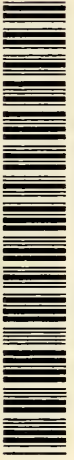


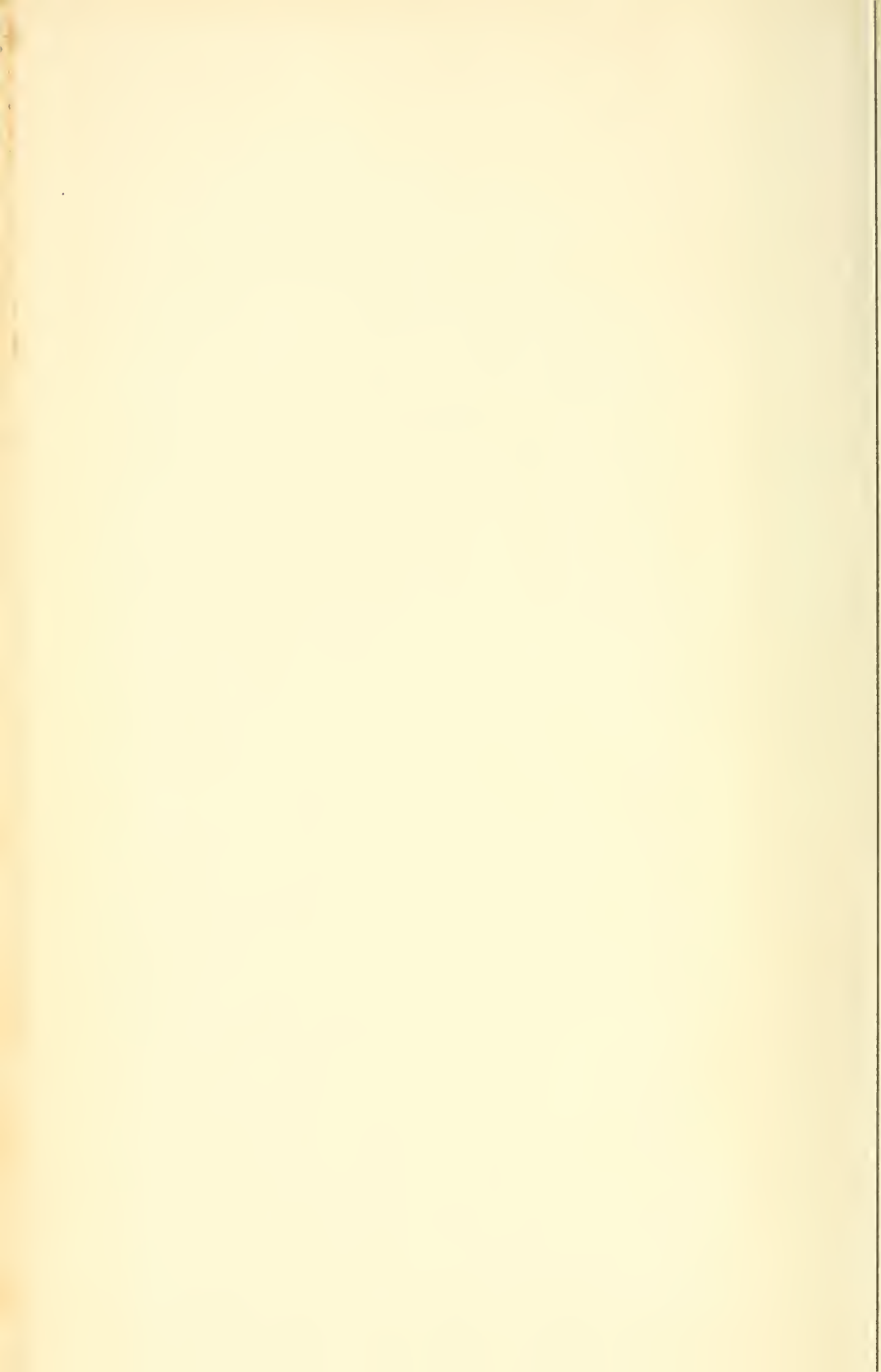




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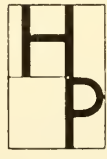
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## Preface

IN the "Genera of Fungi" published in 1909, 2,909 generic names were included; the present volume contains more than 5,000 names. The great number of genera published since the first edition and their inaccessibility to many students have made it desirable to bring the treatment up to date. The last issue of Saccardo's "Sylloge Fungorum," volume 24, includes only genera published previous to 1919 and 1920, while we have attempted in addition to account for all genera proposed since that time. This has been rendered possible largely by the use of the card index of new genera of fungi maintained by the Bureau of Plant Industry, and also by the list of new genera compiled by Plunkett, Young and Ryan.

Illustrations are given of the type or other representative species of approximately 700 genera, and these comprise some 1800 figures. Many are original, having been made from typical specimens of the species illustrated. The others have been copied or adapted from standard works, largely from the parts of Engler & Prantl's "Pflanzenfamilien" that treat of the fungi. The bibliography of the most important literature on systematic mycology is appended, and the glossary has been enlarged and improved.

In contrast with the first edition, the *Myxomycetes*, *Bacteria* and *Myxobacteria* have been omitted. The *Myxomycetes*, although regarded as belonging to the animal kingdom, are studied by mycologists and preserved in collections of fungi. The genera of this group are, however, very fully and satisfactorily treated by Miss G. Lister in her monograph, while the works of Macbride and Masee are also available to students. The bacteria are largely studied by specialists other than mycologists and the so-called genera are founded in many cases upon physiological, pathological or cultural characters, which it is not convenient, even when possible, to handle in a satisfactory manner in a Key.

The determination of the name of a plant is the first thing necessary in its study or in the investigation of any problem connected with it. In the case of fungi, the great number of genera, the scattered descriptions and their inaccessibility, especially those published since 1920 and which have not appeared in the "Sylloge Fungorum," make it desirable to bring together all the known genera in a form in which tentative identifications at least can be made, and the place of publication cited so that detailed descriptions may be found. Only those who have spent their lives in the study of fungi and have become familiar with the life-histories and morphology of members of the various groups, can have any adequate con-

ception of the difficulties involved in an attempt to prepare a Key for the multitude of genera that have been proposed, many of which are imperfectly known and described. Whether its usefulness will justify the labor involved in the preparation of the work or not remains to be determined. Of errors there are undoubtedly many, especially in the citations, as it has been impossible to verify them all, and we shall be grateful to have them called to our attention as found. No one can realize better than the writers the imperfections of the work. In the present state of knowledge of the genera of fungi, no generally satisfactory Key or system of arrangement is possible.

It is hoped that the treatment given and the illustrations in particular may help to promote the study of mycology by students and amateurs, as well as its progress at the hands of professional mycologists and pathologists. If our efforts result in leading more students to become acquainted with this interesting group of plants and to pursue this fertile field of investigation, we shall feel amply repaid for our labors.

The authors wish to express their obligation to Dr. J. C. Arthur for his kind assistance in the key to the rusts. They are further indebted to Miss Edith Cash for her aid in the bibliographic work, and to Mrs. B. F. Jordan for help in connection with manuscript and proof.

FREDERIC E. CLEMENTS  
CORNELIUS L. SHEAR

Santa Barbara  
and  
Washington  
December 1930



Charles C. Bessey

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In Memoriam

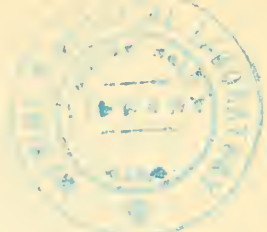


# Contents

	PAGE
PREFACE . . . . .	iii
INTRODUCTION . . . . .	1
SYSTEM OF CLASSIFICATION . . . . .	20
LIST OF KEY INITIALS . . . . .	22
GENERAL KEY TO FAMILIES . . . . .	23
KEY TO THE GENERA . . . . .	30
LIST OF TYPES AND SYNONYMS . . . . .	233
BIBLIOGRAPHY . . . . .	414
GLOSSARY . . . . .	433
INDEX . . . . .	463
LIST OF PLATES . . . . .	<i>following</i> 496

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## Introduction

THE development of systematic mycology during the past quarter of a century has been characterized by three features of much significance. The first of these has been the relative exhaustion of fields long-tilled at home and the consequent tendency to shift the basis of criteria, with the result that sections have been changed into genera and genera into families. A second feature has been due to the increasing exploitation of the Tropics, which has disclosed a large amount of novel material, in certain orders especially. Of even greater interest and significance has been the work of the "revisionists" in testing the foundations of the subject and in removing or refashioning faulty units. The chief worker in the arduous task of reevaluating type specimens and other authentic material has been Hoehnel, but a large part in this has also been taken by Bresadola, Theissen, Sydow, Petrak and Weese, to mention only the most active. Essential as this has been to the development of mycology, it was inevitable that it should reveal great differences as to the facts and even greater ones of interpretation.

In spite of the industry of this group, as well as of others, it is evident that the application of scientific methods to the revision of the fungi is only begun. This is clearly demonstrated by the frequent wide divergence in the treatment of both genera and families, which may be illustrated by several striking examples. Probably the most illuminating instance is afforded by the so-called *Pseudosphaeriaceae*. The concept of a new family based upon a sclerotoid perithecium with paraphysoids in place of paraphyses was first advanced by Hoehnel (1907), who during the course of the next ten years added several genera to the original two, chiefly by transfer from other families. By 1918, Theissen and Sydow had expanded the group to more than a score of genera and had reached the conclusion that "It has already been shown with sufficient clearness that the *Pseudosphaeriales* are to be regarded as an order containing several families, even though a conclusive treatment is not yet possible" (Ann. Myc. 16:34 1918). In the same year, Hoehnel spoke as follows of this expansion of the group: "To what lengths the *Pseudosphaeriaceae*-search may be carried is shown by the following. *Parodiella caespitosa* Winter is treated by Theissen and Sydow as a genuine species of the genus, therefore as one of the *Pseudosphaeriaceae*. The examination of the original specimen of this fungus in Rabenh. Wint., F. europ. No. 3249 convinces me that this is a wholly typical member of the *Sphaeriaceae*" (Ann. Myc. 16:35, 199 1918).

The final blow to the *Pseudosphaeriaceae* was delivered by Petrak five years later. "The comparative study of a large number of forms, regarded either by Hoehnel or Theissen or by both as *Pseudosphaeriaceae*, has shown that, while these are actually of the greatest importance for the taxonomy

of the *Pyrenomycetes*, their true significance has not been placed in the proper light by either Hoehnel or Theissen. We really have here a family (*Pseudosphaeriaceae*) the members of which are much more closely related to the genera of another family (*Sphaeriaceae*) than they are to each other" (Ann. Myc. 21:1 1923).

A similar though less tragic fate has overtaken the *Englerulaceae* as a result of the recension by Petrak (Ann. Myc. 26:386 1928). This family was established by Theissen and Sydow in 1917 and to it were referred some sixteen genera characterized by the slimy histolysis of the perithecium (Ann. Myc. 15:468). Petrak emphasizes the fact that this criterion occurs in different orders and thus is led to reduce the number of genera to six, five of the original family becoming synonyms and five of doubtful character.

Equally significant is the detailed critique by Petrak of the new system of *Fungi Imperfecti* proposed by Hoehnel (Falck Myk. Unters. Ber. 1:301-369 1923). "I shall here endeavor to answer the question whether the new system is a natural one, whether it does justice to the mutual relationships of the genera in so far as possible, and whether, as Hoehnel assumes, 'it actually provides a firm basis for further elaboration, and by others likewise.' Whoever judges Saccardo's system of the fungi without prejudice and with complete objectivity must admit that, however unnatural it may seem otherwise, it would serve very well for practical purposes and for the provisional disposition of the immense host of fungi were its usefulness not greatly reduced by the large number of genera known to him only by the original descriptions. To me it is an established fact that Hoehnel's system exhibits the natural relationships of the genera no better, and in part less well than the old system of Saccardo. Compared with the latter, it has the further great disadvantage of being for practical purposes as good as worthless. For while the beginner can always find his way with a certain security in Saccardo's system, with Hoehnel's he must go astray in the great majority of cases and fall into one error after another" (Ann. Myc. 23:1 1925).

It is superfluous to refer to the many other instances of disagreement or discrepancy in the work of the revisionists. Regardless of the credit due them for devotion to a difficult task, it is obvious that the individual method rarely yields comprehensive and objective results. Still more unfortunate is its lack of permanence, it being a truism that the work of one monographer is usually upset by the next, rendering it all but impossible to build the foundations of mycology broadly, deeply and securely. It has become a matter of critical importance to substitute for the personal equation of the individual worker the cumulative confirmation made possible by cooperation, as well as to suggest a method by which this may be brought about. In science, as in society, it is desirable to limit the independence of the individual only to the extent that the best interests of the group demand, but no mycologist with a broad view of the field can doubt that this point has for some time been passed.

Four principles are considered to be essential for the conversion of mycology into an inclusive and objective science reared upon a secure foundation. In a word, these are usage, uniformity, statistics and experiment. It is evident that the first already constitutes an approach to cooperation, but it lacks conscious direction and to some degree both definiteness and momentum. Furthermore, it sometimes rests upon average rather than optimum values, and then requires to be transmuted into the best usage. The greatest service of the latter is to bring about the highest degree of uniformity in treatment and result compatible with the facts, in short, to insure those objective values that alone can be permanent. For securing these, statistical and experimental methods are indispensable, though it is perhaps an adequate commentary upon the present status of systematic mycology to say that such methods are all but unknown to it. As indicated later, practices in the use of criteria have grown up with little or no scrutiny or question and with but slight endeavor to render them consistent or dependable. No one possesses any real knowledge of the relative merits of criteria and yet every working mycologist continues to act as though he did. However, it must be recognized that experiment *in vitro* provides but one approach to the problem, and that statistics and experiment in nature are fully as important in revealing development and phylogeny.

Probably every working mycologist recognizes and deplors the handicaps under which he must struggle, but too often he fails to recognize his own contribution to them. The outstanding example of this attitude is to be found in Lloyd's "Myths of Mycology," in which the author belabors many a mycologist for faults much less serious than his own. Hoehnel justly criticizes the inadequacy of mycological studies in the following statement in the introduction to his new system: "Since the description of a genus varies with the personal knowledge and the point of view of each author, even when it is drawn up precisely and conscientiously, and since further the great majority of descriptions are inexact, incomplete and often entirely false, it is clear that a very large number of the genera considered by me have been incorrectly interpreted and classified." Yet in spite of his prodigious industry—or perhaps because of it—he has repeatedly committed every one of the sins that he decries. Two of his major series of studies are well-named "fragments" because of the incidental way in which new genera are christened, the lack of diagnoses and indications of relationship, and the frequency with which the promise of later diagnoses is forgotten. Obviously, it is not sufficient to agree with Lloyd, Hoehnel, Petrak and others that mycology suffers seriously from hasty and superficial methods; some procedure must be established and generally adopted that will protect the mycologist from himself as well as his colleagues.

In essence, the remedy is simple, though its application to individualists will be difficult. The first step concerns the individual mycologist whose duty it is to insure that his own work contains none of the defects that he laments in the work of others. This demands not only meticulous thorough-

ness and accuracy in the study of a sufficient quantity of good material, but also the exercise of the same qualities in preparing the results for publication. Diagnoses should be concise but complete, and should specifically take into account all of the generic criteria in the family concerned. Even more imperative is the definite indication of relationship to one or more contiguous genera, together with a clear-cut statement of the differences involved. An admirable way to secure such results is actually to place the proposed genus in the family or sectional key, which will serve also to reveal any weakness in the proposal. To offset personal differences in terminology and interpretation, no genus should be regarded as adequately published unless accompanied by proper illustrations. Finally, the position in family and section should be clearly stated, together with a pertinent account of deviations or discrepancies.

With the task of the individual well performed, the second and even more important step is to speedily insure its confirmation and currency. For this, cooperation is indispensable. Many a genus has passed from one hand to another over a long period without meeting a real test of its validity, and there are still too many that rest upon a single unconfirmed discovery. This condition can be remedied and mycology converted into a body of tested objective knowledge only through some method for the review of genera and species before they are published. Sooner or later all such proposals will be critically examined by other mycologists, and it is obviously to the advantage of all that this be done before publication rather than after. Much uncertainty and not infrequent error will be avoided if the material concerned is submitted to other specialists in the particular field. In the case of genera a cogent argument is afforded by the excessive number of present synonyms, while the over-production of species is attested by Hoehnel's reduction of 17 species of *Diaporthe* on *Salix* to 5, 9 on *Aesculus* to 2, and 7 on *Caprifoliaceae* to 1!

A third essential of the plan proposed is to render much more accessible the original papers and the type material concerned with the publication of new genera. Unfortunately some of the proponents of new genera and species seem to forget that the primary aim and purpose of systematic mycology is the advancement of science and the benefit of mankind rather than the aggrandizement of the individual. No one who has not attempted such a task as the present one can fully appreciate the almost insurmountable difficulties of the existing situation, but every mycologist has made acquaintance with some of them in the course of his own work. This is exemplified in the interval of twelve years between the appearance of volumes 22 and 23 of the "Sylloge Fungorum," but it is even more evident in the numerous omissions in the last two volumes, omissions that are all but unavoidable under the circumstances. This tax upon time and energy, to say nothing of the character of the results, can only be obviated by the clear recognition of his scientific obligations by each mycologist. The first of these is to see that descriptions are drawn in either Latin, English, French or German, and that



publication is made in well-known and widely distributed journals, preferably such as are devoted to fungi. The second duty is to insure that copies of all such papers are sent to the chief mycological centers, such as Berlin, London, Paris, Vienna, and Washington, for example. This should also involve the deposition of co-types of all new genera and species in the herbaria at such centers, to facilitate the labors of future students of the group.

In the hope of furthering the work of mycologists and pathologists the world over, it is definitely planned to issue a new edition of the present book at intervals of three to five years, depending somewhat upon the amount of material that requires attention. In addition to incorporating new and valid genera and determining synonyms, this will also take account of the general progress in the field of systematic mycology. Constructive criticism, both in general and in particular, will be welcomed and utilized, as well as other suggestions designed to render the book more serviceable.

#### CRITERIA

Since the validity of genera rests upon the value of the criteria employed, it is desirable to pass these in review at the outset. As the criteria necessarily differ in the various groups, their consideration will be restricted chiefly to the *Ascomycetes* and *Deuteromycetes*, in which evolution has been most active and the number of genera by far the largest. Moreover, most of the new genera proposed during the past two decades belong in these two groups. As a consequence, the application of criteria here has been fairly consistent and uniform, and thus furnishes a proper basis for examination.

At present no objective basis exists for the evaluation of criteria and no adequate one is possible until statistical and experimental methods have come more into vogue. Though it is usually assumed that cultural studies yield conclusive evidence as to development and structure, this is not necessarily true. On theoretical grounds, the life-history of a fungus should be the same in culture and in nature only when the essential factors are alike, a condition often absent and in most cases extremely difficult to attain. Evidence already available indicates that the results obtained in culture may depart widely from the behavior exhibited in nature, the recent study of *Cristulariella* by Bowen furnishing a striking example of this (1930). The cultural and natural form differ so much as to warrant placing them in separate genera, and in other cases the difference may be as much as that between families or orders. In consequence, while experiment must be regarded as the corner-stone of a scientific mycology, the experimental procedure must rest squarely upon a proper combination of nature and culture, reinforced by thorough-going statistical studies over a wide natural range.

In the general absence of such studies, it must be recognized that our present utilization of criteria rests upon two subjective processes, namely, observation and usage. However, these constitute a much better basis than

might at first be supposed, since the immediate need is for the systematic cataloguing and identifying of the immense number of forms concerned. The observations and practices of the leading mycologists during more than a hundred years provide the present available foundation for this and have led to more or less definite usage. Through the attrition of divergent views and by virtue of increasing information, the latter becomes in a degree objective and affords a correspondingly safer basis. It is imperative, however, to discriminate between use and usage, and furthermore to recognize that scientific usage must be continuously checked by observation and experiment in order to become uniform and objective in the highest degree possible. No mere lapse of time should be permitted to render current either discrepancy or error, or to validate departures from tested and proven practice.

The following discussion of criteria deals with their application in the present treatment, and this is based in the fullest possible degree upon the practice of leading mycologists as exemplified in Saccardo's "Sylloge Fungorum," Engler and Prantl's "Natürlichen Pflanzenfamilien," and Rabenhorst's "Kryptogamen-Flora" in particular. The rule of uniformity has been carried into effect in occasional instances where exceptions to an otherwise universal usage have persisted to render "keying out" awkward or impossible. The consideration given this matter here is not intended to be exhaustive, but to be informatory and to provide a basis for future elaboration.

#### HABIT

The actual significance of habit as a generic criterion is of course unknown, but its practical value in many cases is recognized. This is especially true of strict parasitism and saprophytism, as it is likewise of the lichen habit, involving parasitism on algae. The practice of assigning generic rank to the fungicole forms is apparently valid in case of true parasites, while the fimicole habit is likewise generally accepted among *Pyrenomycetes* in particular, though not always dependable. More recently, Hoehnel has insisted that the latter parasitic in other perithecia bear a distinct stamp and deserve to be segregated, and his genera of this type have been tentatively accepted here. Parasites on lichens have in general been accorded generic value, and Saccardo, Zopf, Rehm, and Theissen and Sydow have been especially consistent in thus treating them. Keissler has recently objected to this procedure, in spite of the current practice (1930:179), but the lichenicole genera are fully as valid as the others based upon habit, and probably more so than those lichen genera founded upon a difference in the genus of the algal host. Much more study and information are necessary to determine the exact status of the lichen-inhabiting forms.

The general tendency has been to recognize the uredicole habit as warranting generic segregation, and this has been extended to other distinctive groups of hosts, the ferns in particular being so treated. With respect to parasitism on different organs, a number of long-accepted genera are based primarily if not wholly on the folicole, caulicole or floricole habit. This has

led to the duplication of genera in many cases and has little or no dependable value except in special instances.

At present, the use of habit as a generic criterion is firmly entrenched in mycological practice, but it should be clearly understood that such characters while utilized in the Key are not necessarily considered of generic value by themselves. Sufficient evidence is already available to show that such criteria are in certain groups of little real worth and should be used with great caution. Habit as a criterion appears to fail almost completely in the *Hypocreaceae*, where twenty of the larger genera occur on from three to ten different types of host or matrix.

#### CONIDIAL STAGES

With increasing knowledge of the life-histories of the *Ascomycetes*, conidial or "nebenfrucht" characters are being adopted in defining and limiting old as well as new genera. Where sufficiently exact knowledge of the development of the various species is available, this may ultimately prove desirable, but too little information of this kind has been published to permit any general application of such criteria in a key. Moreover, our present scanty knowledge of the subject furnishes various examples of the difficulties that arise in attempting to utilize conidial stages for generic segregation. It has been found that ascogenous forms generally regarded as congeneric have very different secondary stages, while widely separated genera may possess similar or nearly identical ones. Further discussion of this theme may be found in "The Problem of a Natural Classification of the *Ascomycetes*" (Shear, 1929). Furthermore, some workers have gone so far as to segregate genera on the basis of the mere association of certain conidial forms with the ascocarp. Such practice is to be deplored, as it can only lead to greater uncertainty and confusion.

The names of the so-called form genera of *Fungi Imperfecti*, which in most cases represent stages in the life-histories of *Ascomycetes*, should be recognized as tentative, until their genetic relation to the perfect form is definitely shown, when they can be reduced to synonymy and discarded, as has already been done in the *Puccimiales*. For present purposes therefore, the most convenient and usable artificial system constitutes the most desirable arrangement of this group. Such attempts as those of Hoehnel to establish a new system of *Fungi Imperfecti* hence serve no useful purpose, except in so far as they increase the readiness with which specimens in hand may be identified. Whoever tries to use Hoehnel's key in this connection is practically certain to concur in the judgment of Petrak, already quoted, that it is much less satisfactory than the Saccardian.

#### SPORE

The opinion is frequently expressed that the carpologic system of Saccardo is much less natural than one based upon stroma and perithecium as primary criteria. With our present knowledge, no objective determination

of relative merits is possible, but for definiteness and convenience the Saccardian arrangement appears much more preferable. Moreover, since all three criteria must be employed in any system, it is a distinct advantage to first utilize the one most clear-cut and easily determined, and last that which presents the most difficulty. This is the sequence followed in Saccardo's spore sections, in which the spore plays the primary rôle, the perithecium comes next, and the stroma last. Even Winter, who used the stroma for his subdivisions of the *Sphaeriales*, emphasized the undesirability of placing too much stress upon this structure.

In general, the usage with respect to the spore is so definite and universal as to require little comment. In spite of some intergrades, as well as occasional variation within a species, the color and septation of the spore are generally dependable criteria in the *Ascomycetes* and *Deuteromycetes*. The presence, position, number and form of spore appendages are also regularly utilized, but with some exceptions. With respect to other spore characters, the practice has been far from uniform. Thus with regard to the epispore, genera have been separated on the nature of the markings in some groups and not in others. It may prove best not to assign this criterion generic value, though there is no question of its convenience, especially in *Moniliales*, where criteria are often at a premium.

In the present treatment, several spore characters recently employed by some mycologists are not considered to be of generic value. These are unequal cells in didymospores and the form of the cells in phragmospores. A third feature, that of the breaking apart of the cells in scolecospores, is likewise regarded as too variable and unimportant to be utilized. Theissen and Sydow have made regular use of unequal spore-cells, but an examination of the genera erected upon this discloses its weakness. This is the wide range of variation within a genus and often in the same species, while in more than one instance genera based upon equal spore-cells contain species with as much inequality as some in those genera stamped with this character. An examination of all the species concerned in the eight examples of generic subdivision on this basis in "Die Dothideales" demonstrates that this is entirely unwarranted, a fact not entirely unrealized by the authors in the statement made under *Placostroma* (p. 407): "The inequality of the spore-cells is not so sharply marked, as in *Coccooides*, *Coccochorella*, etc., that this species must be generically segregated." The same authors have also based new genera upon both 3- and 4-celled spores, but the unlimited possibilities in this direction render comment unnecessary.

The scolecospore presents some problems peculiar to itself with respect to form, septation and color. Dark scolecospores are rare, but a tinge of color is less infrequent; septation is highly variable, sometimes in the same species, and is seldom if ever to be depended upon. While the extremes of the two characteristic forms, acicular and filiform, are distinctive, they vary and intergrade too much to render them serviceable as a rule. The major difficulty lies in a definite distinction between the phragmospore and

scolecospore, and the most satisfactory solution has been found to lie in the ratio between length and width. A compilation of all the long-spored species of the one and short-spored of the other in *Sphaeriales* discloses the fact that a ratio of 20:1 represents much the most natural dividing line and one that requires the transfer of very few species to make it consistent. A similar study of the *Phomales* demonstrates that a ratio of 10:1 is preferable, the difference being probably explained by the normally smaller size of the pycnidium.

It is obvious that the determination of spore characters must rest upon mature spores; this is especially important in *Ascomycetes* where maturity is sometimes long delayed, winter conditions apparently being often necessary to insure this in nature. Spore color and septation, as given in descriptions, are frequently misleading or erroneous, as color and septation usually depend upon age and condition of development of the spores. Spores in some cases, e.g., *Macrophoma*, may be discharged and appear mature and germinate freely, while later the spores remaining in the pycnidium become brown as in *Sphaeropsis* and sometimes septate as in *Diplodia*. This is also true of spore septation, which in some cases is delayed until after the spores seem to be fully formed and mature and are expelled. Only careful observation of abundant material in different stages of development can determine these points in any particular genus. An examination of the older type specimens by Hoehnel and others has shown that the original descriptions were sometimes based upon immature material that failed to indicate the true nature of the spores as to color and septation, but this in no wise detracts from the value or usefulness of these characters under the proper safeguards. As with all fungus criteria, much more careful observation, statistical study and experiment are necessary to determine just how stable and dependable these characters are in representative genera, as well as in spore sections and higher groups.

#### STROMA

Among the *Sphaeriales* and *Phomales* in particular, no other structure is so variable and so difficult of interpretation as the stroma, probably because this is a part of the vegetative body and hence more directly affected by the environment. Perhaps the major part of the disagreement between Hoehnel, Theissen and Sydow, and Petrak centers about the facts as to the various types of stromata and their interpretation. The rise and fall of the *Pseudosphaeriaceae* is the outstanding illustration of this, but it is likewise exemplified throughout the stromate and stromoid forms. Probably more new genera have been proposed on the basis of differing interpretations of the stroma than on any other. Petrak in particular has recognized the undesirability of this, but has not always heeded his own conclusions (Ann. Myc. 21:272 1923; 23:83 1925). It is obviously true, as Winter pointed out in discussing *Sordaria* and *Hypocopra*, that many mistakes have been made by basing genera on stromatic characters alone (1887:169).

With regard to the dependability of such criteria, this may vary greatly in different families and even in genera. In some the stroma is fairly constant, in others very variable; effuse, valsoid and pulvinate forms often intergrade, as do sessile and stipitate ones also. However, the most confusing cases are those connecting *Sphaeriales* and *Dothidiales*, in which the question arises as to whether a stroma contains perithecia or locules. Here again all possible intermediates occur between stromata in which the perithecia are so distinct that they are easily removable, to those in which the asci are borne in a chamber of the stroma which shows no definite wall. Hoehnel and others have gone so far as to recognize a separate family, *Pseudosphaeriaceae*, to include genera such as *Pleospora* and *Pyrenophora*, in which the perithecia have a somewhat thickened wall that they regard as a stroma with a single locule! In this connection, it is to be noted that Blain has found that stromata "possessing interascicular pseudoparenchyma, the distinguishing feature of the *Pseudosphaeriales*, are found in the *Dothidiales* and *Sphaeriales*" (1927:18).

Recently, Miller has attempted to distinguish between a perithecium and a stroma with a single locule. He concludes that the perithecial wall in the *Sphaeriales* "is histologically and ontogenetically different from the tissue of the stroma," and defines it "as the specialized tissue which arises from the archicarp, and from the beginning encloses the ascigerous centrum." It is also stated that the ostiole in a true perithecium is schizogenous in origin, while in the locule it is lysigenous (1928:194). Whatever the actual facts are in the case, in order to determine them conclusively and make them available for practical taxonomic purposes, further investigation embracing many more genera and species is imperative.

#### INSERTION

The position of the ascocarp, stroma or pycnidium with reference to the tissues of the host, i.e., whether innate or superficial, has long been regarded as a criterion of generic significance, and the distinction has been applied with almost complete consistency to the orders concerned. There has been some further tendency to distinguish erumpent forms, but these present the double difficulty of discriminating between both normal insertions, quite apart from the wide variation in the degree of erumpence itself. Innate insertion is likewise modified by concretion with the epiderm to furnish an additional generic criterion.

However, Theissen and Sydow in the *Dothidiales* (1915) and Hoehnel in the *Phacidiales* and the stromoid *Fungi Imperfecti* have carried this distinction to extremes and have segregated a host of new genera with respect to origin between cuticle and epiderm, between epiderm and mesophyll, or within the latter. The difficulty of determining the facts in many cases and their known invalidity in others prohibit for the present at least the use of such criteria. Still more serious is the fact that the proponents disagree as to the facts in a number of critical cases; for example, Hoehnel states that

he considers Theissen's *Stigmatocaceae*, founded upon insertion, to be a blunder (Ann. Myc. 16:35 1918). In the present key, all the genera that rest upon such a character alone have been restored to their original position.

#### ASCOMA AND PYCNIDIUM

The usage with respect to criteria drawn from perithecium and apothecium is long-established and fairly satisfactory, a statement that applies almost equally to the pycnidium. This is especially true of texture, structure of the wall, and the presence of ostiole, beak, stalk, and appendages or hairs. Texture may afford a family character, as with the fleshy perithecium of *Hypocaccaceae* or the gelatinous apothecium of the *Bulgariaceae*, but as a rule it is generic in value as in the distinction between membranous and carbonous perithecia or pycnidia. In the case of structure, the radiate scutellum marks the order *Microthyriales*, but within this generic distinctions are often drawn on the kind or degree of such a structure. With regard to the ostiole, presence or absence is usually generic; however, in the *Perisporiales* absence is characteristic of the order as a whole, while the form of the ostiole sets apart the *Lophiostomaceae* and *Hysteriaceae*. In this connection, it should be noted that Petrak has objected to Hoehnel's practice of utilizing the presence or absence of ostiole in *Phomales* for generic segregation on the grounds of great variability in this respect (Ann. Myc. 21:272 1923).

The presence of a beak, stalk, hairs or appendages has been regularly regarded as a warrant for generic segregation, and this has usually been extended to marked differences in these structures, as for example in the case of an oblique or lateral beak. Furthermore, with respect to hairs, usage has also based distinctions upon the position, and even their color in the case of the apothecium, but their arrangement is highly variable and hence less valid for the perithecium. An exception to this occurs, however in the modified appendages of primitive ascocarps, such as those of the *Erysiphaceae*.

The grouping of perithecia has occasionally been employed for the erection of genera on the cespitose habit, and this though a doubtful character has been utilized for the present. This character is often associated with the presence of a subicle, with respect to which the practice of assigning generic value has been generally accepted. In the *Perisporiales* and *Microthyriales*, Theissen and Sydow have made much use of the presence or absence of a free mycelium, as well as its modification by means of hyphopodia and spines, in which they have been followed for the present.

In the *Discomycetes*, the absence of an exciple has been regularly employed as a generic criterion, and this practice has here been followed in essence, though such genera have been combined into a new family, *Agryriaceae*. The nature of the exciple has long been recognized as of basic value among the lichens, the proper exciple without algal hosts being like that of the other fungi and hence more primitive, while the thalline exciple with algae is derived. The proper exciple is further distinguished as lecideine

when black and carbonous, and biatorine when bright-colored. The cellular structure of the exciple, whether parenchymic or prosenchymic, marks the distinction between *Mollisiaceae* and *Helotiaceae*, as well as between certain genera elsewhere.

Both Hoehnel and Petrak have made use of minor differences in the structure of the wall of perithecium and pycnidium, particularly the number of layers and the character of the cellular pattern, but in the main these must wait much more extensive and systematic study before they can be adopted.

#### ASCUS

The criteria derived from the asci are primarily origin, number, operculum, number of spores, and reaction to iodine. The method of origin is essentially a family character, as exemplified in the fastigate or corymbose arrangement in *Eurotiaceae* as compared with the umbelloid in other *Pyrenomycetes*, or in the inverted position typical of *Trichothyriaceae*. The presence of a single ascus in the perithecium is of generic value, but it occurs very rarely, except in the lower families, especially the *Erysiphaceae*. The so-called monascous hymenium of *Microthyriales* is a wholly different matter and like the arrangement in *Myriangiaceae* a consequence of other changes. The presence of an operculum or lid is characteristic of the *Pezizaceae*, *Ascobolaceae* and *Helvellaceae* by contrast with the other families of the *Discomycetes*, but it is not here employed as a basis for ordinal separation, since it is considered to make an unnatural division of the phylum.

The number of spores is a criterion long established by usage, though it must be employed with some discretion in the case of lichens particularly, where the variation in general is somewhat greater. It rests primarily upon the overwhelming preponderance of the number 8; 4's and 16's are sometimes associated with 8 and in consequence are less dependable than larger or smaller numbers. As a result, the numbers here regarded as warranting segregation are 1-2, 8, 16-32, and the very high numbers designated as myriosporous. Among the lichens, the low numbers sometimes vary within a species or between closely related ones and hence lack validity.

The question of the value of the color-test with iodine is still an open one, but it has been employed with so much consistency and convenience by Rehm, that it is continued here, pending more exact information as to its validity.

#### PARAPHYSIS

In the present instance, an endeavor has been made to definitize the use of the term paraphysis by restricting it to the *Ascomycetes* and *Pucciniales*, and employing pseudoparaphysis for more or less similar structures among the *Phomales* and elsewhere. By contrast with these, other incidental filiform features, such as apophysis, periphysis and dendrophysis, etc., are considered to have no particular diagnostic importance for genera at present.



Further investigation is necessary to establish their value. Within the *Pyrenomycetes*, it has proved desirable to take account of the tissue-like bands upon which the *Pseudosphaeriaceae* were based, and to employ this character under the term paraphysoid as a generic criterion in *Sphaeriales* especially. However, as Theissen and Sydow have pointed out, there is every possible gradation between these and true paraphyses.

While the presence or absence of paraphyses had been employed for a considerable number of genera by Saccardo and others, it remained for Theissen and Sydow to apply it consistently in their several monographs (1915, 1917). This widespread application has been criticized by one or two mycologists, but it seems to be justified by the earlier practice and has been adopted here. The objection that its real significance is unknown may be raised against most criteria.

The branching of the paraphysis has usually been regarded as a character of generic significance, as well as special modifications of note, and the formation of a definite epitecium by the tips has likewise been employed.

#### GENERA

There is a difference of opinion among taxonomists as to whether a genus is an objective entity consisting of a group of species of living organisms differing from other groups of species by distinctive and more or less fixed morphological characters, or whether it is primarily a mental concept of the taxonomist which has no real objective existence as a separate group. In the present state of our knowledge, most fungus genera are to be regarded as tentative concepts, still to be verified or modified by further study and comparison of the species involved, in conformity with accepted practice. It has been fairly well demonstrated in some cases, however, that there are groups of species which differ from other related groups by distinct morphological characters. Such groups may vary greatly in the number of their constituent species and in the number and importance of the different characters involved. In many cases from lack of adequate material and our imperfect knowledge of the species known, and of those perhaps not yet discovered, our generic concepts can not be verified at present. The segregation of genera should therefore in the present state of our knowledge be done with conservatism and caution and serious consideration should be given to the practical as well as the scientific aspects of the subject. The publication of new genera based upon inadequate study, on scanty or imperfect specimens or cultures or characters of unknown value or stability can only add to the present confusion and result in impeding the progress of systematic mycology.

It is manifestly impossible for any individual to become critically familiar with the thousands of genera that have been proposed, even if authentic material of all were available. It should be clearly recognized therefore that the present book is largely a compilation based upon a careful

study of the principal literature of the subject and the critical work of recent mycologists, and the revisionists in particular, as well as upon some forty years of mycological experience on the part of the authors. An attempt is made here to account for all the genera of fungi, with the exception of a very large number of older and generally accepted synonyms. All new genera published since the first edition are included so far as known either as valid names, synonyms or dubia, but for the reasons given earlier, some omissions are unavoidable. In some instances, names have been proposed with the promise of future diagnosis, and in others, names adequately published have completely dropped from sight in later treatments without the slightest mention. In this connection the statement made by Fries in 1849 that "A single long-known and well-developed species correctly observed through all its stages is of more value than a new genus" is in even greater need of being emphasized now than it was in his day. A thorough study of the older genera and species, most of which are still imperfectly known, would contribute more to the advancement of mycology than the continued increase of doubtful new ones.

The adoption of well-established criteria for genera has necessarily led to the rejection of a large number of genera proposed during the past two decades. On the other hand a small number of genera are proposed on the basis of criteria generally recognized, in order to render the Key more uniform and usable.

#### GENERIC TYPES

Mycological literature is cluttered with numerous genera and species inaccurately or incompletely described, and in many cases not represented by type or authentic specimens. Too often genera have been based upon scanty, immature or worthless material that gave scope to the widest range of interpretation. One of the greatest obstacles to the progress of mycology is this mass of names variously applied and interpreted at different times by mycologists. These must be either attached to definitely known species and to particular specimens available for complete description and positive identification, or permanently discarded. Many of these old generic names have already become more or less definitely applied and established by general usage, and they may be fixed in their current application by the selection of well-known species as types. The present use of names has been evolved by gradual changes at the hands of subsequent mycologists, instead of being definitely fixed on the basis of an exact determination of the type of the original author of the name. Hence, the citation of the original author of an old name may have little to do with its present application. In fact, authors themselves have sometimes changed their descriptions, as well as the types of their genera.

In order that generic names may be as exact as possible in their application, it is now generally admitted by taxonomists that they should be fixed by assigning to each a type species, and the recent International Botanical

Congress held at Cambridge, England, has adopted this plan. To attempt to stabilize many of the early names on the basis of species originally included in them would be impossible, as the type species in some instances are not determinable, and in others the adoption of the original species would lead to such a different application of the names from the present that it would cause much change and confusion. Further discussion of this matter with examples may be found in the paper by Shear on "Mycological Nomenclature" (1929).

In view of what has just been said, the selection of the type of a genus is of the first importance. In order to avoid change and ensuing confusion as far as practicable, the type species should be chosen from the best known or more important species generally included in the genus at present. In selecting the generic names adopted in the present treatment, general usage has been followed in the case of all important genera, instead of priority of publication. An attempt to follow the method of fixing generic names in all cases by using the first or in fact any one of the species originally included by the first user of the name would result in many changes from the present application of familiar and well-established names and combinations.

As a matter of fact, the application of the principle of priority has failed to secure uniformity and stability in botanical nomenclature and if applied strictly to the fungi, this principle would produce a condition approaching chaos (cf. Shear, *Science* 60:254 1924). Since the application of the generic name depends upon the type species and many genera contain species that are not congeneric, it is desirable to select a type that will cause the least change. This in many cases necessitates the choice of a species not included by the original author of the genus. Otherwise, many names would need to be discarded, as the original species is indeterminate or unknown, or applied to a totally different group from the present one.

The recently revised International Code recommends this method of fixing generic types, and an international committee of mycologists has been appointed for the purpose of carrying out this plan. It is hoped that most of the types selected here will be found acceptable and generally adopted. The necessary changes can be made in the next edition.

#### SYNONYMS

The synonyms given in the list of types (p. 233) have been obtained in four different ways. The first and most important of these has naturally been by the labors of mycologists as recorded in the more recent literature, in which the revisions of Hoehnel, Theissen, Sydow and Petrak occupy the most conspicuous place. No attempt has been made to duplicate the synonymy already given in the "Sylloge Fungorum" or in Zahlbruckner's monograph of the lichens, but in some of the smaller groups such as the phycomycetes and the rusts and smuts, the synonymy is fairly complete. The assignment of type species has been a second source of synonyms.

As has been indicated earlier, a considerable number of recently proposed genera has been reduced to synonymy on the basis of criteria not regarded as of generic value, such as unequal spore-cells, 3- and 4-celled spores, subcuticular and subepidermal insertion, etc. Finally, a smaller group of what might be called tentative synonyms has been obtained by testing them in the key and finding no essential difference between them and genera already in existence. Further study is required to determine their validity.

The genera included in the lists of those of uncertain position or otherwise doubtful have chiefly been so designated by various monographers and especially by the revisionists, while no inconsiderable number have been frankly classed as such by the proposers themselves. Where differences of opinion obtain, certain genera have been listed both as dubia and synonyms; for the same reason a genus will occasionally be found both in the key and as a synonym.

#### NAMES AND TERMS

In one of the aphorisms of his "Philosophia Botanica," Linné stated that "Ignorant persons impose absurd names," and with the addition of careless and indifferent as epithets, this remark holds good today. A century later, Lindley embodied much the same conclusion in the following: "No one who has had experience in the progress of botany as a science can doubt that it has been more impeded in this country by the repulsive appearance of the names it employs than by any other cause whatever" (1853). Clements has discussed various aspects of this problem in considerable detail (1902), and more recently Hall and Clements have suggested a number of guiding principles to improve the situation (1923).

In palliation of shortcomings in the matter of names, some botanists have contended that "a name is a name," implying that its character is a matter of complete indifference. When it is fully realized that the name of a plant may be employed a hundred times to one contact with the plant itself, it is clear that the quality of names is not a matter of little or no consequence. While it is not necessarily true that "nomenclatorial and taxonomic incompetence go hand in hand," they are too often associated. Slipshod naming is incompatible with mycological work of the first quality, and no one who places the interests of mycology first can be indifferent to this fact. Moreover, general usage lends further warrant to this contention; the great majority of names maintain a fair standard of excellence and are consistent in their form. In view of the paramount rights of the thousands of users of names, it is not too much to ask that each name proposed be short, significant, euphonious, and both properly formed and transliterated.

In harmony with the above, the regular usage has been followed in the matter of transliteration to render this uniform throughout. Names of more than six syllables have been shortened in such a manner as to preserve their

identity. Here again the actual number of sesquipedalian names is not large, but such examples as *Chaetobasidiella vermicularioides*, *Pseudoperisporium erigeronicola*, and *Verticilliodochium tubercularioides* permit no question of the desirability of such abbreviation. Such improvements can properly be made without change of citation, but this has seemed to be impossible in the case of personal hybrids, such as *Raciborskiomyces*. Both brevity and uniformity have also been promoted by rendering consistent in the shorter form the divergent practices with respect to imparasyllabic neuters in *-at*, as in *Lophiostomaceae*, *Phomales*, etc., the doublet, *rr*, before *h*, the double *ii* in personal genitives, etc.

The time and energy demanded by the present treatment have been so far in excess of what was anticipated that the original plan of revising the terminology of mycology to render it more consistent and definite has been relinquished for the present. However, a few steps in this direction have been taken by employing Arthur's terms for the rusts, definitizing the use of paraphysis, paraphysoid and pseudoparaphysis, and bringing the terms among lichens into closer harmony with those used in the other fungi.

#### THE DICHOTOMOUS KEY

Saccardo long ago emphasized the point that many a fungus must be diligently sought by the tyro in more than one place (*Sylloge Fungorum* 1:VI 1882). This is still true today, but an endeavor has been made to minimize this difficulty by inserting certain genera in two or even three places in the key. The latter has been made as definite and consistent as possible, and its use facilitated by employing the dichotomous method throughout. It is a much simpler and easier task to construct keys after the pattern of Hoehnel (1923), in which there are regularly several and frequently ten or more choices under one heading, few of them worded in the same terms and almost none of them strictly comparable. In such a key, the user is obliged to do most of the work that the author should have done for him, but under much more difficult conditions.

The sequence of criteria in the various families and sections has been as strict as possible. In the *Ascomycetes* and *Phomales* in particular, the great majority of genera differ from their immediate neighbors in but one essential, and in consequence both sequence and definition are as a rule exact. On the other hand, as in *Phycomycetes* and *Gasteromycetes*, the contrast is usually much less definite and the key necessarily partakes of the same character. However, in both cases the sequence in the key serves as a diagnosis for each genus, and one in which the salient criteria stand out much more clearly than in the usual description with its attention to trivial features. Furthermore, the dichotomous key provides a very useful test of proposed genera, since it renders it impossible to take refuge in vague statements as to validity and the differences from related ones. It can be safely said that the number of new genera would be greatly reduced if every author would subject his proposals to the test of such a key.

## ORDERS AND FAMILIES

The definition and limitation of the orders and families of fungi is necessarily more uncertain than in the case of genera. In consequence, it is inevitable that mycologists should differ widely in their treatment of these groups. This is especially marked in the case of the *Ascomycetes*, where for example Hoehnel would place the *Microthyriaceae* and *Trichothyriaceae* in the *Perisporiales*, while Theissen and Sydow include them in their *Hemisphaeriales*. Such differences usually arise from divergent views as to the importance of criteria and from lack of knowledge of life-histories and comparative morphology. They also spring from the fact that the complex interrelations of many groups permit placing certain genera with about equal propriety in either of two families or orders, as well as from the lack of uniformity in many genera. Thus, *Physalospora* and *Botryosphaeria* are by some referred to *Sphaeriaceae* and by others to *Dothideaceae*, while *Melanospora*, in which the type possesses gray membranous perithecia though this is black and subcarbonous in others, may be placed with almost equal warrant in either *Hypocreaceae* or *Sphaeriaceae*. In many groups no definite and fixed boundaries exist, and unusual or atypical genera must be sought in more than one place.

It is inevitable that the multiplication of genera on insufficient knowledge and unreliable characters or on vague and trivial ones, should be reflected in the splitting of long-established orders and families. This rarely represents any new knowledge, nor does it advance the understanding of such groups. It constantly shifts the foundations of mycology to the disadvantage of practically every one, and constitutes one of the subjective processes unfavorable to the realization of a sound and scientific basis for mycology. To follow a conservative course in the recognition and limitation of orders and families seems to us to best serve the purpose of the present book and the interests of its users.

## THE NATURAL SYSTEM

The system employed in the present book constitutes an endeavor to approximate the natural system in several respects. It appears obvious that there is but one natural system and equally evident that any approach to it is the result of the work of many minds. Hence, in spite of its convenience for reference, it is more or less inexact to give the name of an individual to any particular arrangement. Phylogeny still labors under the handicap of being regarded by many as a labyrinth of personal opinions, and until it is generally recognized that it affords an inviting field for experiment and investigation quite as much as any other, no great progress in it can be expected.

At present, considerations of space permit reference to but two or three basic principles that have been observed in the arrangement of orders and families. The first of these is that the fungus is a physiological adjustment to

the environment and that in consequence fungi are to be found in every major division of the plant kingdom; though rare among mosses and ferns, they are far from uncommon in the flowering plants. From this is derived the second principle that the fungi do not constitute a natural group, and that all the phyletic lines lead sooner or later to holophytic origins. Mycologists, like lichenologists, are specialists and have been fond of thinking of the autonomy of the fungi as something inherent, and they have not infrequently resorted to the most ingenious and specious arguments to support such opinions. From the objective point of view, the autonomy of the fungi rests on grounds no better than that of the lichens, and they were distributed phyletically in the first edition (1909), a treatment long accorded the hysterophytic flowering plants and more recently the lichens (Clements 1896, 1903).

The third principle is that the ecological approach to the morphology and development of the fungi constitutes the best attack upon their evolution and phylogeny. This is primarily because of its inclusive character, nothing that can affect the organism being left out of account, but largely also because it focuses attention upon the three essential processes of spore production, spore protection, and spore distribution. The claims of cytology to be the final arbiter of questions of origin and relationship among the fungi have been much advanced of late, but this can only play a part rather than assume the paramount rôle in this field. Quite apart from the fact that its viewpoint is necessarily restricted is the further consideration that no other approach is so beset with the bypaths of interpretation. The task of tracing the phyletic development of the fungi is one to demand all the resources of investigation, chief among which must be experiment on the largest and broadest scale possible, in both field and laboratory.

# System of Classification

## PHYCOMYCETES

### Order 1. Protococcales

- Plasmodiophoraceae
- Family 1. Olpidiaceae
- 2. Synchytriaceae
- Protomycetaceae
- 3. Chytridiaceae

### Order 2. Spirogyrales (Zygomycetes)

- Family 4. Mucoraceae
- 5. Endogonaceae
- 6. Empusaceae
- 7. Ascoideaceae

### Order 3. Vaucheriales (Oomycetes)

- Family 8. Saprolegniaceae
- 9. Ancylistaceae
- 10. Peronosporaceae

### Order 4. Confervales

- Family 11a. Blastocladiaceae
- 11b. Monoblepharidaceae

## ASCOMYCETES

### Order 5. Laboulbeniales

- Family 12. Peyritsiellaceae
- 13. Laboulbeniaceae
- 14. Ceratomycetaceae

### Order 6. Gymnasciales

- Family 15. Endomycetaceae
- 16. Saccharomycetaceae
- 17. Monascaceae
- 18. Gymnascaceae

### Order 7. Perisporiales

- Family 19. Eurotiaceae
- 20. Erysiphaceae
- 21. Perisporiaceae
- 22. Englerulaceae
- 23. Capnodiaceae
- 24. Trichothyriaceae
- 25. Coryneliaceae

### Order 8. Sphaeriales

- Family 26. Sphaeriaceae
- 27. Hypocreaceae
- 28. Lophiostomaceae
- 29. Cyttariaceae
- 30. Verrucariaceae

### Order 9. Dothideales

- Family 31. Dothideaceae
- 32. Myriangiaceae
- 33. Mycoporaceae

### Order 10. Microthyriales

- Family 34. Polystomellaceae
- 35. Microthyriaceae
- 36. Micropeltaceae

### Order 11. Phacidiales

- Family 37. Hysteriaceae
- 38. Graphidaceae
- 39. Phacidaceae
- 40. Stictidaceae
- 41. Trybliidaceae

### Order 12. Pezizales

- Family 42. Dermateaceae
- 43. Bulgariaceae
- 44. Patellariaceae
- 45. Caliciaceae
- 46. Chrysotrichaceae
- 47. Collemaceae
- 48. Peltigeraceae
- 49. Lecideaceae
- 50. Cladoniaceae
- 51. Parmeliaceae
- 52. Physciaceae
- 53. Mollisiaceae
- 54. Helotiaceae
- 55. Pezizaceae
- 56. Helvellaceae
- 57. Ascobolaceae

### Order 13. Agyriales

- Family 58. Agyriaceae
- 59. Exasceae



**Order 14. Tuberales**

- Family 60. Onygenaceae  
 61. Elaphomycetaceae  
 62. Tuberaceae

**PROMYCETES****Order 15. Pucciniales**

- Family 63. Pucciniaceae  
 64. Melampsoraceae

**Order 16. Ustilaginales**

- Family 65. Ustilaginaceae  
 66. Tilletiaceae  
 Graphiolaceae

**BASIDIOMYCETES****Order 17. Tremellales**

- Family 67. Auriculariaceae  
 68. Tremellaceae  
 69. Dacryomycetaceae

**Order 18. Agaricales**

- Family 70. Hypochnaceae  
 71. Thelephoraceae  
 72. Clavariaceae  
 73. Hydnaceae

74. Polyporaceae

75. Agaricaceae

**Order 19. Lycoperdales**

- Family 76. Phallaceae  
 77. Lycoperdaceae  
 78. Hymenogastraceae  
 79. Nidulariaceae

**DEUTEROMYCETES****(Fungi Imperfecti)****Order 20. Phomales**

- Family 80. Phomaceae  
 81. Zythiaceae  
 82. Leptostromaceae  
 83. Discellaceae

**Order 21. Melanconiales**

- Family 84. Melanconiaceae

**Order 22. Moniliales**

- Family 85. Moniliaceae  
 86. Dematiaceae  
 87. Tuberculariaceae  
 88. Stilbaceae  
 Dermophyta  
 Sterile Mycelia  
 Pseudosaccharomycetes

## List of Key Initials

To facilitate reference to books in which specific keys or descriptions are found, references are given after nearly all the genera in the Key. The exceptions are furnished by genera published too recently as a rule to find their way into the various compendia; these may be located by means of the references given in the List of Types and Synonyms (p. 233). The first number after the genus regularly refers to the volume and page of Saccardo's "Sylloge Fungorum" (24 volumes and Addenda). The other references are preceded by an initial, except in families where the initial is given under the name of the family. The following list will serve to identify the authors concerned, while the bibliography will supply the titles.

- C** Clements
- D** Dietel
- F** Fitzpatrick (Phycomycetes)
- F** Fischer (Tuberales, Gasteromycetes)
- H** Hoehnel
- K** Killermann
- L** Lindau
- R** Rehm
- S** Schroeter
- T** Thaxter
- TS** Theissen & Sydow
- Z** Zahlbruckner



## General Key to Families

- A. Hyphal filaments 1-celled, very rarely septate, largely aquatic; propagation by zoospores, conidia or both; sex-cells often present, producing resting-spores **Phycomycetes p. 23, 30**
- B. Hyphal filaments septate, rarely aquatic; propagation by conidia; sex-cells usually absent
1. Spores borne in asci or on true basidia
- a. Spores borne in asci **Ascomycetes p. 24, 42**
- b. Spores borne on true basidia **Basidiomycetes p. 28, 157**
2. Asci or basidia lacking
- a. Spores stalked, sessile or internal but not borne on conidiophores, producing a promycelium on germination; conidia often present in the form of aecia or uredia **Promycetes p. 28, 147**
- b. Conidia alone present, borne on conidiophores of various form, often contained in pycnidia **Deuteromycetes p. 29, 175**

### PHYCOMYCETES

- A. Mycelium lacking or scanty and consisting of a few delicate hyphae; propagation by amoeboid cells and spores or by sporangia and zoospores; sex-cells rare
1. Mycelium lacking
- a. Cells typically amoeboid **Plasmodiophoraceae p. 30**
- b. Cells not amoeboid
- (1) Sporangia separate or grouped, but without a soral membrane **Olpidiaceae p. 30**
- (2) Sporangia typically enclosed in a soral membrane **Synchytriaceae p. 31**
2. Mycelium scanty, hyphae typically few and delicate **Chytridiaceae p. 32**
- B. Mycelium present, typically well-developed and ramose; propagation by zoospores or conidia; sex-cells usually present
1. Typically aquatic fungi propagating by zoospores
- a. Mycelium mostly well-developed
- (1) Antheridial tube touching or penetrating the oogone **Saprolegniaceae p. 38**
- (2) Antherids producing ciliate antherozoids
- (a) Hyphae much branched; reproduction by isogametes **Blastocladiaceae p. 40**
- (b) Hyphae mostly simple; reproduction by heterogametes **Monoblepharidaceae p. 41**

- b. Mycelium short, tubular, mostly or entirely developing into sex-cells **Ancylistaceae p. 39**
2. Typically aerial fungi propagating by conidia
- a. Conidia typically in globose to cylindric sporangia or sporocarps
- (1) Conidia endogenous, or rarely exogenous
- (a) Conidia typically in stalked sporangia, rarely on conidiophores **Mucoraceae p. 34**
- (b) Conidia in sessile sporocarps, often with chlamydo-spores or the latter alone present **Endogonaceae p. 36**
- (2) Conidia exogenous on conidiophores and endogenous in sporangia **Ascoideaceae p. 37**
- b. Conidia single, rarely in chains, on the tips of simple or branched conidiophores
- (1) Conidiophores simple; zygosporous; largely entomogenous **Empusaceae p. 37**
- (2) Conidiophores typically ramose, or conidia in chains; oosporous; typically parasites on leaves and stems **Peronosporaceae p. 40**

## ASCOMYCETES

- A. Asci completely or partly enclosed in a definite pericarp which opens variously at maturity
1. Pericarp with a distinct wall, mostly with a regular opening at maturity
- a. Asci borne in perithecia, which are often reduced to locules in a stroma
- (1) Perithecia one to many on a receptacle; sex-organs present; typically on insects **Laboulbeniales p. 42**
- (2) Perithecia not on a receptacle; sex-organs regularly lacking; rarely on insects
- (a) Ostiole and paraphyses usually lacking **Perisporiales p. 49**
- x. Asci borne on branched hyphae, hence irregularly disposed or in corymboid clusters **Eurotiaceae p. 50**
- y. Asci in a basal umbel or parietal layer, or sometimes solitary
- (x) Aerial mycelium typically present; no erumpent stroma
- m. Aerial mycelium white; appendages present and usually modified **Erysiphaceae p. 52**
- n. Aerial mycelium dark, sometimes lacking; appendages usually absent
- (m) Perithecia not radiate
- r. Hyphae not slimy, straight-walled; perithecia parenchymic, the cells polygonal, not slimy **Perisporiaceae p. 53**
- s. Hyphae straight-walled; perithecia dissolving in slime as they mature **Englerulaceae p. 55**

- t. Hyphae constricted or dematioid, or in slimy skeins when straight-walled; perithecia of rounded cells or agglutinate straight-walled meridian hyphae  
 (n) Perithecia radiate; asci hanging from the apparent tip **Capnodiaceae** p. 56
- (y) Aerial mycelium lacking; perithecia borne on an innate-erumpent stroma, elongate **Trichothyriaceae** p. 58
- (b) Ostiole regularly present **Coryneliaceae** p. 58  
**Sphaeriales** p. 58
- x. Perithecial wall distinct; perithecia separate or in a stroma
- (x) Perithecia not parasitic on algae, without a thallus
- m. Perithecia dark, membranous to carbonous
- (m) Ostiole papillate or conical, round, not compressed **Sphaeriaceae** p. 59
- (n) Ostiole broad and compressed, the opening linear **Lophiostomaceae** p. 82
- n. Perithecia bright-colored, rarely whitish, fleshy **Hypocreaceae** p. 76
- (y) Perithecia parasitic on algae, typically with a thallus **Verrucariaceae** 84
- (z) Ascospores at first perithecioid, then cupuloid, in a ramose or alveolate stroma **Cyttariaceae** p. 83
- y. Perithecial wall indefinite or lacking; perithecia reduced to locules in a stroma **Dothideales** p. 88
- (x) Perithecia not parasitic on algae, without a thallus
- m. Locules distinct, perithecium-like, typically ostiolate, with many asci and usually with paraphyses **Dothideaceae** p. 89
- n. Locules mere hollows filled by single asci and separated by stromal tissue or rarely by paraphysoids **Myriangiaceae** p. 92
- (y) Perithecia parasitic on algae, typically with a thallus **Mycoporaceae** p. 94
- b. Asci borne in hysterothecia or dimidiate ascomata
- (1) Asci borne in hysterothecia, the ostiole cleftlike or sometimes stellate
- (a) Not parasitic on algae, thallus lacking **Hysteriaceae** p. 102
- (b) Parasitic on algae, thallus present **Graphidaceae** p. 104
- (2) Asci borne in dimidiate ascomata with a scutellum radiate in whole or in part as a rule
- (a) Scutellum radiate
- x. Apothecia or hypostroma innate or erumpent **Polystomellaceae** p. 95
- y. Apothecia superficial, hypostroma none **Microthyriaceae** p. 98

- (b) Scutellum radiate only at margin or not at all Micropeltaceae p. 100
- c. Asci borne in apothecia
- (1) Apothecia not parasitic on algae, thallus lacking
- (a) Apothecia sunken, then erumpent, usually opening by lobes, sometimes by a cleft Phacidiales p. 102
- x. Apothecia dark to black Phacidiaceae p. 107
- (x) Hypothecium thin Trybliaceae p. 111
- (y) Hypothecium thick Stictiaceae p. 109
- y. Apothecia light-colored, mostly white
- (b) Apothecia typically superficial, opening circularly, sometimes erumpent, as in the first family Pezizales p. 112
- x. Apothecia typically innate-erumpent, leathery or horny, brown or black Dermateaceae p. 114
- y. Apothecia typically superficial
- (x) Asci disappearing early; spores and paraphyses forming a mazaedium Caliciaceae p. 119
- (y) Asci persistent; mazaedium lacking
- m. Apothecia gelatinous Bulgariaceae p. 115
- n. Apothecia not gelatinous
- (m) Apothecia usually dark, carbonous to leathery, rarely waxy Patellariaceae p. 117
- (n) Apothecia usually bright-colored, waxy to fleshy
- r. Apothecia typically waxy, on plants
- (r) Exciple dark, parenchymic all over or at the base; mostly sessile Mollisiaceae p. 133
- (s) Exciple concolorous, rarely dark, prosenchymic; mostly stalked Helotiaceae p. 134
- s. Apothecia typically fleshy, usually terricole, sometimes fimicole
- (r) Apothecia closed at first, then open, cupulate to discoid, rarely ear-shaped
- h. Apothecia usually terricole, medium to large; asci mostly cylindric, not exserted Pezizaceae p. 137
- i. Apothecia usually fimicole, small; asci broad, exserted from disk at maturity Ascobolaceae p. 140
- (s) Apothecia open from the first, stalked, saddle-shaped to pileate or clavate, terricole as a rule Helvellaceae p. 139
- (2) Apothecia parasitic on algae, thallus typically well-developed

- (a) Asci disappearing early; disk with a mazaedium **Caliciaceae p. 119**
- (b) Asci persistent; mazaedium lacking
- x. Thallus cottony, cobwebby or spongy; algae yellow-green **Chyrosotrichaceae p. 120**
- y. Thallus more or less distinctly gelatinous; algae blue-green **Collemaceae p. 121**
- z. Thallus firm, layered, neither cottony nor gelatinous
- (x) Thallus of two kinds, one horizontal, the other erect, i. e., a podetium **Cladoniaceae p. 126**
- (y) Thallus of one kind only, horizontal or erect
- m. Spores typically 2-celled and biguttulate, with a thickened septum, usually traversed by a narrow canal **Physciaceae p. 132**
- n. Spores without thickened septum and intersecting canal
- (m) Apothecia sunken or grown to the thallus on the whole underside **Peltigeraceae p. 123**
- (n) Apothecia typically superficial when mature, not attached broadly
- r. Apothecia with proper exciple **Lecideaceae p. 124**
- s. Apothecia with thalline exciple **Parmeliaceae p. 127**
2. Pericarp without definite opening, merely breaking irregularly or decaying at maturity; mostly hypogean **Tuberales p. 144**
- a. Ascoma not hypogean, opening more or less regularly; gleba typically with capillitium **Onygenaceae p. 144**
- b. Ascoma hypogean, not opening spontaneously
- (1) Gleba powdery, usually with capillitium **Elaphomycetaceae p. 145**
- (2) Gleba firm, loculate, lacunose or veined, without capillitium **Tuberaceae p. 145**
- B. Asci exposed or with a loose hyphal pericarp**
1. Asci solitary or in irregular masses **Gymnascales p. 46**
- a. Asci solitary, on or in mycelial threads, naked or with an individual hyphal wall
- (1) Asci naked **Endomycetaceae p. 46**
- (a) Asci terminal or lateral on a branched septate mycelium
- (b) Asci intercalary or continuous in a short budding mycelium **Saccharomycetaceae p. 47**
- (2) Asci with an individual hyphal wall, terminal on the branches of a septate mycelium **Monascaceae p. 48**
- b. Asci in masses, enclosed by a loose hyphal peridium, the latter sometimes sclerotoid **Gymnascaceae p. 48**
2. Asci forming a hymenium-like layer **Agyriales p. 141**
- a. Paraphyses and hypothecium present, or one or the other occasionally lacking **Agyriaceae p. 142**
- b. Paraphyses and hypothecium both lacking **Exascaceae p. 143**

## PROMYCETES

- A. Spores produced externally as teliospores; aecia and uredia usually present **Pucciniales p. 147**
1. Teliospores typically single and stipitate, sometimes united in a gelatinous mass or a definite body, or more or less fused in series **Pucciniaceae p. 147**
  2. Teliospores sessile, combined in flat crusts, pulvinate masses, or columnar forms, occasionally arising within the epidermal cells or in the mesophyll **Melampsoraceae p. 153**
- B. Spores produced internally in hyphae that disappear to form a more or less powdery spore-mass **Ustilaginales p. 154**
1. Promycelium septate transversely, bearing sporidiales **Ustilaginaceae p. 154**
  2. Promycelium simple, bearing a crown of whorled conidia **Tilletiaceae p. 155**

## BASIDIOMYCETES

- A. Hymenium exposed at maturity, variously modified
1. Basidia septate or cylindric-clavate and 2-spored **Tremellales p. 157**
    - a. Basidia septate **Auriculariaceae p. 157**
      - (1) Basidia transversely septate, elongate-cylindric; sterigmata lateral **Tremellaceae p. 158**
      - (2) Basidia vertically or cruciately 2-4-divided; sterigmata terminal, usually subulate **Dacryomycetaceae p. 159**
    - b. Basidia cylindric-clavate, not septate, with 2 blunt terminal sterigmata **Agaricales p. 159**
  2. Basidia not septate, typically 4-spored **Hypochnaceae p. 160**
    - a. Pileus byssoid or lacking
    - b. Pileus present, firm, crustose to cap-like
      - (1) Hymenium smooth, or merely warted or wrinkled **Thelephoraceae p. 160**
        - (a) Pileus resupinate, dimidiate, cupulate or funnel-form, typically leathery or membranous
        - (b) Pileus typically clavate, filiform or coral-loid, and fleshy **Clavariaceae p. 162**
      - (2) Hymenium modified into teeth, tubes or gills
        - (a) Hymenium of teeth or tooth-like granules **Hydnaceae p. 162**
        - (b) Hymenium of tubes or pores **Polyporaceae p. 163**
        - (c) Hymenium of gills or rarely of gill-like veins **Agaricaceae p. 164**
- B. Definite hymenium lacking; spore-mass or gleba gelatinous, powdery or saccate, typically enclosed in a peridium, sometimes elevated at maturity **Lycoperdales p. 168**
1. Gleba more or less gelatinous, enclosed at first in a volva, then raised on a receptacle, the latter usually stalked **Phallaceae p. 169**



2. Gleba firm or powdery, rarely gelatinous, without volva or receptacle but enclosed in a peridium
- a. Peridium epigean
- (1) Gleba typically powdery or cellular, enclosed in a peridium opening by a definite mouth or irregularly  
Lycoperdaceae p. 170
- (2) Gleba enclosed in seed-like peridioles borne in a globoid to funnellform peridium  
Nidulariaceae p. 173
- b. Peridium hypogean, regularly closed  
Hymenogastraceae p. 172

## DEUTEROMYCETES (Fungi Imperfecti)

- A. Conidia present
1. Conidia in globoid, cupuloid or hysteroioid pycnidia  
Phomales p. 175
- a. Pycnidia perithecium-like, typically globoid, ostiolate or astomous
- (1) Pycnidia brown to black, membranous to carbonous  
Phomaceae p. 176
- (2) Pycnidia bright-colored or hyaline, fleshy, sometimes gelatinous or waxy  
Zythiaceae p. 186
- b. Pycnidia dimidiate and usually more or less distinctly radiate, rarely hysteroioid  
Leptostromaceae p. 189
- c. Pycnidia apothecium-like or hysteroioid, cupulate to discoid, opening circularly or less often by a cleft or lobes, dark and subcarbonous to bright-colored and fleshy  
Discellaceae p. 192
2. Conidia not in pycnidia
- a. Hyphae short or obsolete, borne on a more or less parenchymoid stroma  
Melanconiales p. 196
- b. Hyphae not on a stroma, typically well-developed, but sometimes short or even lacking  
Moniliales p. 200
- (1) Hyphae in more or less loose cottony masses
- (a) Hyphae and conidia hyaline or bright-colored  
Moniliaceae p. 201
- (b) Hyphae and conidia both typically dark, or one or the other dark  
Dematiaceae p. 209
- (2) Hyphae compacted to form a globose to cylindrical spore-body which is often stalked
- (a) Spore-body typically sessile, globose to pulvinate or applanate, i. e., a sporodochium  
Tuberculariaceae p. 219
- (b) Spore-body stalked, capitate to cylindrical, i. e., a synnema  
Stilbaceae p. 227
- B. Conidia lacking  
Sterile Mycelia p. 231
- C. Conidia present but criteria indefinite; parasites on human skin  
Pseudosaccharomycetes p. 411  
Dermophyta p. 231

# Key to the Genera

## PHYCOMYCETES

### Order 1. PROTOCOCCALES

Typically 1-celled yellow-green algae, propagating by fission and frequently also by the formation of zoospores; sexual reproduction usually lacking; three fungous families.

#### Key to Families

- A. Mycelium lacking
  - 1. Cells typically amoeboid Plasmodiophoraceae p. 30
  - 2. Cells not amoeboid
    - a. Sporangia separate or grouped, but without a soral membrane Olpidiaceae p. 30
    - b. Sporangia typically enclosed in a soral membrane Synchytriaceae p. 31
- B. Mycelium present, hyphae typically few and delicate Chytridiaceae p. 32

### PLASMODIOPHORACEAE

Fitzpatrick 48

Mycelium none; cells consisting of naked more or less amoeboid protoplasts forming single sporangia which produce 1-8 amoeboid or rarely 1-ciliate spores; parasites in plant tissues, frequently causing hypertrophy of the host; closely related to the *Mycetozoa* and perhaps best regarded as parasitic slime-molds; included here only for convenience.

- A. Spores separate in the host-cells at maturity Plasmodiophora 7:464, F 55
- B. Spores remaining united at maturity
  - 1. Spores united in twos or fours Tetramyxa 7:464, F 59
  - 2. Spores united in larger numbers
    - a. Spores forming a more or less globose hollow body Sorosphaera 7:446, F 60
    - b. Spore-masses forming 2-layered plates, sometimes with a small cavity Sorodiscus F 63
    - c. Spore-mass sponge-like in structure Spongospora F 64

### Family 1. OLPIDIACEAE

Fitzpatrick 71; Minden 227

Mycelium lacking; cells endobiotic, globose, elliptic or rarely clavoid, typically forming a simple zoosporangium, or a resting sporangium that produces zoospores after a period of rest, or sometimes fragmenting to yield a number of sporangia; zoospores 1- or 2-ciliate

## Subfamily Olpidiae

Zoospores posteriorly 1-ciliate

- A. Sporangia free in the host-cell
1. Sporangia globose
    - a. Sporangia opening by 1-x tubes or by a pore
      - (1) Resting spore with 1-x companion-cells; in Spirogyraceae **Pseudolpidiopsis 76**
      - (2) Resting spore without companion-cells **Olpidium 73; plate 1**
    - b. Sporangia opening by many more or less radiate tubes **Pleotrachelus 78**
  2. Sporangia ellipsoid to fusoid or tubular
    - a. Sporangia ellipsoid to fusoid, opening at one or both ends by a pore or papilla; in Protozoa **Sphaerita 72**
    - b. Sporangia tubular; tubes many, short, in 1-2 rows; in Bacillariaceae **Ectrogella 77**
- B. Sporangia fixed in host-cell, the walls appressed or fused
1. Sporangial wall appressed to that of host-cell; in algae (Oedogonium) **Plasmophagus 79**
  2. Sporangial wall completely fused with that of host-cell; in Phycomyces **Pleolpidium 78**

## Subfamily Woroninae

Zoospores laterally biciliate; regularly in Saprolegniaceae

- A. Sporangia short-cylindric, seriate, filling the host hypha **Rozella 68**
- B. Sporangia globose to saccoid, not seriate
1. Sporangia 1-x, separate
    - a. Resting spore with 1-x companion-cells **Diplophysa 67; 1**
    - b. Resting spore without companion-cells **Olpidiopsis 67**
  2. Sporangia many, forming a more or less definite sorus **Woronina 69**

## Family 2. SYNCHYTRIACEAE

Fitzpatrick 80; Minden 278

Mycelium lacking; cells endobiotic in higher plants, producing galls, early developing a membrane, finally becoming a resting sporangium or dividing to form a sorus of sporangia enclosed in a membrane; zoospores posteriorly 1-ciliate.

One genus

**Synchytrium 80; 1**

## Addendum. Protomycetaceae

Mycelium scanty, of delicate septate branching intercellular hyphae bearing terminal or intercalary unicellular chlamydozoospores which finally germinate, producing numerous small simple non-motile spores in the endospore, which is expelled in the form of a globose or cylindrical sack, the latter bursting at maturity to free the spores; parasites on higher plants.

A. Chlamydozoospores formed irregularly in the sub-epidermal tissues

1. Chlamydozoospores smooth

**Protomyces 7:319, F 305**

2. Chlamydospores verrucose Protomycopsis F 306  
 B. Chlamydospores forming a continuous layer  
 beneath the epidermis Taphridium 18:203, F 306

### Family 3. CHYTRIDIACEAE

Fitzpatrick 88, 100; Minden 209

Mycelium present, consisting typically of short delicate more or less branched hyphae, endophytic or epiphytic; sporangia single and terminal or several and intercalary, often with a sterile swollen cell at base; resting spores similar; zoospores 1-ciliate.

The limits of genera are even more indefinite in this family than in the order as a whole. This arises partly from the great difficulty of investigating adequately forms of such transitory nature and relatively infrequent occurrence. It seems probable that it is caused even more by an exceptional degree of plasticity, in nature but also especially in culture, arising from the hypertrophy due to an intense parasitism. These difficulties have been appreciated by Fitzpatrick in particular and his treatment has been adopted in the following key, except for a few minor details.

#### Subfamily Chytridiæ

Mycelium usually confined to one or two cells of the host, bearing a single sporangium

#### A. Mycelium wholly intramatrical

##### 1. Sporangia epibiotic

##### a. Mycelium consisting of delicate more or less branching threads

(1) Resting spores intramatrical; on Pandorina

Dangeardia 96

(2) Resting spores epibiotic or lacking

(a) Mycelium usually monophagous; resting spore producing zoospores

##### x. Sporangia with a basal vesicle

(x) Sporangia with extramatrical stalk

m. Sporangia with a solid apical spine, in open connection with stalk; saprophytes

Obelidium 92

n. Sporangia without apical spine, a septum between it and the stalk; in Pinnularia

Podochytrium 92

(y) Sporangia without extramatrical stalk

##### m. Orifice apical

(m) Sporangia opening by a lid; in Cylindrocystis

Zygorhizidium 93

(n) Sporangia without a lid

r. Sporangia emitting a vesicle in which the zoospores are formed

Rhizidiomyces 93

s. Sporangia with internal formation of zoospores

(r) Zoospores escaping normally; typically algicole

Phlyctochytrium 94; 1

- (s) Zoospores encysting at orifice; in pollen-grains of Typha  
Achlyella 94
- n. Orifice basal or subbasal
- (m) Sporangia spiny  
Asterophlyctis 94
- (n) Sporangia smooth
- r. Hyphae drawn out to extremely slender tips  
Rhizoclostridium 94
- s. Hyphae more or less tubular  
Siphonaria 95
- y. Sporangia without a basal vesicle  
Rhizophidium 91; 1
- (b) Mycelium often polyphagous; resting spore serving as a prosporangium, the zoospores forming in the extruded endospore  
Rhizidium 96; 1
- b. Mycelium not consisting of delicate threads
- (1) Mycelium a delicate stalk with disk-like tip applied to or formed in the wall of host; sporangia long, fusiform, proliferating; algicole  
Harpochytrium 96
- (2) Mycelium without such a disk
- (a) Resting spores endobiotic, germinating to form an epibiotic sporangium; mycelium a short broad tube; algicole  
Chytridium 96; 1
- (b) Resting spores epibiotic, germinating by zoospores
- x. Sporangia extruding a vesicle in which the zoospores develop; mycelium a lobed haustorium; in Euglena  
Saccomyces p. 98
- y. Sporangia not extruding a vesicle; mycelium a filiform or inflated haustorium  
Phlyctidium 98
2. Sporangia and resting spores intramatrical, formed from a swelling at the tip of the germ-tube of the zoospore
- a. Sporangia with a basal vesicle; resting spore spiny; in Characeae  
Diplophlyctis 98
- b. Sporangia without basal vesicle; resting spore smooth; algicole  
Entophlyctis 98
- B. Mycelium intramatrical only at the tips, polyphagous, parasitic
1. Individual functioning as a sporangium or resting spore
- a. Sporangia with a definite orifice; algicole  
Rhizophlyctis 99
- b. Sporangia without orifice, the wall breaking to emit the zoospores in a rotating sphere; in Hormotheca  
Nowakowskia 99
2. Individual functioning as a prosporangium, extruding a vesicle in which the zoospores are formed; resting spores produced by copulation
- a. Zoospores ciliate, escaping before germination; in Euglena and Chlamydomonas  
Polyphagus 100; 1
- b. Zoospores not ciliate, germinating in the sporangia; on Draparnaldia  
Sporophlyctis 100

## Subfamily Cladochytriae

Mycelium wide-spreading, developing terminal and intercalary enlargements, transformed wholly or partly into sporangia or resting spores; genera for the most part poorly defined.

- A.** Zoospores amoeboid, not ciliate; on *Chaetophora* **Amoebochytrium** 101
- B.** Zoospores ciliate, not amoeboid
1. Sporangia present, terminal or intercalary, formed from enlargements of the mycelium; resting spores rare or absent
    - a. Sporangia with a lid, proliferating **Nowakowskiella** 101
    - b. Sporangia without a lid, not proliferating
      - (1) Mycelium of rather broad cylindrical threads; sporangia developed from fusiform swellings and separated by short cylindrical cells **Catenaria** 101
      - (2) Mycelium of extremely delicate ramose threads; swellings globose or irregular **Cladochytrium** 102
  2. Sporangia rare, when present epibiotic and developing directly from the zoospore; resting spores present and abundant **Physoderma** 103; 1

## Order 2. SPIROGYRALES

Typically 1-celled or filamentous yellow-green algae without zoospores; sexual reproduction by the conjugation of non-motile usually equal gametes; four fungous families.

## Key to Families

- A.** Fructification by means of sporangia and zygospores or one of the two
1. Conidia endogenous in globoid to cylindrical sporangia, rarely exogenous **Mucoraceae** p. 34
  2. Conidia exogenous, single on clavate conidiophores; largely entomophilous **Empusaceae** p. 37
  3. Conidia exogenous on cylindrical conidiophores and endogenous in elongate sporangia **Ascoideaceae** p. 37
- B.** Fructification by means of a definite sporocarp containing zygospores, azygospores or sporangia **Endogonaceae** p. 36

## Family 4. MUCORACEAE

Schroeter 119; Fitzpatrick 234

Saprophytes, rarely parasites, with a well-developed branching mycelium in which septa are lacking; propagation by spores (conidia) arising within sporangia, the latter apparently reduced to chains of conidia in one subfamily; reproduction by the fusion of the end-cells or gametes of conjugating tubes; zygospores naked or surrounded by filaments or a web of hyphae.

## Key to Subfamilies

- A.** Sporangia present
1. Columella present
    - a. Wall of sporangium uniform, not cutinized, diffuent
      - (1) Sporangioles or conidia present **Choanophorae** p.
      - (2) Sporangioles and conidia lacking as a rule **Mucorae** p.

- b. Wall of sporangium cutinized and persistent above, thin and diffuent below *Pilobolae* p.
2. Columella lacking; zygospor in a dense weft of hyphae *Mortierellae* p.
- B.** Conidia present in chains or clusters; representing sporangia
1. Conidia in chains; zygosporos arising usually from an outgrowth of the fused gametes *Syncephalidae* p.
2. Conidia in clusters on spinose conidiophores; zygosporos arising directly from the fused gametes *Chaetocladidae* p.
- Subfamily Mucorae**
- A.** Sporangia of one kind
1. Sporangiphore repeatedly dichotomous *Sporodinia* 7:206; S 127, F 247
2. Sporangiphore simple or branched but not repeatedly dichotomous
- a. Suspensors of the zygospor with spinose appendages at maturity
- (1) Appendages spreading *Phycomyces* 7:204; S 126, F 248; 2
- (2) Appendages loosely enclosing the zygospor *Absidia* 7:214; S 126, F 244
- b. Suspensors without appendages at maturity
- (1) Aerial mycelium present
- (a) Aerial mycelium stoloniferous *Rhizopus* 7:212; S 125, F 245
- (b) Aerial mycelium with many short spinose branches *Spinellus* 7:205; S 125, F 246
- (2) Aerial mycelium lacking
- (a) Sporangia single, terminal *Mucor* 7:190; S 124, F 250; 2
- (b) Sporangia clustered, lateral
- x. Sporangia globoid; columella cylindrical to conic *Circinella* 7:215, S 125, F 244
- y. Sporangia piriform; columella hour-glass-like *Pirella* 7:216; S 125, F 243
- B.** Sporangia of two kinds, primary and secondary
1. Both kinds of sporangia with columella *Dicranophora* 11:240; S 128, F 254
2. Primary sporangia with, secondary without columella *Thamnidium* 7:211; S 127, F 256; 2

**Subfamily Pilobolae**

- A.** Sporangia seated on a large vesicle, thrown off at maturity *Pilobolus* 7:184; S 129, F 251; 2
- B.** Sporangia not on a vesicle and not thrown off at maturity *Pilaira* 7:184; S 129, F 253

**Subfamily Mortierellae**

- A.** Sporangia present
1. Sporangia arising directly from normal hyphae
- a. Sporangiphores erect, branches long-attenuate *Mortierella* 7:220; S 130, F 265; 2

- b. Sporangiphores creeping, branches terete *Herpocladium* 7:225; S 130, F 268
2. Sporangia arising from a stout creeping hypha as buds behind the tip *Dissophora* F 268
- B. Sporangia represented by 1-2-spored sporangioles borne terminally and sometimes laterally also on short branches from fertile intercalary segments of the mycelium *Haplosporangium* F 268

#### Subfamily Choanophorae

- A. Sporangia present, together with sporangioles or conidia
1. Sporangioles present, conidia lacking; spores striate lengthwise *Blakeslea* F 259
2. Conidia present, sporangioles lacking; conidia striate lengthwise *Choanophora* F 261; 2
- B. Sporangia and sporangioles lacking; conidia present, echinulate *Cunninghamella* F 263

#### Subfamily Syncephalidae

- A. Sporangiphores ramose
1. Branching more or less dichotomous
- a. Some branches sterile, prong-like; sporangiferous heads not deciduous *Dispira* F 270
- b. All branches fertile; sporangiferous heads deciduous *Piptocephalis* 7:225; S 132, F 272; 2
2. Branching not dichotomous, but cymose or indefinite; sporangiferous heads not deciduous *Syncephalastrum* 7:232, S 134; F 273; 2
- B. Sporangiphores not ramose below the apical vesicle, provided with spur-like rhizoids *Syncephalis* 7:227; S 132, F 273; 2

#### Subfamily Chaetocladia

- One genus *Chaetocladium* 7:220; S 131, F 257; 2

### Family 5. ENDOGONACEAE

Sporocarps more or less globose or irregular in shape, with a hyphal tomentum or pseudoperidium, sometimes reduced to a nearly naked sorus; producing zygospores or azygospores (chlamyospores) and sometimes in *Endogone*, sporangia; hypogean or epigeal saprophytes.

This is a small group of somewhat doubtful relationship, but regarded by recent workers as exhibiting affinity to the *Mortierellae*.

- A. Pseudoperidium composed of bundles of hyphae radiating from the surface *Sphaerocreas* 4:679; F 267
- B. Pseudoperidium not composed of radiating hyphal bundles
1. Sporocarps hollow; spores arranged irregularly in the wall *Glaziella* 2:581; F 267





## Family 8. SAPROLEGNIACEAE

Schroeter 93; Fitzpatrick 146; Minden 506

Mycelium strongly developed, broadly filamentous, more or less ramose, often constricted; propagation by sporangia producing zoospores or aplanospores; reproduction by means of antherids and oogones, their contents fusing by means of a connecting tube.

## Key to Subfamilies

- |  |                     |
|--|---------------------|
| A. Hyphal filaments uniform, not constricted                             | <b>Saprolegniae</b> |
| B. Hyphal filaments or their branches constricted more or less regularly | <b>Leptomitae</b>   |

## Subfamily Saprolegniae

- |  |   |
|--|---|
| A. Zoospores escaping before germination   |   |
| 1. Sporangia cylindric-clavate to ovoid, zoospores in several rows   |   |
| a. Zoospores escaping through a terminal pore  |   |
| (1) Zoospores scattering upon escape   |   |
| (a) Sporangia ovoid; oogones usually 1-spored  | <b>Pythiopsis S 97, F 165; 3</b>          |
| (b) Sporangia clavoid; oogones mostly x-spored   | <b>Saprolegnia 7:268; S 97, F 167; 3</b>  |
| (2) Zoospores remaining massed about the pore  | <b>Achlya 7:274; S 99, F 167</b>          |
| b. Zoospores not escaping through a common pore  |   |
| (1) Each zoospore escaping singly through its own lateral pore   | <b>Dictyuchus 7:273; S 99, F 162; 3</b>   |
| (2) Zoospores freed by the disintegration of the whole sporangium  | <b>Thraustotheca S 100; F 160</b>         |
| 2. Sporangia linear and zoospores 1-rowed, at least above  |   |
| a. Zoospores escaping through a terminal pore  |   |
| (1) Sporangia irregular and complex with inflated ramose base with zoospores in several series and filamentous apical portion with a single series | <b>Plectospira F 167</b>                  |
| (2) Sporangia not ramose and inflated  |   |
| (a) Zoospores scattering upon escape   | <b>Leptolegnia S 100, F 170; 3</b>        |
| (b) Zoospores remaining massed about the pore  | <b>Aphanomyces 7:276; S 100, F 167; 3</b> |
| b. Zoospores non-motile, escaping by disintegration of the sporangium  | <b>Geolegnia F 164</b>                    |
| B. Zoospores non-motile, germinating in the sporangium   | <b>Aplanes S 101, F 158; 3</b>            |

## Subfamily Leptomitae

- |  |  |
|--|--|
| A. Hyphae uniformly cylindric, without trunk and branches, regularly constricted |  |
| 1. Sporangia cylindric, resembling the segments; zoospores escaping singly       | <b>Leptomitus 7:265; S 101, F 173; 3</b> |

- 2. Sporangia ellipsoid to piriform, broader than the segments; zoospores encysting at the pore
  - B. Hyphae differentiated into stout trunk and slender branches, the latter usually somewhat constricted, rarely lacking
    - 1. Trunk more or less cylindrical, the branches similar but narrow
      - a. Trunk about twice as wide as branches; sporangia all alike, smooth; oogones piriform
      - b. Trunk several times wider than branches; sporangia of two kinds, smooth and spinose; oogones globose
    - 2. Trunk not cylindrical
      - a. Trunk more or less lobed, branches filamentous, numerous, bearing the reproductive cells
      - b. Trunk broadly clavate, hardly branched; reproductive cells on short pedicels
- Apodachlya S 102, F 173; 3
- Sapromyces S 163, F 175
- Araeospora 14:454; F 177
- Rhipidium 7:268; S 103, F 180; 3
- Mindeniella F 180

**Family 9. ANCYLISTACEAE**

Schroeter 134; Fitzpatrick 117; Minden 426

Mycelium mostly poorly developed and scarcely distinct from the fruit-body, the latter tubular, when mature divided into vegetative cells, sporangia or oogones and antherids; entire contents of antherid passing into oogone, oospore lying free; sporangia always producing zoospores.

- A. Hyphae ramose
    - 1. Vegetative cells present, growing by germ-tubes; sporangia lacking
    - 2. Vegetative cells lacking; sporangia present
  - B. Hyphae simple
    - 1. Zoospores escaping normally and encysting at the pore
    - 2. Sporangia extruding a vesicle bearing zoospores
- Ancylistes 7:280; S 92, F 124; 3
- Lagenidium 7:278; S 90, F 122; 3
- Achlyogeton 7:277; S 89, F 119
- Myzocytium 7:279; S 90, F 120; 3

**Family 10. PERONOSPORACEAE**

Schroeter 110; Fitzpatrick 185

Mycelium abundant, filamentous, 1-celled, much branched, typically endophytic; propagation by means of conidia (sporangia) borne on the ends of conidiophores, producing zoospores or a germinating tube, occasionally by means of normal sporangia; reproduction regularly by means of internal oogones and antherids, borne on the ends of lateral branches; oospores solitary, producing zoospores or a germinating tube.

**Key to Subfamilies**

- A. Conidia catenate; conidiophores clavate, simple, forming a sorus
  - B. Conidia or sporangia not catenate; conidiophores regularly branched, not forming a sorus
- Albuginæ



- |  |              |
|--|--------------|
| 1. Conidia borne successively on conidiophores<br>little different from the hyphae | Pythiae      |
| 2. Conidia borne on highly differentiated conidio-<br>phores                       | Peronosporae |

**Subfamily Pythiae**

- |  |                                |
|--|--------------------------------|
| A. Sporangia asymmetric, the insertion eccentric         | Pythiogeton F 194              |
| B. Sporangia symmetric, the insertion centric            |                                |
| 1. Wall of sporangium smooth; zoospores present          | Pythium 7:270; S 104, F 195; 3 |
| 2. Wall of sporangium echinulate; zoospores lack-<br>ing | Trachysphaera F 209            |

**Subfamily Peronosporae**

- |   |  |
|---|--|
| A. Conidiophores slender, with long slender branches                                      |  |
| 1. Conidiophore growing after the formation of<br>the first conidia, producing new joints | Phytophthora 7:237; S 113,<br>F 199; 4 |
| 2. Conidiophore not proliferating   |  |
| a. Conidia papillate at tip   |  |
| (1) Conidia on sterigmata arising from irregu-<br>lar disks                               | Bremia 7:243; S 116, F 219; 4          |
| (2) Conidia on sterigmata without disks   | Plasmopara 7:239; S 115, F 215;<br>4   |
| b. Conidia not papillate at tip   | Peronospora 7:244; S 117,<br>F 221; 4  |
| B. Conidiophores stout, with short thick branches<br>or swollen and sterigmate at tip     |  |
| 1. Conidiophores with short thick branches  | Sclerospora 7:238; S 114, F 212;<br>4  |
| 2. Conidiophores with a sterigmate vesicle at tip   | Basidiophora S 114, F 214; 4           |

**Subfamily Albuginae**

- |           |                               |
|-----------|-------------------------------|
| One genus | Albugo 7:233; S 110, F 188; 4 |
|-----------|-------------------------------|

## Order 4. CONFERVALES

Typically multicellular filamentous algae, propagating by zoospores and reproducing by the union of isogametes, or by heterogametes borne in antherids and oogones; two small fungous families.

**Key to Families**

- |  |                          |
|--|--------------------------|
| A. Filaments fastigiately or corymbosely ramose;<br>reproduction by isogametes         | Blastocladiaceae p. 40   |
| B. Filaments usually simple; reproduction by<br>heterogametes in antherids and oogones | Monoblepharidaceae p. 41 |

### Family 11a. BLASTOCLADIACEAE

Fitzpatrick 130; Minden 601

Mycelium either fastigiately ramose and constricted, without rhizoids, or with a thick trunk, corymbose branches and rhizoids; propagation by sporangia and zoospores; reproduction by isogametes producing a biciliate zygote.

- A. Mycelium fastigiately ramose and constricted, without rhizoids; sporangia present; gametes unknown  
Gonapodya 14:452; S 107, F 134; 4
- B. Mycelium with a thick trunk, more slender corymbose branches, and rhizoids; sporangia and gametes present  
Blastocladia F 136

**Family 11b. MONOBLEPHARIDACEAE**

Schroeter 106; Fitzpatrick 138; Minden 462

Filaments mostly simple, arising from a ramose mycelium fixed to the substratum by rhizoids; propagation by zoospores; reproduction by heterogametes produced in antherids and oogones, antherozoids ciliate; oospores solitary.

- One genus  
Monoblepharis 7:277; S 107; F 138; 4

# ASCOMYCETES

## Order 5. LABOULBENIALES

Thaxter 197, 2:220; Lindau 491

Receptacle consisting of two to many cells in a row, or parenchyma-like, regularly producing from the cells one or more appendages bearing antherids as a rule; antherozoids normally endogenous, borne within flask-like, simple or compound antherids, rarely produced like conidia, i. e., naked or exogenous; perithecia one to many, stalked or sessile, terminal or lateral on the receptacle, resulting from fertilization by means of a trichogyne; asci seriate, mostly 4-spored; spores usually 2-celled.

This key is merely compiled from those constructed by Thaxter in his first two monographs (1895, 1908) and is fully subject to the statement made in the second (p. 236); "It is not expected that this key will prove useful as a means of determining genera to anyone who has not made himself familiar with the general conditions existing in the group and summarized in the preliminary matter of this and the preceding Monograph." Since this order rests almost wholly upon the monumental researches of Thaxter, those who wish to become in any degree familiar with it must turn to the several monographs (cf. bibliography). These render it unnecessary to attempt to include here the genera published since 1908, a complete key to the order as at present constituted being impossible for anyone but the master of the group himself.

### Key to Families

- A. Antherids specially differentiated cells or groups of cells
  - 1. Antherids compound, the antheridial cells endogenous, arising from one or more intercalary cells and discharging into and from a common chamber (eventually free in a compact group in *Distichomyces*) Peyritschiellaceae p. 42
  - 2. Antherids single cells with free efferent tubes Laboulbeniaceae p. 44
- B. Antherids more or less undifferentiated cells of the appendages or their branches Ceratomycetaceae p. 45

### Family 12. PEYRITSCHIELLACEAE

- A. Dioecious
  - 1. Perithecia and appendages in pairs to the right and left Dimorphomyces T 264, 2:240;  
L 497
  - 2. Perithecia and appendages in a row Dimeromyces T 267, 2:241;  
L 497
- B. Monoecious
  - 1. Antherids arising on an appendage
    - a. Antherids lateral Cantharomyces T 271, 2:281;  
L 497
      - (1) On a subbasal cell of the appendage

- (2) On short opposite branchlets of the appendage Stichomyces T 2:301
- b. Antherids terminal
- (1) Antherid with a short spine at the tip Haplomyces T 269, 2:275;  
L 497
- (2) Antherid without a spine but with a neck-like canal cell
- (a) Ascogenic cells at least 36 Polyascomyces T 2:299
- (b) Ascogenic cells few
- x. Stalk of antherid a single cell
- (x) Antheridial cells obliquely in vertical rows
- m. Subbasal cell of receptacle with a sterile appendage Eumonoecomyces T 2:273
- n. Subbasal cell of receptacle without sterile appendage
- (m) Antherids opening by a terminal pore Eucantharomyces T 273, 2:275;  
L 497
- (n) Antherids opening by a lateral pore Clidiomyces T 2:280
- (y) Antherid parenchyma-like, many-celled
- m. Antheridial cells with three marginal cells Euhaplomyces T 2:281
- n. Antheridial cells without marginal cells Camptomyces T 274, L 498
- (z) Antherid of several superposed cells bearing single simple antherids directly
- m. Simple antherids two Acallomyces T 2:300
- n. Simple antherids several Acompsomyces T 2:297
- y. Stalk of two cells placed side by side Monoecomyces T 2:268
2. Antherids arising on the receptacle
- a. Perithecia free
- (1) Receptacle of a single row of several to many superposed cells Enarthromyces T 276, 2:267;  
L 498
- (2) Receptacle of one or two superposed cells followed by two or three oblique or transverse rows
- (a) Receptacle with one basal cell
- x. Basal cell followed by two tiers of cells Limnaeomyces T 2:261
- y. Basal cell followed by three symmetrical series Dichomyces T 282, 2:249, L 499
- (b) Receptacle with two superposed basal cells Peyritschiella T 278, 2:260;  
L 499
- b. Perithecia grown together with distal portion of receptacle
- (1) Base of receptacle of two superposed cells Chitonomyces T 285, 2:263;  
L 499
- (2) Base of three superposed cells Hydraecomyces T 293, L 500

## Family 13. LABOULBENIACEAE

## A. Dioecious

1. Perithecium borne by the basal or subbasal cell of receptacle
  - a. Perithecium on the single basal cell, spores continuous
 

Amorphomyces T 295, 2:293;  
L 501
  - b. Perithecium lateral on the subbasal cell
    - (1) Receptacle terminated by a 2-celled prominence; spores 1-septate
 

Dioecomyces T 2:293  
Smeringomyces T 2:296
    - (2) Receptacle x-celled, setose
 

Herpomyces T 2:282
2. Two-celled normal receptacle producing secondary receptacles on which the perithecia are borne

## B. Monoecious

1. Antherids in definite series on the appendages
  - a. Arising directly from cells of the appendages
    - (1) Appendage one
      - (a) Antherids in a single or double vertical series
 

Stigmatomyces T 298, 2:301
      - (b) Antherids more or less distinctly whorled
 

Arthrorhynchus T 2:312
    - (2) Appendages numerous, antherids in 3 vertical series
 

Idiomyces T 302, L 501
  - b. Borne on branches of the appendages
    - (1) Appendage one
      - (a) Appendage with sterile terminal branchlets, antherids in short series near its base
 

Rhadinomyces T 305, 2:317;  
L 501
      - (b) Appendage with fertile terminal branchlets bearing antherids laterally
 

Eucoethromyces T 2:320
    - (2) Appendages forming a tuft, antherids on lateral branchlets
 

Corethromyces T 303, 2:318;  
L 501
2. Antherids not in definite series on the appendages
  - a. Receptacle 2-celled
    - (1) Basal cell with rhizoids
      - (a) A single receptacle from each rhizoid base
 

Rhizomyces T 307, 2:322; L 502
      - (b) Several receptacles from a common rhizoid base
 

Moschomyces T 368, 2:429;  
L 504
    - (2) Basal cell not from a rhizoid
      - (a) Appendage single
        - x. Receptacle of 2 superposed cells
          - (x) Basal cell spheric, penetrating by a long filament
 

Ceraeomyces T 2:327
          - (y) Basal cell elongate
 

Sphaleromyces T 365, 2:323;  
L 504
        - y. Receptacle of a series of superposed cells
 

Ectinomyces T 2:429



- (b) Appendages several to many  
 x. Appendages and perithecium in a whorl *Compsomyces* T 366, 2:428;  
 L 504  
 y. Appendages in a row *Clematomyces* T 2:427
- b. Receptacle more than 2-celled  
 (1) Receptacle of seriate regularly superposed cells  
 (a) Plant bilaterally symmetrical *Diplomyces* T 357, L 503  
 (b) Plant asymmetrical  
 x. Receptacle of two contiguous and united rows  
 (x) A single basal cell *Rhachomyces* T 358, 2:421;  
 L 504  
 (y) Basal and subbasal cell present *Distichomyces* T 2:249  
 y. Receptacle of a single row *Chaetomyces* T 364, L 504
- (2) Receptacle more or less parenchyma-like, at most only part of the cells superposed in series  
 (a) Appendages all on one side *Laboulbenia* T 308, 2:328;  
 L 502  
 (b) Appendages on two sides *Rickia* T 2:247  
 (c) Appendages completely surrounding the perithecium  
 x. Sterile branches few, antheridial cells intercalary in continuous series *Symplectromyces* T 2:314  
 y. Sterile branches ramose, copious antheridial cells free, externally superposed on lower segments of the appendages, associated with rostrate sterile cells *Teratomyces* T 354, 2:315

#### Family 14. CERATOMYCETACEAE

- A. Receptacle large, very many-celled, parenchyma-like  
 1. Perithecium with six wall-cells in each row  
 a. Base of trichogyne persistent as a one-celled appendage *Caenomyces* T 372, L 505  
 b. Base of trichogyne not persistent as an appendage *Zodiomyces* T 371, 2:444; L 504  
*Euzodiomyces* T 2:444
2. Perithecium with 9-10 wall-cells in each row
- B. Receptacle of a series of superposed cells  
 1. Receptacle bearing appendages from specially differentiated cells below the perithecium *Coreomyces* T 2:411
2. Receptacle bearing no appendages below the perithecium  
 a. Receptacle determinate, of few cells  
 (1) Wall-rows of perithecia few-celled *Autoecomyces* T 2:434  
 (2) Wall-rows of perithecia many-celled *Ceratomyces* T 372, 2:435
- b. Receptacle indeterminate, of many cells  
 (1) Wall-rows of perithecia few-celled *Hydrophilomyces* T 2:431  
 (2) Wall-rows of perithecia many-celled *Rhynchophoromyces* T 2:432

## Order 6. GYMNASCALES

Asci free or in simple prothecia, rarely in a sclerotoid ascoma, solitary or grouped, globoid to saccate, occasionally elongate, 1-many-spored, paraphyses lacking; mycelium well-developed and branched, with cross-walls, or reduced to a few cells multiplying by budding or fission, occasionally developing sex-organs, sometimes massed to form a prothecium, often with appendage-like branches, or a solid sclerotium-like ascoma.

The chief bond in this order is the free ascus or ascus-group, without protective hyphae or these limited to a loose or dense mass termed a prothecium. It serves as the connecting link between the **Phycomycetes** and the **Ascomycetes** proper. In several genera it is practically impossible to determine whether the spore-body is an ascus or a sporangium. The latter seems to be the case in **Ascoidea** and its relatives, and these are in consequence referred to the first group. The **Endomycetaceae** may be placed in either with almost equal warrant. The **Gymnascaceae** lead directly into the **Eurotiaceae** on the one hand and the **Myriangiaceae** on the other, no real dividing line being discernible in the latter case especially. While the **Saccharomycetaceae** are regarded as reduced, it appears certain that this reduction has applied to primitive forms, and that this family has no connection with the **Agyriales**, where reduction has operated upon the highly specialized apothecium.

## Key to Families

- A. Asci solitary, on or in mycelial threads, naked or without an individual hyphal wall
  - 1. Asci naked
    - a. Asci terminal or lateral on a branched septate mycelium Endomycetaceae p. 46
    - b. Asci intercalary or continuous in a short budding mycelium Saccharomycetaceae p. 47
  - 2. Asci with an individual hyphal wall, terminal on the branches of a septate mycelium Monascaceae p. 48
- B. Asci in masses, enclosed by a loose hyphal peridium, the latter sometimes sclerotoid Gymnascaceae p. 48

## Family 15. ENDOMYCETACEAE

22:767, 24:1304; Schroeter 154

Mycelium typically well developed, branched and septate, rarely scanty, frequently with terminal 1-celled conidia; asci single, without hyphal envelop, terminal or lateral, rarely intercalary, 1-8-spored, occasionally many-spored; spores 1-celled and hyaline or nearly so.

- A. Mycelium saprogenous
  - 1. Asci 1-2-spored Bargellinia 8:823
  - 2. Asci 8-spored
    - a. Asci formed from the spirally wound tips of two branches; spores globose Eremascus 8:822
    - b. Asci formed directly from a single hypha
      - (1) Asci 4-spored, terminal Endyllum
      - (2) Asci 8-spored
        - (a) Asci terminal or lateral, not intercalary
          - x. Asci conglomerate; spores ovoid, not conglobate Byssochlamys 22:596
          - y. Asci not conglomerate; spores globose, conglobate Oleinis 8:822

(b) Asci intercalary; spores ovoid, conglomerate

Oleina 8:822

**B. Mycelium biogenous**

1. Asci 4-8-spored

a. Asci 4-spored, mostly lateral on long hyphae *Endomyces* 8:821; 6

b. Asci 8-spored, on short hyphae from lobed haustoria; fungicole *Podocapsa* 8:820

2. Asci many-spored

a. Asci on short hyphae from lobed haustoria; fungicole *Podocapsium* 24:1146

b. Asci on long branched hyphae; fructicole *Eremothecium* 8:821

**Family 16. SACCHAROMYCETACEAE**

8:916, 11:457, 14:828, 16:818, 18:198, 22:771, 24:1304

True mycelium lacking, the hyphae reduced to short toruloid chains or to single cells propagating by budding, rarely by fission; asci derived directly from vegetative cells, or by isogamic or heterogamic copulation, 1-16-spored; spores 1-celled, globose to acicular, hyaline, smooth or asperate, germinating by simple budding or by conjugation.

The yeasts are so greatly reduced that their position is far from certain, but they appear to be derived from the primitive *Ascomycetes* rather than from highly specialized forms. They seem to be most closely connected with the *Endomycetaceae*, certain genera having been referred to both by different authors. A considerable number of yeast-like forms do not produce asci, or these have not yet been found, and all such genera have been referred to the *Pseudosaccharomycetes*, at the end of the key. It is probable that many of these are actually *Hyphomycetes*, in which growth has been emphasized at the expense of conidia formation.

**A. Asci regularly 1-spored, very rarely 2-spored**

1. Spores globoid, asperate

a. Asci produced directly from the cells *Micranthomyces*

b. Asci derived from copulation

(1) Asci derived directly from isogamic copulation *Isomyces* 22:786

(2) Asci derived indirectly from heterogamic copulation *Nadsonia* 22:786

2. Spores ellipsoid, asperate, with median band *Zonosporis* 22:785

3. Spores acicular, smooth; haemophile *Monosporella* 24:1315

**B. Asci not regularly 1-spored, mostly 2-8-spored**

1. Spores elongate, fusiform to acicular

a. Spores flagellate; asci 8- or 16-spored *Nematospora* 18:201

b. Spores not flagellate; asci 4- or 8-spored *Coccidiascus*

2. Spores not elongate

a. Cells arising by fission; asci 4- or 8-spored, derived from isogamic copulation *Schizosaccharis* 14:828

b. Cells arising by budding

(1) Spores with 2 walls, the outer breaking at germination; asci 2- or 4-spored *Saccharomycopsis* 18:198

(2) Spores with single wall

(a) Spores with median band, hence appearing biapiculate *Williopsis*

(b) Spores not banded, globose to ellipsoid

x. Cells apiculate; asci 1-2-spored *Thelis* 24:1306

- y. Cells not apiculate
- (x) Cells toruloid; ascogenous cells with tubes but no true copulation; asci 1-4-spored; spores asperate **Torulospora**
- (y) Cells not toruloid
- m. Asci derived from copulation, 1-4-spored; spores hemispheric or hat-shaped **Zygosaccharis 18:198**
- n. Asci not derived from copulation
- (m) Spores hat-shaped; asci 2-4-spored **Hansenula 18:198**
- (n) Spores not hat-shaped
- r. Cells usually cylindric, catenate; asci 2-4-spored **Pichia 18:198**
- s. Cells globose to oblong, rarely catenate
- (r) Asci regularly 4-spored; spores producing a promycelium **Saccharomyces 18:198**
- (s) Asci 2-8-spored; spores not producing a promycelium **Saccharomyces 8:916; 6**

#### Family 17. MONASCACEAE

Schroeter 148

Mycelium typically well developed, branched and septate, saprophytic, forming conidia; asci sporangium-like, terminal, with an individual hyphal wall; spores many, hyaline to brown.

Spores many; asci enclosed by interwoven hyphae **Monascus S 148**

#### Family 18. GYMNASCALEAE

8:820, 10:70, 11:437, 14:824, 16:805, 18:195, 24:1145

Mycelium more or less well developed, branched and septate, usually saprophytic, frequently forming conidia; asci grouped, more rarely scattered, in a more or less regular globoid mycelial weft, sometimes dense and differentiated externally into a rudimentary peridium; asci globose to saccate, typically 8-spored, rarely 2-many-spored; spores typically 1-celled and hyaline.

The weft-like ascoma is typical of this family, but it passes gradually into the denser type with rudimentary peridium, distinguishable with difficulty, if at all, from the fruit-body of such genera of the **Myriangiaceae** as **Elsinoe** and **Plectodiscella**. **Penicillium** and **Penicillioopsis** have been included in the **Eurotiaceae (Aspergillaceae)** by Fischer, but the latter are here regarded as comprising perithecial forms only.

#### A. Ascoma composed of a globoid weft of hyphae

##### 1. Ascoma saprogenous

##### a. Asci 3-8-spored

(1) Asci 3-5-spored; spores hyaline, minute, globoid

**Conidiascus 16:807**

(2) Asci 8-spored

(a) Ascoma composed of thin-walled uniform hyphae

x. Ascoma stipitate; spores lentiform, furrowed

**Rollandina 22:766**

- y. Ascoma sessile; spores globose to glo-  
boid
- (x) Spores bright-colored, hyaline to yel-  
low or red *Arachniotus* 11:438
- (y) Spores dark, brown or brown-violet *Amaurascus* 11:438
- (b) Ascoma of thick-walled, much branched  
hyphae, united to form a lattice-like  
peridium
- x. Hyphal branches similar, with spines or  
prongs *Gymnascus* 8:823; 6
- y. Hyphal branches of two sorts, some be-  
coming especially differentiated ap-  
pendages
- (x) Appendages circinate at tip *Myxotrichum* F 295; 6
- (y) Appendages comb-like *Ctenomyces* 8:824
- b. Asci many-spored; spores ellipsoid *Myrillium* 11:438
2. Ascoma biogenous
- a. Spores 1-celled, hyaline; zoogenous *Eidamella* 16:805
- b. Spores x-celled, dark; phytogenous *Hexagonella*
- B. Ascoma more or less solid and parenchymic, with  
a rudimentary peridium
1. Ascomata clustered on a stalk *Penicilliopsis* F 306
2. Ascomata not stalked
- a. Spores purple, smooth, ovoid *Diplostephanus*
- b. Spores hyaline to yellowish
- (1) Spores globose, large, verruculose *Lilliputia* 16:816
- (2) Spores typically ellipsoid and ridged, small *Carpenteles*

## Order 7. PERISPORIALES

Mycelium typically superficial, light-colored or dark, sometimes lacking, rarely forming a membrane or stroma; perithecia closed, breaking into plates or opening irregularly at the top, rarely at the base, sometimes deliquescing, apparently never with a true ostiole, usually globoid and sessile but sometimes elongate or flask-shaped, regularly membranous, occasionally coriaceous but rarely carbonous, often provided with appendages, bristles or hairs; asci one to many, clustered on branched hyphae, disposed irregularly, or most frequently in a basal umbel-like group, globoid to elliptic or clavate, rarely cylindrical or long-stalked; typically without paraphyses; spores various.

This order is distinguished from *Gymnasciales* by the presence of a definite perithecium with a distinct wall. The family *Eurotiaceae* may be placed almost equally well in either group, the branched ascogenous hyphae relating it to *Gymnasciales*, the true perithecium to *Perisporiales*. The chief distinction from the *Sphaeriales* lies in the absence of a true ostiole. The *Trichothyriaceae* approach *Microthyriales* by virtue of the radiate perithecium, but this is not dimidiate, with the asci in hymenia. The order passes so gradually into *Microthyriaceae* and *Sphaeriaceae* that it is impossible to draw sharp lines, the *Capnodiaceae* in particular sometimes possessing a distinct if not typical ostiole, while in some of the *Sphaeriaceae* and *Hypocreaceae*, the ostiole is indistinct or lacking.

The *Perisporiales* seem to have sprung directly from the *Gymnascaceae*, and to have given rise to the two somewhat parallel phyla, the *Sphaeriales* and *Microthyriales*.

## Key to Families

- A. Asci borne on branched hyphae, hence irregularly disposed or in corymboid clusters Eurotiaceae p. 50
- B. Asci in a basal umbel or sometimes solitary
1. Aerial mycelium typically present; no erumpent stroma
- a. Aerial mycelium white; appendages present and usually modified Erysiphaceae p. 52
- b. Aerial mycelium dark, sometimes lacking; appendages usually absent
- (1) Perithecia not radiate; asci basal
- (a) Hyphae not slimy, straight-walled; perithecia parenchymic, the cells polygonal, not slimy Perisporiaceae p. 53
- (b) Hyphae straight-walled; perithecia dissolving in slime as they mature Englerulaceae p. 55
- (c) Hyphae constricted or dematioid, or in slimy skeins when straight-walled; perithecia of rounded cells or agglutinate straight-walled meridian hyphae Capnodiaceae p. 56
- (2) Perithecia radiate; asci hanging from the apparent tip Trichothyriaceae p. 58
2. Aerial mycelium lacking; perithecia borne on an innate-erumpent stroma, elongate Coryneliaceae p. 58

As a rule, the **Eurotiaceae** can not be distinguished externally from **Perisporiaceae**, and it is necessary to appeal to the origin or arrangement of the asci. In young or fresh material this can usually be determined positively; in mature or dry specimens it is best decided by the presence or absence of the umbellate arrangement typical of the other families. The first four of these are most intimately related and might well be treated as subfamilies of **Perisporiaceae**. Probably the greatest difficulty is met in separating the latter from the **Capnodiaceae**, the polygonal parenchyma-like cells of the perithecia of the one offering the best criterion, in contrast to the rounded cells or meridian hyphae of the other. The **Trichothyriaceae** are more sharply set off by the radiate wall of the perithecium, and the **Coryneliaceae** by the innate-erumpent stroma and the coriaceous or carbonous elongate perithecia.

The **Perisporiaceae** have probably been derived from the **Eurotiaceae**, and have constituted the central group from which all the others have arisen. The highly developed appendages of the **Erysiphaceae** and the reduced number of asci suggest that they are more specialized rather than the primitive forms of the order, though their development favors the latter view. The other families also represent divergent phyla, two of them, **Englerulaceae** and **Coryneliaceae**, ending blindly, while the other two connect with higher groups, the **Trichothyriaceae** with **Microthyriales**, and the **Capnodiaceae** with **Sphaeriaceae**, as do the **Perisporiaceae** likewise.

## Family 19. EUROTIACEAE

1:24, 9:371, 11:253, 14:462; 16:398, 17:524, 22:25, 24:226; Lind. 1:1:297; TS 15:447

Mycelium abundant, superficial or innate, usually saprophytic, mostly straight-walled and without hyphopodia or spines; perithecia typically on the mycelium, the wall usually parenchymic and membranous, consisting of polygonal plates as a rule, breaking up generally or at the tip when mature, ostiole present only in **Micrascus**, appendages present or lacking; asci typically in corymboid clusters on

branched hyphae, these rarely short and approaching the umbelloid grouping, several to many, globose to clavate, few-, rarely many-spored; paraphyses regularly lacking; spores various.

### Hyalosporae

Spores 1-celled, globoid to oblong, hyaline or subhyaline.

- A. Perithecia bright-colored, yellow to red, rarely white**
1. Perithecia setose or hairy
    - a. Perithecia with long stiff setae; spores lentiform **Chaetotheca 11:254**
    - b. Perithecia with soft hairs; spores spiny, globoid, reddish **Aphanascus 10:35**
  2. Perithecia glabrous
    - a. Spores verrucose **Anixiopsis 14:464**
    - b. Spores smooth or ridged, but not verrucose
      - (1) Perithecia circumscissile at base **Dichlaena 24:228**
      - (2) Perithecia breaking up generally **Eurotium 1:25; 8**
- B. Perithecia brown, deep-purple or finally black**
1. Spores with an irregular wing-like appendage **Samarospora 11:254**
  2. Spores not appendaged
    - a. Perithecia brown, finally black; paraphyses present; spores globoid **Mycogala 1:34; 8**
    - b. Perithecia deep-purple, the plates with sutures; paraphyses lacking; spores bean-shaped **Fragosphaeria**

### Phaeosporae

Spores 1-celled, globoid to oblong, dark, typically olivaceous to brown.

- A. Perithecia with ostiolate beak, carbonous, usually hairy; spores lunulate; fimicole** **Micrascus A:37, 9:495, L 297; 6**
- B. Perithecia not beaked or ostiolate**
1. Perithecia with appendages or hairs
    - a. Spores globose, conglobate
      - (1) Appendages closely spiral, convolute **Pleurascus 16:1123**
      - (2) Appendages flexuous-tortuose **Arachnomyces 17:532**
    - b. Spores ovoid to elliptic
      - (1) Appendages circinate at apex **Magnusia 1:38; 6**
      - (2) Appendages not circinate, mere hairs or bristles **Cephalotheca 1:36; 6**
  2. Perithecia glabrous
    - a. Spores globose, with a median wing-like ring cut into teeth **Emericella L 297**
    - b. Spores ovoid to oblong
      - (1) Spores conglobate at first
        - (a) Paraphyses present; spores elliptic, verrucose **Guillermundia**
        - (b) Paraphyses lacking; spores cuboid, smooth **Phaeidium 16:405**
      - (2) Spores not conglobate
        - (a) Saprophytic on grass culms **Carothecis 9:377**
        - (b) Parasitic on roots of herbs, chiefly legumes **Thielavia 1:39; 8**

**Phaeodidymae**

Spores 2-celled, dark

- A. Perithecia hairy
1. Perithecia breaking into plates; paraphyses present; spores appendaged at first **Zopfella L 334**
  2. Perithecia breaking irregularly at tip; paraphyses lacking; spores not appendaged **Zopfia 1:54**
- B. Perithecia glabrous
1. Paraphyses present, branched, clinging to asci and spores; spores smooth, becoming greatly enlarged **Richonia 9:379**
  2. Paraphyses lacking; spores rough or spiny, not enlarged **Testudina 9:378**

**Hyalophragmiae**

Spores x-celled, hyaline or subhyaline

- Perithecia becoming gelatinous when mature, exposing the asci **Dexteria 24:703**

**Phaeophragmiae**

Spores x-celled, dark

- A. Paraphyses present; spores clavate, cells not separating **Eosphaeria**
- B. Paraphyses lacking; spores cylindrical, cells separating **Preussia**

**Phaeodictyae**

Spores muriform, dark

- A. Ascus single; spores muticate **Phanerascus 24:1146**
- B. Asci many; spores with a beak-like hyaline appendage at either end **Ceratocarpia 14:474**

**Family 20. ERYSHIPACEAE**

1:1, 9:364, 11:253, 14:404, 17:526, 22:19, 24:223

Mycelium or subiculum superficial, white, cobwebby, septate, penetrating the epiderm by means of haustoria and regularly bearing chains of conidia (form genus **Oidium**) on simple upright branches; perithecia without ostiole, always with simple or modified appendages, wall more or less membranous and brittle; asci one to several, globose to ovoid, 2-8-spored, without paraphyses; spores hyaline or light-colored, typically 1-celled.

**Hyalosporae**

Spores 1-celled, hyaline or light-colored

- A. Perithecia with one ascus
1. Asci 4-8-spored
    - a. Appendages simple, hypha-like **Sphaerotheca 1:3; 7**
    - b. Appendages dichotomous at tip **Podosphaera 1:2; 7**
  2. Asci many-spored **Lanomyces 24:365**
- B. Perithecia with 2-several asci
1. Appendages simple, hypha-like **Erysiphe 1:15; 7**
  2. Appendages branched or otherwise modified



- a. Appendages dichotomous at tip                      *Microsphaera* 1:10; 7  
 b. Appendages modified but not branched  
 (1) Appendages lance-like, swollen at base      *Phyllactinia* 1:5; 7  
 (2) Appendages coiled at tip                      *Uncinula* 1:6; 7

**Hyalodidymae**

Spores 2-celled, hyaline or light-colored

- A. Appendages simple or branched, thread-like      *Chilomyces* 22:33  
 B. Appendages dichotomous at tip                      *Schistodes* TS 456

**Hyalophragmiae**

Spores x-celled, hyaline or light-colored

- Appendages simple, thread-like; asci several,  
 x-spored                      *Leucoconis* TS 456

**Family 21. PERISPORIACEAE**

1:24, 9:371, 11:253, 14:462, 16:398, 17:524, 22:19, 24:222; L 333; TS 447

Mycelium or subiculum superficial, rarely beneath cuticle or epiderm or filling the stomata, septate, not constricted or dematioid, with or without hyphopodia or spines; perithecia regularly on the mycelium, without ostiole, wall parenchymic and membranous of one or two layers of polygonal cells, or sometimes firmer and x-layered, rarely carbonous, appendages present or lacking; asci regularly several to many, globoid to clavate, rarely cylindrical, few-, rarely many-spored, borne in an umbellate basal cluster; paraphyses regularly lacking; spores various.

**Hyalosporae**

Spores 1-celled, hyaline or subhyaline

- A. Spores globose; mycelium without hyphopodia      *Melioidium*  
 B. Spores ellipsoid; mycelium with hyphopodia      *Clistosphaera* 24:236, TS 461

**Phaeosporae**

Spores 1-celled, dark

- A. Mycelium superficial, copious; asci clavate  
 1. Paraphysoids present; ostiole more or less distinct      *Episoma* 24:241  
 2. Paraphysoids absent; ostiole lacking; hyphae with star-like setae      *Teratonema* 24:241, TS 463  
 B. Mycelium merely hyphae in hymenium of host; asci globose to ovoid; fungicole      *Guttularia* 24:240

**Hyalodidymae**

Spores 2-celled, hyaline

- A. Perithecia or mycelium innate  
 1. Perithecia hairy, on a subcuticular or erumpent stroma; asci few-spored      *Chevalieropsis* 22:391  
 2. Perithecia glabrous, subepidermal; asci many-spored      *Pampolysporium* 16:411, TS 460  
 B. Perithecia and mycelium superficial  
 1. Mycelium and perithecia with setae; perithecia opening irregularly at tip      *Rhizalia* 24:364, TS 463  
 2. Mycelium without setae; perithecia astomous

- a. Perithecia with appendages, setae or hairs  
 (1) Perithecia with appendages of two kinds, long and simple, short and dichotomous *Dichaetis* 22:33  
 (2) Perithecia with setae or hairs merely  
   (a) Paraphyses present *Chaetostigme* TS 199; 8  
   (b) Paraphysoids present *Lasiostemma* 24:248  
   (c) Paraphyses lacking *Dimeriella* 22:37, TS 462
- b. Perithecia glabrous  
 (1) Asci globose-ellipsoid; hyphae and perithecia yellow, the latter stipitate *Chrysomyces* 24:237, TS 464  
 (2) Asci clavate-cylindric; not yellow  
   (a) Paraphyses present *Stigme* TS 199  
   (b) Paraphyses lacking *Dimerina* 24:245, TS 464

#### Phaeodidymae

Spores 2-celled, dark

- A. Perithecia with a subcuticular hypostroma  
 1. Perithecia separate, single, finally with basal setae *Alina* 22:40, TS 460  
 2. Perithecia in a ring about a sclerotial stroma *Lasiobotrys* 1:29, TS 460; 8
- B. Perithecia or mycelium rooted only in the stomata  
 1. Mycelium with hyphopodia but not setae; perithecia rooted in the stomata *Stomatogene* 24:236, TS 461  
 2. Mycelium with setae but no hyphopodia, rooted in the stomata *Piline* 24:236, TS 461
- C. Perithecia and mycelium superficial  
 1. Mycelium with hyphopodia *Wageria* 24:259  
 2. Mycelium without hyphopodia  
   a. Mycelium with setae; perithecia usually hairy  
     (1) Paraphyses present *Chaetostigmella* 24:257, TS 199  
     (2) Paraphysoids present *Apiosporina*  
     (3) Paraphyses lacking *Phaeodimeris* TS 463, 257  
   b. Mycelium without setae; perithecia glabrous  
     (1) Asci globose-ellipsoid *Parodiopsis* 24:391, TS 464  
     (2) Asci clavate to cylindric  
       (a) Paraphyses present  
         x. Perithecia on a subiculum; fungicole *Phaeostigme*  
         y. Perithecia without subiculum; not fungicole *Parodiella* 1:717, 9:409; 8  
       (b) Paraphyses lacking *Dimerium* 1:51, 16:410, TS 464

#### Hyalophragmiae

Spores x-celled, hyaline

- A. Perithecia separate, not in a disk  
 1. Perithecia setose or hairy *Dimeriellopsis*  
 2. Perithecia glabrous *Mycophaga*
- B. Perithecia ostiolate, glabrous, in a disk *Paropsis* 24:223

#### Phaeophragmiae

Spores x-celled, dark

- A. Mycelium with hyphopodia  
 1. Mycelium with setae; perithecia setose

- a. Paraphyses present
- b. Paraphyses absent
- 2. Mycelium without setae
  - a. Perithecia appendaged or setose
  - b. Perithecia glabrous
- B. Mycelium without hyphopodia
  - 1. Mycelium with setae
    - a. Paraphysoids present
    - b. Paraphysoids lacking
  - 2. Mycelium without setae
    - a. Perithecia setose or hairy
    - b. Perithecia glabrous
      - (1) Spores with hyaline appendage at either end
      - (2) Spores not appendaged

Leptomeliola  
 Meliola 1:60, TS 461; 8  
 Irene 24:358, TS 461  
 Irenina  
 Meliolina 24:360, TS 463  
 Perisporiopsis 17:544  
 Haraea 24:350, TS 463  
 Ceratosperma 24:223  
 Perisporium 1:55; 8

**Phaeodictyae**

Spores muriform, dark

- Mycelium without hyphopodia; perithecia hairy
- Pleomerium 24:223

**Scolecosporae**

Spores acicular to filiform, septate or not, hyaline or dark

- A. Mycelium with hyphopodia
- B. Mycelium without hyphopodia
  - 1. Perithecia hairy
  - 2. Perithecia glabrous

Ophiomeliola 16:416  
 Leptascospora 24:223  
 Tonduzia

**Family 22. ENGLERULACEAE**

22:26, 24:229; TS 467

Mycelium superficial, bright-colored or dark, septate, straight-walled, with or without hyphopodia, sometimes lacking; perithecia superficial, globoid, astomous, sessile or stalked, parenchymic or with meridian hyphae, wholly or partly breaking up by a slimy histolysis; asci single or in basal clusters, mostly without paraphyses.

In a critical account of this family, Petrak (Ann. Myc. 26:385-413, 1928) has eliminated nearly two-thirds of the genera referred to it by Theissen and Sydow in their monograph. Five become synonyms and five are treated as doubtful.

**Phaeodidymae**

Spores 2-celled, dark

- A. Perithecia parenchymic, the soft globose cells falling apart
  - 1. Perithecia with persistent 1-celled stalk and single ascus
  - 2. Perithecia sessile
    - a. Mycelium with hyphopodia; asci one to many
    - b. Mycelium without hyphopodia
- B. Perithecia of meridian hyphae, radiate at tip
  - 1. Ascus single; setae present
  - 2. Asci many; setae lacking; mycelium copious, with hyphopodia

Thrauste 24:234, TS 469  
 Schiffernula 22:27, TS 469  
 Englerula 17:529, TS 468  
 Linotexis 24:235, TS 470  
 Parenglerula 24:235, TS 470

**Phaeophragmiae**

Spores x-celled, dark in mass

Mycelium without hyphopodia; paraphyses present **Hyalotexis****Family 23. CAPNODIACEAE**

1:73, 9:438, 11:270, 14:476, 17:555, 22:59, 24:366; TS 471

Mycelium superficial, rarely subcuticular, dematioid, sometimes straight-walled but the hyphae then agglutinate in skeins, often with setae but hyphopodia only rarely present; perithecia superficial, rarely with innate foot, composed of dematioid cells or of agglutinate, meridian hyphae, never of straight-walled polygonal cells as in *Perisporiaceae*, soft-fleshy or slimy-cartilaginous to tough-leathery, never carbonous, globose to elongate-conical, sessile or stalked, hairy or glabrous; ostiole lacking or indefinite, rarely distinct; asci basal-umbellate or parallel, usually 8-spored and always without true paraphyses; pycnidia often subulate flask-shaped.

This family approaches *Perisporiaceae* so closely on the one hand and *Sphaeriaceae* on the other that genera on the border-line must be traced in both keys concerned.

**Hyalosporae**

Spores 1-celled, hyaline

Perithecia setose; asci 8-16 spored; spores globoid,  
very minute**Oplothecium****Hyalodidymae**

Spores 2-celled, hyaline

**A.** Perithecia innate with central foot**Adelopus 24:371, TS 482****B.** Perithecia superficial, without central foot

1. Perithecia stalked, globoid to oval

**Antenellina**

2. Perithecia sessile, globose

a. Mycelium with setae

(1) Perithecia setose, dark

**Chaetothyrina 24:370, TS 474**

(2) Perithecia glabrous, bright-colored

**Dimerosporina 24:369, TS 474**

b. Mycelium without setae

(1) Perithecia setose

**Ceratochaetopsis**(2) Perithecia glabrous; ostiole more or less  
distinct**Calyptra 24:371, TS 478****Phaeodidymae**

Spores 2-celled, dark

**A.** Mycelium subcuticular, with free setae; perithecia  
glabrous**Chaetobotrys 17:881, TS 482****B.** Mycelium superficial

1. Mycelium with setae

a. Mycelium with hyphopodia; perithecia gla-  
brous

(1) Ascus single

**Balladyna 16:411, TS 475**

(2) Asci many

**Balladynopsis 24:374, TS 475**b. Mycelium without hyphopodia; perithecia  
setose**Neohoehnelia 24:375, TS 476**

2. Mycelium without setae

a. Perithecia setose

**Chaetyllis**

b. Perithecia glabrous

(1) Ascus single

**Balladynella 24:374, TS 478**

(2) Asci many

**Dysrhynchis 17:689, TS 478**

**Hyalophragmiae**

Spores x-celled, hyaline

- A.** Perithecia stalked or at least vertically elongate
1. Perithecia hairy Hypocapnodium 24:376
  2. Perithecia glabrous
    - a. Mycelium arachnoid, hyphae straight-walled Scorias 1:83, TS 473
    - b. Mycelium leathery, dematioid, walls constricted Antenella 24:367, TS 473
- B.** Perithecia sessile, globose
1. Mycelium with setae; perithecia more or less setose Chaetothyrium 9:1061, TS 477
  2. Mycelium without setae
    - a. Perithecia setose Trichomerium 24:223
    - b. Perithecia glabrous Limacinia 14:382, TS 478

**Phaeophragmiae**

Spores x-celled, dark

- A.** Perithecia stalked or at least vertically elongate Capnodaria 1:74, TS 474
- B.** Perithecia sessile, globose
1. Mycelium with setae; perithecia more or less setose Setella 24:384, TS 477
  2. Mycelium without setae
    - a. Perithecia setose
      - (1) Ostiole present Capnophaeum 24:384
      - (2) Ostiole absent Aethalomyces
    - b. Perithecia glabrous; ostiole usually present Phragmocapnias 24:385, TS 480

**Hyalodictyae**

Spores muriform, hyaline

- A.** Perithecia stalked or at least vertically elongate, glabrous Paracapnodium 24:367, TS 473
- B.** Perithecia sessile, globose
1. Mycelium with setae; perithecia setose Chaetomeris 22:495, TS 478
  2. Mycelium without setae; perithecia glabrous Phaeopeltis 17:873, TS 480

**Phaeodictyae**

Spores muriform, dark

- A.** Perithecia stalked and elongate Capnodium 1:73, 80, TS 473; 8
- B.** Perithecia sessile, globose
1. Spores typically muriform Naetrocymbe 22:67, 24:388, TS 481
  2. Spores cruciform-septate Schizocapnodium

**Scolecosporae**

Spores acicular to filiform, hyaline or dark

- A.** Spores hyaline; mycelium with setae Actinocymbe 24:389, TS 478
- B.** Spores dark; mycelium without setae
1. Perithecia elongate, with ostiole Ophiocapnis 24:388
  2. Perithecia globose, without ostiole Nematothecium 24:392

## Family 24. TRICOTHYRIACEAE

24:506; TS 15:484

Mycelium superficial, usually well-developed, rarely evanescent, dark, cottony or forming a membrane, mostly fungicole; perithecia round, radiate, somewhat flattened, the upper and lower walls somewhat unlike, inverted, the morphological base forming the apex with papilla and pore; asci several to many, small, clavate, hanging from the apex; paraphyses typically lacking; spores various.

## Hyalodidymae

Spores 2-celled, hyaline or subhyaline

- |                                  |                                    |
|----------------------------------|------------------------------------|
| A. Mycelium abundant, persistent | Trichothyrium 9:1062, TS 487       |
| B. Mycelium lacking              | Loranthomyces 24:507,<br>TS 487; 8 |

## Phaeodidymae

Spores 2-celled, dark

- |           |                                      |
|-----------|--------------------------------------|
| One genus | Trichothyriella 24:507,<br>TS 487; 8 |
|-----------|--------------------------------------|

## Hyalophragmiae

Spores 2-celled, hyaline or subhyaline

- |                                       |                                    |
|---------------------------------------|------------------------------------|
| A. Mycelium abundant, persistent      | Trichothyriopsis 24:507, TS<br>487 |
| B. Mycelium lacking; perithecia hairy | Actinopeltis TS 487; 8             |

## Family 25. CORYNELIACEAE

9:1073, 11:385, 16:650, 22:513, 24:1104

Aerial mycelium none; stroma innate, then erumpent, flat to pulvinate, black, coriaceous to carbonous; perithecia on the stroma, usually cespitose, elongate, turbinate to flask-shaped, sessile or stipitate, when mature opening widely by means of a cleft or fimbriate-lacerate lobes; asci ovoid, with long slender stalks, 1-8-spored; paraphyses lacking; spores brown to nearly black when mature.

## Phaeosporae

Spores 1-celled, brown to black

- |   |                       |
|---|-----------------------|
| A. Perithecia with definite stalk                       |                       |
| 1. Perithecia proliferating to form a second at the tip | Sorica 17:621         |
| 2. Perithecia not proliferating                         | Caliciopsis 8:833; 23 |
| B. Perithecia without definite stalk                    | Corynelia 9:1073; 17  |

## Staurosporae

Spores stellate with 4-5 conical rays

- |           |                   |
|-----------|-------------------|
| One genus | Tripospora 9:1073 |
|-----------|-------------------|

## Order 8. SPHAERIALES

Mycelium typically immersed and scanty, sometimes forming a subiculum and frequently compacted into a stroma of various types; perithecia innate to superficial, typically globoid, occasionally depressed, cupulate, conical or cylindrical, regularly ostiolate, rarely astomous, sometimes with a beak or crest, wall fleshy, membranous, coriaceous or carbonous, bright-colored to dark, frequently hairy or setose, separate,

cespitose or composite in a stroma; asci typically clavate to cylindrical and persistent, sometimes stalked, usually 8-spored but the spores varying from one to many, with paraphyses or paraphysoids, or these lacking; spores from minute botuliform to long filiform, hyaline to dark, continuous to septate.

This is the typical order of the **Pyrenomycetes** and the one in which evolution has been the most active. In contrast to the ancestral **Perisporiales**, saprophytism has been developed in a high degree, accompanied by the sinking of the mycelium and the specialization of the perithecium for spore protection and distribution. In one direction this has produced the carbonous wall, in the other a fleshy one, both of sufficient thickness to necessitate the regular development of an ostiole for freeing the spores.

This order is distinguished from the **Perisporiales** primarily by the presence of an ostiole, typically in the form of a perforate papilla or beak. As a rule, the mycelium is immersed instead of superficial, and is often developed into a stromal mass about the perithecia. The persistence of the perithecial wall in the stroma separates it from the **Dothideales**, in which the perithecia have become locules enclosed merely by stromal hyphae. This evolution has apparently taken place in two directions, the massive stroma giving rise to the **Dothideae** and the clypeus to the **Phyllachoreae**. The modification has been so gradual and continuous that the number of intermediate forms is large and these must be sought in both orders. The sphaerials with paraphysoids approach the **Myriangiaceae** to a certain degree, but it does not seem probable that they are phyletically connected. The **Microthyriales** are set apart by the dimidiate and typically radiate ascoma, and usually also by the superficial mycelium and fruit-body.

#### Key to Families

- |   |                       |
|---|-----------------------|
| A. Perithecia not parasitic on algae, without a thallus                           |                       |
| 1. Perithecia dark, membranous to carbonous                                       |                       |
| a. Ostiole papillate or conical, round, not compressed                            | Sphaeriaceae p. 59    |
| b. Ostiole broad and compressed, the opening linear                               | Lophiostomaceae p. 82 |
| 2. Perithecia bright-colored, rarely whitish, fleshy                              | Hypocreaceae p. 76    |
| B. Perithecia parasitic on algae, typically with a thallus                        | Verrucariaceae p. 84  |
| C. Ascomata at first perithecioid, then cupuloid, in a ramose or alveolate stroma | Cyttariaceae p. 83    |

#### Family 26. SPHAERIACEAE

Perithecia innate, erumpent or superficial from the first, typically globose, sometimes lentiform, or cupulate-collapsing, rarely conical or cylindrical, regularly ostiolate, rarely astomous, sometimes beaked, wall typically dark, brown to black, membranous, coriaceous or carbonous, never fleshy and bright-colored, frequently hairy, separate, cespitose or composite in a stroma; stroma scanty and immersed, or producing a subicle or stroma of various forms; asci typically clavate to cylindrical and persistent, mostly 8-spored, paraphyses or paraphysoids present or sometimes lacking; spores various.

The first four families are intimately related, the line of descent being continuous from the central sphaerials to **Hypocreaceae** and **Lophiostomaceae**. In the case of the former, whitish or hyaline forms are scarcely to be distinguished from innate membranous sphaerials, and a similar difficulty recurs in those genera with fleshy-leathery stromata. The thick compressed ostiole with a rimose opening

sets the **Lophiostomaceae** off distinctly from the other two families. This family may constitute an intermediate stage in the evolution of the **Hysteriaceae** from **Sphaeriaceae**, but the emphasis on the ostiole indicates that the carbonous genera of hysteriales have sprung directly from the sphaerials, as a response to the structure of the matrix. The **Verrucariaceae** are lichens derived directly from **Sphaeriaceae** as a consequence of becoming parasitic on blue-green or yellow-green algae and developing a more or less conspicuous thallus. The fifth family is of problematic constitution and position, as indicated later.

#### Allantosporae

1:88, 9:442, 11:271, 14:478, 16:417, 17:560, 22:67, 24:708, 775

#### Hyalallantiae

Spores 1-celled, botuliform, hyaline or subhyaline

- A. Perithecia separate or cespitose, without distinct subicle or stroma
1. Perithecia innate, or finally erumpent
    - a. Perithecia typically single or scattered
      - (1) Perithecia beaked Wegelia 16:421
      - (2) Perithecia not beaked
        - (a) Perithecia hairy Enchnoa 1:89
        - (b) Perithecia glabrous
          - x. Perithecia discoid or cupulate Romellia 16:419
          - y. Perithecia globoid Massalongiella 1:89
    - b. Perithecia cespitose or seriate
      - (1) Perithecia in concentric groups between bark and wood
        - (a) Perithecia hairy Coronophorella
        - (b) Perithecia glabrous
          - x. Asci 8-spored
            - (x) Perithecia beaked Calosphaeria 1:95, 16:419; 9
            - (y) Perithecia not beaked Togninia 1:101, 16:480
          - y. Asci many-spored Coronophora 1:103
        - (2) Perithecia merely cespitose, imbedded in bark or wood; stroma sometimes indicated, as below
          - (a) Perithecia imbedded in wood; asci 8-spored Endoxyla 1:181
          - (b) Perithecia imbedded in the bark
            - x. Asci 8-spored Cryptosphaeria 1:182
            - y. Asci many-spored Cryptosphaerella 1:185
    2. Perithecia superficial from the first
      - a. Perithecia setose, ostiole central; asci 8-spored Euacanthae
      - b. Perithecia glabrous, ostiole lateral; asci many-spored Pleurostoma 1:95
- B. Perithecia on a subicle or in a stroma
1. Perithecia with a subicle or mycelial pseudo-stroma
    - a. Perithecia setose
      - (1) Asci 8-spored Acanthonitschkea 22:68
      - (2) Asci many-spored Neotrotteria 24:777
    - b. Perithecia glabrous, typically cupulate-collapsing



- (1) Ostiole present; mycelial spines lacking  
 (a) Asci 8-spored  
 x. Perithecia beaked, not cupulate **Rostromitschkea** 24:776  
 y. Perithecia not beaked **Nitschkea** 1:91, 11:272; 9  
 (b) Asci many-spored **Fracchiaea** 1:93; 9
- (2) Ostiole lacking; mycelial spines present **Sydowinula**
2. Perithecia in a stroma, the latter sometimes obsolete
- a. Stroma formed by the changed matrix
- (1) Stroma valsoid, i. e., perithecia in a circle or row
- (a) Asci 4-8-spored **Quaternaria** 1:106  
 x. Perithecia 4, rarely 6, in a stroma  
 y. Perithecia many, 8-30, in a stroma  
 (x) Stroma in the bark; perithecia with ostiole entire; asci sessile or subsessile **Valsa** 1:108; 9  
 (y) Stroma in or on the wood; perithecia with sulcate ostiole; asci stalked **Eutypella** 1:145, 17:569; 9  
**Valsella** 1:158
- (b) Asci many-spored **Valsella** 1:158
- (2) Stroma eutypoid, i. e., more or less broadly effuse
- (a) Stroma evident  
 x. Asci 8-spored **Eutypa** 1:162, 17:569; 9  
 y. Asci many-spored **Cryptovalsa** 1:187
- (b) Stroma more or less indistinct or obsolete
- x. Asci 8-spored  
 (x) Stroma in the bark **Cryptosphaeria** 1:182  
 (y) Stroma in the wood **Endoxyla** 1:181  
 y. Asci many-spored **Cryptosphaerella** 1:186
- b. Stroma different from the matrix, diatrypoid
- (1) Asci 8-spored **Diatrype** 1:91, 9:480; 9  
 (2) Asci many-spored **Diatrypella** 1:200

**Phaeallantiae**

Spores 1-celled, botuliform, dark

Stroma pulvinate, different from matrix, erumpent **Phaeotrype** 24:849**Hyalosporae**

1:407, A:58, 9:577, 11:289, 14:515, 16:452, 17:573, 22:71, 24:778

Spores 1-celled, not botuliform, hyaline to subhyaline

**A. Perithecia separate to cespitose**

## 1. Perithecia innate, or finally erumpent

## a. Perithecia beaked or with stellate ostiole

## (1) Perithecia carbonous

(a) Perithecia hairy; beak bent **Camptosphaeria** 1:143(b) Perithecia glabrous; beak straight **Rostrosphaeria**

## (2) Perithecia membranous, usually folicole

(a) Ostiole stellate or lobed

x. Ostiole densely hairy-coronate, brown, 3-5-lobed **Paidania** 22:80y. Ostiole not coronate, white, stellate with black, wart-like lobes **Rinia** 17:591

- (b) Ostiole not stellate or lobed, black, beaked  
 x. Spores with mucous sheath, long-striate **Amylis**  
 y. Spores without mucous sheath  
 (1) Perithecia in a pseudostroma **Mamiana** 24:705  
 (2) Perithecia not in a pseudostroma **Gnomoniella** 1:413; 9
- b. Perithecia not beaked or stellate  
 (1) Perithecia with clypeus or epistroma  
 (a) Perithecia with a clypeus, i.e. black adhering epiderm  
 x. Paraphyses present **Causalis** 24: 1262  
 y. Paraphyses lacking  
 (x) Asci 8-spored **Sphaerognomonia** 22:78; 10  
 (y) Asci 16-spored **Stevensiella** 24:808  
 (b) Perithecia with epistroma splitting radially  
**Schizoparme**
- (2) Perithecia without clypeus or epistroma  
 (a) Paraphyses present  
 x. Perithecia setulose **Physalosporella** 22:290  
 y. Perithecia glabrous  
 (x) Asci 2-spored **Dicarpella** 24:743  
 (y) Asci 8-spored  
 m. Spores with a mucous sheath **Myelosperma** 24:815  
 n. Spores without mucous sheath  
 (m) Perithecia lichenicole **Sporophysa** 17:586  
 (n) Perithecia peritheciolate **Cryptonectriopsis** 24:742  
 (o) Perithecia not in lichens or other perithecia  
**Physalospora** 1:433; 9
- (b) Paraphysoids present; intramatrical hyphae more or less well developed **Montagnellina** 24:636
- (c) Paraphyses or paraphysoids lacking  
 x. Asci 1-2-spored  
 (x) Perithecia ostiolate, not lichenicole **Geminispora** 11:292  
 (y) Perithecia astomous, then splitting irregularly at apex, lichenicole **Spolverinia** 17:577  
 y. Asci 4-8-spored  
 (x) Asci globose; spores with an irregular wing **Samarospora** 11:254  
 (y) Asci not globose or spores winged  
 m. Spores long-caudate at one or both ends  
**Urospora** 1:488, 14:523  
 n. Spores not caudate  
 (m) Perithecia lichenicole **Paralaestadia** 17:576  
 (n) Perithecia not lichenicole **Phomatospora** 1:420, 432
- z. Asci many-spored  
 (x) Perithecia hairy **Polytrichia** 1:451  
 (y) Perithecia glabrous **Ditopella** 1:450
2. Perithecia superficial from the first  
 a. Perithecia beaked  
 (1) Spores with a ring-like appendage **Rostrella** 17:609  
 (2) Spores not appendaged  
 x. Perithecia hairy **Cerastomis** 2:409  
 y. Perithecia glabrous **Ceratostomella** 2:408; 9

- b. Perithecia not beaked
  - (1) Perithecia hairy
    - (a) Asci 8-spored *Trichosphaeria* 1:452; 10
    - (b) Asci 16-spored *Trichosphaerella* 9:604
  - (2) Perithecia glabrous
    - (a) Spores stellate *Inzengaea* 9:610
    - (b) Spores not stellate
      - x. Paraphyses present *Wallrothiella* 1:455
      - y. Paraphysoids present *Epithyma* 24:239
- B. Perithecia with a subicle or stroma
  - 1. Perithecia with a subicle
    - a. Perithecia sunken in a subicle with spines or conidia
      - (1) Subicle with spines; spores not reniform *Scortechinia* A:68, 9:604
      - (2) Subicle with conidia; spores reniform *Nephrospora*
    - b. Subicle without spines or conidia
      - (1) Perithecia hairy; paraphyses present *Miyoshiella* 22:92
      - (2) Perithecia glabrous
        - (a) Subicle crustose; asci very long stalked; paraphysoids present *Pilgeriella* 16:464
        - (b) Subicle cottony; asci not long stalked; paraphyses lacking *Vestergrenia* 16:465
  - 2. Perithecia with a stroma
    - a. Perithecia beaked
      - (1) Paraphyses present *Glomerella* 16:452, 17:573; 10
      - (2) Paraphyses lacking *Hyperus*
    - b. Perithecia not beaked
      - (1) Stroma bright red or yellow; paraphyses lacking *Endothia* 1:601
      - (2) Stroma brown or black
        - (a) Stroma valsiform; perithecia circinate with long necks converging into a common canal *Crytospora* 1:466
        - (b) Stroma not valsiform; perithecia without long necks
          - x. Stroma lineate *Scirrhia* 9:1030
          - y. Stroma pulvinate
            - (x) Stroma sclerotium-like, with black carbonous crust and hyaline center *Mazzantia* 2:591
            - (y) Stroma not sclerotium-like, botryose *Botryosphaeria* 1:456; 10

## Phaeosporae

1:214, 9:481, 11:278, 14:489, 16:427, 17:593, 22:94, 24:816

Spores 1-celled, not botuliform, dark, yellow, olive or brown

- A. Perithecia separate to cespitose but without subicle or stroma
  - 1. Perithecia innate, or finally erumpent
    - a. Perithecia persistently innate
      - (1) Perithecia with a clypeus or epistroma
        - (a) Perithecia with a clypeus
          - x. Spores appendaged at one or both ends *Entosordaria* 1:286
          - y. Spores not appendaged
            - (x) Perithecia lichenicole *Anthostomaria* 17:595
            - (y) Perithecia not lichenicole *Anthostomella* 1:278; 10

- (b) Perithecia with a 5-6-radiate epistroma **Erikssonia 14:710, 24:848**
- (2) Perithecia without clypeus or epistroma
- (a) Perithecia beaked **Acanthorhynchus 22:300**
- (b) Perithecia not beaked
- x. Spores with a mucous sheath **Leptomassaria 24:826**
- y. Spores without mucous sheath **Paranthostomella 22:101**
- b. Perithecia finally erumpent
- (1) Asci 8-spored; epiderm rupturing stel-  
lately; not lichenicole **Astrocystis 1:293**
- (2) Asci many-spored
- (a) Perithecia lichenicole **Muellerella A:49, 9:483**
- (b) Perithecia not lichenicole **Mesniera 16:440**
2. Perithecia superficial from the first
- a. Perithecia beaked
- (1) Spores lunulate; fimicole **Micrascus A:37, 9:483**
- (2) Spores globoid to elliptic; not fimicole
- (a) Perithecia setose **Chaetoceria 24:1070**
- (b) Perithecia glabrous
- x. Asci 1-spored **Cryptascus 22:298**
- y. Asci 8-spored **Ceratostoma 1:215; 10**
- b. Perithecia not beaked
- (1) Perithecia membranous
- (a) Spores with mucous sheath or tail;  
usually fimicole
- x. Spores with mucous sheath **Sordaria 1:230; 10**
- y. Spores caudate at one or both ends
- (x) Asci 4-8-spored **Podospora**
- (y) Asci many-spored **Philocopra 1:249**
- (b) Spores without mucous sheath or tail;  
perithecia typically with long branched  
or spiral hairs
- x. Spores globoid to elliptic **Chaetomium 1:220; 10**
- y. Spores triangular **Bommerella A:38, 9:486**
- (2) Perithecia typically carbonous; spores not  
caudate
- (a) Perithecia setose **Coniochaeta 1:269**
- (b) Perithecia glabrous
- x. Perithecia lichenicole **Adelococcus**
- y. Perithecia not lichenicole **Rosellinia 1:252; 10**
- (3) Perithecia coriaceous to corneous; spores  
caudate at one or both ends **Bombardia 1:277; 10**
- B. Perithecia with subicle or stroma
1. Perithecia with a subicle
- a. Perithecia collapsing into cups; paraphyses  
absent **Tympanopsis 11:283**
- b. Perithecia not collapsing; paraphyses present
- (1) Perithecia hairy; fungicole **Helminthosphaeria 1:230**
- (2) Perithecia glabrous; not fungicole **Rosellinia 1:252; 10**
2. Perithecia with a stroma
- a. Stroma immersed
- (1) Stroma in wood or bark, valsoid or dia-  
trypoid **Anthostoma 1:293; 10**
- (2) Stroma in leaves, with a hypostroma **Pseudotthiella**

- b. Stroma superficial, carbonous to soft-leathery or sometimes almost fleshy
- (1) Stroma effuse, pulvinate, globoid or cupulate, without sterile base or stalk
- (a) Stroma effuse
- x. Perithecia with long necks; spores without mucous sheath; lignicole **Bolinia 1:352**
- y. Perithecia without necks; spores with mucous sheath; finicole **Hypocpra 1:240; 10**
- (b) Stroma globoid, pulvinate or cupulate, sometimes confluent and crustose
- x. Stroma concentrically zoned **Daldinia 1:393; 11**
- y. Stroma not concentrically zoned
- (x) Stroma solid
- m. Perithecia in several series covered by a fragmenting peridium **Peridoxylum**
- n. Perithecia typically in one series, without fragmenting peridium
- (m) Stroma discoid or cupulate; conidia below upper layer **Nummularia 1:395; 11**
- (n) Stroma pulvinate to hemispheric, often confluent and then crustose; conidia superficial **Hypoxyllum 1:352; 11**
- (y) Stroma more or less hollow
- m. Stroma woody-fleshy, hemispheric, hollow, pale, the surface crested-alveolate **Cerillum 24:650**
- n. Stroma carbonous, black, somewhat hollow, the surface not crested-alveolate **Ustulina 1:350; 11**
- (2) Stroma stipitate, terete, cylindric, clavate, or fruticose, sometimes capitate, discoid or cupulate above
- (a) Stroma broadened into a disk above; spores with mucous sheath **Poronia 1:348; 11**
- (b) Stroma not discoid above; spores without sheath
- x. Perithecia immersed laterally
- (x) Stroma clavate or filiform, often branched **Xylaria 1:309; 11**
- (y) Stromata capitate, forming a crust **Kretschmaria 9:965**
- y. Perithecia immersed vertically
- (x) Perithecia in a circle below the truncate disk **Camillea 1:346**
- (y) Perithecia crowded below an operculate disk **Henningsina 16:450**

**Hyalodidymae**

1:475, 9:611, 11:295, 14:525, 16:468, 17:635, 22:120, 24:849

Spores 2-celled, hyaline or subhyaline, ovoid to oblong or fusoid

**A. Perithecia separate or cespitose, rarely subiculoid****1. Perithecia innate, or finally erumpent****a. Perithecia beaked**

- (1) *Perithecia* concentric in groups between bark and wood *Cacosphaeria* 9:699
- (2) *Perithecia* not in concentric groups
- (a) Asci 8-spored
- x. Paraphyses present *Pseudodiaporthe* 22:388
- y. Paraphyses lacking *Gnomonia* 1:561; 11
- (b) Asci many-spored *Rehmiella* 9:675
- b. *Perithecia* not beaked
- (1) *Perithecia* with clypeus or epistroma
- (a) *Perithecia* with clypeus
- x. Spores appendaged both ways; ostiole oblique *Plagiostigma*
- y. Spores not appendaged; ostiole straight
- (x) Paraphyses present *Stegophora*
- (y) Paraphyses lacking *Hypospilina* 2:190
- (b) *Perithecia* with 5-6-radiate epistroma *Periaster*
- (2) *Perithecia* without clypeus or epistroma
- (a) *Perithecia* setose, often about apex only *Venturia* 1:586; 11
- (b) *Perithecia* not setose
- x. Spores with mucous sheath or appendages
- (x) Spores with mucous sheath *Massarinula* 14:536
- (y) Spores caudate at each end *Ceriosporella*
- y. Spores without sheath or appendages
- (x) Paraphyses present
- m. *Perithecia* cespitose, carbonous *Othtiella* 1:739, 17:662
- n. *Perithecia* sparse to gregarious, typically membranous
- (m) *Perithecia* with long branched hairs; typically lichenicole *Arcangelia* 9:696
- (n) *Perithecia* glabrous
- r. *Perithecia* lichenicole *Didymellopsis* 17:657
- s. *Perithecia* not lichenicole *Didymella* 1:545; 11
- (y) Paraphysoids present
- m. *Perithecia* lichenicole *Polycarpella*
- n. *Perithecia* not lichenicole
- (m) Asci few, ovoid *Wettsteinina* 22:406
- (n) Asci many, clavate-cylindric *Pseudosphaerella* 24:631
- (z) Paraphyses and paraphysoids lacking *Mycosphaerella* 1:476; 9:659; 11
2. *Perithecia* superficial
- a. *Perithecia* beaked
- (1) Spores expelled in a mucous mass *Spumatoria* 16:1134
- (2) Spores not expelled in a mucous mass
- (a) *Perithecia* setose; paraphyses lacking *Chaetolentomita* 24:1072
- (b) *Perithecia* glabrous; paraphyses present *Lentomita* 1:584
- b. *Perithecia* not beaked
- (1) *Perithecia* setose or hairy
- (a) Paraphyses present *Gibbera* 1:599
- (b) Paraphyses lacking
- x. *Perithecia* lichenicole *Echinothecium* 16:484
- y. *Perithecia* insecticole *Cantharosphaeria* 24:923
- z. *Perithecia* foli-caulicole, sometimes collapsing *Coleroa*

- (2) *Perithecia* glabrous  
 (a) Paraphyses present  
 x. Spores short, elliptic to fusoid  
 (x) *Perithecia* coarsely warted or ridged  
 m. *Perithecia* lichenicole  
 n. *Perithecia* not lichenicole  
 (y) *Perithecia* not warted or ridged  
 m. *Perithecia* lichenicole  
 n. *Perithecia* not lichenicole  
 y. Spores long, botuliform, fusiform or cylindrical, sometimes continuous  
 (b) Paraphyses lacking  
 x. Asci 8-spored  
 (x) *Perithecia* with innate basal stroma or foot  
 (y) *Perithecia* without basal stroma  
 y. Asci many-spored
- B. *Perithecia* with a subicle or stroma
1. *Perithecia* with a subicle
- a. *Perithecia* cupulate-collapsing  
 (1) Paraphyses present  
 (2) Paraphyses lacking  
 b. *Perithecia* not cupulate-collapsing  
 (1) *Perithecia* hairy  
 (a) Ostiole present  
 (b) Ostiole lacking  
 (2) *Perithecia* glabrous  
 (a) Paraphyses present  
 x. Spores with long hyaline setae at each end  
 y. Spores without setae  
 (b) Paraphyses lacking
2. *Perithecia* with a stroma
- a. Stroma bright-colored  
 (1) Stroma white and soft  
 (2) Stroma yellow or red, leathery  
 b. Stroma black, carbonous or woody  
 (1) Stroma superficial; perithecial wall radiate; paraphyses lacking  
 (2) Stroma immersed, then more or less erumpent; perithecial wall not radiate  
 (a) Paraphyses present  
 x. *Perithecia* setose  
 y. *Perithecia* not setose  
 (x) Spores with appendages  
 m. Spores with an appendage at one or both ends  
 n. Spores also with two or more appendages at the septum  
 (y) Spores without appendages  
 m. Stroma immersed; conidia on a stroma  
 n. Stroma erumpent-superficial; conidia in a pycnidium
- Rhagadostoma  
 Bertia 1:581  
 Pharcidia 9:676, 17:635  
 Melanopsamma 1:575; 11  
 Thaxteria 9:687  
 Monopus 24:634  
 Montemartinia  
 Kirschsteinia 22:164  
 Dimerinopsis  
 Winterina  
 Apiosporina  
 Lasiostemma 24:248  
 Neokeissleria 24:747  
 Plactogene  
 Ascospora  
 Melchiora 14:538  
 Endothia 1:601; 12  
 Loranthomyces 24:539; 8  
 Cyphospileia  
 Melanidium 1:604  
 Caudospora  
 Melanconis 1:602  
 Myrmaeciella 1:600, L 478

- (b) Paraphyses lacking  
 x. Perithecia setose; stroma thin, subcuticular **Montagnina**  
 y. Perithecia glabrous; stroma valsoid or diatrypid  
 (x) Spores appendaged at one or both ends **Chorostella 1:623**  
 (y) Spores not appendaged  
 m. Stroma valsoid **Chorostate 1:606; 12**  
 n. Stroma diatrypid **Diaporthe 1:631**

**Phaeodidymae**

1:701, 9:723, 11:312, 14:551, 16:498, 17:675, 22:169, 303, 390, 24:762, 924, 1074  
 Spores 2-celled, dark, yellow to olive or brown, ovoid to oblong or fusoid

**A. Perithecia separate**

1. Perithecia innate, or finally erumpent  
 a. Perithecia beaked **Rhynchostoma 1:730**  
 b. Perithecia not beaked  
 (1) Perithecia with clypeus or epistroma  
 (a) Perithecia with clypeus  
 x. Perithecia setose **Metacoleroa**  
 y. Perithecia glabrous  
 (x) Paraphyses present  
 m. Perithecia membranous; spores not mucose **Stegastroma 24:936**  
 n. Perithecia carbonous; spores mucose **Seynesia 2:668**  
 (y) Paraphyses lacking **Teratosphaeria 24:538, 635**  
 (b) Perithecia with disk-like epistroma **Haplovalsaria**  
 (2) Perithecia without clypeus or epistroma  
 (a) Perithecia hairy **Pyrenobotrys 24:538, 635**  
 (b) Perithecia glabrous  
 x. Paraphyses present  
 (x) Spores with mucous sheath or appendages  
 m. Spores with mucous sheath only **Phorcys**  
 n. Spores with appendages, rarely a sheath also **Ceriospora 2:184, 14:19**  
 (y) Spores without mucous sheath or appendages  
 m. Asci 8-spored  
 (m) Perithecia lichenicole **Endococcus 22:176**  
 (n) Perithecia not lichenicole  
 r. Asci on a central sterile column  
 s. Asci basal-peripheral  
 n. Asci many-spored; lichenicole  
 y. Paraphyses lacking  
 (x) Perithecia lichenicole **Sphaerellothecium 17:676**  
 (y) Perithecia not lichenicole **Phaeosphaerella 9:723**
2. Perithecia superficial from the first  
 a. Perithecia hairy  
 (1) Paraphyses present **Protoventuria A:113, 9:74**  
 (2) Paraphysoids present **Epipolaeum 24:1132**



- (3) Paraphyses and paraphysoids lacking; fungicole *Acanthostoma* 24:366
- b. *Perithecia* glabrous
- (1) *Perithecia* carbonous; paraphyses present *Amphisphaeria* 1:718; 12
- (2) *Perithecia* membranous
- (a) Asci 8-spored
- x. Paraphyses present; spores with mucous sheath; fimicole *Delitschia* 1:732
- y. Paraphyses lacking
- (x) *Perithecia* cupulate *Gaillardiiella* 14:559
- (y) *Perithecia* not cupulate
- m. *Perithecia* fungicole *Bolosphaera* 24:926
- n. *Perithecia* muscicole *Lizonia* 1:574
- (b) Asci many-spored *Delitschiella* 17:688
- B. *Perithecia* cespitose or forming a crust, no true subicle or stroma
1. *Perithecia* cespitose, with distinct ostiole
- a. *Perithecia* innate-erumpent, ramicole *Otthia* 1:735; 12
- b. *Perithecia* superficial, lichenicole *Sorothelia* A:122, 9:728
2. *Perithecia* forming a crust, ostiole indistinct or lacking *Parodiella* 1:717; 8
- C. *Perithecia* with a subicle or stroma
1. *Perithecia* with a superficial mycelium or subicle
- a. *Perithecia* beaked
- (1) Paraphyses present
- (a) Spores with a mucous sheath *Sydowina*
- (b) Spores without a mucous sheath *Gibellina* A:413, 9:740
- (2) Paraphyses lacking *Rhynchomeliola* A:127, 9:751
- b. *Perithecia* not beaked
- (1) Paraphyses present
- (a) *Perithecia* hairy
- x. Asci 2-spored *Pachyspora* 22:185
- y. Asci 8-spored *Neopeckia* A:26, 9:749
- (b) *Perithecia* glabrous
- x. *Perithecia* carbonous *Aloysiella* 22:188
- y. *Perithecia* membranous
- (x) *Perithecia* fungicole *Pseudodimerium*
- (y) *Perithecia* not fungicole *Lojkania* 22:486
- (2) Paraphysoids present
- (a) Subiculum with spines *Acantharia* 24:1132
- (b) Subiculum without spines
- x. *Perithecia* hairy *Apiosporina*
- y. *Perithecia* glabrous *Hypoplegma* 24:252
- (3) Paraphyses and paraphysoids lacking *Porostigma* 24:948
2. *Perithecia* with a stroma
- a. Stroma discoid to pulvinate
- (1) Stroma phyllogenous
- (a) *Perithecia* superficial *Licopolia* 16:508
- (b) *Perithecia* immersed *Pseudothis* 24:766
- (2) Stroma not phyllogenous
- (a) Paraphyses present
- x. Spores with mucous sheath *Massariovalsa* 9:755
- y. Spores without mucous sheath

- |  |                                  |
|--|----------------------------------|
| (x) Stroma valsoid                             | <i>Valsaria</i> 1:741; 12        |
| (y) Stroma cutypoid                            | <i>Endoxylina</i> 11:318         |
| (b) Paraphyses lacking                         | <i>Melanconiella</i> 1:740       |
| b. Stroma erect, subterete, simple or branched | <i>Xylobotryum</i> 11:319, 14:20 |

#### Hyalophragmiae

2:152, 9:824, 11:332, 14:581, 16:528, 17:692, 22:189, 300, 24:767, 948, 1075

Spores x-celled, hyaline to subhyaline, oblong, cylindric, or fusiform. The ratio between length and width is less than 20:1; in a few genera of this section the spores are typical in form, but merely 1-septate or even continuous.

- |   |                                  |
|---|----------------------------------|
| A. Perithecia separate, sometimes gregarious but rarely cespitose |                                  |
| 1. Perithecia innate, or finally crumpled                         |                                  |
| a. Perithecia beaked  |                                  |
| (1) Perithecia carbonous, lignicole; paraphyses present           | <i>Ceratosphaeria</i> 2:227; 12  |
| (2) Perithecia membranous, foliicole; paraphyses lacking          | <i>Cryptoderis</i> 2:229, 17:716 |
| b. Perithecia not beaked  |                                  |
| (1) Perithecia with a clypeus                                     |                                  |
| (a) Paraphyses present  | <i>Clypeothecium</i>             |
| (b) Paraphyses lacking  | <i>Hypospila</i> 2:189           |
| (2) Perithecia without clypeus                                    |                                  |
| (a) Perithecia hairy  | <i>Chaetopyrenis</i> 24:961      |
| (b) Perithecia glabrous   |                                  |
| x. Paraphyses present   |                                  |
| (x) Spores with a mucous sheath                                   | <i>Massarina</i> 2:153           |
| (y) Spores without a mucous sheath                                |                                  |
| m. Perithecia membranous  |                                  |
| (m) Perithecia on spermaphytes                                    |                                  |
| r. Spores with a seta at each end                                 | <i>Keissleria</i> 2:184, 14:19   |
| s. Spores without setae   | <i>Metasphaeria</i> 2:156; 12    |
| (n) Perithecia on thallophytes                                    |                                  |
| r. Perithecia lichenicole   | <i>Pharcidiopsis</i> 17:646      |
| s. Perithecia uredicole   | <i>Eudarlucia</i> 22:201         |
| t. Perithecia fucicole  | <i>Lulworthia</i> 24:1059        |
| n. Perithecia carbonous   |                                  |
| (m) Spores with a seta at each end, very long, 20-30-septate      | <i>Saccardoella</i> 2:190        |
| (n) Spores without setae, few-septate                             |                                  |
| r. Perithecia warted or ridged                                    | <i>Bertiella</i>                 |
| s. Perithecia not warted or ridged                                | <i>Melomastia</i> 2:213          |
| y. Paraphysoids present   |                                  |
| (x) Spores with a mucous sheath                                   | <i>Pseudosphaeria</i> 22:407     |
| (y) Spores without mucous sheath                                  | <i>Phragmosperma</i> 24:1131     |
| z. Paraphyses and paraphysoids lacking                            | <i>Sphaerulina</i> 2:186         |
| 2. Perithecia superficial from the first                          |                                  |
| a. Perithecia hairy or setose                                     |                                  |
| (1) Perithecia membranous   |                                  |
| (a) Paraphyses present  | <i>Aphanostigme</i>              |
| (b) Paraphyses lacking  | <i>Acanthostigma</i> 2:207       |

- (2) *Perithecia carbonous*  
 (a) *Perithecia lichenicole* *Enchnosphaeria* 2:207  
 (b) *Perithecia* not lichenicole; spores sometimes faintly septate or continuous *Lasiosphaeria* 2:191, 198; 12
- b. *Perithecia* glabrous  
 (1) *Perithecia* stalked, covered with a bright powder *Bombardiastrum* 11:338  
 (2) *Perithecia* not stalked or powdery  
 (a) Paraphyses present  
 x. *Perithecia* soft, membranous *Sporoctomorpha*  
 y. *Perithecia* hard, carbonous *Zignoella* 2:214; 12  
 (b) Paraphysoids present *Phaneroascus* 24:1132
- B. *Perithecia* cespitose, glabrous, finally collabent *Baumiella* 17:708
- C. *Perithecia* with a subicle or stroma
1. *Perithecia* with a subicle  
 a. *Perithecia* hairy or setose  
 (1) Paraphyses present *Nematostigma* 24:973  
 (2) Paraphyses lacking *Pseudoperis*
- b. *Perithecia* glabrous  
 (1) Paraphyses present; asci 8-spored *Thaxteriella*  
 (2) Paraphyses lacking; asci many-spored *Sydowia* 11:341, 24:964
2. *Perithecia* in a stroma  
 a. Stroma white, lanose; lichenicole *Dichosporium* 16:542  
 b. Stroma black; not lichenicole  
 (1) Stroma immersed, small, valsoid *Calospora* 2:231; 12  
 (2) Stroma superficial  
 (a) Stroma large, short-stalked, asperate; spores muticate *Petrakiella*  
 (b) Stroma small; spores ciliate both ways *Broomella* 2:557; 16

**Phaeophragmiae**

2:1, 9:759, 11:319, 14:561, 16:510, 17:718, 22:214, 305, 396, 24:768, 979, 1077

Spores x-celled, dark, yellow to olive or brown, oblong, cylindrical or fusiform. The ratio between length and width is less than 20:1, and usually less than 10:1.

- A. *Perithecia* separate, sometimes gregarious, but not cespitose
1. *Perithecia* innate, or finally erumpent  
 a. *Perithecia* beaked *Rhynchosphaeria* 16:524  
 b. *Perithecia* not beaked  
 (1) *Perithecia* with a clypeus *Clypeosphaeria* 2:90; 13  
 (2) *Perithecia* without clypeus  
 (a) *Perithecia* setose  
 x. *Perithecia* fungicole *Litschaueria*  
 y. *Perithecia* not fungicole *Pocosphaeria* 11:325  
 (b) *Perithecia* glabrous  
 x. *Perithecia* fimicole; spores with mucous sheath *Sporormia* 2:123; 13  
 y. *Perithecia* not fimicole  
 (x) Spores with mucous sheath or appendages  
 m. Spores with mucous sheath *Massaria* 2:2; 13

- n. Spores with appendages
  - (m) Spores with stout conical appendage at base **Rebentischia** 2:12
  - (n) Spores with a long seta at each end **Keissleria** 2:184, 14:19
- (y) Spores without sheath or appendages
- m. Paraphyses present
  - (m) Perithecia membranous
    - r. Perithecia lichenicole **Xenosphaeria** 17:730
    - s. Perithecia not lichenicole **Leptosphaeria** 2:13, 88; 13
  - (n) Perithecia carbonous **Trematosphaeria** 2:115; 13
- n. Paraphysoids present **Scleroplella** 24:1131
- o. Paraphyses and paraphysoids lacking
  - (m) Perithecia lichenicole **Phaeospora** 16:519
  - (n) Perithecia not lichenicole **Phaeosphaeria** 22:214
- 2. Perithecia superficial from the first
  - a. Perithecia hairy or setose
    - (1) Paraphyses present **Liasiosphaeris** 2:194
    - (2) Paraphyses lacking **Herpotrichiella** 24:973
  - b. Perithecia glabrous
    - (1) Spores biconic, a 2-3-septate hyaline appendage at each end **Caryospora** 2:122
    - (2) Spores not biconic and appendaged
      - (a) Perithecia fimicole; spores usually with mucous sheath **Sporormia** 2:123; 13
      - (b) Perithecia not fimicole; spores without sheath
        - x. Paraphyses present **Melanomma** 2:98; 13
        - y. Paraphyses lacking **Gillotia** 22:253
- B. Perithecia cespitose
  - 1. Perithecia fungicole **Philonectria** 24:1016
  - 2. Perithecia lignicole **Gibberidea** 2:132
- C. Perithecia with a subicle or stroma
  - 1. Perithecia with a subicle or thin superficial stroma
    - a. Perithecia parasitic on insects **Coccidophthora** 24:1018
    - b. Perithecia lignicole
      - (1) Perithecia on a subicle, submembranous, typically collapsing **Chaetosphaeria** 2:92; 13
      - (2) Perithecia on a thin superficial stroma, not collapsing; spore-cells finally separating **Ohleria** 2:96
  - 2. Perithecia in a stroma, the latter typically immersed
    - a. Stroma lichenicole **Trematosphaeris** 17:735
    - b. Stroma fimicole **Sporormiella**
    - c. Stroma phytogenous
      - (1) Paraphyses present
        - (a) Asci with a single large spore; perithecia valsoid **Titania** 9:823
        - (b) Asci 4-8 spored
          - x. Spores appendaged both ways **Broomella** 2:557; 16
          - y. Spores not appendaged
      - (x) Stroma valsoid

- m. Stroma innate; conidia on a stroma      *Aglaospora* 2:133, 135, 140; 13  
 n. Stroma erumpent-superficial; conidia  
     in a pycnidium      *Melogramma* 2:144; 13  
 (y) Stroma diatrypoid      *Kalmusia* 2:142  
 (2) Paraphyses lacking      *Cryptosphaerina* 16:521

**Hyalodictyae**

2:238, 9:872, 11:349, 14:611, 16:554, 17:743, 22:253, 400, 24:1019, 1077

Spores transversely and longitudinally septate, typically muriform, hyaline to subhyaline, oblong to fusiform.

**A. Perithecia separate****1. Perithecia innate, or finally erumpent****a. Perithecia beaked**      *Rhamphoria* 2:307**b. Perithecia not beaked**(1) Perithecia with a clypeus      *Peltosphaeria* 9:898; 14

## (2) Perithecia without a clypeus

(a) Perithecia setose; asci 16-spored      *Capronia* 2:288

## (b) Perithecia glabrous; asci typically 8-spored, sometimes 1-4-spored

**x. Paraphyses present**      *Julella* 2:289**y. Paraphysoids present**      *Pseudoplea* 24:1131**z. Paraphyses and paraphysoids lacking**(x) Perithecia lichenicole      *Norrinia*(y) Perithecia not lichenicole      *Pringsheimia* 11:350; 14**2. Perithecia superficial from the first****a. Perithecia hairy**      *Ophiodictyum* 16:555**b. Perithecia glabrous**      *Tichosporella* 11:351; 14**B. Perithecia with a subicle or stroma****1. Perithecia with a subicle****a. Perithecia setose, globoid**      *Boerlagella* 14:612**b. Perithecia glabrous, collapsing**      *Phaeopeltis* 17:873**2. Perithecia in a stroma****a. Perithecia projecting, setose**      *Berlesiella* 9:914; 14**b. Perithecia immersed, glabrous**

## (1) Stroma immersed; paraphyses present

(a) Stroma valsoid      *Clathridium* 11:350, 2:332(b) Stroma diatrypoid      *Thyridella* 11:351(2) Stroma superficial; paraphyses lacking      *Pleomogramma* 22:401**Phaeodictyae**

2:238, 9:872, 11:341, 14:594, 16:554, 17:746, 22:258, 401, 24:711, 1024

Spores transversely and longitudinally septate, typically muriform, dark, yellow, olive or brown, oblong to fusiform.

**A. Perithecia separate****1. Perithecia innate, or finally erumpent****a. Perithecia with a clypeus**      *Phaeopeltium* 11:344**b. Perithecia without a clypeus**

## (1) Perithecia setose

(a) Spores compressed, flattened      *Comoclathris* 24:1039

## (b) Spores not flattened

**x. Perithecia sclerotoid; paraphysoids present**

*Pyrenophora* 2:277; 14

- y. Perithecia not sclerotoid, often collabent; paraphyses lacking **Chaetoplea 2:279**
- (2) Perithecia glabrous
- (a) Spores with mucous sheath or appendages
- x. Spores with mucous sheath **Pleomassaria 2:239**
- y. Spores with hyaline beak at each end **Delacourea 2:288**
- (b) Spores without mucous sheath or appendages
- x. Paraphyses present
- (x) Perithecia membranous, often collabent
- m. Spores compressed, flattened **Clathrospora 9:894**
- n. Spores not flattened; asci 2-8-spored **Pleospora 2:241; 14**
- (y) Perithecia coriaceous, not collabent **Karstenula 2:240**
- y. Paraphysoids present; perithecia sclerotoid **Scleroplea 2:277**
- z. Paraphyses and paraphysoids lacking
- (x) Perithecia lichenicole **Merismatium 16:553**
- (y) Perithecia not lichenicole **Leptosphaerulina 17:746**
2. Perithecia superficial from the first
- a. Perithecia hairy **Pleosphaeria 2:304**
- b. Perithecia glabrous
- (1) Perithecia corrugate-warted **Crotonocarpia 2:306**
- (2) Perithecia not corrugate-warted **Tichospora 2:290; 14**
- B. Perithecia caespitose, usually on a crustose or felted stroma **Cucurbitaria 2:307; 14**
- C. Perithecia with a subicle or stroma
1. Perithecia on a subicle, glabrous **Naetrocymbe 22:66**
2. Perithecia in a stroma
- a. Spores with a mucous sheath **Montagnula 14:603**
- b. Spores without a mucous sheath
- (1) Paraphyses present
- (a) Stroma valsoid **Fenestella 2:325; 14**
- (b) Stroma diatrypoid **Thyridium 2:323**
- (2) Paraphysoids present **Curreya 2:651**

#### Scolecosporae

2:237, 9:923, 11:351, 14:613, 16:557, 17:767, 22:289, 306, 404, 24:774, 1058, 1077

Spores acicular to filiform, the ratio of length to width 20:1 or more, continuous or septate, hyaline or subhyaline, rarely dark.

#### Hyaloscoleciae

Spores hyaline to subhyaline

- A. Perithecia separate, rarely caespitose
1. Perithecia innate, or finally erumpent
- a. Perithecia beaked
- (1) Perithecia with a clypeus; beak often lateral; paraphyses lacking **Linospora 2:354; 15**
- (2) Perithecia without a clypeus; paraphyses present
- (a) Perithecia erect; beak straight, not discoid at tip **Ophioceras 2:358, 11:353**

- (b) Perithecia horizontal; beak right-angled, discoid at tip Robergea 2:806
- b. Perithecia not beaked
- (1) Perithecia with a clypeus Ceuthocarpum 14:618
- (2) Perithecia without a clypeus
- (a) Perithecia hairy or setose Ophiochaeta 11:352
- (b) Perithecia glabrous
- x. Spores with mucous sheath or appendages
- (x) Spores with mucous sheath Ophiomassaria 11:353
- (y) Spores with a seta at each end Dilophia 2:357; 15
- y. Spores without sheath or appendages
- (x) Perithecia with several ostioles; paraphyses lacking Criserosphaeria 24:1060
- (y) Perithecia with a single ostiole
- m. Perithecia lichenicole
- (m) Asci 8-spored Rhabdiphora 2:351
- (n) Asci many-spored Neolamyia 2:351
- n. Perithecia not lichenicole
- (m) Paraphyses present
- r. Perithecia globose to conoid Ophiobolus 2:337; 15
- s. Perithecia cylindrical, truncate Cylindrina A:421, 9:937
- (n) Paraphysoids present Ophiocarpella 24:638, 1131
- (o) Paraphyses lacking
- r. Perithecia algicole, astomous; spores just below 20:1 Lulworthia 24:1059
- s. Perithecia graminicole, ostiolate; spores typically filiform Ophiosphaerella 22:290
2. Perithecia superficial
- a. Perithecia hairy; paraphyses lacking Acerbiella 17:768
- b. Perithecia glabrous
- (1) Perithecia fimicole; spores long-awned at each end Bovilla 2:360
- (2) Perithecia not fimicole; spores muticate
- (a) Perithecia globoid to conoid; ostiole normal Leptospora 14:619
- (b) Perithecia elongate-cylindrical, ostiole sulcate Bactrosphaeria 14:617
- B. Perithecia with a subicle or stroma
1. Perithecia with a subicle
- a. Paraphyses present Bombardiella 22:292
- b. Paraphyses lacking Trichospermella 24:364
2. Perithecia with a stroma
- a. Stroma superficial; perithecia setose Acanthotheca
- b. Stroma immersed or erumpent
- (1) Stroma erumpent
- (a) Paraphyses present Sillia 1:361; 15
- (b) Paraphyses lacking Naumovia
- (2) Stroma immersed, disk alone emerging
- (a) Necks of perithecia short, scarcely converging; conidia in a pycnidium Vialaea 14:619
- (b) Necks of perithecia long, converging into a disk; conidia on a stroma Cryptospora 2:361; 15

## Phaeoscoleciae

Spores dark

- A. Perithecia separate, innate, beaked Exilispora  
 B. Perithecia immersed in an effuse superficial  
 stroma, not beaked Maurya 14:620

## Family 27. HYPOCREACEAE

2:447, 9:941, 11:354, 14:621, 16:559, 17:777, 22:443, 24:447

Perithecia innate or superficial, typically globoid, occasionally flask-shaped or cylindrical, regularly ostiolate, rarely astomous, sometimes beaked, wall typically fleshy and bright-colored, usually reddish, more rarely yellow, whitish or blue, single, cespitose or composite in a stroma; mycelium scanty and immersed, or producing a subicle or stroma; asci, paraphyses and spores various, as in **Sphaeriaceae**.

As a rule, the **Hypocreaceae** are readily distinguished from the **Sphaeriaceae** by the fleshy bright-colored perithecia. These criteria, together with the presence of a distinct perithecial wall, serve also to separate them from **Dothideaceae**. The **Perisporiales** differ in being typically astomous and in the wall being at most soft-membranous or slimy, never truly fleshy, though occasionally bright-colored. Perhaps the greatest difficulty comes in distinguishing **Hypocreaceae** from the persistently innate **Sphaeriaceae** of foliicole habit, in which the wall is often soft-membranous, but never truly fleshy and bright-colored, and from such stromate forms as **Xylaria** and **Hypoxylum** of more or less fleshy texture when fresh, but usually dark-colored.

The **Hypocreaceae** are regarded as derived directly from the **Sphaeriaceae**, under conditions permitting a larger or more assured water-supply, though a few may have sprung from **Perisporiales**. This line of evolution comes to an end in the group without giving rise to other families.

## Allantosporae

17:778, 24:640

Spores 1-celled, botuliform, hyaline or subhyaline

One genus

**Allantonectria** 17:778; 15

## Hyalosporae

2:477, 9:941, 11:354, 14:621, 16:559, 17:778, 22:443, 24:448

Spores 1-celled, globose to oblong, hyaline or subhyaline, not yellow, olive or brown.

## A. Perithecia separate

1. Perithecia innate, or finally more or less erumpent

## a. Asci 8-spored

(1) Spores globose; paraphyses present

**Mycaureola**

(2) Spores not globose; paraphyses lacking

**Hyponectria** 2:455

## b. Asci many-spored; algal hosts often present

**Thelocarum** 9:946, Z 213

2. Perithecia superficial or nearly so

## a. Spores hemispheric, spiny

**Clistosoma** A:195, 9:943

## b. Spores not hemispheric and spiny

(1) Perithecia hairy

**Notarisiella** 2; 452; 15

(2) Perithecia glabrous

**Nectriella** 2:448



- B.** *Perithecia cespitose*  
 1. Asci 8-spored *Lisiella* 9:945  
 2. Asci many-spored *Chilonectria* 2:453; 15
- C.** *Perithecia with a subicle or stroma*  
 1. *Perithecia in a subicle*  
 a. Paraphyses present; not fungicole *Byssonectria* 2:456  
 b. Paraphyses lacking; fungicole *Peckiella* 9:944
2. *Perithecia in a stroma*  
 a. *Stroma elongate, erect*  
 (1) Asci 8-spored; stroma capitate *Sphaerostilbella* 17:778  
 (2) Asci 16-spored; stroma clavate; on insects *Podostroma* 11:355
- b. *Stroma effuse, globose, verruciform or linear*  
 (1) Asci 8-spored  
 (a) *Perithecia circinate, valsoid* *Balzania* 16:561  
 (b) *Perithecia not circinate, mostly irregular*  
 x. Spores globose *Battarina* 2:533  
 y. Spores not globose  
 (x) *Stroma effuse, phyllogenous*  
 m. Spores rostrate above *Uropolystigma* 24:644  
 n. Spores not rostrate *Polystigma* 2:458; 15  
 (y) *Stroma globoid to verruciform*  
 m. *Stroma hairy, red; perithecia distinct* *Selinia* 2:457  
 n. *Stroma glabrous, amber-like; perithecia loculiform* *Succinaria*  
 (2) Asci many-spored; phyllogenous *Moelleriella* 14:626

### Phaeosporae

2:459, 9:949, 11:355, 14:626, 16:562, 17:781, 22:449, 24:647

Spores 1-celled, dark, typically olivaceous to brown

- A.** *Perithecia separate*  
 1. *Perithecia innate, or finally more or less erumpent*  
 a. *Perithecia more or less hairy; spores with mucous sheath* *Sphaerodermella* 22:451  
 b. *Perithecia glabrous; spores not mucose* *Baculospora* 9:952
2. *Perithecia superficial*  
 a. *Perithecia beaked*  
 (1) Asci 8-spored *Melanospora* 2:461; 15  
 (2) Asci many-spored *Scopinella* 9:953
- b. *Perithecia not beaked*  
 (1) *Perithecia hairy* *Erythrocarpum* 9:950  
 (2) *Perithecia glabrous*  
 (a) Spores globose, warded *Neocosmospora* 16:562  
 (b) Spores ovoid to oblong, smooth *Sphaerodes* 2:460, C 172
- B.** *Perithecia with a subicle or stroma*  
 1. *Perithecia in a subicle*  
 a. *Perithecia beaked* *Rhynchomelas* 2:461, C 172  
 b. *Perithecia not beaked* *Sphaeroderma* 2:459
2. *Perithecia in a stroma*  
 a. *Stroma with sterile crests; surface alveolate* *Cerillum* 22:454  
 b. *Stroma not crested or alveolate*

- (1) Stroma more or less globoid; perithecia in one or more layers **Sarcoxylum 16:450**
- (2) Stroma clavate to cylindrical-conic
- (a) Perithecia superficial on stroma **Wawelia 22:453**
- (b) Perithecia immersed
- x. Stroma pendulous, without peridium **Xylocrea 16:451**
- y. Stroma erect; perithecia in several series covered by a fragmenting peridium **Peridoxylum**

**Hyalodidymae**

2:465, 9:953, 11:356, 14:628, 16:565, 17: 782, 22:455, 24:651

Spores 2-celled, hyaline or subhyaline

**A. Perithecia separate or cespitose**

## 1. Perithecia innate

- a. Perithecia with a long beak **Apiosphaeria**
- b. Perithecia not beaked **Charonectria 2:466**

## 2. Perithecia superficial

## a. Perithecia red, yellow or white

- (1) Asci 8-spored, alike
- (a) Perithecia beaked; spores ciliate at each end **Rhynchonectria 17:798**
- (b) Perithecia not beaked; spores not ciliate
- x. Perithecia hairy **Lasionectria 2:505**
- y. Perithecia glabrous
- (x) Perithecia on or with a stilboid base **Sphaerostilbe 2:511; 16**
- (y) Perithecia without base or the latter tubercularoid
- m. Perithecia lichenicole **Pronectria 2:498**
- n. Perithecia not lichenicole **Nectria 2:479; 16**

## (2) Asci of two kinds, 8- and many-spored

(3) Asci many-spored, alike **Aponectria 2:516**(3) Asci many-spored, alike **Metanectria 2:517**

## b. Perithecia blue or violet

- (1) Asci 8-spored
- (a) Perithecia lichenicole **Prolisea 17:807**
- (b) Perithecia not lichenicole **Lisea 2:517**

- (2) Asci many-spored **Cyanocephalum 11:360**

**B. Perithecia with a subicle or stroma**

## 1. Perithecia with a subicle

- a. Paraphyses present; spores in a broad mucous capsule, ending in a long lash; on submerged stems **Loramycetes**
- b. Paraphyses lacking; spores not mucose or flagellate; typically on basidiomycetes **Hypomyces 2:466; 16**

## 2. Perithecia immersed in an effuse, globoid or elongate stroma

- a. Perithecia with a long beak **Treleasia 14:640**

## b. Perithecia not beaked

- (1) Paraphyses present **Lambro 16:589**

- (2) Paraphyses lacking **Podocrea 17:799**

- (a) Stroma elongate, clavate or capitate

- (b) Stroma effuse to globoid **Stilbocrea 16:588**

- x. Stroma with Stilbum **Hypocrea 2:250; 16**
- y. Stroma without Stilbum

## Phaeodidymae

2:537, 9:981, 14:646, 16:591, 17:808, 22:484, 24:677

Spores 2-celled, dark, typically olivaceous to brown

## A. Perithecia separate or cespitose

## 1. Perithecia innate or erumpent

## a. Asci 8-spored

(1) Perithecia beaked; on pyrenomycetes *Passerinula* 2:537(2) Perithecia with broad umbilicate ostiole;  
on bark *Spegazzinula* 2:537b. Asci many-spored *Erispora*

## 2. Perithecia superficial

a. Spores with hyaline appendages *Xenonectria*

## b. Spores without appendages

(1) Perithecia on or with a stilbum-like base *Calostilbe* 16:391(2) Perithecia without a stilbum-like base *Letendreaa* 2:538; 16

## B. Perithecia with a stroma

1. Perithecia with a long beak, in 2-3 layers *Metadothella* 18:162

## 2. Perithecia not beaked

a. Perithecia superficial on the stroma *Macbridella* 22:485b. Perithecia immersed in the stroma *Phaeocreopsis* 16:591

## Hyalophragmiae

2:539, 9:982, 11:363, 14:647, 16:592, 17:808, 22:487, 24:678

Spores x-celled, hyaline or subhyaline

## A. Perithecia separate or cespitose

## 1. Perithecia innate, or more or less erumpent

## a. Perithecia with a long beak; in sea-weeds

(1) Paraphyses present; spores normal *Orcadia* 24:678(2) Paraphyses lacking; spores flagellate, bent  
double *Trailia* 24:690

## b. Perithecia not beaked; not in sea-weeds

(1) Perithecia peritheciolate; spores oblong *Debaryella* 17:809

(2) Perithecia not peritheciolate

x. Spores falcate *Cesatiella* 2:557y. Spores not falcate *Micronectriella*

## 2. Perithecia superficial

## a. Perithecia red, yellow or white

(1) Perithecia on or with a stilbum-like base *Stilbonectria* 9:986

(2) Perithecia without a stilbum-like base

(a) Spores ciliate at each end *Paranectria* 2:552

(b) Spores not ciliate

x. Perithecia discoid to turbinate, margined  
by fasciculate setae *Actiniopsis* 17:871y. Perithecia globoid, setae if present not  
fasciculate(x) Perithecia hairy or setose *Trichonectria* 22:498(y) Perithecia glabrous *Calonectria* 2:540

## b. Perithecia blue, violet or greenish

(1) Spores appendaged at each end *Lecithium* 11:364(2) Spores not appendaged *Gibberella* 2:552; 16

## B. Perithecia with a subicle or stroma

## 1. Perithecia with a subicle

## a. Perithecia hairy

## (1) Setae of perithecium simple

## (a) Paraphyses present

Byssocallis

## (b) Paraphyses lacking

Hyalocrea

## (2) Setae of perithecium coralloid branched at tip

Chaetocrea

## b. Perithecia glabrous

## (1) Paraphyses present

Subulicola

## (2) Paraphyses lacking

Berkelella 9:989

## 2. Perithecia in stroma

## a. Stromata seated in a common botryose one; paraphyses lacking; perithecia immersed

Stereocrea 24:684

## b. Stromata not compound

## (1) Ostiole broad-conic, erumpent; folicole

Phyllocelis

## (2) Ostiole minute or obsolescent

## (a) Perithecia lichenicole; stroma not hairy

Pericoccis 9:989

## (b) Perithecia not lichenicole; stroma hairy; spores 1-2-caudate

Puttemansia 18:98

## Phaeophragmiae

2:539, 9:982, 11:363, 16:599, 22:493

Spores x-celled, dark, typically olivaceous to brown

## A. Perithecia separate or cespitose

## 1. Perithecia peritheciolate

Weesea

## 2. Perithecia lignicole

Chiajea 14:648

## B. Perithecia in a stroma

## 1. Stroma erect, cylindric; perithecia sparse, immersed

Loculistroma 22:493

## 2. Stroma globoid, tuberiform; perithecia dense, superficial

Peloronectria 16:599

## Hyalodictyae

2:558, 9:990, 11:364, 14:650, 16:599, 17:814, 22:493, 24:688

Spores muriform, hyaline or subhyaline

## A. Perithecia separate or cespitose

## 1. Perithecia red or yellow to whitish

## a. Perithecia with a stilbum-like base

Megalonectria 2:560

## b. Perithecia without a stilbum-like base

## (1) Perithecia setose; paraphyses present

Ophiodictyum 16:555

## (2) Perithecia glabrous

## (a) Paraphyses present

Calyptonectria 22:494

## (b) Paraphyses lacking

Pleonectria 2:559; 16

## 2. Perithecia blue or violet

Pleogibberella 9:992

## B. Perithecia with a subicle or stroma

## 1. Perithecia in a subicle

## a. Perithecia setose; paraphyses lacking; spores muticate

Chaetomeris 22:495

## b. Perithecia hairy; paraphyses present, dissolving; spores ciliate each way

Ciliomyces 22:494

## 2. Perithecia in a stroma

- a. Stroma cupulate with single central perithecium  
*Patellonectria* 24:1340
- b. Stroma valsoid with several perithecia  
*Thyronectria* 2:561

**Phaeodictyae**

2:558, 9:990, 11:364, 16:600, 17:815

Spores muriform, dark, typically olivaceous to brown

## A. Perithecia separate or cespitose

1. Perithecia beaked; asci 8-spored  
*Bivonella* 9:989
2. Perithecia not beaked  
 a. Asci 8-spored  
*Trotterula*
- b. Asci many-spored  
*Feracia* 17:815

## B. Perithecia in a stroma

1. Paraphyses present  
 a. Stroma conoid, snow-white  
*Leucocrea* 16:601
- b. Stroma tuberiform, rimose  
*Shiraia* 16:600
2. Paraphyses absent; stroma pulvinate, more or less valsoid  
*Mattirolia* 9:993

**Scolecosporae**

2:562, 9:993, 11:365, 14:651, 16:601, 17:815, 22:497, 24:689

Spores acicular to filiform, 20x1 or more, continuous or septate, hyaline to dark.

**Hyaloscoleciae**

Spores hyaline or subhyaline

## A. Perithecia separate or cespitose

1. Perithecia innate, or finally more or less erumpent  
 a. Perithecia with a single ostiole  
 (1) Paraphyses present  
*Micronectriopsis*
- (2) Paraphyses lacking  
*Micronectria* 9:996
- b. Perithecia with many ostioles or openings  
*Coscinaria* 9:1003
2. Perithecia superficial  
 a. Perithecia enclosed in a stroma-like sack  
*Oomyces* 2:564
- b. Perithecia not in a sack  
 (1) Perithecia beaked, conic-cylindric; fimicole  
*Copranophilus* 22:499
- (2) Perithecia not beaked  
 (a) Perithecia cylindric, erect, with a rimose ostiole  
*Acrospermum* 2:807; 22
- (b) Perithecia globoid; ostiole round  
 x. Perithecia red to white  
 (x) Paraphyses present  
*Tubeufia* 14:652
- (y) Paraphyses lacking  
*Ophionectria* 2:563; 16
- y. Perithecia blue; paraphyses present  
*Cyanoderma*

## B. Perithecia with a subicle or stroma

1. Perithecia with a subicle  
 a. Paraphyses present  
 (1) Perithecia stipitate; wall composed of inflated hyphal apices  
*Microstelium* 16:672
- (2) Perithecia not stipitate; wall not of inflated hyphal apices  
*Torrubiella* 9:994
- b. Paraphyses lacking  
*Barya* 2:563, 22:500

2. Perithecia with a stroma
- a. Stroma stipitate, or arising from a sclerotium or pseudosclerotium
- (1) Stroma from a sclerotium or sclerotium-like body
- (a) True sclerotium, consisting solely of hyphae **Claviceps 2:564; 16**
- (b) Pseudosclerotium, consisting of host-cells and hyphae **Balansia 9:997**
- (2) Stroma without sclerotium, typically stipitate; on insects or fungi **Cordyceps 2:566; 16**
- b. Stroma not stipitate, without sclerotium, pulvinate to effuse, or lanceolate
- (1) Stroma lanceolate, in inflorescences of bamboo **Mitosporium 24:701**
- (2) Stroma globose to pulvinate
- (a) Perithecia superficial, the stroma appearing to be spiny **Echinodothis 17:819**
- (b) Perithecia imbedded in the stroma
- m. Perithecia over entire surface of stroma **Hypocrella 2:579**
- n. Perithecia limited to a portion of the stroma
- (m) Perithecia scattered around periphery; paraphyses present **Dussiella 9:1004**
- (n) Perithecia in a band or zone; paraphyses lacking
- r. Perithecia in a median band, stroma sterile above and below **Mycomalus 16:604**
- s. Perithecia in a superior zone, stroma sterile below **Ascopolyporus 16:605**
- (3) Stroma effuse
- (a) Stroma bright-colored, encircling stems **Epichloe 2:578; 16**
- (b) Stroma black, not encircling stems **Dothichloe**

#### Phaeoscoleciae

Spores dark, usually brown

- A. Perithecia hairy, superficial, on a buff mycelium **Borenquia 24:702**
- B. Perithecia immersed in a black stroma; spores dilabent **Konradia 16:605**

#### Family 28. LOPHIOSTOMACEAE

2:672, 9:1074, 11:382, 14:702, 16:650, 17:886, 22:546, 24:1106

Perithecia innate, then becoming more or less erumpent, rarely superficial, simple and separate, very rarely stromate, though the matrix is often blackened and sometimes gives the appearance of a stroma, wall typically carbonous, black, with a massive compressed ostiole, opening by a very narrow cleft; asci clavate-cylindric, usually 8-spored, typically paraphysate; spores various.

The genera of this family are derived directly from **Sphaeriaceae** by hypertrophy of the ostiole, the compression of the latter producing a slit-like opening. In spite of this, they appear to have no close relation to the **Hysteriaceae**.

#### Hyalosporae

(Not represented)

**Phaeosporae**

2:673, 17:886

Spores 1-celled, dark; perithecia insculptate **Lophiella** 2:673**Hyalodidymae**

2:675, 9:1075, 11:383, 14:702, 17:886, 22:546

Spores 2-celled, hyaline, oblong to fusoid

- A. Perithecia hairy, subiculate at base **Lophiotricha** 9:1082  
 B. Perithecia glabrous  
 1. Spores appendaged at each end **Lambottiella** 2:677, 22:547  
 2. Spores not appendaged  
 a. Perithecia in a subicle, fungicole **Khekia**  
 b. Perithecia without subicle, not fungicole **Lophiosphaera** 2:675; 17

**Phaeodidymae**

2:673, 9:1074, 11:382, 14:702, 16:650, 17:887, 22:548, 24:1106

Spores 2-celled, dark, oblong to fusoid

- A. Perithecia with a subicle **Byssolophis** 24:1106  
 B. Perithecia without a subicle **Schizostoma** 2:673; 17

**Hyalophragmiae**

2:678, 9:1076, 14:703, 16:631, 17:887, 22:548, 24:1106

Spores x-celled, hyaline, oblong to fusiform

- A. Spores appendaged at each end **Vivianella** 2:687, 22:550  
 B. Spores not appendaged **Lophiotrema** 2:678; 17

**Phaeophragmiae**

2:689, 9:1083, 11:383, 14:704, 16:651, 17:887, 22:550, 24:1108

Spores x-celled, dark, oblong to fusiform

- A. Spores appendaged at one or both ends **Brigantiella** 2:703, 707, 17:889  
 B. Spores not appendaged **Lophiostoma** 2:689; 17

**Hyalodictyae**

9:1093, 22:552

Spores hyaline, muriform

- A. Spores long-caudate at base **Sampaioa**  
 B. Spores not appendaged **Lophidiopsis** 9:1093

**Phaeodictyae**

2:710, 9:1091, 11:384, 14:706, 16:653, 17:889, 22:553, 24:1110

Perithecia typically immersed; spores dark, muriform **Platystomum** 2:710, 17:889; 17**Scolecosporae**

2:717, 9:1094, 22:553, 24:1111

Perithecia immersed; spores acicular to filiform **Lophionema** 2:717; 17**Family 29. CYTTARIACEAE**

8:4, 810; 16:695, 803

Ascomata in a stroma, at first closed and more or less loculiform, then widely open and becoming cupuloid, the stroma either branched or globose to turbinate

and alveolate, carbonous, suberose or fleshy and horny when dry; asci clavate to cylindrical, 6-8-spored, paraphyses present or lacking; spores hyaline, 1-2-celled.

This is not regarded as a natural family, but one based largely upon convenience. The **Cordieritaceae** and **Cyttariaceae** have been treated as separate families, though apparently considered to be related by Lindau (Nat. Pflanzenf. 1:1:241, 1897). Saccardo pointed out the relationship of the first family to the **Pyrenomycetes** (Syll. Fung. 8:810, 1889), and it seems probable that both are to be regarded as intermediate between this group and the **Discomycetes**, in which they have been included. They possess in common a stroma with closed ascomata that finally become more or less cupuloid. The texture of the stroma in the one reflects the **Sphaeriaceae**, in the other the **Hypocreaceae**.

- A. Stroma branched, carbonous or suberose; ascomata terminal, superficial; paraphyses lacking
1. Spores 1-celled; stroma much branched above, horny-carbonous **Cordierites 8:810**
  2. Spores 2-celled; stroma fascicled-ramose, suberose **Acroscyphus 8:811**
- B. Stroma globose to turbinate, not branched, fleshy to corneous; ascomata immersed, opening to form an alveolate surface; paraphyses present; spores 1-celled **Cyttaria 8:4; 38**

### Family 30. VERRUCARIACEAE

Zahlbruckner 63-92

Mycelium parasitic on blue-green or yellow-green algae, and forming a more or less distinct crustose, foliose or fruticose thallus, the latter usually superficial but sometimes below the surface; perithecia distinct, single, cespitose or united in a stroma, usually globoid and ostiolate, membranous, coriaceous or carbonous; asci 1-many-spored; spores various.

The members of this family differ from the **Sphaeriaceae** only in the presence of algae in the mycelium; in short, they are pyrenomycetes parasitic on algae. At present it is most convenient to draw this distinction as sharply as possible, but it is practically certain that this places the species of more than one natural genus in two separate families. In some cases, the same species may be parasitic on algae or saprophytic on bark, a fact that furnishes one of the chief reasons for including lichens with the other fungi. In the past, considerable confusion has resulted from those fungi that grow as parasites on lichens, but most of these have now been recognized and set apart as distinct genera of **Sphaeriaceae** on the basis of the lichenicole habit.

- A. Perithecia separate, at least not in a stroma
1. Thallus with blue-green algae, Nostoc, Scytonema, Rivularia, etc. **Subfamily Pyrenidiaceae**
    - a. Asci 4-8-spored
      - (1) Spores 1-celled
        - (a) Algae Nostoc
          - x. Spores ciliate at one end; asci 4-spored; paraphyses lacking **Cocciscia 90**
          - y. Spores not ciliate; asci 8-spored; paraphyses present, ramose **Rhabdopsora 90**
        - (b) Algae Scytonema; paraphyses ramose **Rhodothrix 91**
        - (c) Algae Rivulariaceae



- x. Spores globose; thallus scaly or crustose **Calotrichopsis 161**
- y. Spores ellipsoid; thallus fruticulose
  - (x) Algal filaments parallel with long axis of branches **Lichina 163**
  - (y) Algal filaments perpendicular to long axis
    - m. Paraphyses present **Lichenyllum 163**
    - n. Paraphyses lacking **Homopsella 163**
- (2) Spores 2-celled
  - (a) Paraphyses present
    - x. Algae Xanthocapsa **Xanthopyrenia 91**
    - y. Algae Nostoc **Pyrenocollema 165; 18**
  - (b) Paraphyses lacking; algae Scytonema or Sirospion **Eolichen 90**
- (3) Spores x-celled; asci 4-spored; paraphyses dissolving **Pyrenidium 91; 18**
- (4) Spores muriform, dark; algae Scytonema **Pyrenothrix 91**
- (5) Spores filiform; periphyses present **Hassea 90**
- b. Asci many-spored; spores 1-celled
  - (1) Algae Dactylococcus; thallus fine-scaly **Placothelium 90**
  - (2) Algae Calothrix; thallus fruticulose **Lichinella 162**
- 2. Thallus with yellow-green algae, Pleurococcus, Palmella, Trentepohlia, etc.
  - a. Thallus gelatinous or crustose
    - (1) Thallus gelatinous, hyphae loose; spores 2-celled, hyaline **Epigloea 65; 18**
    - (2) Thallus crustose, hyphae compact
      - (a) Algae Cystococcus, in sheathed colonies **Subfamily Moriolae**
        - x. Thallus without pseudoparenchyma **Moriola 64**
        - y. Thallus with pseudoparenchyma
          - (x) Asci 8-spored
            - m. Spores 2-celled, dark **Dimerisma 64**
            - n. Spores x-celled
              - (m) Spores hyaline **Spheconisca 64**
              - (n) Spores dark **Phaeomeris 64**
          - (y) Asci many-spored; spores 1-celled, hyaline **Pleophalis 64**
  - (b) Algae Pleurococcus or Palmella **Subfamily Verrucariae 65**
    - x. Paraphyses persistent **Thelenidia 68**
      - (x) Algae present in the perithecium
      - (y) Algae not present in perithecium
    - m. Perithecia with normal ostiole
      - (m) Spores 1-celled
        - r. Spores hyaline **Thrombium 68**
        - s. Spores dark **Phaeothrombis 69**
      - (n) Spores 2-celled, dark **Thelidiopsis 69**
      - (o) Spores x-celled, hyaline **Geisleria 69**
      - (p) Spores muriform, hyaline or sub-hyaline **Microglaena 69**
      - (q) Spores acicular, septate, hyaline **Gongylia 69**
  - n. Ostiole margined by a broad disk; spores hyaline
    - (m) Spores x-celled **Aspidopyrenis 69**
    - (n) Spores muriform **Aspidothelium 70; 18**

- y. Paraphyses lacking, or soon disappearing
- (x) Asci 1-8-spored
- m. Algae present in the perithecium; spores muriform
- (m) Spores hyaline *Willeya* 68
- (n) Spores dark *Staurothele* 68
- n. Algae not present in perithecium
- (m) Spores 1-celled
- r. Spores globoid to ellipsoid
- (r) Perithecia immersed *Lithoecea* 67
- (s) Perithecia more or less superficial
- h. Spores hyaline *Verrucaria* 66; 18
- i. Spores dark *Phaeosporis* 67
- s. Spores vermiform, clavate at each end *Sarcopyrenia* 66
- (n) Spores 2-celled, hyaline *Thelidium* 67
- (o) Spores x-celled, hyaline *Phragmothele* 68
- (p) Spores muriform
- r. Spores hyaline *Polyblastia* 68
- s. Spores dark *Sporodictyum*
- (y) Asci many-spored; spores 1-celled, hyaline *Trimmatothele* 67
- (c) Algae Trentepohlia
- x. Perithecia upright, with vertical ostiole *Subfamily Pyrenulaceae* 74
- (x) Paraphyses simple, free
- m. Perithecia with stiff fascicled hairs *Stereochlamys* 81
- n. Perithecia glabrous
- (m) Asci 4-8-spored
- r. Spores 1-celled, hyaline *Coccotrema* 78
- s. Spores 2-celled
- (r) Spores hyaline; cells separating or not *Diporina* 79
- (s) Spores dark *Dipyrenis* 80
- t. Spores x-celled
- (r) Spores hyaline *Porina* 78
- (s) Spores dark *Pyrenula* 80; 18
- u. Spores muriform
- (r) Spores hyaline *Clathroporina* 80
- (s) Spores dark *Anthracotheicum* 81
- v. Spores acicular to filiform
- (r) Asci evanescent *Belonia* 79
- (s) Asci persistent
- h. Perithecia immersed *Rhaphidyllis* 79
- i. Perithecia more or less superficial *Rhaphidopyris* 79
- (n) Asci many-spored; spores hyaline
- r. Spores 1-celled *Holothelis* 79
- s. Spores 2-celled *Dithelopsis* 80
- t. Spores x-celled *Thelopsis* 79
- (y) Paraphyses branched and united, rarely lacking
- m. Ostiole round or dot-like

- (m) Spores 1-celled, hyaline; asci 2-4-spored Monoblastia 75
- (n) Spores 2-celled
  - r. Spores hyaline Pyrenyllum 77
  - s. Spores dark Microthelia 75
- (o) Spores x-celled
  - r. Spores hyaline Arthrospyrenia 75
  - s. Spores dark Polythelis 75
- (p) Spores muriform; asci 1-8-spored Polyblastiopsis 78
- (q) Spores acicular to filiform Leptorhaphis 77
- n. Ostiole radiate, torn or lobed; spores 2-celled Asteroporum 92
- y. Perithecia oblique or horizontal with oblique or lateral ostiole Subfamily Paratheliae 84
- (w) Spores 2-celled, hyaline Ditremis 84
- (x) Spores x-celled
  - m. Spores hyaline Pleurotrema 84
  - n. Spores dark Parathelium 84
- (y) Spores muriform
  - m. Spores hyaline Campylothelium 85; 18
  - n. Spores dark Pleurotheliopsis 85
- (z) Spores filiform Trichotrema 84
- (d) Algae Phyllactidium or Cephaleurus Subfamily Strigulae 87
- x. Perithecia with fascicled nearly horizontal hairs at apex; spores x-celled, hyaline Trichothelium 88
- y. Perithecia glabrous
  - (x) Paraphyses present, persistent
  - m. Paraphyses simple, free
    - (m) Spores 2-celled, hyaline Phylloporis 88
    - (n) Spores x-celled, hyaline
    - r. Thallus crustose, uniform Phylloporina 87
    - s. Thallus orbicular, lobed at edge Strigula 89; 18
    - (o) Spores muriform, hyaline Phyllobathelium 88
  - n. Paraphyses branched and united
    - (m) Spores 1-celled, dark Haplopyrenula 88
    - (n) Spores x-celled
    - r. Spores hyaline Raciborskiella 88
    - s. Spores dark Microtheliopsis
  - (y) Paraphyses dissolving or lacking; spores hyaline or nearly so
  - m. Paraphyses dissolving in mucus; spores acicular, spirally twisted Phylloblastia 87
  - n. Paraphyses lacking; spores acicular, not twisted Micropyrenula 87
- b. Thallus foliose or scaly-foliose Subfamily Dermatocarpae
- (1) Algae Pleurococcus Endocarpum 73; 18
- (a) Perithecia with hymenial algae
- (b) Perithecia without hymenial algae
  - x. Paraphyses persistent
  - (x) Spores 1-celled, dark; paraphyses simple Anapyrenium 71

- (y) Spores muriform, hyaline; paraphyses branched and united **Psoroglaena 71**
- y. Paraphyses dissolving or lacking
- (x) Paraphyses dissolving in mucus; thallus corticate
- m. Spores 1-celled, hyaline **Dermatocarpum 71; 18**
- n. Spores mostly 2-celled
- (m) Spores hyaline **Placidiopsis 72**
- (n) Spores dark **Heterocarpum 72**
- o. Spores muriform, hyaline to brownish; asci 1-2-spored **Agonomia 73**
- (y) Paraphyses lacking; thallus not corticate **Normandina 71**
- (2) Algae Trentepohlia; spores 1-celled, hyaline **Lepolichen 81**
- (3) Algae Irasiola; spores 1-celled, hyaline **Mastodia 92**
- c. Thallus fruticulose, branched; algae Pleurococcus
- (1) Spores 2-celled, hyaline **Nylanderiella 73**
- (2) Spores muriform, dark **Pyrenothamnia 74**
- B. Perithecia in a stroma (Cfr. Pertusariae, p. 128)**
1. Perithecia erect, with separate ostioles **Subfamily Trypetheliae 81**
- a. Spores x-celled
- (1) Spores hyaline **Trypethelium 83; 18**
- (2) Spores dark **Melanotheca 82**
- b. Spores muriform
- (1) Spores hyaline; asci 2-8-spored **Laurera 83**
- (2) Spores dark **Bottaria 83**
- c. Spores acicular to filiform, hyaline **Tomasiella 82**
2. Perithecia oblique or horizontal, the necks long and with a common pore; valsoid **Subfamily Astrotheliae 85**
- a. Spores x-celled
- (1) Spores hyaline **Astrothelium 86**
- (2) Spores dark **Pyrenastrum 86**
- b. Spores muriform
- (1) Spores hyaline **Cryptothelium 86**
- (2) Spores dark **Parmentaria 87**
- C. Perithecia sunken in stroma-like warts; horizontal thallus lacking; asci many-spored; spores 1-celled, hyaline** **Thelocarpum 213**

## Order 9. DOTHIDEALES

Perithecia composite in a stroma, without a wall distinct from the stromal tissue and hence reduced to polyascous locules, or irregularly stromoid or discoid with monascous loculiform hollows; the stroma immersed and often forming a clypeus, erumpent, or superficial and usually with a hypostroma; asci many, more or less cylindrical and often with true paraphyses in **Dothideaceae**, or single in the hollows, globose to ovoid, rarely cylindrical, separated by stromal tissue or paraphysoids in **Myriangiaceae**.

This order is not regarded as a natural one, nor are the two families considered to be phylogenetically related. While the presence of a locule affords the warrant

of convenience for associating them, its nature indicates that they are the terminal groups of two distinct phyla. The *Dothideaceae* owe their distinguishing character to the reduction or loss of the perithecial wall as a consequence of the protection afforded by the stroma, and are to be directly related to the *Sphaeriaceae*, the difficulty of separation sometimes being extreme. A similar problem exists with respect to the *Myriangiaceae* and *Gymnascaceae*, the simplest members of the former pertaining equally well to either family, and it appears probable that the two represent a continuous phylum, which may find its terminus in some members of the *Tuberales*, as apparently the *Dothioreae* do in *Discomycetes*.

**Key to Families**

- A. Perithecia not parasitic on algae, without a thallus
  - 1. Locules distinct, perithecium-like, typically ostiolate, with many asci and usually with paraphyses Dothideaceae p. 89
  - 2. Locules mere hollows filled by single asci and separated by stromal tissue or rarely by paraphysoids Myriangiaceae p. 92
- B. Perithecia parasitic on algae, typically with a thallus Mycoporaceae p. 94

**Family 31. DOTHIDEACEAE**

Perithecia sunken in a stroma and reduced to polyascous locules with ostioles, the stroma with erect hyphae and then prosenchymic or even parenchymic, or the structure sometimes more irregularly hyphal, frequently involving the epidermis to form a clypeus-like area, typically dark, round to oblong or linear, innate, erumpent or superficial; asci mostly cylindric, 8-spored, usually with paraphyses; spores various.

**Subfamily Dothideae**

Stroma innate-erumpent or superficial, not clypeate

- A. Stroma innate, becoming more or less erumpent
  - 1. Spores 1-celled
    - a. Spores hyaline
      - (1) Spores allantoid Dothideovalsa 22:407, TS 289
      - (2) Spores not allantoid
        - (a) Paraphyses present
          - x. Asci mostly 3-spored (1-4); wall of locule not distinct and perithecioid Zimmermanniella 17:827, TS 290
          - y. Asci 8-spored; wall more or less distinctly perithecioid Botryosphaeria 1:456, TS 661
        - (b) Paraphyses lacking
          - x. Stroma regularly pulvinoid Amerodothis 24:539, TS 295
          - y. Locules single in stromatic columns united above Catabotrys 24:539, TS 297; 20
      - b. Spores dark
        - (1) Paraphyses present
          - (a) Stroma lichenicole Botryochora 24:542
          - (b) Stroma not lichenicole Bagnisiopsis 24:390, TS 291; 19
        - (2) Paraphyses lacking Auerswaldia 2:626, TS 298

2. Spores 2-celled
- a. Spores hyaline
- (1) Paraphyses present *Didothis* 24:544, TS 305
- (2) Paraphyses lacking
- (a) Stroma of parallel prosenchymic cells *Plowrightia* 2:635, TS 307; 19
- (b) Stroma of interwoven brown hyphae, parenchymic below the locules *Diplochorella* TS 620; 19
- b. Spores dark
- (1) Paraphyses present *Achorella* 24:548, TS 340
- (2) Paraphyses lacking
- (a) Locules imbedded singly in column tips of a botryose stroma *Stalagmites* 24: 636, TS 650; 20
- (b) Locules not in a botryose stroma
- x. Stroma peripheral in a minute hemispheric gall *Crotone* 24:635, TS 629; 19
- y. Stroma pulvinoid, not forming a gall *Dothidea* 2:639, TS 330; 19
3. Spores x-celled
- a. Spores hyaline
- (1) Paraphyses present *Metameris* 24:551, TS 342
- (2) Paraphyses lacking
- (a) Stroma lirelliform *Dangeardiella* 14:683, TS 665; 19
- (b) Stroma pulvinoid, not lirelliform *Phragmodothella* 24:551, TS 343
- b. Spores dark
- (1) Paraphyses present
- (a) Locules imbedded singly in tip of separate stroma columns *Rosenscheldia* 9:1036, TS 648; 19
- (b) Locules not in columns *Dothideopsella* 24:552
- (2) Paraphyses lacking *Phragmodothis* 24:551, TS 344
4. Spores muriform, dark
- a. Paraphyses present *Amylirosa* 24:1338
- b. Paraphyses lacking *Dictyodothis* 24:552, TS 346
- B. Stroma superficial
1. Stroma with innate central foot not more than half its width
- a. Stroma sterile in center, locules in a circle
- (1) Spores 1-celled, hyaline; paraphyses present; stroma glabrous *Yoshinagella* 24:550, TS 265
- (2) Spores 2-celled, dark; paraphyses present; stroma with marginal hyphae
- (a) Locules globose, separate *Trichodothis* 24:548, TS 268
- (b) Locules confluent in a circle *Perischizum* 24:548, TS 269
- b. Stroma uniformly fertile
- (1) Spores 1-celled
- (a) Spores hyaline
- x. Paraphyses present *Coccostromopsis*
- y. Paraphyses lacking *Coccostroma* 24:539, TS 271; 20
- (b) Spores dark; paraphyses present *Auerswaldiella* 24:541, TS 272
- (2) Spores 2-celled
- (a) Spores hyaline
- x. Paraphyses present

- (x) Stroma fungicole
- (y) Stroma not fungicole
  - m. Subicle present
  - n. Subicle none
- y. Paraphyses lacking
- (b) Spores dark
  - x. Paraphyses present; spore-cells equal or unequal
  - y. Paraphyses lacking
- (3) Spores x-celled
  - (a) Spores hyaline; paraphyses present
  - (b) Spores dark; paraphyses lacking
- (4) Spores acicular to filiform, hyaline; paraphyses present
- 2. Stroma without central foot, attached at several points
  - a. Spores 1-celled, hyaline
  - b. Spores 2-celled
    - (1) Spores hyaline; paraphyses lacking
    - (2) Spores dark
      - (a) Paraphyses present
        - x. Stroma fungicole; spores long-falcate
        - y. Stroma not fungicole
          - (x) Subicle present
          - (y) Subicle none
        - (b) Paraphyses lacking
          - x. Stroma with conidial hairs
          - y. Stroma without conidial hairs
  - c. Spores filiform, hyaline

- Parabotryum
- Nowellia
- Microcyclus 17:844, TS 276; 20
- Coccoidella TS 277
- Coccodiscus 17:860, TS 274, 279
- Coccodothella 24:549, TS 280
- Coccodiella TS 281
- Pauahia
- Schweinitziella 9:1005, TS 270
- Leveillinopsis
- Microcyclella 24:544, TS 283
- Castagnella 24:553
- Leveillella 24:549, TS 284
- Dothophaeis 24:549, TS 285
- Discodothis 22:436, TS 287
- Leveillina 24:549, TS 285
- Trichochora 24:553, TS 289

**Subfamily Phyllachorae**

Stroma persistently innate, forming a clypeus with the epidermis

- A. Spores 1-celled
  - 1. Spores hyaline
    - a. Paraphyses present
      - (1) Spores with appendages
      - (2) Spores without appendages
    - b. Paraphyses lacking
      - (1) Asci 2-spored
      - (2) Asci 8-spored
  - 2. Spores dark
    - a. Paraphyses present
    - b. Paraphyses lacking
- B. Spores 2-celled
  - 1. Spores hyaline
    - a. Paraphyses present
    - b. Paraphyses lacking
      - (1) Stroma round to oblong
      - (2) Stroma linear
  - 2. Spores dark; paraphyses present

- Schizachora 24:565, TS 401
- Phyllachora 2:594, TS 431; 19
- Geminispora 11:292
- Phyllachorella 24:607, TS 576
- Sphaerodothis 16:625, TS 577
- Phaeochora 24:609, TS 401; 20
- Placostroma 24:610, TS 407; 20
- Euryachora 2:625, TS 364, 361; 20
- Scirrhia 2:634, TS 413, 419; 19
- Phaeodothis 17:854, TS 594

- C. Spores x-celled
1. Spores hyaline
    - a. Paraphyses present
      - (1) Stroma lichenicole Epiphora TS 599
      - (2) Stroma not lichenicole
        - (a) Stroma round to oblong Telimena 16:631, TS 599
        - (b) Stroma linear Examidium 24:621, TS 424, 423
    - b. Paraphyses lacking Phragmocarpella 24:624, TS 601
  2. Spores dark
    - a. Paraphyses present
      - (1) Stroma lichenicole Homostegia 2:649; 19
      - (2) Stroma not lichenicole
        - (a) Stroma round to oblong Dermatodothis 24:625, TS 369
        - (b) Stroma linear Rhopographus 2:647, TS 425; 20
    - b. Paraphyses lacking
      - (a) Stroma round to oblong Clypeostroma 24: 628, TS 609
      - (b) Stroma linear Rhopographina 24:625, TS 429
- D. Spores muriform, dark; paraphyses present Dictyochorella 24:629, TS 610
- E. Spores filiform Scolecodothis 24:630, TS 412
1. Paraphyses present Ophiodothella 24:629, TS 611; 19
  2. Paraphyses lacking
    - a. Asci 8-spored Myriogenis 14:685
    - b. Asci many-spored

### Family 32. MYRIANGIACEAE

(Phymatosphaeriaceae)

8:843, 11:440, 16:799, 18:191, 22:579, 24:1133; TS 433

Stroma or ascoma mostly verruciform or pulvinate, sometimes discoid, typically innate, then erumpent, rarely permanently covered or superficial from the first, with an outer more or less differentiated layer or peridium and a central stromatoid mass in which the asci are imbedded singly, and irregularly for the most part; asci in one to several layers and separated from each other by purely stromatic tissue or paraphysis-like filaments; hypothecium merely a part of the ascoma, or parenchymoid and then more or less differentiated from it; hymenial area occupying all the interior, or definitely localized; asci freed by the weathering away of the peridium.

This is one of the most puzzling of groups, and many of the genera can be assigned with equal warrant to families belonging to other orders. The simplest forms, such as *Elsinoe* and *Plectodiscella*, are perhaps best referred to the *Gymnascales*, while the most specialized are distinguished with difficulty from the *Discomycetes*. The *Saccardiae* approach the *Agyriaceae* closely, and certain genera of the *Dothiorae* have been assigned to the *Patellariaceae*. Theissen and Sydow regard this family as directly related to the *Dothideaceae*, and in spite of a difference of interpretation as to this point, it is convenient to include them in the same order on the basis of the stroma. The perithecioid locule of the latter appears to be a very different structure, however, and the order in consequence is best regarded as diphyletic.

A. Ascoma more or less permanently innate, little if at all differentiated

Subfamily *Elsinoae*



1. Ascoma with an epithelial shield composed of one layer of brown polygonal cells *Plectodiscella* 24:1140; 20
2. Ascoma without epithelial shield *Elsinoe* 16:804
- B. Ascoma erumpent to superficial, with differentiated periderm as a rule**
1. Asci separated by stromatic tissue
- a. Asci in several irregular layers **Subfamily Myriangiace**
- (1) Ascoma homogeneous, covered with a hard black slime; spores x-celled, hyaline *Myxomyriangis* 24:1138, TS 438; 20
- (2) Ascoma differentiated externally, not slimy
- (a) Spores 2-celled, brown *Butleria* 24:1134, TS 440
- (b) Spores x-celled
- x. Spores hyaline *Ascostratum* 22:1135, TS 441
- y. Spores dark *Kusanoa* 16:800, TS 440; 20
- (c) Spores muriform
- x. Spores hyaline or subhyaline
- (x) Ascoma uniformly fertile within, no definite hymenial tissue *Ascomycetella* 8:846, TS 440
- (y) Hymenial tissue locally developed, distinct from the sterile base
- m. Ascoma with central innate foot, margined by a radiate subicle *Angatia* 24:1137, TS 439
- n. Ascoma without innate foot and subicle
- y. Spores dark *Myriangium* 16:800, TS 439; 20
- (x) Ascoma fleshy and colored, globose *Myriangina* 11:364, 22:579; 20
- (y) Ascoma membranous, dark, discoid *Cookella* 1:71, 22:585
- b. Asci in a single hymenium-like layer** **Subfamily Saccardiace**
- (1) Spores 2-celled
- (a) Spores hyaline *Leptophyma* 8:844, 22:585
- (b) Spores dark *Allosoma*
- (2) Spores x-celled, hyaline *Eurytheca* 8:846, 22:579
- (3) Spores muriform
- (a) Spores hyaline; subicle more or less evident
- x. Ascoma hairy *Saccardia* 1:24, 22:583
- y. Ascoma glabrous *Calolepis*
- (b) Spores dark
- x. Ascoma hairy, with subicle *Calopeziza* 24:1216, TS 442
- y. Ascoma glabrous
- (x) Subicle present *Dictyonella* 22:583, TS 442; 20
- (y) Subicle lacking *Anhellia* 22:579, TS 442
2. Asci separated by paraphysoids or paraphysis-like threads **Subfamily Dothiorace**
- a. Asci one to few, ovoid
- (1) Ascus single; ascoma arising in a stoma *Monascostroma* 22:1131
- (2) Asci several; ascoma not arising in a stoma
- (a) Spores 2-celled, hyaline, without mucose sheath *Wettsteinina* 22:406; 20
- (b) Spores x-celled, hyaline, with mucose sheath *Pseudosphaeria* 22:407

- b. Asci many, clavate to cylindrical; paraphysoids often very like paraphyses
- (1) Asci 8-spored; spores hyaline
- (a) Spores 1-celled Bagnisiella 2:589, 22:407; 20
- x. Ascoma attached broadly
- y. Ascoma with central innate foot Yoshinagaia 17:860; 20
- (b) Spores x-celled Leptodothiora 24:1265
- (c) Spores muriform Dothiora 8:764; 20
- (2) Asci many-spored; spores hyaline
- (a) Spores 2-celled Hariotia 9:672
- (b) Spores x-celled
- x. Ascoma fungicole Endodothiora
- y. Ascoma not fungicole Sydowia 11:341, 24:964
- (c) Spores muriform Keisslerina 24:1265

### Family 33. MYCOPORACEAE

Zahlbruckner 92(77)

Mycelium parasitic on Trentepohlia or Palmella, forming a uniform thallus without a cortex; perithecia reduced to locules in a stroma as in *Dothideaceae*, to which family the genera might well be referred.

- A. Spores transeptate; algae Trentepohlia
1. Spores 2-celled
- a. Spores hyaline Chlorodothis 93
- b. Spores dark Sciodothis 93
2. Spores x-celled
- a. Spores hyaline Nothostroma 93
- b. Spores dark Mycoporis 93
3. Spores needle-shaped Mycoporellum 93
- B. Spores muriform; algae Palmella Mycoporum 93

## Order 10. MICROTHYRIALES

Mycelium typically superficial, light-colored or dark, sometimes lacking, often forming an innate hypostroma, more rarely membranous; ascomata or apothecia halved or dimidiate, flat to convex, typically radiate, but only at the margin or not at all in *Micropeltaceae*, opening by a pore or cleft, or astomous and then splitting irregularly, mostly superficial, occasionally innate or erumpent; hymenium single (polyascous) or several, in this case the asci separated singly or in groups by densely branched threads or tissue masses arising from the hypothecium; asci typically parallel and basal, clavate to cylindrical; paraphyses lacking or poorly developed, except in a few genera where they form a typical epithecium, as in the true *Discomycetes*.

Theissen and Sydow regard this order as belonging to the *Discomycetes*, though in large part divergent in form, manner of opening and usual absence of epithecium (Ann. Myc. 15:397, 1917). However, it is interesting to know that two years earlier they had included the *Polystomellaceae* in the *Dothideales* (Ann. Myc. 13:158, 1915). On the other hand, Hoehnel referred a number of the genera to his order *Phacidiales* (Ber. Deut. Bot. Ges. 35:416, 1917), and placed the *Microthyriaceae*, together with the *Trichothyriaceae*, in the *Perisporiales* (loc. cit.). With the leading students of the group disagreeing so seriously as to its limits and relationships, it is evident that it offers many difficulties to the general worker. However, the scutellum or cover of the apothecium, which is always halved or dimidiate, and

radiate in the two largest families and marginally so in most genera of the third, serves as a definite mark of recognition.

The opposing views are probably to be reconciled by the assumption that the order has arisen from **Perisporiales** through the **Trichothyriaceae** and has undergone fairly rapid and direct evolution into the discomycete type, as indicated by Hoehnel's reference of several genera to the **Phacidiaceae**. This development was more or less parallel to the much more extensive evolution of the sphaerial type, which in the main line of descent is supposed to have led through the **Hysteriaceae** to the **Phacidiaceae** also. As a consequence, the latter are regarded as diphyletic at least, and the **Discomycetes** necessarily so likewise. The order is overwhelmingly tropical in distribution, and its peculiar morphology and evolution are probably to be ascribed to this fact.

### Key to Families

- |   |                               |
|---|-------------------------------|
| A. Scutellum radiate                              |                               |
| 1. Apothecia or hypostroma innate or erumpent     | <b>Polystomellaceae</b> p. 95 |
| 2. Apothecia superficial, hypostroma none         | <b>Microthyriaceae</b> p. 98  |
| B. Scutellum radiate only at margin or not at all | <b>Micropeltaceae</b> p. 100  |

Though differences in insertion are not regarded as family criteria, the separation of the first two families is more or less warranted by the fact that the majority of the **Polystomellaceae** possess a hypostroma. The original limits of this family, as drawn by Theissen and Sydow in their monograph on the **Dothideales** (Ann. Myc. 13: 158, 1915), appear much more natural, and the **Stigmataceae** and appended genera of their latter treatment have been included in it (Ann. Myc. 15: 399, 403, 1917). Moreover, their family **Trichopeltaceae**, characterized by a membranous mycelium or subiculum, has been merged in the **Microthyriaceae**. They have followed Theissen in terming the order, **Hemisphaeriales**, and the third family, **Hemisphaeriaceae**, but these names have been replaced in accordance with the sound principle that the designations of families and orders should be based upon a representative genus.

### Family 34. POLYSTOMELLACEAE

22:514, 24:393; TS 13:158, 15:399

Ascoma covered, erumpent, or typically superficial with an innate hypostroma, dimidiate with radiate scutellum, round to more or less elongate; hymenium round or linear, single or several and then concave and more or less locule-like, arranged radially, circularly or irregularly; asci usually many in each hymenium, mostly basal, parallel and clavate; paraphyses present or lacking.

- |  |                        |                              |
|--|------------------------|------------------------------|
| A. Ascoma subcuticular, persistently covered or finally erumpent; paraphyses present |                        | <b>Subfamily-Stigmataeae</b> |
| 1. Ascoma persistently covered   |                        |                              |
| a. Scutellum with a single hymenium beneath  |                        |                              |
| (1) Spores 1-celled  |                        |                              |
| (a) Spores hyaline   | <b>Parastigmataeae</b> |                              |
| (b) Spores dark  | <b>Entopeltis</b>      | 24:394, TS 401               |
| (2) Spores 2-celled  |                        |                              |
| (a) Spores hyaline   |                        |                              |
| x. Ascoma round  | <b>Diplocarpum</b>     | 24:911                       |
| y. Ascoma elongate   |                        |                              |
| (x) Ascoma lichenicole   | <b>Lichenopeltella</b> |                              |
| (y) Ascoma not lichenicole   | <b>Leptopeltis</b>     | 24:394, TS 401               |

- (b) Spores dark  
 x. Hymenium discoid  
 y. Hymenium ring-like, loculoid  
 (3) Spores x-celled, hyaline  
 (4) Spores muriform, hyaline
- b. Scutellum with several concave hymenia beneath  
 (1) Spores 1-celled, hyaline  
 (2) Spores 2-celled, hyaline  
 x. Hymenia rounded; spore-cells equal or unequal  
 y. Hymenia linear  
 (3) Spores x-celled, dark
2. Ascoma finally erumpent  
 a. Spores 1-celled, dark; hymenium usually single, ring-like  
 b. Spores 2-celled, dark; hymenia several, linear, irregular
- B. Ascoma superficial, with innate hypostroma  
 1. Hymenia linear  
 a. Hymenia arranged radially  
 (1) Ascoma attached at the center  
 (a) Ascoma setose; hymenia often irregularly radiate; spores 2-celled, brown; paraphyses present  
 (b) Ascoma glabrous; spores 2-celled, brown  
 x. Hymenia stellately arranged  
 y. Hymenia flabellately arranged  
 (2) Ascoma attached at several points  
 (a) Ascoma with conidial hairs; spores 2-celled, hyaline; paraphyses lacking  
 (b) Ascoma without conidial hairs; spores 2-celled, dark; paraphyses present  
 b. Hymenia arranged in a more or less complete ring  
 (1) Ascoma attached at the center  
 (a) Spores 1-celled, dark; asci 16-spored  
 (b) Spores 2-celled; asci 8-spored  
 x. Spores hyaline; paraphyses present  
 y. Spores dark  
 (x) Hymenia with radial rifts; paraphyses lacking  
 (y) Hymenia without radial rifts  
 m. Paraphyses present  
 n. Paraphyses lacking  
 (2) Ascoma attached at several points  
 (a) Spores 2-celled  
 x. Spores hyaline; paraphyses lacking  
 y. Spores dark; paraphyses present  
 (b) Spores muriform, hyaline; paraphyses present
- Stigmatea 1:541, TS 401; 21  
 Cycloschizella  
 Stigmatodothis 24:400, TS 401  
 Vizella 2:662, TS 401; 21  
 Coccinopeltis 24:394, TS 402; 21  
 Munkiella 24:395, TS 402  
 Pseudolembosia 24:403, TS 401  
 Melanochlamys 24:401, TS 402; 21  
 Blasdalea 16:634, TS 403; 21  
 Aulacostroma 24:402, TS 403; 21  
 Subfamily Parmulineae  
 Chaetaspis 24:419, TS 406  
 Parmulina 24:415, TS 406  
 Rhipidocarpum 24:415, TS 406  
 Parmulariella 24:404, TS 407  
 Schneepia 24:404, TS 407; 21  
 Cyclostomella 24:404, TS 407  
 Cycloschizum 24:404, TS 407  
 Inocyclus 24:416, TS 408; 21  
 Dielsiella 24:404, TS 407; 21  
 Polycyclus 24:416, TS 408  
 Polycyclina 24:408, TS 408  
 Cocconia 8:738, TS 408; 21  
 Mendogia 16:669, TS 408

- c. Hymenia arranged irregularly
- (1) Ascoma attached at the center; spores 2-celled, dark
- (a) Paraphyses present *Monorhiza* 24:415, TS 408
- (b) Paraphyses lacking *Monorhizina* 24:415, TS 409
- (2) Ascoma attached at several points, spores 2-celled
- (a) Spores hyaline
- x. Paraphyses present *Cyclothecha* 24:408, TS 409; 21
- y. Paraphyses lacking *Lauterbachella* 24:405, TS 409
- (b) Spores dark
- x. Paraphyses present
- (x) Free mycelium present
- m. Hypostroma forming subcuticular bands *Lembosiodothis* 24:411, TS 409
- n. Hypostroma not forming subcuticular bands
- (y) Free mycelium lacking *Macowaniella*
- y. Paraphyses lacking *Hysterostomina* 24:410, TS 409
- Hysterostomella* 24:409, TS 409
- Subfamily Polystomelleae
2. Hymenia rounded or discoid
- a. Ascoma attached at the center; spores 2-celled, dark
- (1) Hypostroma forming subcuticular bands
- (a) Free mycelium present
- x. Paraphyses present; mycelium with straight setae *Dothidasteris* 24:411, TS 409; 21
- y. Paraphyses lacking; setae twisted *Scolionema* 24:411, TS 410
- (b) Free mycelium lacking; paraphyses present *Dothidasteroma* 24:411, TS 410
- (2) Hypostroma not forming bands
- (a) Ascoma setose, single *Asterodothis* 24:411, TS 410
- (b) Ascoma glabrous, in a composite group *Polyrhizum* 24:412, TS 410
- b. Ascoma attached at several points
- (1) Free mycelium present; spores 2-celled
- (a) Spores hyaline; paraphyses present *Armatella* 24:409, TS 410
- (b) Spores dark
- x. Paraphyses present *Hysterostoma* 24:412, TS 411
- y. Paraphyses lacking *Placasterella* 24:412, TS 411
- (2) Free mycelium lacking
- (a) Hymenia beneath a common scutellum, separated only by hyaline plectenchym; spores 2-celled, hyaline
- x. Paraphyses present *Polystomella* 9:1063, TS 411
- y. Paraphyses lacking *Rhagadolobium* 24:1264, TS 411
- (b) Hymenia with separate or divided scutella
- x. Spores 1-celled, hyaline; paraphyses present *Microdothella* 24:406, TS 412
- y. Spores 2-celled
- (x) Spores hyaline
- m. Paraphyses present *Synpeltis* 24:409, TS 412
- n. Paraphyses lacking *Leptodothis* 24:409, TS 412

- (y) Spores dark  
 m. Hypothecium hyaline; hymenia irregularly disposed  
 (m) Paraphyses present Palawania 24:414, TS 412  
 (n) Paraphyses lacking Melanoplaca 24:414, TS 412  
 n. Hypothecium carbonous, black; hymenia in a crown around a sterile center; paraphyses present Marchalia 24:406, TS 412  
 z. Spores x-celled  
 (x) Spores hyaline; paraphyses present Gillettiella 14:691, TS 413  
 (y) Spores dark; paraphyses lacking Actinodothis 24:417, TS 413  
 (c) Hymenia with separate scutella, in concentric rows; spores muriform, hyaline; paraphyses present Pleostomella 24:418, TS 413

### Family 35. MICROTHYRIACEAE

2:658, 9:1053, 11:379, 14:686, 16:633, 17:861, 22:514, 24:393; TS 413

Ascomata or apothecia superficial, without hypostroma, dimidiate with radiate scutellum, round or linear, on a filamentous or membranous mycelium or subiculum, or this lacking, ostiolate, lacinate, cleft or astomous; hymenium single, rarely several and then somewhat loculoid; asci typically many, basal, parallel or convergent, saccate to clavate, rarely cylindrical; paraphyses lacking, or present and then sometimes forming an epithecium.

#### A. Free mycelium none

#### Subfamily Microthyriaceae

##### 1. Scutellum with a single hymenium beneath

##### a. Ascoma rounded

##### (1) Spores 1-celled, hyaline

##### (a) Asci 8-spored

x. Paraphyses present

Myiocoprum 2:659, TS 416

y. Paraphyses lacking

Peltella 24:423, TS 416

##### (b) Asci many-spored

Myiocoprella 24:532

##### (2) Spores 2-celled

##### (a) Spores hyaline

x. Ascoma setose; paraphyses lacking

Chaetothyriopsis

y. Ascoma glabrous

(x) Lichenicole; paraphyses lacking

Microthyris

(y) Not lichenicole; paraphyses present

Microthyrium 2:662, TS 416; 17

##### (b) Spores dark; paraphyses present

Seynesia 2:668, TS 416; 17

##### (3) Spores x-celled

##### (a) Spores hyaline

x. Ascoma more or less hairy; paraphyses lacking

Caenothyrium 24:430, TS 417

y. Ascoma glabrous

(x) Paraphyses present

m. Scutellum dissolving at tip, then wholly

Actinomyxa 24:533

n. Scutellum persistent, usually ostiolate

Phragmothryium 24:430, TS 416

(y) Paraphyses lacking; lichenicole

Micropeltopsis

##### (b) Spores dark; paraphyses lacking

Halbania 24:420, TS 417

##### b. Ascoma linear

##### (1) Spores 2-celled







3. Spores x-celled, hyaline  
 a. Paraphyses present *Micropeltis* 2:669, TS 430; 17  
 b. Paraphyses lacking  
 (1) Ascoma on a subiculum *Mitopeltis*  
 (2) Ascoma without subiculum *Micropeltella* 24:519, TS 430
4. Spores filiform, hyaline  
 a. Paraphyses present *Scolecopeltium*  
 b. Paraphyses lacking *Scolecopeltis* 24:524, TS 430;  
 21
- B. Scutellum parenchymic, brown, radiate at margin, typically without evident mycelium; hymenia single or several**
1. Ascoma subcuticular  
 a. Spores 2-celled, brownish; paraphyses lacking *Aphysa* 24:400, TS 402  
 b. Spores x-celled, hyaline; paraphyses present  
 (1) Ascoma caespitose or stromoid; ostiole elongate *Moesziella*  
 (2) Ascoma solitary; ostiole round *Stigmatophragma*
2. Ascoma superficial  
 a. Scutellum with a single hymenium beneath  
 (1) Spores 1-celled, hyaline  
 (a) Paraphyses present, ascoma stromoid *Griggsia* 24:639  
 (b) Paraphyses lacking; ascoma separate *Haplopeltis* 24:525, TS 430  
 (2) Spores 2-celled, hyaline  
 (a) Ascoma round, astomous  
 x. Paraphyses present *Clypeolum* 2:667, TS 430  
 y. Paraphyses lacking *Microthyriella* 24:526, TS 431  
 (b) Ascoma linear, with a cleft; paraphyses lacking *Schizothyrium* 2:723, TS 431  
*Phragmothyriella* 24:528, TS 431  
*Saccardinula* 9:1071
- (3) Spores x-celled, hyaline; paraphyses lacking  
 (4) Spores muriform, hyaline
- b. Scutellum with several hymenia beneath  
 (1) Spores 2-celled, hyaline; paraphyses lacking  
 (a) Each hymenium of several asci *Polyclypeolum* 24:527, TS 431  
 (b) Each hymenium of a single ascus  
 x. Ascoma setose *Chaetoplaca* 24:531  
 y. Ascoma glabrous *Eremotheca* 24:528, TS 431  
 (2) Spores x-celled, hyaline; each hymenium of a single ascus *Eremothecella* 24:529, TS 432
- C. Scutellum wavy plectenchymic; mycelium present, reticulate**
1. Spores 2-celled, hyaline  
 a. Scutellum with ostiole; hymenium single  
 (1) Ascoma setose; paraphyses lacking *Chaetopeltopsis* 24:530, TS 432  
 (2) Ascoma glabrous  
 (a) Paraphyses present *Stomiopeltis* 24:529, TS 432  
 (b) Paraphyses lacking *Stomiopeltella* 24:529, TS 432  
 b. Scutellum astomous  
 (1) Hymenium single; paraphyses present *Metathyriella*  
 (2) Hymenia several; paraphyses lacking *Plochmopeltis* 24:529, TS 432
2. Spores x-celled, hyaline; ascoma astomous, paraphyses present *Protopeltis*

## Subfamily Haplopeltineae

## Subfamily Plochmopeltineae

## Order 11. PHACIDIALES

Apothecia superficial, erumpent, or innate and then sometimes concrete with the epiderm, elongate, elliptic or round, typically opening by a cleft or splitting into lobes, usually dark, but light-colored in one family, varying in texture from carbonous to membranous, coriaceous, corneous or waxy, but never fleshy or gelatinous, separate or gregarious, occasionally cespitose or stromate; asci typically cylindrical and 8-spored, paraphyses regularly present, often forming an epithecium, filiform, clavate or branched; hypothecium usually thin, well-developed only in one family; spores various.

The limits of this order have been somewhat extended in the present treatment, owing to the practical difficulties in the way of defining the families sharply. There has been general agreement as to the **Stictidaceae** owing to the light color of the apothecium, but the genera with dark apothecia have been treated very differently by Saccardo, Rehm, and Hoehnel. This is best exemplified by the **Hypodermieae**, which are distributed among the families of his **Phacidiales** by Hoehnel, placed in a separate family next **Hysteriaceae** by Rehm, and distributed in this family by Saccardo. By virtue of their thick hypothecium, the **Trybliaceae** may be placed almost equally well in the **Pezizales**, but they are retained here because of the cleft or lobed opening.

This order is considered to be diphyletic, the **Hysteriaceae** being derived from the **Sphaeriaceae** and in turn passing directly into the cleft forms of **Phacidiaceae** and perhaps **Trybliaceae** as well. The round apothecium as a rule appears to have arisen from the ascoma of the **Microthyriales**, a number of genera placed by Theissen and Sydow in the **Stigmateteae** having been transferred to **Phacidiales** by Hoehnel.

## Key to Families

- A. Algal host-cells lacking
  - 1. Apothecia dark
    - a. Apothecia opening by a narrow cleft Hysteriaceae p. 102
    - b. Apothecia opening by lobes or a wide cleft
      - (1) Hypothecium thin Phacidiaceae p. 107
      - (2) Hypothecium thick Trybliaceae p. 111
  - 2. Apothecia light-colored, mostly white Stictidaceae p. 109
- B. Algal host-cells present, forming a more or less evident thallus Graphidaceae p. 104

## Family 37. HYSTERIACEAE

2:721, 9:1100, 11:385, 14:710, 16:657, 17:893, 22:557, 24:1112; Rehm 1

Apothecia erumpent or superficial as a rule, sometimes innate and concrete with the epidermis, elongate-elliptic, oblong or linear, occasionally extended vertically, typically black, carbonous or membranous, opening by a narrow cleft, or this wider and exposing the disk, typically separate, very rarely cespitose or stromate; asci mostly cylindrical and 8-spored, paraphyses regularly present, usually much branched at the tip and concrete into an epithecium; spores various.

The elongate cleft ascoma distinguishes this family readily from the **Sphaeriaceae**. The rimose opening resembles that of the **Lophiostomaceae**, but the form of the ascoma and the absence of the thickened ostiole render their separation a simple matter. The fruit-body has usually been called a perithecium or hysterothecium, but the presence of an epithecium justifies the application of the term apothecium, first used by Rehm. This is further warranted by the difficulty experienced in drawing a clear line between this and the three succeeding families, by general consent assigned to the **Discomycetes**. Genera with hysteroïd apothecia appear

in all of these, and have in consequence received widely varying treatment at the hands of different workers.

The **Hysteriaceae** have apparently been derived directly from the **Sphaeriaceae** and hence represent a second line of evolution connecting **Pyrenomycetes** with **Discomycetes**. The carbonous forms with narrow cleft are essentially elongate perithecia, while the membranous ones with wider opening pass imperceptibly into **Phacidiaceae** and **Trybliaceae**.

#### Hyalosporae

2:721, 9:1100, 11:385, 14:710, 16:657, 22:557, 24:1112

Spores 1-celled, hyaline or subhyaline, ovoid to oblong

- A. Paraphyses present  
B. Paraphyses lacking

*Hypodermella* 11:385  
*Bifusella* 24:1257

#### Phaeosporae

2:727

Spores 1-celled, dark, ovoid to oblong

- Apothecia superficial on a subicle; paraphyses present

*Farlowiella* 2:727, 9:1100

#### Hyalodidymae

2:727, 9:1101, 11:388, 14:711, 16:659, 17:895, 22:558, 24:1112

Spores 2-celled, hyaline or subhyaline, ovoid to fusoid

- A. Apothecia membranous

1. Apothecia innate, more or less concrete with the epiderm

*Hypoderma* 2:784, R 29, 31; 22

2. Apothecia erumpent to superficial

- a. Apothecia typically oblong, opening by a cleft

*Aulographum* 2:727, R 4, 8; 22

- b. Apothecia typically rounded, opening by lobes

*Schizothyrium* 2:722, R 63, 75

- B. Apothecia carbonous, erumpent or superficial; subiculum more or less developed

*Glonium* 2:731, R 4, 10; 22

#### Phaeodidymae

2:740, 9:1103, 11:387, 14:711, 16:659, 17:897, 22:561

Spores 2-celled, dark, ovoid to fusoid

- A. Apothecia carbonous, conchiform; cleft narrow and straight

*Bulliardella* 17:902

#### Hyalophragmiae

2:765, 9:1112, 11:388, 14:715, 16:664, 17:903, 22:565, 24:1113

Spores x-celled, hyaline to subhyaline, oblong to cylindrical

- A. Apothecia parasitic, densely gregarious or caespitose

1. Apothecia densely gregarious, corticole; spores long 1- or 2-celled

*Dichaena* 2:771, R 49; 22

2. Apothecia radiately disposed, folicole

*Aldona* 16:667

- B. Apothecia saprophytic

1. Apothecia membranous or coriaceous, innate

- a. Apothecia membranous; cleft narrow

*Glioniella* 2:765, R 29, 35; 22

- b. Apothecia coriaceous; cleft gaping

*Pseudographis* 2:769, R 90, 94; 22

2. Apothecia carbonous, superficial; cleft narrow

*Hysteroglonium*

**Phaeopragmiae**

2:743, 9:1108, 11:387, 14:715, 16:664, 17:907, 22:567, 24:1116

Spores x-celled, dark, oblong to cylindrical

- A. Apothecia innate, submembranous **Hypodermopsis** 17:908
- B. Apothecia erumpent to superficial
1. Apothecia carbonous or subcarbonous
- a. Apothecia upright, conchiform, fragile **Mytilidium** 2:760, 765, R 7, 23; 22
- b. Apothecia horizontal, not conchiform, firm **Hysterium** 2:743, R 5, 13; 22
2. Apothecia coriaceous or subcoriaceous **Trybliella** 2:757

**Hyalodictyae**

2:772, 9:1116, 11:389, 14:717, 16:668, 17:909, 22:570, 24:1119

Spores muriform, hyaline or subhyaline, ovoid to oblong

- A. Apothecia innate, concrete with epiderm, membranous; spores with mucous sheath **Hysteropsis** 9:1118, R 30, 36
- B. Apothecia erumpent-superficial, carbonous; spores without mucous sheath **Gloniopsis** 2:772, R 17

**Phaeodictyae**

2:776, 9:1119, 11:389, 14:717, 16:668, 17:912, 22:573, 24:1120

Spores muriform, dark, ovoid to oblong

- A. Apothecia innate, membranous, thin **Graphyllum** 16:1145, 17:913; 22
- B. Apothecia erumpent-superficial, carbonous or corio-carbonous, firm **Hysterographium** 2:776, R 6, 16; 22

**Scolecosporae**

2:784, 9:1123, 11:389, 14:719, 16:669, 17:713, 22:574, 24:1123

Spores acicular to filiform, hyaline or dark, continuous or septate

- A. Apothecia innate or erumpent
1. Apothecia membranous, elongate, applanate; paraphyses typically simple, hooked at tip **Lophodermium** 2:791, R 31, 37; 22
2. Apothecia coriaceous, conic-discoïd; paraphyses much branched above **Ostropa** 2:804, R 186, 187
- B. Apothecia superficial
1. Apothecia horizontal, elongate **Hadotia** 22:574
2. Apothecia vertical, conchiform or dolabriform **Lophium** 2:799, R 7, 26; 22

**Family 38. GRAPHIDACEAE**

Zahlbruckner 102(87)

Mycelium parasitic on yellow-green algae, forming a crustose, foliose or fruticose thallus, the latter sometimes immersed or lacking, and the mycelium then parasitic on lichens or bark; apothecia single, cespitose or united in a stroma, typically oblong to elongate with a cleft, more rarely disk-shaped and with an irregular often stellate opening, more or less carbonous.

The sole distinction between this family and the **Hysteriaceae**, as well as certain hysterioid **Discomycetes**, lies in the presence of algal hosts and thus typically of a thallus. Species with rudimentary or obsolete thallus must be sought in both places, and it is necessary to place several genera in two different families.

The above pages refer respectively to the second and first editions of Zahlbruckner's monograph, and those in the key to the second.

- A. Apothecia separate, single or cespitose
1. Thallus lacking, parasitic on lichens or on bark **Subfamily Arthoniæ**
    - a. Parasitic on lichens
      - (1) Spores 1-celled **Phacopsis R 419**
      - (2) Spores 2-celled **Conida R 420**
      - (3) Spores x-celled **Celidium R 425**
    - b. Parasitic on bark
      - (1) Spores 2-celled **Lecideopsis R 432**
      - (2) Spores x-celled **Arthonia R 435; 23**
      - (3) Spores muriform **Arthothelium R 438**
  2. Thallus present, crustose or uniform
    - a. Apothecia without an exciple, i.e., not margined **Subfamily Arthoniæ**
      - (1) Algae Palmella or Protococcus; spores hyaline
        - (a) Spores 2-celled **Allarthonia 106**
        - (b) Spores x-celled **Plearthonis 106**
        - (c) Spores muriform **Allarthothelium 107**
      - (2) Algae Trentepohlia
        - (a) Spores 2-x-celled
          - x. Spores hyaline
            - (x) Spores 2-celled **Coniocarpum 106**
            - (y) Spores x-celled **Arthonia 104**
          - y. Spores brownish to brown, x-celled
            - (x) Perithecia cespitose; spores brownish **Synarthonia 107**
            - (y) Perithecia not cespitose; spores brown
              - Gymnographa 110**
              - Arthothelium 106**
          - (b) Spores muriform
            - Merarthonis 107**
            - Arthoniopsis 107**
            - Trichophyma 107**
        - (3) Algae Phyllactidium; spores hyaline
          - (a) Spores 2-celled **Merarthonis 107**
          - (b) Spores x-celled **Arthoniopsis 107**
          - (c) Spores muriform **Trichophyma 107**
      - b. Apothecia margined with a distinct proper exciple as a rule **Subfamily Graphidæ**
        - (1) Thallus without cortex
          - (a) Algae Palmella
            - x. Apothecia with a single hymenium
              - (x) Spores hyaline or subhyaline
                - m. Spores 1-celled
                  - (m) Hypothecium clear or brownish **Xylographa 108**
                  - (n) Hypothecium black, carbonous **Lithographa 108**
                - n. Spores x-celled **Aulaxina 109**
              - (y) Spores dark
                - m. Spores x-celled **Encephalographa 109**
                - n. Spores finally muriform **Xyloschistes 110**
            - y. Apothecia with 2-4 parallel hymenia; spores hyaline
              - (x) Spores 1-celled **Ptychographa 109**
              - (y) Spores x-celled **Diplogramma 109**
          - (b) Algae Trentepohlia
            - x. Asci 1-8 spored
              - (x) Spores hyaline
              - m. Spores transeptate
              - (m) Paraphyses simple, not united

- r. Tips of paraphyses little thickened, smooth
  - (r) Spores 2-celled **Anomorpha 114**
  - (s) Spores x-celled **Graphis 112; 23**
- s. Tips of paraphyses clavate and warted or spiny
  - (n) Paraphyses ramose and united **Psorographis 118**  
**Opegrapha 110; 23**
- n. Spores muriform
  - (m) Paraphyses simple, not united
    - r. Tips of paraphyses not thickened, smooth **Graphina 115**
    - s. Tips of paraphyses clavate, warted or spiny **Acanthothecis 117; 23**  
**Helminthocarpum 118**
    - (n) Paraphyses ramose and united **Melaspilea 111**
  - (y) Spores dark **Phaeographis 114**
  - m. Spores 2-celled **Sclerographis 111**
  - n. Spores x-celled **Phaeographina 11b**
  - (m) Paraphyses simple, not united **Graphinella 118**
  - (n) Paraphyses ramose, united **Spirographa 111**
  - o. Spores muriform **Fouragea 118**
- y. Asci many-spored; spores fusoid to acicular
  - (x) Paraphyses simple, not united **Micrographa 118**
  - (y) Paraphyses ramose, united **Subfamily Dirinae**
- (c) Algae *Phyllactidium*; spores x-celled
  - x. Spores hyaline; paraphyses ramose, united **Dirina 122; 23**
  - y. Spores dark; paraphyses simple, not united **Cyclographa 123**  
**Dirinastrum 123**
- (2) *Thallus* with a cortex; algae *Trentepohlia*; spores x-celled **Subfamily Roccellae**
- (a) Spores hyaline
  - x. Paraphyses simple, not united **Ingaderia 123**
  - y. Paraphyses ramose, united **Dendrographa 124**  
**Roccellaria 124**
  - (b) Spores dark **Darbishirella 124**
- 3. *Thallus* present, fruticose, erect, rarely crustose-fruticose; spores x-celled
  - a. Hyphae of cortex parallel with *thallus* surface
    - (1) Apothecia elongate, furrowed; spores hyaline **Roccellographa 125; 23**
    - (2) Apothecia round **Reinkella 125**
    - (a) Hypothecium black; spores hyaline
    - x. Exciple with algae
    - y. Exciple without algae
    - (b) Hypothecium hyaline; spores brownish, spiny
  - b. Hyphae of cortex perpendicular to surface
    - (1) Apothecia elongate, furrowed
      - (a) Apothecia immersed; hypothecium hyaline
      - (b) Apothecia superficial; hypothecium black
    - (2) Apothecia round
      - (a) Spores hyaline; apothecia entire
      - x. Hypothecium hyaline

- (x) Algae present below the hypothecium *Pentagenella* 126
- (y) Algae lacking below the hypothecium *Combea* 126
- y. Hypothecium black
  - (x) Thallus crustose-fruticose *Roccellina* 125
  - (y) Thallus distinctly fruticose *Roccella* 125; 23
- (b) Spores dark; apothecia deeply lobed
  - x. Medulla hyaline throughout *Schizopelte* 126
  - y. Inner medullary layer black *Simonyella* 127
- B. Apothecia in a stroma, mostly immersed
  - 1. Algae *Trentepohlia*
    - a. Paraphyses simple and free
      - (1) Spores x-celled
        - (a) Spores hyaline *Glyphis* 119
        - (b) Spores dark *Sarcographa* 119
      - (2) Spores muriform
        - (a) Spores hyaline *Enterodictyum* 120
        - (b) Spores dark *Sarcographina* 120
    - b. Paraphyses ramose and reticulately united
      - (1) Spores x-celled
        - (a) Spores hyaline *Chiodectum* 120; 23
        - (b) Spores dark *Sclerophyllum* 121
      - (2) Spores muriform
        - (a) Spores hyaline *Minksia* 121
        - (b) Spores dark *Enterostigma* 122
  - 2. Algae *Heterothallus*; spores x-celled, hyaline *Rotularia* 122
  - 3. Algae *Phyllactidium*; spores hyaline
    - a. Spores 2-celled; paraphyses ramose and united *Mazosia* 122
    - b. Spores x-celled; paraphyses simple and free *Pycnographa* 122

### Family 39. PHACIDIACEAE

Apothecia innate, often concrete with the epiderm and splitting with it into lobes or a cleft, or free and then more or less erumpent and splitting separately, discoid or elongate, black, membranous to carbonous, separate or gregarious, or crowded in black stroma-like areas of the leaf; hypothecium poorly developed as a rule; asci mostly cylindric and 8-spored, occasionally stalked and clavate; paraphyses usually numerous, often hooked or branched at the tip, sometimes sparse but very rarely absent; spores various.

It is an open question whether the genera with elongate and cleft membranous apothecia belong to the *Hysteriaceae* or to the *Phacidiaceae*; they have been placed in the former by Saccardo and by Rehm, in the latter by Hoehnel. To minimize the difficulty for the beginner especially, such genera have here been included in both keys. There is further disagreement as to the presence of paraphyses, two or three genera having been described on the basis of their absence. This may be explained by those species in which the paraphyses are sparse, and the latter are perhaps entirely lacking only in *Dothiora*, which belongs more properly in *Myriangiaceae*.

#### *Hyalosporae*

8:705, 11:431, 10:48, 14:813, 16:783, 18:155, 22:742, 24:1254

Spores 1-celled, hyaline, ovoid to oblong

- A. Apothecia round, opening by lobes
  - 1. Apothecia concrete above with the epiderm *Phacidium* 8:709, R 66; 24
  - 2. Apothecia not concrete with epiderm *Pseudophacidium* 8:776, R 94

- B. Apothecia elongate to effuse, splitting with a cleft  
or irregularly
1. Apothecia elongate, with a cleft
    - a. Paraphyses present Hypodermella
    - b. Paraphyses lacking Bifusella 24:1257
  2. Apothecia effuse, splitting irregularly Cryptomyces 8:707, R 106; 24

#### Phaeosporae

14:814, 22:746, 24:1263

Spores 1-celled, dark, spherical to oblong

- A. Apothecia in black stroma-like folicole spots Criella 8:756
- B. Apothecia not in black stroma-like spots
  1. Spores spherical Bonanseia 22:746
  2. Spores elliptic to oblong Phaeophacidium 14:814

#### Hyalodidymae

Spores 2-celled, hyaline, elliptic to oblong

- A. Apothecia elliptic to oblong, opening by a cleft;  
asci typically long-stalked Hypoderma 2:784, R 31
- B. Apothecia round to ellipsoid, opening by lobes;  
asci not long-stalked Schizothyrium 2:723, R 75; 24

#### Phaeodidymae

10:49, 22:748, 22:1263

Spores 2-celled, dark, ovoid

- Apothecia and epiderm concrete above, the latter  
operculate or laciniate; asci 2-4-spored; spore-cells  
unequal Keithia 10:49; 24

#### Hyalophragmiae

8:740

Spores x-celled, hyaline, fusoid

- A. Apothecia round, concrete with the epiderm,  
laciniate Sphaeropezia 8:740, R 72; 24
- B. Apothecia elongate, with a cleft
  1. Apothecia folicole, branched or radiate Aldona 16:667
  2. Apothecia corticole, single, not radiate Pseudographis 2:769, R 72

#### Phaeophragmiae

17:908

Spores x-celled, dark, fusoid

- Apothecia innate, membranous; cleft narrow Hypodermopsis 17:908

#### Hyalodictyae

8:764, 16:790, 22:1265

Spores muriform, hyaline or subhyaline, ovoid to fusoid

- A. Paraphyses present
  1. Apothecia round, opening by lobes Tridens
  2. Apothecia elongate, opening by a cleft Hysteropsis 9:1118, R 36



B. Paraphyses lacking; apothecia round, opening irregularly

1. Asci 8-spored

*Dothiora* 8:764, R 108; 24

2. Asci many-spored

*Keisslerina* 24:1265

#### Phaeodictyae

16:1145, 17:913, 24:1122

Spores muriform, dark, ovoid to fusoid

Apothecia innate, membranous, linear, with a cleft *Graphyllum* 16:1145; 22

#### Scolecosporae

2:744, 10:51, 11:432, 14:817, 16:789, 18:163, 22:749, 24:1123

Spores acicular to filiform, typically hyaline, continuous or septate

A. Apothecia concrete with epiderm

1. Apothecia in black folicole stroma-like spots

*Rhytisma* 8:752, R 82; 24

2. Apothecia not in stroma-like spots, lacinate with the epiderm

*Coccomyces* 8:744, R 76; 24

B. Apothecia not concrete with the epiderm

1. Apothecia round, opening by lobes

*Coccophacidium* R 97

2. Apothecia oblong to elongate, opening by a cleft

a. Apothecia with a linear cleft

*Lophodermium* 2:791, R 37

b. Apothecia opening broadly, exposing the hymenium

*Clithris* 18:165, R 101; 24

### Family 40. STICTIDACEAE

8:647; Rehm 112

Apothecia innate, never concrete with the epiderm, finally more or less erumpent as a rule, opening by lobes, by a cleft or lid or circularly, round to elongate, white or bright-colored, or rarely dark but at least never black, typically waxy, rarely membranous, separate or grouped; hymenium well exposed at maturity in most cases, hypothecium poorly developed; asci mostly cylindric, 8-spored; paraphyses usually numerous, and swollen at the tip, rarely subulate, simple or branched; spores various.

This family contains many genera with elongate apothecia, but these are readily separated from similar forms in the *Hysteriaceae* by the color and consistency, as well as by the fact that the disk is widely exposed at maturity. The *Ostropae* may be placed almost equally well in either.

#### Subfamily Eustictidae

Rehm 113

Apothecia waxy, not deeply sunken, finally opening widely and exposing the hymenium more or less completely.

#### Hyalosporae

8:648, 10:44, 11:428, 14:806, 16:776, 18:146, 22:733, 24:1244

Spores 1-celled, hyaline, globose to oblong

A. Spores globose

1. Asci 8-spored

*Lindauella* 16:777

2. Asci many-spored

*Flaminia* 16:777



- B. Spores elliptic to oblong
1. Paraphyses long-pointed, much longer than asci *Stegia* 8:733, R 135; 24
  2. Paraphyses blunt, swollen or branched
    - a. Paraphyses filiform or forked
      - (1) Apothecia round
        - (a) Apothecia blackish; ascus-pore blue with iodine *Trochila* 8:728, R 127
        - (b) Apothecia bright-colored
          - x. Ascus-pore blue with iodine
          - (x) Paraphyses enlarged and colored above *Ocellaria* 8:654, R 133
          - (y) Paraphyses little if at all enlarged or colored *Habrosticktis* R 137
      - y. Ascus-pore not blue with iodine *Naevia* 8:658, R 145
    - (2) Apothecia oblong or linear
      - (a) Hymenium blue with iodine *Xylographa* 8:664, R 153; 24
      - (b) Hymenium not blue with iodine *Briardia* 16:776, R 151
  - b. Paraphyses irregularly branched above
    - (1) Asci 8-spored *Propolis* 8:648, R 148; 24
    - (2) Asci many-spored *Propolina* 8:654

#### Phaeosporae

- Spores 1-celled, dark, oblong; paraphyses much forked, forming an epithecium *Stictophacidium* 8:735, R 1215

#### Hyalodidymae

8:666, 10:45, 11:428, 14:808, 16:778, 18:147, 24:1248

Spores 2-celled, hyaline or bright-colored, elliptic to oblong

- A. Paraphyses present
1. Spores with 1-2 cilia at either end; hysterooid *Iridionia* 16:788
  2. Spores not ciliate
    - a. Paraphyses filiform or forked; apothecia round
      - (1) Asci not blue with iodine *Naeviella* R 164
      - (2) Asci blue with iodine
        - (a) Ascus-pore alone blue with iodine *Diplonaevia* 8:666, R 161
        - (b) Whole hymenium blue with iodine *Diplocrytis* R 158
    - b. Paraphyses irregularly branched
      - (1) Apothecia round; ascus-pore not blue with iodine *Propolidium* 8:667
      - (2) Apothecia elongate; ascus-pore blue with iodine *Xyloglyphis* R 170
- B. Paraphyses lacking *Coccopeziza* 10:45

#### Hyalophragmiae

8:669, 10:46, 11:429, 14:808, 16:778, 18:148 22:734, 24:1248

Spores x-celled, hyaline, oblong to fusoid

- A. Paraphyses filiform or forked; apothecia round
1. Asci not blue with iodine *Merostictis* R 164
  2. Asci blue with iodine
    - a. Ascus-pore alone blue with iodine *Phragmonaevia* 8:674, R 160
    - b. Whole hymenium blue with iodine *Cryptodiscus* 8:669, R 158; 25
- B. Paraphyses branched; apothecia elongate *Xylogramma* 8:677, R 169; 25

**Phaeophragmiae**

8:676, 24:1248

Spores x-celled, dark, oblong to fusoid

- A. Apothecia parasitic on leaves *Eupropolella*  
 B. Apothecia saprophytic on stems and twigs *Eupropolis* 8:676

**Hyalodictyae**

8:704, 11:431, 14:812, 16:782, 18:151

Spores muriform, hyaline to subhyaline, ovoid to fusoid

- A. Asci 1-spored *Pleostictis* 8:703  
 B. Asci typically 8-spored *Melittosporium* 8:704, R 172

**Scolecosporae**

681, 10:46, 11:429, 14:810, 16:781, 18:152, 22:737, 24:1251

Spores acicular to filiform, typically hyaline, continuous or septate

- A. Asci 8-spored  
 1. Apothecia pilose *Lasiostrictis* 8:696  
 2. Apothecia not pilose  
 a. Paraphyses present  
 (1) Paraphyses filiform or nearly so; apothecia lobed *Stictis* 8:681, R 175; 25  
 (2) Paraphyses much branched  
 (a) Spores acicular, vermiform, cells not separating; apothecia opening by a cleft *Naemacyclus* 8:701, R 173  
 (b) Spores long-filiform, cells separating; apothecia opening circularly *Schizoxylum* 8:697, R 101; 25  
 b. Paraphyses lacking; apothecia opening by a lid *Moutoniella* 18:163  
*Carestiella* 14:810
- B. Asci many-spored

**Subfamily Ostropae**

Rehm 185

Apothecia membranous or leathery, grey to darkish, deeply sunken, the scarcely opened tip alone erumpent.

- A. Spores 1-celled, elliptic; asci clavate *Laquearia* 8:586, R 187  
 B. Spores many-celled, filiform; asci long-cylindrical  
 1. Apothecia cask-shaped, partly erumpent; paraphyses branched *Ostropa* 2:804, R 188; 25  
 2. Apothecia with only the thick ostiole erumpent; paraphyses filiform *Robergea* 2:806, R 189

**Family 41. TRYBLIDIACEAE**

Rehm 191

Apothecia innate, then erumpent or superficial, opening by lobes or rarely by a cleft, round to elliptic, brown or black, membranous to corneous, usually separate, occasionally cespitose or stromate; hymenium exposed at maturity, hypothecium well developed, thick; asci mostly cylindrical, 8-spored; paraphyses numerous, much branched or swollen at the tip; spores various.

This family differs from **Phacidiaceae** only in the better developed hypothecium and hymenium, and from **Dermateaceae** in opening by lobes or a cleft rather than

circularly. In neither case is the line a sharp one, and Rehm is probably correct in stating that the genera will probably be assigned finally to one or the other of these two families (p. 191). However, Hoehnel takes the opposite view, and has transferred a number of genera from the latter especially to Tryblidiaceae (Ann. Myc. 15:321).

A. Apothecia separate to gregarious

- |  |                                 |
|--|---------------------------------|
| 1. Spores 1-celled, hyaline                                    | Hysteropeziza R 132             |
| 2. Spores 2-celled   |                                 |
| a. Spores with a mucous sheath, hyaline                        | Tryblidiopsis 8:786, R 193; 25  |
| b. Spores without a mucous sheath                              |                                 |
| (1) Spores hyaline   | Heterosphaeria 8:775, R 198; 25 |
| (2) Spores dark  | Caldesia R 290; 27              |
| 3. Spores x-celled, hyaline                                    |                                 |
| a. Spores with a mucous sheath                                 | Tryblis R 195                   |
| b. Spores without a mucous sheath                              | Odontotrema 8:679, R 204; 25    |
| 4. Spores muriform, hyaline, at first with mucous sheath       | Tryblidium R 196; 25            |
| 5. Spores filiform   |                                 |
| a. Apothecia innate, then erumpent                             | Odontura R 207                  |
| b. Apothecia superficial, short-stalked; exciple of two layers | Asterocalyx 24:1243             |

B. Apothecia caespitose or stromate

- |                             |                               |
|-----------------------------|-------------------------------|
| 1. Spores 1-celled, hyaline | Henriquesia 2:726             |
| 2. Spores x-celled          |                               |
| a. Spores hyaline           | Scleroderris 8:594, R 208; 25 |
| b. Spores dark              | Phaeoderris 8:599             |

## Order 12. PEZIZALES

Apothecia innate, erumpent, or superficial and then often found on moist soil, typically globoid at first, later opening circularly as a rule to form a discoid, scutellate, cupuliform or reversed body, frequently with a stalk, leathery, gelatinous, waxy or fleshy, separate to caespitose but rarely stromate; exciple typically distinct, often well-differentiated, infrequently lacking, hypothecium well-developed, often very thick; asci usually cylindric, 8-spored, with a lid or operculum in the fleshy forms as a rule; paraphyses practically universal, filiform, clavate or sometimes branched, often forming an epithecium; spores various, but prevailingly hyaline.

The extent of this order has been narrowed by the reference of the three lower families to the Phacidiales, on the basis of differences in the manner of opening, as well as in texture and form to some degree. The form of the Helvellaceae appears to be widely divergent, but the development of the apothecium indicates that they are properly included here. Ecologically, the forms without exciple represent a specialized type due to reduction, and these have been grouped in a new order, Agyriales, probably polyphyletic in nature. Boudier, and more recently Seaver, has divided the order into two primary groups, Operculates and Inoperculates, but a single character of this kind hardly affords a satisfactory basis for phylogeny.

The Pezizales have evidently been derived directly from the Phacidiales, and it would seem in response to a gradually increasing supply of water and food. The order terminates blindly in three diverging groups, Geoglosseae, Agyriales and Tuberales, but is thought to have continued its specialization into the Pucciniales from which the Basidiomycetes have sprung.

## Key to Families

- A. Apothecia not parasitic on algae, without a thallus**
1. Apothecia typically innate-erumpent, leathery or horny, brown or black Dermateaceae p. 114
  2. Apothecia typically superficial
    - a. Asci disappearing early; spores and paraphyses forming a mazaedium Caliciaceae p. 119
    - b. Asci persistent; mazaedium lacking
      - (1) Apothecia gelatinous Bulgariaceae p. 115
      - (2) Apothecia not gelatinous
        - (a) Apothecia usually dark, carbonous to leathery, rarely waxy Patellariaceae p. 117
        - (b) Apothecia usually bright-colored, waxy to fleshy
    - x. Apothecia typically waxy, on plants
      - (x) Exciple dark, parenchymic all over or at the base; mostly sessile Mollisiaceae p. 133
      - (y) Exciple concolorous, rarely dark, prosenchymic; mostly stalked Helotiaceae p. 134
    - y. Apothecia typically fleshy, usually terricole, sometimes fimicole
      - (x) Apothecia closed at first, then open, cupulate to discoid, rarely ear-shaped
      - m. Apothecia usually terricole, medium to large; asci mostly cylindric, not exerted Pezizaceae p. 137
      - n. Apothecia usually fimicole, small; asci broad, exerted from disk at maturity Ascobolaceae p. 140
      - (y) Apothecia open from the first, stalked, saddle-shaped to pileate or clavate, terricole as a rule Helvellaceae p. 139
- B. Apothecia parasitic on algae, thallus typically well-developed**
1. Asci disappearing early; disk with a mazaedium Caliciaceae p. 119
  2. Asci persistent; mazaedium lacking
    - a. Thallus cottony, cobwebby or spongy; algae yellow-green Chrysotrichaceae p. 120
    - b. Thallus more or less distinctly gelatinous; algae blue-green Collemaceae p. 121
    - c. Thallus firm, layered, neither cottony nor gelatinous
      - (1) Thallus of two kinds, one horizontal, the other erect, i.e. a podetium Cladoniaceae p. 126
      - (2) Thallus of one kind only, horizontal or erect
        - (a) Spores typically 2-celled and biguttulate, with a thickened septum, usually traversed by a narrow canal Physciaceae p. 132
        - (b) Spores without thickened septum and intersecting canal

- x. Apothecia sunken or grown to the thallus on the whole underside Peltigeraceae p. 123
- y. Apothecia typically superficial when mature, not attached broadly
  - (x) Apothecia with proper exciple Lecideaceae p. 124
  - (y) Apothecia with thalline exciple Parmeliaceae p. 127

#### Family 42. DERMATEACEAE

Rehm 241

Apothecia innate at first, then erumpent or superficial, rounded or angled by mutual pressure, rarely one-sided or clavate, opening circularly, mostly leathery or horny, brownish to black, separate or cespitose and then often with a stroma-like base; hypothecium usually well-developed, thick; asci regularly cylindrical and 8-spored, paraphyses present, various; spores various.

This family is to be distinguished from the closely related *Tryblidiaceae* with rounded apothecia chiefly by the fact that the opening is circular instead of lobed. Lobes or teeth occur in one or two genera with very large apothecia, but all such forms appear to belong properly in the *Pezizaceae*, as Rehm has placed them, and they are retained here only because of their more or less leathery consistence.

#### Hyalosporae

8:547, 10:36, 11:422, 14:794, 16:782, 18:121, 22:710, 24:1224

Spores 1-celled, hyaline, globose to oblong

- A. Apothecia large, usually stalked or radicate at base
  - 1. Apothecia ear-shaped, more or less vertical
    - a. Spores globose Midotiopsis 18:121
    - b. Spores ovoid to oblong Midotis 8:547
  - 2. Apothecia urceolate or turbinate
    - a. Apothecia stalked
      - (1) Exciple and hypothecium prosenchymic Urnula 8:548, R 974; 35
      - (2) Exciple and hypothecium parenchymic Choriactis 18:121
    - b. Apothecia sessile; exciple parenchymic, hypothecium prosenchymic Scytopezis 18:122
- B. Apothecia small, sessile or substipitate
  - 1. Apothecia on a stromoid base
    - a. Ascus-pore blue with iodine; spores often 1-2-celled Dermatea 8:550, R 246; 26
    - b. Ascus-pore not blue with iodine
      - (1) Margin thick sulcate, forming claw-like projections over disk Godroniopsis
      - (2) Margin normal Pezolepis
  - 2. Apothecia without a stromoid base
    - a. Asci 8-spored
      - (1) Spores globose Encoeliella
      - (2) Spores ovoid to oblong
        - (a) Paraphyses lance-shaped, pointed Cenangiopsis
        - (b) Paraphyses filiform or branched Cenangium 8:556, R 219; 26
    - b. Asci many-spored, or 8- and many-spored Tympanis 8:578, R 264; 26

#### Phaeosporae

16:764, 18:127, 22:715, 24:1230

Spores 1-celled, dark, ellipsoid

- Apothecia coriaceous, mostly cespitose Phaeangium 16:764

**Hyalodidymae**

8:587, 10:37, 11:424, 14:798, 18:127, 22:716, 24:1231

Spores 2-celled, hyaline, elliptic to oblong

Apothecia coriaceous, single or cespitose **Cenangella 8:587****Phaeodidymae**

18:128

Spores 2-celled, dark, elliptic to oblong

Apothecia coriaceous, patellate **Phaeangella 18:128****Hyalophragmiae**

8:594, 16:765, 18:129

Spores x-celled, hyaline, oblong to fusoid

A. Apothecia coriaceous, cespitose, patellate **Stilbopeziza 22:757**B. Apothecia waxy-coriaceous, urceolate, pilose;  
spores variably 1-x-celled **Crumenula 8:600, R 235; 26****Phaeophragmiae**

2:757

Spores 2-celled, dark, oblong to fusoid

Apothecia elliptic-oblong, opening widely by a cleft **Trybliidiella R 234; 26****Scolecosporae**

8:601, 10:37, 11:425, 18:130, 24:1233

Spores filiform, hyaline

A. Apothecia coriaceous, urceolate **Godronia 8:601, R 237; 26**  
B. Apothecia corneous, patellate, cespitose **Durandia 24:1234****Family 43. BULGARIACEAE**

Rehm 444

Apothecia usually superficial from the first, more rarely innate-erumpent, cupulate to discoid, opening circularly, typically smooth, gelatinous-waxy or gelatinous-fleshy, horn-like when dry, frequently stalked, separate to cespitose; hypothecium gelatinous, thick, epithecium sometimes lacking; asci regularly cylindric and 8-spored, paraphyses and spores various.

The gelatinous texture of the apothecium distinguishes this family more or less readily from all others of the order, though a few genera approach the **Mollisiaceae** and **Pezizaceae** closely. The exciple is more frequently lost in gelatinous forms, apparently because of a lessened need of protection. All such genera are assembled in the **Agyriaceae**, but those with gelatinous apothecia are also keyed here for convenience.

**Hyalosporae**

8:607, 10:38, 11:425, 14:801, 16:766, 18:131, 22:719, 24:1234

Spores 1-celled, hyaline, globose to oblong

A. Spores globose **Pulparia 8:612**

B. Spores elliptic to bacillar

1. Apothecia in a lens-shaped gelatinous stroma **Physmatomyces 16:770**

2. Apothecia not in a stroma

a. Exciple present

(1) Apothecia lichenicole; asci 16-spored **Ahlesia 8:633**

(2) Apothecia not lichenicole

- (a) Apothecia stipitate Ombrophila 8:613, R 475; 26  
 (b) Apothecia sessile  
   x. Asci 8-spored  
     (x) Apothecia veined or ridged outside,  
        large, terricole Sarcosoma 10:42, R 497  
     (y) Apothecia smooth outside, small, not  
        terricole  
       m. Disk convolute or gyrose Haematomyces 8:633  
       n. Disk smooth Orbilia 8:621, R 453  
     y. Asci many-spored Myridium 8:631
- b. Exciple lacking  
 (1) Asci 8-spored  
   (a) Apothecia margined by changed paraphyses, microscopic Gloeopeziza 10:41  
   (b) Apothecia without modified paraphyses Agyrium 8:634, R 450; 26  
 (2) Asci many-spored Agyrina 8:636

#### Phaeosporae

8:636, 10:41, 14:804, 16:770, 18:140, 22:726, 24:1240

Spores 1-celled, dark, elliptic to fusoid

Apothecia erumpent or superficial, substipitate or sessile, turbinate to discoid Bulgaria 8:636, R 494; 26

#### Hyalodidymae

8:639, 10:42, 11:427, 14:805, 16:771, 18:142, 22:728, 24:1241

Spores 2-celled, hyaline or subhyaline, elliptic to fusoid

- A. Apothecia parasitic; paraphyses forming an epithecium  
 1. Parasitic on algae and liverworts Paryphedria 10:43, R 484  
 2. Parasitic on leaves of spermatophytes Bulgariastrum 24:1241  
 B. Apothecia saprophytic; epithecium lacking Calloria 8:639, R 462; 26

#### Phaeodidymae

10:42, 16:771, 18:142

Spores 2-celled, dark, elliptic to fusoid

Apothecia subturbinate, sessile Sorokinia 10:42

#### Phragmosporae

8:641, 10:43, 11:427, 16:773, 18:143, 22:730, 24:1242

Spores x-celled, hyaline, spores ovoid to fusoid

Apothecia turbinate to disciform, sessile or substipitate Coryne 8:644, R 485; 26

#### Hyalodictyae

18:145, 22:732

Spores muriform, hyaline, ovoid

Apothecia erumpent, cupulate, then plane Dictyonina 18:144

#### Phaeodictyae

8:646, 10:44, 18:144, 22:732

Spores muriform, dark, ovoid to oblong

- A. Hymenium sinuate-gyrose, not margined Haematomyxa 8:646  
 B. Hymenium smooth, margined Sarcomyces 10:44



**Scolecosporae**

8:646, 14:805, 16:775, 18:145, 22:732, 24:1243  
 Spores acicular to filiform, typically hyaline

- A. Apothecia with an exciple
  - 1. Apothecia pilose; spores very long filiform **Ophiogloea 18:145**
  - 2. Apothecia not pilose; spores acicular
    - a. Apothecia clavate-cylindric, on a subicle **Holwaya 8:646; 26**
    - b. Apothecia not clavate-cylindric or on a subicle **Orthoscypha**
- B. Apothecia without an exciple **Agyriopsis 14:805**

**Family 44. PATELLARIACEAE**

Rehm 277

Apothecia mostly superficial from the first, more rarely innate-erumpent, cupulate to discoid, sometimes boat-shaped or oblong, opening circularly, typically smooth, usually dark or black, carbonous, leathery or corneous; hypothecium typically well-developed, thick, epithecium rarely lacking; asci clavate to cylindric, usually 8-spored, paraphyses and spores various.

This family is to be distinguished from the **Dermateaceae** chiefly by the fact that the apothecia are typically superficial rather than erumpent, but several genera are more or less intermediate in this respect. The corneous forms approach the **Bulgariaceae** closely, while the waxy apothecia pass readily into **Helotiaceae**. The relationship to the lichens is close, and the main line of evolution of the lichens is thought to have sprung from this family. It is practically certain that a considerable number of natural genera are artificially divided into lichen and non-lichen groups, and the tendency in the family is further shown by the numerous lichenicole genera.

**Hyalosporae**

8:769, 10:52, 11:433, 14:818, 16:791, 18:165, 22:752, 24:1272  
 Spores 1-celled, hyaline, globose to oblong

- A. Asci 8-spored; spores not globose
  - 1. Apothecia oblong to elongate, cleft **Placographa 22:753, R 313**
  - 2. Apothecia round
    - a. Apothecia lichenicole
      - (1) Apothecia with an exciple **Rhymbocarpus 14:819**
      - (2) Apothecia without an exciple **Nesolechia 10:53, R 315**
    - b. Apothecia not lichenicole
      - (1) Paraphyses branched, forming an epithecium
        - (a) Asci saccate to clavate
          - x. Subicle present, radiate **Actinoscypha 8:774**
          - y. Subicle lacking **Patinella 8:769, R 310; 27**
        - (b) Asci narrow, cylindric **Starbaeckia 10:53**
      - (2) Paraphyses simple, epithecium none **Psilothecium 18:168; 27**
- B. Asci many-spored; spores globose **Biatorella 8:469, R 303; 27**

**Phaeosporae**

10:55, 22:754, 24:1276

Spores 1-celled, dark, ovoid to ellipsoid

- Apothecia patellate, margined, black **Lagerheimia 10:55**

**Hyalodidymae**

8:779, 10:56, 11:434, 14:820, 16:792, 18:173, 22:755

Spores 2-celled, hyaline, elliptic to fusoid

**A. Apothecia lichenicole**

1. Asci 8-spored

**Scutula R 321**

2. Asci many-spored

**Pleoscutula 24:1285****B. Apothecia not lichenicole**

1. Apothecia setose

**Johansonia 8:785**

2. Apothecia glabrous

**Patellea 8:783, R 283; 27****Phaeodidymae**

8:779, 10:56, 11:434, 14:820, 16:792, 18:173

Spores 2-celled, dark, elliptic to fusoid

**A. Asci 8-spored**

1. Apothecia on a radiate subicle, folicole

**Woodiella 16:794**

2. Apothecia not on a subicle

**a. Apothecia round**

(1) Apothecia innate, then erumpent

(a) Apothecia lichenicole, with an epithecium

**Abrothallus 8:739, R 358; 27**

(b) Apothecia folicole; paraphyses few or none

**Pachypatella 24:1278**

(2) Apothecia superficial

(a) Apothecia lichenicole

**Epilichen 18:177, R 350**

(b) Apothecia not lichenicole

**Karschia 8:779, R 345; 27**

b. Apothecia irregularly elliptic to oblong

**Melaspilea 10:58, R 362****B. Asci many-spored**

1. Paraphyses lacking

**Ravenelula 8:782**

2. Paraphyses present

**Pleospilis 18:179****Hyalophragmiae**

8:786, 10:59, 11:434, 14:821, 16:795, 18:179, 22:756, 24:1286

Spores x-celled, hyaline, elliptic to fusoid

**A. Apothecia lichenicole****Mycobilimbia 10:60, R 327****B. Apothecia not lichenicole**

1. Hypothecium and exciple thin; apothecia rolled together when dry

**Durella 8:790, R 286; 27**

2. Hypothecium and exciple thick; apothecia not rolled together when dry

**Patellaria 8:795, R 329; 27****Phaeophragmiae**

8:786, 10:59, 11:434, 14:821, 16:795, 18:179

Spores x-celled, dark, elliptic to fusoid

**A. Asci 8-spored**

1. Apothecia innate-erumpent

**Pseudotryblidium 10:65, R 370**

2. Apothecia superficial

a. Apothecia lichenicole

**Leciographa 10:61, R 372**

b. Apothecia not lichenicole

**Mycolecidea 10:61, R 372****B. Asci many-spored****Baggea 2:760, R 369; 27**

**Dictyosporae**

8:802, 11:435, 14:823, 18:185, 22:758, 24:1293

Spores muriform, hyaline to subhyaline, ovoid to oblong

- A. Asci 1-spored Pleopatella 22:754  
 B. Asci 8-spored Tryblidaria 18:186

**Scolecosporae**

8:807, 10:65, 11:435, 14:823, 16:708, 24:1294

Spores bacillar to filiform, hyaline to subhyaline

- A. Apothecia sessile  
 1. Exciple thin, parenchymic; spore-cells separating Bactrospora 10:67, R 344  
 2. Exciple thick, typically prosenchymic; spore-cells not separating  
 a. Apothecia lichenicol Mycobacidia 10:66, R 337; 27  
 b. Apothecia not lichenicol Pragmopara R 339
- B. Apothecia stalked, turbinate  
 a. Apothecia lichenicol Lahmia 10:65, R 341  
 b. Apothecia not lichenicol Parathalle R 343

**Family 45. CALICIACEAE**

Rehm 388, Zahlbruckner 95 (80)

Mycelium inconspicuous and saprophytic, or parasitic on algae, forming a powdery, crustose, foliose or fruticose thallus; apothecia sessile or stalked, cup- to top-shaped, opening more or less completely, asci disappearing very early and the disk then covered with a persistent mass of spores and paraphyses, i.e. a mazaedium; exciple prosenchymic, horny, proper or thalline.

- A. Mycelium saprophytic, at least not forming a thallus  
 1. Spores 1-celled, globose or globoid, rarely ellipsoid  
 a. Spores hyaline or subhyaline  
 (1) Algae present but not forming a thallus Farriola 98  
 (2) Algae lacking Roesleria 8:826, R 396  
 b. Spores dark or at least brownish  
 (1) Spores globose, smooth, dark  
 (a) Apothecia black, nearly sessile Sphinctrina 98, R 389; 23  
 (b) Apothecia bright-colored, with a slender stalk Eucyphelis R 392  
 (2) Spores ellipsoid, reticulate, brownish; apothecia nearly sessile Sphinctrinopsis
2. Spores typically 2-x-celled  
 a. Spores 2-celled  
 (1) Apothecia sessile Acolium R 398; 28  
 (2) Apothecia with a slender stalk Mycocalicium R 401  
 b. Spores x-celled Stenocybe 97, R 413; 28
- B. Mycelium forming a thallus with algae  
 1. Thallus crustose  
 a. Spores 1-celled, typically globose to globoid

- (1) Asci 8-spored  
 (a) Spores hyaline or yellowish; disk globose **Coniocybe 97; 28**  
 (b) Spores dark; disk more or less flat  
 x. Apothecia sessile  
 (x) Thallus with a cortical layer **Carlusia 98**  
 (y) Thallus without a cortical layer **Holocyphis 99**  
 y. Apothecia stalked **Chaenotheca 95; 28**  
**Tylophorella 100**
- (2) Asci many-spored  
 b. Spores 2-celled, dark  
 (1) Apothecia sessile  
 (a) Algae *Pleurococcus* **Cyphelium 98; 23**  
 (b) Algae *Trentepohlia* **Ditylis 99**  
 (2) Apothecia stalked  
 (a) Apothecia with a long stalk **Calicium 96; 28**  
 (b) Apothecia with a short thick stalk **Pyrgidium 98**
- c. Spores x-celled  
 (1) Proper exciple alone present **Pyrgillus 99; 28**  
 (2) Thalline exciple also present **Tylophorum 99**
- d. Spores more or less muriform  
 (1) Algae *Pleurococcus* **Pseudocolium 99**  
 (2) Algae *Trentepohlia* **Schistophorum 100**
2. Thallus foliose  
 a. Thallus of horizontal scales with marginal apothecia; spores 1-celled, dark, globose **Calycidium 100**  
 b. Horizontal scales sterile; apothecia on cylindrical podetia; spores 2-celled, dark, oblong **Tholurna 100; 28**
3. Thallus fruticose  
 a. Thallus hollow; apothecia on the under side; spores 1-celled, dark, globose **Pleurocybe 101**  
 b. Thallus with solid medulla; apothecia terminal  
 (1) Spores 1-celled, dark, globose; apothecia enclosed in a globose thalline exciple opening irregularly at the top **Sphaerophorus 102; 28**  
 (2) Spores 2-celled, dark, elliptic; apothecia without thalline covering, goblet-like **Acrosocyphus 102**

#### Family 46. CHRYSOTRICHACEAE

Zahlbruckner 134, 147 (117, 127)

Apothecia disciform, margined; asci persistent, mazaedium lacking; thallus uniform, cobwebby, cottony or spongy, loose, without layers, with *Palmella*, *Pleurococcus*, *Trentepohlia* or *Cladophora* as algal hosts.

- A. Thallus with *Palmella* or *Pleurococcus*; spores hyaline  
 1. Spores 1-celled **Crocynia 135**  
 2. Spores x-celled **Chrysothrix 135; 28**
- B. Thallus with *Trentepohlia*; spores hyaline  
 1. Spores 1-celled **Holocoenis 149**  
 2. Spores 2-celled **Coenogonium 148**
- C. Thallus with *Cladophora*; apothecia lacking **Racodium 149**

## Family 47. COLLEMACEAE

Zahlbruckner 153, 164, 149, 160, 154, 158, 167, 168

Thallus more or less gelatinous when moist, mostly without distinct layers, scaly, foliose or fruticose, rarely crustose, always with blue-green algae as hosts; apothecia disciform or urceolate, with persistent asci; spores typically hyaline.

- A. Thallus with Gloeocapsa, Chroococcus or Xanthocapsa** **Subfamily Pyrenopsidae**
1. Algae Gloeocapsa
    - a. Thallus crustose, scaly or dwarf fruticose
      - (1) Spores 1-celled
        - (a) Asci 8-spored
          - x. Apothecia biatorine or almost lecideine **Lecopyrenopsis 155**
          - y. Apothecia lecanorine **Pyrenopsis 155**
        - (b) Asci many-spored **Pleopyrenis 155**
      - (2) Spores 2-celled **Cryptothele 155**
    - b. Thallus foliose, a single leaf attached in the middle **Phylliscidium 155**
    - c. Thallus fruticose, attached by delicate rhizoids **Synalissa 155**
  2. Algae Chroococcus
    - a. Thallus crustose; apothecia more or less open **Pyrenopsidium 155**
    - b. Thallus foliose, a single leaf attached in the middle; apothecia closed **Phylliscum 156; 28**
  3. Algae Xanthocapsa
    - a. Thallus crustose
      - (1) Spores 1-celled
        - (a) Hymenium with an epithelial mass of algae and hyphae **Gonohymenia 157**
        - (b) Hymenium without epithelial mass
          - x. Asci normally 8-spored; pseudoparenchymic cortex lacking **Psorotichia 157**
          - y. Asci many-spored; pseudoparenchymic cortex present **Forssellia 157**
      - (2) Spores 2-celled; apothecia closed **Collemopsidium 157**
    - b. Thallus foliose, of a single umbilicate leaf, often lobed
      - (1) Thallus pseudoparenchymic **Anema 157**
      - (2) Thallus not pseudoparenchymic
        - (a) Spores 1-celled
          - x. Hyphae loose, reticulate at margin **Thyrea 158**
          - y. Hyphae dense, perpendicular to margin **Jenmania 158; 28**
        - (b) Spores 2-celled **Paulia 159**
    - c. Thallus fruticose, erect
      - (1) Thallus without layers
        - (a) Asci 8-spored **Peccania 159**
        - (b) Asci many-spored **Pleoconis 160**
      - (2) Thallus layered, with a cortex **Phloeopeccania 160**
- B. Thallus with Nostoc**
1. Apothecia biatorine
    - a. Spores 1-celled
      - (1) Spores globoid to fusoid, straight
        - (a) Thallus crustose, scarcely gelatinous **Leprocollema 165; 29**
        - (b) Thallus scaly or dwarf fruticose, gelatinous **Leciophysma 166**

- (c) Thallus fruticose, Ramalina-like  
 (2) Spores needle-shaped, twisted
- b. Spores 2-x-celled  
 (1) Spores 2-celled; thallus without cortex  
 (2) Spores x-celled; thallus with cortex
2. Apothecia lecanorine  
 a. Spores 1-celled  
 (1) Paraphyses simple, scarcely united  
 (a) Thallus scaly or dwarf-fruticose  
 x. Thallus without cortex  
 y. Thallus with pseudoparenchymic cortex  
 (b) Thallus large-leaved; spores thick-walled or mucose  
 (2) Paraphyses ramose and united; thallus crustose
- b. Spores 2-celled
- c. Spores x-celled  
 (1) Thallus without cortex  
 (a) Spermagonia present  
 (b) Spermagonia lacking  
 (2) Thallus with pseudoparenchymic cortex or pseudoparenchymic throughout
- d. Spores muriform  
 (1) Thallus without cortex  
 (2) Thallus with pseudoparenchymic cortex or pseudoparenchymic throughout
- C. Thallus with Scytonema or Stigonema  
 1. Thallus crustose to scaly  
 a. Thallus without cortex  
 (1) Spores 1-celled  
 (2) Spores x-celled  
 b. Thallus with cortex above
2. Thallus dwarf fruticose, much branched, dark  
 a. Apothecia sunken in swellings of the thallus  
 (1) Spores 1-celled; paraphyses present  
 (2) Spores 2-3-celled; paraphyses lacking  
 b. Apothecia superficial  
 (1) Thallus without pseudoparenchymic cortex or central medulla  
 (a) Paraphyses capitate, dark  
 (b) Paraphyses not capitate  
 x. Asci 8-spored  
 (x) Spores 1-celled, globose to ovoid  
 (y) Spores x-celled, acicular  
 y. Asci typically many-spored  
 (2) Thallus with large-celled pseudoparenchymic cortex and central medulla  
 (a) Spores 1-celled  
 (b) Spores 2-celled
- D. Thallus with Rivularia  
 1. Apothecia disciform; thallus scaly to granular  
 a. Apothecia lecideine; algae horizontal  
 b. Apothecia lecanorine; algae erect
- Ramalodium 172  
 Koerberia 170  
 Hormothecium 168  
 Arcotomia 170  
 Lempholemma 166  
 Lemmopsis 167  
 Physma 167  
 Gyrocollema  
 Dicollema  
 Collemis 168  
 Collemodes 170  
 Leptogiopsis 171  
 Collema 168; 29  
 Leptogium 170; 29  
 Subfamily Ephebae  
 Pterygiopsis 152  
 Petractis 145  
 Porocyphus 152  
 Ephebeia 151  
 Ephebe 151; 29  
 Sponema 150  
 Thermutis 150; 29  
 Trichobacidia 153  
 Zahlbrucknerella 150  
 Leptogidium 152  
 Polychidium 152  
 Subfamily Lichinae  
 Pterygium 161  
 Steinera 162

- 2. Apothecia more or less perithecioid; thallus dwarf fruticose
  - a. Algal filaments in the middle of the thallus and parallel with the long axis of the branches Lichinodium 162
  - b. Algal filaments absent from the middle but marginal beneath the cortex
    - (1) Algae parallel with the long axis of the branches Lichina 163
    - (2) Algae perpendicular to the long axis
      - (a) Paraphyses present
        - x. Asci 8-spored Lichenyllum 163
        - y. Asci many-spored Lichinella 162
      - (b) Paraphyses lacking Homopsella 163

Family 48. PELTIGERACEAE

Zahlbruckner 142, 173, 189 (122, 176, 190)

Thallus firm, not at all gelatinous, crustose or foliose, more or less lobed and sometimes erect at the margin but never truly fruticose, typically attached to the substratum by rhizoids or by a navel, with a pseudoparenchymic cortex on one or both sides or pseudoparenchymic throughout; apothecia typically sunken in the thallus or grown together with it on the whole lower surface, more or less margined by the thallus, but without a proper exciple.

- A. Thallus uniform to crustose; algae Protococcus or Pleurococcus Subfamily Caleniace
  - 1. Spores transeptate, usually 2-3-celled
    - a. Paraphyses soon dissolving in slime to form a dark epithecium; spores x-celled Phlegmophiale 142
    - b. Paraphyses persistent
      - (1) Paraphyses simple
        - (a) Paraphyses free; no algae below hymenium Asterothyrium 144
        - (b) Paraphyses united
          - x. Algae present below hymenium; apothecia without byssoid or coralloid marginal hyphae Gonolecania 143
          - y. Algae not present below hymenium; apothecia with byssoid or coralloid marginal hyphae Byssolecania 142
      - (2) Paraphyses ramose and united
        - (a) Spores 2-celled Actinoplaca 143
        - (b) Spores x-celled
          - x. Hymenium at first enclosed in a membrane Calenia 144
          - y. Hymenium without membrane Tapellaria 143
  - 2. Spores muriform
    - a. Asci 1-spored; hypothecium without algae below
      - (1) Paraphyses simple, free Lopadiopsis 143
      - (2) Paraphyses ramose, united
        - (a) Upper surface of thallus with stiff black hairs Tricharia 144

- (b) Upper surface without stiff black hairs
  - x. Epithecium with hymenial algae Gonothecis 143
  - y. Epithecium without hymenial algae Sporopodium 143
- b. Asci 8-spored; hypothecium with algae below Arthotheliopsis 143
- B. Thallus foliose or foliose-scaly, rarely subfruticose; algae *Scytonema*, *Nostoc* or *Palmella* Subfamily Heppiae
- 1. Apothecia not marginal; thallus uniform and typically pseudoparenchymic throughout; algae *Scytonema*
  - a. Thallus of interwoven hyphae, not parenchymic Pseudoheppia 173
  - b. Thallus pseudoparenchymic throughout
    - (1) Spores 1-celled Heppia 173; 29
    - (2) Spores muriform Latzelia 175
- 2. Apothecia typically marginal or even with the thallus; thallus layered; algae *Nostoc* or *Palmella* Subfamily Peltigerae
- a. Thallus foliose, usually large-leaved
  - (1) Apothecia on upper side of thallus
    - (a) Apothecia marginal on lobes of thallus; lower surface of thallus netted, without cortex
      - x. Algae *Nostoc* Peltigera 189; 29
      - y. Algae *Palmella* (*Dactylococcus*) Peltidea 191
    - (b) Apothecia superficial, lower surface with cortex below the apothecia; algae *Nostoc*, *Palmella* or both Solorina 188; 29
  - (2) Apothecia on lower side of elongate thallus lobes; thallus completely corticate on both sides
    - (a) Algae *Nostoc* Nephromium 189
    - (b) Algae *Palmella* Nephroma 188
- b. Thallus minute of small triangular scales radiating from the apothecium; asci many-spored; spores 2-celled Solorinella 188

#### Family 49. LECIDEACEAE

Zahlbruckner 131, 191, 200, 209 (114, 129, 138, 144)

Thallus firm, not gelatinous, crustose, scaly or foliose, exceptionally dwarf fruticose, with rhizoids or a navel in the larger forms, with or without cortex; apothecia superficial or somewhat sunken at first, with a characteristic proper exciple that is very rarely lacking, but without a true thalline exciple. The absence of the latter distinguishes this family from the **Parmeliaceae**.

- A. Thallus uniform or crustose
  - 1. Thallus with Trentepohlia Subfamily Lecanactidae
    - a. Proper exciple thin or incomplete
      - (1) Spores x-celled; paraphyses ramose, united Schismatomma 132; 30
      - (3) Spores muriform; paraphyses simple, free Melampyrium 133
    - b. Proper exciple well-developed, carbonous



- (1) Paraphyses simple  
 (a) Spores 1-celled Pseudolecianactis 131  
 (b) Spores 2-celled Catinaria 131
- (2) Paraphyses ramose, often united  
 (a) Spores 2-celled Arthoniactis 131  
 (b) Spores x-celled Lecanactis 131; 30  
 (c) Spores many-celled, acicular Scolecactis 132
2. Thallus with Pleurococcus or Palmella
- a. Exciple with an external byssoid mass of hyphae Subfamily Byssolomae
- (1) Spores x-celled  
 (a) Spores hyaline; exciple dark within Byssoloma 133  
 (b) Spores dark; exciple hyaline Asteristium 134
- (2) Spores muriform Amphischizonia 134
- b. Exciple without external byssoid mass Subfamily Lecideae
- (1) Asci 1-8-spored, rarely 16-32-spored
- (a) Spores 1-celled
- x. Spores hyaline
- (x) Asci 1-2-spored; spores large, thick-walled Mycoblastus 195
- (y) Asci 8-spored
- m. Exciple black, carbonous Lecidea 192; 30
- n. Exciple hyaline or colored, not carbonous Biatora 193; 30
- (z) Asci 16-32-spored Pleolecis 195
- y. Spores dark Orphniospora 195
- (b) Spores 2-celled
- x. Spores hyaline
- (x) Paraphyses simple Megalospora 197
- m. Spores thick-walled, large
- n. Spores thin-walled, small to medium
- (m) Thallus with cortex Thalloedema 199
- (n) Thallus without cortex
- r. Exciple and hypothecium dark or black Catillaria 196
- s. Exciple and hypothecium clear or bright Biatorina 196
- (y) Paraphyses ramose, in a slimy hyemenium
- y. Spores dark; paraphyses ramose Diphanis 200  
 Catocarpus 200
- (c) Spores x-celled
- x. Spores elliptic to long-fusoid
- (x) Thallus not corticate, crustose-uniform Bacidia 197; 30  
 Toninia 198
- (y) Thallus corticate, warty to scaly
- y. Spores acicular to filiform Scoliciosporum 198
- (d) Spores muriform
- x. Spores hyaline
- (x) Spores with mucous sheath; paraphyses ramose Phalodictyum 200
- (y) Spores without mucous sheath; paraphyses simple Lopadium 199; 30  
 Rhizocarpum 200
- y. Spores dark, with mucous sheath
- (2) Asci muriosporous Biatorella 214

- B. Thallus scaly or foliose, with Pleurococcus or Palmella** Subfamily Phyllopsorae
1. Thallus scaly, often with rhizoids; disk not furrowed
    - a. Spores 1-celled
      - (1) Hypothecium pseudoparenchymic Phyllopsora 201
      - (2) Hypothecium not pseudoparenchymic
        - (a) Exciple clear or bright Psoromaria 181
        - (b) Exciple dark to black Psora 195
    - b. Spores x-celled; hypothecium pseudoparenchymic Psorella 201
  2. Thallus mostly with one large leaf; disk often furrowed
    - a. Spores 1-celled; disk typically furrowed Subfamily Gyrophorae
    - b. Spores 2-celled Gyrophora 210; 31
      - (1) Spores hyaline Charcotia 212
      - (2) Spores dark Dermaticum 212
    - c. Spores x-celled Agryphora 210
    - d. Spores muriform Umbilicaria 211; 31
- C. Thallus dwarf fruticose, of low erect furcate podetia; horizontal thallus lacking; spores hyaline, 2-celled** Sphaerophoropsis 196; 30

#### Family 50. CLADONIACEAE

Zahlbruckner 201 (139)

Thallus of two kinds, the primary horizontal on the substratum, crustose, scaly to foliose, the secondary consisting of erect clavate, cupulate or filiform, simple to much branched podetia; algae typically Pleurococcus; apothecia terminal or lateral, mostly convex to globose, with proper exciple only, except in *Chlorocaulum*; spores colorless.

- A. Apothecia with proper exciple**
1. Podetia short, simple, rarely forked; apothecia terminal
    - a. Podetia equal or little broadened above
      - (1) Podetia scattered over the surface
        - (a) Hypothecium clear
          - x. Spores 1-celled Baeomyces 203; 30
          - y. Spores 2-celled Dibaeis 203
          - z. Spores x-celled
            - (x) Spores fusoid to bacillar, few-celled
              - m. Algae blue-green Cyanobaeis 203
              - n. Algae yellow-green Heteromyces 203
            - (y) Spores filiform, very many celled Gomphillus 203
          - (b) Hypothecium dark; spores 1-celled Pilophorum 205; 30
        - (2) Podetia marginal on a foliose thallus Gymnoderma 203; 30
      - b. Podetia broadened above into lobes or tongues bearing the hymenium on one side
        - (1) No algae below the hymenium; medulla uniform Glossodium 204
        - (2) Algae below the hymenium; medulla with thicker strands Thysanothecium 204

- 2. Podetia funnellform, cupulate, filiform or more or less ramose, large as a rule
  - a. Spores 1-celled; podetia mostly hollow; cephalodia lacking Cladonia 205; 30
  - b. Spores x-celled or muriform; podetia solid; cephalodia present
    - (1) Spores x-celled Stereocaulum 208; 30
    - (2) Spores muriform Argopsis 209; 30
- B. Apothecia with thalline exciple
  - 1. Spores 1-celled Lachnocaulum 208
  - 2. Spores x-celled Chlorocaulum 208

**Family 51. PARMELIACEAE**

Zahlbruckner. 220, 217, 213, 136, 144, 229, 238, 175, 182

Thallus of one kind, podetia lacking, firm, not gelatinous, crustose, scaly, foliose or fruticose, often with rhizoids, typically layered, algae usually yellow-green, but blue-green in two subfamilies; apothecia characterized by a thalline exciple, which is sometimes lacking, superficial, rarely immersed.

- A. Thallus typically crustose, sometimes scaly or lobed at the margin
  - 1. Thallus with Pleurococcus or Palmella, rarely Protococcus
    - a. Asci mostly 8-spored, 1-32-spored, but not myriosporous
      - (1) Disk conspicuous, not more or less closed and perithecioid Subfamily Lecanorae
      - (a) Spores 1-celled
        - x. Asci 1-8-spored
          - (x) Paraphyses simple, free
            - m. Spores straight, elliptic to oblong
            - (m) Thallus bright yellow; pycnoconidia elliptic Candelariella 228
            - (n) Thallus rarely bright yellow; pycnoconidia more or less cylindrical
              - r. Cortex pseudoparenchymic Psoroma 180; 31
              - s. Cortex not pseudoparenchymic Lecanora 221; 31
          - n. Spores crescentic to falcate; thallus uniformly pseudoparenchymic
            - (y) Paraphyses ramose and united
              - y. Asci many-spored Harpidium 221
              - Ochrolechia 225
              - Myriolecis 223
        - (b) Spores 2-celled
          - x. Paraphyses simple, free
            - (x) Sterigmata exobasidial Lecania 226
            - (y) Sterigmata endobasidial
              - m. Thallus uniform, crustose Icmadophila 226; 31
              - n. Thallus lobed at margin Solenopsora 227
            - y. Paraphyses ramose, united Calenia 144
      - (c) Spores x-celled
        - x. Apothecia superficial
          - (x) Asci 1-8-spored
            - m. Thallus with cortex Haematomma 227
            - n. Thallus without cortex

- (m) Paraphyses furcate above; spores moniliform, 30-40-celled **Conotrema 140**
- (n) Paraphyses simple; spores not moniliform **Adermatis 226**  
**Dyslecanis 226**
- (y) Asci many-spored
- y. Apothecia immersed; thallus without cortex
- (x) Paraphyses simple, free **Phlyctella 228**
- (y) Paraphyses ramose, united **Phlyctidia 228**
- (d) Spores muriform
- x. Spores hyaline or subhyaline •
- (x) Apothecia superficial, broad; hymenium with algae below **Myxodictyum 227**
- (y) Apothecia immersed, small; no algae below hymenium **Phlyctis 227**  
**Diploschistes 141; 31**
- y. Spores dark
- (2) Disk small, more or less closed and perithecioid; apothecia mostly sunken in verrucae **Subfamily Pertusariae**
- (a) Spores 1-celled
- x. Paraphyses simple, free; hymenium perforate **Perforaria 217**
- y. Paraphyses ramose, united; hymenium not perforate **Pertusaria 217; 31**
- (b) Spores 2-celled; paraphyses ramose, united **Varicellaria 220**  
**Subfamily Acarosporae**
- b. Asci myriosporous; spores mostly 1-celled
- (1) Apothecia superficial
- (a) Thallus bright yellow **Pleochroma 229**
- (b) Thallus not bright yellow **Maronea 215**
- (2) Apothecia typically immersed, with mostly narrow disk **Acarospora 216; 31**
2. Thallus with Trentepohlia or Phyllactidium; thalline exciple sometimes disappearing in age **Subfamily Gyalectae**
- a. Thalline exciple present and persistent
- (1) Spores 1-celled, hyaline **Jonaspis 145**
- (2) Spores 2-celled
- (a) Spores hyaline **Lecaniopsis 147**
- (b) Spores dark at last **Diplopetopsis**
- (3) Spores x-celled
- (a) Spores hyaline
- x. Apothecia proliferating repeatedly from margin, forming erect forking chains of apothecia **Polystroma 140**
- y. Apothecia not in chains
- (x) Algae Trentepohlia
- m. Exciple and hypothecium hyaline **Ocellularia 137**
- n. Exciple and hypothecium dark, hard **Sagiolechia 145**
- (y) Algae Phyllactidium **Phyllophtharmaria 139**  
**Phaeotrema 137**
- (b) Spores dark
- (4) Spores muriform
- (a) Spores hyaline
- x. Paraphyses simple



- r. Sterigmata exobasidial Parmeliopsis 231
- s. Sterigmata endobasidial
  - (r) Lower surface of thallus with cyphellae Pseudoparmelia 236
  - (s) Lower surface without cyphellae Parmelia 233; 32
- n. Apothecia marginal or terminal; thallus often more or less fruticose
  - (m) Disks upright from the beginning Cetraria 236; 32
  - (n) Disks on the under side of thallus lobes, which later twist to bring them upright Nephromopsis 238
- (y) Thallus with cortex on upper surface alone
- m. Apothecia superficial; thallus without cyphellae
  - (m) Exciple with algae Physcidia 230
  - (n) Exciple without algae Megalopsora 230
- n. Apothecia terminal; cyphellae present Heterodea 230
- y. Asci many-spored Candelaria 231
- (2) Thallus fruticose, erect or hanging, often long and hair-like; radial, rarely dorsiventral in structure Subfamily Usneae
- (a) Spores 1-celled or lacking
  - x. Medulla traversed by solid strands of variable number and size Letharia 240
  - y. Medulla uniform, without strands
    - (x) Cortex formed of hyphae running lengthwise; asci 4-8-spored; spores hyaline to brownish Alectoria 241; 32
    - (y) Cortex pseudoparenchymic, hyphae more or less perpendicular to the long axis
- m. Medulla of hyphae running lengthwise
  - (m) Medulla loose, not horny; apothecia unknown Thamnolia 246
  - (n) Medulla firm, horny
    - r. Thallus low, podetium-like; apothecia unknown Siphula 247
    - s. Thallus fruticose, elongate; apothecia present
      - (r) Thallus dorsiventral, without fibrous branches; medulla and cortex not separable Everniopsis 240
      - (s) Thallus radial, usually with fibrous branches; medulla and cortex readily separable Usnea 245; 32
- n. Medulla of hyphae running in all directions
  - (m) Thallus more or less hollow
    - r. Thallus swollen, tubular Dactylina 240
    - s. Thallus not swollen and tubular

- (r) Thallus fruticose, erect Dufourea 240; 32
- (s) Thallus podetium-like; apothecia unknown Endocena 247
- (n) Thallus flattened, not hollow, dorsiventral Evernia 239; 32
- (b) Spores 2-celled Ramalina 242; 32
- (c) Spores muriform, dark, large; asci 1-spored Oropogon 242
- b. Asci myriosporous; apothecia cespitose on a one-leaved thallus Glypholecia 216
- 2. Thallus with Scytonema or Nostoc
- a. Thallus large-leaved, with cyphellae, pseudocyphellae, or cephalodia Subfamily Stictinae
- (1) Lower surface of thallus with cyphellae or pseudocyphellae
- (a) Apothecia with thalline exciple Podostictina 186
- x. Spores hyaline
- y. Spores dark
- (x) Spores 2-celled Stictina 186
- (y) Spores x-celled Merostictina 186
- (b) Apothecia with proper exciple only Dystictina 186
- (2) Lower surface without cyphellae; cephalodia usually present
- (a) Apothecia with thalline exciple Phycodiscis 185
- (b) Apothecia with proper exciple only Lobarina 185
- b. Thallus scaly to small-leafy, sometimes crustose, rarely large-leafy, without cyphellae, etc. Subfamily Pannariae
- (1) Lower surface of thallus with distinct forked veins; spores hyaline, x-celled Hydrothyria 177
- (2) Lower surface scarcely or not at all veined; spores 1-2-celled
- (a) Upper cortex well-developed, distinct
- x. Upper cortex with hyphae perpendicular to it Erioderma 181
- (x) Upper cortex hairy or pilose
- (y) Upper cortex not hairy
- m. Apothecia with thalline exciple
- (m) Algae Nostoc
- r. Spores 1-celled
- (r) Upper and lower cortex well-developed Pannaria 180; 32
- (s) Lower cortex lacking Lepidogium 177
- s. Spores 2-celled; both cortexes present Hueella 180
- (n) Algae Scytonema; spores 2-celled Massalongia 178
- n. Apothecia with proper exciple only
- (m) Spores 1-celled Parmeliella 178
- (n) Spores x-celled Placynthium 178
- y. Upper cortex of horizontal hyphae Coccocarpia 181
- (b) Upper cortex indistinct; algae occupying nearly whole width of thallus Lepidocollema 177; 32

**Family 52. PHYSCIACEAE**

Zahlbruckner 247-256 (226-234)

Thallus crustose, foliose or fruticose, as in Parmeliaceae; apothecia mostly with thalline exciple, sometimes with proper exciple alone; spores normally 2-celled, with more or less thickened cross-wall often traversed by a line-like canal connecting polar guttae, or sometimes 1-x-celled or muriform.

**A. Spores 2-celled, rarely 1-celled****1. Spores hyaline****a. Thallus without cortex, uniform or crustose**(1) Apothecia with thalline exciple **Caloplaca 249; 32**

(2) Apothecia with proper exciple only

(a) Spores 1-celled **Protoblastenia 248**(b) Spores 2-celled **Blastenia 248**(c) Spores x-celled **Bombyliospora 249****b. Thallus with cortex, foliose or fruticose**(1) Thallus foliose, spreading, dorsiventral,  
with rhizoids **Xanthoria 251; 32**

(2) Thallus fruticose, erect

(a) Algae Protococcus; no central solid  
strand **Theloschistes 251; 32**(b) Algae Pleurococcus; central solid strand  
present **Lethariopsis 253****2. Spores dark****a. Thallus without cortex, uniform or crustose**

(1) Apothecia with thalline exciple

(a) Asci 8-spored **Rinodina 254; 32**(b) Asci many-spored **Pleorinis 254**(2) Apothecia with proper exciple only **Buellia 253; 30****b. Thallus with cortex, foliose or fruticose**(1) Upper cortex of perpendicular hyphae,  
pseudoparenchymic

(a) Apothecia with thalline exciple

x. Hypothecium hyaline **Physcia 257; 32**y. Hypothecium black **Dirinaria 257**(b) Apothecia with proper exciple only **Pyxine 256**(2) Upper cortex of hyphae parallel with long  
axis, not pseudoparenchymic; apothecia  
with thalline exciple **Anaptychia 258; 32****B. Spores x-celled****1. Spores hyaline****a. Thallus without cortex, uniform or crustose**(1) Apothecia with thalline exciple **Meroplacis 250**(2) Apothecia with proper exciple only **Xanthocarpia****b. Thallus with cortex, fruticose** **Niorma 252****2. Spores dark****a. Thallus without cortex, uniform or crustose**(1) Apothecia with thalline exciple **Merorinis 256**(2) Apothecia with proper exciple only **Diplotomma****b. Thallus with cortex, foliose; exciple proper** **Phragmopyxine 257****C. Spores muriform, dark****1. Thallus without cortex, uniform or crustose** **Dictyorinis 256****2. Thallus with cortex, foliose** **Hyperphyscia 258**



## Family 53. MOLLISIACEAE

Rehm 503

Apothecia innate-crumpent, or superficial from the first, mostly scutellate to discoid, opening circularly, typically smooth, mostly fleshy-waxy, disk dark-gray to bright-colored, frequently on a subicle; hypothecium thin for the most part, epithecium obsolescent, exciple characteristically parenchymic and brown; asci mostly cylindrical and 8-spored, paraphyses filiform or lance-pointed; spores typically hyaline.

This family is closely related to both *Patellariaceae* and *Helotiaceae*, as well as the smaller forms of the *Pezizaceae*. As a rule, it may be readily distinguished from all of these by the brown parenchymic exciple and the poorly developed hypothecium.

## Subfamily Eumollisiae

Apothecia superficial from the beginning

## Hyalosporae

Spores 1-celled, hyaline, globose to oblong

- |                                      |                                  |
|--------------------------------------|----------------------------------|
| <b>A.</b> Apothecia on a subicle     |                                  |
| 1. Spores globose                    | <i>Hyphodiscus</i> 22:673        |
| 2. Spores elliptic to oblong         | <i>Tapesia</i> 8:371, R 573; 33  |
| <b>B.</b> Apothecia not on a subicle |                                  |
| 1. Spores globose                    | <i>Mollisiella</i> 18:64         |
| 2. Spores elliptic to oblong         |                                  |
| a. Paraphyses filiform               | <i>Mollisia</i> 8:321, R 511; 33 |
| b. Paraphyses lance-pointed          | <i>Mollisiopsis</i> 22:668       |

## Hyalodidymae

Spores 2-celled, hyaline, elliptic to oblong

- |   |                                 |
|---|---------------------------------|
| <b>A.</b> Apothecia on a subicle            |                                 |
| 1. Spores with a mucous sheath              | <i>Stictoclypeolum</i> 18:110   |
| 2. Spores without a mucous sheath           |                                 |
| a. Asci 1-spored; spores biscuit-shaped     | <i>Psorotheciopsis</i> 16:746   |
| b. Asci 8-spored; spores not biscuit-shaped | <i>Linhartia</i> 16:744         |
| <b>B.</b> Apothecia not on a subicle        | <i>Niptera</i> 8:480, R 549; 33 |

## Hyalophragmiae

Spores x-celled, hyaline, elliptic to fusoid

- |   |                                |
|---|--------------------------------|
| <b>A.</b> Apothecia on a subicle or thallus     |                                |
| 1. Spores ciliate at each end                   | <i>Ciliella</i> 16:748         |
| 2. Spores not ciliate                           |                                |
| a. Apothecia on a subicle of hyphae             | <i>Trichobelonium</i> 16:747   |
| b. Apothecia on a parenchymic thallus           | <i>Pazschkea</i> 14:788        |
| <b>B.</b> Apothecia not on a subicle or thallus |                                |
| 1. Spores appendaged at base                    | <i>Strossmayera</i> 22:700     |
| 2. Spores not appendaged                        | <i>Belonidium</i> 8:496, R 561 |

## Hyalodictyae

Spores muriform, hyaline, ovoid to oblong

- |   |                            |
|---|----------------------------|
| <b>A.</b> Asci 1-4-spored; spores with a mucous sheath  | <i>Gonothecium</i> 16:751  |
| <b>B.</b> Asci 8-spored; spores without a mucous sheath | <i>Dictyomollis</i> 22:702 |

**Scolecosporae**

Spores acicular, hyaline, usually septate

Spores 10-15 times longer than wide, not filiform **Belonopsis 16:752, R 571****Subfamily Pyrenopezizae**

Apothecia innate, then erumpent or more or less superficial

**Hyalosporae**

Spores 1-celled, hyaline, globose to oblong

- A.** Apothecia bright-colored, in spots on living leaves
1. Apothecia setose **Bioscypha**
  2. Apothecia not setose **Pseudopeziza 8:723, R 596**
- B.** Apothecia dark-brown without, not on living leaves
1. Apothecia setose **Pirottaea 8:386, R 636**
  2. Apothecia not setose, often rough with projecting cells
    - a. Apothecia on a subicle **Spilopezis 24:1199, R 620**
    - b. Apothecia not on a subicle
      - (1) Paraphyses filiform **Pyrenopeziza 8:354, R 608; 33**
      - (2) Paraphyses lance-pointed **Pyrenopezis 24:1198**

**Phaeosporae**

Spores 1-celled, brownish, ovoid to elliptic

Apothecia waxy-leathery, bright and downy outside **Velutaria 8:488, R 645****Hyalodidymae**

Spores 2-celled, hyaline, elliptic to fusoid

- A.** Apothecia bright-colored, in spots on living leaves **Fabraea 8:735, R 599; 33**
- B.** Apothecia dark-brown without, not on living leaves **Dibelonis R 638**

**Phaeodidymae**

Spores 2-celled, brownish, elliptic to fusoid

Apothecia bright-colored, in spots on living leaves **Phaeofabraea 22:748****Hyalophragmiae**

Spores x-celled, hyaline, oblong to fusoid

- A.** Apothecia bright-colored, in spots on living leaves **Neofabraea**
- B.** Apothecia dark-brown without, not on living leaves **Beloniella R 640**

**Hyalodictyae**

Spores muriform, hyaline, ovoid to fusoid

Apothecium folicole; epithecium present **Protoscypha****Family 54. HELOTIACEAE**

Rehm 647

Apothecia typically superficial from the first, rarely innate-erumpent or arising from a sclerotium, mostly stalked, sometimes sessile, cupulate to discoid, waxy or

waxy-fleshy, typically bright-colored, frequently setose or hairy; hypothecium usually well-developed, epithecium only rarely so, exciple prosenchymic and bright-colored as a rule; asci mostly cylindrical and 8-spored, paraphyses filiform or lance-pointed; spores typically hyaline.

This family is distinguished from the related *Mollisiaceae* by the bright-colored prosenchymic exciple and the thick hypothecium. The line between it and the *Pezizaceae* is less marked, but the small waxy apothecia of phytogenous habit serve to separate them more or less clearly.

### Subfamily Helotiae

Apothecia not hairy

#### Hyalosporae

Spores 1-celled, hyaline, globose to oblong

- |   |                                     |
|---|-------------------------------------|
| A. Apothecia on a subicle                                     | <i>Eriopeziza</i> R 693; 33         |
| B. Apothecia not on a subicle                                 |                                     |
| 1. Apothecia rising from a sclerotium, long stalked           | <i>Sclerotinia</i> 8:195, R 803; 33 |
| 2. Apothecia not arising from a sclerotium                    |                                     |
| a. Apothecia green, arising typically from a green substratum | <i>Chlorosplenium</i> 8:315, R 752  |
| b. Apothecia not green with a green substratum                |                                     |
| (1) Apothecia margined by a row of triangular teeth           |                                     |
| (a) Apothecia stalked   | <i>Cyathicula</i> 8:304, R 740; 33  |
| (b) Apothecia sessile   | <i>Pezoloma</i> 24:1194             |
| (2) Apothecia without a toothed margin                        |                                     |
| (a) Asci typically 8-spored                                   |                                     |
| x. Spores globose   | <i>Helotiopsis</i>                  |
| y. Spores elliptic to fusoid                                  |                                     |
| (x) Apothecia stalked   |                                     |
| m. Paraphyses lance-pointed                                   | <i>Helolachnum</i> 22:680           |
| n. Paraphyses filiform, blunt                                 |                                     |
| (m) Ascus-pore blue with iodine                               | <i>Helotium</i> 8:210, R 772; 33    |
| (n) Ascus-pore not blue with iodine                           | <i>Phialea</i> 8:251, R 708         |
| (y) Apothecia sessile   |                                     |
| m. Apothecia not peritheciolate                               | <i>Pezizella</i> 8:275, R 653       |
| n. Apothecia peritheciolate                                   | <i>Cryptopezia</i>                  |
| (b) Asci many-spored  | <i>Comesia</i> 8:468                |

#### Phaeosporae

Spores 1-celled, dark, elliptic to oblong

- |  |                            |
|--|----------------------------|
| A. Apothecia arising from a sclerotium | <i>Lambertella</i> 24:1207 |
| B. Apothecia not from a sclerotium     | <i>Phaeociboria</i>        |

#### Hyalodidymae

Spores 2-celled, hyaline, elliptic to fusoid

- |                                     |                               |
|-------------------------------------|-------------------------------|
| A. Apothecia stalked                |                               |
| 1. Stalk with ridges or folds       | <i>Lanzia</i> 8:479           |
| 2. Stalk without ridges or folds    | <i>Hymenoscypha</i> R 781; 33 |
| B. Apothecia sessile                |                               |
| 1. Apothecia margined by teeth      | <i>Pezizellaster</i> 24:1190  |
| 2. Apothecia without marginal teeth | <i>Eubelonis</i> R 685        |

**Hyalophragmiae**

Spores x-celled, hyaline, elliptic to fusoid

- A. Apothecia margined by a row of triangular teeth  
 1. Apothecia stalked **Davincia 18:101**  
 2. Apothecia sessile **Merodontis 18:102**
- B. Apothecia without marginal teeth  
 1. Apothecia stalked **Masseea 18:99**  
 a. Apothecia on a subicle  
 b. Apothecia not on a subicle  
 (1) Spores 1-ciliate at each end **Belospora 24:1182, R 744**  
 (2) Spores muticate  
 (a) Paraphyses colored, forming an epithecium **Rutstroemia R 763**  
 (b) Paraphyses colorless, epithecium lacking **Belonioscypha R 743**  
 2. Apothecia sessile **Belonium 8:492, R 685**

**Phaeophragmiae**

Spores x-celled, dark, oblong

- Apothecia short-stalked; paraphyses colored **Scelobonium 8:496**

**Scolecosporae**

Spores acicular to filiform, hyaline, continuous or septate

- A. Apothecia stalked, cupulate; paraphyses capitate; spores filiform, continuous **Pocillum 8:605, R 747; 33**
- B. Apothecia sessile, scutellate; paraphyses not capitate; spores acicular, septate **Gorgoniceps 8:504, R 690**

**Subfamily Dasyscyphae**

Rehm 284

Apothecia hairy

**Hyalosporae**

Spores 1-celled, hyaline, globose to oblong

- A. Spores globose **Lachnellula 8:390, R 862; 33**
- B. Spores elliptic to fusoid  
 1. Paraphyses lance-pointed  
 a. Apothecia stalked  
 (1) Apothecia margined by a row of teeth **Lachnaster 24:1202**  
 (2) Apothecia without marginal teeth **Lachnum R 870; 33**  
 b. Apothecia sessile **Dyslachnum 24:1201**
2. Paraphyses filiform, blunt  
 a. Apothecia divided above into 3-6 lobes, black **Arenaea 18:75**  
 b. Apothecia entire, rarely if ever black  
 (1) Apothecia setose with distinct bristles  
 (a) Setae shining, clear, non-septate, nearly solid **Phalothrix R 831**  
 (b) Setae dull, usually septate, hollow  
 x. Apothecia stalked **Dasyscypha 8:432, R 832; 33**  
 y. Apothecia sessile  
 (x) Apothecia superficial **Dasypezis R 829, 842**  
 (y) Apothecia deeply imbedded **Endoscypha**  
 (2) Apothecia villous with projecting hyphae **Hyphoscypha 18:87**

**Hyalodidymae**

Spores 2-celled, hyaline, elliptic to fusoid

Apothecia sessile; paraphyses filiform; spores finally 2-celled

*Lachnella* 8:391, R 853; 33**Hyalophragmiae**

Spores x-celled, hyaline, oblong to cylindrical

A. Paraphyses bearing conidia at the tips

*Diplocarpa* 18:110

B. Paraphyses without conidia at the tips

1. Apothecia on a subicle

*Arachnopeziza* 8:499, R 698

2. Apothecia without a subicle

*Lasiobelonia* 8:502**Scolecosporae**

Spores filiform, hyaline, more or less septate

A. Paraphyses lance-pointed

*Erinella* 8:507

B. Paraphyses filiform, blunt

*Dasyscyphella***Family 55. PEZIZACEAE**

Rehm 913, Lindau 178

Apothecia typically superficial and terrestrial, sometimes erumpent, rarely phylogenous, urn-shaped, cupulate or disciform, stalked or sessile, fleshy or fleshy-waxy, bright-colored to brown, rarely black, frequently hairy, setose or ciliate; hypothecium usually well-developed, epithecium mostly lacking, exciple present and not specially differentiated, rarely lacking; asci typically cylindrical, 8-spored, regularly opening by an operculum or lid, rarely by a slit; paraphyses present, filiform as a rule; spores simple, mostly hyaline.

The fleshy texture and terrestrial habit serve to distinguish this family from the **Helotiaceae**, though the genus *Pitya* is more or less intermediate between the two. The transition to the **Helvellaceae** is almost imperceptible, several genera fitting almost equally well in either, and this is likewise true of the relationship to the **Ascobolaceae**. As with the **Bulgariaceae** in particular, the texture of the cup renders the protection of the exciple less necessary, and this feature becomes obsolete in a few genera, properly included in the **Agyriaceae**.

The sculpturing of the spore-wall is a feature in several genera, ranging from fine points to warts, reticulations or striae. With the exception of *Aleuria* and its relatives, the range of variation within the genera concerned is too great to warrant its use, and *Aleuria* itself is retained largely because of custom.

**Subfamily Pezizae**

Apothecia glabrous or at least without definite hairs or setae

**Hyalosporae**

Spores 1-celled, hyaline, globose to fusoid

A. Asci turning blue with iodine

1. Apothecia ear-like, cleft on one side

*Iotideia* R 1028

2. Apothecia not ear-like

a. Spores globose

*Plicariella* R 993; 34

b. Spores elliptic to fusoid

(1) Apothecia with a long slender stalk

*Tarzetta* R 1021; 35

(2) Apothecia sessile or subsessile

- (a) Apothecia with a milky juice
  - (b) Apothecia without milky juice
    - x. Apothecia on a subicle
    - y. Apothecia not on a subicle
    - (x) Apothecia leathery, black
    - (y) Apothecia fleshy, not black
    - m. Apothecia sunken, deeply and radially lobed, very large
    - n. Apothecia superficial, not lobed
- B. Asci not turning blue with iodine
1. Apothecia ear-like, cleft on one side
  2. Apothecia not ear-like
    - a. Spores globose
      - (1) Apothecia substipitate, parasitic
      - (2) Apothecia sessile, terrestrial
    - b. Spores elliptic to fusoid
      - (1) Apothecia stalked
        - (a) Stalk narrow, cylindrical, mealy-rough
        - (b) Stalk mostly short and thick, not mealy
          - x. Stalk deeply furrowed, large and thick
          - y. Stalk smooth or slightly furrowed at most
        - (x) Apothecia persistently cup-shaped
        - (y) Apothecia finally open and flat
      - (2) Apothecia sessile
        - (a) Spores reticulate
        - (b) Spores smooth or rough, but not reticulate
          - x. Apothecia on a subicle; exciple obsolescent
          - y. Apothecia not on a subicle; exciple present

Galactinia 8:106; 35

Melachroia R 997

Urnula 8:548, R 999; 35

Sarcosphaera R 1019; 35

Peziza 8:73, R 1000; 35

Otidea 8:94, R 1023; 34

Pitya 8:209, R 925; 34

Lamprospora 8:105, 111, R 927; 34

Macropodia 8:158, R 984; 34

Acetabula 8:59, R 981; 34

Geopyxis 8:63, R 971; 34

Discina 8:99, R 976; 34

Aleuria R 968; 34

Pyronema 8:107; 34

Humaria 8:118, R 934; 34

#### Phaeosporae

Spores 1-celled, dark or brownish, globose to fusoid

A. Spores globose

Phaeopezia 8:471, R 995

B. Spores ellipsoid

1. Apothecia stalked

Podaleuris 18:88, 24:1208

2. Apothecia sessile

Aleurina 18:88

#### Subfamily Scutelliniae

Apothecia hairy or setose

#### Hyalosporae

Spores 1-celled, hyaline, globose to fusoid

A. Spores globose

1. Apothecia on a subiculum, white-hairy; exciple obsolescent

Pyronemella 8:194, R 1038

2. Apothecia not on a subiculum; exciple present

a. Apothecia dark to black, more or less strigose at base

Pseudoplectania 8:165, R 1039; 35

b. Apothecia bright-colored, hairy or setose

Sphaerospora 8:188, R 1037; 35

**B. Spores elliptic to fusoid**

- |   |  |
|---|--|
| 1. Apothecia sunken, opening by lobes                 | <i>Sepultaria</i> 8:166, R 1075; 35    |
| 2. Apothecia superficial                              |  |
| <b>a. Apothecia stalked</b>                           |  |
| (1) Apothecia dark to black                           |  |
| (a) Stalk long, slender and mealy-rough               | <i>Macropodia</i> 8:158, R 984; 34     |
| (b) Stalk short, thick, with brown hairs and rhizoids | <i>Plectania</i> 8:163, R 1070; 35     |
| (2) Apothecia and hairs bright-colored                | <i>Sarcoscypha</i> 8:153, R 1070; 35   |
| <b>b. Apothecia sessile</b>                           |  |
| (1) Apothecia dark hairy or ciliate                   |  |
| (a) Apothecia with long cilia at margin               |  |
| x. Paraphyses equal, clavulate, blunt                 | <i>Scutellinia</i> 8:173, R 1042; 35   |
| y. Paraphyses unequal, pointed, brown                 | <i>Desmazierella</i> 8:386, R 1041; 35 |
| (b) Apothecia without long cilia at margin            | <i>Pelodiscus</i> 18:35, 16:1147       |
| (2) Apothecia bright hairy or ciliate                 |  |
| (a) Apothecia with long cilia at margin               | <i>Neottiella</i> 8:190, R 1068        |
| (b) Apothecia without long cilia at margin            | <i>Leucopezis</i> 24:1198              |

**Phaeosporae**

Spores 1-celled, dark, elliptic to fusoid

- |                                     |                             |
|-------------------------------------|-----------------------------|
| A. Apothecia stalked, rough-mealy   | <i>Phaeomacropus</i> 16:740 |
| B. Apothecia sessile, hairy-ciliate | <i>Trichaleuris</i> 24:1207 |

**Family 56. HELVELLACEAE**

Rehm 1134, Schroeter 162

Ascoma typically terrestrial and stalked, occasionally phytogenous or sessile, saddle-shaped, conical, club-shaped, or capitate, rarely discoid or flat, mostly smooth, fleshy or fleshy-cartilaginous, rarely gelatinous; hypothecium and exciple not indicated, the hymenium on the outside of the fruiting body; asci typically cylindrical, 8-spored, opening by an operculum; paraphyses present, filiform as a rule; spores mostly hyaline.

The sessile genera represent one line of evolution from the *Pezizaceae*, while the simpler forms of *Helvella* are closely related to *Macropodia*. *Morchella* represents the highest development in the direction of the reticulate hymenium, and the *Geoglossae* in that of the clavate fruit-body.

**Subfamily Rhizinae**

Ascoma sessile, flat, arched or irregularly globose

- |  |                                     |
|--|-------------------------------------|
| A. Spores globose; ascoma inflated                           | <i>Sphaerosoma</i> 8:56, R 1140; 36 |
| B. Spores elliptic to fusoid; ascoma flat                    |                                     |
| 1. Ascoma with rhizoids below; spores fusoid, pointed        | <i>Rhizina</i> 8:57, R 1138; 36     |
| 2. Ascoma without rhizoids; spores elliptic, rounded at ends | <i>Psilopezia</i> 8:152, R 1140     |

**Subfamily Helvellae**

Ascoma stalked, cap- or saddle-shaped, or columnar

- |   |                                  |
|---|----------------------------------|
| A. Ascoma with distinct stalk                         |                                  |
| 1. Hymenium ridged in both directions, i.e. alveolate | <i>Morchella</i> 8:8, R 1200; 36 |

2. Hymenium smooth, convolute, or ridged lengthwise  
 a. Hymenium saddle-like, more or less lobed *Helvella* 8:17, R 1179; 36  
 b. Hymenium globose, convolute *Gyromitra* 8:15, R 1189  
 c. Hymenium cap- or bell-shaped, smooth or ridged lengthwise *Verpa* 8:29, R 1195; 36
- B. Ascoma columnar, entirely covered by the hymenium *Underwoodia* 10:1

### Subfamily Geoglossae

Ascoma stalked, capitate or clavate

- A. Hymenium distinct from stem, capitate or pileate
1. Spores x-celled, fusoid  
 a. Ascoma gelatinous *Leotia* 8:609, R 1164; 36  
 b. Ascoma fleshy-waxy *Cudoniella* 8:41, R 1166
2. Spores acicular or filiform, septate or not  
 a. Ascoma fleshy-leathery, cap-like, margin involute; spores acicular, septate *Cudonia* 8:527, R 1169; 36  
 b. Ascoma waxy-gelatinous, button-shaped, solid; spores filiform, continuous *Vibrissea* 8:51, R 1170; 36
- B. Hymenium clavate or spatulate, little or not at all distinct from the stalk
1. Spores hyaline  
 a. Spores 1-celled  
 (1) Spores globose *Neolecta* 8:40  
 (2) Spores elliptic *Mitrula* 8:32, R 1146; 36  
 b. Spores x-celled, fusoid  
 (1) Hymenium covering the whole club; ascoma yellow, brown or black *Microglossum* 8:39, R 1151  
 (2) Hymenium on one side only *Hemiglossum* 10:2  
*Spathularia* 8:48, R 1158; 36  
 c. Spores filiform; ascoma spatulate
2. Spores dark  
 a. Spores 1-celled *Phaeoglossum*  
 b. Spores acicular or clavate, many-septate  
 (1) Hymenium with spines or setae *Trichoglossum*  
 (2) Hymenium glabrous  
 (a) Ascoma viscid-gelatinous; paraphyses extending down the stalk *Gloeoglossum*  
 (b) Ascoma not viscid-gelatinous; paraphyses not extending down the stalk *Geoglossum* 8:42, R 1153; 36

### Family 57. ASCOBOLACEAE

Rehm 1078, Lindau 188

Apothecia typically superficial and fimicoid, sessile, rarely short-stalked, scutellate to discoid, soft-fleshy or somewhat gelatinous, usually bright-colored, smooth or sometimes hairy; hypothecium mostly well-developed, exciple thin or even lacking; asci broad-cylindric or clavate, with an operculum, rarely with a slit, typically projecting from the hymenium at maturity; paraphyses mostly simple; spores simple, often colored, and variously sculptured.

This family might well be included in the *Pezizaceae*, as has been done by recent authors (cf. Seaver N. A. *Cup-Fungi*, 1928) but it is fairly well marked by



the fimicole habit and exerted asci and is retained as a matter of usage. However, it is necessary to refer the genera without exciple to the next family, **Agyriaceae**, which represents the stage of reduction consequent upon a more assured water and food supply.

### Subfamily Ascophanae

Spores colorless

- |   |                              |
|---|------------------------------|
| A. Spores globose                           |                              |
| 1. Asci 4-spored, opening by a slit         | Boudierella 14:792           |
| 2. Asci 8-spored, opening by a lid          | Cubonia 8:527                |
| B. Spores elliptic to fusoid                |                              |
| 1. Asci 8-spored                            |                              |
| a. Apothecia setose                         | Lasiobolus 8:536, R 1096; 37 |
| b. Apothecia glabrous                       | Ascophanus 8:528, R 1085; 37 |
| 2. Asci many-spored                         |                              |
| a. Ascus single                             | Thelebolus R 1106            |
| b. Asci several to many                     |                              |
| (1) Apothecia fimbriate with delicate hairs | Streptotheca 10:34           |
| (2) Apothecia glabrous                      | Rhyarobolus R 1099; 37       |

### Subfamily Ascobolae

Spores colored

- |   |                              |
|---|------------------------------|
| A. Spores globose                       | Boudiera 8:512, R 1113; 37   |
| B. Spores elliptic to fusoid            |                              |
| 1. Spores in a gelatinous mass in ascus | Saccobolus 8:524, R 1115; 37 |
| 2. Spores free in the ascus             |                              |
| a. Apothecia hairy or ciliate           | Dasybolus 11:421             |
| b. Apothecia glabrous                   | Ascobolus 8:514, R 1120; 37  |

## Order 13. AGYRIALES

Apothecia reduced by the loss of the exciple, more rarely of hypothecium or paraphyses also, typically convex or discoid, gelatinous to fleshy, bright-colored, rarely black and carbonous to membranous, superficial, rarely erumpent; hypothecium usually present but much reduced, parenchymic, exceptionally prosenchymic; asci ovoid to clavate, paraphyses mostly present, occasionally forming an epithecium; spores various.

This is a new order characterized by the progressive reduction of the apothecium until asci and spores alone remain. By contrast with the **Gymnascales** it represents a highly specialized group instead of a primitive one, but as usual this distinction is difficult to apply in practice. The presence of a uniform hymenium is taken as the distinguishing feature of reduced forms of **Discomycetes**, usually with the presence of paraphyses and a parenchymic hypothecium.

On the basis of texture at least, the **Agyriales** are a polyphyletic order, containing gelatinous, fleshy and membranous forms closely related to **Bulgariaceae**, **Pezizaceae**, **Ascobolaceae** and **Mýriangiaceae**, and probably derived from these families. From the first three it is separated by the absence of exciple, though in a few genera this feature is in the process of disappearing. It is best distinguished from **Myriangiaceae** by the uniform hymenium and the regular presence of genuine paraphyses, though occasional puzzling intermediates occur.

## Key to Families

- A. Paraphyses and hypothecium present, or one or the other occasionally lacking      **Agyriaceae p.**  
 B. Both paraphyses and hypothecium lacking      **Exascaceae p.**

## Family 58. AGYRIACEAE

22:586, 24:1142

Apothecia without an exciple or the latter incomplete, convex to discoid, gelatinous, fleshy or rarely more or less membranous, bright-colored, rarely black, typically superficial; hypothecium regularly present and parenchymic; asci ovoid to clavate, mostly 8-spored, paraphyses regularly present, occasionally forming an epithecium; spores various.

## Hyalosporae

Spores 1-celled, hyaline, globose to fusoid

- A. Exciple present but incomplete  
 1. Exciple prosenchymic, lateral, lacking below; paraphyses branched, forming an epithecium      **Discomycella 24:1144**  
 2. Exciple represented only by apophyses with inflated cells and long points; paraphyses simple      **Solanella 22:627**
- B. Exciple entirely lacking  
 1. Asci typically 8-spored  
 a. Apothecia black, membranous or firm-waxy, usually with an epithecium  
 (1) Apothecium membranous, superficial, not lichenicole      **Phillipsiella 22:584**  
 (2) Apothecia firm-waxy, lichenicole, typically erumpent      **Nesolechia 10:53**
- b. Apothecia bright-colored, gelatinous to fleshy  
 (1) Apothecia gelatinous  
 (a) Hymenium covered with mucus; algicole      **Gloeopeziza 10:41, 14:804**  
 (b) Hymenium without mucus; not algicole  
 x. Apothecia with gyrose or folded hymenium      **Haematomyces 8:633**  
 y. Apothecia with smooth hymenium      **Agyrium 8:634, R 450; 26**  
 (2) Apothecia fleshy  
 (a) Apothecia on a cottony subicle; hypothecium thick  
 x. Spores globose; apothecia white-hairy      **Pyronemella 8:194, R 1038**  
 y. Spores ellipsoid; apothecia not hairy      **Pyronema 8:107, R 962; 34**  
 (b) Apothecia without subicle; hypothecium thin      **Ascocalathium 14:30**
2. Asci many-spored  
 a. Asci 16-spored; spores globose; apothecia without a disk-like hypothecium      **Agyrina 8:636**  
 b. Asci many-spored; spores fusoid; apothecia with a disk-like hypothecium      **Zukalina 14:32; 37**

## Phaeosporae

Spores 1-celled, dark, globose to fusoid

- A. Apothecia effuse, phytogenous; hypothecium lacking      **Medeolaria**  
 B. Apothecia minute, fimicole; hypothecium parenchymic      **Ascodesmis 8:824**

**Hyalodidymae**

Spores 2-celled, hyaline, ovoid to fusoid

- A. Apothecia superficial**  
 1. Paraphyses present  
 a. Paraphyses much branched, moniliform; hypothecium none *Atichia* 22:769, R 500  
 b. Paraphyses branched at tip, not moniliform; hypothecium present, thin *Lecideopsella* 22:588  
 c. Paraphyses simple, inflated at tip; hypothecium somewhat thick *Agyronella* 22:588  
 2. Paraphyses lacking; hypothecium present *Henningsiella* 22:586  
**B. Apothecia erumpent; paraphyses present** *Didymascus* 14:816

**Phaeodidymae**

Spores 2-celled, dark, ovoid to fusoid

- Apothecia* erumpent, foliicole; paraphyses filiform; asci 4-spored *Didymascella* 18:162

**Hyalophragmiae**

Spores x-celled, hyaline, oblong

- Apothecia* superficial, membranous, dark, with yellow bulbiform base; paraphyses present; foliicole *Mollerliella* 8:845

**Phaeophragmiae**

Spores x-celled, dark, oblong

- Apothecia* superficial, waxy, dark; paraphyses present, forming an epithecium; lignicole *Microdiscus* 24:1143

**Hyalodictyae**

Spores muriform, hyaline, oblong

- Apothecia* superficial, submembranous, dark; paraphyses lacking; foliicole *Zukaliopsis* 17:554

**Phaeodictyae**

Spores muriform, dark, oblong

- A. Apothecia superficial, with gyrose or folded hymenium** *Haematomyxa* 8:646  
**B. Apothecia erumpent; hymenium plane** *Ramosiella* 24:1142

**Scolecosporae**

Spores acicular to filiform

- Apothecia* superficial, gelatinous; paraphyses filiform *Agryriopsis* 14:895

**Family 59. EXASCACEAE**

8:811, 10:67, 11:435, 14:823, 16:803, 18:196, 22:763, 24:1300; Schroeter 158

*Apothecia* reduced to a hymenium without exciple, hypothecium, or paraphyses, mostly parasitic, occasionally saprophytic; asci globose to clavate, arising directly from the hyphae, or disposed on a base of parallel hyphae, few to many-spored; spores simple, hyaline.

## A. Asci typically 4-8-spored

## 1. Parasitic

a. Hymenium deforming the host; asci arising from separate hyphae, typically 8-spored; spores globoid

*Exascus* 8:816; 37

b. Hymenium not deforming the host, folicole; asci arising from a hyphal layer, 4-spored; spores cylindrical

*Ascosorus*

2. Saprophytic; asci 8-spored, arising from a hyphal layer; spores elliptic

*Ascocorticium* 10:71; 37

## B. Asci many-spored

1. Asci more or less globose

*Taphridium* 18:203

2. Asci clavate to cylindrical

*Taphrina* 8:812; 37

## Order 14. TUBERALES

Ascoma typically more or less globose, with a differentiated peridium that crumbles or breaks away irregularly, occasionally stalked, fleshy, waxy, leathery, carbonous or corneous; ascogenous tissue or gleba with hollows, locules or veins, or solid and then becoming powdery; asci mostly saccate to oblong, irregularly disposed, 1-many-spored; spores usually hyaline, simple, often sculptured, sometimes mixed with capillitium when powdery; rarely parasitic, usually saprophytic and subterranean.

This is probably not a natural order, though the several families appear to be more nearly related to each other than to the *Gymnasciales*, where Fischer placed the first two (*Nat. Pflanzenfl.* 1:1:309, 1897). The group is regarded as diphyletic, such simple forms as *Genea* in the *Tuberaceae* being derived from cup-fungi like *Sphaerosoma*, while the *Onygenaceae* seem to be the connecting link between the sclerotoid *Gymnascaceae* and the *Elaphomycetaceae*.

## Key to Families

A. Ascoma not hypogean, opening more or less regularly; gleba typically with capillitium

*Onygenaceae* p. 144

B. Ascoma hypogean, not opening spontaneously

1. Gleba powdery, usually with capillitium

*Elaphomycetaceae* p. 145

2. Gleba firm, loculate, lacunose or veined, without capillitium

*Tuberaceae* p. 145

## Family 60. ONYGENACEAE

8:861, 10:80, 11:440, 16:807, 22:589, 24:1145; Fischer 309, 310

Ascoma globoid or ovoid, sessile to stipitate, membranous to waxy, with a distinct peridium of one or more layers; gleba waxy or corneous, then becoming powdery, usually with a capillitium; asci more or less saccate, mostly 8-spored and evanescent; spores simple, hyaline or subhyaline.

A. Ascoma stipitate as a rule; capillitium not vertical

1. Stalk simple; ascoma glabrous; gleba uniform; epizoic

*Onygena* 8:861, F 309; 6

2. Stalk branched above; ascoma floccose at first; gleba plurilocular; humicole

*Dendrosphaera* 22:589

- B. Ascoma sessile, the entire top opening and exposing the columnar mass of vertical capillitium and spores

*Trichocoma* F 310; 6

**Family 61. ELAPHOMYCETACEAE**

8:863, 10:80, 11:441, 22:589; Fischer 311

Ascoma hypogean, tuberiform, woody, crustose or corneous, not spontaneously dehiscent, peridium well developed; gleba loculate or veined, at last powdery; asci globoid to ovoid, 1-8-spored; spores simple, typically dark and with a several-layered wall.

- A. Gleba with sterile veins; asci normal; spores typically opaque; spore-wall thick, of several layers
- B. Gleba without sterile veins; spores light-colored, wall not thick and layered

*Elaphomyces* 8:863, F 311; 38

*Mesophellia* 7:56

**Family 62. TUBERACEAE**

8:872, 10:80, 11:442, 14:826, 16:808, 18:205, 22:590, 24:1147; Fischer 278

Ascoma hypogean, tuberiform, very rarely epigean, fleshy or waxy to indurated, not opening spontaneously; gleba typically lacunose or veined, never becoming powdery, without capillitium; asci globose to cylindrical, 1-8-spored; spores 1-celled, hyaline or dark, often beautifully sculptured.

**Hyalosporae**

Spores 1-celled, hyaline, globose to elliptic

- A. Gleba with one or more cavities, but not veined
1. Asci cylindrical or elongate
- a. Spores verrucose, spinose or reticulate
- (1) Ascoma broadly stipitate; canals or chambers closed
- (2) Ascoma not stipitate
- (a) Gleba with one or more chambers opening to the outside
- x. Spores globose
- y. Spores ovoid to elliptic
- (b) Gleba without canals opening to the outside
- b. Spores smooth
- (1) Ascoma with a single large closed cavity
- (2) Ascoma with winding canals or irregular chambers
- (a) Canals reaching the surface
- x. Ascoma with a definite cavity into which the canals open
- y. Ascoma without central cavity; gleba cerebro-convolute
- (b) Canals not reaching the surface; ascoma lanate
2. Asci saccate, globoid to oblong
- a. Spores verrucose, spinose or reticulate, globose

*Napomyces*

*Pseudogenea* 16:808

*Genea* 8:873; 38

*Hydnotryopsis* 24:1150

*Hydnocystis* 8:876; 38

*Barssia*

*Pseudohydnotrya* 16:608; 38

*Geopora* 8:877

- (1) Asci 2-4-spored; spores with recurved spines  
 (2) Asci 8-spored  
 b. Spores smooth, ellipsoid  
 (1) Ascoma hypogean, large; gleba with irregular canals  
 (a) Canals reaching the surface  
 (b) Canals not reaching the surface  
 (2) Ascoma epigean, on fungi; gleba with radiate locules  
 B. Gleba solid, typically with veins, sometimes locules also  
 1. Spores reticulate or alveolate; asci 2-4-spored  
 a. Gleba with distinct veins  
 b. Gleba marbled with brown spots  
 2. Spores smooth; asci 2-8-spored  
 a. Spores globose; asci cylindrical  
 b. Spores ovoid to ellipsoid; asci globoid to clavate  
 (1) Ascoma villous; gleba not veined  
 (2) Ascoma not villous; gleba veined  
 (a) Ascoma narrowed to the basal mycelium, whitish, smooth; asci 8-spored, with a broad stalk  
 (b) Ascoma not narrowed or with basal mycelium, dark, verrucose; asci 4-8-spored, not stalked
- Terfeziopsis 16:916  
 Hydnobolites 8: 879  
 Pseudobalsamia 22:591  
 Balsamia 8:877; 38  
 Eoterfezia 18:205  
 Delastria 8:904; 38  
 Piersonia 16:812  
 Stephensia 8:880; 38  
 Phaeangium 11:442  
 Tirmania 11:444  
 Picoa 8:899

#### Phaeosporae

Spores 1-celled, dark, globose to elliptic

- A. Gleba with canals or chambers, not veined  
 1. Spores verrucose, globose; asci ovoid to cylindrical  
 2. Spores smooth, ovoid  
 B. Gleba more or less solid, veined  
 1. Veins of two colors  
 a. Some veins white; asci globoid to ellipsoid, mostly 1-4-spored, arranged irregularly  
 b. No veins white; asci clavate to cylindrical, 8-spored, arranged more or less regularly  
 2. Veins of one color  
 a. Asci elongate, with paraphyses, in palisade-like meandering veins  
 b. Asci typically globose to oblong, without paraphyses, arranged irregularly in masses separated by veins
- Hydnotrya 8:879; 38  
 Genabea 8:878  
 Tuber 8:882; 38  
 Pachyphloeus 8:881  
 Choeromyces 8:900  
 Terfezia 8:902; 38

# PROMYCETES

## Order 15. PUCCINIALES

Parasites; apothecia reduced to a mass of asci with the ascus-wall fused with the spore-wall, i. e., teliospores with one or more cells; conidia normally present, produced in aecia (aecidia), uredia, or pycnia (spermagonia), all of which are frequently developed; the telia and the conidia forms may occur upon the same host or upon different hosts, any two or more may be associated, or any stage except the pycnia may exist alone; the aecia normally possess a peridium, uredia and telia only rarely, though paraphyses not infrequently occur; teliospores typically with 1 or more germination pores in each cell, giving rise to a promycelium with sporidioles; promycelium exserted and filamentous, merely proliferated, or entirely internal.

The conidial stages of rusts lend strong support to the ecological view that the telium is a reduced apothecium, probably to be derived from that of the **Agyriales**. Chiefly as the result of an assured water-supply, the apothecium has become reduced to a mass of asci and spores, in which the fusion of the two walls has provided the necessary protection at maturity. The intense parasitism of the group has rendered possible a new and very active evolution that has dealt especially with the number and association of the four spore-forms (cf. Arthur 1906).

Two families are recognized in accordance with the treatment of Dietel (*Nat. Pflanzenf.* 6:35 1928), but there is no clear dividing line between them. The **Pucciniaceae** are regarded as ancestral and the **Melampsoraceae** as derived from them by more or less reduction.

### Key to Families

- A. Teliospores typically single and stipitate, sometimes united in a gelatinous mass or a definite body, or more or less fused in series Pucciniaceae p. 147
- B. Teliospores sessile, combined in flat crusts, pulvinate masses, or columnar forms, occasionally arising within the epidermal cells or in the mesophyll Melampsoraceae p. 153

### Family 63. PUCCINIACEAE

Dietel 48; 7:528

Teliospores typically stipitate, rarely sessile, seriate and somewhat united laterally, 1-x-celled, promycelium exserted, proliferate, or internal; aecia mostly with a peridium, but this occasionally rudimentary or lacking, or replaced by paraphyses; uredia rarely with a peridium, sometimes with paraphyses, urediospores separate, not catenate.

When missing spore-forms are not indicated in the key, all four stages are found. The geographical distribution and host-plants are likewise given for such genera as are more or less restricted in either respect.

## Amerosporae

Teliospores 1-celled, colored or hyaline, sometimes lacking

## A. Telia present

1. Spores or sporogenous hyphae exerted through the stomata
  - a. Teliospores exerted in loose twisted threads; I—; Tropics / Skierkia 16:271, D 53
  - b. Sporogenous hyphae exerted, singly or in fascicles
    - (1) Promycelium typical, i. e., external, filiform and sterigmate
      - (a) Sporogenous hyphae single; 0 I II—; Rubus, Java Gerwasia 21:597, D 51
      - (b) Sporogenous hyphae fascicled; 0 I—; Rubiaceae esp., Tropics Hemileia 7:585, D 52
    - (2) Promycelium short, stout, half-exserted at spore-base; sporidioles sessile
      - (a) Promycelium 2-celled; II—; Olea, East Indies Cystopsora 21:607, D 52
      - (b) Promycelium 4-celled; Phillyrea, Mediterranean Zaghouania 17:268, D 53
2. Spores or sporogenous hyphae not exerted through the stomata
  - a. Teliospores sessile, hyaline, not seriate
    - (1) Aecia with peridium
      - (a) Promycelium typical, arising from spore-apex
        - x. Teliospores in a single layer; I—; Nyssa, N. A. Aplopsora D 56
        - y. Teliospores in an x-layered mass; Urticaceae esp., Trop-Subtrop. Cerotelium 21:606, D 56
      - (b) Promycelium internal; heteroecious Ochropsora 21:604, D 56
    - (2) Aecia without peridium
      - (a) Telia and uredia enclosed by brown curved cylindric paraphyses; Trop. Am. Olivea 23:663, D 54
      - (b) Paraphyses lacking or rudimentary
        - x. Teliospores in fascicles arising from a basal cell; 0 I II—; Pithecolobium, Paraguay Chaconia 14:290, D 54
        - y. Teliospores not in fascicles from a basal cell
          - (x) Promycelium apical; II—; S. Hem. Chrysocelis 23:664, D 55
          - (y) Promycelium internal; 0 I II—; Java Goplana 16:318, D 55
  - b. Teliospores sessile, seriate usually colored, often more or less united laterally; pycnia subepidermal
    - (1) Telia with a peridium; 0 I II—; Sida, Argentina Dietelia 14:291, D 96
    - (2) Telia without peridium
      - (a) Teliospores imbedded in a gelatinous mass; 0 I II—; Capparis, India Masseella 14:292, D 93



- (b) Teliospores not in a gelatinous mass
- x. *Telia* pulvinate, erumpent; chains of spores short; I II—; *Senecio*, *Eupatorium*, Calif-Guatem. Baeodromus 21:371, D 93
  - y. *Telia* columnar to filiform, superficial
    - (x) *Telia* short-cylindric, falling apart in 1-layered disks; I II—; *Cordia*, C-S Am. Alveolaria 11:212, D 94
    - (y) *Telia* elongate to filiform, not falling apart in disks
      - m. Promycelium typical, exserted; I II— Cionothrix D 94
      - n. Promycelium internal; I II—; *Tournefortia*, Ecuador Trichopsora 11:206, D 94
- c. Teliospores stipitate
- (1) Pycnia typically subcuticular
- (a) Teliospores single, without a cyst
    - x. Teliospores hyaline
      - (x) Uredospores with median pores; 0 I—; *Mimoseae* Maravalia D 66
      - (y) Uredospores without pores; I—; *Rubus* Spirechina D 70
    - y. Teliospores dark
      - (x) Teliospores with pores
        - m. Teliospores with 2 pores; wall of three layers; I—; *Crotalaria*, Guatemala Haplopyxis 23:829, D 65
        - n. Teliospores with 3-x pores
          - (m) Uredia present; I— Pileolaria 7:552, D 67
          - (n) Uredia lacking; 0 I II—; *Rosa*, N. A. Ameris D 58
      - (y) Teliospores without pores; 0 I—; *Alchimilla*, Eur., Java Trachyspora D 57
  - (b) Teliospores united in chains or pairs, or with a cyst
    - x. Teliospores in chains resembling x-celled spores; I—; *Rosa*, *Rubus*, Am., Japan Kuehneola 23:788, D 60
    - y. Teliospores in pairs without cysts
      - (x) Each spore with a basal cell; 0 I—; *Erythrina*, C. Am. Dichirinia D 67
      - (y) Basal cell lacking; 0 I II—; *Mimosa*, Cuba Diabole D 67
    - z. Teliospores single or paired, with a cyst, or in 3's without a cyst; *Mimosa*, Australia Uromycladium 21:593, D 67
- (2) Pycnia subepidermal
- (a) Teliospores hyaline; aecia when present without peridium or the latter very evanescent
    - x. *Telia* resembling uredia; 0 I II—; *Hippocratea*, Porto Rico Botryorhiza D 80
    - y. *Telia* normal

- (x) Promycelium escaping through a small apical pore; I—; Trop. Am. Argomycetella D 77
- (y) Promycelium formed by proliferation of spore-apex; 0 I—; Japan, India Blastospora 21:596, D 78
- (z) Promycelium internal; I II—; Mikania, Costa Rica Chrysella D 78
- (b) Teliospores yellow to dark; aecia when present with persistent, sometimes rudimentary peridium
- x. Aecia present; wall of teliospore swelling little or not at all
- (x) Teliospores applanate, radially ribbed around a central pit; stalk strongly inflated; 0 II—; Ipomoea, Cape Colony Trochodium 23:662, D 80
- (y) Teliospores not applanate and ribbed, or stalk strongly inflated Uromyces 7:531, D 80; 39
- y. Aecia lacking; wall of teliospore swelling strongly in water
- (x) Exospore warted; wall swelling chiefly at apex; I II—; Sapindaceae esp. Ctenoderma 23:662, D 80
- (y) Exospore ribbed; wall swelling uniformly; 0 I—; Zygophyllum, Cape Colony Dichlamys 23:662, D 80
- B. Telia absent**
1. Spores in aecia
- a. Aecia with cupulate peridium
- (1) Aeciospores germinating to form a promycelium Endophyllum 7:767, D 92
- (2) Aeciospores not forming a promycelium Acidium 7:774, D 97
- b. Aecia not cupulate
- (1) Aecia with vesiculose peridium opening irregularly; Pinaceae, Ephedra Peridermium 7:835, D 96
- (2) Aecia with rudimentary peridium; Mikania, Trop. Am. Endophylloides, D 93
2. Spores in uredia
- a. Spores catenate (i. e., in aecia without peridium)
- (1) Spores germinating to form a promycelium; Rubus, N. A. Kunkelia 23:827, D 59
- (2) Spores not forming a promycelium Caecoma 7:863, D 97
- b. Spores not catenate
- (1) Uredia exserted, margined by brown incurved pseudoparaphyses; Lindsaea, Brazil Calidion 23:950, D 54
- (2) Uredia merely erumpent as a rule, without pseudoparaphyses Uredo 7:838, D 98

#### Didymosporae

Teliospores 2-celled, colored or hyaline

- A. Sporogenous hyphae exserted through the stomata; 0 I—; Ferns, S. A. Desmella 23:830, D 51

- B. Sporogenous hyphae not exerted through the stomata
1. Teliospores stipitate
    - a. Teliospores divided lengthwise
      - (1) Teliospores hyaline or nearly so, with apical pore; 0 I—; Tropic Am. *Sphenospora*, D 68
      - (2) Teliospores brown, with 2 lateral pores; 0 I—; Tropics, Subtropics *Diorchidium* 7:736, D 68
    - b. Teliospores divided crosswise
      - (1) Teliospores with appendages on stalk; uredia with cylindrical pseudoparaphyses *Prospodium* 21:662, D 65
      - (2) Teliospores without appendages
        - (a) Uredia with pseudoparaphyses
          - x. Pseudoparaphyses capitate; teliospores with indistinct pores; Ranunculaceae, *Prunus* *Tranzschelia*, D 57
          - y. Pseudoparaphyses cylindrical; teliospores with 2 pores in each cell, the wall 3-layered *Uropyxis* 7:735, D 65; 39
        - (b) Uredia without pseudoparaphyses
          - x. Telia regularly on Cupressaceae, oblong to corniculate, united in gelatinous masses; teliospores sometimes x-celled *Gymnosporangium* 7:737, D 75; 39
          - y. Telia not on Cupressaceae, not united in gelatinous masses
            - (x) Telia with a definite peridium
            - m. Telia alone present, sunken in gall-like outgrowths *Xenosteles* 23:830, D 91
            - n. All stages present; teliospores in both uredia and telia; *Anaphalis*, Japan *Miyagia*, D 91
          - (y) Telia without definite peridium
          - m. Uredia present
            - (m) Teliospores hyaline or nearly so; pycnia and aecia lacking; *Bambusa*, Japan *Stereostromum*, D 66
            - (n) Teliospores colored; pycnia and aecia present *Puccinia* 7:600, D 84; 39
        - n. Uredia lacking
          - (m) Aecia present, without peridium; teliospores with one pore in each cell; *Rubus*, *Alchimilla* *Gymnoconia* 14:369, D 59
          - (n) Aecia lacking
            - r. Teliospores colored, with 3-layered wall, 4-8 pores in each cell and typical promycelium; *Aegiphila*, *Adesmia* S. A. *Cleptomycetes* 23:830, D 65
            - s. Teliospores hyaline, pores lacking, promycelium not typical
            - (r) Promycelium proliferating from the end of each cell; Tropic Am. *Chrysocyclus*, D 79
            - (s) Promycelium internal *Chrysospora* 11:206, D 79

2. Teliospores sessile, seriate, often laterally united
- a. Telia with a peridium; pores lacking; I II— **Puccinosira 11:205, D 96; 39**
  - b. Telia without a peridium
    - (1) Teliospores all 2-celled
      - (a) Telia hemispheric to globoid, attached only at the middle, gelatinous; 0 I II—; Amelanchier, Eriobotrya, China, Japan **Coleopuccinia 9:313, D 77**
      - (b) Telia columnar to filiform, not gelatinous
        - x. Telia columnar, brown; I II—; Brazil **Didymopsora 16:315, D 94**
        - y. Telia filiform, black; I II—; Berberis, India **Gambleola 16:314, D 94**
    - (2) Teliospores 1- and 2-celled; telia pulvinate; Astilbe, Asia **Pucciniostele 16:321, D 94**

### Phragmosporae

Teliospores 2-x-septate transversely, typically colored

- A. Wall of teliospore 3-layered, the middle layer swelling in water; aecia, uredia and telia with a border of paraphyses; Benthamantha, Coursetia, Ariz-Ecuador **Phragmopyxis 14:361, D 65**
- B. Wall of teliospore not 3-layered; telia at least without paraphyses
  1. Aecia present, with well-developed peridium; telia gelatinous **Gymnosporangium 7:737, D 75**
  2. Aecia present, without peridium; telia not gelatinous
    - a. Aecia with pseudoparaphyses; teliospores stipitate **Phragmidium 7:742, D 62; 39**
    - b. Aecia without pseudoparaphyses; teliospores sessile; II—; Sanguisorba, N. Hem. **Xenodochus 7:750, D 63**
  3. Aecia lacking; primary and secondary uredia present; Potentillae, N. Hem. **Frommea 23:826, D 61; 39**

### Dictyosporae

Teliospores more or less radially septate or muriform

- A. Cells of teliospore 3, forming a triangle
  1. Each cell with a single pore **Triphragmium 7:768, D 64; 40**
  2. Each cell with 2-x pores
    - a. Teliospores chestnut-brown, warted; 0 II—; Ranales, Eurasia **Triphragmiopsis, D 69**
    - b. Teliospores opaque black-brown, spinose or appendaged, 0 I— **Nyssopsora, D 69**
- B. Cells of teliospore more than 3, forming a head without cysts
  1. Stalk of teliospore simple
    - a. Teliospores smooth, septa vertical; 0 I—; Fabaceae, Brazil **Anthomyces 16:325, D 70**
    - b. Teliospores spinose, septa irregular; 0 I—; Fabaceae esp., Tropics **Sphaerophragmium 11:209, D 70**

2. Stalk composed of several hyphae; teliospores smooth, septa vertical, cells in two layers; 0 I II—; Canarium, Philippines **Anthomycetella 23:807, D 70**
- C. Cells of teliospore forming a head with cysts, 3-x in number
1. Heads 3-celled; stalk simple; I II—; Fabaceae, Costa Rica **Cystomyces, D 70**
2. Heads x-celled
- a. Heads with a compound stalk **Ravenelia 7:770, D 72; 40**
- b. Heads sessile; 0 I—; Securinega, China, Japan **Nothoravenelia 21:745, D 73**

### Family 64. MELAMPSORACEAE

Dietel 35; 7:586

Teliospores sessile, firmly united into 1-x-layered crusts, pulvinate masses or columnar bodies, 1-celled, or x-celled and in this case often developed in the epidermal cells or in the mesophyll, promycelium exserted or internal; aecia with or without peridia; uredia often with a peridium or with pseudoparaphyses, the spores single or in short chains.

The limits of several genera are not accurately drawn with respect to the spore character, and these are included in the section **Phragmosporae** in spite of the fact that the spores of a few species are 2-celled or even 1-celled.

#### Amerosporae

Teliospores 1-celled, colored or hyaline

- A. Aecia with peridium, or lacking
1. Uredospores typically in short chains; uredia without peridium
- a. Telia pulvinate; teliospores separate in cylindrical sometimes ramose chains; promycelium exserted **Chrysomyxa 7:759, D 44; 39**
- b. Telia flat; teliospores laterally united into a waxy layer; promycelium internal
- (1) Teliospores cylindrical or sometimes clavoid
- (a) Teliospores in a single layer; Angiosperms **Coleosporium 7:751, D 45**
- (b) Teliospores in short rows; I II—; Pinus **Gallowaya, D 46**
- (2) Teliospores ellipsoid, later elongated; 0 I—; Fagus, Chile **Micronegeria, D 46**
2. Uredospores typically single, not in chains; uredia often with peridium or pseudoparaphyses
- a. Teliospores united in a 1-layered crust or single in the mesophyll
- (1) Teliospores in the epidermal cells; N. Hem. **Melampsorella 7:596, D 40**
- (2) Teliospores beneath the epidermis
- (a) Uredia with peridium; Betulaceae, N. Hem. **Melampsoridium 21:605, D 41**
- (b) Uredia without peridium; 0 I—; Hypericum, Eur., Afr. **Mesopsora, D 41**

- b. Teliospores seriate; telia lentiform to columnar
- (1) Teliospores in x-layered subepidermal crusts; 0 I—; Asia Phacopsora 14:289, D 42
- (2) Teliospores in exserted columns, often corneous
- (a) Uredia with a peridium; chiefly N. Hem. Cronartium 7:597, D 42; 39
- (b) Uredia with pseudoparaphyses; 0 I—; Malaysia Crossopsora 23:854, D 43
- B. Aecia without peridium**
1. Teliospores hyaline or nearly so; II—; India, Afr. Chnoopsora 21:600, D 47
2. Teliospores more or less intensely brown; N. Hem. Melampsora 7:586, D 47; 39
- Phragmosporae**
- Teliospores typically x-celled, rarely 2- or 1-celled, hyaline or colored
- A. Telia on ferns**
1. Teliospores scattered irregularly in the mesophyll, rarely in a subepidermal crust Uredinopsis 17:269, D 36
2. Teliospores not in the mesophyll, but in the epidermis
- a. Uredospores of two kinds, with pores; 0 I—; N. Hem. Hyalopsora 17:268, D 37
- b. Uredospores of one kind, without pores Milesia 7:768, D 38
- B. Telia not on ferns**
1. Teliospores in the epidermal cells; 0 II—; Vaccinium, N. Hem. Calyptospora 7:766, D 39; 40
2. Teliospores beneath the epidermis; chiefly N. Hem. Pucciniastrum 7:762, D 40

## Order 16. USTILAGINALES

Parasites chiefly in the interior of plant tissues and especially in fruits and flowers, mycelium usually inconspicuous until fruiting occurs; asci represented by erect parallel fertile hyphae in a few genera, but for the most part no longer recognizable in the hyphal knots in which the spores are produced; sporogenous hyphae disappearing at maturity to leave a dense mass of spores, often in a gall-like deformation of the host-organ; conidia often present; spores germinating to produce a promycelium bearing sporidioles, or sometimes developing into a mycelial thread, simple, variously colored or ornamented.

### Key to Families

- A.** Promycelium septate transversely, bearing sporidioles at the septa and apex Ustilaginaceae p. 154
- B.** Promycelium simple, bearing a crown of whorled conidia Tilletiaceae p. 155

### Family 65. USTILAGINACEAE

Dietel 6; 7:449

Spores typically arising from the complete division of the mycelium to form powdery masses, single or united in balls, but rarely agglutinate; promycelium

septate transversely, the sporidioles arising at the septa and usually the apex also, often increasing further by proliferation; mycelium rarely produced directly from the promycelium.

- A. Spores single, not united in balls**
1. Sori traversed by many sterile bundles of hyphae Farysia 23:631, D 13
  2. Sori without sterile hyphal bands
    - a. Spores powdery
      - (1) Sori with a more or less permanent peridium Sphacelotheca 7:499, D 11; 40
      - (2) Sori without a peridium Ustilago 7:741, D 7; 40
    - b. Spores agglutinate into a carbonous mass
      - (1) Sori produced in chambers within the host-plant; Polygonum Melanopsichium 17:484, D 11
      - (2) Sori on the surface of the host-plant, at first with a thin peridium Cintractia 7:480, D 12
- B. Spores united by pairs or in balls**
1. Spores united by pairs
    - a. Sori with a double peridium; Cissus, Tropics Mycosyrinx 17:484, D 14
    - b. Sori without peridium; Carex, Elyna, Eur., Am. Schizonella 7:500, D 14
  2. Spores united in larger numbers in balls
    - a. Spores loosely united, readily separable by pressure Sorosporium 7:511, D 14; 40
    - b. Spores firmly united
      - (1) Spore-balls fertile throughout
        - (a) Promycelium simple or dichotomous with a single apical sporidiole Thecaphora 7:507, D 14
        - (b) Promycelium simple, sporidioles lateral and terminal; chiefly Poaceae Tolyposporium 7:501, D 15; 40
        - (c) Promycelium ramose, sporidioles lateral; Andropogon, N. A. Tolyposporella 14:427, D 15
      - (2) Spore-balls with fertile surface, sterile interior; Cyperaceae, Am. Testicularia 7:150, D 15

#### Family 66. TILLETIACEAE

Dietel 16; 7:481

Spores massed in superficial or erumpent sori or permanently included in the tissues of the host-plant, single or united in balls and then often associated with sterile empty spores; promycelium simple, with apical whorls of sporidioles; spores colored or hyaline.

- A. Spores single**
1. Spores with simple membrane
    - a. Sporidioles not more than 12 in each whorl
      - (1) Sori powdery, largely in fruits; chiefly Poaceae Tilletia 7:481, D 16; 40
      - (2) Sori not powdery, in leaves and stems
        - (a) Spores bright-colored to brownish Entyloma 7:487, D 17; 40
        - (b) Spores dark brown Melanotaenium 7:496, D 18
      - (3) Sori in galls on roots; mostly Juncaceae and Cyperaceae Entorrhiza 7:497, D 19

- b. Sporidioles very many in a terminal head;  
Poaceae, N. Hem. *Neovossia* 16:375, D 19
2. Spores with double membrane, inner layer hyaline, outer dark-brown; Rhynchospora, Brazil *Perichlamys* 14:430, D 19
- B.** Spores united in groups of several to many
1. Spore-balls with very inconspicuous sterile spores on the surface *Tuburcinia* 7:507, D 19
2. Spore-balls with distinct sterile spores on the surface or inside
- a. Fertile spores few in each ball
- (1) Sori with a peridium; Solanum, S. A. *Polysaccopsis* 16:381, D 22; 40  
*Urocystis* 7:515, D 20
- (2) Sori without peridium
- b. Fertile spores many in each ball; on hydrophytes
- (1) Spore-balls with a single outer layer of fertile spores
- (a) Interior of ball filled with a network of hyphae; Hydrocharis, Spirodela, N. Hem. *Tracya* 11:236, D 22
- (b) Interior of ball filled with sterile parenchymic cells; Potamogeton, Sagittaria *Doassansiopsis* 23:630, D 23
- (2) Spore-balls with fertile spores in the interior
- (a) Spore-balls with a surface layer of sterile spores *Doassansia* 7:502, D 24; 40
- (b) Spore-balls without sterile surface layer; N. A. *Burrillia* 11:236, D 24

#### Addendum. GRAPHIOLACEAE

Sori erumpent, single or several enclosed in a compact black peridium; sporogenous hyphae arising from the base, erect, dense, typically producing lateral whorls of four initials which divide transversely to form spores; parasites on leaves of palms.

This family is of very uncertain relationship and has often been included in the Deuteromycetes.

- A.** Sori single, typically with inner peridium; sporogenous hyphae, separated by hyphal bundles, falling apart after the production of spore-initials; spores globose or oblong *Graphiola* 7:522
- B.** Sori several in a stroma, inner peridium lacking; sporogenous hyphae not separated by hyphal bundles, and not falling apart but shrunken and persistent; spores mostly triangular, plate-like *Stylina*



# BASIDIOMYCETES

## Order 17. TREMELLALES

Killermann 103

Pileus typically gelatinous, horny when dry, reviving when wet, sometimes waxy, membranous or coriaceous, but then with divided basidia; hymenium regularly amphigenous or superior, smooth or somewhat convolute, occasionally enclosed in a more or less definite peridium; basidia globose to terete, transversely or vertically divided, or in one family merely terete-clavate and furcate, 1-4-sterigmate; spores mostly simple occasionally septate; conidia often present with the spores.

This order is related on the one hand to the **Uredinales** and **Ustilaginales**, and on the other to the **Agaricales**, the septate or furcate basidia distinguishing it from the latter especially. The form of the pileus often suggests that of several other families, **Clavariaceae**, **Hydnaceae**, etc.; in the case of **Dacryomitra** it closely resembles a tiny **Morchella** or **Verpa**.

### Key to Families

- A. Basidia septate
  - 1. Basidia transversely septate, elongate-cylindric, sterigmata lateral Auriculariaceae p. 157
  - 2. Basidia vertically or cruciately 2-4-divided, sterigmata terminal, usually subulate Tremellaceae p. 158
- B. Basidia not septate, cylindric-clavate, with 2 blunt terminal sterigmata Dacryomycetaceae p. 159

### Family 67. AURICULARIACEAE

6:762; K 105

Characters of the order, but the basidia transversely septate, elongate-cylindric and the sterigmata terminal; hymenium enclosed in a more or less definite peridium in a few genera perhaps better referred to the **Gasteromycetes**.

- A. Hymenium exposed, without peridium
  - 1. Pileus or at least the hymenium gelatinous
    - a. Entire pileus gelatinous
      - (1) Pileus crustose, effuse or convex
        - (a) Basidia with piriform basal cell, but no sterile threads inmixed Jola 14:245, K 106
        - (b) Basidia with sterile threads inmixed, but no piriform basal cell Platygleoa 6:771, K 106; 41
      - (2) Pileus large, firm, free, more or less ear-shaped Hirneola 6:764, K 108; 41
    - b. Hymenium alone gelatinous, lower layer coriaceous; pileus large, free, more or less ear-shaped Auricularia 6:762, K 108; 41
  - 2. Pileus not at all gelatinous, byssoid or coriaceous
    - a. Pileus byssoid
      - (1) Basal cell of basidia bearing a lateral saccate cell Saccoblastia 14:244; 41
      - (2) Basidia without lateral saccate cell Helicobasis 6:666, K 106

- b. Pileus coriaceous  
 (1) Basidia at first globose, then cylindrical **Septobasidium** 11:118, K 107  
 (2) Basidia clavate **Patouillardina** K 108
- B. Hymenium with more or less complete and definite peridium
1. Pileus from waxy to fleshy or gelatinous; spores hyaline **Pilacrella** 14:246, K 109
2. Pileus becoming powdery; spores dark **Pilacre** 4:579, K 109

### Family 68. TREMELLACEAE

6:780; K 111

Characters of the order, but the basidia vertically or cruciately 2-4-divided, sterigmata terminal, usually subulate; typically gelatinous or fleshy-waxy; an incomplete peridium present in one genus.

- A. Hymenium exposed, without peridium
1. Basidia seriate, obliquely septate; pileus globoid, gelatinous **Sirobasidium** 14:248, K 111
2. Basidia not seriate, cruciately divided by 3 vertical septa
- a. Pileus with spines
- (1) Pileus crustose **Protohydnum** 14:251, K 118
- (2) Pileus more or less irregularly cap-shaped, often with lateral stalk; spines inferior **Tremellodon** 6:479, K 119; 42
- b. Pileus without spines
- (1) Pileus byssoid **Stypella** 14:246, K 113
- (2) Pileus crustose, applanate or cupuloid, hymenium mostly smooth
- (a) Hymenium wrinkled or alveolate **Protomerulius** 11:142, K 117
- (b) Hymenium with setose papillae **Heterochaete** 14:247, K 113
- (c) Hymenium smooth
- x. Pileus more or less cupuloid
- (x) Pileus hairy; spores obovate **Gloeosoma** K 115
- (y) Pileus not hairy; spores cylindrical, often curved **Hirneolina** 17:208, K 114; 41
- y. Pileus applanate
- (x) Pileus fleshy-gelatinous, mostly lilac-red **Tulasnella** 14:234, K 114
- (y) Pileus more or less waxy
- m. Spores reniform; conidia ovoid **Sebacina** 6:540, K 113; 41
- n. Spores ovoid to oblong, curved; conidia hamate **Exidiopsis** 14:248, K 115
- (3) Pileus thick-gelatinous, folded or ascending, often convolute-funneliform
- (a) Pileus typically dark, often folded
- x. Pileus papillose; spores reniform **Exidia** 6:772, K 115; 41
- y. Pileus not papillose; spores cylindrical, curved **Craterocolla** 6:778, K 115
- (b) Pileus usually yellow to brown or red, convolute, foliose or funneliform
- x. Spores hyaline
- (x) Hymenium with gloeocystidia **Seismosarca** 9:260, K 117
- (y) Hymenium without gloeocystidia

- m. Pileus cerebroid or convolute-foliose Tremella 6:780, K 115; 41  
 n. Pileus funnellform; hymenium more  
 or less ridged Gyrocephalus 6:795, K 117  
 y. Spores dark; pileus of Tremella Phaeotremella 23:580, K 117
- B. Hymenium in a more or less complete stalked  
 peridium Hyaloria 14:252, K 119

### Family 69. DACRYOMYCETACEAE

6:796; K 119

Characters of the order, but the basidia not septate, cylindric-clavate, with 2 blunt terminal sterigmata; pileus typically gelatinous, golden-yellow.

- A. Pileus crustose, waxy; spores 2-celled Ceracea 6:805, K 120  
 B. Pileus pulvinate, gelatinous; spores x-celled Dacryomyces 6:796, K 120; 41  
 C. Pileus erect, cupulate or stalked
1. Pileus only partly covered with hymenium
- a. Pileus cupulate, fleshy; spores x-celled, very  
 large Femsjonia 6:779, K 122
- b. Pileus stalked
- (1) Pileus capitate, firm-fleshy; spores 2-celled Ditiola 6:813, K 120  
 (2) Pileus spatulate or cornucopiod, gelati-  
 nous; spores x-celled Guepinia 6:805, K 120; 41
2. Pileus covered with hymenium on all sides
- a. Pileus clavate or capitate, simple, gelatinous;  
 hymenium often ridged Dacryomitra 6:811, K 122; 41  
 b. Pileus subulate or ramose, Clavaria-like, car-  
 tilaginous Calocera 6:732, K 123; 42

## Order 18. AGARICALES

Pileus rarely gelatinous, sometimes waxy, membranous or woody, but chiefly leathery or fleshy, crustose or resupinate to dimidiate or cap-like, rarely cupulate or byssoid, typically stalked in the fleshy forms; hymenium superior, amphigenous or regularly inferior in dimidiate and pileate species, ranging from smooth, warted or convolute to teeth, tubes, or lamellae; basidia simple, more or less clavate, typically 4-sterigmate, often intermixed with cystidia; spores mostly simple, hyaline or colored.

This order has evidently been derived from the Tremellales, and it passes gradually into the Lycoperdales, from the most highly specialized family, Agaricaceae. The pileus and hymenium are often most variable, with the consequence that family and generic criteria are obscured.

### Key to Families

- A. Pileus byssoid or lacking Hypochnaceae p. 160  
 B. Pileus present, firm, crustose to cap-like
1. Hymenium smooth, or merely warted or  
 wrinkled
- a. Pileus resupinate, dimidiate, cupulate or fun-  
 nel-form, typically leathery or membra-  
 nous Thelephoraceae p. 160  
 b. Pileus typically clavate, filiform or coralloid,  
 and fleshy Clavariaceae p. 162

- |   |                            |
|---|----------------------------|
| 2. Hymenium modified into teeth, tubes or gills   |                            |
| a. Hymenium of teeth or tooth-like granules       | <b>Hydnaceae</b> p. 162    |
| b. Hymenium of tubes or pores                     | <b>Polyporaceae</b> p. 163 |
| c. Hymenium of gills or rarely of gill-like veins | <b>Agaricaceae</b> p. 164  |

The line of evolution is practically continuous from the **Thelephoraceae** through **Hydnaceae** and **Polyporaceae** to the **Agaricaceae**, while the **Clavariaceae** are probably a lateral offshoot of the first family. The **Hypochnaceae** may be regarded as primitive or reduced forms, but the predominance of parasitism indicates the latter, corresponding to **Exascaceae** among **Ascomycetes**.

### Family 70. HYPOCHNACEAE

Killermann 131-133

Pileus lacking or byssoid, rarely somewhat crustose, mostly parasitic and often forming galls; hymenium loose, of simple clavate basidia mostly with 2-6 sterigmata; spores typically simple, hyaline or colored, smooth or spiny.

- |   |                                     |
|---|-------------------------------------|
| A. Pileus present, byssoid, loose; saprogenous as a rule  |                                     |
| 1. Spores globose or subglobose, spinose or asperate, usually yellow; basidia 4- (2-6) sterigmate |                                     |
| a. Cystidia present   | <b>Tomentellina</b> K 134           |
| b. Cystidia lacking   | <b>Hypochnus</b> 6:653, K 133; 42   |
| 2. Spores cylindrical to bacillar, smooth; basidia 6-x-sterigmate                                 | <b>Aureobasis</b> 11:131, K 134     |
| B. Pileus reduced to a loose group of basidia; typically biogenous and usually folicole           |                                     |
| 1. Spores 1-celled  |                                     |
| a. Spores globose; basidia obpiriform, 2-sterigmate   | <b>Urobasidium</b> 11:131, K 131    |
| b. Spores oblong to fusoid  |                                     |
| (1) Basidia cylindrical, 2-sterigmate   | <b>Kordyana</b> 16:199, K 132       |
| (2) Basidia clavate, x- (mostly 6) sterigmate   | <b>Microstroma</b> 4:9, K 131; 53   |
| 2. Spores finally x-celled, mostly curved; basidia 4-sterigmate                                   |                                     |
| (1) Cystidia present, clavate, fascicled  | <b>Botryocanis</b>                  |
| (2) Cystidia lacking or not fascicled   | <b>Exobasidium</b> 6:664, K 131; 42 |

### Family 71. THELEPHORACEAE

6:513; K 135

Pileus resupinate to dimidiate, funnellform or cupuloid, leathery or membranous, more rarely waxy, fleshy, gelatinous or corky; hymenium superior, inferior or amphigenous, smooth or with flat tubercles or ridges; cystidia or papillae frequently present, highly variable; spores simple, hyaline or dark.

Generic distinctions are exceedingly difficult to draw in this family on the basis of form, texture and hymenial surface, and this difficulty has been aggravated by the attempt to base genera upon the form of the various outgrowths of the hymenium. The terminology employed for these has been indefinite and confused, and it is impossible to draw a clear line between papillae, spines, cystidia, gloeocystidia and paraphyses (dendrophyses, dichophyses, etc.).

- A. Parasitic on algae**
1. Algae *Chroococcus*
    - a. Algae in middle layer, medulla above and below  
*Cora* 6:685, Z 259
    - b. Algae in upper layer, medulla below only  
*Corella* Z 261
  2. Algae *Scytonema*  
*Dictyonema* 6:687, Z 261
- B. Not parasitic on algae**
1. Pileus resupinate, effuse, rarely cupuloid when mature
    - a. Pileus consisting of one layer
      - (1) Spores hyaline
        - (a) Basidia forming an even layer with the much branched paraphyses  
*Asterostromella* 21:381, K 142
        - (b) Hymenial layer with projecting papillae or cystidia
          - x. Papillae present, of fascicled hyphae
            - (x) Papillae feathery  
*Epithele* 21:381, K 140
            - (y) Papillae columnar, smooth or asperate  
*Bonia* 11:123, K 140
          - y. Cystidia present, stellate or simple
            - (x) Cystidia stellate  
*Asterostroma* 9:236, K 140
            - (y) Cystidia simple
              - m. Cystidia typically subulate  
*Peniophora* 6:640, K 138
              - n. Cystidia spinose or short-branched, often blunt  
*Aleurodiscus* K 142
          - (c) Cystidia lacking  
*Corticium* 6:603, K 136; 42
        - (2) Spores dark
          - (a) Cystidia present  
*Coniophorella* 17:183, K 141
          - (b) Cystidia lacking  
*Coniophora* 6:647, K 140; 42
      - b. Pileus consisting of several layers
        - (1) Cystidia present, hyaline or dark  
*Hymenochaete* 6:588, K 144
        - (2) Cystidia lacking  
*Stereum* 6:551, K 143; 42
    2. Pileus typically erect, funnelliform, cupulate, terete or clavate, often stipitate
      - a. Pileus leathery
        - (1) Pileus urceolate, small, hard; hymenium smooth  
*Hypolyssus* 6:521; K 148
        - (2) Pileus large, funnelliform, flabelliform or clavarioid
          - (a) Hymenium with ramose ribs; pileus funnelliform  
*Cladoderris* 6:547, K 148
          - (b) Hymenium smooth or roughened, not ribbed  
*Thelephora* 6:521, K 146; 42
      - b. Pileus firm-fleshy or fleshy-gelatinous
        - (1) Pileus clavate, margin involute; cystidia present  
*Skepperia* 6:603, K 148
        - (2) Pileus scutellate to funnelliform or clavate; cystidia lacking
          - (a) Pileus scutellate; hymenium smooth  
*Cytidia* 21:380, K 142
          - (b) Pileus funnelliform to clavate; hymenium ribbed  
*Craterellus* 6:514, K 148; 42
      - c. Pileus membranous, cupulate to cylindrical
        - (1) Pileus cupulate, single  
*Cyphella* 6:667, K 149
        - (2) Pileus cylindrical, cespitose  
*Solenia* 6:424, K 149; 42

## Family 72. CLAVARIACEAE

6:690; K 151

Pileus erect, simple or much branched, clavate or capitate to coralloid, rarely foliose, typically fleshy, sometimes leathery or waxy, rarely subgelatinous; hymenium smooth, not discrete, amphigenous; cystidia lacking; spores typically simple, hyaline, rarely brownish.

- A. Pileus with many crowded leaf-like branches; fleshy Sparassis 6:690, K 157; 42
- B. Pileus without leaf-like branches
  - 1. Pileus capitate, hollow, more or less globose, waxy Physalacria 6:759; K 151; 42
  - 2. Pileus not capitate and hollow, but filamentous, clavate or coralloid
    - a. Pileus typically fleshy, large and coralloid, sometimes filamentous or clavate Clavaria 6:692, K 152; 42
    - b. Pileus waxy, cartilaginous or leathery, small, simple or ramose
      - (1) Pileus tomentose, leathery, much branched Lachnocladium 6:738, K 156
      - (2) Pileus not tomentose, mostly simple
        - (a) Pileus simple, clavate to filamentous
          - x. Stipe short or none; basidia 2-sterigmate Pistillaria 6:752, K 152; 42
          - y. Stipe long-filiform, usually from a sclerotium; basidia 4-sterigmate Typhula 6:743, K 152
        - (b) Pileus ramose, cartilaginous Pterula 6:740, K 156

## Family 73. HYDNACEAE

6:429; K 158

Pileus resupinate, dimidiate or cap-like, occasionally coralloid, leathery, corky or fleshy; hymenium typically with teeth or warts, sometimes pore-like or lamelloid, occasionally wrinkled, exceptionally reduced to groups of teeth without a pileus; cystidia often present; spores simple, hyaline or dark.

- A. Hymenium consisting of crests or warts
  - 1. Hymenium of crests or ridges
    - a. Crests with edge incised; pileus membranous Lopharia 6:500, K 161; 43
    - b. Crests not incised; pileus fleshy-waxy Phlebia 6:497; K 160
  - 2. Hymenium with warts or granules
    - a. Warts semi-globose, smooth; cystidia lacking Grandinia 6:500, K 160
    - b. Warts penicillate, ciliate; cystidia present Odontia 6:506, K 159; 43
- B. Hymenium consisting of teeth, often poriform or lamelloid
  - 1. Teeth distinct
    - a. Hymenophore lacking; teeth subulate, recurved, cespitose Mucronella 6:512, K 159
    - b. Hymenophore present
      - (1) Cystidia present; pileus resupinate
        - (a) Cystidia simple; pileus corky Hydnochaete 14:211, K 162; 43
        - (b) Cystidia stellate; pileus floccose-membranous Asterodon 11:111, K 162
      - (2) Cystidia lacking
        - (a) Pileus crustose, waxy; teeth blunt, stout Radulum 6:493, K 161; 43

- (b) Pileus mostly cap-like and stipitate, sometimes coralloid, leathery to woody or fleshy; teeth usually long and subulate  
Hydnum 6:430, K 162; 43
2. Teeth forming pore- or lamella-like structures
- a. Hymenium porous-reticulate, crustose
- (1) Gloeocystidia present  
Gloeothele K 169
- (2) Gloeocystidia lacking  
Grammothele 6:505, K 169
- b. Hymenium with more or less lamella-like teeth; pileus cap-like to crustose
- (1) Teeth with spiny-serrate margins  
Echinodontium 16:176, K 168
- (2) Margins not spiny-serrate
- (a) Pileus leathery, mostly crustose to dimidiate  
Irpex 6:482, K 166
- (b) Pileus mostly fleshy, pileate and stipitate  
Sistotrema 6:480, K 168

## Family 74. POLYPORACEAE

6:1; K 169

Pileus resupinate, dimidiate or cap-like, rarely volvate or annulate, fleshy, leathery or woody, exceptionally waxy or gelatinous; hymenium concrete with the hymenophore or readily separable from it, consisting of pores arranged regularly or irregularly, sometimes lamelloid, very rarely rudimentary and reticulate; cystidia often present, multiform; spores typically 1-celled, hyaline or colored.

- A. Pileus tough-fleshy to leathery or woody, rarely gelatinous or waxy
1. Pileus waxy or gelatinous, at least the hymenium; pores mostly alveolate or reticulate
- a. Pileus waxy; hymenium with shallow net-like pores  
Merulius 6:411, K 171; 45
- b. Pileus gelatinous, at least the hymenium; pores alveolate
- (1) Entire pileus gelatinous  
Laschia 6:404, K 202
- (2) Hymenium alone gelatinous  
Gloeoporus 6:403, K 202
2. Pileus tough-fleshy to leathery, corky or woody, sometimes perennial; hymenium concrete with hymenophore; tubes grown together
- a. Hymenium covered by a volva-like membrane  
Cryptoporus 17:125, K 177; 43
- b. Hymenium not volvate
- (1) Pileus with tubes in layers, woody, perennial  
Fomes 6:150, K 188; 43
- (2) Tubes not stratified in layers
- (a) Pores rounded, mostly small and crowded
- x. Pileus tough-fleshy, thick, stipitate to dimidiate  
Polyporus 6:55, K 177; 43
- y. Pileus coriaceous or membranous, thin
- (x) Pileus resupinate
- m. Tubes wart-like, separate  
Poria 6:292, K 174
- n. Tubes not separate  
Porothelium 6:421, K 174
- (y) Pileus stipitate to dimidiate  
Polystictus 6:208, K 184
- z. Pileus suberose, typically resupinate to dimidiate; tubes unequally sunken  
Trametes 6:334, K 194; 43

- (b) Pores hexagonal, large; pileus leathery to corky, mostly dimidiate **Hexagonia 6:356, K 196**
- (c) Pores elongate, the tubes lamelloid, sometimes passing into distinct lamellae
- x. Hymenium resupinate; hymenium with fine forked parallel veins **Hymenogramme 5:652, K 200**
- y. Pileus dimidiate to cap-like and stipitate
- (x) Lamellae concentric **Cyclomyces 6:389, K 200; 45**
- (y) Lamellae not concentric
- m. Hymenium labyrinthine, the pores multiform
- (m) Pores with crowded cystidia **Elmerina 23:453, K 201**
- (n) Pores without cystidia **Daedalea 6:370, K 197; 43**
- n. Hymenium radiately lamelloid or lamellose
- (m) Lamellae mostly continuous and distinct; pileus typically dimidiate **Lenzites 5:637; K 199**
- (n) Lamellae forking regularly to form elongate rhomboidal pores; pileus mostly stipitate **Favolus 6:390, K 200**
- B. Pileus fleshy, typically putrescent, rarely tough**
1. Pileus fleshy and putrescent; hymenium separable from hymenophore; tubes concrete
- a. Pileus fleshy-membranous, small and delicate; spores hyaline, cylindrical **Filoboletus 16:142, K 209**
- b. Pileus fleshy, large; spores typically colored, globose to fusoid
- (1) Pileus and stipe beautifully squarrose-scaly; spores dark-brown, verrucose **Strobilomyces 6:49, K 209; 43**
- (2) Pileus and stipe not squarrose-scaly; spores smooth
- (a) Pores round or polygonal
- x. Hymenium separating readily from hymenophore **Boletus 6:2, K 205**
- y. Hymenium not separating readily; pores compound **Boletinus 6:51**
- (b) Pores tortuose, labyrinthine **Gyrodon 6:51, K 209**
- (c) Pores lamelloid **Phylloporus 21:255, K 210**
2. Pileus fleshy, becoming somewhat tough, spatulate; hymenium not separable; tubes discrete **Fistulina 6:54, K 203; 43**

#### Family 75. AGARICACEAE

5:8; K 210

Pileus typically cap-shaped and stipitate, occasionally excentric, lateral, dimidiate or inverted, fleshy to leathery, corky or woody, sometimes enclosed in a cap-veil that persists at the base of the stipe as a volva; hymenium of radiating lamellae or gills, rarely of ridges or veins, often protected by a gill-veil that usually remains on the stipe as a ring, regularly inferior; gills covered with basidia bearing typically 4 sterigmata and spores, sometimes with cystidia; spores typically 1-celled, hyaline or variously colored.



**Leucosporae**

5:8; K 247

Spores hyaline, white or only very dilutely colored even in spore-prints, green in a few species, globose to fusoid, smooth or rough.

- A. Edge of the gills split or revolute; pileus leathery; stipe none or lateral Schizophyllum 5:654, K 253; 44
- B. Edge of gills normal
  - 1. Pileus fleshy and putrescent, rarely reviving when wet
    - a. Edge of gills obtuse or gills fold-like
      - (1) Gills decurrent, dichotomous, somewhat waxy Cantharellus 5:482, K 248; 44
      - (2) Gills not decurrent
        - (a) Gills thick; pileus typically agaricole Nyctalis 5:499, K 252
        - (b) Gills thin, vein-like; pileus not agaricole Arrhenia 5:498, K 248
    - b. Edge of gills acute
      - (1) Trama of pileus more or less vesiculose; spores globose or globoid, usually spiny
        - (a) Gills with white or bright-colored milky sap Lactarius 5:423, K 260
        - (b) Gills without milky sap Russula 5:453, K 262
      - (2) Trama of pileus not vesiculose; spores typically smooth
        - (a) Gills more or less fleshy and separable into two layers
          - x. Stipe excentric or none; pileus sometimes inverted Pleurotus 5:339, K 266
          - y. Stipe central or nearly so
            - (x) Hymenophore discrete from the fleshy stipe
              - m. Stipe volvate
                - (m) Stipe annulate Amanita 5:8, K 280; 44
                - (n) Stipe not annulate Amanitopsis 5:20, K 283
              - n. Stipe not volvate
                - (m) Stipe annulate Lepiota 5:27, K 276; 44
                - (n) Stipe not annulate Schulzeria 5:72, K 278
            - (y) Hymenophore homogeneous and confluent with the fleshy or fibrous-elastic stipe
              - m. Stipe annulate, without a volva Armillaria 5:73, K 278
              - n. Stipe not annulate or volvate
                - (m) Gills sinuate or adnate, not decurrent Tricholoma 5:87, K 274; 44
                - (n) Gills typically decurrent Clitocybe 5:141, K 272
          - (z) Hymenophore confluent with the cartilaginous stipe but heterogeneous from it
            - m. Gills decurrent; cap umbilicate Omphalia 5:308, K 267
            - n. Gills not decurrent
              - (m) Cap very thin, diaphanous, ephemeral, but not diffluent; typically tropical Hiatala 5:305, K 271

- (n) Cap not diaphanous and ephemeral  
 r. Margin of the young cap turned in  
 s. Margin of the young cap straight  
 (b) Gills waxy rather than fleshy, splitting with difficulty
2. Pileus fleshy-leathery, leathery, corky or woody, persistent, reviving when wet
- a. Pileus fleshy-leathery or gelatinous-leathery
- (1) Gills wide, distinct
- (a) Stipe discrete from the hymenophore; gills not decurrent
- x. Pileus tough-fleshy or leathery  
 y. Pileus gelatinous-leathery
- (b) Stipe and hymenophore continuous; gills decurrent; stipe often lateral or lacking
- x. Edge of gills acute  
 (x) Edge typically serrate  
 (y) Edge entire  
 y. Edge of gills obtuse; gills dichotomous
- (2) Gills fold-like, edges canaliculate or crisp
- b. Pileus corky or woody
- (1) Gills tomentose  
 (2) Gills glabrous
- Collybia 5:200, K 271; 44  
 Mycena 5:251, K 268  
 Hygrophorus 5:387, K 250  
 Marasmius 5:503, K 256; 44  
 Heliomyces 5:569, K 259  
 Lentinus 5:571, K 254  
 Panus 5:614, K 253  
 Xerotus 5:630, K 256  
 Trogia 5:635, K 253; 44  
 Tilotus 5:652  
 Lenzites 5:637, K 199

## Rhodosporae

5:656; K 241

Spores rosy, salmon-colored or rosy-rust-colored in spore-prints, paler under the microscope.

- A. Stipe excentric or none; typically lignicole  
 B. Stipe central or nearly so
1. Hymenophore discrete from stipe
- a. Stipe volvate
- (1) Stipe annulate also  
 (2) Stipe not annulate
- b. Stipe not volvate
- (1) Stipe annulate  
 (2) Stipe not annulate
2. Hymenophore homogeneous and confluent with the stipe
- a. Gills decurrent
- (1) Stipe fleshy-fibrous  
 (2) Stipe cartilaginous
- b. Gills adnexed, sinuate or free
- (1) Stipe fleshy-fibrous; gills sinuate  
 (2) Stipe cartilaginous; gills not sinuate
- (a) Cap convex; margin at first inflexed  
 (b) Cap campanulate; margin straight from the first
- Claudopus 5:733, K 241; 45  
 Metraria 9:82, K 246  
 Volvaria 5:656, K 246  
 Annularia 5:663, K 246  
 Pluteus 5:665, K 244; 45  
 Clitopilus 5:698, K 243; 45  
 Eccilia 5:729, K 242  
 Entoloma 5:679, K 244; 45  
 Leptonia 5:706, K 242  
 Nolanea 5:716, K 242

**Ochrosporae**

5:735; K 216

Spores ochraceous to dark ferruginous

- A. Gills separating readily from hymenophore, decurrent; margin more or less persistently involute Paxillus 5:983, K 216
- B. Gills not separating readily from hymenophore
1. Gill-veil cobwebby, hanging curtain-like from the margin, often disappearing completely with age Cortinarius 5:889, K 222
2. Gill-veil not cobwebby Crepidotus 5:876, K 217; 45
- a. Stipe excentric or none; typically lignicole
- b. Stipe central or nearly so
- (1) Stipe volvate or annulate
- (a) Stipe volvate Locellina 5:761, K 216, 229
- (b) Stipe annulate Pholiota 5:736, K 227
- (2) Stipe not volvate or annulate
- (a) Pileus and gills very delicate, deliquescing Bolbitius 5:1073, K 220
- (b) Pileus and gills not deliquescing
- x. Stipe fleshy
- (x) Gills adnate or decurrent; typically lignicole Flammula 5:809, K 226; 45
- (y) Gills mostly sinuate; typically humicole
- m. Pileus fibrillose, silky or scaly Inocybe 5:672, K 220
- n. Pileus smooth, typically viscid Hebeloma 5:791, K 227
- y. Stipe cartilaginous
- (x) Gills decurrent Tubaria 5:872, K 218
- (y) Gills not decurrent
- m. Margin of pileus inflexed at first Naucoria 5:828, K 218; 45
- n. Margin of pileus straight from the first
- (m) Stipe discrete from hymenophore; gills free Pluteolus 5:859, K 218
- (n) Stipe homogeneous with hymenophore; gills adnate or adnexed Galera 5:860, K 217

**Melanosporae**

5:991; K 230

Spores purple to dark-purple or black, or the gills black

- A. Spores purple or dark-purple
1. Hymenophore discrete from stipe
- a. Stipe volvate
- (1) Stipe annulate also Chitoniella 14:149, K 241
- (2) Stipe not annulate Chitonia 5:992, K 241
- b. Stipe not volvate
- (1) Stipe annulate Agaricus 5:993, K 239; 45
- (2) Stipe not annulate Pilosace 5:1010, K 241
2. Hymenophore continuous with stipe
- a. Stipe annulate Stropharia 5:1012, K 237

- b. Stipe not annulate or only slightly so
- (1) Margin of pileus cortinate; stipe sometimes with incomplete or vanishing annulus *Hypholoma* 5:1027, K 237; 45
- (2) Margin of pileus not cortinate
- (a) Gills decurrent *Deconica* 5:1058, K 235
- (b) Gills not decurrent
- x. Margin of pileus inflexed at first *Psilocybe* 5:1043, K 235
- y. Margin of pileus straight from the first *Psathyra* 5:1060, K 235
- B. Spores dark or black, not purple
1. Gills deliquescing into a black fluid *Coprinus* 5:1070, K 231; 45
2. Gills not deliquescing
- a. Gills exposed above, the trama remaining as a volva at the base of stipe; stipe expanded into a disk bearing the gills *Montagnites* 5:1140, K 230
- b. Pileus and gills normal
- (1) Pileus fleshy or fleshy-membranous
- (a) Spores globose to elliptic; gills not decurrent
- x. Stipe annulate *Anellaria* 5:1125, K 235
- y. Stipe not annulate
- (x) Pileus fleshy, not striate; gills variegated *Panaeolus* 5:1118, K 234
- (y) Pileus membranous, striate; gills uniform *Psathyrella* 5:1126, K 234
- (b) Spores elongate, fusoid; gills decurrent *Gomphidius* 5:1137, K 230; 45
- (2) Pileus leathery-horny; spores minute, globose, hyaline *Anthracophyllum* 5:1139, K 256

## Order 19. LYCOPERDALES

Spore-body consisting of a fertile gleba with or without hymenium, borne on a receptacle arising from a volva or with a closed peridium that opens variously at maturity, typically terrestrial, hypogean in one family, occasionally lignicole; spores borne on basidia, 1-celled, hyaline or colored.

### Key to Families

- A. Gleba more or less gelatinous, enclosed at first in a volva, then raised on a receptacle, the latter usually stalked *Phallaceae* p. 169
- B. Gleba firm or powdery, rarely gelatinous, without volva or receptacle but enclosed in a peridium
1. Peridium epigeal
- a. Gleba typically powdery or cellular, enclosed in a peridium opening by a definite mouth or irregularly *Lycoperdaceae* p. 170
- b. Gleba enclosed in seed-like peridioles borne in a globoid to funnelliform peridium *Nidulariaceae* p. 173
2. Peridium hypogean, regularly closed *Hymenogastraceae* p. 172

This order is closely connected with the *Agaricales*, the *Lycoperdaceae* probably having been evolved from the *Agaricaceae* through such genera as *Gyrophragmium*, *Secotium* and *Podaxon*. The *Phallaceae* have apparently been derived from some point on this same phylum, while the *Hymenogastraceae* are thought to represent hypogean forms arising from both families. The *Nidulariaceae* are most closely related to such types as *Pisolithus* with peridioles.

### Family 76. PHALLACEAE

7:2; Fischer 276

Gleba more or less gelatinous, borne on a receptacle at first enclosed in a volva, the receptacle pileiform and stalked, or more or less clathrate and usually sessile.

- A. Gleba covering outside of receptacle, the latter pileiform or stalk-like, sometimes appendaged
1. Receptacle pileiform; gleba on outer surface of pileus
    - a. Stalk with an appendage below the pileus
      - (1) Appendage long, net-like; volva smooth; gleba not becoming lattice-like Dictyophora 7:3, F 295; 46
      - (2) Appendage short, hidden, collar-like; volva aculeate; gleba becoming lattice-like Echinophallus 16:226, F 295
    - b. Stalk without appendage
      - (1) Upper part of volva remaining on pileus and enclosing the gleba Cryptophallus 14:254
      - (2) Upper part of volva not enclosing gleba at maturity
        - (a) Gleba continuous over apex of pileus Aporophallus 11:153
        - (b) Gleba interrupted at apex of pileus, more or less reticulate Phallus 7:8, F 292; 46
  2. Receptacle without hanging pileus; gleba borne directly on the apex of the stalk-like receptacle Mutinus 7:12, F 290, 555; 46
- B. Gleba on inside of the hollow receptacle, which is clathrate or lobed
1. Receptacle hollow and clathrate, or formed of a few vertical branches united at apex
    - a. Receptacle stalked
      - (1) Gleba dimorphous, apex with sterile radiate lamellae, lower part with convolute subclathrate lobes Dictyobole 17:213; 46
      - (2) Gleba not dimorphous
        - (a) Meshes of the gleba polygonal, in several series Simblum 7:16, F 284; 46
        - (b) Meshes of the gleba vertically elongate, in a single series Colus 7:21, F 285; 46
    - b. Receptacle sessile or nearly so
      - (1) Walls of the receptacle thick, consisting of several layers of chambers
        - (a) Walls with wing-like appendages Blumenavia 11:154, F 283
        - (b) Walls without wing-like appendages Clathrus 7:18, F 283; 46

- (2) Walls of the receptacle ribbon-like or delicate
- (a) Walls ribbon-like, hollow; not stipitiform at base **Ileodictyum** F 283
- (b) Walls delicate, with 1-2 layers of chambers; stipitiform at base **Clathrella** 16:228, F 284
2. Receptacle divided above into free laciniae or lobes
- a. Receptacle expanded above into a horizontal border with deeply divided lobes **Aseroe** 7:25, F 288; 46
- b. Receptacle divided directly into lobes
- (1) Receptacle cupulate with many simple lobes **Calathiscus** 7:24, F 289
- (2) Receptacle of a few simple lobes
- (a) Gleba on the outside of the lobes **Lysurus** 7:22, F 286; 46
- (b) Gleba on the inside of the lobes **Anthurus** 7:23, F 286; 46
- (3) Receptacle of many furcate lobes, subcoralloid **Kalchbrennera** 7:14, K 289

### Family 77. LYCOPERDACEAE

7:48; Fischer 313-346

Epigeal; gleba powdery or firm, not at all gelatinous, enclosed in a peridium, the latter usually globoid to pyriform, sessile or stipitate, membranous, furnished with a definite mouth or opening more or less irregularly; gleba sometimes with a percurrent or incomplete columella, typically powdery, often with capillitium, or sometimes containing more or less distinct sack-like units; spores 1-celled, hyaline or colored.

- A. Peridium with a percurrent columella, stipitate
1. Gleba lamelloid, poroid or with labyrinthine chambers
- a. Gleba lamelloid or poroid; stipe appendaged
- (1) Gleba with radiate lamellae; capillitium none **Gyrophragmium** 7:51, F 303; 47
- (2) Gleba with vertical tube-like chambers; capillitium present **Polyplocium** 7:55, F 302
- b. Gleba with anastomosing septa or chambers
- (1) Peridium globoid, more or less pileiform at maturity; capillitium none
- (a) Trama-plates or septa decurrent on the stipe **Macowanites** 7:179, F 299; 48
- (b) Trama-plates not decurrent, arising from peridium or upper part of columella **Secotium** 7:51, F 300; 47  
**Cauloglossum** 7:57, F 299; 47
- (2) Peridium clavate **Podaxon** 7:58, F 332; 47
2. Gleba merely spongy, with hyphal strands; capillitium typically present
- a. Peridium opening at base about the stipe **Chaenoderma** 9:268, F 333
- b. Peridium not opening around stipe but splitting lengthwise

- B.** Peridium without percurrent columella, the latter infrequent and incomplete
- 1.** Gleba floccose or at least without distinct sack-like areas
- a.** Peridium with distinct inner and outer walls
- (1) Peridium stalked
- (a) Capillitium present
- x. Endoperidium alone persistent; capillitium not ornamented
- (x) Peridium opening by an apical pore; fixed to stipe *Tylostoma* 7:60, F 342; 47
- (y) Peridium without apical pore, opening irregularly; easily separable from stipe *Queletia* 7:65, F 343
- y. Two or more peridial layers persisting; capillitium typically ornamented
- (x) Endoperidium sack-like, fixed at apex of exoperidium, the mouth with bright-colored teeth; stipe not volvate *Mitromyces* 7:68, F 339; 47
- (y) Endoperidium otherwise
- m. Stipe volvate at base; gleba campanulate *Battarrea* 7:65, F 344
- n. Stipe not volvate at base; gleba globose *Sphaericeps* 7:60, F 345  
*Battarreopsis* 17:223
- (b) Capillitium lacking
- (2) Exoperidium sessile, typically stellate-laciniate; endoperidium usually with one, rarely many mouths
- (a) Columella present, short and incomplete; capillitium sparsely branched *Geaster* 7:70, F 320; 47
- (b) Columella lacking; capillitium much branched *Astraeus* F 341
- b.** Exoperidium a papery, warted or spiny cortex, usually disappearing more or less completely
- (1) Capillitial threads more or less uniform, without larger trunk and smaller branches
- (a) Gleba sterile below, forming a stalk-like base
- x. Peridium with definite apical mouth *Lycoperdum* 7:106, F 316; 47
- y. Peridium without definite mouth, opening by long slits *Calvatia* 7:105, F 316
- (b) Gleba fertile throughout, stalk-like base lacking
- x. Outer peridium circumscissile; inner with basal mouth, becoming inverted *Catastoma* 11:165, F 318; 47
- y. Outer peridium falling away; inner with apical pore or irregular opening *Globaria* F 318
- (2) Capillitial threads with distinct trunk and attenuate branches
- (a) Gleba sterile below *Bovistella* F 319
- (b) Gleba fertile throughout

- x. Endoperidium papery, with apical openings; capillitial threads smooth, long acuminate Bovista 7:96, F 319; 47
- y. Endoperidium thick, opening by irregular lobes; capillitial threads with spiny branches Mycenastrum F 320
- 2. Gleba with distinct sack-like areas or peridioles
  - a. Gleba with peridioles
    - (1) Stipe with persistent cupulate volva; capillitium present Dictyocephalus 17:238
    - (2) Stipe not volvate; capillitium rudimentary Pisolithus 7:146, F 338; 47
  - b. Gleba without peridioles, finally powdery
    - (1) Peridium stalked, corky, opening irregularly; capillitium present Phellorina 7:145, F 334
    - (2) Peridium sessile or nearly so
      - (a) Peridium with two walls, outer firm, splitting stellately, the inner evanescent Sclerangium F 338
      - (b) Peridium with one wall
        - x. Wall not distinct, fleshy; capillitium lacking; spores spiny Corditubera 14:266, F 335
        - y. Wall more or less distinct, leathery or membranous; capillitium rudimentary; spores smooth or warty
        - (x) Gleba with saccules; peridium more or less contracted below, not on a subiculum Scleroderma 7:134, F 336; 47
        - (y) Gleba with elongate seriate chambers; peridium with a broad base arising from a stroma-like subiculum Lycogalopsis F 312
- C. Peridia numerous on a stroma, the latter often stipitate; mouth fimbriate-dentate; capillitium ramose Broomeia 7:93, F 324; 47

#### Family 78. HYMENOGASTRACEAE

7:154; Fischer 309

Hypogean, rarely if ever truly epigean; gleba fleshy to cartilaginous or somewhat gelatinous, not powdery, but more or less putrescent, usually loculate or with trama-plates, the peridium with wall sometimes poorly developed or even lacking at maturity, irregularly globoid, sometimes with short stalk-like base or rhizoids, astomous, the surface merely cracking or breaking away, or the gleba putrescent; capillitium lacking; spores 1-celled, hyaline or colored.

- A. Trama-plates arising radially from a basal columella-like mass; peridium wall separating readily from gleba, sometimes lacking
  - 1. Peridium wall present
    - a. Peridium volvate
      - (1) Peridium silky, reticulate-sulcate; volva gelatinous; spores yellow, globose, crested Clathrogaster 16:250
      - (2) Peridium waxy-gelatinous, not sulcate; spores hyaline Torrendia 17:241



- b. Peridium not volvate
    - (1) Peridium elongate-cylindric; spores globose, reticulate, brownish-orange Protoglossum 11:158, F 306
    - (2) Peridium tuberiform or piriform
      - (a) Spores with longitudinal ridges or furrows Chamonixia 16:251, F 556  
Martellia 16:252
      - (b) Spores spinose
      - (c) Spores smooth
        - x. Peridium with an interrupted mucous layer here and there beneath
          - (x) Peridium hypogean, tuberiform, falling apart irregularly at maturity Protubera 11:155, F 306
          - (y) Peridium epigean, piriform, opening by slits Phallogaster 11:155, F 304  
Hysterangium 7:155, F 306; 48
        - y. Peridium without mucous layer
  - 2. Peridium wall lacking, at least at maturity
    - a. Peridium elongate-cylindric; spores smooth Gymnoglossum 11:158
    - b. Peridium tuberiform or piriform; spores furrowed lengthwise Gautieria 7:177, F 304; 48
- B. Trama-plates arising typically from the peridium and not radial; peridium wall separating difficultly or not at all from the gleba
  - 1. Peridium with rhizoids over the surface or at least about the base
    - a. Spores globose, warty Sclerogaster 11:169, F 312
    - b. Spores smooth
      - (1) Chambers of gleba filled with mucus at first Leucogaster 9:281, F 311
      - (2) Chambers of gleba hollow
        - (a) Spores hyaline Rhizopogon 7:161, F 311; 48
        - (b) Spores colored Melanogaster 7:164, F 334
  - 2. Peridium without rhizoids
    - a. Spores spinose, globose
      - (1) Gleba percurrent by a columella Arcangeliella 16:255
      - (2) Gleba without columella
        - (a) Peridium with sterile base Octaviana 7:158, F 310
        - (b) Peridium without sterile base Hydnangium 7:175, F 310
    - b. Spores not spinose, but smooth, verrucose or rugose
      - (1) Gleba with branching columella and sterile base Dendrogaster 17:240
      - (2) Gleba without columella or sterile base Hymenogaster 7:168, F 308; 48

Family 79. NIDULARIACEAE

7:28; Fischer 326

Peridium funnellform to cupulate or globoid, leathery or fleshy-leathery, opening over the entire top and exposing one to many lentiform or globoid peridioles, the latter usually attached by a funiculus to the wall of the peridium; spores 1-celled, hyaline, smooth; epigean, humicole, fmicole or lignicole.

- A. Peridium with several to many peridioles
  - 1. Peridium globoid, without epiphragm, opening by a tear; peridioles without funiculus Nidularia 7:28, F 326; 48

2. Peridium cylindric to cupulate, with epiphragm
- a. Peridioles with funiculus
- (1) Mouth of peridium with a distinct seam;  
spores mixed with filaments **Cyathus 7:32, F 326; 48**
- (2) Mouth without seam; spores not mixed  
with filaments **Crucibulum 7:43, F 326; 48**
- b. Peridioles without funiculus, densely crowded  
in mucus **Nidula 17:125; 48**
- B. Peridium with a single viscous peridiole; wall  
double, the outer splitting stellately; minute **Sphaerobolus 7:46, F 346; 48**

## DEUTEROMYCETES (Fungi Imperfecti)

As the name implies, these are secondary or propagative stages of other fungi, principally **Ascomycetes**. In consequence, they do not constitute a natural class, but form an artificial group kept together for convenience. Many of them are found in association with the perfect form in nature, while the number of those linked up by means of experimental cultures is steadily increasing. An enormous number of new genera have been described during the past quarter of a century, many of them on trivial or very variable criteria.

A natural system of secondary stages is obviously out of the question, short of their assignment to the perfect forms. However, the grouping into orders approximates this in some measure in view of the fact that pycnidium and stroma often reflect the structure of the perfect form. Even among the **Hyphomycetes** the resemblances probably indicate some community of relation to the perfect forms, but the entire situation is complicated by the fact that some of the latter possess two or more very dissimilar propagative stages, while essentially the same type of secondary form may occur in widely separated orders of **Ascomycetes**.

The **Phomales** are distinguished by the presence of the pycnidium, which reflects the evolution of the perithecium and its final transition into the apothecium. The **Melanconiales** represent a probable final condition of the latter in which the protective cover has been suppressed, resulting in a simple stroma. The **Hyphomycetes** or **Moniliales** are mycelial forms without differentiated pycnidia or stroma, though the latter is sometimes so closely simulated in the **Tuberculariaceae** as to warrant their inclusion in **Melanconiales**, as Hoehnel has done (1923:301).

### Order 20. PHOMALES

Fruiting-body a pycnidium, the latter varying from globose to conic or elongate, usually with a distinct ostiole, to dimidiate with a simple pore or astomous, or to hysterioid, discoid or cupulate and opening by a cleft, lobes or circularly, single, cespitose or with a subicle or stroma, the latter effuse, valsoid or dothideoid, immersed, erumpent or superficial from the first, membranous to carbonous, waxy or fleshy, typically dark but sometimes bright-colored; conidia borne on simple or branched conidiophores or basidia, or the latter sometimes lacking and the conidia then arising directly from the pycnidial wall, rarely endogenous; conidia various, hyaline or dark, globose to filiform.

#### Key to Families

- A. Pycnidia perithecium-like, typically globoid, ostiole or astomous
  - 1. Pycnidia brown to black, membranous to carbonous **Phomaceae** p. 176
  - 2. Pycnidia bright-colored, or hyaline, fleshy, sometimes gelatinous or waxy **Zythiaceae** p. 186
- B. Pycnidia dimidiate and usually more or less distinctly radiate, rarely hysterioid **Leptostromaceae** p. 189
- C. Pycnidia apothecium-like or hysterioid, cupulate to discoid, opening circularly or less often by a cleft or lobes, dark and subcarbonous to bright-colored and fleshy **Discellaceae** p. 192

The four families reflect more or less accurately the structure of the corresponding perfect forms. The **Phomaceae** correspond chiefly to **Sphaeriaceae** and **Dothideaceae**, the **Zythiaceae** to **Hypocreaceae**, the **Leptostromaceae** to **Microthyriales**, and the **Discellaceae** to the **Phacidiales** and xeric **Pezizales**. The **Patellinae**, referred to **Zythiaceae** by Saccardo on the basis of color and texture, are primarily forms of **Discomycetes** and hence belong in the **Discellaceae**. The latter appear to pass gradually and completely into the **Melanconiaceae**.

### Family 80. PHOMACEAE

(Sphaerioidaceae)

Pycnidia globoid, conic or lentiform, membranous, carbonous or sub-coriaceous, innate, erumpent or superficial, ostiolate or astomous, separate or with a subicle or stroma, which is variously loculate, typically dark; conidia various, borne on simple or ramose basidia, or arising from the pycnidial wall.

#### Hyalosporae

3:1, 10:100, 11:472, 14:844, 16:825, 18:220, 22:823

Conidia 1-celled, hyaline, globose, ovoid, ellipsoid or botuliform

A. Pycnidia separate, sometimes cespitose, without subicle or stroma

1. Pycnidia innate, or finally more or less erumpent

a. Pycnidia with a clypeus

(1) Pycnidia with ostiole

(a) Conidia ciliate

**Ciliochora**

(b) Conidia not ciliate

x. Basidia ramose; conidia acro-pleurogenous

**Plectophomopsis**

y. Basidia simple

(x) Conidia acrogenous

m. Basidia bacillar, fasciculate

**Scleromeris**

n. Basidia papillate, not fasciculate

**Phomachora**

(y) Conidia pleurogenous

**Clypeochorella**

(2) Pycnidia without ostiole; basidia ramose

**Plectosira**

b. Pycnidia without a clypeus

(1) Pycnidia rostrate or cylindrical

(a) Pycnidia rostrate

x. Pycnidia hairy

**Chaetosphaeronema**

y. Pycnidia glabrous

(x) Basidia ramose; conidia usually expelled in a ball

m. Spores allantoid

**Pleuonaema H 34**

n. Spores ovoid to ellipsoid

**Sphaeronema 3:185; 49**

(y) Basidia simple

**Ceratophoma H 35**

(z) Basidia none; conidia histogenic

**Pseudophoma H 5**

(b) Pycnidia vertical, oblong to cylindrical

x. Basidia ramose; conidia pleurogenous

**Pleurophomella H 335**

y. Basidia simple

(x) Conidia acrogenous

**Chondropodiella**

(y) Conidia acro-pleurogenous

**Glutinium 11:500, H 337**

(2) Pycnidia not rostrate or cylindrical

(a) Pycnidia hairy or setose

x. Setae stellately ramose

**Staurochaeta 3:218, H 30**

- y. Setae or hairs not stellate  
 (x) Basidia ramose *Pyrenochaeta* 3:219, H 27, 28  
 (y) Basidia simple; conidia expelled in mucus; fungicole *Pycnis* H 32  
 (z) Basidia none *Sclerochaeta* H 6
- (b) Pycnidia glabrous  
 x. Conidia catenate or ciliate  
 (x) Conidia catenate  
 m. Conidia globose *Myrioconium* H 259  
 n. Conidia not globose  
 (m) Chains of spores connected, often net-like *Peckia* 3:217, H 119  
 (n) Chains of spores simple  
 r. Pycnidia with ostiole *Sirophoma* H 37  
 s. Pycnidia without ostiole *Sirococcus* 3:217, H 297  
 (y) Conidia ciliate or caudate  
 m. Outer wall of conidium torn into 2-3 strips resembling cilia *Tiarosporella*  
 n. Cilia distinct, terminal  
 (m) Apex 1-ciliate  
 r. Pycnidia membranous; conidia lunate *Ciliophora*  
 s. Pycnidia carbonous; conidia cylindrical *Strasseria* 18:284, H 253  
 (n) Apex x-ciliate *Neottiospora* 3:216, H 36; 49
- y. Conidia neither catenate nor ciliate  
 (x) Pycnidia with ostiole  
 m. Basidia ramose  
 (m) Basidia reticulately fused *Plectophoma* 22:905, H 38  
 (n) Basidia not reticulately fused  
 r. Conidia acrogenous *Dendrophoma* 3:178, H 39; 49  
 s. Conidia pleurogenous *Pleurophoma* H 40  
 t. Conidia acro-pleurogenous  
 (r) Pycnidia membranous *Pleurophomopsis*  
 (s) Pycnidia sclerotoid *Dendrodomus*
- n. Basidia typically simple  
 (m) Pycnidia fungicole  
 r. Pycnidia oidicole *Cicinnobolus* 3:216, H 41  
 s. Pycnidia pycnicole *Mycosticta*  
 t. Pycnidia lichenicole *Lichenosticta* 16:851, H 42  
 (n) Pycnidia not fungicole  
 r. Pseudoparaphyses present, long-filiform *Lichenophoma*  
 s. Pseudoparaphyses absent  
 (r) Pycnidia in discolored areas, maculicole *Phyllosticta* 3:3, H 45; 49  
 (s) Pycnidia not maculicole  
 h. Spores lunate *Selenophoma* 22:916, H 51  
 i. Spores not lunate  
 (h) Pycnidia with a columella *Cyclodomus* 22:950, H 229  
 (i) Pycnidia without columella  
 + Pycnidia membranous *Neophoma*  
 - Pycnidia coriaceous to carbonous *Phoma* 3:65, H 47; 49

- o. Basidia obsolete or none; conidia histogenic
  - (m) Spores globose or trigonous
    - r. Spores globose; floricole **Hapalosphaeria 22:868, H 33**
    - s. Spores trigonous; ramicole **Trigonosporium 16:892, H 31**
  - (n) Spores not globose or trigonous
    - r. Pycnidia coriaceous or carbonous, more or less sclerotioid **Plenodomus 3:184, H 13**
    - s. Pycnidia membranous **Phyllostictina**
- (y) Pycnidia without ostiole
- m. Basidia ramose
  - (m) Pycnidia with central columella; conidia acrogenous **Conostroma**
  - (n) Pycnidia without columella; conidia acro-pleurogenous **Pleuroplaconema**
- n. Basidia simple
  - (m) Pycnidia membranous to subcarbonous **Phomopsis 18:264, H 257; 49**
  - (n) Pycnidia sclerotioid **Sclerotiopsis 3:184, H 122**
- o. Basidia obsolete or none; conidia histogenic
  - (m) Conidia more or less catenate **Sirostromella H 2**
  - (n) Conidia not catenate
    - r. Conidia involved in mucus **Coleophoma H 273**
    - s. Conidia without mucus **Dothichiza 3:671, H 11**
- 2. Pycnidia superficial
  - a. Pycnidia rostrate or cylindrical
    - (1) Pycnidia rostrate; conidia pleurogenous **Plectonaemella H 20**
    - (2) Pycnidia cylindrical, cornucopioid; conidia acrogenous **Cornucopiella H 203**
  - b. Pycnidia neither rostrate nor cylindrical
    - (1) Pycnidia hairy or setose
      - (a) Pycnidia membranous; ostiole present; basidia filiform **Trichocicinnus 22:935, H 26**
      - (b) Pycnidia corio-carbonous; ostiole none; basidia none **Pyrenochaetina H 123**
    - (2) Pycnidia glabrous
      - (a) Conidia catenate; ostiole none; basidia none **Sirolegniella**
      - (b) Conidia not catenate
        - x. Pycnidia densely gregarious in asteroma-like spots; ostiole present **Asteromella 3:182**
        - y. Pycnidia not in asteroma-like spots
          - (x) Ostiole present
            - m. Pycnidia more or less stipitate; foliicole **Rhizosphaera 22:917**
            - n. Pycnidia not stipitate; lignicole **Aposphaeria 3:169, H 24**
          - (y) Ostiole absent
            - m. Basidia ramose **Ligniella**
            - n. Basidia none; conidia histogenic
              - (m) Pycnidia with hypostroma in the stomata **Rhizophoma**
              - (n) Pycnidia without hypostroma **Sclerophomina H 7**

- B. Pycnidia with a subicle**
1. Pycnidia rostrate **Leptoxyphium**
2. Pycnidia not rostrate
- a. Pycnidia hairy or setose
- (1) Hairs cruciately branched **Staurophoma 22:935, H 29**
- (2) Hairs or setae not branched
- (a) Ostiole present **Chaetasbolisia**
- (b) Ostiole none **Chaetophomella**
- b. Pycnidia glabrous
- (1) Conidia catenate
- (a) Basidia present, filiform **Sirosphaera**
- (b) Basidia none **Sirosperma**
- (2) Conidia not catenate
- (a) Pycnidia pedicellate **Podoxyphium**
- (b) Pycnidia not pedicellate
- x. Ostiole present
- (x) Basidia ramose **Dothiorellina H 21**
- (y) Basidia simple
- m. Subicle white **Dasysticta H 22**
- n. Subicle dark **Dasystictella**
- (z) Basidia obsolete or unknown **Asbolisia**
- y. Ostiole none
- (x) Subicle radiate **Asteroma 3:201, H 350**
- (y) Subicle not radiate
- m. Conidia of 2 kinds, fusoid and hamate **Placophomopsis**
- n. Conidia of one kind
- (m) Pycnidia biogenous, folicole
- r. Pycnidia folicole **Chaetophoma 3:199, H 126**
- s. Pycnidia fungicole **Phomyces**
- (n) Pycnidia saprogenous **Lasiophoma**
- C. Pycnidia with a stroma**
1. Stroma innate or erumpent
- a. Stroma valsoid or dothideoid
- (1) Stroma valsoid; basidia typically simple, sometimes ramose or obsolete
- (a) Pycnidia fungicole; conidia allantoid **Cryptosporiopsis**
- (b) Pycnidia not fungicole
- x. Conidia allantoid, expelled in cirrhi **Cytospora 3:252, H 281; 49**
- y. Conidia globose to bacillar
- (x) Conidia globose to ovoid, cirrhose **Cytosporella 3:251, H 266**
- (y) Conidia oblong to bacillar
- m. Stroma circumscissile, with a lid at top; basidia filiform; conidia cirrhose **Rabenhorstia 3:243, H 334; 49**
- n. Stroma not circumscissile with a lid
- (m) Conidia cirrhose; basidia obsolete or none **Ceuthospora 3:277, H 277**
- (n) Conidia not cirrhose; basidia filiform **Fusicoccum 3:247**
- (2) Stroma dothideoid
- (a) Conidia ciliate **Diachorella H 247**
- (b) Conidia not ciliate
- x. Stroma substipitate, with peridium which persists as a cup about the margin **Bothrodiscus 22:950, H 332**

- y. Stroma sessile, without peridium
  - (x) Basidia ramose Pleurostromella
  - (y) Basidia simple
  - m. Basidia fasciculate Scleromeris
  - n. Basidia not fasciculate
  - (m) Ostiole present Phomachora
  - (n) Ostiole none; hypostroma usually present Podoplaconema
- 3. Stroma not valsoid or dothideoid
  - (1) Stroma discoid, pulvinate, globoid, or botryose
    - (a) Pycnidia hairy; conidia cirrhose Lasiostroma
    - (b) Pycnidia glabrous
      - x. Conidia catenate Sirodothis
      - y. Conidia not catenate
        - (x) Conidia ciliate Placonema 18:293
        - (y) Conidia not ciliate
        - m. Basidia ramose Endothiella 22:965, H 313
        - n. Basidia filiform Dothiorella 3:235, H 235; 49
        - o. Basidia short or obsolete Placosphaeria 3:244, H 244
  - (2) Stroma lineate or effuse, sometimes basal only
    - (a) Stroma lineate
      - x. Conidia connate in fours Gamosporella 10:238, H 300
      - y. Conidia not in fours Hypodermina H 264
    - (b) Stroma effuse or merely basal
      - x. Stroma effuse; pycnidia immersed
        - (x) Stroma fungicole, on Cyttaria Anthracoderma 10:238, H 299
        - (y) Stroma not fungicole Epheliopsis 22:951
      - y. Stroma basal; pycnidia exerted
        - (x) Pycnidia single in stroma columns; basidia papillate; conidia globoid Sphaerophoma
        - (y) Pycnidia not in stroma columns; basidia none; conidia histogenic, allantoid Botryophoma
- 2. Stroma superficial
  - a. Stroma setose, papillate with ostioles Chaetocystostroma
  - b. Stroma glabrous
    - (1) Stroma on animal hairs; basidia very short Trichophila 10:423, H 256
    - (2) Stroma phytogenous
      - (a) Stroma suberose, large, hypoxyloid; conidia not falcate Phellostroma H 267
      - (b) Stroma subcarbonous; conidia falcate Ascochytopsis 22:951, H 305

#### Phaeosporae

3:291, 10:251, 11:511, 14:919, 16:905, 18:302, 22:966

Conidia 1-celled, dark, globose, ovoid, elliptic to fusoid, rarely botuliform

- A. Pycnidia separate, sometimes cespitose, without subicle or stroma
  - 1. Pycnidia innate or finally more or less erumpent
    - a. Pycnidia with ostiole
      - (1) Pycnidia rostrate or cylindrical
      - (a) Pycnidia rostrate Naemosphaera 10:259, H 333



- (b) Pycnidia cylindric; opening funnel-form **Endocalyx** 22:1454, H 206
- (2) Pycnidia not rostrate
- (a) Pycnidia hairy **Conithyriopsis** 22:977, H 75
- (b) Pycnidia not hairy
- x. Pycnidia fungicole in apothecia, pycnidia, etc. **Cryptophaella** H 3
- y. Pycnidia not fungicole
- (x) Basidia filiform; conidia large **Sphaeropsis** 3:291, H 71; 49
- (y) Basidia obsolete or none; conidia small **Coniothyrium** 3:305; 49
- b. Pycnidia without ostiole
- (1) Pycnidia lichenicole **Lichenonium**
- (2) Pycnidia in Rhizopogon **Microthecium**
- (3) Pycnidia not fungicole
- (a) Conidia catenate **Sirothecium** 10:270, H 129
- (b) Conidia not catenate
- x. Pycnidia carbonous **Phaeodomus** 22:984
- y. Pycnidia membranous **Coniella**
2. Pycnidia superficial
- a. Pycnidia with ostiole
- (1) Pycnidia hairy **Cladochaete** 22:986, H 76
- (2) Pycnidia glabrous **Epistigme**
- b. Pycnidia without ostiole
- (1) Pycnidia hairy **Chaetomella** 3:321; 49
- (2) Pycnidia glabrous
- x. Conidia globose **Coniothyrina** 22:977, H 130
- y. Conidia elliptic or limoniform **Oothecium**
- B. Pycnidia with a subicle
1. Pycnidia fungicole; ostiole present **Cicinnobella** H 150
2. Pycnidia not fungicole; ostiole none; subicle dark
- a. Subicle radiate **Asteropsis**
- b. Subicle not radiate **Capnodiastrum** 10:272, H 131
- C. Pycnidia with a stroma
1. Stroma innate or erumpent
- a. Stroma valsoid or dothideoid
- (1) Stroma valsoid
- (a) Spores mucose; pseudoparaphyses present **Pleosphaeropsis**
- (b) Spores not mucose; pseudoparaphyses none
- x. Basidia reticulately branched **Cytosphaera**
- y. Basidia simple **Melanconiopsis** 16:915
- (2) Stroma dothideoid
- (a) Conidia trigonous **Readerella** H 245
- (b) Conidia not trigonous
- x. Stroma forming a clypeus **Spilomyces**
- y. Stroma not forming a clypeus; pycnidia botryose **Pseudohaplis**
- b. Stroma not valsoid or dothideoid, but pulvinate, botryose, effuse, or lineate
- (1) Conidia catenate; pseudoparaphyses present **Cytoplea** 3:325, H 236

- (2) Conidia not catenate; pseudoparaphyses none
- (a) Conidia globoid Lasmeniella
- (b) Conidia not globoid
- x. Stroma botryose to pulvinate
- (x) Pycnidia in dense botryose groups, basal stroma mostly well developed Haplosporella 3:323, H 77; 49
- (y) Pycnidia in a globoid or pulvinate stroma
- m. Pycnidia in 2-3 layers, the upper more or less superficial Botrysphaeria
- n. Pycnidia in one layer
- (m) Ostiole present; basidia ramose Phaeocystostroma
- (n) Ostiole none; basidia simple Pseudothiopsella
- y. Stroma lineate; basidia none Placodiplodia
2. Stroma superficial Pycnodothis

#### Hyalodidymae

3:384, 10:295, 11:522, 14:942, 16:925, 18:335, 22:1012

Conidia 2-celled, hyaline, ovoid, elliptic or fusoid

#### A. Pycnidia separate

1. Pycnidia innate or finally erumpent
- a. Pycnidia with a clypeus Ascochyulina
- b. Pycnidia without clypeus
- (1) Pycnidia rostrate
- (a) Pycnidia or at least the beak hairy Cryptorhynchella
- (b) Pycnidia glabrous Rhynchophoma 3:414, H 63
- (2) Pycnidia not rostrate
- (a) Pycnidia hairy Didymochaete 14:953
- (b) Pycnidia glabrous
- x. Conidia catenate; ostiole none; basidia ramose Sirodiplospora
- y. Conidia not catenate
- (x) Pycnidia maculicole
- m. Conidia with 3 cilia at apex Robillardia 10:317, H 59
- n. Conidia muticate Ascochyta 3:384, H 52; 49
- (y) Pycnidia not maculicole
- m. Conidia appendaged
- (m) Conidia setulose at apex Kellermannia 10:337; 50
- (n) Conidia setulose at each end
- r. Pycnidia uredicole Darluca 3:410, H 58; 49
- s. Pycnidia not uredicole Darlucis
- (n) Conidia with cap-like appendages Tiarospora 10:311, H 61
- n. Conidia not appendaged
- (m) Basidia ramose Diplodinis
- (n) Basidia simple, bacillar to filiform
- r. Pycnidia fungicole Davisiella
- s. Pycnidia not fungicole Diplodina 3:411, H 56; 49
- (o) Basidia obsolete or none Diploplodomus H 15
2. Pycnidia superficial
- a. Pycnidia rostrate or cylindrical
- (1) Pycnidia corniform, with beak more or less curved Ceratopycnis 22:1034, H 66
- (2) Pycnidia cylindrical; conidia ciliate Hoehneliella 18:654, H 204

- b. Pycnidia not corniform or rostrate  
 (1) Pycnidia fungicole; conidia in 4's, lanciform **Lonchospermella** 22:915, H 65  
 (2) Pycnidia not fungicole  
 x. Conidia ciliate at both ends, appendaged in middle **Corollospora**  
 y. Conidia not appendaged or ciliate; subicle sparse **Puccinospora** 10:317, H 134
- B.** Pycnidia with a subicle  
 1. Pycnidia with ostiole  
 a. Pycnidia elongate-linear, vertical, sometimes branched **Microxyphiella**  
**Chaetodiplodia** 22:1048, H 67  
 b. Pycnidia globoid **Puccinospora** 10:317, H 134
- C.** Pycnidia with a stroma  
 1. Stroma valsoid or dothideoid  
 a. Stroma valsoid; basidia simple **Cytodiplospora** 11:528, H 294  
 b. Stroma dothideoid  
 (1) Basidia present, persisting laterally at the end of the conidia **Cytotriplospora**  
**Diploplaxis**  
 (2) Basidia none
2. Stroma not valsoid or dothideoid  
 a. Stroma verruciform or pulvinate  
 (1) Stroma innate **Botryella** H 68  
 (2) Stroma superficial **Pazschkella** 16:942, H 237  
 b. Stroma effuse  
 (1) Stroma innate, of dark upper and hyaline lower layer **Thoracella** 16:941, H 289  
 (2) Stroma superficial, uniform **Placosphaerella** 14:948, H 288
- Phaeodidymae**  
 2:329, 10:275, 11:518, 14:297, 16:915, 18:319, 22:989  
 Conidia 2-celled, dark, ovoid to elliptic or fusoid
- A.** Pycnidia separate  
 1. Pycnidia innate or finally erumpent  
 a. Pycnidia rostrate, glabrous; basidia bacillar **Pellionella** 18:329, H 79  
 b. Pycnidia not rostrate  
 (1) Pycnidia hairy **Chaetodiplis**  
 (2) Pycnidia glabrous  
 (a) Conidia mucose, very large **Macrodiplodia** 3:374, H 82  
 (b) Conidia not mucose and very large  
 x. Ostiole present **Diplodia** 3:329, H 81; 50  
 y. Ostiole none; basidia obsolete or none **Didymosporis** 22:1001, H 133
2. Pycnidia superficial  
 a. Pycnidia rostrate and hairy **Rhynchodiplodia** 18:329, H 78  
 b. Pycnidia not rostrate  
 (1) Pycnidia hairy **Chaetodiplodia** 3:374; 50  
 (2) Pycnidia glabrous **Diplodiella** 3:375, H 83  
**Diblastospermella**
- B.** Pycnidia with a subicle, globose, astomous  
**C.** Pycnidia cespitose or stromate  
 1. Pycnidia cespitose or botryose, more or less stromate **Botrydiplis** 3:377, H 84  
 2. Pycnidia in a dothideoid stroma **Paradiplodia**

**Hyalophragmiae**

3:418, 10:330, 11:533, 14:962, 16:947, 18:358, 22:1051

Conidia x-celled, hyaline, oblong to fusoid, typically with distinct septa

- A. Pycnidia separate**
1. Pycnidia innate or erumpent
    - a. Conidia ciliate or setose
      - (1) Setae at apex only
        - (a) Seta single Kellermannia 10:337; 50
        - (b) Setae three Bartalinia 16:951, H 86
      - (2) Seta one at each end Cryptostictella H 87
    - b. Conidia consisting of basal cell with 2-6 parallel septate branches Chiroconium H 310
  - c. Conidia muticate and normal
    - (1) Pycnidia elongate-vertical, attenuate both ways Mastomyces 3:356, H 347
    - (2) Pycnidia globose Stagonospora 3:445, H 88; 50
2. Pycnidia superficial, hairy Dasypyrena H 91
- B. Pycnidia with a subicle**
1. Pycnidia elongate-vertical Polychaetum
  2. Pycnidia globoid Asteromidium 10:338, H 89
- C. Pycnidia with a stroma**
1. Stroma innate or erumpent
    - a. Pycnidia distinct, botryose Botryogene
    - b. Pycnidia as locules only
      - (1) Stroma innate, phyllachoroid Septoriella H 238
      - (2) Stroma erumpent, dothideoid Staganostromella
  2. Stroma superficial, botryose Microperella H 338

**Phaeophragmiae**

3:418, 10:317, 11:528, 14:953, 16:943, 18:362, 22:1058

Conidia x-celled, dark, oblong to fusoid, typically with distinct septa

- A. Pycnidia separate**
1. Pycnidia innate or erumpent
    - a. Pycnidia rostrate Ceratopycnis H 101
    - b. Pycnidia not rostrate
      - (1) Pycnidia hairy Wojnowicia 14:960, H 93
      - (2) Pycnidia glabrous
        - (a) Conidia united in groups
          - x. Conidia united into a fascicle Eriosporina 11:532, H 100
          - y. Conidia stellately united Prosthemium 3:444, H 118; 50
        - (b) Conidia free from each other
          - x. Conidia appendaged or mucose
          - (x) Conidia caudate at base with the persistent filiform basidium Uroconis 18:368, H 99
          - (y) Conidia with mucous sheath Macrodiplis
          - y. Conidia not appendaged or mucose Hendersonia 3:418, H 97; 50
  2. Pycnidia superficial
    - a. Conidia catenate; pycnidia glabrous Alysioporium
    - b. Conidia not catenate
      - (1) Pycnidia elongate-obconic, hairy Angiopoma 3:442, H 205
      - (2) Pycnidia globose, glabrous
        - (a) Basidia dendroid ramose; conidia mostly paired Hendersoniella 18:368, H 96

- (b) Basidia not dendroid; conidia single  
 B. Pycnidia with a radiate subicle  
 C. Pycnidia locules in a stroma
- Diplozythia 18:417; 50  
 Couturea 3:442, H 111  
 Hendersonula 3:445, H 239

**Hyalodictyae**

16:955, 22:1085

Conidia muriform, hyaline, ovoid, oblong or fusoid

- A. Pycnidia innate or erumpent  
 1. Pseudoparaphyses present  
 2. Pseudoparaphyses lacking
- B. Pycnidia superficial, elongate-vertical, on a subicle.
- Camarographium  
 Hyalothyris 16:955, H 110  
 Polychaetella

**Phaeodictyae**

3:450, 10:338, 11:536, 14:964, 16:951, 18:369, 22:1075

Conidia muriform, dark, ovoid, oblong or fusoid

- A. Pycnidia separate  
 1. Pycnidia innate or erumpent  
 a. Pycnidia with a clypeus  
 b. Pycnidia glabrous  
 (1) Conidia mucose  
 (a) Conidia with a mucous sheath  
 (b) Conidia with globoid mucous appendage at base  
 (2) Conidia not mucose
2. Pycnidia superficial  
 a. Pycnidia hairy  
 b. Pycnidia glabrous  
 (1) Basidia mostly dichotomous  
 (2) Basidia simple or obsolete
- B. Pycnidia with a subicle, elongate-vertical  
 C. Pycnidia with a stroma  
 1. Pycnidia cespitose on a basal stroma  
 2. Pycnidia reduced to locules
- Pleocouturea  
 Myxocyclus 22:1084, H 116  
 Shearia  
 Camarosporium 3:459, H 115; 50  
 Piringa 22:1088, H 113  
 Sclerotheca  
 Cytosporium 3:470, H 112  
 Fumagospora  
 Pseudodichomera H 117  
 Dichomera 3:471, H 240; 50

**Scolecosporae**

3:374, 10:349, 11:538, 14:964, 16:951, 18:369, 22:1086

Conidia hyaline or subhyaline, rarely dark, acicular to filiform, typically 10:1 or more, or continuous when shorter

- A. Pycnidia separate  
 1. Pycnidia innate or erumpent  
 a. Pycnidia with a clypeus  
 b. Pycnidia without a clypeus  
 (1) Pycnidia rostrate or spiniform  
 (2) Pycnidia not rostrate or spiniform  
 (a) Pycnidia hairy  
 (b) Pycnidia glabrous  
 x. Conidia 4-6 on a basidium  
 y. Conidia single  
 (x) Basidia ramose; conidia attached by a delicate extension
- Cytostaganis  
 Sphaerographium 3:396, H 344  
 Trichoseptoria 11:548, H 90  
 Eriospora 3:600, H 105  
 Scopophoma

- (y) Basidia simple to obsolete
- m. Pycnidia maculicole Septoria 3:474; 50
- n. Pycnidia not maculicole
- (m) Pycnidia complete, rami-caulicole
- r. Pycnidia globose or depressed, membranous Rhabdospora 3:578, H 104; 50
- s. Pycnidia conoid, coriaceous Micropera 3:604
- (n) Pycnidia incomplete or opening widely
- r. Pycnidia incomplete, folicole; spores acicular Phleospora 3:577
- (r) Spores hyaline Phaeophleospora
- (s) Spores dark Phaeophleospora
- s. Pycnidia opening widely, exposing the gelatinous spore-mass, ramicole; spores filiform Gelatinosporis 3:596
2. Pycnidia superficial
- a. Pycnidia rostrate or terete Cornularia 3:598
- b. Pycnidia not rostrate
- (1) Pycnidia hairy Ciferria
- (2) Pycnidia glabrous
- (a) Conidia 3-x on a basidium Gamospora 10:402, H 402
- (b) Conidia single
- x. Ostiole present; pycnidia not maculicole Leptochlamys
- y. Ostiole none; pycnidia maculicole Pseudoseptoria 22:1135
- B. Pycnidia with a subicle
1. Conidia hyaline; pycnidia not maculicole Chaetophiophoma 22:1136
2. Conidia dark; pycnidia maculicole Phaeoseptoria 22:1121
- C. Pycnidia with a stroma
1. Pycnidia distinct in the stroma
- a. Conidia setose-penicillate at each end Dilophospora 3:600, H 270
- b. Conidia muticate Cytosporina 3:601, H 284; 50
2. Pycnidia reduced to locules
- a. Stroma dothideoid Hemidothis H 231
- b. Stroma phyllachoroid Linochora H 249

### Family 81. ZYTHIACEAE

(Nectrioidaceae)

Pycnidia globoid, rarely conic or lentiform, fleshy, rarely waxy or gelatinous, innate, erumpent or superficial, ostiolate or astomous, separate or with a subicle or stroma, typically bright-colored; conidia various, typically on simple or ramose basidia.

This family differs from the Phomaceae only in the bright color and fleshy texture of the pycnidia. It resembles the subfamily Patellinae of the Discellaceae in these respects, but the pycnidium is perithecium-like and not cupulate or hysterioid.

#### Hyalosporae

3:613, 10:404, 11:552, 14:988, 16:983, 18:407, 22:1140

Conidia 1-celled, hyaline, globose or ovoid to oblong

#### A. Pycnidia separate

1. Pycnidia innate or more or less erumpent

- a. Pycnidia cylindric to conic; pseudoparaphyses present **Lagynodella**
- b. Pycnidia globose
- (1) Conidia catenate
- (a) Pycnidia innate, clypeus-like; basidia none **Blennoriopsis**
- (b) Pycnidia erumpent; basidia present **Sirozythia** 18:410, H 159
- (2) Conidia not catenate
- (a) Conidia ciliate
- x. Ostiole present **Eleutheris** 22:1142, H 151
- y. Ostiole none **Mastigosporella** H 160
- (b) Conidia muticate
- x. Conidia geminate on minute sterigmata **Tremellidium**
- y. Conidia not geminate
- (x) Conidia allantoid **Allantozythia**
- (y) Conidia not allantoid
- m. Ostiole present
- (m) Pycnidia blue or violet **Cyanophomella** H 149
- (n) Pycnidia of other colors
- r. Basidia present **Zythia** 3:614, H 146; 50
- s. Basidia none **Plenozythia**
- n. Ostiole none
- (m) Basidia simple **Leptodermella** H 161
- (n) Basidia none **Sarcophoma** H 10
2. Pycnidia superficial
- a. Pycnidia rostrate or elongate to cylindric
- (1) Conidia catenate **Trelesiella** 14:989, H 141
- (2) Conidia not catenate **Sphaeronemina** H 145
- b. Pycnidia globose
- (1) Pycnidia hairy
- (a) Ostiole present; fungicole **Cicinnobella** 18:302, H 150
- (b) Ostiole none; cadavericole **Collacystis** 3:616, H 158
- (2) Pycnidia glabrous; conidia x-ciliate **Ciliospora** 18:410, H 152
- B.** Pycnidia with a stroma
1. Stroma superficial
- a. Pycnidia in stroma columns; conidia lobed **Xenostroma** H 342
- b. Pycnidia not in columns; conidia not lobed
- (1) Pycnidia completely immersed **Dothiorina** H 320
- (2) Pycnidia superficial or nearly so, licheni-  
cole **Verrucaster** 50
2. Stroma innate or somewhat erumpent
- a. Conidia globose, large; stroma 2-layered **Matula** H 317
- b. Conidia not globose or stroma 2-layered
- (1) Basidia present
- (a) Basidia long, much branched **Microdiscula** H 318
- (b) Basidia simple or merely forked
- x. Stroma crustose, oblong; pycnidia with  
more or less convergent necks **Siroplaconema**
- y. Stroma not crustose; pycnidia without  
necks **Rhodosticta**
- (2) Basidia none **Sirogloea**

**Phaeosporae**

10:409, 18:416

Conidia 1-celled, dark, globose to ovoid or oblong

**A. Pycnidia separate**

## 1. Conidia ciliate

a. Conidia 1-ciliate at apex

**Mastigonetrum** H 164

b. Conidia 1-ciliate at base

**Caudosporella** H 165

## 2. Conidia muticate

**Harknessia** 3:320, H 163; 49**B. Pycnidia with a stroma****Martinella** 10:409, H 330**Hyalodidymae**

3:621, 10:409, 11:553, 16:986, 18:416, 22:1145

Conidia 2-celled, hyaline, ovoid to oblong or fusoid

**A. Pycnidia separate**

## 1. Pycnidia innate or erumpent, more or less clypeate; basidia flask-shaped

**Clypeopycnis**

## 2. Pycnidia superficial

a. Pycnidia dark blue or violet

**Cyanochyta** H 152b

b. Pycnidia bright-colored, not blue or violet

**Stylonectria** H 152c**B. Pycnidia with a botryose, short-stalked stroma****Fuckelia** 3:244, H 343**Phaeodidymae**

3:621

Conidia 2-celled, dark, ellipsoid

Pycnidia erumpent, rather widely open

**Pseudodiplodia** 3:621, H 168**Hyalophragmiae**

3:621, 10:410, 18:417, 22:1146

Conidia hyaline, x-celled, elliptic to fusoid

**A. Pycnidia separate**1. Conidia catenate; stroma somewhat developed **Sirozythiella** H 324

2. Conidia not catenate

a. Pycnidia clypeate; conidia 1-ciliate at apex **Ciliosporella**

b. Pycnidia not clypeate; conidia not ciliate

(1) Conidia 4-radiate, the radii septate

**Chiastospora** 3:621, H 156

(2) Conidia not radiate

(a) Pycnidia blue or violet; pycnidia usually cespitose on a basal stroma

**Stagonstroma** H 154

(b) Pycnidia not blue or violet; basal stroma none

**Stagonopsis** 3:621, H 153**B. Pycnidia in a stroma****Aschersonia** 3:619, H 326; 50**Scolecosporae**

3:622, 10:410, 18:418, 22:1146

Conidia acicular or filiform, hyaline, continuous or septate

**A. Pycnidia separate or cespitose, without distinct stroma**

1. Pycnidia innate or somewhat erumpent

a. Basidia present, simple; pycnidia cespitose

**Phlyctaeniella**

b. Basidia none; pycnidia separate; fungicole

**Scolecozythia**



2. Pycnidia superficial, rostrate; conidia cuspidate  
at both ends **Mycorhynchus 18:418, H 155**
- B. Pycnidia with a stroma
1. Stroma innate; foliicole **Polystigmina 3:622, H 327; 50**
2. Stroma more or less erumpent; ramicole **Chromocytospora 22:1147**

### Family 82. LEPTOSTROMACEAE

Pycnidia dimidiate, hemispheric, sometimes elongate and hysterooid, but typically with more or less radiate scutellum, membranous to carbonous, usually superficial but often innate-erumpent, ostiolate or astomous, separate or with subicle or stroma, typically dark; conidia and basidia various.

The hysterooid genera of this family approach the similar types of **Discellaceae** very closely, but they can be distinguished as a rule by the presence of a more or less radiate scutellum.

#### Hyalosporae

3:625, 10:412, 11:553, 14:992, 16:986, 18:419, 22:1148

Conidia 1-celled, hyaline, globose to oblong

- A. Pycnidia separate
1. Pycnidia innate or erumpent
- a. Conidia catenate
- (1) Pycnidia stellately arranged; conidia globose-ellipsoid **Piggotia 3:636, H 228**
- (2) Pycnidia not stellate; conidia bacillar **Crandallia 14:998, H 221**
- b. Conidia not catenate
- (1) Conidia ciliate at each end; ostiole none **Tracyella 18:424, H 220**
- (2) Conidia not ciliate
- (a) Pycnidia opening by a cleft
- x. Pycnidia oblong to elongate **Leptostroma 3:639, H 225; 51**
- y. Pycnidia rounded **Labrella 3:647**
- (b) Pycnidia ostiolate or astomous, but without a cleft
- x. Pycnidia with several ostioles **Massalongina**
- y. Pycnidia with single ostiole or none
- (x) Basidia ramose; conidia acropleurogenous **Pleurothyriella**
- (y) Basidia simple; conidia typically acrogenous **Leptothyrium 3:626, H 223; 51**
- (z) Basidia none; conidia histogenic **Myxothyrium**
2. Pycnidia superficial
- a. Pycnidia bright-colored, fleshy; conidia catenate **Creothyrium**
- b. Pycnidia not bright or fleshy
- (1) Pycnidia stellate, rimose **Actinothecium 3:638, H 213**
- (2) Pycnidia not stellate
- (a) Conidia catenate
- x. Basidia present **Sirothyriella H 207**
- y. Basidia none **Sirothyrium**
- (b) Conidia not catenate
- x. Ostiole present, columellae absent; conidia lateral on bacillar basidia **Acarella**
- y. Ostiole none; columellae present; conidia on lageniform basidia **Columnothyrium**

**B. Pycnidia with subicle or thalloid mycelium****1. Basidia present****a. Basidia ramose**

(1) Subicle with setae; ostiole none

**Merismella**

(2) Subicle without setae

(a) Ostiole present; basidia moniliform

**Plectopeltis**

(b) Ostiole none; basidia not moniliform

**Plenotrichum****b. Basidia simple**

(1) Pseudoparaphyses present

**Gloeodes**

(2) Pseudoparaphyses lacking

(a) Subicle of broad dendroid fibers

**Trichopeltulum 10:418, H 211**

(b) Subicle effuse, hyphal

**Eriothyrium 10:418, H 210****2. Basidia none****a. Ostiole present****Elachopeltis****b. Ostiole none, stellately dehiscent**

(1) Subicle membranous; conidia in a mucous layer

**Diedickea**

(2) Subicle asterinoid; conidia not in a mucous layer

**Peltaster****C. Pycnidia with a stroma, the latter innate, phyllog-enous; conidia botuliform****Melasmia 3:673, H 219; 51****Phaeosporae**

3:653, 10:423, 14:996, 18:429, 22:1159

Conidia 1-celled, dark, globose to oblong

**A. Pycnidia separate****1. Pycnidia erumpent****a. Pycnidia single, linear, rimose****Phaeolabrella****b. Pycnidia stellately arranged****Piggotia 3:636, H 228****2. Pycnidia superficial****Pirostoma 3:653, 14:996****B. Pycnidia with a subicle****1. Pycnidia subcuticular****Manginula****2. Pycnidia superficial****a. Subicle with hyphopodia****Asterostomella 10:423, H 213****b. Subicle without hyphopodia****Asterostomula H 214****C. Pycnidia with a stroma****1. Stroma innate or erumpent****Lasmenia 10:424, 14:246****2. Stroma superficial****a. Pycnidia more or less superficial****Peltostroma 18:430, H 251****b. Pycnidia immersed as locules****Poropeltis 18:430, H 252****Hyalodidymae**

10:426, 11:557, 18:431, 22:1162

Conidia 2-celled, hyaline, ovoid to oblong or fusoid

**A. Pycnidia separate****1. Conidia catenate, also laterally ciliate****Chaetalysis****2. Conidia not catenate****a. Conidia falcate, cuspidate at apex****Kabatia 18:433, H 380; 51****b. Conidia not falcate and cuspidate**

(1) Basidia present

**Leptothyrella 10:426**

(2) Basidia none

**Discotheciella****B. Pycnidia with a subicle; conidia ciliate at each end****Discosiella H 291**

**Phaeodidymae**

10:426, 18:431, 22:1161

Conidia 2-celled, dark, ovoid to oblong or fusoid

**A. Pycnidia separate**

1. Pycnidia innate or erumpent; basidia none

**Didymochora**

2. Pycnidia superficial; basidia present

**Diplopeltis 10:426, H 208****B. Pycnidia with a subicle****Leprieurina****C. Pycnidia with a stroma**

1. Stroma innate-erumpent

**Seynesiopsis 18:431**

2. Stroma superficial

**Peltostromella 22:1161, H 215****Hyalophragmiae**

3:653, 10:426, 11:557, 14:996, 16:992, 18:434, 22:1162

Conidia x-celled, hyaline, oblong to fusoid

**A. Pycnidia innate to erumpent**

1. Conidia ciliate at each end; pycnidia ostiolate

**Discosia 3:653, H 296; 51**

2. Conidia not ciliate; pycnidia rimose

**Cystothyrium 10:427, H 227****B. Pycnidia superficial**

1. Pycnidia with a subicle; columella absent

**Septothyrella 18:434, H 216**

2. Pycnidia without subicle; columella present, forming an immersed hypostroma at base

**Rhizothyrium****Phaeophragmiae**

14:997, 18:435

Conidia x-celled, dark, oblong to fusoid

**A. Pycnidia separate, innate to erumpent**

1. Conidia ciliate at one or both ends

**Labridium 14:997, H 307**

2. Conidia not ciliate; cells ternately disposed

**Pseudodictya****B. Pycnidia superficial, with a subicle****Peltosoma****C. Pycnidia with a stroma****Phragmopeltis 18:435, H 250****Scolecosporae**

3:658, 10:428, 11:557, 14:997, 16:992, 18:436, 22:1163

Conidia acicular to filiform, typically hyaline, continuous or septate

**A. Pycnidia separate**

1. Pycnidia innate to erumpent

a. Conidia cilio-penicillate at apex

**Giulia 18:435, H 269**

b. Conidia muticate

(1) Pycnidia elongate, rimose; conidia acropleurog-enous

(a) Basidia umbellately ramose

**Petasodes 14:998**

(b) Basidia simple

**Leptostromella 3:659, H 248; 51**

(2) Pycnidia rounded; conidia acropleurog-enous

**Pleurothyrium**

2. Pycnidia superficial

a. Pycnidia hairy

**Tassia**

b. Pycnidia globose

(1) Conidia curved to vermiform

**Melophia 3:658**

(2) Conidia not curved

- (a) Basidia present; pycnidia more or less fimbriate at margin **Actinothyrium** 3:658, H 546; 51
- (b) Basidia none **Stigmopeltis**
- B. Pycnidia with a subicle **Thyrinula**
- C. Pycnidia with a stroma
1. Stroma innate, striiform; basidia lageniform **Placothyrium**
2. Stroma superficial
- a. Basidia present **Trachythyriolum**
- b. Basidia none **Ischnostroma** H 218

### Family 83. DISCELLACEAE

(Excipulaceae)

Pycnidia often globoid at first, then becoming scutellate or discoid, or elongate, hysterooid, boat-shaped, membranous to carbonous or fleshy to gelatinous, dark or bright-colored, innate, erumpent or superficial; conidia and basidia various.

The genera with bright-colored fleshy pycnidia are distinguished from those of the **Zythiaceae** by the scutellate or discoid form, while the hysterooid ones open widely and lack the radiate scutellum of the **Leptostromaceae**.

#### Subfamily Discellae

Pycnidia dark, membranous to carbonous, rarely fleshy

#### Hyalosporae

3:665, 10:432, 11:558, 14:999, 16:993, 18:436, 22:1166

Conidia 1-celled, hyaline, globose to oblong

- A. Pycnidia innate or erumpent
1. Pycnidia patelloid, at least finally so
- a. Conidia catenate
- (1) Basidia present; chains of conidia simple **Sirexipula** 22:1171, H 255
- (2) Basidia obsolete; chains often ramose **Desmopeltella**
- b. Conidia not catenate
- (1) Conidia strongly falcate **Neopatella** 22:1166, H 121
- (2) Conidia not falcate
- (a) Pycnidia globoid, dehiscing irregularly to become cupuloid **Traversoa**
- (b) Pycnidia cupulate or scutellate-discoid **Stictopatella**
2. Pycnidia hysterooid or lacinate
- a. Pycnidia hysterooid
- (1) Conidia catenate **Lophodermopsis** 22:1159, H 120
- (2) Conidia not catenate **Psilospora** 3:679, H 331; 51
- b. Pycnidia lacinate **Sporonema** 3:677, H 260
- B. Pycnidia superficial
1. Pycnidia setose or hairy
- a. Conidia ciliate
- (1) Conidia 1-ciliate at each end **Dinemasporium** 3:683, H 177; 51
- (2) Conidia x-ciliate at apex **Polynema** 3:687, H 176
- (3) Conidia cruciate-aristate **Stauronema**
- b. Conidia not ciliate
- (1) Basidia present **Amerosporium** 3:680, H 170
- (2) Basidia none **Xenopeltis**

2. *Pycnidia* glabrous  
 a. Conidia long-ciliate at apex, short-ciliate at base *Heteropatella* 3:670, H 180  
 b. Conidia not ciliate  
 (1) *Pycnidia* membrano-carbonous; basidia oval to piriform *Agyriellopsis* 18:438, H 124  
 (2) *Pycnidia* fleshy; basidia bacillar *Catinula* 3:673, H 193

**Phaeosporae**

10:439, 18:441, 22:1172

Conidia 1-celled, dark, globose to oblong

- A. *Pycnidia* innate to erumpent  
 1. *Pycnidia* hairy or setose; conidia not catenate *Coniothyris* 10:439, H 173  
 2. *Pycnidia* glabrous  
 a. Conidia catenate *Vouauxiella*  
 b. Conidia not catenate *Myxormia* 3:734, H 175  
 B. *Pycnidia* superficial, glabrous *Phaeodiscula* 10:439, H 174

**Hyalodidymae**

3:687, 10:440, 11:560, 14:1002, 16:993, 18:442, 22:1173

Conidia 2-celled, hyaline, ovoid to oblong or fusoid

- A. *Pycnidia* discoid to patellate, typically erumpent  
 1. *Pycnidia* setose; conidia ciliate at each end *Pseudolachnea* 22:1174  
 2. *Pycnidia* glabrous  
 a. Conidia catenate, ciliate at one end *Acarosporium* H 290  
 b. Conidia not catenate  
 (1) Conidia ciliate at each end *Dinemasporis* 22:1169, H 64  
 (2) Conidia not ciliate *Discella* 3:687, H 293; 51  
 B. *Pycnidia* hysteroïd or irregularly gaping  
 1. *Pycnidia* elongate, hysteroïd; conidia not catenate *Scaphidium* 18:443, H 135  
 2. *Pycnidia* globoid at first, then irregularly and widely gaping; conidia catenate *Siropatella* 18:443, H 166

**Hyalophragmiae**

3:688, 10:441, 11:560, 14:1002, 18:443, 22:1174

Conidia x-celled, hyaline, oblong to fusoid

- A. *Pycnidia* innate to erumpent  
 1. *Pycnidia* discoid to patellate  
 a. Conidia rostrate at apex *Excipulina* 3:688  
 b. Conidia not rostrate, hamate or sigmoid *Oncospora* 3:691, H 304  
 2. *Pycnidia* hysteroïd *Stagonopatella*  
 B. *Pycnidia* superficial  
 1. *Pycnidia* hairy  
 a. Conidia forficulate or x-shaped *Ypsilonia* 3:215, H 182  
 b. Conidia normal *Excipularia* 3:689, H 306  
 2. *Pycnidia* glabrous  
 a. Basidia forked; conidia rostrate at base *Japonia* 22:1175, H 298  
 b. Basidia simple; conidia not rostrate *Harposporella* H 301

**Phaeophragmiae**

10:443, 18:444

Conidia x-celled, dark, oblong to fusoid

**A. Pycnidia innate to erumpent**

1. Pycnidia discoid; conidia of 3-5 parallel or divergent parts, united by basal cells; basidia none

**Sirothecium**

2. Pycnidia hysterioid; conidia normal; basidia present

**Dichaenopsis 18:444, H 140****B. Pycnidia superficial, discoid or cupulate, hairy****Excipularia 3:688****Phaeodictyae**

10:443

Conidia muriform, dark, fusoid

Pycnidia laciniate; conidia catenate

**Taeniophora 10:443, H 139****Scolecosporae**

3:690, 10:443, 14:1002, 16:993, 18:445, 22:1175

Conidia acicular to filiform, typically hyaline, continuous to septate

**A. Pycnidia separate**

1. Pycnidia innate to erumpent

**a. Pycnidia discoid to cupulate**

- (1) Pycnidia laciniate; conidia filiform

- (a) Conidia catenate, not curved

**Pseudocenangium 10:445,  
H 179**

- (b) Conidia not catenate, curved

- (2) Pycnidia sublaciniate; conidia acicular

**Protostegia 3:690, H 392; 51  
Pilidium 3:689**

- b. Pycnidia globose-oblong, more or less cleft; conidia neither hamate nor catenate

**Phlyctaena 3:593, H 286; 50  
Septopatella**

2. Pycnidia superficial, scutellate

**B. Pycnidia with a stroma**

1. Pycnidia with pectinate-ciliate margin

**Ephelidium**

2. Pycnidia glabrous

**Ephelis 3:691, H 198****Subfamily Patellinae**

Pycnidia bright-colored, fleshy to gelatinous

**Hyalosporae**

3:622, 10:411, 11:553, 18:419, 22:1145

Conidia 1-celled, hyaline, globose to oblong

**A. Pycnidia separate**

1. Pycnidia innate to erumpent

**a. Pycnidia discoid**

- (1) Pycnidia hairy, somewhat stipitate

**Crocicreas 3:183, H 171; 49**

- (2) Pycnidia glabrous

- (a) Conidia catenate

- x. Basidia ramose

**Sirexcupulina**

- y. Basidia simple, bacillar

**Libertiella 3:616, H 192**

- z. Basidia none

**Discozythia**

- (b) Conidia not catenate

- x. Basidia very short or obsolete **Selenophomopsis**
- y. Basidia ramose
  - (x) Hymenium sinuous **Gyrostroma**
  - (y) Hymenium smooth **Hainesia 3:698**
- b. Pycnidia more or less hysterioid and rimose or lacinate
  - (1) Conidia catenate (scoleospore-like at first) **Schizothyrella 3:690, H 272**
  - (2) Conidia not catenate
    - (a) Basidia branched; conidia pleurogenous **Pseudopatellina 22:1145, H 162**
    - (b) Basidia simple; conidia acrogenous **Scleropycnium**
- 2. Pycnidia superficial
  - a. Pycnidia hairy
    - (1) Conidia catenate **Sirocyphis H 187; 50**
    - (2) Conidia not catenate
      - (a) Pycnidia pendent, ribbed and lobed at margin **Hyphostereum H 186**
      - (b) Pycnidia not pendent or lobed **Cyphina 3:623, H 188**
  - b. Pycnidia glabrous
    - (1) Pycnidia short-stipitate; basidia ramose; conidia pleurogenous **Pseudozythia 18:409, H 190**
    - (2) Pycnidia not stipitate
      - (a) Conidia catenate, acrogenous; basidia ramose **Siroscyphella H 189**
      - (b) Conidia not catenate
        - x. Conidia x-ciliate at each end **Entomopatella**
        - y. Conidia not ciliate
          - (x) Basidia ramose **Ollula 10:411, H 191**
          - (y) Basidia simple **Patellina 3:622**
- B. Pycnidia with a stroma, sometimes incomplete
  - 1. Stroma superficial; basidia simple **Munkia 10:408, H 311**
  - 2. Stroma innate; basidia ramose **Microdiscula H 318**

**Phaeosporae**

Conidia 1-celled, colored or dark, elliptic to oblong

- A. Conidiome not a pycnidium, large, shell-like, superficial; basidia ramose, with filiform pseudoparaphyses; conidia yellow to red **Michenera 6:652, H 183**
- B. Pycnidia minute, patellate, erumpent; conidia catenate **Trullula 3:731, H 195**

**Hyalodidymae**

Conidia 2-celled, hyaline, globose to oblong

- A. Pycnidia separate
  - 1. Conidia catenate **Siropatella H 166**
  - 2. Conidia not catenate
    - a. Pycnidia scutellate, erumpent; basidia ramose; conidia acropleurogenous **Myriellina**
    - b. Pycnidia hysterioid, rimose
      - (1) Basidia ramose; conidia pleurogenous **Cystotricha 3:413, H 167**
      - (2) Basidia simple or obsolete; conidia acrogenous **Fioriella 18:432, H 9**
- B. Pycnidia with a stroma; basidia simple **Diplozythiella**

**Hyalophragmiae**

11:553

Conidia x-celled, hyaline, fusoid

Pycnidia hysterioid, erumpent; basidia very short **Stagonopattella****Phaeophragmiae**

Conidia x-celled, dark, cylindric

Pycnidia scutellate, erumpent; basidia short-ramose **Lecanosticta****Scolecosporae**

10:411

Conidia filiform, hyaline, continuous or septate

A. Pycnidia innate-erumpent

**Trichocrea 10:410, H 169**

B. Pycnidia superficial

1. Pycnidia with a subicle

**Trichosperma 10:411, H 200**

2. Pycnidia without a subicle

**Pyrenotrichum 3:184, H 199****Order 21. MELANCONIALES****Family 84. MELANCONIACEAE**

Pycnidia lacking, represented by a stroma-like stratum; strata typically bearing simple or ramose basidia upon which the conidia arise, forming acervuli or masses, which are immersed or erumpent, black, gray or light-colored, waxy, horny or gelatinous; conidia various.

The spore-body of this family closely approaches the discoid form frequent in the **Discellaceae** on the one hand and the sporodochium of the **Tuberculariaceae** on the other. Hoehnel places the latter and **Melanconiaceae** in the same group, **Gymnostromaceae**, distinguishing the one as innate-erumpent or superficial and the other as persistently innate (1923:309), but this distinction appears to be neither valid nor practicable. While the superficial resemblance is often great, the sporodochium proper is to be regarded as a compacting of hyphae and conidiophores rather than a new development from a reduced fruit-body with short or obsolescent basidia.

**Hyalosporae**

3:698, 10:446, 11:562, 14:1004, 16:995, 18:447, 22:1176

Conidia 1-celled, hyaline or subhyaline, globose to fusoid

A. Masses or acervuli setose; conidia oblong to fusoid, rarely cylindric

1. Setae marginal

**Colletotrichum 3:735**

2. Setae scattered throughout, simple or ramose

**Vermicularia 3:221; 49**

B. Masses not setose

1. Conidia ciliate or setose

a. Conidia catenate, x-flagellate

**Mastigonema**

b. Conidia not catenate

(1) Conidia with ramose awn at apex

**Pestalozziella 3:737; 51**

(2) Conidia with 3 divergent setae

**Eriosporella H 342**

2. Conidia not ciliate

a. Conidia catenate

(1) Conidial rows forming heads



- (a) Rows more or less clearly spiral      *Hyperomyxa* H 339  
 (b) Rows not spiral  
   x. Rows on a central axis      *Conoplea* H 339  
   y. Rows on the tip of the basidium, often  
     ramose      *Thyrsidiella* H 339
- (2) Conidial rows not forming heads  
 (a) Masses oblong, hysterioid, dark, hard      *Hypodermium* 3:728  
 (b) Masses discoid to pulvinate  
   x. Masses bright-colored, soft, subgelati-  
     nous      *Myxosporella* 3:729  
   y. Masses dark, not gelatinous      *Bloxamia* 3:734
- b. Conidia not catenate  
 (1) Masses linear      *Rhabdogloeum*  
 (2) Masses discoid to pulvinate  
 (a) Conidia 1-x on each basidium  
   x. Basidia ramose      *Discosporella* H 373  
   y. Basidia simple  
     (x) Masses with brown setae      *Protocoronis* 21:241  
     (y) Masses without setae  
       m. Basidia bacillar; conidia 2-3      *Rhabdogloeopsis*  
       n. Basidia broadly clavate; conidia 3-8  
         (m) Masses byssoid, yellow; on roots      *Aureobasis* 11:131, K 134  
         (n) Masses minute, white, exerted  
             from the stomata; in leaves      *Microstroma* 4:9, K 131; 53  
 (b) Conidia single  
   x. Conidia allantoid      *Naemospora* 3:746; 52  
   y. Conidia not allantoid  
     (x) Basidia ramose, long  
       m. Masses bright-colored, red or rose;  
         basal stroma thin; folicole      *Hypogloeum*  
       n. Masses hyaline to brownish; basal  
         stroma thick, sometimes sublocu-  
         late; ramicole      *Cytogloeum*  
     (y) Basidia typically simple  
       m. Masses folicole or fructicole      *Gloeosporium* 3:699; 51  
       n. Masses ramicole  
         (m) Basidia arising from inner side of  
             vertical hyphae, more or less  
             knobbed      *Cryptosporiopsis*  
         (n) Basidia normal      *Myxosporium* 3:728

#### Phaeosporae

3:748, 10:471, 11:571, 14:1018, 16:1008, 18:469, 22:1206  
 Conidia 1-celled, dark, globose to oblong or fusoid

#### A. Conidia catenate or capitate

##### 1. Conidia catenate

- a. Conidial chains separate      *Trullula* 3:731; 52  
 b. Conidial chains radiate in a mucose head      *Thyrsidium* 3:761

##### 2. Conidia capitate or clustered at the tip

*Botryconis*

#### B. Conidia single

##### 1. Conidia globose to oblong or fusoid

##### a. Conidia globose to oblong

- (1) Masses setose      *Melanconium* 3:749; 52  
 (2) Masses not setose      *Chaetobasis*

- b. Conidia fusoid, often arcuate Cryptomela 3:760
- 2. Conidia tetraedric or scyphiform
  - a. Conidia tetraedric; basidia short Vanderystiella 22:1193
  - b. Conidia scyphiform; basidia long, septate below, filiform above Scyphospora

#### Hyalodidymae

3:766, 10:475, 11:572, 14:1020, 16:1009, 18:472, 22:1210

Conidia 2-celled, hyaline or subhyaline, ovoid to fusoid

- A. Conidia ciliate
  - 1. Conidia 1-ciliate at apex, stalked below Monotrichum
  - 2. Conidia 3-4 ciliate at each end Gloeosporiella 11:575
- B. Conidia muticate
  - 1. Masses setose; basidia with 1-3 sterigmata Fominia
  - 2. Masses not setose
    - a. Masses bright-colored, carnosule; not folicole Septomyxa 3:766
    - b. Masses pale to black; folicole Marsonia 3:767

#### Phaeodidymae

3:763, 10:475, 11:572, 14:1029, 16:1009, 22:1213

Conidia 2-celled, dark, ovoid to fusoid

- A. Conidia 1-3-ciliate at apex Neobarclaya 14:46, 10:475
- B. Conidia not ciliate
  - 1. Masses saprogenous, mostly on twigs Didymosporium 3:763; 52
  - 2. Masses biogenous, on leaves Phaeomarsonia 22:1214

#### Hyalophragmiae

3:801, 10:480, 11:575, 14:1022, 16:1012, 18:474, 22:1214

Conidia 2-x-septate, hyaline or subhyaline, oblong to fusoid or clavate

- A. Conidia catenate; basidia ramose Endocladis
- B. Conidia not catenate
  - 1. Conidia ciliate
    - a. Conidia 1-x-ciliate at apex Pestalozzina 11:580
    - b. Conidia 1-ciliate at each end Pseudodiscosia
    - c. Conidia 2-ciliate at each end Diploceras 10:484
    - d. Conidia cruciate 4-celled, each cell ciliate Entomosporium 3:657; 51
  - 2. Conidia not ciliate
    - a. Conidia ramose or united at base
      - (1) Conidia irregularly united or ramose at base Titaeospora
      - (2) Conidia united at base into a radiate or stellate group Prosthemiiella 3:803
    - b. Conidia not ramose or united Septogloeum 3:801; 52

#### Phaeophragmiae

3:771, 10:480, 11:575, 14:1022, 16:1012, 18:475, 22:1217

Conidia 2-x-septate, dark, at least in part, oblong to cylindrical

- A. Conidia ciliate
  - 1. Conidia catenate
    - a. Conidia 1-ciliate above Siridium 3:782
    - b. Conidia 1-ciliate above, 1 lateral cilium below Siridina H 309

2. Conidia not catenate
- a. Conidia ciliate at one end only
- (1) Conidia ciliate at the apex
- (a) Conidia 1-ciliate above **Monochaetia 18:485**
- (b) Conidia 2-4-ciliate above **Pestalozzia 3:784; 52**
- (2) Conidia 1-ciliate at base **Cryptostictis 3:443**
- b. Conidia ciliate at two points
- (1) Conidia 1-ciliate at each end **Amphichaeta 18:486**
- (2) Conidia 1-ciliate above, 2-3-ciliate in middle **Heteroceras**
- B. Conidia not ciliate
1. Conidia catenate **Sirdiella 11:580**
2. Conidia not catenate
- a. Conidia stellate-lobed, lobes x-septate **Asterosporium 3:782; 52**
- b. Conidia not stellate-lobed
- (1) Conidia attenuate into a beak at one or both ends
- (a) Conidia hyaline-rostrate at apex only **Scolecosporium 3:782; 52**
- (b) Conidia rostrate-curved at both ends **Toxosporium 14:1030**
- (2) Conidia not rostrate
- (a) Conidia cirrhose protruded and atro-inquinant **Stilbospora 3:771**
- (b) Conidia not cirrhose and atro-inquinant **Coryneum 3:774; 52**

**Hyalodictyae**

22:1230.

Conidia muriform, hyaline, globoid or oblong

- A. Masses fleshy, rosy; conidia rose-colored, rounded **Thyrsideina 22:1230**
- B. Masses pale; conidia not rose-colored, oblong **Hyalodictyum**

**Phaeodictyae**

3:803, 10:508, 11:565, 14:1035, 16:1022, 18:488, 22:1229

Conidia muriform, dark, globose, ovoid or oblong

- A. Conidia united into rough dictyospore-like bodies
1. Conidial bodies imbedded in mucus; basidia dissolving into mucus **Endobotrya 3:470, H 338**
2. Conidial bodies and basidia not mucose **Endobotryella H 338**
- B. Conidia true dictyospores
1. Conidia catenate by cylindrical isthmi **Phragmotrichum 3:806; 52**
2. Conidia not catenate
- a. Conidia 2-3-ciliate at apex **Morinia 10:508**
- b. Conidia not ciliate
- (1) Masses saprogenous, mostly ramicole **Steganosporium 3:806**
- (2) Masses biogenous **Stigmopsis**

**Scolecosporae**

3:737, 10:498, 11:582, 14:1031, 16:1018, 18:488, 22:1231

Conidia acicular to filiform, hyaline, typically continuous

- A. Conidia flagellate at one end **Pseuderiespora**
- B. Conidia muticate
1. Conidia fasciculate at apex of basidium; on plant hairs **Trichodytes 14:1031**

2. Conidia single
- a. Masses white to dark, foliicole or ramicole;  
conidia often curved
- (1) Masses setose at margin Pseudostegia 22:1237
- (2) Masses not setose Cylindrosporium 3:737, 740; 52
- b. Masses bright-colored
- (1) Conidia acrogenous Libertella 3:744
- (2) Conidia acropleurogenous Libertina H 395

#### Staurosporae

18:493

Conidia star-shaped, hyaline

- A. Masses phyllogenous, bright-colored; conidia 4-radiate, rays continuous Asteroconium 18:493
- B. Masses lignicole, dark; conidia 3-4-radiate, rays septate Asterosporium 3:782; 52

## Order 22. MONILIALES

Hyphae usually well-developed, but sometimes short or obsolete, loose and cobwebby, cottony, fasciculate, or compacted into a definite sporodochium or synnema, rarely arising from a distinct stratum or stroma and never enclosed in a pycnidium, typically superficial; conidiophores typically definite and often much differentiated into a wide variety of forms; conidia various.

The members of this order are readily distinguished from the **Phomales** by the absence of a pycnidium, and from the **Melanconiales** by the lack of a basal stroma or stratum as a rule. As has been previously indicated, however, species with compact spore-bodies and short or obsolete conidiophores must be sought in both the **Tuberculariaceae** and **Melanconiaceae**.

#### Key to the Families

- A. Conidia present
1. Hyphae in more or less loose cottony masses
- a. Hyphae and conidia hyaline or bright-colored Moniliaceae p. 201
- b. Hyphae and conidia both typically dark, or one or the other dark Dematiaceae p. 209
2. Hyphae compacted to form a globose to cylindrical spore-body which is often stalked
- a. Spore-body stalked, capitate to cylindrical, i. e., a synnema Stilbaceae p. 227
- b. Spore-body typically sessile, globose to pulvinate or applanate, i. e., a sporodochium Tuberculariaceae p. 219
- B. Conidia lacking Dermophyta 231
- Sterile Mycelia p. 231**
- Pseudosaccharomycetes p. 411**

The essential differences between the four families are indicated in the above key. The first two families are morphologically identical, and the criterion of color serves merely to facilitate the recognition of the numerous form-genera, which are the outcome of a very active evolution. The **Tuberculariaceae** are characterized by the evolution of the cottony mycelium into a compact sporodochium, and the **Stilbaceae** by the further development into an erect more or less stalked synnema.

## Family 85. MONILIACEAE

Hyphae hyaline or bright-colored, loose and cottony, rarely fasciculate; sterile and fertile hyphae or conidiophores both present as a rule, the latter differentiated by means of vesicles, whorls, basidia, sterigmata, etc.; conidia concolorous, i. e., hyaline or bright-colored.

## Hyalosporae

4:2, 10:510, 11:586, 14:1037, 16:1023, 18:495, 22:1238

Conidia 1-celled, hyaline or bright-colored, globose to ovoid or cylindrical

## Micronemeae

Hyphae very short or obsolete, or little different from the conidia

## A. Conidia catenate

## 1. Saprogenous

a. Conidia endogenous, chains arising in the hyphae

(1) Conidial branches dichotomous, not arcuate

*Glycophila* 4:11

(2) Conidial branches simple, arcuate

*Malbranchea* 4:11

b. Conidia exogenous, arising on the hyphae

(1) Conidia globose, elliptic or fusiform

(a) Hyphae short, simple or nearly so

x. Conidia globose or suboblong

*Oospora* 4:11

y. Conidia fusiform, acute each way

*Fusidium* 4:25; 53

(b) Hyphae longer, distinctly ramose

*Monilia* 4:31; 53

(2) Conidia cuboid or bacillar

(a) Hyphae distinct, often ramose

x. Conidia cuboid

*Geotrichum* 4:39

y. Conidia bacillar or cylindrical

*Polyscytalum* 4:38

(b) Hyphae nearly obsolete; conidia bacillar

*Cylindrium* 4:36

## 2. Biogenous

a. Mycelium endogenous, hyphae escaping through the stomata

*Oidiopsis* 18:507

b. Mycelium on the surface of leaves or other parts

(1) Conidia globose, connected by isthmi

*Paepalopsis* 4:47

(2) Conidia ovoid to elliptic, without isthmi

*Oidium* 4:40; 53

## B. Conidia not catenate

1. Conidia capitate; hyphae obsolescent or lacking; biophilous

*Glomerularia* 4:10; 53

2. Conidia not capitate, usually solitary

## a. Saprogenous

(1) Conidia globose to ellipsoid, separate

*Chromosporium* 4:6; 53

(2) Conidia fusoid-falcate, variously united by twos or threes

*Selenotila* 11:587

## b. Biogenous

(1) Fungicole

(a) Conidia globoid, verrucose

*Coccosporella* 11:586

(b) Conidia ovoid, smooth

*Myceliophthora* 11:587

(2) Folicole; hyphae vermiform-tortuous

*Ophiocladium* 11:587

## Macronemeae

Hyphae elongate and distinct from the conidia

- A. Conidia capitata
1. Conidia catenate Aspergillae
- a. Conidiophores inflated at apex
- (1) Conidiophores dichotomous, branches curved Dispira 4:77
- (2) Conidiophores simple or nearly so
- (a) Conidia elongate to lanceolate, papillate, pleurogenous Spermatoloncha 22:1251
- (b) Conidia globose to ellipsoid
- x. Conidia acrogenous Aspergillus 4:64; 71
- y. Conidia acropleurogenous Dimargaris 4:76
- b. Conidiophores little or not at all inflated
- (1) Conidia enclosed in mucus Gliocladium 4:84
- (2) Conidia not in mucus
- (a) Conidia globose; conidiophores unequally verticillate at tip Penicillium 4:78; 53
- (b) Conidia doliform; conidiophores equally verticillate at tip Amblyosporium 4:77; 53
2. Conidia not catenate Cephalosporiae
- a. Conidia globose to ellipsoid
- (1) Conidia borne on little stalks or sterigmata
- (a) Conidiophores verticillate-ramose Spicularia 4:63
- (b) Conidiophores simple
- x. Conidia capitata Corethrospis 4:62
- y. Conidia in a long club Basidiobotrys 22:1262
- (2) Conidia sessile or nearly so
- (a) Conidiophores greatly inflated at tip
- x. Apical vesicle globose-inflated Rhopalomyces 4:50; 53
- (x) Vesicle hexagonally areolate
- (y) Vesicle muriculate or verrucose
- m. Vesicles terminal on simple conidiophores Oedocephalum 4:47
- n. Vesicles lateral on sigmoid, ramose conidiophores Sigmoidomyces 4:50
- y. Apical vesicle disciform, stellate-lobed Coronella 4:51
- (b) Conidiophores much less or not at all inflated
- x. Conidia involved in mucus
- (x) Conidiophores verticillate-ramose at tip Gliobotrys 18:510
- (y) Conidiophores simple Hyalopus 4:51; 53
- y. Conidia not in mucus
- (x) Conidiophores with a single head Cristulariella
- m. Head globose or slightly clavate
- (m) Head composed chiefly of ramose chains of basidia, with 2 conidia on each bi-lobed apical one
- (n) Head otherwise Cephalosporium 4:56
- r. Sterile hyphae long, decumbent Haplotrichum 4:53; 53
- s. Sterile hyphae scanty

- n. Head elongate-conic Doratomyces 4:53  
 (y) Conidiophores with 2-x heads  
 m. Conidia on the upper side of radiate-  
 verticillate sterigmata Coemansiella 4:55  
 n. Conidia in more definite heads  
 (m) Conidiophores divaricately 2-3-  
 fid; head single on each tip Trichoderma 4:59  
 (n) Conidiophores long, with many  
 short laterals bearing 3-x  
 spines, each of the latter with  
 a head Botryosporium 4:54; 53
- b. Conidia cylindric or bacillar  
 (1) Conidia covered with mucus Acontium 18:512  
 (2) Conidia without mucus Cylindrocephalum 4:63
- B. Conidia acrogenous on verticillate branches Verticilliae
1. Conidia catenate Nomuraea 18:533  
 a. Entomogenous Spicaria 4:166  
 b. Phytogenous
2. Conidia not catenate  
 a. Conidiophore a series of obconic whorls; co-  
 nidia fusoid, curved, united in eights Articularia 22:1300  
 b. Conidiophores not a series of whorls Pachybasium 4:149  
 (1) End branches very short, ampulliform  
 (2) End branches longer, obclavate to terete  
 (a) Conidia solitary or loosely grouped  
 x. Conidia globose to ellipsoid  
 (x) Tips of branches clavate, in twos at  
 right angles Verticilliosis 11:600  
 (y) Tips of branches normal  
 m. Conidia conglutinate into a stratum Corymbomyces 18:533  
 n. Conidia not conglutinate  
 (m) Conidia separating readily from  
 the tips Verticillium 4:150; 54  
 (n) Conidia not separating readily  
 from tips Cladobotryum 4:160
- y. Conidia cylindric or elongate  
 (x) End branches 1-spored  
 m. End branches straight  
 (m) Biogenous, floricole Acrocylindrium 4:161  
 (n) Saprogenous Graphidium 22:1292  
 n. End branches uncinata Uncigera 4:162  
 (y) End branches x-spored  
 m. End branches inflated-verrucose at  
 apex Calcarisporium 4:162  
 n. End branches incurved, with seriate  
 conidia below Coemansia 4:162
- (b) Conidia capitate or densely spicate  
 x. Conidia on short stalks Sceptromyces 4:166  
 y. Conidia sessile  
 (x) Conidia capitate, involved in mucus  
 m. Conidiophores asperate Gloeosphaera 18:535  
 n. Conidiophores smooth Acrostalagmus 4:163; 54  
 (y) Conidia long-spicate, the spikes in a  
 dense cluster Clonostachys 4:165

- C. Conidia borne more or less irregularly on simple or ramose but not inflated or verticillate hyphae **Botrytidae**
1. Conidia smooth or scarcely roughened
- a. Saprogenous
- (1) Conidia typically pleurogenous
- (a) Conidiophores 2-x-furcate **Haplaria 4:85; 53**
- (b) Conidiophores simple or nearly so
- x. Conidia globose to ellipsoid **Acladium 4:87**
- y. Conidia short cylindrical **Cylindrotrichum 4:88**
- (2) Conidia acrogenous or acropleurogenous
- (a) Some intermediate joints of the hyphae swollen and denticulate conidia-bearing **Physospora 4:88**
- (b) Intermediate joints equal
- x. Conidia-bearing hyphae of two sorts, the upright alone denticulate **Blastomyces 10:329**
- y. Conidia-bearing hyphae of one sort
- (x) Conidiophores ramose
- m. Conidia globose to ellipsoid
- (m) Both sterile and fertile hyphae procumbent
- r. Sterile hyphae intracellular **Meria 16:1031**
- s. Sterile hyphae superficial
- (r) Conidiophores vaguely branched
- h. Conidia acropleurogenous **Sporotrichum 4:96; 54**
- i. Conidia on a one-sided sympodium **Monopodium 10:543**
- (s) Conidiophores dichotomous; conidia acrogenous on spine-like branches **Langloisula 10:535**
- (n) Fertile hyphae (conidiophores) erect or ascending
- r. Conidia solitary, acrogenous
- (r) Conidiophores spiny-ramose at apex **Plectothrix 18:525**
- (s) Conidiophores not spiny-ramose **Monosporium 4:113; 54**
- s. Conidia loosely grouped about the apex
- (r) Conidia involved in mucus **Tolypomyria 4:137**
- (s) Conidia without mucus
- h. Conidia on inflated muriculate apices **Phymatotrichum 16:1033**
- i. Conidia not on such apices **Botrytis 4:116; 54**
- n. Conidia fusoid to cylindrical
- (m) Conidiophores mostly procumbent **Sporotrichella 10:534**
- (n) Conidiophores erect or ascending
- r. Conidia fusoid, biseriate on the upper side of short curved branches **Martensella 4:138**
- s. Conidia acrogenous



- (r) End branches long, terete *Cylindrophora* 4:138
- (s) End branches very short, ellipsoid *Cylindrodendrum* 4:139
- (y) Conidiophores simple or nearly so
  - m. Conidiophores denticulate; conidia usually grouped
    - (m) Hyphae everywhere denticulate, bearing conidia only at tip *Xenopus* 18:524
    - (n) Hyphae denticulate or proliferous at tip alone
      - r. Apex denticulate, x-spored *Rhinotrichum* 4:91; 53
      - s. Apex inflated-ampulliform, 1-spored *Olpitrichum* 11:594
  - n. Conidiophores not denticulate, solitary
    - (m) Hyphae forming a crust-like stratum *Hyphoderma* 4:89
    - (n) Hyphae loose, cobwebby *Acremonium* 4:89; 54
- b. Entomogenous; much branched; conidia solitary, acrogenous *Chantransiopsis*
- c. Biogenous, folicole; conidia acrogenous, solitary or sometimes subcatenate *Ovularia* 4:139
- 2. Conidia asperate, spiny or tuberculose-stellate
  - a. Conidia globose
    - (1) Conidia intercalary, verrucose; terminal one with a seta *Chaetoconidium* 10:544
    - (2) Conidia not intercalary or setose
      - (a) Conidia acrogenous; hyphae loose, cobwebby *Sepedonium* 4:146
      - (b) Conidia pleurogenous; hyphae dense
        - x. Sterile hyphae granulate; mass resembling a sporodochium; conidia asperate *Volutellis*
        - y. Sterile hyphae not granulate; mass forming a subgelatinous pellicle; conidia spiny
          - Pellicularia* 4:149
          - Ramulaspera* 18:532
          - Asterophora* 4:148; 54
  - b. Conidia oblong to cylindric, spiny *Gonatobotrytae*
  - c. Conidia tuberculose-stellate, globose *Gonatorhodis* 10:548
- D. Conidia grouped on inflated joints of the hyphae
  - 1. Joints muricate or punctate
    - a. Conidia catenate, forming a globose head *Gonatobotrys* 4:169; 54
    - b. Conidia not catenate *Nematogonium* 4:170
  - 2. Joints smooth; conidia not catenate

**Hyalodidymae**

4:176, 10:548, 11:600, 14:1057, 16:1038, 18:539, 22:1305

Conidia 2-celled, hyaline or bright-colored, globose to oblong or fusoid

**A. Conidia catenate**

- 1. Conidiophores ramose, dichotomous or verticillate
  - a. Conidia ellipsoid *Didymocladium* 4:186
  - b. Conidia cylindric *Hormiactina*

2. Conidiophores simple
- a. Conidia ovoid; conidiophores short Diploospora
  - b. Conidia oblong to cylindric; conidiophores longer; chains binate or ternate, acropleurogenous Hormiactis 4:186
- B. Conidia not catenate
1. Saprogenous
- a. Conidia smooth
    - (1) Conidiophores ramose
      - (a) Conidiophores verticillate or dichotomous
        - x. Conidiophores verticillate Diplocladium 4:176
        - y. Conidiophores dichotomous; sterigmata subternate Cylindrocladium 11:600
      - (b) Conidiophores more or less irregularly ramose Diplosporium 4:178
    - (2) Conidiophores simple or nearly so
      - (a) Conidiophores inflated at apex or joints
        - x. Conidiophores denticulate inflated at apex only Diplorhinotrichum 18:540
        - y. Conidiophores inflated at both joints and apex Arthrobotrys 4:181; 54
      - (b) Conidiophores not inflated
        - x. Conidia spirally pleurogenous Haplariopsis 18:539
        - y. Conidia acrogenous or acropleurogenous, capitate or solitary
          - (x) Conidia capitate Cephalothecium 4:180; 54
          - (y) Conidia solitary
            - m. Conidiophores very short, like the sterile hyphae Didymopsis 4:182
            - n. Conidiophores long, unlike the sterile hyphae Trichothecium 4:178
    - b. Conidia echinulate; conidial cells unequal Mycogone 4:183; 54

2. Biogenous

    - a. Conidia obliquely beaked, cylindric Rhynchosporium 18:540
    - b. Conidia not obliquely beaked
      - (1) Conidiophores more or less dichotomous
        - (a) Conidia piriform, binate; hyphae gemmiferous; lichenicole Lindauopsis 22:1306
        - (b) Conidia fusoid-cylindric, single; hyphae normal; not lichenicole Ramulariopsis 22:1307
      - (2) Conidiophores simple
        - (a) Conidiophores spirally twisted Bostrichonema 4:185
        - (b) Conidiophores not spirally twisted Didymaria 4:184

#### Hyalophragmiae

4:188, 10:551, 11:601, 14:1059, 16:1041, 18:544, 22:1309

Conidia x-celled, hyaline or bright-colored, ovoid to oblong or cylindric

#### Micronemeae

Hyphae very short and little different from the conidia

- A. Conidia catenate, cylindric; hyphae very short or obsolete Septocylindrium 4:223

## MONILIACEAE

### B. Conidia not catenate

1. Conidiophore 3-celled, upper cell much inflated Milowia 4:222
2. Conidiophore not inflated, often obsolete
  - a. Conidia ciliate at apex and upper septum Mastigosporium 4:220
  - b. Conidia not ciliate
    - (1) Conidia cylindric, cohering at base and forming a radiate capitule Psammina 10:498
    - (2) Conidia not coherent into a radiate capitule
      - (a) Hyphae lacking or very short
        - x. Conidia ellipsoid; mycelium endophytic Amastigis
        - y. Conidia long fusoid, often curved Fusoma 4:220
      - (b) Hyphae distinct, creeping
        - x. Conidia in mucose glomerules Rotaea 4:222
        - y. Conidia in subglobose fascicles, not mucose Paraspora 4:222

### Macronemeae

Hyphae manifest and distinct from the conidia

### A. Saprogenous

1. Conidia capitate or fascicled
  - a. Conidia capitate
    - (1) Conidiophores vesiculose at tip; fimicole Cephalophora 18:544
    - (2) Conidiophores not vesiculose; rarely fimicole
      - (a) Conidiophores verticillate Mucrosporium 4:190
      - (b) Conidiophores simple Dactylaria 4:194
  - b. Conidia fascicled; conidiophores irregularly ramosae
    - (1) End branches lageniform, rostrate, bearing a dense fascicle of conidia Moeszia
    - (2) End branches dichotomous, terete; conidia single but forming a loose fascicle Candelospora
2. Conidia solitary
  - a. Conidiophores ramosae
    - (1) Conidiophores verticillate Dactylium 4:188
    - (2) Conidiophores more or less irregularly ramosae
      - (a) End branches corymbose-fascicled; conidia dolioloid Gueguenia 22:1328
      - (b) End branches single; conidia fusoid to clavate Blastotrichum 4:191; 54
  - b. Conidiophores simple or nearly so
    - (1) Sterile hyphae obsolete
      - (a) Conidia doliform; conidiophores granulate Pithomyces 4:693
      - (b) Conidia ellipsoid to cylindric; conidiophores smooth Dactylella 4:193
    - (2) Sterile hyphae present, often abundant
      - (a) Conidia with a whorl of 3-5 blunt appendages at the apex Triposporina
      - (b) Conidia not appendaged

- x. Conidia at right angles to the conidiophore, forming secondary pleurogenous conidia successively to produce dendroid masses Varicosporium 22:1329
  - y. Conidia not at right angles or in dendroid masses; fimicole Monacrosporium 4:193
- B. Biogenous**
- 1. Conidia mucose-conglobate, allantoid, often continuous Allantospora 14:1043
  - 2. Conidia otherwise
    - a. Conidia with a filiform seta at apex Trichoconis 18:545
    - b. Conidia not ciliate
      - (1) Conidia obclavate-piriform Piricularia 4:217
      - (2) Conidia cylindrical or clavoid, often catenate, sometimes 1-2-celled Ramularia 4:196; 54

**Hyalodictyae**

11:608, 18:561, 22:1330

Conidia muriform, hyaline, globose to elliptic

- A. Conidiophores with clavate-nodose joints; conidia usually 2-3 catenate** Gilletia
- B. Conidiophores not clavate-nodose**
  - 1. Conidia stipitate, smooth; forming gall-like bodies Coniodictyum 22:1330
  - 2. Conidia not stipitate, verrucose; on germinating seeds Stemphyliopsis 18:561

**Scolecosporae**

4:218, 22:1331

Conidia more or less broadly filiform, septate, hyaline

- Biogenous, folicole; conidia typically much more than 10 times longer than wide Cercosporella 4:218

**Staurospora**

4:230, 10:567, 11:608, 14:1067, 16:1049, 18:559

Conidia forked or lobed, radiate or stellate, hyaline or bright-colored, septate or continuous

- A. Conidia globose to cylindric, with 2-3 divergent sterigma-like appendages permanently attached** Tetracladium 14:1067
- B. Conidia themselves lobed, radiate or stellate**
  - 1. Conidia lobed, the lobes more or less parallel
    - a. Conidia 1-celled, 6-lobed, outer divisions arcuate Monogrammia
    - b. Conidia 5-celled, bilobate-furcate, lobes parallel, contiguous Pedilospora 18:559
  - 2. Conidia long-digitate, the divisions prismatic Prismaria 4:230
  - 3. Conidia radiate or radiate-sarciniform
    - a. Conidia 3-5-radiate
      - (1) Conidia ciliate
        - (a) Conidia 5-radiate, 3 cells 1-ciliate, 2 muticate Titaea 4:231; 54
        - (b) Conidia 4-radiate, all cells 1-ciliate Lemonniera 14:1067

- (2) Conidia not ciliate, 3-radiate; rays 4-5-septate  
 b. Conidia radiate-sarciniform, a central cell with an enclosing circle of 5-6 others  
 (1) Conidia with 3 long setae from the base of the central cell; marginal cells 5, all in one plane  
 (2) Conidia not setulose; marginal cells 6; central cell larger, colored; lobes in 3 planes
- Trinacrium 4:231  
 Aorate  
 Stephanoma 4:753, 11:608

**Helicosporae**

4:233, 10:568, 11:608, 22:1332

Conidia spirally curved, hyaline or bright-colored, cylindrical

- A. Conidia catenate; conidiophores and chains ramose  
 B. Conidia not catenate  
 1. Conidia concentrically coiled  
 2. Conidia spirally twisted into a conic or ovoid tube
- Helicodendrum  
 Helicomycetes 4:233; 54  
 Helicoum 11:609

**Family 86. DEMATIACEAE**

Hyphae typically dark, olive to brown or black, rarely hyaline but the conidia then dark, loose and byssoid, more or less rigid, rarely fasciculate; sterile and fertile hyphae or conidiophores both present as a rule, the latter differentiated by means of vesicles, whorls, basidia, sterigmata, etc.; conidia typically dark, but sometimes hyaline.

**Amerosporae**

2:235, 10:569, 11:610, 14:1068, 16:1059, 18:563, 22:1337

Conidia 1-celled, dark, or sometimes hyaline but the hyphae then dark, globose to oblong

**Micronemeae**

Hyphae very short or scarcely different from the conidia

- A. Conidia catenate  
 1. Conidia of two sorts, the larger catenate, the smaller glomerate  
 2. Conidia alike  
 a. Hyphae dark  
 (1) Conidial chains breaking up readily  
 (a) Conidia globose to oblong  
 (b) Conidia clavate  
 (2) Conidial chains breaking with difficulty or not at all  
 (a) Chains curved  
 (b) Chains straight or nearly so  
 b. Hyphae hyaline  
 B. Conidia not catenate  
 1. Conidia in heads or racemes, piriform to lageniform
- Heterobotrys 4:267  
 Torula 4:247; 55  
 Gongromeriza 4:263  
 Gyroceras 4:266  
 Hormiscium 4:263  
 Torulina 18:566  
 Echinobotryum 4:268; 55

2. Conidia solitary, globose to fusoid  
 a. Conidia globose to elliptic  
   (1) Sterile hyphae nearly obsolete                    *Coniosporium* 4:238; 55  
   (2) Sterile hyphae elongate                            *Cordella* 10:586  
 b. Conidia fusoid or elongate                            *Fusella* 4:246

#### Macronemeae

Hyphae manifest and distinct from the conidia

- A. Conidia dark, rarely subhyaline  
 1. Conidia endogenous  
 a. Conidia catenate  
   (1) Conidia of two kinds, endogenous and exogenous  
     (a) Both kinds of conidia catenate, the endogenous smaller cylindrical hyaline, the exogenous larger ovate fuscous                    *Thielaviopsis* 11:612  
     (b) Exogenous conidia not catenate                    *Chalaropsis*  
   (2) Conidia alike  
     (a) Conidiophores ramose  
       x. Conidiophores verticillate-aggregate; conidia at first capitulate, then catenulate                    *Rhacodiella*  
       y. Conidiophores not verticillate nor conidia capitulate                    *Sporendonema* 11:515  
     (b) Conidia simple or nearly so  
       x. Conidia mucose, finally conglobate at the apex; saprogenous                    *Gliomastix* 22:1347  
       y. Conidia not mucose or conglobate; biogenous                    *Columnophora*  
   b. Conidia not catenate  
     (1) Conidia arising singly in substipitate vesicles                    *Conioscypha* 18:572  
     (2) Conidia several from a lageniform or elongate terminal cell of 2-3-celled branches                    *Cadophora*  
 2. Conidia exogenous  
 a. Conidia catenate  
   (1) Conidiophores spirally twisted, forming a head of conidia                    *Helicocephalum* 10:512  
   (2) Conidiophores not spirally twisted  
     (a) Conidiophores with verticillate basidia on the swollen nodes                    *Gonatorhodum* 4:168  
     (b) Conidiophores torulose, muriculate, intermixed with long rigid setae                    *Lacellina*  
     (c) Conidiophores otherwise  
       x. Conidial chains simple; sterile hyphae creeping  
         (x) Conidiophores vesiculose-inflated at apex                    *Rhopalocystis*  
         (y) Conidiophores not vesiculose-inflated  
           m. Conidia verruculose, the chains botryose-aggregate, forming irregular heads                    *Pachytrichum*  
           n. Conidia not verruculose

- (m) Conidiophores simple or sparingly ramose
  - r. Chains of conidia terminal, solitary
    - (r) Conidia connected by cylindrical isthmi **Prophytroma 4:309**
    - (s) Conidia without isthmi **Catenularia 4:303**
    - s. Chains of conidia lateral **Dematium 4:308**
  - (n) Conidiophores more or less dendroid-ramose **Hormodendrum 4:310; 55**
- y. Conidial chains ramose; sterile hyphae erect and mixed with the fertile ones **Hormiactella 4:311**
- b. Conidia not catenate
  - (1) Conidia capitate
    - (a) Saprogenous
      - x. Conidiophores simple, with or without basidia
        - (x) Conidiophores with basidia
          - m. Basidia terminal, umbellate **Stachybotrys 4:269; 55**
          - n. Basidia lateral, irregularly disposed **Periconia 4:270**
        - (y) Conidiophores without basidia
          - m. Conidia globose **Trichobotrys 18:571**
          - n. Conidia fusoid, sometimes subhyaline **Acrotheca 4:276**
      - y. Conidiophores ramose at the apex
        - (x) Conidiophores scopiform at apex; conidia oblong, 1-3 at each tip **Acrodesmis**
        - (y) Conidiophores with 2-3-furcate spine-bearing branches; conidia globose **Cephalotrichum 4:275**
    - z. Conidiophores ramose much below the apex
      - (x) Conidiophores furcate or dichotomous
        - m. Conidiophores 1-furcate **Synsporium 4:278**
        - n. Conidiophores repeatedly dichotomous **Dicyma 18:570**
      - (y) Conidiophores verticillately or irregularly ramose; heads mucose
        - m. Conidiophores verticillately ramose **Leptographium**
        - n. Conidiophores with short more or less opposite branches **Phialophora**
  - (b) Biogenous
    - x. Conidia globose; conidiophores swollen above, bearing 3-4 basidia **Haplobasidium 10:578**
    - y. Conidia ovoid to oblong
      - (x) Conidiophores swollen above, without basidia; conidia globoid **Stachybotryella 18:570**
      - (y) Conidiophores ramose above; conidia oblong **Periconiella 4:275**
- (2) Conidia verticillate-pleurogenous
  - (a) Hyphae dark, nodose-inflated and denticulate; conidia ovoid **Gonatobotryum 4:278; 55**
  - (b) Hyphae hyaline, not nodose-inflated and denticulate, but with thick septa

- x. Conidia globoid-angulate, stipitellate **Goniosporium 4:280**  
y. Conidia oblong to fusoid, not stipitellate **Arthrinium 4:279**
- (3) Conidia mostly single and acrogenous, rarely clustered and acropleurogenous  
(a) Conidiophores vesiculose-inflated or ramose  
x. Conidiophores vesiculose-inflated  
(x) Vesicles pleurogenous **Oedemium 4:297**  
(y) Vesicles acrogenous, with a hilum at tip **Cystophora 4:298**  
y. Conidiophores ramose  
(x) Saprogenous  
m. Conidiophores erect  
(m) Branches circinate or spirally twisted  
r. Branches circinate at apex; conidia intercalary, muriculate **Acrospira 4:282**  
s. Branches spirally twisted; conidia not intercalary **Streptothrix 4:282; 55**  
(n) Branches straight, sometimes furcate, rarely none **Virgaria 4:280**  
n. All hyphae more or less creeping  
(m) Branches curved or lash-like **Campsotrichum 4:295**  
(n) Branches not curved  
r. Conidia spiny **Zygodemus 4:283; 55**  
s. Conidia smooth **Trichosporium 4:288**  
(r) Conidia sessile  
(s) Conidia on stalks or basidia  
h. Conidia on tooth-like sterigmata **Rhinocladium 4:295**  
i. Conidia on doliform basidia **Basisporium 18:533**  
(y) Biogenous  
m. Conidia pleurogenous, sessile, on radiate hyphae from a sclerotium parasitic in the ovaries of grasses **Ustilaginodes 17:492**  
n. Conidia not from a sclerotium  
(m) Conidiophores vesiculose at tip; conidia 4-8-superposed, verruculose **Hemispora 22:1346**  
(n) Conidiophores not vesiculose; conidia solitary, smooth **Glenspora 4:298; 55**
- (b) Conidiophores simple or nearly so  
x. Sterile hyphae lacking or obsolescent **Monotospora 4:299**  
y. Sterile hyphae present **Zygodemella**  
(x) Conidia verrucose, pedicellate  
(y) Conidia not verrucose or pedicellate  
m. Sterile hyphae bearing curved blunt bristles and 2-3-celled conidiophores **Pirostomella**  
n. Sterile hyphae without bristles  
(m) Conidia in pairs at the apex **Microclava**  
(n) Conidia single  
r. Conidia in a dense cylindric mass **Microtypha 22:1352**  
s. Conidia not in a dense mass **Acremoniella 4:302**



## B. Conidia hyaline or subhyaline

1. Conidia acrogenous on short heteromorphic basidia on the lower part or at the base of erect hyphae
  - a. Conidia capitata-glomerate; sterile hyphae much branched below Myxotrichella 4:317, 14:57
  - b. Conidia not capitata
    - (1) Conidia loosely catenate Stirochaete 4:316
    - (2) Conidia not catenate
      - (a) Erumpent; conidia 1-setose above, fusoid, curved Ellisiella 4:315
      - (b) Superficial; conidia not setose
        - x. Sterile hyphae ramose
          - (x) Hyphae irregularly ramose; basidia verticillate Costantinella 16:1054
          - (y) Hyphae repeatedly dichotomous; basidia terete, basal Circinotrichum 4:314
          - (z) Hyphae reticulate-anastomosing; basidia clavate, basal Dictyochaeta
        - y. Sterile hyphae simple
          - (x) Conidia globose
            - m. Biogenous; setae marginal Peziotrichum 11:614
            - n. Saprogenous; setae not marginal Botryotrichum 4:313
          - (y) Conidia bacillar
            - m. Sterile hyphae tortuose Sarcopodium 4:312:55
            - n. Sterile hyphae circinate Helicotrichum 4:313
  2. Conidia on normal hyphae
    - a. Conidia endogenous, catenate
      - (1) Sterile hyphae present; conidiophores verticillate-ramose, end branches with oblong cysts Cystodendrum
      - (2) Sterile hyphae obsolete; conidiophores simple
        - (a) Conidia in simple chains Chalara 4:333
        - (b) Conidia conglutinate into a long curl Cirromyces 18:627
    - b. Conidia exogenous
      - (1) Conidia capitata
        - (a) Conidiophores verticillately ramose Stachylidium 4:331:56
        - (b) Conidiophores pencillately ramose; conidia mucose Scopularia 4:330
        - (c) Conidiophores simple, with basidia at tip
          - x. Basidia verticillate Fuckelina 4:330
          - y. Basidia irregular Pimina 16:1054
      - (2) Conidia not capitata
        - (a) Conidiophores ramose
          - x. Conidiophores erect
            - (x) Conidiophores verticillately ramose Verticicladium 4:327
            - (y) Conidiophores more or less irregularly ramose
          - m. Conidia 1-ciliate at each end, falcate Eriomene 4:326
          - n. Conidia not ciliate
          - (m) Conidia globose to ovoid Mesobotrys 4:324; 55

- (n) Conidia oblong-cylindric **Chaetopsis**
- (o) Conidia falcate **Menispora 4:325**
- y. Conidiophores more or less decumbent
- (x) Conidia muricate, not on spines **Actinochaete 22:1359**
- (y) Conidia smooth, borne on spines
- m. Conidiophores nodose-spiny here and there **Gonytrichum 4:329; 56**
- n. Conidiophores spiny but not nodose **Cladorhinum 4:330**
- (b) Conidiophores simple
- x. Conidiophores with a single lateral curved basidium at the base; conidia 2-4 **Zygosporium 4:328**
- y. Conidiophores with many pleurogenous conidia **Chloridium 4:320**

#### Didymosporae

4:341, 10:595, 11:616, 14:1077, 16:1056, 18:575, 22:1364

Conidia 1-celled, dark, rarely hyaline, ovoid to oblong or fusoid

#### Micronemeae

Hyphae very short or scarcely different from the conidia

- A. Conidia catenate **Bispora 4:343; 56**
- B. Conidia not catenate
- 1. Mycelium circinate **Cyloconium 4:343**
- 2. Mycelium obsolete **Dicoccum 4:342**

#### Macronemeae

Hyphae manifest and distinct from the conidia

- A. Conidia ciliate or muriculate
- 1. Conidia 1-ciliate at apex; sterile setae among the conidiophores **Beltrania 4:377; 56**
- 2. Conidia muriculate; sterile setae none
- a. Saprogenous; hyphae decumbent **Trichocladium 4:376**
- b. Biogenous; hyphae erect, fasciculate **Hadronema 22:1365**
- B. Conidia not ciliate or muriculate
- 1. Conidia capitate
- a. Conidiophores simple
- (1) Conidiophores with a muriculate vesicle at tip **Muchmoria 22:1364**
- (2) Conidiophores not inflated at tip **Cordana 4:376**
- b. Conidiophores bearing muriculate vesicles at apex and at tips of short laterals **Cephalomyces 22:1365**
- c. Conidiophores with intercalary muriculate vesicles **Arthrobotryella**
- 2. Conidia not capitate
- a. Conidia more or less catenate at first, the chains often short
- (1) Hyphae and conidia of two kinds, hyaline and dark; dark conidia 2-celled catenate, hyaline conidia 1-celled, not catenate **Epochnium 4:375**
- (2) Hyphae and conidia of one kind

- (a) Joints of conidiophore more or less inflated and clavoid *Cladotrichum* 4:370; 56
- (b) Joints not inflated
- x. Conidiophores erect; conidia long-catenate *Diplococcium* 4:374
- y. Conidiophores somewhat decumbent; conidia 2-3 in chains, often solitary *Cladosporium* 4:350
- b. Conidia not catenate
- (1) Conidiophores beautifully flexuous or torulose *Polythrincium* 4:350; 56
- (2) Conidiophores not flexuous or torulose
- (a) Conidiophores inflated, repeatedly ramose; conidia rhomboid *Pseudobeltrania* 18:578
- (b) Conidiophores with somewhat globose denticulate joints, bearing 1-x conidia, simple *Gonyella*
- (c) Conidiophores not inflated, simple or sparsely branched
- x. Conidia verrucose *Asperisporium*
- y. Conidia not verrucose
- (x) Conidia acrogenous *Fusicladium* 4:345
- (y) Conidia acropleurogenous
- m. Conidiophores simple, short, fasciculate, mostly erect *Scolecotrichum* 4:347
- n. Conidiophores more or less ramose, longer, somewhat decumbent *Cladosporium* 4:350

**Phragmosporae**

4:380, 10:606, 11:621, 14:1082, 16:1060, 18:581, 22:1379

Conidia 2-x-celled, dark, rarely hyaline, ovoid to cylindrical or vermicular

**Micronemeae**

Hyphae very short or little different from the conidia

- A. Conidia catenate
1. Conidia connected by isthmi *Polydesmus* 4:401
2. Conidia without isthmi *Septonema* 4:397; 56
- B. Conidia not catenate
1. Conidia 1-3-rostellate at apex
- a. Conidiophores dichotomous and broadened at apex *Urosporium* 4:397
- b. Conidiophores not dichotomous or broadened *Ceratophorum* 4:395
2. Conidia muticate
- a. Conidia ovoid to cylindrical, straight
- (1) Saprogenous *Clasterosporium* 4:382
- (2) Phyllogenous *Stigmina* 4:394
- b. Conidia fusoid-falcate *Fusariella* 4:395; 56

**Macronemeae**

Hyphae long or distinctly different from the conidia

- A. Conidia endogenous
1. Conidia catenate, dark *Sporoschisma* 4:486; 56
2. Conidia not catenate, hyaline *Excioconis*

B. *Conidia exogenous*1. *Conidia catenate*a. *Conidia connected by isthmi**Peyronelia*b. *Conidia without isthmi**Dendryphium* 4:4872. *Conidia not catenate*a. *Conidia capitate or verticillate*(1) *Conidia acrogenous, capitate*(a) *Conidiophores ramose at tip; heads mucose**Atractina* 18:584(b) *Conidiophores simple, with sterigmata; heads not mucose**Acrothecium* 4:483; 56(2) *Conidia pleurogenous, verticillate*(a) *Conidia verticillate at the apex**Spondylocladium* 4:482(b) *Conidia subverticillate at the enlarged middle; tip of conidiophore naked and rostrate**Rhynchomyces* 18:584b. *Conidia not capitate or verticillate, solitary or few in a group*(1) *Conidia ciliate*(a) *Conidia dark, 2-(1-3) ciliate at apex**Camarosporium* 4:482(b) *Conidia hyaline, 1-ciliate at each end**Eriomenella* 4:326(2) *Conidia not ciliate*(a) *Conidiophores with nodes or cyathiform appendages*x. *Conidiophores with nodes; conidia acrogenous and also pleurogenous on the nodes**Dendryphiella*y. *Conidiophores with a cup-like membrane at 1-2 septa; conidia acrogenous, large**Endophragma*(b) *Conidiophores otherwise*x. *Conidia echinulate**Heterosporium* 4:480y. *Conidia smooth*(x) *Saprogenous*m. *Hyphae of two kinds, one torulose with 2-celled conidia, the other not torulose, with x-celled conidia**Hyphosoma*n. *Hyphae of one kind*(m) *Conidia of two kinds, one subfusoid, dark, the other filiform-falcate, hyaline**Jainesia*(n) *Conidia of one kind*r. *Sterile hyphae present*(r) *Hyphae intracellular, algicole; conidia torulose**Blodgettia* 10:664(s) *Hyphae not intracellular; conidia not torulose*h. *Conidia falcate; conidiophores with basidia**Drepanospora* 4:430i. *Conidia ellipsoid; basidia lacking**Stemphyliomma* 22:1394s. *Sterile hyphae lacking*(r) *Conidia ovoid, few-septate**Brachysporium* 4:423

- (s) Conidia elongate, typically many-septate Helminthosporium 4:402; 56
- (y) Biogenous
- m. Hyphae creeping
- (m) Hyphae radiate, without setae; conidia ellipsoid Ophiotrichum 10:617
- (n) Hyphae not radiate, with setae
- r. Hyphae with hyphopodia; conidia long-rostellate Chiropodium
- s. Hyphae without hyphopodia; conidia long, not rostellate Chaetotrichum
- n. Hyphae erect, fasciculate; conidia ovoid Cercosporidium 18:594

#### Dictyosporae

4:496, 10:665, 11:632, 14:1090, 16:1075, 18:612, 22:1399

Conidia muriform, dark, rarely hyaline, globose to oblong

#### Micronemeae

Hyphae very short or scarcely different from the conidia

- A. Conidia catenate Sirodesmium 4:516; 56
- B. Conidia not catenate
1. Conidia 3-4-rostrate at apex Tetraploa 4:516
2. Conidia not rostrate
- a. Conidia composed of parallel chains of cells
- (1) Chains never separating Dictyosporium 4:513; 56
- (2) Chains separating Spira 4:514
- b. Conidia irregularly muriform or sarciniform
- (1) Conidia with a conic point at each side Oncopodium 18:616
- (2) Conidia muticate
- (a) Conidia sarciniform, irregular, often coalescent Coniothecium 4:508
- (b) Conidia globose to oblong
- x. Conidia globose-ovoid, aggregated, on ramose hyphae Stigmella 4:507
- y. Conidia ovoid-oblong, single, on short simple hyphae Sporodesmium 4:497; 56

#### Macronemeae

Hyphae long or distinctly different from the conidia

- A. Conidia of two kinds, dark sarciniform and sub-hyaline falcate Sarcinella 4:458; 57
- B. Conidia alike
1. Conidia catenate
- a. Conidia connected by isthmi, then caudate; hyphae velvety, subsimple Alternaria 4:545; 57
- b. Conidia without isthmi, not caudate; hyphae crustose, typically branched Fumago 4:457
2. Conidia not catenate
- a. Conidia capitata Dactylosporium 4:545
- b. Conidia not capitata

- (1) Hyphae of two kinds, longer sterile,  
shorter fertile **Septosporium 4:543**
- (2) Hyphae of one kind
- (a) Conidia subreniform, bearing globose  
conidioles **Xenosporium 18:612**
- (b) Conidia without conidioles
- x. Conidia cruciate-divided, verrucose **Tetracoccusporis 18:617**
- y. Conidia not cruciate, muriform, smooth
- (x) Conidia reniform or semicircular
- m. Conidia inversely reniform, enclosed  
in a clear semi-gelatinous vesicle **Coleodictys**
- n. Conidia semi-circular, half surround-  
ing a globose cell **Xenosporella**
- (y) Conidia otherwise
- m. Conidiophores decumbent **Stemphylium 4:519**
- n. Conidiophores erect or ascending
- (m) Conidia globose, pleurogenous
- r. Conidia around the apex of the  
hyphae **Coccusporium 4:542**
- s. Conidia conglobate around the  
base of the hyphae **Trichaeum 4:542**
- (n) Conidia ovoid to oblong, typically  
acrogenous **Macrosporium 4:523; 56**

**Scolecosporae**

4:431, 14:1099, 22:1432

Conidia long-filiform or vermicular

- A. Conidia hooked at apex; sphagnicole **Casaresia**
- B. Conidia not hooked; not sphagnicole **Cercospora 4:431; 56**

**Staurosporae**

4:552, 11:639, 14:1107, 16:1181, 18:625, 22:1411

Conidia forked or stellate, usually dark, septate or continuous

- A. Conidia of two forms, large lobate x-celled dark,  
small fusoid hyaline **Desmidiospora 10:568**
- B. Conidia alike
1. Conidiophores present
- a. Conidia 2-4-radiate **Triposporium 4:554; 57**
- b. Conidia anchor-like, rostrate at apex **Teratosperma 22:1411**
2. Conidiophores lacking
- a. Conidia 3-x-forked or united at base; sterile  
hyphae present; xylogenous **Ceratosporium 4:552**
- b. Conidia horseshoe-shaped, aggregate; sterile  
hyphae lacking; phyllogenous **Hirundinaria 4:553**

**Helicosporae**

4:557, 10:680, 11:638, 14:1107, 16:1081, 18:625, 22:1435

Conidia spiral or convolute, cylindrical, dark or hyaline, typically septate

- A. Conidia relatively thick, not hygroscopic **Helicoma 11:638**
- B. Conidia relatively thin, hygroscopic **Helicosporium 4:557; 57**

## Family 87. TUBERCULARIACEAE

Hyphae compacted into a globose, pulvinate, discoid or verruciform body or sporodochium; sporodochia typically sessile, erumpent or superficial, byssoid, waxy, fleshy or subgelatinous, hyaline, bright-colored, or dark to black; conidiophores typically long and ramose, sometimes short and simple or rarely obsolete, usually not arising from a cellular stroma-like base; conidia various, lacking in one anomalous group, as are the conidiophores also.

This family is more or less readily distinguished from the *Moniliaceae* and *Dematiaceae* by the presence of a sporodochium, and from the *Stilbaceae* by the practically universal sessile habit. On the other hand, there is no satisfactory distinction between it and the *Melanconiaceae*, as the two groups are at present constituted, and genera with short simple conidiophores must be sought in both. These are thought to belong properly in the *Melanconiaceae*, but this transfer has not been made, owing to the number of genera concerned and the inadequacy of many of the descriptions. Properly limited, the *Tuberculariaceae* comprise only those genera with long and typically branched conidiophores without a basal stroma. The distinction drawn by Hoehnel with respect to the insertion of the spore-body in the matrix, i. e., persistently innate in the one and erumpent-superficial in the other, may possess some validity, but it is not a practicable criterion.

An anomalous group without conidiophores and conidia is referred to this family by virtue of the possession of a sporodochium.

## Mucedineae

Hyphae and conidia hyaline or bright-colored

## Amerosporae

4:635, 10:700, 11:645, 14:1115, 16:1090, 18:658, 22:1458

Conidia 1-celled, hyaline or bright-colored, globose to fusoid

- A. Conidia and conidiophores present, or the latter rarely obsolete
1. Sporodochia hairy or setulose
    - a. Conidia catenate; conidiophores simple, short **Volutina 18:667**
    - b. Conidia not catenate
      - (1) Conidia ciliate **Neottiosporis H 445**
      - (2) Conidia not ciliate
        - (a) Sporodochia more or less uniformly setulose
          - x. Conidiophores dendroid-ramose
            - (x) Setae spirally twisted; conidia acropleurogenous **Perioloopsis H 446**
            - (y) Setae not spiral; conidia acrogenous **Trichofusarium 22:1473**
          - y. Conidiophores simple
            - (x) Sporodochia short-stalked **Thysanopyxis H 451**
            - (y) Sporodochia not stalked **Psilonia**
        - (b) Sporodochia ciliate at margin
          - x. Conidiophores obsolete; conidia coacervate **Volutellaria 4:682**
          - y. Conidiophores present, simple
            - (x) Conidiophores 6-ciliate above, united below **Guelichia 10:720**
            - (y) Conidiophores not ciliate or united **Volutella 4:682; 58**

2. Sporodochia glabrous, or rarely velvety
- a. Conidia catenate
- (1) Conidia ciliate
- (a) Conidia 1-ciliate at each end
- x. Conidia spinulose *Amphichaetella*
- y. Conidia smooth *Thozetia* 4:679
- (b) Conidia 7-8-ciliate at each end *Chaetospermum* 10:706
- (2) Conidia not ciliate
- (a) Conidia covered with mucus *Collodochium* 18:661
- (b) Conidia without mucus
- x. Spores globose *Sphaerocolla* 11:648
- y. Spores more or less cylindrical
- (x) Sporodochia gelatinous, verruciform, sessile *Cylindrocolla* 4:673; 58
- (y) Sporodochia not gelatinous
- m. Sporodochia globose, short-stalked *Sphaeridium* 4:675
- n. Sporodochia pulvinate to discoid, sessile
- (m) Sporodochia dark, without hypostroma *Blennoria* 3:730; 52
- (n) Sporodochia bright, with hypostroma *Sirodochiella*
- b. Conidia not catenate
- (1) Conidia endogenous
- (a) Conidia globoid; conidiophores 2-3-ramose *Endoconidium* 10:708
- (b) Conidia ovoid, minute; conidiophores obclavate, short *Hymenella* 16:1105
- (2) Conidia exogenous
- (a) Conidiophores ramose
- x. Conidiophores verticillate or dichotomous
- (x) Conidiophores verticillate or penicillate
- m. Conidiophores verticillate
- (m) Conidia in mucose capitules *Haplariella* H 430
- (n) Conidia not in mucose capitules *Verticillis* H 431
- n. Conidiophores penicillate; conidia in small lateral heads *Cephalodochium* 4:678
- (y) Conidiophores dichotomous
- m. Each fork with two sterigmata *Ranojevicia* 22:1487
- n. Forks without sterigmata *Dendrodochium* 4:650; 58
- y. Conidiophores dendroid or irregularly ramose
- (x) Conidiophores dendroid-ramose
- m. Conidia acrogenous *Fusicolla* 4:664
- n. Conidia acropleurogenous *Pleurocolla*
- (y) Conidiophores irregularly ramose, the branches few or short
- m. Conidia globose, pleurogenous *Dacrymycella* 4:671
- n. Conidia sigmoid, acrogenous *Sigmatomyces* H 470
- o. Conidia ovoid to oblong



- (m) Conidia acrogenous
    - r. Sporodochia globose; hyphae and conidiophores radiate **Granularia 4:649**
    - s. Sporodochia verruciform or tuberculate; not radiate **Tubercularia 4:638; 58**
  - (n) Conidia acropleurogenous **Tubercularis 22:1460**
  - (b) Conidiophores simple or nearly so
    - x. Conidia globose
      - (x) Conidia acrogenous
        - m. Sporodochia gelatinous; conidia capitate **Dacryodochium 14:1122**
        - n. Sporodochia hard; conidia not capitate; mostly uredicole **Tuberculina 4:653; 58**
      - (y) Conidia pleurogenous; conidiophores spirally twisted **Beniowskia 16:1091**
    - y. Conidia ovoid to oblong or lunate, rarely globoid
      - (x) Conidia very large
        - m. Sporodochia plane to pulvinate, superficial, yellow-brown **Coccospora 4:9, H 423**
        - n. Sporodochia discoid, erumpent, bright-colored **Tuberculis' H 424**
      - (y) Conidia medium to minute
        - m. Conidia capitate; sporodochium subglobose, gelatinous, white **Lachnodochium 14:1122**
        - n. Conidia not capitate
          - (m) Conidia lunulate; sporodochia pulvinate, fleshy **Menoidea 22:1463**
          - (n) Conidia not lunulate
            - r. Sporodochium disciform, bright-colored **Hymenula 4:667**
            - s. Sporodochium white to pale or brownish
      - (r) Sporodochium convex to pulvinate
        - h. Sporodochia with hard hypostroma; conidiophores not papillate; typically gramini-cole **Sphacelia 4:666**
        - i. Sporodochia slimy-gelatinous; conidiophores 2-papillate; fungicole **Tremellidium**
    - (s) Sporodochia globoid, white or hyaline
      - h. Conidiophores papilliform **Microdochium**
      - i. Conidiophores filiform, radiate **Leucodochium**
- B. Conidia and conidiophores lacking, or imperfect
  - 1. Sporodochia innate, rounded, falling apart in polygonal cells, orange-red **Necator 16:1094**
  - 2. Sporodochia superficial
    - a. Sporodochia bright-colored **Illosporium 4:656**
    - b. Sporodochia white or pale **Aegerita 4:661**

**Didymosporae**

4:690, 10:721, 18:668, 22:1473

Conidia 2-celled, hyaline or bright-colored, ovoid to fusoid

- A. Sporodochia setulose; conidiophores obsolete
1. Conidia catenate, with an obtuse appendage at each end Endodesmia 4:691
  2. Conidia not catenate or appendaged Leptotrichum 4:690
- B. Sporodochia glabrous
1. Conidia catenate
    - a. Conidiophores dichotomous; conidia lunate-fusoid Fusisporella 22:1473
    - b. Conidiophores simple; conidia elliptic Gymnodochium 18:668
  2. Conidia not catenate
    - a. Conidia with a lateral seta at each end Dithozetia
    - b. Conidia not setulose
      - (1) Conidia verrucose, deeply constricted Cosmariospora 4:690; 58
      - (2) Conidia smooth, not constricted Patouillardia 10:721

**Phragmosporae**

4:691, 10:721, 11:649, 14:1123, 16:1097, 18:669, 22:1474

Conidia x-celled, hyaline or bright-colored, oblong to fusoid

- A. Sporodochia setulose, disciform; conidia cylindrical Volutelopsis 22:1488
- B. Sporodochia not setulose
1. Conidia somewhat catenate, cylindrical Discocolla 11:653
  2. Conidia not catenate or rarely so
    - a. Conidiophores ramose
      - (1) Conidiophores dichotomous; conidia large, key-like Heliscus 4:693
      - (2) Conidiophores mostly dendroid or verticillate; conidia usually fusoid-curved Fusarium 4:694; 58
    - b. Conidiophores simple; conidia large
      - (1) Sporodochia gelatinous; conidia bearing conidioles at tip and septa Xenogloea
      - (2) Sporodochia not gelatinous; conidioles lacking Bactridium 4:691; 58

**Dictyosporae**

18:676, 22:1487

Conidia muriform or cruciate, hyaline, subglobose to oblong

- A. Sporodochia globose, white; conidia single, large, muriform Sporocystis 18:676
- B. Sporodochia plane, yellow; conidia 3-5-congested, medium, cruciately 4-celled Sarcinodochium 18:677

**Scolecosporae**

16:1158, 22:1488

Conidia acicular to filiform, hyaline, continuous

- A. Conidiophores verticillate-ramose, short; conidia acro-pleurogenous Linodochium 22:1488
- B. Conidiophores simple, long; conidia acrogenous Kmetia 16:1158

**Staurosporae**

4:728, 16:1104, 18:677, 22:1489

Conidia variously united or forked, hyaline or bright-colored

- A. Conidia or cells united in the middle
1. Conidia consisting of septate parallel parts united in the middle Amallospora 14:1131
  2. Conidia consisting of a cylindric 2-celled middle part and 2 half-moon 1-celled smaller ones fastened in the middle Araneomyces 22:1489
- B. Conidia forked
1. Conidia consisting of a basal middle part, with a whorl of 2-7 cylindric septate branches Tetracium 18:560
  2. Conidia 2-forked, 5-celled Dicranidium 4:728
  3. Conidia 3-forked, 3-celled Triglyphium 4:728

**Helicosporae**

4:729, 10:732, 11:653, 18:678

Conidia spirally convolute or horseshoe-like

- A. Conidia spirally convolute
1. Conidia septate; sporodochia yellow, mucose Hobsonia 11:653
  2. Conidia continuous; sporodochia white, mealy Troposporium 4:729
- B. Conidia once coiled
1. Sporodochia gelatinous; conidial wall not very thick Delortia 6:795
  2. Sporodochia not gelatinous; conidia with thick hyaline wall Drepanoconis 17:519
- C. Conidia horseshoe-like; sporodochia white, globoid Lituraria 4:728

**Dematiaceae**

Hyphae olive to brown or black; conidia concolorous, sometimes hyaline

**Amerosporae**

4:736, 10:732, 11:654, 14:1129, 16:1104, 18:678, 22:1489

Conidia 1-celled, dark or sometimes hyaline, globose to elongate

- A. Conidia and conidiophores present, or the latter rarely obsolete
1. Sporodochia hairy or setulose
    - a. Conidia catenate, hyaline Chaetosira 22:1496
    - b. Conidia not catenate
      - (1) Sporodochia more or less uniformly setulose
        - (a) Conidia hyaline Periola 4:681; 58
        - (b) Conidia dark Chaetostroma 4:749; 58
      - (2) Sporodochia ciliate at margin
        - (a) Setae colored; sporodochia pale Amerosporis H 486
        - (b) Setae white; sporodochia dark, scutellate to discoid Myrothecium 4:750
  2. Sporodochia glabrous
    - a. Conidia catenate
      - (1) Conidia subhyaline; sporodochia scutellate, white-margined Myrotheciella 22:1493

- (2) Conidia dark; sporodochia otherwise
- (a) Conidiophores simple or ramose, radiate
- x. Conidiophores very short; conidia globose-angulate **Sphaeromyces 4:753**
- y. Conidiophores longer, often ramose; conidia oblong to cylindrical **Actinodochium**
- (b) Conidiophores obsolete or none
- x. Conidia asperulate **Spilodochium**
- y. Conidia smooth **Exosporina 18:684**
- b. Conidia not catenate
- (1) Conidia hyaline
- (a) Sporodochia with brown radiate subicle, discoid **Astrodochium 14:1117**
- (b) Sporodochia without subicle
- x. Conidia globose; sporodochia of 3 varicolored layers **Triplicaria 10:734**
- y. Conidia ovoid to cylindrical; sporodochia not layered
- (x) Sporodochia superficial, discoid, gelatinous; conidia long-bacillar **Hymenobactrum 4:747**
- (y) Sporodochia erumpent
- m. Conidiophores verticillate-ramose; conidia cylindrical, small, more or less capitate **Agyriella 3:731**
- n. Conidiophores simple, cylindrical
- (m) Conidia ovoid, not conglutinate **Melanobasis 22:1490**
- (n) Conidia oblong, conglutinate **Melanodiscus**
- (2) Conidia dark
- (a) Sporodochia lichenicole; conidiophores obsolete; conidia globoid **Spilomium 18:678**
- (b) Sporodochia not lichenicole
- x. Conidia globose or lentiform
- (x) Conidiophores with a slender apical appendage; conidia pleurogenous, smooth **Bonplandiella 10:732**
- (y) Conidiophores not appendaged; conidia acrogenous
- m. Conidia lentiform; sporodochia flat, small **Papularia H 499**
- n. Conidia globose
- (m) Conidiophores short, not penicillate
- r. Sporodochia globose to convex, fleshy; conidia usually asperate **Epicoccum 4:736; 58**
- s. Sporodochia thin, effuse, not fleshy; conidia not asperate **Hadrotrichum 4:301; 55**
- (n) Conidiophores penicillately fascicled above; conidia roundish, asperate **Mapea H 422**
- y. Conidia not globose or lentiform
- (x) Conidia verticillately acropleurogenous; conidiophores with prominent septa **Arthrimum 4:279; 55**

- (y) Conidia not verticillate or pleurogenous  
 m. Conidiophores none; sporodochia discoid, shining Sclerodiscus 10:735  
 n. Conidiophores ramose or simple  
 (m) Conidiophores ramose; conidia verrucose, ovate Strumellopsis H 497  
 (n) Conidiophores simple; conidia smooth Xiphomyces
- B. Conidia and conidiophores lacking, or imperfect  
 1. Sporodochia verruciform, gray to black, of multiform hyphae; not lichenicole Strumella 4:742; 58  
 2. Sporodochia globose, breaking into cells or groups; lichenicole Sclerococcum 4:754

## Didymosporae

4:754, 10:737, 16:1105, 18:684, 22:1494

Conidia 2-celled, dark or sometimes hyaline, elliptic to fusoid

- A. Sporodochia setulose at margin; conidia catenate Trichodochium  
 B. Sporodochia glabrous; conidia not catenate  
 1. Conidia subhyaline; sporodochia globose, black, on a white radiate subicle Erysiphopsis 22:1494  
 2. Conidia dark; subicle lacking  
 a. Sporodochia globose, superficial; conidia clavate, fuscous Pucciniopsis 10:737  
 b. Sporodochia pulvinate, erumpent; conidia clavate-cylindric, brown, with mucous sheath Anomomyces 10:482  
 c. Sporodochia scutellate, margined, erumpent; conidia oblong, black Epiclinium 4:754

## Phragmosporae

4:755, 10:738, 11:656, 14:1131, 16:1106, 18:685, 22:1495

Conidia x-celled, dark or rarely hyaline, oblong to cylindric

- A. Sporodochia setulose, scutellate Excipularia 18:688, 3:689  
 B. Sporodochia not setulose  
 1. Conidia catenate; sporodochia discoid to pulvinate Trimmatostroma 4:757  
 2. Conidia not catenate  
 a. Conidia 1-ciliate at each end, hyaline, curved Ciliofusa 11:656  
 b. Conidia not ciliate, dark  
 (1) Sporodochia terete; conidia very large, ellipsoid, verruculose Cylomyces 18:685  
 (2) Sporodochia not terete; conidia otherwise  
 (a) Conidia acropleurogenous; sporodochia pulvinate, superficial; conidiophores very long Acrotheciella 22:1496  
 (b) Conidia acrogenous  
 x. Sporodochia subglobose to convex Exosporium 4:755:58  
 (x) Sporodochia erumpent Cryptocoryneum 4:395  
 (y) Sporodochia superficial Marcusia H 513  
 y. Sporodochia scutellate to discoid

## Dictyosporae

4:758, 10:739, 11:656, 14:1131, 16:1107, 18:689, 22:1497

Conidia muriform, usually dark, ovoid to fusoid

- A. Sporodochia setulose**
1. Setae arising from the outside; conidia ellipsoid, large, smooth Chaetostromella 11:656
  2. Setae arising from the hymenium; conidia cruciately 4-celled, asperate Tetrachia
- B. Sporodochia glabrous**
1. Conidia catenate, globose-angled, irregularly cruciate Bonordeniella 18:689
  2. Conidia not catenate
    - a. Conidia with subhyaline radiate processes Petrakia H 523
    - b. Conidia without radiate processes
      - (1) Sporodochia convolute, soft; conidia irregular, roundish, 1- and x-celled Cerebella 4:761, H 524
      - (2) Sporodochia not convolute
        - (a) Sporodochia globose, superficial
          - x. Sporodochia subgelatinous; conidia large, of many spherical cells Myriophysella 22:1497
          - y. Sporodochia not gelatinous; conidia small, of few polygonal cells Clathrococcum H 521
        - (b) Sporodochia not globose, erumpent
          - x. Sporodochia verruciform or pulvinate; conidiophores simple Thyrostroma H 525
          - y. Sporodochia columnar; conidiophores long, ramose Thyrodochium

## Scolecosporae

18:688

Conidia filiform, hyaline

- A. Sporodochia setulose, globose; conidiophores minute or obsolete** Schizotrichum 18:688
- B. Sporodochia glabrous, verruciform; conidiophores short** Exosporella H 527

## Staurosporae

4:753, 22:1498

Conidia forked, radiate or united, hyaline to dark

- A. Sporodochia setulose, with subicle; conidia hyaline, with 2-celled base and 3 cylindrical septate parts** Fumagopsis 22:1498
- B. Sporodochia without setae or subicle**
1. Sporodochia erumpent
    - a. Conidia 2-4-digitate, brownish Chiromyces 4:554
    - b. Conidia 5-7-celled, claw-like, brown Chelisporium 22:1498
  2. Sporodochia superficial
    - a. Conidia cruciately 4-celled Spegazzinia 4:758
    - b. Conidia mostly 5-celled, acutely bent together Chiromycella H 529

**Helicosporae**

4:729, 11:654

Conidia spirally convolute, hyaline or smoky

- A. Conidiophores obsolete; conidia hyaline **Everhartia 4:729**  
 B. Conidiophores ramose, moniliform; conidia smoky **Troposporella 11:654**

**Family 88. STILBACEAE**

Sterile hyphae creeping, scanty; fertile hyphae aggregated into clavate or cylindrical fascicles or synnemata, typically bearing the conidia at the top, often in a head, more rarely along the sides, pale, bright-colored, or dark to black; conidia various.

**Hyalostilbae**

Hyphae and conidia pale or bright-colored, not dark or black

**Amerosporae**

4:461, 10:681, 11:640, 14:1107, 16:1082, 18:630, 22:1437

Conidia 1-celled, hyaline to bright-colored, globose to elliptic or oblong

- A. Conidial part distinctly capitate or at least terminal
1. Conidia catenate
    - a. Synnema with conidia above; conidia without mucus
      - (1) Conidiophores verticillate-ramose **Coremium 4:581; 57**
      - (2) Conidiophores not verticillate-ramose **Coremiella H 556**
    - b. Synnema with conidia below; conidia with mucus **Microspatha 10:687**
  2. Conidia not catenate
    - a. Head spiny with radiating spicules
      - (1) Spicules conic, granulate **Actiniceps 4:579**
      - (2) Spicules with many curved branches at middle **Heterocephalum 18:642**
    - b. Head not spiny
      - (1) Conidiophores conidium-like, septate; synnema monocephalous **Atractiella 4:578**
      - (2) Conidiophores normal
        - (a) Conidia covered with mucus
          - x. Synnema monocephalous
            - (x) Conidiophores dendroid-verticillate
            - m. Conidiophores with obpiriform sterigmata **Pirobasidium 18:638**
            - n. Conidiophores without distinct sterigmata **Dendrostilbella 18:635**
            - (y) Conidiophores not dendroid-verticillate **Stilbum 4:564**
          - y. Synnema polycephalous
            - (x) Capitula on erect branches **Corallo dendrum 4:576**
            - (y) Capitula on spreading subulate branches **Tilachlidium 4:576**

- (b) Conidia without mucus
- x. Synnema monocephalous
- (x) Conidiophores spirally twisted **Martindalia 4:578**
- (y) Conidiophores more or less straight
- m. Conidia rhombic or biconic **Rhombostilbella 18:636**
- n. Conidia globose to fusoid
- (m) Conidia acrogenous **Ciliciopus 4:577; 57**
- (n) Conidia pleurogenous **Clathrotrichum**
- y. Synnema polycephalous, terrestrial, large **Macrostilbum 16:1083**
- B. Conidial part cylindric or long-clavate
1. Conidia more or less equally distributed on the synnema
- a. Conidia catenate **Alphitomyces 22:1445**
- b. Conidia not catenate
- (1) Conidiophores ovoid with an apical filiform sterigma **Trichosterigma**
- (2) Conidiophores not ovoid and sterigmate **Isaria 4:584; 57**
2. Conidia in lateral groups
- a. Conidiophores with sterigmata; conidia in capituli; typically entomophilous **Gibellula 11:643; 57**
- b. Conidiophores without sterigmata; conidia umbellate; not entomophilous **Articulis 22:1443**

**Didymosporae**

18:645, 22:1446

Conidia 2-celled, hyaline, oblong to fusoid

- A. Synnema capitate; conidia fusoid **Didymostilbe 18:645**
- B. Synnema cylindric
1. Synnema with a paraphysate disk at tip **Actinostilbe**
2. Synnema merely fimbriate at tip **Didymobotrys 18:645**

**Phragmosporae**

4:598, 10:691, 14:1109, 18:646

Conidia x-celled, hyaline, oblong to bacillar or filiform

- A. Conidia catenate **Symphyosira 4:600**
- B. Conidia not catenate
1. Conidia aristate, separating at the joints **Stilbomyces 14:1109**
2. Conidia not aristate or separating **Atractium 4:599; 57**

**Helicosporae**

18:658

Conidia filiform, spirally twisted

- Synnema setose; conidia acropleurogenous **Helicostilbe 18:657**

**Phaeostilbae**

Hyphae and conidia or the one or the other dark



## Amerosporae

4:603, 10:692, 11:643, 14:1109, 16:1086, 18:648, 22:1446

Conidia 1-celled, dark or hyaline, globose to oblong

- A. Conidia endogenous in open hyphae, of two sorts, hyaline and dark **Stilbochalara 22:1449**
- B. Conidia not endogenous
1. Conidia catenate
- a. *Synnema setose* **Trichurus 14:1112**
- b. *Synnema not setose*
- (1) *Synnema ramose*
- (a) *Synnema scopulate-ramose* above; conidia hyaline **Stemmaria 10:696**
- (b) *Synnema ramose* with several heads or spikes; conidia dark
- x. Branches capitulate, without sterigmata **Stilbodendrum**
- y. Branches clavate, fertile throughout, with sterigmata **Sarophorum**
- (2) *Synnema simple* or nearly so
- (a) Capitule loose
- x. Base of synnema globoid; usually foli-  
cole **Graphiothecium 4:624**
- y. Base of synnema not globoid; typically  
cauli- or ligni-  
cole
- (x) Conidia hyaline or subhyaline **Stysanus 4:620; 57**
- (y) Conidia dark **Pycnostysanus H 581**
- (b) Capitule compact
- x. Conidia globose; chains simple **Briosia 10:698**
- y. Conidia oblong; chains usually ramose **Antromyopsis 14:1113**
2. Conidia not catenate
- a. *Synnema setose* **Saccardaea 11:643**
- b. *Synnema not setose*
- (1) Conidia asperate; conidiophores clavate,  
with minute sterigmata **Basidiella 10:698**
- (2) Conidia smooth
- (a) Conidial part capitate
- x. *Synnema monocephalous*
- (x) *Synnemata* grouped on a carbonous  
basal stroma **Stromatographium H 583**
- (y) *Synnemata* without basal stroma
- m. Heads involved in mucus
- (m) Conidia hyaline
- r. Stalk pseudoparenchymic, hollow **Coelographium**
- s. Stalk not pseudoparenchymic and  
hollow
- (r) *Synnema* with root-like base  
in substratum **Crinula H 584**
- (s) *Synnema* without such base **Graphium 4:609**
- (n) Conidia dark **Sporocybe 4:604; 57**
- n. Heads without mucus
- (m) Conidia acropleurogenous, on  
dentate conidiophores **Graphiopsis H 588**
- (n) Conidia pleurogenous, usually fal-  
cate **Harpographium 4:619**

- y. *Synnema* polycephalous  
 (x) Capitula with mucus **Cladographium**  
 (y) Capitula without mucus  
 m. Conidia hyaline **Tilachlidiopsis**  
 n. Conidia dark **Stilbothamnium** 14:1110
- (b) Conidial part cylindrical or subulate  
 x. *Synnema* dendroid-ramose; conidia hyaline, cohering in mucose glomerules **Synnematium**  
 y. *Synnema* ramose-circinate and sterile above; below conidiophores with lageniform sterigmata **Ceratocladium** 18:649; 55  
 z. *Synnema* not ramose; conidia dark  
 (x) Conidia reniform, acropleurogenous **Melanographium**  
 (y) Conidia not reniform  
 m. *Synnema* with thin membrane from sterile external hyphae; conidia pleurogenous **Endocalyx**  
 n. *Synnema* without membrane **Sporostachys**

**Didymosporae**

4:626, 10:699, 18:654

Conidia 1-celled, dark or hyaline, oblong to cylindrical

- A. Conidia catenate, in branched chains, long 1-celled **Antromyces** 3:626  
 B. Conidia not catenate  
 1. Conidia 1-ciliate at apex **Hoehneliella** 18:654  
 2. Conidia muticate **Didymobotryum** 4:626

**Phragmosporae**

4:627, 10:699, 11:644, 14:1113, 16:1089, 18:655, 22:1455

Conidia x-celled, dark or hyaline, oblong to cylindrical

- A. Conidial part capitate or at least terminal  
 1. Conidia involved in mucus; conidiophores paraphysate **Calostilbella**  
 2. Conidia not in mucus  
 a. *Synnema* black; conidia densely capitate **Arthrobotryum** 4:628  
 b. *Synnema* fuscous or pale; conidia looser in a capitate or clavate group **Isariopsis** 4:630
- B. Conidial part cylindrical or long-clavate  
 1. Conidia catenate **Dendrographium** 11:644  
 2. Conidia not catenate  
 a. Stalk of *synnema* fibrous; conidia acropleurogenous **Podosporium** 4:627; 57  
 b. Stalk pseudoparenchymic; conidia acrogenous **Podosporiella** 11:644

**Dictyosporae**

4:632, 14:1114, 22:1457

Conidia muriform, dark or hyaline, globoid to fusoid

- A. *Synnema* of but 2-3 hyphae arising from a scanty subiculum; conidia globoid, sublentiform, cells concentric **Hermatomyces** 22:1457

## B. Synnema composed of many hyphae

1. Synnema clavate-capitate

Sclerographium 4:632

2. Synnema filiform-subulate

Negeriella 14:1114

## Staurosporae

Synnema clavate-capitate; conidia of 4-5-radiate cells,  
hyaline

Riessia 4:627; 57

## 89. DERMOPHYTA

22:1334

Mycelium branched, septate, usually producing two or three forms of conidia in cultures; the so-called arthrospores are apparently nothing but hyphae with short terminal segments that sometimes separate; aleurisporae are simple conidia acrogenous or pleurogenous on the hyphae or very short lateral branches; spindles are a second type of conidia, usually hyaline and mostly elongate fusiform, continuous or septate.

These are probably hyphomycetous forms of *Gymnascaceae*, parasitic in the skin and hair of man and other animals. Nannizzi (1926:85) has shown that, under favorable cultural conditions, *Microsporium gypseum* (Bod.) Grigor. produces asci and spores typical of *Gymnascaceae*, to which most of the genera and species of this group probably belong. Since the diagnoses are not based upon the usual criteria, it is impossible to place the genera satisfactorily in any of the preceding families.

A. Conidia of one kind only in culture, simple,  
globose to subglobose, rarely septate

1. Conidia simple, globose to subglobose

a. Conidia acrogenous

b. Conidia pleurogenous

c. Conidia in botryose clusters

Montoyella

Pinoyella

Malassezia

2. Conidia fusiform and septate

Epidermophytum 22:1336

B. Conidia of two kinds

1. Aleurisporae and x-septate spindles present

Microsporium 22:1335

2. Aleurisporae and arthrospores present

Trichophytum 22:1334

3. Aleurisporae, arthrospores and hyphae with  
dichotomous subglobose or clavate apical  
branches

Achorium 22:1336

## 90. STERILE MYCELIA

14:1138, 16:1108, 18:690, 22:1499

Conidia permanently lacking so far as known; hyphae various, sometimes parasitic on algae (sterile lichens). Somewhat similar forms, such as *Aegerita* and *Illosporium*, have been traditionally included in *Tuberculariaceae*.

A. Parasitic on algae

Lepraria, Pulveraria, etc. Z 239

B. Not parasitic on algae

1. Tubercle-like or sclerotia

a. Tubercles connected with fibrils

Rhizoctonia 14:1175

b. Tubercles without fibrils

(1) Cortex discrete

Acinula 14:1174

(2) Cortex not discrete

Sclerotium 14:1139

2. Maculiform  
 a. Forming black stromata in leaves and stems **Ectostroma 14:1177**  
 b. Not forming black stromata **Cuticularia 22:1502**
3. Root-like  
 a. Filaments rigid, broad, terete or flattened,  
 dark, white within **Rhizomorpha 14:1180**  
 b. Filaments rigid, capilliform, dark, closely  
 adhering **Capillaria 14:1184**
4. Clavariform  
 a. Filaments fasciculate **Anthina 14:1184**  
 b. Filaments single, not fasciculate **Clavariopsis 22:1502**
5. Cobwebby or byssoid  
 a. Hyphae cespitose, interwoven  
 (1) Primary hyphae joined in bundles **Ozonium 14:1187**  
 (2) Hyphae not fasciculate **Rhacodium 14:1189**  
 b. Hyphae cobwebby, soft, evanescent, white or  
 pale  
 (1) Hyphae with globose sporangium-like  
 bodies **Helicosporangium S 149**  
**Papulospora 4:58, S 149**  
**Hypha 14:1192**  
 (2) Hyphae without sporangium-like bodies  
 c. Hyphae crustose, creeping, dendritic, white to  
 brownish, not forming a continuous mem-  
 brane **Himantia 14:1194**
6. Membrane-like, densely interwoven, forming a  
 continuous suberose or corious membrane **Xylostroma 14:1197**
7. Deformed, discolored corky cells of plants **Phloeconis 14:1197**

# List of Types and Synonyms

## PROTOCOCCALES

### PLASMODIOPHORACEAE

- Plasmodiophora* Woronin Jahrb. Wiss. Bot. 11:548, ill. 1878. P. *brassicae* Wor.  
*Sorodiscus* Lagerh. & Winge Ark. Bot. 12:23, ill. 1923. S. *callitrichis* L. & W.  
*Sorosphaera* Schroet. Krypt. Fl. Schles. 1:135 1886. S. *veronicae* Schroet.  
    *Ligniera* Maire & Tison Comp. Rend. 152:206 1911; Syll. Fung. 22:816 1913; Fitzpatrick 61. L. *radicalis* M. & T.  
*Spongospora* Brunchorst Berg. Mus. Aarsber. 1886:219, ill. 1887. S. *subterranea* (Wallr.) Lag.  
*Tetramyxa* Goebel Flora 67:517 1884. T. *parasitica* Goebel

### Genera Incertae Sedis Vel Dubia

- Anisomyxa* Nemeč Bull. Int. Acad. Boheme 1913; Riv. Pat. Veg. 6:218 1913; Fitzpatrick 63. A. *plantaginis* Nemeč  
*Coelomycidium* Debaisieux Comp. Rend. 82:899 1919. C. *simulii* Debais.  
*Cystospora* Elliott Del. Agr. Exp. Sta. Bull. 114:1, ill. 1916; Fitzpatrick 66. C. *latata* Elliott  
*Endospora* Scherffel Arch. Protistenk. 52:89, ill. 1925. E. *ovalis* Scherf.  
*Molliardia* Maire & Tison Ann. Myc. 9:238, ill. 1911; Fitzpatrick 60. M. *triglochinis* (Moll.) M. & T.  
*Ostenfeldiella* Ferd. & Winge Ann. Bot. 28:648, ill. 1914; Fitzpatrick 66. O. *diphantherae* F. & W.  
*Rhizomyxa* Borzi *Rhizomyxa*, nuovo ficomite 6, ill. 1884; Fitzpatrick 62. R. *hypogaea* Borzi  
*Sorolpidium* Nemeč Ber. Deut. Bot. Ges. 29:48 1911; Fitzpatrick 63. S. *betae* Nemeč  
*Sporomyxa* Leger Arch. Protistenk. 12:109, ill. 1908; Fitzpatrick 65. S. *scauri* Leger

### OLPIDIACEAE

- Diplophysa* Schroet. Nat. Pflanzenf. 1:1:85 1892. D. *saprolegniae* (Cornu) Schroet.  
    *Olpidiopsis* (Cornu) Fisch. Rabh. Krypt. Fl. 1:47 1892. O. *saprolegniae* Cornu  
*Ectrogella* Zopf Nov. Act. Leop. 47:175 1884. E. *bacillaris* Zopf

- Olpidiopsis** Cornu Ann. Sci. Nat. 5:15:114, ill. 1872.  
**Pseudolpidium** Fisch. Rabh. Krypt. Fl. 1:433 1892.  
**Olpidium** Schroet. Krypt. Fl. Schles. 1:180 1886.  
**Olpidiaster** Pascher Beih. Bot. Cent. 35:2:578 1917; for *Asterocystis* De Wild. Ann. Soc. Micr. Belg. 17:21 1893; not Gobi 1879 (Algae); Fitzpatrick 72.  
**Reessia** Fisch. Beitr. Kennt. Chytr. 17 1884.  
**Plasmophagus** De Wild. Ann. Soc. Micr. Belg. 19:219 1895.  
**Pleolpidium** Fisch. Rabh. Krypt. Fl. 1:443 1892.  
**Pleotrachelus** Zopf Nov. Act. Leop. 47:173 1884.  
**Pseudolpidiopsis** Minden Krypt. Fl. Brandenb. 5:255 1911.  
**Rozella** Cornu Ann. Sci. Nat. 5:15:114 1872.  
**Sphaerita** Dangeard Ann. Sci. Nat. 7:4:277 1886.  
**Woronina** Cornu Ann. Sci. Nat. 5:15:114 1872.
- O. fusiformis** Cornu  
**P. fusiforme** (Cornu) Fisch.  
**O. endogenum** (A. Br.) Schroet.  
**O. radialis** (De Wild.) Pasch.  
**R. amoeboides** Fisch.  
**P. oedogoniorum** De Wild.  
**P. monoblepharidis** (Cornu) Fisch.  
**P. fulgens** Zopf  
**P. schenkiana** (Zopf) Minden  
**R. septigena** Cornu  
**S. endogena** Dang.  
**W. polycystis** Cornu

## SYNCHYTRIACEAE

- Synchytrium** De Bary & Woronin Verh. Nat. Ges. Freiburg 3:22 1863.  
**Miyabella** Ito & Homma Bot. Mag. Tokyo 40:110 1926.  
**Oedomycetes** Sacc. Rev. Gen. Bot. 6:409 1894.  
**Pynochytrium** De Bary & Woronin Verh. Nat. Ges. Freiburg 3:22 1863.  
**Woroninella** Rac. Zeits. Pflanzenkr. 8:195 1898.
- S. taraxaci** De B. & W.  
**M. puerariae** (Henn.) I. & H.  
**O. leproides** Trab.  
**P. succisae** De B. & W.  
**W. psophocarpi** Rac.

## PROTOMYCETACEAE

- Protomyces** Unger Exanth. Pfl. 341 1833.  
**Protomycopsis** Magnus Pilz. Tirol 322 1905.  
**Taphridium** Lagerh. & Juel Bih. Sven. Vet. Handl. 27:16 1902.  
**Volkartia** Maire Bull. Soc. Bot. Fr. 54:145 1907; Syll. Fung. 22:790 1913.
- P. macrosporus** Ung.  
**P. leucanthemi** Magn.  
**T. umbelliferarum** (Rost.) L. & J.  
**V. rhaetica** (Volk.) Maire

## CHYTRIDIACEAE

- Achlyella** Lagerh. Hedwigia 29:143 1890.  
**Amoebochytrium** Zopf Nov. Act. Leop. 47:181 1884.  
**Asterophlyctis** Petersen Jour. de Bot. 17:218 1903.
- A. flahaulti** Lagerh.  
**A. rhizidioides** Zopf  
**A. sarcoptoides** Pet.

- Catenaria** Sorokin Ann. Sci. Nat. 6:4:67  
1876.
- Chytridium** A. Braun Erschein. Verj. 198  
1850.
- Cladochytrium** Nowakowski Cohn Beitr. Biol.  
Pfl. 2:92 1876.
- Dangardia** Schröder Ber. Deut. Bot. Ges.  
16:314, ill. 1898.
- Diplophlyctis** Schroet. Nat. Pflanzenf. 1:1:78  
1892.
- Entophlyctis** Fisch. Rabh. Krypt. Fl. 1:414  
1892.
- Harpochytrium** Lagerh. Hedwigia 29:142  
1890.  
**Fulminaria** Gobi Script. Hort. Bot. Petr.  
15:282 1889.  
**Rhabdium** Dangeard Ann. Myc. 1:61, ill.  
1903.
- Nowakowskia** Borzi Bot. Cent. 22:23, ill.  
1885.
- Nowakowskiella** Schroet. Nat. Pflanzenf.  
1:1:82 1892.
- Obelidium** Nowakowski Cohn Beitr. Biol. Pfl.  
2:86, ill. 1876.
- Phlyctidium** A. Braun Mon. Berl. Akad.  
Wiss. 1885:41, as subgen.
- Phlyctochytrium** Schroet. Nat. Pflanzenf.  
1:1:78 1892.
- Physoderma** Wallr. Fl. Crypt. Germ. 2:192  
1833.  
**Urophlyctis** Schroet. Jahrbr. Schles. Ges.  
60:198 1882; Fitzpatrick 106, 107.
- Podochytrium** Pfitzer Sitzb. Nied-rhein. Ges.  
62 1870.
- Polyphagus** Nowakowski Cohn Beitr. Biol.  
Pfl. 2:203, ill. 1876.
- Rhizidium** A. Braun Mon. Berl. Akad. Wiss.  
591 1856.
- Rhizidiomyces** Zopf Nov. Act. Leop. 47:188  
1884.
- Rhizoclosmatium** Petersen Jour. de Bot.  
17:216 1903.
- Rhizophidium** Schenk Verh. Phys. Med. Ges.  
Würzburg 8:245 1858.
- Rhizophlyctis** Fisch. Rabh. Krypt. Fl. 1:119  
1892.
- Saccomyces** Serbinow Script. Hort. Bot. Petr.  
24:162, ill. 1907.
- Siphonaria** Petersen Jour. de Bot. 17:220  
1903.
- Sporophlyctis** Serbinow Script. Hort. Bot.  
Petr. 24:116, 164, ill. 1907.
- Zygorhizidium** Löwenthal Arch. Protistenk.  
5:228, ill. 1904.
- C. anguillulae** Sor.
- C. olla** A. Br.
- C. tenue** Now.
- D. mamillata** Schröd.
- D. intestina** Schroet.
- E. cienkowskiana** (Zopf) Fisch.
- H. hyalothecae** Lagerh.
- F. mucophila** Gobi
- R. acutum** Dang.
- N. hormothecae** Borzi
- N. elegans** (Now.) Schroet.
- O. mucronatum** Now.
- P. laterale** (A. Br.) Minden
- P. hydrodictyi** (A. Br.) Schroet.
- P. maculare** Wallr.
- U. pulposa** (Wallr.) Schroet.
- P. clavatum** Pfitzer
- P. euglenae** Now.
- R. mycophilum** A. Br.
- R. apophysatus** Zopf
- R. globosum** Pet.
- R. globosum** A. Br.
- R. rosea** (De B. & W.) Fisch.
- S. dangeardi** Serb.
- S. variabilis** Pet.
- S. rostrata** Serb.
- Z. willei** Löwen.

## Genera Incertae Sedis Vel Dubia

- Eurychasma** Magnus Hedwigia 44:347, ill. 1905.  
**Hypochytrium** Zopf Nov. Act. Leop. 47:187 1884; Fitzpatrick 107.  
**Latrostium** Zopf Beitr. Nied. Org. 4:43 1804; Fitzpatrick 91.  
**Macrochytrium** Minden Cent. Bakt. 8:824 1902; Fitzpatrick 109.  
**Micromyces** Dangeard Le Botaniste 1:55 1889; Fitzpatrick 87.  
**Micromycopsis** Scherffel Arch. Protistenk. 54:202, ill. 1926.  
**Mitochytridium** Dangeard Bull. Soc. Myc. Fr. 27:202 1911; Fitzpatrick 110.  
**Polyrhina** Sorokin Ann. Sci. Nat. 6:4:65, ill. 1876; Fitzpatrick 110.  
**Pyrhosorus** Juel Bih. Sven. Akad. Handl. 26:1, ill. 1901; Fitzpatrick 71.  
**Rhizidiocystis** Sideris Phytopathology 19:376 1929; Fitzpatrick 110.  
**Rhodochytrium** Lagerh. Bot. Zeit. 51:43 1893.  
**Sirolopidium** Petersen Overs. Dan. Vid. Förh. 480, ill. 1905.  
**Tetrachytrium** Sorokin Bot. Zeit. 32:307 1874.  
**Wolkia** Ramsbottom Trans. Brit. Myc. Soc. 5:143 1914.  
**Protascus** Van der Wolk Myc. Cent. 3:153, ill. 1913; not Dangeard 1903.  
**Zygochytrium** Sorokin Bot. Zeit. 32:305 1874; Fitzpatrick 108.
- E. dicksoni** (Wright) Magn.  
**H. infestans** Zopf  
**L. comprimens** Zopf  
**M. botryoides** Minden  
**M. zygoni** Dang.  
**M. cristata** Scherf.  
**M. ramosum** Dang.  
**P. multiformis** Sor.  
**P. marinus** Juel  
**R. ananasi** Sideris  
**R. spilanthidis** Lagerh.  
**S. bryopsisidis** (de Bruyne) Pet.  
**T. triceps** Sor.  
**W. decolorans** (Wolk) Rams.  
**P. decolorans** Wolk  
**Z. aurantiacum** Sor.

## SPIROGYRALES

## MUCORACEAE

- Absidia** van Tiegh. Ann. Sci. Nat. 6:4:313, ill. 1876.  
**Lichtheimia** Vuill. Bull. Soc. Myc. Fr. 19:124 1903; cf. Lendner Mucor. Suisse 129 1908; Fitzpatrick 245.  
**Mycocladius** Beauverie Ann. Univ. Lyon n. s. 1:163, ill. 1900; cf. Lendner Ib.; Fitzpatrick 245.  
**Proabsidia** Vuill. Bull. Soc. Myc. Fr. 19:116 1903; cf. Lendner Ib.; Fitzpatrick 245.  
**Pseudoabsidia** Bainier Bull. Soc. Myc. Fr. 19:153, ill. 1903; cf. Lendner Ib.; Fitzpatrick 245.  
**Tieghemella** Berl. & De T. Syll. Fung. 7:215 1888; cf. Lendner Ib.; Fitzpatrick 245.  
**Blakeslea** Thaxt. Bot. Gaz. 58:353, ill. 1914.
- A. septata** van Tiegh.  
**L. corymbifera** Vuill.  
**M. verticillatus** Beauv.  
**P. saccardoi** (Oud.) Vuill.  
**P. vulgaris** Bain.  
**T. repens** B. & De T.  
**B. trispora** Thaxt.



- Chaetocladium* Fres. Beitr. Myk. 97 1863.  
*Choanophora* Currey Jour. Linn. Soc. Bot. 13:578, ill. 1873.  
*Cunninghamia* Currey Ib. 334; Fitzpatrick 261.  
*Circinella* van Tiegh. & le Mon. Ann. Sci. Nat. 5:17:261, ill. 1873.  
*Cunninghamella* Matr. Ann. Myc. 1:46 1903; Syll. Fung. 17:508 1905.  
*Actinocephalum* Saito Bot. Mag. Tokyo 19:1 1904; Fitzpatrick 263.  
*Dicranophora* Schroet. Jahrb. Schles. Ges. 64:184 1886.  
*Dispira* van Tiegh. Ann. Sci. Nat. 6:1:160, ill. 1875.  
*Dissophora* Thaxt. Bot. Gaz. 58:361, ill. 1914.  
*Haplosporangium* Thaxter Ib. 362, ill. 1914.  
*Herpocladium* Schroet. Krypt. Fl. Schles. 1:213 1886.  
*Herpoclediella* Schroet. Nat. Pflanzenf. 1:1:130 1893; Syll. Fung. 7:225 1888.  
*Mortierella* Coemans Bull. Acad. Bot. Belg. 2:15:536 1863.  
*Mucor* Micheli Nov. Pl. Gen. 215, ill. 1729; cf. Link Sp. Pl. Fung. 6:80 1824.  
*Chlamydomucor* Brefeld Unters. Myk. 8:223 1889; cf. Lendner Mucor. Suisse 69 1908; Fitzpatrick 251.  
*Glomerula* Bainier Bull. Soc. Myc. Fr. 19:154, ill. 1903; cf. Lendner Ib.; Fitzpatrick 251.  
*Hydrophora* Tode Fung. Meckl. 2:5 1791.  
*Parasitella* Bainier Ib.; cf. Lendner Ib.; Fitzpatrick 251.  
*Phycomyces* Kze. & Schm. Myc. Heft. 2:113 1823.  
*Pilaira* van Tiegh. Ann. Sci. Nat. 6:1:5 1875.  
*Pilobolus* Tode Schrift. Nat. Freunde Berlin 5:46 1784.  
*Hydrogera* Wigg. Prim. Fl. Hols. 110 1780; Fitzpatrick 251.  
*Piptocephalis* De Bary Abh. Senck. Nat. Ges. 5:356, ill. 1866.  
*Pirella* Bainier Ann. Sci. Nat. 6:15:84, ill. 1883.  
*Rhizopus* Ehrenb. Nov. Act. Leop. 10:198 1820.  
*Spinellus* van Tiegh. Ann. Sci. Nat. 6:1:66 1875.  
*Sporodinia* Link Sp. Pl. Fung. 6:94 1824.  
*Syzygites* Ehrenb. Sylv. Myc. Berol. 25 1818; Fitzpatrick 247.  
*Syncephalastrum* Schroet. Krypt. Fl. Schles. 1:217 1886.
- C. jonesi* Fres.  
*C. infundibula* (Curr.) Sacc.  
*C. infundibulifera* Curr.  
*C. spinosa* v. T. & le M.  
*C. echinulata* (Thaxt.) Matr.  
*A. japonicum* Saito  
*D. fulva* Schroet.  
*D. cornuta* van Tiegh.  
*D. decumbens* Thaxt.  
*H. bisporale* Thaxt.  
*H. circinans* Schroet.  
*H. circinans* Schroet.  
*M. polycephala* Coem.  
*M. mucedo* (L.) Lk.  
*C. racemosus* Bref.  
*G. repens* Bain.  
*H. minima* Tode  
*P. simplex* Bain.  
*P. nitens* (Ag.) K. & S.  
*P. anomala* (Ces.) Schroet.  
*P. crystallinus* (Wigg.) Tode  
*H. crystallina* Wigg.  
*P. freseniana* De Bary  
*P. circinans* Bain.  
*R. stolonifer* Ehrenb.  
*S. fusiger* (Lk.) van Tiegh.  
*S. grandis* Lk.  
*S. megalocarpus* Ehrenb.  
*S. racemosum* Cohn

- Syncephalis* van Tiegh. & le Mon. Ann. Sci. Nat. 5:17:261, ill. 1873.
- Gliocephalis* Matr. Bull. Soc. Myc. Fr. 15:254, ill. 1899; cf. Hoehn. Frag. Myk. 50 1902.
- Thamnidium* Link Berl. Mag. Nat. Freunde 3:31 1809.
- Bulbothamnidium* Klein Verh. z-b. Ges. Wien 20:557, ill. 1870; p. p.
- Chaetostylum* van Tiegh. & le Mon. Ann. Sci. Nat. 5:17:328 1873.
- Helicostylum* Corda Icon. Fung. 5:18, 55 1842; p. p.
- S. cordata* v. T. & le M.
- G. hyalina* Matr.
- T. elegans* Lk.
- B. elegans* Klein
- C. freseni* v. T. & le M.
- H. elegans* Corda

## Genera Incertae Sedis Vel Dubia

- Actinomucor* Schostak. Ber. Deut. Bot. Ges. 16:155, ill. 1898; Fitzpatrick 257.
- Coemansia* van Tiegh. & le Mon. Ann. Sci. Nat. 5:17:392 1873; Fitzpatrick 272.
- Coemansiella* Sacc. Syll. Fung. 2:815 1883; Fitzpatrick 272.
- Dimargaris* van Tiegh. Ann. Sci. Nat. 6:1:154, ill. 1875; Fitzpatrick 272.
- Kickxella* Coemans Bull. Soc. Bot. Belg. 1:155, ill. 1862.
- Martensella* Coemans Bull. Acad. Roy. Belg. 2:15:544, ill. 1863.
- Rhopalomyces* Corda Prachtflora 3, ill. 1839.
- Saitomyces* Ricker Jour. Myc. 12:61 1906; Boedijn Ann. Myc. 25:162 1927.
- Spinalia* Vuill. Bull. Soc. Myc. Fr. 20:32, ill. 1904.
- Thamnocephalis* Blakeslee Bot. Gaz. 40:161, ill. 1905.
- A. repens* Schostak.
- C. reversa* v. T. & le M.
- C. alabastrina* Sacc.
- D. crystalligena* van Tiegh.
- K. alabastrina* Coemans
- M. pectinata* Coemans
- R. elegans* Corda
- S. japonicus* (Saito) Ricker
- S. radians* Vuill.
- T. quadrupedata* Blak.

## ENDOGENACEAE

- Endogone* Link Mag. Ges. Naturf. Freunde Berlin 3:33, ill. 1809; Syll. Fung. 8:905 1889; 14:829 1899; cf. Thaxt. Proc. Am. Acad. 57:291, ill. 1922; Fitzpatrick 265.
- Glomus* Tul. Giorn. Bot. Ital. 2:63 1845.
- Glaziellâ* Berk. Vid. Medd. For. Kjob. 31:31 1879.
- Endogonella* Hoehn. Sitzb. Akad. Wien 122:294, ill. 1913; Syll. Fung. 24:1320 1928.
- Sclerocystis* B. & Br. Jour. Linn. Soc. 14:137 1873.
- Ackermannia* Pat. Bull. Soc. Myc. Fr. 18:180, ill. 1902; cf. Hoehn. Frag. Myk. 264 1909; Thaxt. Proc. Am. Acad. 57:328 1922.
- E. pisiformis* Lk.
- G. macrocarpus* Tul.
- G. vesiculosa* Berk.
- E. borneensis* Hoehn.
- S. coremioides* B. & Br.
- A. dussi* Pat.

- Xenomyces* Cesati Att. Accad. Napoli 8:26, ill. 1879; Syll. Fung. 9:340 1891; cf. Hoehn. Frag. Myk. 474 1910.
- Sphaeroceas* Sacc. & Ell. *Michelia* 2:582 1880-82; cf. Hoehn. Frag. Myk. 264, 1909; Thaxt. Proc. Am. Acad. 57:326 1922.
- Stigmatella* Sacc. Syll. Fung. 4:679 1886; cf. Hoehn. Frag. Myk. 264 1909.
- X. ochraceus* Ces.
- S. pubescens* S. & E.
- S. pubescens* Sacc.

## Genera Incertae Sedis Vel Dubia

- Menezesia* Torrend *Broteria* 11:172, ill. 1913; Syll. Fung. 24:1321 1928.
- Plenophysa* Syd. *Ann. Myc.* 17:142 1919; Syll. Fung. 24:1320 1928.
- M. setulosa* Torr.
- P. mirabilis* Syd.

## EMPUSACEAE

- Basidiobolus* Eidam *Cohn Beitr. Biol. Pfl.* 4:181, ill. 1886; cf. Fitzpatrick 286.
- Completozia* Lohde *Ges. Deut. Naturf.* 47:203 1874.
- Conidiobolus* Brefeld *Unters. Myk.* 4:35, ill. 1884; cf. Fitzpatrick 288.
- Empusa* Cohn *Nov. Act. Leop.* 25:301, ill. 1855.
- Entomophthora* Fres. *Bot. Zeit.* 14:882 1856; Fitzpatrick 292.
- Lamia* Nowakowski *Pam. Akad. Krakau* 8:153, ill. 1884; p. p.
- Tarichium* Cohn *Beitr. Biol. Pfl.* 1:58 1875; p. p.
- Massospora* Peck *N. Y. Mus. Nat. Hist. Rep.* 31:44 1879.
- B. ranarum* Eidam
- C. complens* Lohde
- C. utriculosus* Bref.
- E. muscae* Cohn
- E. sphaerosperma* Fres.
- L. culicis* (A. Br.) Now.
- T. megaspermum* Cohn
- M. cicadina* Pk.

## ASCOIDEACEAE

- Ascoidea* Brefeld *Unters. Myk.* 9:91, ill. 1891.
- Dipodascus* Lagerh. *Jahrb. Wiss. Bot.* 24:549 1892.
- A. rubescens* Bref.
- D. albidus* Lagerh.

## Genera Incertae Sedis Vel Dubia

- Conidiascus* Holtermann *Myk. Unters. Trop.* 23 1898; Fitzpatrick 311.
- Oscarbrefeldia* Holtermann *Ib.*; Fitzpatrick 311.
- Pericystis* Betts *Ann. Bot.* 17:167, ill. 1903; Fitzpatrick 312.
- C. paradoxus* Holt.
- O. pellucida* Holt.
- P. alvei* Betts

## VAUCHERIALES

## SAPROLEGNIACEAE

- Achlya* Nees *Nov. Act. Leop.* 11:514, ill. 1823.
- Isoachlya* Kauffman *Am. Jour. Bot.* 8:231, ill. 1921; Fitzpatrick 167.
- A. prolifera* Nees
- I. toruloides* K. & C.

- Protoachlya* Coker *Saprolegniaceae* 90  
1923.
- Aphanomyces* De Bary *Jahrb. Wiss. Bot.*  
2:179 1860.
- Aplanes* De Bary *Bot. Zeit.* 46:650, ill. 1888.
- Apodachlya* Pringsheim *Ber. Deut. Bot. Ges.*  
1:288, ill. 1883.
- Aracospora* Thaxt. *Bot. Gaz.* 21:317, ill. 1896.
- Dictyuchus* Leitgeb *Bot. Zeit.* 26:502 1868.
- Geolegnia* Coker *Jour. Elisha Mitchell Soc.*  
41:153, ill. 1925.
- Leptolegnia* De Bary *Bot. Zeit.* 46:631 1888.
- Leptomitus* Agardh *Syst. Alg.* 47 1824.
- Apodya* Cornu *Bull. Soc. Bot. Fr.* 18:53  
1871; Fitzpatrick 173.
- Mindenella* Kanouse *Am. Jour. Bot.* 14:301  
1927.
- Plectospora* Drechsler *Jour. Agr. Res.* 34:294  
1927.
- Pythiopsis* De Bary *Bot. Zeit.* 46:632 1888.
- Rhipidium* Cornu *Bull. Soc. Bot. Fr.* 18:53  
1871.
- Saprolegnia* Nees *Nov. Act. Leop.* 11:514  
1823.
- Sapromyces* Fritsch *Oest. Bot. Zeits.* 42:333  
1892; 43:420 1893.
- Naegelia* Reinsch *Jahrb. Wiss. Bot.* 11:289,  
ill. 1878; not Regel et al.; cf. Thaxt. *Bot.*  
*Gaz.* 19:49, ill. 1894.
- Naegeliella* Schroet. *Nat. Pflanzenf.* 1:1:104,  
ill. 1893.
- Thraustotheca* Humphrey *Trans. Am. Phil.*  
*Soc.* 17:63, ill. 1893.
- Brevilegnia* Coker & Couch *Jour. Elisha*  
*Mitchell Soc.* 42:207, ill. 1927; Fitzpatrick  
164.
- Calyptralegnia* Coker *Ib.* 219; Fitzpatrick  
162.
- P. paradoxa* Coker
- A. levis* De Bary
- A. brauni* De Bary
- A. pirifera* (Zopf) Pring.
- A. pulchra* Thaxt.
- D. monosporus* Leitgeb
- G. inflata* C. & H.
- L. caudata* De Bary
- L. lacteus* Ag.
- A. lactea* Cornu
- M. spinospora* Kan.
- P. myriandra* Drech.
- P. cymosa* De Bary
- R. interruptum* Cornu
- S. ferax* (Gruith.) Nees
- S. reinschi* (Schroet.) Fritsch
- N. sp. I.* = *N. reinschi*?
- N. reinschi* Schroet.
- T. clavata* Humph.
- B. subclavata* Couch
- C. achlyoides* Coker

## Genera Incertae Sedis Vel Dubia

- Aphanomycopsis* Scherffel *Arch. Protistenk.*  
52:1, ill. 1925; Fitzpatrick 170.
- Jaraia* Nemeč *Bull. Acad. Sci. Boheme* 18:1,  
ill. 1913; Fitzpatrick 171.
- Sommerstorffia* Arnaudow *Flora* 116:109 1923.
- A. bacillariacearum* Scherf.
- J. salicis* Nemeč
- S. spinosa* Arnaud.

## ANCYLISTACEAE

- Achlyogeton* Schenk *Bot. Zeit.* 17:398 1859.
- Ancylistes* Pfitzer *Mon. Akad. Wiss. Berlin*  
1872:379, ill.
- Lagenidium* Schenk *Verh. Phys. Med. Ges.*  
Würzburg 9:27 1857.
- Myzocytium* Schenk *Ueb. Vork. Kontr. Zell.*  
70 1858.
- A. entophytus* Schenk
- A. closterii* Pfitzer
- L. rabenhorsti* Zopf
- M. proliferum* Schenk

## Genera Incertae Sedis Vel Dubia

- Lagena* Vanterpool & Ledingham Can. Jour. Res. 3:192, ill. 1930; Fitzpatrick 128. *L. radicolica* V. & L.  
*Lagenidiopsis* De Wild. Ann. Soc. Belg. Micr. 20:109 1896; Fitzpatrick 126. *L. reducta* De Wild.  
*Mitochytrium* Dangeard Bull. Soc. Myc. Fr. 27:200, ill. 1911; Fitzpatrick 127. *M. ramosum* Dang.  
*Protascus* Dangeard. Le Botaniste 9:207, ill. 1906; Fitzpatrick 127. *P. subuliformis* Dang.  
*Resticularia* Dangeard Ib. 2:96, ill. 1891; Fitzpatrick 126. *R. nodosa* Dang.

## PERONOSPORACEAE

- Albugo* Gray Nat. Arrang. Brit. Pl. 1:540 1821. *A. candida* (Pers.) Gray  
*Cystopus* Lev. Ann. Sci. Nat. 3:8:371 1847. *C. candidus* (Pers.) Lev.  
*Basidiophora* Roze & Cornu Ann. Sci. Nat. 5:11:84 1869. *B. entospora* R. & C.  
*Bremia* Regel Bot. Zeit. 1:665 1843. *B. lactucae* Regel  
*Bremiella* Wilson Mycologia 6:195, ill. 1914; Fitzpatrick 220. *B. megasperma* (Berl.) Wilson  
*Peronospora* Corda Icon. Fung. 1:20, ill. 1837. *P. parasitica* (Pers.) De B.  
*Phytophthora* De Bary Jour. Roy. Agr. Soc. England 2:12:239, ill. 1876. *P. infestans* (Mont.) De B.  
*Blepharospora* Petri Ann. For. Ist. Naz. 3:3, ill. 1918; Riv. Path. Ent. Agr. 11:259, ill. 1924; Fitzpatrick 208. *B. cambiovora* Petri  
*Kawakamia* Miyabe Bot. Mag. Tokyo 17:306 1903. *K. cyperi* (M. & I.) Miy.  
*Mycelophagus* Mangin Comp. Rend. 136:471 1903. *M. castaneae* Mang.  
*Nozemia* Peth. Proc. Dublin Sci. Soc. n. s. 13:566 1913; Fitzpatrick 203. *N. cactorum* (Leb. & Cohn) Peth.  
*Phloeophthora* Klebahn Cent. Bakt. 2:15:336 1905; Jour. Myc. 12:61 1906. *P. syringae* Kleb.  
*Pythiocystis* Smith & Smith Bot. Gaz. 42:215, ill. 1906; Fitzpatrick 207. *P. citrophthora* S. & S.  
*Pythiomorpha* Petersen Ann. Myc. 8:528, ill. 1910; Fitzpatrick 208. *P. gonapodyodes* Pet.  
*Plasmopara* Schroet. Krypt. Fl. Schles. 1:236 1889. *P. nivea* (Ung.) Schroet.  
*Peronoplasmopara* Berl. Subgen. 1901; Clint. Rep. Conn. Exp. Sta. 1904:329 1905; Fitzpatrick 218. *P. cubensis* (B. & C.) Clint.  
*Pseudoperonospora* Rostowzew Flora 92:422, ill. 1903; Fitzpatrick 218. *P. cubensis* (B. & C.) Rost.  
*Pseudoplasmopara* Sawada Rep. Res. Inst. Formosa 2:40, ill. 1922. *P. justiciae* Saw.  
*Rhysotheca* Wilson Bull. Torr. Club 34:398 1907. *R. geranii* (Pk.) Wilson  
*Pythiogeton* Minden Falck Myc. Unters. Ber. 2:228, ill. 1916. *P. utriforme* Minden

*Pythium* Pringsheim Jahrb. Wiss. Bot. 1:304  
1858.

*Nematosporangium* (Fisch.) Schroet. Nat.  
Pflanzenf. 1:1:104 1893; Fitzpatrick 196.

*Zoophagus* Sommerstorff Oest. Bot. Zeits.  
61:361, ill. 1911; Fitzpatrick 199.

*Sclerospora* Schroet. Krypt. Fl. Schles. 1:236  
1889.

*Trachysphaera* Tabor & Bunting Ann. Bot.  
37:156, ill. 1923.

*P. debaryanum* Hesse

*N. monospermum* (Pring.) Schroet.

*Z. insidians* Som.

*S. graminicola* (Sacc.) Schroet.

*T. fructigena* T. & B.

#### Genus Incertae Sedis

*Stigeosporium* West Ann. Bot. 30:357 1916;  
Fitzpatrick 209.

*S. marattiacearum* West

### BLASTOCLADIACEAE

*Blastocladia* Reinsch Jahrb. Wiss. Bot. 11:298,  
ill. 1878.

*Allomyces* Butler Ann. Bot. 25:1023, ill.  
1911; Fitzpatrick 135.

*Septocladia* Coker & Grant Jour. Elisha  
Mitchell Soc. 37:180, ill. 1922.

*Gonapodya* Fisch. Rabh. Krypt. Fl. 1:4:382,  
ill. 1892.

*B. pringsheimi* Reinsch

*A. arbuscula* Butler

*S. dichotoma* C. & G.

*G. prolifera* (Cornu) Fisch.

### MONOBLEPHARIDACEAE

*Monoblepharis* Cornu Bull. Soc. Bot. Fr. 18:58  
1871.

*Diblepharis* Lagerh. Bih. Sven. Akad.  
Handl. 25:1, ill. 1900; Fitzpatrick 140.

*Monoblephariopsis* Laibach Jahrb. Wiss.  
Bot. 66:603, ill. 1927; Fitzpatrick 142.

*M. sphaerica* Cornu

*D. insignis* (Thaxt.) Lagerh.

*M. regnans* Laib.

#### Genus Incertae Sedis

*Myrioblepharis* Thaxter Bot. Gaz. 20:433, ill.  
1895.

*M. paradoxa* Thaxt.

#### Genera Dubia

*Coelomyces* Keilin Parasitology 13:225, ill.  
1921.

*Synchaetophagus* Apstein Wiss. Meeresun-  
ters. 12:163, ill. 1911.

*C. stegomyiae* Keil.

*S. balticus* Apstein

## LABOULBENIALES

### PEYRITSCHIELLACEAE

- Acallomyces** Thaxt. Proc. Am. Acad. Arts  
Sci. 38:23 1902.
- Acompsomyces** Thaxt. Proc. Am. Acad. Arts  
Sci. 37:37 1901.
- Camptomyces** Thaxt. Proc. Am. Acad. Arts  
Sci. 29:100 1894.
- Cantharomyces** Thaxt. Proc. Am. Acad. Arts  
Sci. 24:9 1899.
- Chitonomyces** Thaxt. Proc. Am. Acad. Arts  
Sci. 27:30 1892.
- Clidiomyces** Thaxt. Mem. Am. Acad. Arts Sci.  
13:n.6:280, ill. 1908; (Kleidiomyces).
- Dichomyces** Thaxt. Proc. Am. Acad. Arts  
Sci. 28:183 1893.
- Dimeromyces** Thaxt. Mem. Am. Acad. Arts  
Sci. 12:n.3:267 1895.
- Dimorphomyces** Thaxt. Proc. Am. Acad. Arts  
Sci. 28:157 1893.
- Enarthromyces** Thaxt. Mem. Am. Acad. Arts  
Sci. 12:n.3:276 1895.
- Eucantharomyces** Thaxt. Mem. Am. Acad.  
Arts Sci. 12:n.3:273 1895.
- Euhaplomyces** Thaxt. Proc. Am. Acad. Arts  
Sci. 37:25 1901.
- Eumonoecomyces** Thaxt. Proc. Am. Acad.  
Arts Sci. 37:21 1901.
- Haplomyces** Thaxt. Proc. Am. Acad. Arts Sci.  
28:159 1893.
- Hydraeomyces** Thaxt. Mem. Am. Acad. Arts  
Sci. 12:n.3:293 1895.
- Limnaeomyces** Thaxt. Proc. Am. Acad. Arts  
Sci. 35:428 1900.
- Monoecomyces** Thaxt. Proc. Am. Acad. Arts  
Sci. 35:412 1900.
- Peyritschiella** Thaxt. Proc. Am. Acad. Arts  
Sci. 24:8 1890.
- Polyascomyces** Thaxt. Proc. Am. Acad. Arts  
Sci. 35:414 1900.
- Stichomyces** Thaxt. Proc. Am. Acad. Arts  
Sci. 37:37 1901.
- A. homalotae** Thaxt.
- A. corticariae** Thaxt.
- C. melanopus** Thaxt.
- C. bledii** Thaxt.
- C. melanorus** Peyr.
- C. furcillatus** Thaxt.
- D. furciferus** Thaxt.
- D. africanus** Thaxt.
- D. denticulatus** Thaxt.
- E. indicus** Thaxt.
- E. atrani** Thaxt.
- E. ancyrophori** Thaxt.
- E. papuanus** Thaxt.
- H. californicus** Thaxt.
- H. halipli** Thaxt.
- L. tropisterni** Thaxt.
- M. homalotae** Thaxt.
- P. curvata** Thaxt.
- P. trichophyae** Thaxt.
- S. conosomae** Thaxt.

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- Amorphomyces** Thaxt. Proc. Am. Acad. Arts  
Sci. 28:158 1893.
- Arthrorhynchus** Kol. Wien. Ent. Monats. 1:66  
1857.
- A. falagriae** Thaxt.
- A. nycteribiae** (Peyr.) Thaxt.

- Helminthophana* Peyr. Sitzb. Acad. Wien  
68:250 1873.
- Ceraeomyces* Thaxt. Proc. Am. Acad. Arts  
Sci. 26:410 1901.
- Chaetomyces* Thaxt. Proc. Am. Acad. Arts  
Sci. 28:178 1893.
- Clematomyces* Thaxt. Proc. Am. Acad. Arts  
Sci. 35:439 1900.
- Compsomyces* Thaxt. Proc. Am. Acad. Arts  
Sci. 29:96 1894.
- Corethromyces* Thaxt. Proc. Am. Acad. Arts  
Sci. 27:36 1892.
- Dioecomyces* Thaxt. Proc. Am. Acad. Arts  
Sci. 37:33 1901.
- Diplomyces* Thaxt. Proc. Am. Acad. Arts Sci.  
30:468 1895.
- Distichomyces* Thaxt. Proc. Am. Acad. Arts  
Sci. 41:308 1905.
- Ectinomyces* Thaxt. Proc. Am. Acad. Arts  
Sci. 38:26 1902.
- Eucoethromyces* Thaxt. Proc. Am. Acad.  
Arts Sci. 35:433 1900.
- Herpomyces* Thaxt. Proc. Am. Acad. Arts  
Sci. 38:11 1902.
- Idiomyces* Thaxt. Proc. Am. Acad. Arts Sci.  
28:162 1893.
- Laboulbenia* Mont. & Rob. Hist. Nat. Veg.  
Par. 622 1853.
- Moschomyces* Thaxt. Proc. Am. Acad. Arts  
Sci. 29:97 1894.
- Rhachomyces* Thaxt. Proc. Am. Acad. Arts  
Sci. 30:468 1895.
- Rhadinomyces* Thaxt. Proc. Am. Acad. Arts  
Sci. 28:179 1893.
- Rhizomyces* Thaxt. Mem. Am. Acad. Arts  
Sci. 12:n.3:307 1895.
- Rickia* Cav. Malpighia 13:182 1899.
- Smeringomyces* Thaxt. Mem. Am. Acad. Arts  
Sci. 13:n. 6:296 1908.
- Sphaleromyces* Thaxt. Proc. Am. Acad. Arts  
Sci. 29:95 1894.
- Stigmatomyces* Karst. Chem. Pflanzenzelle  
78 1869.
- Appendicularia* Pk. Rept. N. Y. State Bot.  
38:95 1885.
- Symplectromyces* Thaxt. Mem. Am. Acad.  
Arts Sci. 13:n.6:314 1908.
- Teratomyces* Thaxt. Proc. Am. Acad. Arts  
Sci. 28:182 1893.
- H. nycteribiae* Peyr.
- C. dahlii* Thaxt.
- C. pinophili* Thaxt.
- C. pinophili* Thaxt.
- C. verticillatus* Thaxt.
- C. cryptobii* Thaxt.
- D. anthici* Thaxt.
- D. actobianus* Thaxt.
- D. leptochiri* Thaxt.
- E. trichopterophilus* Thaxt.
- E. aptonii* Thaxt.
- H. chaetophilus* Thaxt.
- I. peyritschi* Thaxt.
- L. europeae* Thaxt.
- M. insignis* Thaxt.
- R. speluncalis* Thaxt.
- R. crustatus* Thaxt.
- R. tenophorus* Thaxt.
- R. wasmanni* Cav.
- S. anomalus* Thaxt.
- S. lathrobii* Thaxt.
- S. entomophilus* (Pk.) Thaxt.
- A. entomophila* Pk.
- S. vulgaris* Thaxt.
- T. mirificus* Thaxt.

## CERATOMYCETACEAE

- Autoecomyces* Thaxt. Mem. Am. Acad. Arts  
Sci. 13:n.6, 434 1908.
- A. acuminatus* Thaxt.



- Caenomyces** Thaxt. Proc. Am. Acad. Arts Sci. 37:44 1901.  
**Ceratomyces** Thaxt. Proc. Am. Acad. Arts Sci. 27:34 1892.  
**Coreomyces** Thaxt. Proc. Am. Acad. Arts Sci. 38:56 1902.  
**Euzodiomyces** Thaxt. Proc. Am. Acad. Arts Sci. 35:449 1900.  
**Hydrophilomyces** Thaxt. Mem. Am. Acad. Arts Sci. 13:n.6:431 1908.  
**Rhyncophoromyces** Thaxt. Mem. Am. Acad. Arts Sci. 13:n. 6:432 1908.  
**Zodiomyces** Thaxt. Proc. Am. Acad. Arts Sci. 24:263 1889.
- C. isomali** Thaxt.  
**C. mirabilis** Thaxt.  
**C. corisae** Thaxt.  
**E. lathrobii** Thaxt.  
**H. rhyncophorus** Thaxt.  
**R. elephantinus** Thaxt.  
**Z. vorticellarius** Thaxt.

## GYMNASCALES

## ENDOMYCETACEAE

- Bargellinia** Borzi Malpighia 2:476 1888.  
**Byssochlamys** Westling Sven. Bot. Tids. 2:134 1909.  
**Endomyces** Reess Bot. Unters. 77 1870.  
**Endyllum** Clem.; for *Magnusiomyces* Zander Bull. Soc. Bot. Genev. 17:299 1925.  
**Eremascus** Eidam Cohn Beitr. 3:385 1883.  
**Eremothecium** Borzi Nuov. Giorn. Ital. 455, ill. 1888.  
**Oleina** van Tiegh. Jour. Bot. 1:289, ill. 1887.  
**Oleinis** Clem.; *Oleina ascis lateralibus et sporis globosis*.  
**Podocapsa** van Tiegh. Jour. Bot. 1:292, ill. 1887.  
**Podocapsium** Clem. Gen. Fung. 94, 176 1909.
- B. monospora** Borzi  
**B. nivea** Westl.  
**E. decipiens** (Tul.) Reess  
**E. magnusi** (Ludw.) Clem.  
**E. albus** Eidam  
**E. cymbalariae** Borzi  
**O. nodosa** van Tiegh.  
**O. lateralis** (van Tiegh.) Clem.  
**P. palmata** van Tiegh.  
**P. diffusum** (van Tiegh.) Clem.

## SACCHAROMYCETACEAE

- Coccidiascus** Chatton Comp. Rend. Soc. Biol. 75:117, ill. 1913.  
**Hansenula** Syd. Ann. Myc. 17:44 1919; for *Willia* Hansen 1904, not *C. Muell.* 1899.  
**Isomyces** Clem.; for *Debaryomyces* Kloeck. Comp. Rend. Lab. Carlsb. 7:273, ill. 1909; Syll. Fung. 22:786 1913.  
**Micranthomyces** Gruss Jahrb. Wiss. Bot. 66:177, ill. 1926.  
**Monosporella** Keilin Parasitology 12:89, ill. 1920.  
**Monospora** Metschnikoff Virchow Arch. 96:178, ill. 1884; not *Hochstet.* 1841; or *Solier* 1845.  
**Nadsonia** Syd. Ann. Myc. 10:347 1912.  
**Guilliermondia** Nad. & Kon. Bull. Jard. Bot. Petersb. 11:116, ill. 1911; not *Boud.* 1904.
- C. legeri** Chatton  
**H. anomala** (Hans.) Syd.  
**I. globosus** (Kloeck.) Clem.  
**M. alpinus** Gruss.  
**M. bicuspidata** (Metschn.) Keil.  
**M. bicuspidata** Metschn.  
**N. fulvescens** (Nad. & Kon.) Syd.  
**G. fulvescens** Nad. & Kon.

- Nematospora* Peglion Att. Accad. Linc.  
5:6:276 1897.  
*Ashbia* Cif. & Frag. Bol. Soc. Espan. 28:379  
1928.  
*Pichia* Hansen Cent. Bakt. 2:12:538 1904.  
*Saccharomyces* Meyen Wieg. Arch. 4:2:100  
1838.  
*Saccharomycodes* Hansen Cent. Bakt. 2:12:537  
1904.  
*Saccharomycopsis* Schionning Comp. Rend.  
Lab. Carlsb. 6:124 1906.  
*Schizosaccharis* Lindner Wochens. Brauer.  
10:1298 1893; for *Schizosaccharomyces*.  
*Telia* Clem.; for  
*Hanseniospora* Zikes Cent. Bakt. 2:30:148  
1911; Syll. Fung. 24:1306 1928.  
*Hansenia* Lindner Mikr. Betriebs. Gär. 434  
1905; not Karst. 1879, or Zopf 1883  
*Torulospira* Lindner Mikr. Betriebs. Gär.  
421 1905.  
*Williopsis* Zender Inst. Bot. Univ. Genev.  
10:12:42 1925.  
*Zonosporis* Clem.; for *Schwanniomyces* Kloeck.  
Cent. Bakt. 2:25:294 1909.  
*Zygosaccharis* Barker Proc. Roy. Soc. London  
68:347 1901; for *Zygosaccharomyces*.
- N. coryli* Peglion  
*A. gossypii* (Ash. & Now.) C. & F.  
*P. membranifaciens* Hans.  
*S. cerevisiae* Meyen  
*S. ludwigi* Hans.  
*S. capsularis* Schion.  
*S. pombe* Lindner  
*T. apiculata* (Reess) Clem.  
*H. apiculata* (Lindn.) Zikes  
*H. apiculata* Lindner  
*T. delbruecki* Lindner  
*W. saturnus* (Kloeck.) Zend.  
*Z. occidentalis* (Kloeck.) Clem.  
*Z. barkeri* S. & S.

## MONASCACEAE

- Monascus* van Tiegh. Bull. Soc. Bot. Fr.  
31:226 1884. *M. ruber* van Tiegh.

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- Amaurascus* Schroet. Krypt. Flor. Schles.  
3:211 1893. *A. niger* Schroet.  
*Arachniotus* Schroet. Krypt. Flor. Schles.  
3:210 1893. *A. candidus* (Eidam) Schroet.  
*Conidiascus* Holterm. Myk. Unters. Trop. 23  
1898. *C. paradoxus* Holterm.  
*Ctenomyces* Eidam Cohn Beitr. 3:274 1880. *C. serratus* Eidam  
*Diplostephanus* Langeron Comp. Rend. 87:344  
1922. *D. nidulans* (Eidam) Lang.  
*Eidamella* Matr. & Dass. Bull. Soc. Myc. Fr.  
17:123 1901. *E. spinosa* M. & D.  
*Gymnascus* Baran. Bot. Zeit. 30:158 1872. *G. reessi* Baran.  
*Dichotonium* B. & C. Grevillea 3:146 1875. *D. melleum* B. & C.  
*Hexagonella* Stev. & Guba Bishop Mus. Bull.  
19:89, ill. 1925. *H. peleae* Stev. & Guba  
*Lilliputia* Boud. & Pat. Bull. Soc. Myc. Fr.  
16:144 1900. *L. gaillardi* B. & P.  
*Myrillium* Clem. *Gymnascus polysporus*. *M. myriosporus* (Rostr.) Clem.  
*Myxotrichum* Kze. Myc. Heft. 2:108 1823. *M. chartarum* Kze.

- Penicillioopsis* Solms-Laubach Ann. Jard.  
Buitenz. 6:53 1887. P. *clavariaeformis* Solms.  
*Rollandina* Pat. Bull. Soc. Myc. Fr. 21:83, ill.  
1905. R. *capitata* Pat.

## Genera Incertae Sedis Vel Dubia

- Ateleothylox* Ota & Lang. Ann. Paras. Hum.  
1:333 1923. A. *curri* (C. & M.) O. & L.

## PERISPORIALES

## EUROTIACEAE

## Hyalosporae

- Anixiopsis* Hansen Bot. Zeit. 7:131, ill. 1897. A. *stercoraria* Hans.  
*Aphanascus* Zukal Ber. Deut. Bot. Ges. 8:295  
ill. 1890. A. *cinnabarinus* Zukal  
*Carpenteles* Langeron Comp. Rend. 87:343  
1922. C. *glaucum* (Lk.) Lang.  
*Penicillium* Fisch. Nat. Pflanzenf. 1:1:304  
1897; not *Penicillium* Lk. 1809. P. *crustaceum* Fisch.  
*Chaetotheca* Zukal Ber. Deut. Bot. Ges. 8:296  
1890. C. *fragilis* Zukal  
*Dichlaena* Dur. & Mont., em. Maire Bull. Soc.  
Nat. Afr. 159 1917. D. *lentisci* Dur. & Mont.  
*Eurotium* Link Spec. Plant. 6:1:79 1824. E. *herbariorum* (Wigg.) Link  
*Allescheria* Sacc. & Syd. Syll. Fung. 14:464  
1899. A. *gayoni* (Cost.) S. & S.  
*Aspergillus* Link p.p. Obs. Myc. 16 1889. A. *glaucus* (L.) Link  
*Eurotiella* Lindau Nat. Pflanzenf. 1:1:383  
1900. E. *gayoni* (Cost.) Lind.  
*Eurotiopsis* Costantin Ann. Inst. Pasteur  
11:1 1897; not Karst. Syll. Fung. 14:464  
1899. E. *gayoni* Cost.  
*Kickxella* Coemans Bull. Soc. Bot. Belg.  
1:155 ill. 1862. Syll. Fung. 9:372 1891. K. *alabastrina* Coem.  
*Sartorya* Vuillemin Comp. Rend. 184:136  
1927. S. *fumigata* (Fres.) Vuill.  
*Fragosphaeria* Shear Mycologia 15:124 1923. F. *purpurea* Shear  
*Mycogala* Rost. Sluz. Mon. 1875 M. *parietina* (Schrad.) Rost.  
*Anixia* Hoffm. Icon. Fung. 70 ill. 1862; not  
Fries 1819. A. *truncigena* Hoffm.  
*Samarospora* Rostrup Beih. Bot. Cent. 53:3  
1893. S. *potamogetonis* Rostr.

## Phaeosporae

- Arachnomyces* Masee & Salmon Copr. Fung.  
2:68 1902. A. *nitidus* Mass. & Salmon  
*Carothecis* Clem. Cephalotheca glabra C. *palearum* (Richon) Clem.

- Cephalotheca* Fkl. *Symb. Myc.* 1:297 1869. *C. sulphurea* Fkl.  
*Aposphaeriopsis* Died. *Ann. Myc.* 11:44 1913. *A. fusco-atra* Died.  
*Fairmania* Sacc. *Ann. Myc.* 4:276 1906; *Syll. Fung.* 22:978 1913; cf. Hoehn. *Frag. Myk.* 359. *F. singularis* Sacc.  
*Emericella* Berk. *Crypt. Bot.* 340 1857. *E. variegata* B. & Br.  
*Guillermundia* Boud. *Bull. Soc. Myc. Fr.* 20:19 1904. *G. saccoboloides* Boud.  
*Magnusia* Sacc. *Michelia* 1:122 1878. *M. nitida* Sacc.  
*Micrascus* Zukal *Neue Pilz.* 9, ill. 1885. *M. longirostris* Zukal  
*Phaeidium* Clem.; for *P. microscopicum* (Ruhl.) Clem.  
*Laaseomyces* Ruhl. *Verh. Bot. Brandenb.* 41:83 1889. *L. microscopicum* Ruhl.  
*Pleurascus* Masee & Salmon *Ann. Bot.* 15:330 1901. *P. nicholsoni* Mass. & Salmon  
*Thielavia* Zopf. *Verh. Bot. Brandenb.* 18:101 1876. *T. basicola* Zopf

## Phaeodidymae

- Richonia* Boud. *Rev. Myc.* 7:224 1885. *R. variospora* Boud.  
*Testudina* Bizz. *Fung. Ven.* 1 1885. *T. terrestris* Bizz.  
*Marchaliella* Bomm. & Roum. *Wint. Cont. Myc. Belg.* 4:243; cf. Hoehn. *Frag. Myk.* 1023; *Syll. Fung.* 11:257 1895. *M. zopfiioides* B. & R.  
*Zopfia* Rabh. *Fung. Eur. no.* 1734 1874. *Z. rhizophila* Rabh.  
*Celtidea* Janse *Ann. Jard. Buitenz.* 14:202, ill. 1896. *C. duplicispora* Janse  
*Zopfella* Winter *Die Pilze* 1:2:56 1887, not Trev. 1885. (Bacter.) *Z. tabulata* (Zopf) Wint.

## Hyalophragmiae

- Dexteria* Stev. *Trans. Ill. Acad. Sci.* 10:174, ill. 1917. *D. pulchella* Stev.

## Phaeophragmiae

- Eosphaeria* Hoehn. *Ann. Myc.* 15:362 1917. *E. uliginosa* (Fr.) Hoehn.  
*Preussia* Fkl. *Symb. Myc.* 91 1869. *P. funiculata* Fkl.  
*Fleischhakea* Auersw. *Hedwigia* 8:2 1869; not Rabh. 1878 (Disc.) *F. levis* Auersw.

## Phaeodictyae

- Ceratocarpia* Rolland *Bull. Soc. Myc. Fr.* 12:2, ill. 1896. *C. cactorum* Rolland  
*Phanerascus* Baudys *Cent. Bakt.* 2:15:513 1920. *P. quercinus* Baudys

## Genera Dubia

- Myriococcum* Fr. *Syst. Myc.* 2:304 1823. *M. praecox* Fr.  
*Pisomyxa* Corda *Icon. Fung.* 1:23, ill. 1837. *P. racodioides* Corda

ERYSIPHACEAE

Hyalosporae

- Erysiphe* Hedw. f. DC. Flor. Fr. 2:272 1805. *E. polygoni* DC.  
*Erysiphella* Pk. Rep. N. Y. Mus. 28:63 *E. aggregata* Pk.  
 1876; Syll. Fung. 1:23 1882. *E. parnassiae* Hal.  
*Erysiphopsis* Halsted Bull. Torr. Club *L. taurica* (Lev.) Arn.  
 26:594 1899; Syll. Fung. 16:399 1902. *T. japonica* I. & H.  
*Leveillula* Arnaud Ann. Serv. Epiphyt. 7:92 *L. tjbodensis* Gäum.  
 1919; Syll. Fung. 24:226 1926. *M. divaricata* Lev.  
*Typhulochaeta* Ito & Hara Bot. Mag. *C. divaricata* Lev.  
 Tokyo 29:20 1915; Syll. Fung. 24:226 *P. suffulta* (Reb.) Sacc.  
 1926. *P. myrtilina* Kze. & Schm.  
*Lanomyces* Gäum. Ann. Jard. Buitenz. 32:46 *S. pannosa* (Wallr.) Lev.  
 1922. *C. wrighti* B. & C.  
*Microsphaera* Lev. Ann. Sci. Nat. 3:15:381 *U. bivonae* Lev.  
 1851. *P. curtisi* Sacc. & Speg.

Hyalodidymae

- Chilomyces* Speg. Fung. Chil. 27, ill. 1910. *C. valparadisus* Speg.  
*Schistodes* Theiss. Ann. Myc. 15:456 1917. *S. erysiphina* (Henn.) Theiss.  
*Dichothrix* Theiss. Beih. Bot. Cent. 29:2:60 *D. erysiphina* (Henn.) Theiss.  
 1912; not Zan. (Algae).

Hyalophragmiae

- Leucoconis* Theiss. & Syd. Ann. Myc. 15:456 *L. erysiphina* (Syd.) T. & S.  
 1917.

PERISPORIACEAE

Hyalosporae

- Clistosphaera* Syd. Ann. Myc. 14:74 1916; *C. macrostegia* Syd.  
 15:458, ill. 1917. *M. portoricense* Speg.

Phaeosporae

- Episoma* Syd. Ann. Myc. 23:329 1925. *E. parasiticum* Syd.  
*Guttularia* Obermayer Myc. Cent. 3:9 1913. *G. geoporae* Oberm.

- Teratonema* Syd. Ann. Myc. 15:180 1917; cf.  
Werdermann Ann. Myc. 21:336 1923.      *T. corniculare* (Henn.) Syd.

## Hyalodidymae

- Chaetostigme* Syd. Ann. Myc. 15:199 1917.      *C. horridula* Syd.  
*Chevalieropsis* Arnaud Ann. Serv. Epiphyt.  
9:2 1923.      *C. ctenotricha* (Har. & Pat.) Arn.  
*Chevaliera* Arnaud Comp. Rend. 170:203  
1920; not Gaud. 1852.      *C. ctenotricha* (Har. & Pat.) Arn.  
*Pseudoparodiella* Stev. Ill. Biol. Mon. 11:14,  
ill. 1927.      *P. vernoniae* Stev.  
*Chrysomyces* Theiss. & Syd. Ann. Myc. 15:139  
1917.      *C. brachystegiae* (Henn.) T. & S.  
*Dichaetis* Clem.; for      *D. javanica* (Koord.) Clem.  
*Wentiomyces* Koord. Bot. Unters. 148  
1907.      *W. javanicus* Koord.  
*Dimeriella* Speg. Rev. Mus. La Plata 15:12  
1908.      *D. cordiae* (Henn.) Theiss.  
*Dimerina* Theiss. Beih. Bot. Cent. 29:2:46  
1912.      *D. strychni* (Henn.) Theiss.  
*Dimeriopsis* Stev. Trans. Ill. Acad. Sci.  
10:171 1917.      *D. arthrostylis* Stev.  
*Pilula* Masee Kew Bull. 1910:252.      *P. straminea* Masee  
*Lasiostemma* Theiss. & Syd. Ann. Myc. 15:218  
1917; 16:8 1918.      *L. melioloides* (B. & R.) T. & S.  
*Pampolysporium* Magn. Verh. z-b. Ges. Wien  
1900:444.      *P. singulare* Magn.  
*Polysporidium* Syd. Ann. Myc. 6:528 1908.      *P. bornmülleri* Syd.  
*Rhizalia* Syd. Ann. Myc. 12:546, ill. 1914.      *R. fasciculata* Syd.  
*Stigme* Syd. Ann. Myc. 15:199 1917.      *S. lussoniensis* Syd.

## Phaeodidymae

- Alina* Rac. Bull. Acad. Crac. 1909:374.      *A. jasmini* Rac.  
*Jaffuela* Speg. Bol. Acad. Cordoba 25:41, ill.  
1921.      *J. chilensis* Speg.  
*Apiosporina* Hoehn. Frag. Myk. 506 1910; cf.  
Theiss. & Syd. Ann. Myc. 16:12 1918.      *A. collinsi* (Schw.) Hoehn.  
*Acantharia* Theiss. & Syd. Ann. Myc. 16:15  
1918.      *A. echinata* (E. & E.) T. & S.  
*Hypoplegma* Theiss. & Syd. Ann. Myc.  
15:135 1917.      *H. viridescens* (Rehm) T. & S.  
*Chaetostigmella* Syd. Ann. Myc. 15:199 1917.      *C. papillifera* Syd.  
*Meliolinopsis* Stev. Ill. Biol. Mon. 8:193, ill.  
1923.      *M. palmicola* Stev.  
*Dimerium* Sacc. & Syd. Syll. Fung. 17:537  
1905; 16:410 1902.      *D. pulveraceum* (Speg.) Theiss.  
*Lasiobotrys* Kze. Myk. Heft. 2:88 1823.      *L. loniceræ* (Schl.) Kze.  
*Parodiella* (Speg.) Theiss. & Syd. Ann. Myc.  
15:126 1917.      *P. grammodes* (Kze.) Cke.  
*Parodiopsis* Maubl. Bull. Soc. Myc. Fr. 31:22  
1915.      *P. melioloides* (B. & C.) Maubl.

- Phaeodimeris* Speg. Rev. Mus. La Plata 15:13  
1908 (for *Phaeodimeriella* Speg.).  
*Phaeodimeriella* Theiss. Beih. Bot. Cent.  
29:2:46 1912.  
*Pseudodimerium* Petr. Ann. Myc. 22:21  
1924.  
*Phaeostigme* Syd. Ann. Myc. 15:199 1917.  
*Piline* Theiss. Ann. Myc. 14:409 1916; 15:458,  
ill. 1917.  
*Stomatogene* Theiss. Ann. Myc. 14:406, ill.  
1916.  
*Wageria* Stev. & Dalbey Mycologia 11:7, ill.  
1919.
- P. occulta* (Rac.) Speg.  
*P. occulta* (Rac.) Theiss.  
*P. meliolicolum* Petr.  
*P. picea* (B. & C.) Syd.  
*P. splendens* (Pat.) Theiss.  
*S. agaves* (E. & E.) Theiss.  
*W. portoricensis* S. & D.

## Hyalophragmiae

- Dimeriellopsis* Stev. Ill. Biol. Mon. 11:17, ill.  
1927.  
*Mycophaga* Stev. Ib. 8:197 1923.  
*Paropsis* Speg. Physis 4:284 1918; Syll. Fung.  
22:65 1913.
- D. costaricensis* Stev.  
*M. guianensis* Stev.  
*P. roseospora* Speg.

## Phaeophragmiae

- Ceratasperma* Speg. Physis 4:284 1918.  
*Haraea* Sacc. & Syd. Ann. Myc. 11:312 1913.  
*Irene* Theiss. & Syd. Ann. Myc. 15:194 1917.  
*Appendiculella* Hoehn. Frag. Myk. 1160  
1919.  
*Irenopsis* Stev. Ann. Myc. 25:411, ill. 1927.  
*Irenina* Stev. Ann. Myc. 25:411, ill. 1927.  
*Leptomeliola* Hoehn. Frag. Myk. 1160 1919.  
*Meliola* Fr. Syst. Orb. Veg. 111 1825.  
*Asteridium* Sacc. Syll. Fung. 1:49 1882;  
9:435 1891.  
*Myxothecium* Kze. Weig. Exsic. 1827; Fr.  
Syst. Myc. 3:232 1829.  
*Meliolina* Syd. Ann. Myc. 12:553 1914.  
*Hyalomeliolina* Stev. Ill. Biol. Mon. 8:193,  
ill. 1923.  
*Meliolinopsis* Beeli Bull. Jard. Brux. 7:101  
1920.  
*Stevensula* Speg. Bol. Acad. Cordoba 26:339  
1923.  
*Perisporiopsis* Henn. Hedwigia 43:83 1904;  
cf. Theiss. & Syd. Ann. Myc. 16:14 1918.  
*Perisporium* Fr. Syst. Myc. 3:248 1821.  
*Euantennaria* Speg. Bol. Acad. Cordoba  
23:549, ill. 1919.  
*Perisporina* Henn. Hedwigia 43:357 1904.  
*Perisporiopsis* Stev. Trans. Ill. Acad. Sci.  
10:170 1917; not Henn. 1904.  
*Stevensea* Trotter Syll. Fung. 24:261 1926.  
*Toroa* Syd. Jour. Dept. Agr. P. R. 10:19, ill.  
1926.
- C. theobromae* (Fab.) Speg.  
*H. japonica* S. & S.  
*I. inermis* (K. & C.) T. & S.  
*A. calostroma* (Desm.) Hoehn.  
*I. tortuosa* (Wint.) Stev.  
*I. glabra* (B. & C.) Stev.  
*L. hyalospora* (Lev.) Hoehn.  
*M. nidulans* (Schw.) Cke.  
*A. pleurostyliae* (B. & Br.) Sacc.  
*M. musae* Kze.  
*M. cladotricha* (Lev.) Syd.  
*H. guianensis* Stev.  
*M. megalospora* (Rehm) Beeli  
*S. monensis* Speg.  
*P. struthanthi* Henn.  
*P. vulgare* Fr.  
*E. tropicicola* Speg.  
*P. manaoensis* Henn.  
*P. wrighti* (B. & C.) Stev.  
*S. wrighti* (B. & C.) Trotter.  
*T. dimerosporis* (Speg.) Syd.

## Phaeodictyae

- Pleomerium Speg. Physis 4:284 1918 P. fusciviridescens (Rehm) Speg.

## Scolecosporae

- Leptascospora Speg. Physis 4:284 1918 L. uredinis (Rac.) Speg.  
 Ophiomeliola Starb. Bih. Sven. Handl. 25:22  
 1899. O. lindmani Starb.  
 Tonduzia Stev. Ill. Biol. Mon. 11:16, ill. 1927 T. psychotriae Stev.

## ENGLERULACEAE

- Englerula Henn. Engler Bot. Jahrb. 34:49  
 1905; em. Hoehn. Frag. Myk. 6:221 1909;  
 cf. Ann. Myc. 15:458, ill. 1917; Petr. Ib.  
 26:387 1928. E. macarangae Henn.  
 Anatexis Syd. Ann. Myc. 26:90 1928; cf.  
 Petr. Ib. 26:409. A. elmeri Syd.  
 Hyalotexis Syd. Ann. Myc. 23:326 1925; cf.  
 Petr. Ib. 26:398. H. pellucida Syd.  
 Linotexis Syd. Ann. Myc. 15:197 1917; cf.  
 Petr. Ib. 26:407. L. philippinensis Syd.  
 Parenglerula Hoehn. Frag. Myk. 10:525 1910;  
 cf. Petr. Ann. Myc. 26:404 1928. P. macowaniana (Thuem.) Hoehn.  
 Schiffnerula Hoehn. Frag. Myk. 7:330 1909;  
 cf. Petr. Ann. Myc. 26:395 1928. S. mirabilis Hoehn.  
 Diathryptum Syd. Phil. Jour. Sci. 21:137  
 1922; cf. Petr. Ann. Myc. 26:400 1928. D. amboinense Syd.  
 Phaeoschiffnerula Theiss. Broteria 12:21,  
 ill. 1917; cf. Petr. Ann. Myc. 26:397 1928. P. compositarum Theiss.  
 Questiera Arnaud Les Asterin. 1:186 1918;  
 cf. Petr. Ann. Myc. 26:397 1928. Q. pulchra (Sacc.) Arn.  
 Rhytidenglerula Hoehn. Frag. Myk. 1088  
 1918. R. carnea (E. & M.) Hoehn.  
 Thrauste Theiss. Verh. z-b. Ges. Wien 66:337  
 1916; cf. Ann. Myc. 15:467, ill. 1917;  
 Petr. Ib. 26:408 1928. T. medinillae (Rac.) Theiss.

## Genera Incertae Sedis Vel Dubia

- Hyaloderma Speg. Fung. Guar. 1:171, ill.  
 1883; cf. Petr. Ann. Myc. 26:394 1928. H. imperspicuum Speg.  
 Hyalodermella Speg. Physis 4:284 1918. H. gardeniae (Niessl) Speg.  
 Hyalosphaera Stev. Trans. Ill. Acad. Sci.  
 10:172 1917; cf. Petr. Ann. Myc. 26:398  
 1928. H. miconiae Stev.  
 Ophiotexis Theiss. Verh. z-b. Ges. Wien  
 66:345 1916; cf. Petr. Ann. Myc. 26:402  
 1928. O. perpusilla (Speg.) Theiss.  
 Rhizotexis Theiss. & Syd. Ann. Myc. 15:140  
 1917; cf. Petr. Ib. 26:412. 1928. R. bauhiniarum (Henn.) T. & S.  
 Syntexis Theiss. Verh. z-b. Ges. Wien 66:340  
 1916; cf. Petr. Ann. Myc. 26:399. 1928. S. tibouchina (Henn.) Theiss.  
 Theissenula Syd. Ann. Myc. 12:198. 1914;  
 cf. Petr. Ib. 26:410 1928. clavispora Syd.



## CAPNODIACEAE

## Hyalosporae

*Oplothecium* Syd. Ann. Myc. 21:97, ill. 1923. *O. arecae* Syd.

## Hyalodidymae

- Adelopus* Theiss. Ann. Myc. 15:482 1917. *A. balsamicola* (Pk.) Theiss.  
*Cryptopus* Theiss. Ann. Myc. 12:72 1914; not Lindley 1824. *C. balsamicola* (Pk.) Theiss.  
*Antenellina* Mendoza Bishop Mus. Bull. 19:55, ill. 1925. *A. hawaiiensis* Mendoza  
*Calyptra* Theiss. & Syd. Ann. Myc. 15:478 1917. *C. cordobensis* (Speg.) T. & S.  
*Capnodinula* Speg. Physis 4:288 1918; Syll. 16:1141 1902. *C. trichodes* (Rehm) Speg.  
*Ceratochaetopsis* Stev. & Weedon Ill. Biol. Mon. 11:20 1927. *C. costaricensis* S. & W.  
*Chaetothyrina* Theiss. Ann. Myc. 11:495 1913. *C. musarum* (Speg.) Theiss.  
*Ceratochaete* Syd. Ann. Myc. 15:179 1917. *C. philippinensis* Syd.  
*Microcallis* Syd. Ann. Myc. 24:337, ill. 1926. *M. phoebes* Syd.  
*Dimerosporina* Hoehn. Frag. Myk. 610. 1909. *D. amomi* (B. & Br.) Hoehn.  
*Dimerosporiella* Hoehn. Sitzb. Akad. Wien 8:1178 1909, not Speg. 1908. *D. amomi* (B. & Br.) Hoehn.

## Phaeodidymae

- Balladyna* Rac. Par. Alg. Pilz. Java 2:3 1900. *B. gardeniae* Rac.  
*Balladynella* Theiss. & Syd. Ann. Myc. 15:478 1917. *B. amazonica* (Hoehn.) T. & S.  
*Balladynopsis* Theiss. & Syd. Ann. Myc. 15:475, ill. 1917. *B. philippinensis* Syd.  
*Chaetobotrys* Clem.; for *C. bambusae* (Henn.) Clem.  
*Kusanobotrys* Henn. Hedwigia 1904:141; Syll. 17:881 1905.  
*Chaetyllis* Clem.; for *Raciborskiomyces* Siemaszko Act. Soc. Bot. Bol. 2:270 1925. *K. bambusae* Henn.  
*Dysrhynchis* Clem. Gen. Fung. 32 1909. *C. polonica* (Siem.) Clem.  
*Henningsomyces* Sacc. Syll. Fung. 17:689. 1905. *R. polonicus* Siem.  
*Phaeocapnodinula* Speg. Bol. Acad. Cordoba 26:369, ill. 1923. *D. pulchella* (Sacc.) Clem.  
*Neohoehnelia* Theiss. & Syd. Ann. Myc. 15:476 1917. *H. pulchella* Sacc.  
*P. paulistana* Speg.  
*N. oligotricha* (Mont.) T. & S.

## Hyalophragmiae

- Antenella* Theiss. & Syd. Ann. Myc. 15:473, ill. 1917. *A. usteri* (Rehm) T. & S.  
*Chaetothyrium* Speg. Fung. Guar. 2:123. 1888. *C. guaranicum* Speg.  
*Aethaloderma* Syd. Ann. Myc. 11:257, ill. 1913; 15:477 1917; Syll. Fung. 24:376 1926. *A. clavatispora* Syd.

- Chaetasterina* Bub. Ann. Nat. Mus. Wien 23:102 1909; Syll. Fung. 22:545 1913.
- Zukalia* Sacc. Syll. Fung. 9:931 1891; cf. Ann. Myc. 15:477 1917; Syll. Fung. 22:42 1913.
- Hypocapnodium* Speg. Physis 2:287 1918; Syll. Fung. 17:557 1905.
- Limacinia* Neger in Johow Estud. Flor. J. F. 190 1896.
- Asteridiella* McAlp. Proc. Linn. Soc. N. S. Wales 1:38 1897; Syll. Fung. 14:701 1899.
- Xystozukalia* Theiss. Verh. z-b. Ges. Wien 66:357 1916; Syll. Fung. 24:382 1926.
- Scorias* Fr. Syst. Orb. Veg. 1:171 1825.
- Trichomerium* Speg. Physis 4:284 1918; Syll. Fung. 17:557. 1905.
- Capnodina* Sacc. Syll. Fung. 22:60 1913.
- C. anomala* (C. & H.) Bub.
- Z. loganiensis* S. & Berl.
- H. setosum* (Zimm.) Speg.
- L. fernandesiana* Neger
- A. solani* McAlp.
- X. transiens* (Hoehn.) Theiss.
- S. spongiosa* (Schw.) Fr.
- T. coffeicola* (Putt.) Speg.
- C. capsulifera* (Rehm) Sacc.

## Phaeophragmiae

- Aethalomyces* Woronich. Ann. Myc. 24:149 1926.
- Capnodaria* Theiss. & Syd. Ann. Myc. 15:474 1917.
- Capnophaeum* Speg. Physis 4:287 1918.
- Phragmocapnias* Theiss. & Syd. Ann. Myc. 15:480 1917.
- Limaciniopsis* Mendoza Bishop Mus. Bull. 19:58, ill. 1925.
- Metacapnodium* Speg. Physis 4:288 1918.
- Setella* Syd. Ann. Myc. 14:359 1916.
- A. arctica* Woronich.
- C. tiliae* (Fkl.) T. & S.
- C. indicum* (Brn.) Speg.
- P. betle* Syd. & Butler
- L. rollandiae* Mendoza
- M. juniperi* (Ph. & Plw.) Speg.
- S. disseminata* Syd.

## Hyalodictyae

- Chaetomeris* Clem.; for
- Treubiomyces* Hoehn. Frag. Myk. 370 1909.
- Paracapnodium* Speg. An. Mus. Nac. 19:325 1909.
- Phaeopeltis* Clem. Gen. Fung. 52 1909.
- Capnites* Theiss. Verh. z-b. Ges. Wien 66:365 1916.
- Limacinia* Sacc. Syll. Fung. 17:556 1905; not Neger 1896.
- Phaeosaccardinula* Henn. Hedwigia 44:67 1905; Syll. Fung. 17:873 1905.
- Tephrosticta* Sacc. & Syd. Syll. Fung. 17:745 1905; 24:1023 1928.
- C. pulcherrima* (Hoehn.) Clem.
- T. pulcherrimus* Hoehn.
- P. pulchellum* Speg.
- P. diospyricola* (Henn.) Clem.
- C. costaricensis* (Speg.) Theiss.
- L. javanica* (Zimm.) S. & D. S.
- P. diospyricola* Henn.
- T. negeriana* S. & S.

## Phaeodictyae

- Capnodium* Mont. Ann. Sci. Nat. 3:11:233 1849.
- Polychaetum* OK. Rev. Gen. Pl. 1:13 1891.
- Naetrocymbe* Koerb. Lich. Germ. 58 1858; Par. Lich. 441 1865.
- C. salicinum* (Pers.) Mont.
- P. quercinum* (Pers.) Lev.
- N. fuliginea* Koerb.

**Coccodinium** Mass. Att. Ist. Venet. 3:5:336  
1860.  
**Schizocapnodium** Fairman Proc. Rochester  
Acad. 6:93 1921.

**C. bartschi** Mass.  
**S. sarcinellum** Fairman

## Scolecosporae

**Actinocymbe** Hoehn. Frag. Myk. 690 1911.  
**Nematothecium** Syd. Leaf. Phil. Bot. 5:1534  
1912.  
**Ophiocapnis** Speg. Physis 4:286 1918;  
Syll. Fung. 22:57 1913; for *Ophiocap-*  
*nodium*.

**A. separatis** (Henn.) Hoehn.  
**N. vinosum** Syd.  
**O. usteri** (Speg.) Sacc.

## Genera Dubia

**Antennulariella** Woronich. Bull. App. Bot.  
8:771, ill. 1915; Syll. Fung. 24:248 1926.  
Probably *Dimeriella*, but paraphyses un-  
certain.  
**Apiosporium** Kze. Myk. Heft. 1:8 1817; Syll.  
Fung. 1:30 1882.  
The type is a sclerotium; Hoehn. Frag. Myk.  
355.

**A. fuliginosa** Woronich.  
**A. salicis** Kze. & Schm.

**Argynna** Morgan Jour. Cincin. Soc. Nat.  
Hist. 18:41 1895; Syll. Fung. 14:470 1899.  
Not to be regarded as an ascomycete; TS  
Ann. Myc. 14:466 1916.

**A. polyhedron** (Schw.) Morgan

**Diblastospermella** Speg. Bol. Acad. Cordoba  
23:579 1919.  
Asci lacking.

**D. aequatorialis** Speg.

**Dimerosporiella** Speg. Rev. Mus. La Plata  
15:10 1908; Syll. Fung. 22:29 1913.  
Perhaps a parenchymic genus of *Englerula-*  
*ceae*; TS Ann. Myc. 15:470 1917.

**D. paulistana** Speg.

**Eudimeriolum** Speg. An. Mus. Nac. 23:36, ill.  
1912; Syll. Fung. 24:246 1926.  
No definite criteria to determine its position;  
TS Ann. Myc. 15:465 1917.

**E. elegans** Speg.

**Hyalotheles** Speg. Rev. Mus. La Plata 15:12  
1908; Syll. Fung. 22:29 1913.  
Probably an *Englerula* with separating  
spore-cells; TS Ann. Myc. 15:470 1917.

**H. dimerosperma** Speg.

**Melanomyces** Syd. Ann. Myc. 15:196 1917;  
Syll. Fung. 24:918 1928.

**M. quercinus** Syd.

Of uncertain affinity; Ann. Myc. 16:15 1918.  
**Meliolopsis** Sacc. Syll. Fung. 9:375 1891.  
Immature, hardly perisporiaceous; TS Ann.  
Myc. 15:465 1917.

**M. microthecia** (Thuem.) Sacc.

**Micromastia** Speg. An. Mus. Nac. 19:324  
1909; Syll. Fung. 22:30 1913.

**M. trigonospora** Speg.

Of completely uncertain character; TS Ann.  
Myc. 15:465 1917.

**Orbicula** Coöke Handb. Brit. Fung. 2:296  
1871; Syll. Fung. 1:38 1882; 9:378 1891.  
Nothing certain known of it; TS Ann. Myc.  
15:465 1917.

**O. cyclospora** Cke.

- Perisporiella** Henn. Hedwigia 41:141 1902. Sterile stroma of a Hypocrella; Hoehn. Frag. Myk. 678; TS Ann. Myc. 15:466 1917.
- Phaeocryptopus** Naumov Bull. Soc. Myc. Fr. 30:424 1914; Syll. Fung. 24:259 1926. Requires further investigation; Sacc. Syll. Fung. 24:259 1926.
- Pleomeliola** Sacc. Syll. Fung. 17:554 1905. Nothing known of type or second species; TS Ann. Myc. 15:406 1917.
- Pseudolizonia** Pir. Nuov. Giorn. Ital. 21:315 1889; Syll. Fung. 9:683 1891. Lizonia with 16-spored asci; not definitely known; TS Ann. Myc. 15:482 1917.
- Rhizogene** Syd. Ann. Myc. 18:181 1920; Syll. Fung. 24:365 1926. Asci and spores immature.
- Sclerotomyces** Woronich. Ann. Myc. 24:233 1926. No generic diagnosis; apparently a sclerotium.
- Scyphostroma** Starb. Bih. Sven. Vet. Handl. 25:23 1899; Syll. Fung. 16:417 1902. Perithecium uncertain; TS Ann. Myc. 15:466 1917.
- P. myristicae** Henn.
- P. abietis** Naumov
- P. fenestrata** (C. & E.) Sacc.
- P. baldwini** Pir.
- R. symphoricarpi** Syd.
- S. dissipabilis** Woronich.
- S. mirum** Starb.

## TRICHOthyRIACEAE

- Actinopeltis** Hoehn. Denks. Akad. Wien 83:17 1907.
- Dasypyrena** Speg. Ann. Myc. 23:267 1925
- Loranthomyces** Hoehn. Ber. Deut. Bot. Ges. 35:414 1917.
- Actinopeltella** Doidge Bothalia 1:216, ill. 1924.
- Trichothyriella** Theiss. Beih. Bot. Cent. 32:4 1914.
- Trichothyriopsis** Theiss. Ib.
- Trichothyrium** Speg. Bol. Acad. Cordoba 11:555 1889.
- Mycolangloisia** Arnaud Ann. Agr. Montp. 16:157 1918.
- Trichopeltopsis** Hoehn. Frag. Myk. 325 1909.
- A. peristomalis** Hoehn.
- D. lauricola** Speg.
- L. sordidulus** (Lev.) Hoehn.
- A. nitida** Doidge
- T. quercigena** (Berk.) Theiss.
- T. densa** (Rac.) Theiss.
- T. sarciniferum** Speg.
- M. echinata** Arn.
- T. reptans** (B. & C.) Hoehn.

## CORYNELIACEAE

- Caliciopsis** Peck Rep. N. Y. Mus. 33:32 1880.
- Corynelia** Fr. Syst. Myc. 2:535 1822.
- Sorica** Giesenhagen Ber. Deut. Bot. Ges. 22:191, ill. 1904.
- Capnodiella** Sacc. Syll. Fung. 1:74 1882; 17:621 1905.
- Tripospora** Sacc. Syll. Fung. Add. 194 1886.
- C. pinea** Pk.
- C. uberata** Fr.
- S. maxima** (B. & C.) Giesen.
- C. maxima** (B. & C.) Sacc.
- T. tripos** (Cke.) Lind.

Genus *Dubium*

- Coryneliella* Hariot & Karsten Rev. Myc.  
12:128 1890; Syll. Fung. 11:385 1895; cf.  
Fitzpatrick Mycologia 12:263 1920. *C. consimilis* H. & K.

## SPHAERIALES

## SPHAERIACEAE

## Allantosporae

- Acanthonitschkea* Speg. An. Mus. Nac.  
3:10:116, ill. 1910. *A. argentinensis* Speg.
- Calosphaeria* Tul. Sel. Fung. Carp. 2:108  
1861. *C. princeps* Tul.
- Longoa* Curzi Att. Ist. Pavia 3:3:204, ill.  
1927. *L. paniculata* Curzi
- Sphaeronemopsis* Speg. Fung. Chil. 151  
1910; Syll. Fung. 22:927 1913; cf. Petr. &  
Syd. Ann. Myc. 23:220 1925. *S. chilensis* Speg.
- Coronophora* Fkl. Symb. Myc. 229 1869; cf.  
Ann. Myc. 15:273. *C. gregaria* (Lib.) Fkl.
- Coronophorella* Hoehn. Sitzb. Akad. Wien  
18:1507 1910. *C. chaetomoides* (P. & S.) Hoehn.
- Cryptosphaerella* Sacc. Syll. Fung. 1:186 1882;  
cf. Hoehn. Frag. Myk. 162. *C. annexa* (Nke.) Hoehn.
- Cryptosphaeria* Greville Scot. Crypt. Flor. 201  
1823. *C. millepunctata* Grev.  
*C. protracta* (Pers.) DeN.
- Cryptovalsa* DeN. Sfer. Ital. 40 1863.  
*Allescherina* Berl. Malpighia 16:300 1902;  
Syll. Fung. 24:733 1928. *A. clematidis* (Br. & Har.) Berl.
- Diatrype* Fr. Sum. Veg. Scan. 385 1849. *D. disciformis* (Hoffm.) Fr.
- Ectosphaeria* Speg. Bol. Acad. Cordoba  
25:48, ill. 1921. *E. costesi* Speg.
- Valseutypella* Hoehn. Ann. Myc. 16:224  
1918; 18:72 1920. *V. tristicha* (DeN.) Hoehn.
- Diatrypella* DeN. Sfer. Ital. 29 1863. *D. verrucaeformis* (Ehrh.) Nke.
- Enchnoa* Fr. Sum. Veg. Scan. 410. 1849. *E. infernalis* (Kze. & Fr.) Fkl.
- Endoxyla* Fkl. Symb. Myc. App. 1:321 1871;  
Hoehn. Frag. Myk. 866. *E. operculata* (A. & S.) Fr.
- Eutypa* Tul. Sel. Fung. Carp. 2:52 1861. *E. lata* (Pers.) Tul.
- Epheliopsis* Henn. Hedwigia 27:270 1908;  
cf. Hoehn. Frag. Myk. 695. *E. turnerae* Henn.
- Lageniformia* Plunk. Bishop Mus. Bull.  
19:98, ill. 1925; cf. Petr. Ann. Myc. 25:237  
1927. *L. bambusae* Plunk.
- Peroneutypa* Berl. Icon. Fung. 3:80 1902;  
Syll. Fung. 17:569 1905. *P. cylindrica* (K. & C.) Berl.
- Eutypella* (Nke.) Sacc. Consp. Gen. Pyr. 4  
1875. *E. cerviculata* (Fr.) Sacc.
- Peroneutypella* Berl. Icon. Fung. 3:82 1902;  
Syll. Fung. 17:569 1905. *P. longirostrata* (Henn.) Berl.
- Pseudotrype* Henn. Monsumia 1:164 1899;  
Syll. Fung. 16:561 1902; cf. Hoehn. Frag.  
Myk. 621. *P. rehiana* Henn. & Nym.

- Scoptria* Nke. Pyr. Germ. 83 1867; Syll. Fung. 1:146 1881; cf. Hoehn. Ann. Myc. 16:128.
- Euacanth*e Theiss. Ann. Myc. 15:272 1917.
- Fracchiaea* Sacc. Myc. Ven. Spec. 115 1873.
- Echusias* Haszlsinsky Verh. z-b. Ges. Wien 23:367 1873; cf. Hoehn. Ann. Myc. 17:31 1919.
- Massalongiella* Speg. Fung. Arg. 1:180 1880.
- Jattaea* Berl. Icon. Fung. 3:6 1902; Syll. Fung. 16:421 1902.
- Lyonella* Syd. Bishop Mus. Bull. 19:108 1925.
- Neozimmermannia* Koord. Verh. Akad. Amster. 3:68, ill. 1907.
- Neotrotteria* Sacc. Bull. Ort. Napoli 6:45 1921.
- Petelotia* Pat. Bull. Soc. Myc. Fr. 40:35 1924.
- Nitschkea* Otth Fkl. Symb. Myc. 165 1869.
- Coelosphaeria* Sacc. Myc. Ven. Spec. 115 1873.
- Phaeotrype* Sacc. Mycologia 12:200 1920.
- Pleurostoma* Tul. Sel. Fung. Carp. 2:247 ill. 1863.
- Neoarcangelia* Berl. Icon. Fung. 3:6 1902; Syll. Fung. 16:419 1902; cf. Hoehn. Ber. Deut. Bot. Ges. 35:129 1917.
- Quaternaria* Tul. Sel. Fung. Carp. 2:104 1863.
- Romellia* Berl. Icon. Fung. 3:5 1902.
- Rostronitschkea* Fitzpatrick Mycologia 11:163, ill. 1919.
- Sydowinula* Petr. Ann. Myc. 21:277 1923.
- Togninia* Berl. Icon. Fung. 3:9 1902.
- Erostella* (Sacc.) Trav. Fl. Ital. Crypt. 1:155 1906; Syll. Fung. 22:353 1913.
- Leucostoma* (Nke.) Hoehn. Ber. Deut. Bot. Ges. 35:631 1917.
- Valsa* Fr. Sum. Veg. Scan. 410 1849.
- Valsella* Fkl. Symb. Myc. 203 1869.
- Wegelia* Berl. Icon. Fung. 3:8 1902; cf. Petr. & Syd. Ann. Myc. 23:221 1925.
- S. isariphora* (Nke.) Sacc.
- E. usambarensis* (Henn.) Theiss.
- F. heterogenea* Sacc.
- E. vitis* Haszl.
- M. bonariensis* Speg.
- J. algeriensis* Berl.
- L. neurophila* Syd.
- N. elastica* Koord.
- N. pulchella* Sacc.
- P. tonkinensis* Pat.
- N. fuckeli* Nke.
- C. cupularis* (Pers.) Karst.
- P. brencklei* Sacc.
- P. candollei* Tul.
- N. ootheca* (B. & C.) Berl.
- Q. persooni* Tul.
- R. vibratilis* (Fr.) Berl.
- R. nervincola* Fitzp.
- S. moravica* Petr.
- T. minima* (Tul.) Berl.
- E. minima* (Tul.) Trav.
- L. massarianum* (DeN.) Hoehn.
- V. ceratophora* Tul.
- V. salicis* Fkl.
- W. discreta* Berl.

## Hyalosporae

- Amylis* Speg. An. Mus. Nac. 31:405 1922.
- Botryosphaeria* C. & DeN. Sfer. Ital. 37 1863; em., Shear Jour. Agr. Res. 28:596 1924.
- Melanops* (Tul.) Sacc. Syll. Fung. 2:231 1883.
- Camptosphaeria* Fkl. Symb. Myc. 140 1869.
- Causalis* Theiss. Ann. Myc. 16:184 1918.
- Anthostomellina* Kants. Bolez. Rast. 17:82, ill. 1928.
- A. memorabilis* Speg.
- B. ribis* Gross. & Dug.
- M. tulasnei* Nke.
- C. sulphurea* Fkl.
- C. myrtacearum* (Rick) Theiss.
- A. carpinea* Kants.

- Clypeotrabutia* Seaver & Chardon *Sci. Surv.*  
P. R. 8:60 1926.
- Cerastomis* Clem.; *Ceratostoma piliferum*
- Ceratostomella* Sacc. *Michelia* 1:370 1878.
- Endoconidiophora* Münch. *Nat. Zeits.*  
*Landw.* 5:564, ill. 1907.
- Linostoma* Hoehn. *Ann. Myc.* 16:91 1918.
- Linostomella* Petr. *Ann. Myc.* 23:41 1925.
- Ophiostoma* Syd. *Ann. Myc.* 17:43 1919;  
new name for *Linostroma* Hoehn. 1918;  
not Wallr. 1831.
- Cryptonectriopsis* Hoehn. *Ann. Myc.* 16:36  
1918.
- Cryptosporella* Sacc. *Michelia* 1:30 1877.
- Cryptosporina* Hoehn. *Oest. Bot. Zeit.* 55:54  
1905.
- Diaporthopsis* H. Fab. *Spher. Vaucl.* 2:35,  
ill. 1883.
- Flageoletia* Sacc. *Syll. Fung.* 14:525 1899,  
as subg.
- Dicarpella* Syd. *Ann. Myc.* 18:181 1920; new  
name for *Disperma* Theiss. *Verh. z-b. Ges.*  
Wien 66:390 1916; not Clarke 1899.
- Ditopella* DeNot. *Sfer. Ital.* 42 1863.
- Halonia* Fr. *Sum. Veg. Scan.* 2:397 1849.
- Epiphyma* Theiss. *Verh. z-b. Ges. Wien* 66:306  
1916.
- Geminispora* Pat. *Bull. Soc. Myc. Fr.* 9:151  
1893.
- Diplosporitis* Clem. *Gen. Fung.* 27 1909.
- Glomerella* Schrenk & Spauld. *Science* 17:750  
1903.
- Gnomoniella* Sacc. *Michelia* 2:312 1881.
- Hyperus* Stevens *Ill. Biol. Mon.* 11:27, ill.  
1927.
- Inzengaea* Borzi *Pringsh. Jarhb.* 16:450 1885.
- Mamiana* C. & DeN. *Sfer. Ital.* 36 1863.
- Mamianella* Hoehn. *Ann. Myc.* 16:102 1918.
- Mazzantia* Mont. *Syll. Gen.* 215 1856.
- Gibellia* Sacc. *Misc. Myc.* 2:12 1885; *Syll.*  
*Fung.* 9:608; cf. Theiss. & Syd. *Ann. Myc.*  
13:185 1915; Hoehn. *Frag. Myk.* 768.
- Miyoshiella* Kawamura *Jap. Jour. Bot.* 4:295,  
ill. 1907; new name for *Miyoshia* Kawamura.
- Montagnellina* Hoehn. *Sitzb. Akad. Wien*  
121:387 1912.
- Desmotascus* Stev. *Bot. Gaz.* 68:476 1919.
- Haplodothella* Werdermann *Rep. Spec.*  
*Nov. Fedde* 19:54 1923.
- Haplothecium* Theiss. & Syd. *Ann. Myc.*  
13:614 1915.
- Pyreniella* Theiss. *Verh. z-b. Ges. Wien*  
66:371, ill. 1916.
- C. portoricensis* (Stev.) S. & C.
- C. vestita* (Sacc.) Clem.
- C. rostrata* (Fkl.) Sacc.
- E. coeruleascens* Münch.
- L. piliferum* (Fr.) Hoehn.
- L. sphaerosperma* (Fkl.) Petr.
- O. piliferum* (Fr.) Syd.
- C. biparasitica* Hoehn.
- C. hypodermia* (Fr.) Sacc.
- C. hypodermia* (Fr.) Hoehn.
- D. nigrella* (Niessl) H. Fab.
- F. tenuis* (C. & P.) Sacc.
- D. bina* (Harkn.) Syd.
- D. ditopa* (Fr.) De N.
- H. cubicularis* Fr.
- E. anceps* (Hoehn.) Theiss.
- G. mimosae* Pat.
- D. mimosae* (Pat.) Clem.
- G. cingulata* (Atkin.) S. & S.
- G. tubaeformis* (Tode) Sacc.
- H. costaricensis* Stev.
- I. erythrospora* Borzi
- M. fimbriata* (Pers.) C. & DeN.
- M. coryli* (Batsch) Hoehn.
- M. galii* (Fr.) Mont.
- G. dothideoides* B. & S.
- M. fuisporina* Kawamura
- M. pithecolobii* (Rac.) Hoehn.
- D. portoricensis* Stev.
- H. chaenostoma* (Sacc.) Werd.
- H. amenti* (Rostr.) T. & S.
- P. festucae* (Lib.) Theiss.

- Myelosperma* Syd. Ann. Myc. 13:38 1915.  
*Chiloella* Syd. Ann. Myc. 26:112 1928.  
*Nephrospora* Loubiere Comp. Rend. 177:211, ill. 1923.  
*Paidania* Rac. Bull. Acad. Crac. 1909:390; Ann. Myc. 7:391 1909.  
*Paralaestadia* Sacc. Syll. Fung. 17:576 1905.  
*Phomatospora* Sacc. Fung. Ven. 2:306 1874.  
*Discosphaerina* Hoehn. Frag. Myk. no. 1031 1917; Syll. Fung. 24:793 1905.  
*Gnomonina* Hoehn. Ann. Myc. 16:48 1918.  
*Guignardia* Viala & Rav. Bull. Soc. Myc. Fr. 63 1892; cf. Syd. Ann. Myc. 17:46 1919.  
*Heteropera* Theiss. Ann. Myc. 14:423, ill. 1916.  
*Laestadia* Auers. Hedwigia 1869:177; not Kunth 1832.  
*Laestadiella* Hoehn. Ann. Myc. 16:50 1918.  
*Mesonella* Petr. & Syd. Ann. Myc. 22:367 1924.  
*Paramazzantia* Petr. Ann. Myc. 25:233 1927.  
*Pseudoguignardia* Gutner Mat. Myk. Fitop. 6:311, ill. 1927.  
*Physalospora* Niessl Verh. Nat. Ver. Brünn 14:10 1876; em., Shear Jour. Agr. Res. 28:596 1924.  
*Anisostomula* Hoehn. Ann. Myc. 16:48 1918.  
*Coutinia* Alm. & Cam. Riv. Agron. 293 1903; Syll. Fung. 17:589 1905.  
*Hypostegium* Theiss. Verh. z-b. Ges. Wien 66:384 1916; Syll. Fung. 24:807 1928.  
*Hypostigme* Syd. Ann. Myc. 23:337 1925.  
*Pemphidium* Mont. Ann. Sci. Nat. 2:14:326 1840; cf. Theiss. Myc. Cent. 3:280 1913; Syll. Fung. 2:670 1883.  
*Physalosporina* Woronich. Ann. Myc. 9:220 1911.  
*Physosporella* Hoehn. Ann. Myc. 16:161 1918.  
*Physalosporella* Speg. Rev. Agron. Vet. 6:35 1910.  
*Pseudophysalospora* Hoehn. Ann. Myc. 16:57 1918.  
*Pilgeriella* Henn. Hedwigia 39:137 1900.  
*Polytrichia* Sacc. Syll. Fung. 1:451 1882.  
*Rinia* Penzig & Sacc. Malpighia 15:224 1901; Syll. Fung. 17:591. 1905.  
*Rostrella* Zimmermann Bull. Inst. Buitenz. 4:19 1900.  
*Rostrosphaeria* Tehon & Daniels Mycologia 19:112, ill. 1927.  
*M. tumidum* Syd.  
*C. guevinae* Syd.  
*N. mangini* Loub.  
*P. melastomis* Rac.  
*P. verrucosa* (Wedd.) Sacc.  
*P. berkeleyi* Sacc.  
*D. discophora* Hoehn.  
*G. alnea* (Fr.) Hoehn.  
*G. alnea* (Fr.) Syd.  
*H. borealis* (Sacc.) Theiss.  
*L. alnea* (Fr.) Auers.  
*L. niessli* (Kze.) Hoehn.  
*M. melaleucae* (Berk.) P. & S.  
*P. biennis* (Dearn.) Petr.  
*P. scirpi* Gutner  
*P. malorum* (Pk.) Shear  
*A. cookeana* (Auers.) Hoehn.  
*C. agaves* Alm. & Cam.  
*H. phormii* (Schröt.) Theiss.  
*H. polyadelpa* Syd.  
*P. nitidum* Mont.  
*P. megastoma* (Pk.) Woron.  
*P. sanguinea* (Rehm) Hoehn.  
*P. chilensis* Speg.  
*P. adeana* (Rehm) Hoehn.  
*P. perisporiodes* Henn.  
*P. wallrothi* Sacc.  
*R. spectabilis* P. & S.  
*R. coffeae* Zimm.  
*R. phlei* T. & D.



- Samarospora* Rostrup Beih. Bot. Cent. 3:3  
1893.
- Schizoparme* Shear Mycologia 15:120, ill. 1923
- Scirrhella* Speg. Fung. Guar. 1:110 1883;  
Ann. Myc. 13:180 1915.
- Scortechinia* Sacc. Syll. Fung. 9:604 1891.
- Sphaerognomonium* Potebnia Ann. Myc. 8:53,  
ill. 1910.
- Amerostege* Theiss. Verh. z-b. Ges. Wien  
66:396, ill. 1916; Syll. Fung. 24:1132 1928.
- Clypeoporthella* Petr. Ann. Myc. 22:149  
1924.
- Spolverinia* Mass. Flora 39:61 1856.
- Sporophysa* Sacc. Syll. Fung. 17:586 1905.
- Stevensiella* Trotter Syll. Fung. 24:808 1928.
- Trabutiella* Stev. Bot. Gaz. 70:401 1920;  
not Theiss. & Syd. 1914.
- Trichosphaerella* B. R. & S. Syll. Fung.  
9:604 1891.
- Trichosphaeria* Fkl. Symb. Myc. 144 1869.
- Bakeromyces* Syd. Ann. Myc. 15:202 1917;  
cf. Hoehn. Ann. Myc. 16:77 1918; Syll.  
Fung. 24:816 1928.
- Pseudorhynchia* Hoehn. Sitzb. Akad. Wien.  
118:1206 1910.
- Urospora* H. Fab. Spher. Vaucl. 75 1878.
- Urosporella* Atkin. Bull. Cornell Univ.  
3:99 1897; Syll. Fung. 14:523 1899.
- Vestergrenia* Rehm. Hedwigia 40:100, ill.  
1901.
- Guignardiella* Sacc. & Syd. Syll. Fung.  
16:465 1902.
- Wallrothiella* Sacc. Syll. Fung. 1:455 1882.
- S. potamogetonis* Rostr.
- S. straminea* Shear
- S. curvispora* Speg.
- S. acanthostroma* (Mont.) Sacc.
- S. carpinea* (Fr.) Poteb.
- A. pseudopustula* (B. & H.) Theiss.
- C. brencklei* Petr.
- S. punctum* Mass.
- S. insularis* (Mass.) Sacc.
- S. cordiae* (Stev.) Trott.
- T. cordiae* Stev.
- T. decipiens* (B. & S.)
- T. pilosa* (Pers.) Fkl.
- B. philippinensis* Syd.
- P. polyrhynga* (P. & S.) Hoehn.
- U. coccifera* H. Fab.
- U. americana* Atkin.
- V. nervisequia* Rehm
- G. nervisequia* (Rehm) S. & S.
- W. congregata* (Wallr.) Sacc.

## Phaeosporae

- Acanthorhynchus* Shear Bull. Torr. Club  
34:313 1907.
- Adelococcus* Theiss. & Syd. Ann. Myc. 16:31  
1918.
- Anthostoma* Nke. Pyr. Germ. 110 1867.
- Lopadostoma* (Nke.) Traverso Flor. Ital.  
Crypt. 2:169 1906; cf. Syll. Fung. 22:374  
1913.
- Phaeobotryosphaeria* Speg. An. Mus. Nac.  
17:120 1908; Syll. Fung. 22:120 1913.
- Phaeobotryum* Theiss. & Syd. Ann. Myc.  
13:664 1915.
- Anthostomaria* Sacc. Syll. Fung. 17:595 1905,  
as subg.; Theiss. & Syd. Ann. Myc. 16:27  
1918.
- Anthostomella* Sacc. Syll. Fung. 1:278 1882.
- Phaeophomatospora* Speg. An. Mus. Nac.  
12:339 1909; cf. Petr. & Syd. Ann. Myc.  
23:212 1925.
- A. vaccinii* Shear
- A. alpestris* (Zopf) T. & S.
- A. decipiens* (DC.) Nke.
- L. gastrinum* (Fr.) Trav.
- P. yerbae* Speg.
- P. cercidis* (Cke.) T. & S.
- A. apogyra* (Nyl.) Sacc.
- A. phaeosticta* (Berk.) Sacc.
- P. argentinensis* Speg.

- Astrocystis* B. & Br. Fung. Ceylon 123, ill. 1870.
- Bolinia* Nke. Pyr. Germ. 26 1867.
- Camarops* Karst. Myc. Fenn. 2:6 1879; Syll. Fung. 1:753 1882.
- Solenoplea* Starb. Ascom. Reg. Exped. 2:13 1901; Syll. Fung. 17:619 1905.
- Bombardia* Fr. Sum. Veg. Scan. 389 1849
- Lasiosordaria* Chenantais Bull. Soc. Myc. Fr. 35:77, ill. 1919.
- Bommerella* Marchal Bull. Soc. Bot. Belg. 24:164 1885.
- Camillea* Fr. Sum. Veg. Scan. 382 1849.
- Cerastostoma* Fr. Sum. Veg. Scan. 392 1849.
- Ophiostomella* Petr. Hedwigia 65:235 1925.
- Cerillum* Clem.; for
- Colletomanginia* Har. & Pat. Comp. Rend. 142:224 1906.
- Chaetocercis* Turconi & Maffei Att. Ist. Pav. 2:15:144, ill. 1918; for *Chaetocercerastostoma*.
- Chaetomium* Kze. Myk. Heft. 1:15 1817.
- Ascotricha* Berk. Ann. Nat. Hist. 1:1:257 1838; Syll. Fung. 1:37 1882.
- Bolacotricha* B. & Br. Ann. Nat. Hist. 1:1:257, ill. 1838; cf. Hoehn. Frag. Myk. 565.
- Chaetomidium* Zopf Entw. Chact. 280, ill. 1881; Syll. Fung. 1:39 1882.
- Peristomium* Lechmere Bull. Soc. Myc. Fr. 29:307, ill. 1913; Syll. Fung. 24:229 1928.
- Coniochaeta* Sacc. Syll. Fung. 1:269 1882.
- Cryptascus* Petri Att. Acad. Linc. 5:18:642, ill. 1909.
- Daldinia* DeN. & Ces. Sfer. Ital. 1:197 1861.
- Entosordaria* Sacc. Syll. Fung. 1:286 1882.
- Erikssonia* (Penz. & Sacc.) Syd. Ann. Myc. 13:315, 668 1915.
- Helminthosphaeria* Fkl. Symb. Myc. 166 1869.
- Henningsina* Moell. Phyc. Asc. Bras. 309 1901.
- Hypocopra* Fkl. Symb. Myc. 240 1869.
- Coprolepa* Fkl. Symb. Myc. 240 1869; Syll. Fung. 1:248 1882.
- Fimetaria* Griff. & Seav. N. A. Fl. 3:65 1910.
- Hypoxyllum* Bull. Champ. France 1:168 1791.
- Alboffia* Speg. An. Mus. Nac. 1:295 1899; Syll. Fung. 24:539 1926.
- Entoleuca* Syd. Ann. Myc. 20:186 1922.
- Penzigia* Sacc. Myc. Malac. 20 1888; Syll. Fung. 9:567 1891.
- Pyrenopolyporus* Lloyd Myc. Notes 50:76, ill. 1917.
- A. *mirabilis* B. & Br.
- B. *tubulina* (A. & S.) Sacc.
- C. *hypoxyloides* Karst.
- S. *microspora* Starb.
- B. *fasciculata* Fr.
- L. *lignicola* (Fkl.) Chen.
- B. *trigonospora* March.
- C. *leprieuri* Mont.
- C. *avocetta* (C. & E.) Sacc.
- O. *melanosporis* (Wint.) Petr.
- C. *paradoxa* (Har. & Pat.) Clem.
- C. *paradoxa* Har. & Pat.
- C. *hispida* T. & M.
- C. *globosum* Kze.
- A. *chartarum* Berk.
- B. *grisea* B. & Br.
- C. *fimeti* (Fkl.) Zopf.
- P. *desmosporum* Lech.
- C. *ligniaria* (Grev.) Sacc.
- C. *oligosporus* Petri
- D. *concentrica* (Bolt.) C. & DeN.
- E. *perfidiosa* (DeN.) Hoehn.
- E. *spatholobi* Syd.
- H. *clavariarum* Fkl.
- H. *durissima* Moell.
- H. *fimicola* (Rob.) Sacc.
- C. *merdaria* (Fr.) Fkl.
- F. *fimicola* (Rob.) Griff. & Seav.
- H. *coccineum* Bull.
- A. *oreophila* Speg.
- E. *callimorpha* Syd.
- P. *cranioides* Sacc. & Paol.
- P. *hunteri* Lloyd

- Spirogramma* Ferd. & Wing. Vid. Med. For.  
Kjob. 142, ill. 1909; Syll. Fung. 22:336  
1913.
- Squamotubera* Henn. Syll. Fung. 17:620  
1905.
- Theissenia* Maubl. Bull. Soc. Myc. Fr. 30:52,  
ill. 1914.
- Kretschmaria* Fr. Sum. Veg. Scan. 409 1849.
- Leptomassaria* Petr. Ann. Myc. 12:274 1914.
- Mesniera* Sacc. & Syd. Syll. Fung. 16:440  
1902.
- Micrascus* Zukal Pilz. Myx. Bakt. 9, ill. 1885.
- Muellerella* Hepp Müll.-Arg. Prin. Class.  
Lich. 80 1862.
- Nummularia* Tul. Sel. Fung. Carp. 2:42 1861.
- Paranthostomella* Speg. Rev. Fac. Agron.  
6:42, ill. 1910.
- Philocopra* Speg. An. Soc. Sci. Arg. 9:193  
1880.
- Podospora* Cesati Rabh. Herb. Myc. 258 1856.
- Hansenia* Zopf Zeits. Naturw. 56:27 1883.
- Poronia* Willd. Flor. Ber. Prod. 400 1787.
- Podosordaria* Ell. & Holway Bot. Gaz.  
24:37 1897; Syll. Fung. 14:494 1899.
- Pseudotthiella* Petr. Hedwigia 68:257 1928.
- Rosellinia* DeNot. Giorn. Bot. Ital. 2:334  
1847.
- Pleosporopsis* Oersted Nat. For. Vid. Medd.  
128 1865.
- Sordaria* Ces. & DeN. Sfer. Ital. 1:197 1861.
- Pleurage* Fr. Sum. Veg. Scan. 418 1849.
- Tympanopsis* Starb. Bih. Sven. Akad. Handl.  
19:24, ill. 1894.
- Cucurbitariella* Petr. Ann. Myc. 14:440  
1916; Syll. Fung. 24:837 1928.
- Ustulina* Tul. Sel. Fung. Carp. 2:23 1861.
- Xylaria* (Hill) Schrank. Bayer. Fl. 2:566  
1789.
- Moelleroclavus* Henn. Hedwigia 41:15  
1902; Syll. Fung. 17:634 1905.
- Thamnomycetes* Ehrenb. Nees Hor. Phys.  
Berol. 79, 27 ill. 1820; Syll. Fung. 1:344  
1882.
- Xylariodiscus* Henn. Hedwigia 38:63 1899;  
Syll. Fung. 16:449 1902; Ann. Myc. 6:335  
1908; cf. Hoehn. Frag. Myk. 624.
- S. boergeseni F. & W.
- S. lerati Henn.
- T. pyrenocrata (Theiss.) Maubl.
- K. clavus Fr.
- L. simplex Petr.
- M rottlerae (Rac.) Sacc.
- M. longirostris Zukal
- M. polyspora Hepp
- N. bulliardii Tul.
- P. eryngicola Speg.
- P. pleiospora (Wint.) Sacc.
- P. fimicola Ces.
- H. lanuginosa Zopf.
- P. punctata (L.) Fr.
- P. mexicana E. & H.
- P. hirtellae (Henn.) Petr.
- R. aquila (Fr.) DeN.
- P. strobilorum Oerst.
- S. coprophila (Fr.) C. & DeN.
- P. fimicola (Cda.) Fr.
- T. euomphala (B. & C.) Starb.
- C. moravica Petr.
- U. vulgaris Tul.
- X. hypoxylum (L.) Grev.
- M. penicilliopsis Henn.
- T. hippotrichoides (Sow.) Sacc.
- X. dorstenioides Henn.

## Hyalodidymae

- Apiosporina* Hoehn. Sitzb. Akad. Wien 119:439  
1910.
- Microtyle* Speg. Bol. Acad. Cordoba 23:458,  
ill. 1919.
- A. collinsi (Schw.) Hoehn.
- M. bergi Speg.

- Arcangelia* Sacc. Bull. Soc. Myc. Fr. 5:115, ill. 1890.  
*Ascospora* Fr. Sum. Veg. Scan. 425 1849.  
*Bertia* DeNot. Giorn. Bot. Ital. 1:335 1846.  
*Cacosphaeria* Speg. Fung. Fueg. 218. 1887.  
*Cantharosphaeria* Thaxt. Bot. Gaz. 69:3, ill. 1920.  
*Caudospora* Starb. Vet.-Akad. Handl. 15:11 1889.  
*Ceriosporella* Berl. Icon. Fung. 1:121, ill. 1902.  
*Chaetolentomita* Maubl. Bol. Agr. 16:313, ill. 1915.  
*Chorostate* (Sacc.) Traverso Flor. Ital. Crypt. 2:190 1906; Syll. Fung. 22:376 1913.  
*Allantoporthe* Petr. Hedwigia 62:289 1921.  
*Apioporthella* Petr. Ann. Myc. 27:401 1929.  
*Cryptodiaporthe* Petr. Ann. Myc. 19:118 1921.  
*Discodiaporthe* Petr. Hedwigia 62:293 1921.  
*Chorostella* Sacc. Syll. Fung. 1:623 1882.  
*Coleroa* Rabh. Winter Krypt-Flor. 2:198 1887.  
*Niesslia* Auers. Gonn. & Rabh. Myc. Eur. 5:6:30, ill. 1869.  
*Valetoniella* Hoehn. Sitzb. Akad. Wien 118:1499 1909.  
*Cyphospilea* Syd. Ann. Myc. 24:377 1926.  
*Diaporthe* Nke. Pyr. Germ. 240 1870.  
*Anisogramma* Theiss. & Syd. Ann. Myc. 14:451 1916.  
*Apioporthe* Hoehn. Sitzb. Akad. Wien 126:381 1917; Syll. Fung. 24:705 1928.  
*Diaporthella* Petr. Ann. Myc. 22:30 1924.  
*Skottsbergiella* Petr. Nat. Hist. J. F. 2:481 1927.  
*Stigmatopsis* Traverso Flor. Ital. Crypt. 2:213 1906; Syll. Fung. 22:389 1913.  
*Didymella* Sacc. Michelia 1:377 1878; cf. Petr. Ann. Myc. 21:26 1923.  
*Apiosporina* Petr. Ann. Myc. 23:18 1925.  
*Apiosporella* Hoehn. Frag. Myk. 389; Ann. Myc. 15:275, ill. 1917; Syll. Fung. 24:914 1928.  
*Apiosporopsis* Mariani Att. Soc. Ital. 50:165 1911; Syll. Fung. 22:78 1913.  
*Botryostroma* Hoehn. Frag. Myk. 692 1911; cf. Theiss. & Syd. 13:665 1915.  
*Didymopsamma* Petr. Ann. Myc. 23:80 1925.  
*Haplotheciella* Hoehn. Ber. Deut. Bot. Ges. 36:314 1918; cf. Petr. Ann. Myc. 23:31; Syll. Fung. 24:634 1926.  
*Leiosphaerella* Hoehn. Sitzb. Akad. Wien 128:579 1919.  
*Paradidymella* Petr. Ann. Myc. 25:238 1927.
- A. *hepaticarum* Sacc.  
 A. *himantia* (Pers.) Rehm  
 B. *moriformis* (Tode) DeN.  
 C. *antarctica* Speg.  
 C. *chilensis* Thaxt.  
 C. *taleola* (Fr.) Starb.  
 C. *patouillardii* (Let.) Berl.  
 C. *lignorum* Maubl.  
 C. *oncostoma* (Duby) Fkl.  
 A. *tessella* (Pers.) Petr.  
 A. *bavarica* Petr.  
 C. *aesculi* (Fkl.) Petr.  
 D. *sulphurea* (Fkl.) Petr.  
 C. *castanea* (Tul.) Sacc.  
 C. *chaetomium* (Kze.) Rabh.  
 N. *chaetomium* (Kze.) Auers.  
 V. *crucipila* Hoehn.  
 C. *polylopha* Syd.  
 D. *eres* Nke.  
 A. *virgultorum* (Fr.) T. & S.  
 A. *anomala* (Pk.) Hoehn.  
 D. *aristata* (Fr.) Petr.  
 S. *diaporthoides* Petr.  
 S. *beccarini* Trav.  
 D. *applanata* (Niessl) Sacc.  
 A. *corni* (Sow.) Petr.  
 A. *sepincolaeformis* (Sacc.) Theiss.  
 A. *saccardiana* (Trav.) Mar.  
 B. *inaequalis* (Wint.) Hoehn.  
 D. *moravica* Petr.  
 H. *hellebori* (Chaill.) Hoehn.  
 L. *praeclara* (Rehm) Hoehn.  
 P. *tosta* (B. & Br.) Petr.

- Didymellopsis* Sacc. Syll. Fung. 17:657 1905,  
 as subg.  
*Cercidospora* Koerb. Parerg. Lich. 466 1865.  
*Dimerinopsis* Syd. Ann. Myc. 15:202 1917.  
*Echinothecium* Zopf Nov. Act. Leop. 70:250,  
 ill. 1898.  
*Endothia* Fr. Sum. Veg. Scan. 385 1849.  
*Cryphonectria* Sacc. Syll. Fung. 17:784  
 1905; cf. Hoehn. Frag. Myk. 421 1909.  
*Valsonectria* Speg. Fung. Arg. 4:201; Syll.  
 Fung. 2:519 1883.  
*Gibbera* Fr. Sum. Veg. Scan. 402 1849.  
*Eriosphaeria* Sacc. Att. Soc. Ven. Trent.  
 4:10 1875; Syll. Fung. 1:507 1882.  
*Melanopsammella* Hoehn. Ann. Myc. 17:121  
 1919.  
*Neorehmia* Hoehn. Sitzb. Akad. Wien  
 111:988 1902; Syll. Fung. 17:536 1905.  
*Winteromyces* Speg. An. Mus. Nac. 23:37  
 1912; Syll. Fung. 24:237 1926.  
*Gnomonia* Ces. & DeN. Sfer. Ital. 1:57 1861.  
*Apiognomonia* Hoehn. Ann. Myc. 16:51  
 1918; Syll. Fung. 24:705 1928.  
*Plagiostoma* Fkl. Symb. Myc. 1:3 1869.  
*Plagiostomella* Hoehn. Ann. Myc. 16:52  
 1918; Syll. Fung. 24:705 1928.  
*Hypospilina* Sacc. Syll. Fung. 2:190 1883, as  
 subg.  
*Clypeoportha* Hoehn. Sitzb. Akad. Wien  
 128:584 1919.  
*Kirschsteinia* Syd. Ann. Myc. 4:455 1906.  
*Bertiella* Kirschstein Abh. Bot. Brandenb.  
 48:51, ill. 1906; not *Bertiella* Sacc. 1882.  
*Lasiostemma* Theiss. & Syd. Ann. Myc. 15:218  
 1917.  
*Lentomia* Niessl Not. Pyr. 44 1876.  
*Lentomitella* Hoehn. Ann. Myc. 3:552 1905.  
*Loranthomyces* Hoehn. Sitzb. Akad. Wien  
 118:840 1909.  
*Massarinula* Lamarl. Rev. Gen. Bot. 6:321  
 1894.  
*Pteridiospora* Penz. & Sacc. Malpighia  
 11:399 1897; Syll. Fung. 14:539 1899.  
*Melanconis* Tul. Sel. Fung. Carp. 2:115 1861.  
*Aplacodina* Ruhl Hedwigia 39:38 1900;  
 Syll. Fung. 16:485 1902.  
*Bioportha* Petr. Ann. Myc. 27:24 1929.  
*Ceratoportha* Petr. Ann. Myc. 23:14 1925.  
*Hercospora* Tul. Sel. Fung. Carp. 2:154  
 1861.  
*Macrodiaportha* Petr. Ann. Myc. 17:94  
 1919; Syll. Fung. 24:747 1928.  
*Parasphaeria* Syd. Ann. Myc. 22:297 1924.  
*Phylloporthe* Syd. Ann. Myc. 23:348 1925.  
*D. latitans* (Nyl.) Sacc.  
*C. ulothi* Koerb.  
*D. luzonensis* Syd.  
*E. reticulatum* Zopf  
*E. gyrosa* (Schw.) Fr.  
*C. gyrosa* (B. & Br.) Sacc.  
*V. pulchella* Speg.  
*G. vaccini* (Sow.) Fr.  
*E. vermicularia* (Nees) Sacc.  
*M. inaequalis* (Grove) Hoehn.  
*N. ceratophora* Hoehn.  
*W. caespitosus* (Wint.) Speg.  
*G. setacea* (Pers.) DeN.  
*A. veneta* (Sacc.) Hoehn.  
*P. euphorbiae* Fkl.  
*P. petiolicola* (Fkl.) Hoehn.  
*H. bifrons* (DC.) Sacc.  
*C. monocarpa* Hoehn.  
*K. polyspora* (Kirsch.) Syd.  
*B. polyspora* Kirsch.  
*L. merrilli* Syd.  
*L. brevicollis* Niessl  
*L. vestita* (Sacc.) Hoehn.  
*L. sordidulus* (Lev.) Hoehn.  
*M. quercina* Lam.  
*P. javanica* P. & S.  
*M. stilbostoma* (Fr.) Tul.  
*A. chondrospora* (Ces.) Ruhl  
*B. brenei* Petr.  
*C. didymospora* Petr.  
*H. tiliae* (Fr.) Tul.  
*M. occulta* (Fkl.) Petr.  
*P. contraria* Syd.  
*P. vernoniae* Syd.

- Melanidium* Sacc. Syll. Fung. 1:604 1882,  
as subg.
- Melanopsamma* Niessl Not. Pyr. 40 1876.
- Episphaerella* Petr. Ann. Myc. 22:126 1924.
- Malacosphaeria* Syd. Ann. Myc. 22:299  
1924.
- Melanopsamma* Hoehn. Sitzb. Akad.  
Wien. 128:573 1919.
- Melchiora* Penz. & Sacc. Malpighia 11:399  
1897.
- Monopus* Theiss. & Syd. Ann. Myc. 13:647  
1915.
- Rosenscheldiella* Theiss. & Syd. Ann. Myc.  
13:645 1915; Syll. Fung. 24:538 1926.
- Montagnina* Hoehn. Frag. Myk. 488 1910.
- Montemartina* Curzi Att. Ist. Pavia 3:3:84,  
ill. 1927.
- Melanopsammopsis* Stahel Med. Landb.  
Suriname 1916; Syll. Fung. 24:919 1928.
- Mycosphaerella* Johans. Svamp. Island 163  
1884; Syll. Fung. 1:476, as *Sphaerella*,  
9:611, 659 1891.
- Boydia* Smith Trans. Brit. Myc. Soc. 6:151,  
ill. 1919; Syll. Fung. 24:683 1926.
- Cercosphaerella* Klebahn Haupt. Neb.  
Askom. 1:132 1918, as subg.; Syll. Fung.  
24:849 1928.
- Didymellina* Hoehn. Ann. Myc. 16:66 1918;  
Syll. Fung. 24:911 1928.
- Diplosphaerella* Grove Jour. Bot. 50:91 1912.
- Hypomyces* Henn. Hedwigia 43:86 1904;  
cf. Hoehn. Frag. Myk. 612.
- Plectosphaerella* Klebahn Phyt. Zeits. 1:43,  
ill. 1929.
- Ramularisphaerella* Klebahn Haupt. Neb.  
Askom. 1:131 1918, as subg.
- Rehmiellopsis* Bub. & Kab. Naturw. Zeits.  
8:320 1910; Syll. Fung. 22:147 1913.
- Septorisphaerella* Klebahn Ib; Syll. Fung.  
24:849 1928, as subg.
- Sphaerella* C. & DeN. Sfer. Ital. 62 1863;  
not *Sphaerella* Sonn. 1824.
- Myrmaeciella* Lindau Nat. Pflanzenf. 1:1:478  
1897.
- Neokeissleria* Petr. Ann. Myc. 17:87 1919;  
Syll. Fung. 24:747 1928.
- Otthiella* Sacc. Syll. Fung. 17:662 1905.
- Keissleriella* Hoehn. Sitzb. Akad. Wien  
128:592 1919; Frag. Myk. 1169.
- Periaster* Theiss. & Syd. Ann. Myc. 14:452  
1916.
- Pharcidia* Koerber Parerg. Lich. 470 1865.
- Epicymatia* Fkl. Symb. Myc. 118 1869.
- M.alni* (Tul.) Sacc.
- M. pomiformis* (Pers.) Sacc.
- E. manihotis* (Henn.) Petr.
- M. scabrosa* Syd.
- M. carinthiaca* Hoehn.
- M. leucomelaena* P. & S.
- M. pulverulentus* (B. & C.) T. & S.
- R. styracis* (Henn.) T. & S.
- M. examinans* (B. & C.) Hoehn.
- M. myriadea* Curzi
- M. ulei* Stahel
- M. ribis* (Fkl.) Lind.
- B. remuliformis* Smith
- C. millegrana* (Cke.) Schroet.
- D. iridis* (Desm.) Hoehn.
- D. polyspora* (Johans.) Grove
- H. linearis* (Rehm) Henn.
- P. cucumeris* Kleb.
- R. hieracii* (Sacc. & Br.) Jaap
- R. bohémica* B. & K.
- S. hippocastani* (Jaap) Kleb.
- S. depazeaeformis* (Auers.) C. &  
DeN.
- M. endoleuca* (Sacc.) Lind.
- N. ribis* (H. & P.) Petr.
- O. seriata* (Pk.) Sacc.
- K. aesculi* Hoehn.
- P. strongyloodontis* T. & S.
- P. congesta* Koerber.
- E. vulgaris* Fkl.

- Plactogene* Theiss. Ann. Myc. 14:432 1916.  
*Plagiostigme* Syd. Ann. Myc. 23:341, ill. 1925.  
*Polycarpella* Theiss. & Syd. Ann. Myc. 16:26 1918.  
*Pseudodiaporthe* Speg. An. Mus. Nac. 19:358 1909.  
*Sydowiella* Petr. Ann. Myc. 21:30 1923.  
*Pseudosphaerella* Hoehn. Frag. Myk. 14:769 1912; cf. Theiss. & Syd. Ann. Myc. 16:34 1918.  
*Haplodothis* Hoehn. Frag. Myk. 692 1911; cf. Theiss. & Syd. Ann. Myc. 16:34 1918.  
*Melanomyces* Syd. Ann. Myc. 15:196 1917; Syll. Fung. 24:918 1928.  
*Mycosphaerellopsis* Hoehn. Ann. Myc. 16:157 1918.  
*Rehmiella* Wint. Hedwigia 22:2 1883.  
*Rhagadostoma* Koerber Parerg. Lich. 473 1865.  
*Stegophora* Syd. Ann. Myc. 14:364 1916.  
*Amphididymella* Petr. Engler Bot. Jahrb. 62:94 1928.  
*Spumatoria* Masee & Salmon Ann. Bot. 15:350 1901.  
*Thaxteria* Sacc. Syll. Fung. 9:687 1891.  
*Venturia* DeNot. & Ces. Sfer. Ital. 1:225 1867.  
*Phomatosporopsis* Petr. Ann. Myc. 23:39 1925.  
*Wettsteinina* Hoehn. Sitzb. Akad. Wien 116:126 1907; cf. Petr. Ann. Myc. 25:204 1927.  
*Winterina* Sacc. em. Syll. Fung. 14:589 1899; not Sacc. Syll. Fung. 9:909 1891.  
*Calyculosphaeria* Fitzp. Mycologia 15:45 1923.  
*Winterella* Berl. Icon. Fung. 1:94 1894; not Winterella Kze. 1891; not Winterella Sacc. 1883.
- P. lindigi* (Pat.) Theiss.  
*P. couraliae* Syd.  
*P. cookei* (Linds.) T. & S.  
*P. coffeae* Speg.  
*S. fenestrans* (Duby) Petr.  
*P. baccharidis* (Rehm) Hoehn.  
*H. singularis* (Henn.) Hoehn.  
*M. quercinus* Syd.  
*M. myricariae* (Fkl.) Hoehn.  
*R. alpina* Winter  
*R. lichenicola* (DeN.) T. & S.  
*S. ulmi* (Schw.) Syd.  
*A. adeana* Petr.  
*S. longicollis* Mass. & Salm.  
*T. didyma* (Speg.) Sacc.  
*V. chlorospora* (Ces.) Karst.  
*P. angelicae* (Fkl.) Petr.  
*W. gigaspora* Hoehn.  
*W. tristis* (Fkl.) Sacc.  
*C. tristis* (Fkl.) Fitzp.  
*W. tuberculigera* (E. & E.) Berl.

## Phaeodidymae

- Acantharia* Theiss. & Syd. Ann. Myc. 16:15 1918.  
*Acanthostoma* Theiss. Beil. Bot. Cent. 29:45 1912.  
*Aloysiella* Mattir. & Sacc. Annal. Bot. 7:143 1908.  
*Amphisphaeria* C. & DeN. Sfer. Ital. 49 1863.  
*Kirschsteiniella* Petr. Ann. Myc. 21:331 1923.  
*Massariopsis* Niessl Verh. Nat. Brünn 14:199 1875; cf. Petr. Ann. Myc. 21:329 1923.  
*Bolosphaera* Syd. Ann. Myc. 15:201 1917.  
*A. echinata* (E. & E.) T. & S.  
*A. watti* (Syd.) Theiss.  
*A. ruwenzorensis* M. & S.  
*A. umbrina* (Fr.) DeN.  
*K. applanata* (Fr.) Petr.  
*M. subpecta* Niessl  
*B. degenerans* Syd.

- Ceriospora* Niessl Not. Pyr. 9 1876.  
*Ceriophora* Hoehn. Sitzb. Akad. Wien 128:585 1919.  
*Delitschia* Auersw. Hedwigia 5:49 1866.  
*Delitschiella* Sacc. Syll. Fung. 17:688 1905.  
*Didymosphaeria* Fkl. Symb. Myc. 140 1869.  
*Apiotypa* Petr. Ann. Myc. 23:105 1925.  
*Astrosphaeriella* Syd. Ann. Myc. 11:260, ill. 1913; Syll. Fung. 24:937 1928.  
*Cryptodidymosphaeria* (Rehm) Hoehn. Ann. Myc. 4:265 1906; cf. Hoehn. Frag. Myk. 1036 1917.  
*Didymascina* Hoehn. Ann. Myc. 3:331 1905; Frag. Myk. 438 1909; Syll. Fung. 22:183 1913.  
*Endostigme* Syd. Ann. Myc. 21:173 1923.  
*Massariellops* Curzi Att. Ist. Pavia 3:3:162, ill. 1927.  
*Phaeapiospora* Sacc. & Syd. Syll. Fung. 16:477 1902; cf. Petr. Ann. Myc. 23:106 1925.  
*Punctillum* Petr. & Syd. Ann. Myc. 22:364 1924.  
*Rousoella* Sacc. Att. Ist. Venet. 6:6:410, ill. 1888; Syll. Fung. 9:1044 1891; Theiss. & Syd. Ann. Myc. 13:185 1915.  
*Endococcus* Nyl. 1854; em. Sacc. Syll. Fung. 17:681 1905.  
*Discothecium* Zopf Nov. Act. Leop. 70:131 1897; Syll. Fung. 9:724 1891.  
*Polycoccum* Koerb. Parerg. Lich. 470 1865.  
*Endoxylina* Rom. Bot. Notis. 1892:173  
*Eutyopsis* Karst. Medd. Soc. Fenn. 2:182 1878.  
*Epipolaeum* Theiss. & Syd. Ann. Myc. 16:7 1918.  
*Pseudoparodia* Theiss. & Syd. Ann. Myc. 15:138 1917.  
*Gaillardella* Pat. Bull. Soc. Myc. Fr. 10:226 1895.  
*Gibellina* Pass. Rev. Myc. 8:177 1886.  
*Haplovalsaria* Hoehn. Sitzb. Akad. Wien 128:582 1919.  
*Hypocelis* Petr. Ann. Myc. 27:27 1929.  
*Hypoplegma* Theiss. & Syd. Ann. Myc. 15:135 1917; 16:11 1918.  
*Licopolia* Sacc. & Syd. Bull. Herb. Boiss. 2:1:79 1901.  
*Lizonia* C. & DeN. Sfer. Ital. 41 1867.  
*Lojkania* Rehm Cont. Myc. Hung. 2 1905.  
*Massariovalsaria* Sacc. Michelia 2:569 1882.  
*Melanconiella* Sacc. Syll. Fung. 1:740. 1882  
*Metacoleroa* Petr. Ann. Myc. 25:332 1927.
- C. *dubyi* Niessl  
 C. *palustris* (B. & Br.) Hoehn.  
 D. *auerswaldi* Fkl.  
 D. *polyspora* Sacc.  
 D. *epidermidis* (Fr.) Fkl.  
 A. *philippinensis* Petr.  
 A. *fusispora* Syd.  
 C. *conoidea* (Niessl) Rehm  
 D. *salicicola* (Allesch.) Hoehn.  
 E. *ditricha* (Fr.) Syd.  
 M. *aprutina* Curzi  
 P. *paullinae* (Rehm) S. & S.  
 P. *hepaticarum* (Cke) P. & S.  
 R. *nitidula* Sacc. & Paol.  
 E. *pellax* Nyl.  
 D. *stigma* (Koerb.) Zopf  
 P. *sauteri* Koerb.  
 E. *stellulata* Rom.  
 E. *parallela* (Fr.) Karst.  
 E. *irradians* (Pat.) T. & S.  
 P. *pseudopeziza* (Pat.) T. & S.  
 G. *pezizoides* Pat.  
 G. *cerealis* Pass.  
 H. *simplex* Hoehn.  
 H. *costaricensis* Petr.  
 H. *viridescens* (Rehm) T. & S.  
 L. *franciscana* S. & S.  
 L. *emperigonia* (Auers.) C. & DeN.  
 L. *hungarica* Rehm  
 M. *sudans* (B. & C.) Sacc.  
 M. *chrysostoma* (Fr.) Sacc.  
 M. *dickiei* (B. & Br.) Petr.



- Neopeckia* Sacc. Bull. Torr. Club 10:127  
 1883.  
*Didymotricha* Berl. Att. Cong. Genova 572,  
 ill. 1893.  
*Dimerosporiopsis* Henn. Hedwigia 40:173  
 1901; Syll. Fung. 17:686 1905.  
*Otthia* Nke. Fkl. Symb. Myc. 169 1869.  
*Dothidotthia* Hoehn. Ber. Deut. Bot. Ges.  
 36:312 1918.  
*Pseudotthia* Henn. Monsunia 1:167 1899.  
*Pachyspora* Kirschst. Abh. Bot. Brandenb.  
 48:48, ill. 1906.  
*Parodiella* Speg. Fung. Arg. 1:178 1880.  
*Maireella* Syd. Ann. Myc. 6:146 1908; Syll.  
 Fung. 22:42.  
*Phaeosphaerella* Karst. Medd. Soc. Fenn.  
 16:28 1880; cf. Hoehn. Ann. Myc. 16:155  
 1918; Syll. Fung. 9:723 1891.  
*Phorcys* Niessl. Not. Pyr. 41 1876.  
*Massariella* Speg. Fung. Arg. 1:2, ill. 1880.  
*Porostigme* Syd. Ann. Myc. 15:202 1917.  
*Protoventuria* Berl. & Sacc. Att. Soc. Ven.  
 10:174, ill. 1886.  
*Malacosphaeria* Syd. Ann. Myc. 22:299  
 1924.  
*Pseudodimerium* Petr. Ann. Myc. 22:21 1924.  
*Pseudotthis* Theiss. & Syd. Ann. Myc. 12:274  
 1914.  
*Pyrenobotrys* Theiss. & Syd. Ann. Myc.  
 12:182 1914.  
*Spilosticta* Syd. Ann. Myc. 21:171 1923.  
*Rhynchomeliola* Speg. Fung. Guar. 1:283  
 1883.  
*Rhynchostoma* Karst. Myc. Fenn. 2:7 1873.  
*Rhynchostomopsis* Petr. & Syd. Ann. Myc.  
 21:370 1923.  
*Seynesia* Sacc. Syll. Fung. 2:668 1883; cf.  
 Petr. Ann. Myc. 25:338 1927.  
*Steganopycnis* Syd. Ann. Myc. 16:245 1918;  
 cf. Petr. Ann. Myc. 25:337 1927.  
*Sorothelia* Koerb. Parerg. Lich. 471 1865.  
*Sphaerellothecium* Zopf. Nov. Act. Leop.  
 70:178, ill. 1897; Syll. Fung. 17:676 1905.  
*Stegastroma* Syd. Ann. Myc. 14:81 1916.  
*Stegasphaeria* Syd. Ann. Myc. 14:362 1916;  
 Syll. Fung. 24:937 1928.  
*Sydowina* Petr. Ann. Myc. 21:182 1923.  
*Teratosphaeria* Syd. Ann. Myc. 10:39 1912.  
*Tichothecium* Flotow Hedwigia 25:15 1886;  
 Syll. Fung. 9:723 1891.  
*Valsaria* DeN. & Ces. Sfer. Ital. 31 1863.  
*Anisomyces* Theiss. & Syd. Ann. Myc.  
 12:270 1914; Syll. Fung. 24:768 1928.
- N. coulteri* (Pk.) Sacc.  
*D. rhodosticta* (B. & Br.) Berl.  
*D. engleriana* Henn.  
*O. piri* Fkl.  
*D. symphoricarpi* (Rehm) Hoehn.  
*P. vaccinii* H. & W.  
*P. gigantea* Kirschst.  
*P. grammodes* (Kze.) Cke.  
*M. maculans* Syd.  
*P. macularis* (Fr.) Karst.  
*P. betulae* Niessl  
*M. bufonia* (B. & Br.) Speg.  
*P. scheffleri* (Henn.) Syd.  
*P. rosae* (DeN.) Berl.  
*M. scabrosa* Syd.  
*P. meliolicolum* Petr.  
*P. machaerii* (Rehm) T. & S.  
*P. conferta* (Fr.) T. & S.  
*S. rumicis* (Desm.) Syd.  
*R. pulchella* Speg.  
*R. minutum* Karst.  
*R. brasiliensis* (Hoehn.) P. & S.  
*S. nobilis* (W. & C.) Sacc.  
*S. oncospermatis* Syd.  
*S. confluens* Koerb.  
*S. araneosum* (Rehm) Zopf  
*S. theissenii* Syd.  
*S. pavonina* Syd.  
*S. vestita* (Rehm) Petr.  
*T. fibrillosa* Syd.  
*T. pygmaeum* Koerb.  
*V. insitiva* (Fr.) C. & DeN.  
*A. papilloidis* (Henn.) T. & S.

- Hypoxyloopsis* Henn. *Hedwigia* 43:256  
1904; Syll. Fung. 17:854 1905.
- Myrmaecium* Nke. *Fkl. Symb. Myc.* 227  
1869; Syll. Fung. 1:741 1882; not Sacc.  
*Mich.* 2:138 1880.
- Phaeodiaporthe* Petr. *Ann. Myc.* 17:99 1919.
- Phaeosperma* (Sacc.) *Trav. Flor. Ital.*  
*Crypt.* 2:292 1906; Syll. Fung. 1:750 1882;  
22:393 1913.
- Pseudothyridaria* Petr. *Ann. Myc.* 23:36  
1925.
- Xylobotryum* Pat. *Bull. Herb. Boiss.* 3:69  
1895.
- Melanobotrys* Rodway *Proc. Roy. Soc. Tas-*  
*mania* 168 1926.
- Trachyxylaria* Moeller *Phyc. Ascom.* 308,  
ill. 1901; Syll. Fung. 16:510 1902.
- Xyloceras* Smith *Jour. Linn. Soc.* 35:16, ill.  
1901; Syll. Fung. 17:690 1905.
- Hyalophragmiae**
- Acanthostigma* DeNot. *Sfer. Ital.* 85, ill. 1863.
- Acanthostigmella* Hoehn. *Ann. Myc.* 3:327  
1905.
- Acanthostigmina* Hoehn. *Sitzb. Akad. Wien*  
118:1499 1909.
- Aphanostigma* Syd. *Ann. Myc.* 24:368 1926.
- Baumiella* Henn. Syll. Fung. 17:708 1905.
- Bertiella* Sacc. Syll. Fung. 1:584 1882, as  
subg.; 17:708 1905.
- Bombardiastrum* Pat. *Bull. Soc. Myc. Fr.*  
9:153 1893.
- Broomella* Sacc. Syll. Fung. 2:557 1883.
- Calospora* Sacc. Syll. Fung. 2:231 1883.
- Calosporella* Schroet. *Krypt. Fl. Schles.*  
3:2:442 1894.
- Darwiniella* Speg. *Fung. Fueg.* 105 1887;  
Syll. Fung. 9:1048 1891; cf. *Theiss. & Syd.*  
*Ann. Myc.* 13:181 1915.
- Oxydothis* Penz. & Sacc. *Malpighia* 11:505  
1897; Syll. Fung. 14:674 1899.
- Phragmocalosphaeria* Petr. *Ann. Myc.* 21:109  
1923.
- Phyllocelis* Syd. *Ann. Myc.* 23:353 1925.
- Rhopographella* Sacc. Syll. Fung. 22:440  
1913.
- Ceratospaeria* Niessl *Not. Pyr.* 43 1876.
- Chaetopyrenis* Sacc. Syll. Fung. 24:961 1928;  
for *Chaetopyrena* Sacc. 1882; not *Pass.*  
1881.
- Clypeothecium* Petr. *Ann. Myc.* 20:182; 21:281  
1923.
- Monographella* Petr. *Ann. Myc.* 22:144  
1924.
- H. hurae* Henn.
- M. insitivum* (Fr.) Fkl.
- P. keissleri* Petr.
- P. anserinum* (Sacc.) *Trav.*
- P. insitiva* Petr.
- X. andinum* Pat.
- M. tasmanicus* Rodway
- T. phaeodidyma* Moell.
- X. elliotti* Smith
- A. perpusillum* DeN.
- A. genuflexa* Hoehn.
- A. minuta* (Fkl.) Hoehn.
- A. solani* Syd.
- B. caespitosa* Henn.
- B. macrospora* Sacc.
- B. andinum* Pat.
- B. vitalbae* (B. & Br.) Sacc.
- C. platanoides* (Pers.) Niessl
- C. platanoides* (Pers.) Schroet.
- D. antarctica* Speg.
- O. grisea* P. & S.
- P. piskorzi* Petr.
- P. oyedaeae* Syd.
- R. gaduae* (Henn.) S. & T.
- C. lampadophora* (B. & Br.) Niessl
- C. poae* (Niessl) Sacc.
- C. weiri* Petr.
- M. divergens* (Rehm) Petr.

- Cryptoderis* Auers. Gonnerm. & Rabh. Myc. Eur. Pyr. 5-6:29 1870?  
*Gnomoniopsis* Berl. Ic. Fung. 1:93 1892; not Stoneman 1898.  
*Pleuroceras* Riess Hedwigia 1:25, ill. 1854.  
*Dichosporium* Pat. Bull. Soc. Myc. Fr. 14:207 1899.  
*Enchnosphaeria* Fkl. cm. Clem.; Syll. Fung. 2:207 1883.  
*Eudarluka* Speg. Rev. Mus. La Plata 15:22, ill. 1908.  
*Hyospila* Fr. Sum. Veg. Scan. 421 1849  
*Actinidothiopsis* Stev. Bishop Mus. Bull. 19:19, ill. 1925.  
*Chalcosphaeria* Hoehn. Ann. Myc. 16:97 1918.  
*Lasiosphaeria* C. & DeN. Sfer. Ital. 55 1863.  
*Bizzozzeria* Berl. & Sacc. Misc. Myc. 2:26 1885; cf. Hoehn. Ann. Myc. 16:74 1918.  
*Enchnosphaeria* Fkl. Symb. Myc. 147 1869; not lichenicole.  
*Herpotrichia* Fkl. Symb. Myc. 146 1869.  
*Heteronectria* Penz. & Sacc. Malpighia 11:509 1897.  
*Hormosperma* Penz. & Sacc. Malpighia 11:402 1897.  
*Lasiella* Quelet Mem. Soc. Montbel. 2:5:516 1875.  
*Leptospora* Fkl. Symb. Myc. 143 1869.  
*Stuartella* H. Fab. Spher. Vaubl. 95, ill.; Syll. Fung. 2:123 1883; cf. Hoehn. Frag. Myk. 802.  
*Lulworthia* Sutherland Trans. Brit. Myc. Soc. 5:259, ill. 1915.  
*Massarina* Sacc. Syll. Fung. 2:153 1883.  
*Holstiella* Henn. Pilz. Ostafr. 33 1895; Syll. Fung. 14:593 1899; cf. Hoehn. Frag. Myk. 616.  
*Melomastia* Nke. & Fkl. Symb. Myc. 1:306 1869.  
*Oraniella* Speg. An. Mus. Nac. 19:378 1909.  
*Metasphaeria* Sacc. Syll. Fung. 2:156 1883.  
*Charrinia* Viala & Rav. Comp. Rend. 119:443 1894.  
*Griphosphaerella* Petr. Ann. Myc. 25:209 1927.  
*Merrilliopeltis* Henn. Hedwigia 47:261 1908; Syll. Fung. 22:565 1913; cf. Hoehn. Frag. Myk. 694 1911.  
*Parasphaeria* Syd. Ann. Myc. 22:297 1924.  
*Sclerodotthis* Hoehn. Ann. Myc. 16:69 1918.  
*Nematostigma* Syd. Ann. Myc. 11:262 1913.  
*Petrakiella* Syd. Ann. Myc. 22:230, ill. 1924.
- C. lamprotheca* (Desm.) Auers.  
*G. chamaemori* (Fr.) Berl.  
*P. cryptoderis* (Lev.) Hoehn.  
*D. glomeratum* Pat.  
*E. peltigerae* (Fkl.) Sacc.  
*E. australis* Speg.  
*H. pustula* (Pers.) Karst.  
*A. coprosmae* Stev.  
*C. pustula* (Pers.) Hoehn.  
*L. hirsuta* (Fr.) C. & DeN.  
*B. veneta* S. & B.  
*E. pinetorum* Fkl.  
*H. rubi* Fkl.  
*H. spirillospora* P. & S.  
*H. pusillum* P. & S.  
*L. ovina* (Pers.) Quel.  
*L. spermoides* (Hoffm.) Fkl.  
*S. formosa* H. Fab.  
*L. fucicola* Suther.  
*M. eburnea* (Tul.) Sacc.  
*H. usambarensis* Henn.  
*M. friesi* Nke.  
*O. coffeicola* Speg.  
*M. sepincola* (Fr.) Sacc.  
*C. diplodiella* (Speg.) V. & R.  
*G. stevensoni* Petr.  
*M. calami* Henn.  
*P. contraria* Syd.  
*S. aggregata* (Lasch) Hoehn.  
*N. obducens* Syd.  
*P. insignis* Syd.

- Phaneroascus* Theiss. & Syd. Ann. Myc. 16:9 1918.
- Pharcidiopsis* Sacc. Syll. Fung. 17:646 1905.
- Epicymatia* Fkl. Symb. Myc. 118 1869; Syll. Fung. 1:570 1882.
- Pharcidiella* Sacc. Syll. Fung. 17:695 1905, as subg.
- Sagediopsis* Sacc. Syll. Fung. 17:705 1905, as subg.
- Phragmosperma* Theiss. & Syd. Ann. Myc. 14:450 1916.
- Pseudoperis* Toro. Sci. Surv. P. R. 8:41 1926 (for *Pseudoperisporium erigeronicola*).
- Pseudosphaeria* Hoehn. Sitzb. Akad. Wien 116:129, 365 1907; Syll. Fung. 22:407 1913.
- Saccardoella* Speg. Michelia 1:461 1879.
- Sphaerulina* Sacc. Michelia 1:399 1878.
- Pseudoplea* Petr. Ann. Myc. 19:29 1921; not Hoehn. 1918.
- Sporoctomorpha* Alm. & Cam. Rev. Agron. 1:90, ill. 1903.
- Sydowia* Bres. Hedwigia 34:66 1895; cf. Hoehn. Ann. Myc. 16:166 1918.
- Thaxteriella* Petr. Ann. Myc. 22:63 1924.
- Zignoella* Sacc. Syll. Fung. 2:214 1883.
- Aposphaeriella* Died. Ann. Myc. 10:140 1912; cf. Hoehn. Frag. Myk. 358.
- Koordersiella* Hoehn. Sitzb. Akad. Wien 118:833 1909.
- Trichocollonema* Hoehn. Frag. Myk. no. 23 1902; cf. ib. 1029 1917.
- P. feijoae* (Rehm) T. & S.
- P. endococcea* (Nyl.) Sacc.
- E. vulgaris* Fkl.
- P. endococcea* (Nyl.) Sacc.
- S. koerberi* (Stein) Sacc.
- P. rickianum* (Rehm) Theiss.
- P. erigerontis* (Stev.) Toro
- P. callista* (Rehm) Hoehn.
- S. montellica* Speg.
- S. intermixta* (B. & Br.) Sacc.
- P. trifolii* (Rostr.) Petr.
- S. magnoliae* A. & C.
- S. gregaria* Bres.
- T. corticola* Petr.
- Z. pulviuscula* (Curr.) Sacc.
- A. gregaria* Died.
- K. javanica* Hoehn.
- T. acrothecum* Hoehn.

## Phaeophragmiae

- Aglaospora* DeNot. Giorn. Bot. Ital. 1:43 1844.
- Apiorhynchostoma* Petr. Ann. Myc. 21:185 1923.
- Koenia* Hara Bot. Mag. Tokyo 27:250 1913.
- Lepteutypa* Petr. Ann. Myc. 21:276 1923.
- Plagiostromella* Hoehn. Sitzb. Akad. Wien 126:372 1917.
- Prosthecium* Fresenius Beitr. Myk. 2:62, ill. 1852.
- Pseudovalsa* C. & DeN. Sfer. Ital. 32 1863; Syll. Fung. 2:135 1883.
- Thyridaria* Sacc. Grevillea 4:21 1875; Syll. Fung. 2:140 1883.
- Trematovalsa* Jacobesco Comp. Rend. 142:289 1906; Syll. Fung. 22:397 1913.
- Caryospora* DeNot. Micr. Ital. Dec. 9:7 1856.
- A. profusa* (Fr.) DeN.
- A. apiculatum* (Curr.) Petr.
- K. bambusae* Hara
- L. fuckeli* (Nke.) Petr.
- P. pleurostoma* Hoehn.
- P. ellipsosporum* Fres.
- P. lanciformis* (Fr.) C. & DeN.
- T. incrustans* Sacc.
- T. matrucoti* Jacob.
- C. putaminum* (Schw.) DeN.

- Chaetosphaeria* Tul. Sel. Fung. Carp. 2:252  
1863.
- Clypeosphaeria* Fkl. Symb. Myc. 117 1869.
- Starbaeckiiella* Syd. Ann. Myc. 17:37 1919;  
Syll. Fung. 16:519 1902; 24:1018 1928.
- Coccidophthora* Syd. Ann. Myc. 11:263 1913.
- Gibberidea* Fkl. Symb. Myc. 168 1869.
- Gillotia* Sacc. & Trotter Syll. Fung. 22:253  
1913.
- Hapalocystis* Fkl. Symb. Myc. 188, ill. 1869.
- Herpotrichiella* Petr. Ann. Myc. 12:472 1914.
- Kalmusia* Niessl Beitr. Kennt. Pilz. 54 1872.
- Cryptosphaerina* Lamb. & Fautr. Rev. Myc.  
20:58 1898.
- Keissleria* Hoehn. Ann. Myc. 16:93 1918.
- Lasiosphaeris* Clem. Gen. Fung. 35, 173 1909.
- Chaetomastia* Sacc. as subg. Syll. Fung.  
2:113 1883.
- Herpotrix* Clem. Gen. Fung. 35, 173 1909.
- Nematostoma* Syd. Ann. Myc. 12:161, ill.  
1914; Syll. Fung. 24:972 1928.
- Neoventuria* Syd. Ann. Myc. 17:44 1919;  
for
- Venturiella* Speg. An. Mus. Nac. 19:379  
1909; not *Venturiella* C. Muell. 1875;  
Syll. Fung. 22:236, 24:1005 1928.
- Trichohleria* Sacc. Ann. Myc. 6:559, ill.  
1908; Syll. Fung. 22:248 1913.
- Leptosphaeria* C. & DeN. Sfer. Ital. 60 1863.
- Chitonospora* B. R. S. Syll. Fung. 9:797  
1891.
- Cladosphaeria* Nke. Mitt. Nat. Ges. Berl.  
1871:110; Jacz. Bull. Herb. Boiss. 2:685  
1894; Syll. Fung. 11:320 1895.
- Heptameria* Rehm & Thuem. Myc. Lusit.  
292 1878; Syll. Fung. 2:88 1883.
- Leptosphaeropsis* Berl. Icon. Fung. 1:88  
1902; Syll. Fung. 11:321 1895.
- Macrobasis* Starb. Stud. 97 1894; Petr. &  
Syd. Ann. Myc. 21:349 1923.
- Mycopyrenula* Wain. Act. Soc. Fenn. 49:139  
1921.
- Nodulisphaeria* Rabh. Herb. Myc. Exs. n.  
725 1858.
- Passeriniella* Berl. Icon. Fung. 1:51 1902;  
Syll. Fung. 11:326 1895.
- Syncarpella* Theiss. & Syd. Ann. Myc.  
13:631 1915; Syll. Fung. 24:639 1926.
- Litschaueria* Petr. Ann. Myc. 21:275 1923.
- Massaria* DeNot. Giorn. Bot. Ital. 1:333 1846.
- Asteromassaria* Hoehn. Sitzb. Akad. Wien  
126:368 1917.
- Sacothecium* Fr. Sum. Veg. Scan. 398  
1849.
- C. phaeostroma* (D. & M.) Fkl.
- C. notarisi* Fkl.
- S. massariospora* (Starb.) Syd.
- C. variabilis* Syd.
- G. visci* Fkl.
- G. orbicularis* (Syd.) S. & T.
- H. berkeleyi* (Tul.) Fkl.
- H. moravica* Petr.
- K. ebula* Niessl
- C. fraxini* Lamb. & Fautr.
- K. xantha* (Sacc.) Hoehn.
- L. hispida* (Tode) Clem.
- C. hirtula* (Karst.) Sacc.
- H. calospora* (Wint.) Clem.
- N. artemisiae* Syd.
- N. argentinensis* (Speg.) Syd.
- V. argentinensis* Speg.
- T. quadrigellensis* Flag. & S.
- L. doliolum* (Pers.) C. & DeN.
- C. ammophila* B. R. S.
- C. eunomioides* (Othth) Nke.
- H. elegans* Rehm & Thuem.
- L. ophioboloides* (Sacc.) Berl.
- M. platypus* (Schw.) Starb.
- M. coryli* (Mass.) Wain.
- N. hirta* Rabh.
- P. dichroa* (Pass.) Berl.
- S. tumefaciens* (E. & H.) T. & S.
- L. corticiorum* (Hoehn.) Petr.
- M. inquinans* (Tode) Fr.
- A. macrospora* (Desm.) Sacc.
- S. corni* (Mont.) Fr.

- Melanomma** Nke. & Fkl. Symb. Myc. 159 1869.
- Melogramma** Tul. Sel. Fung. Carp. 2:81 1863.
- Ohleria** Fkl. Symb. Myc. 163 1869.
- Ohleriella** Earle Jour. N. Y. Bot. Gard. 3:349 1902.
- Phaeosphaeria** Miyake Jour. Agr. Tokyo 2:245 1910.
- Leptosphaerella** Sacc. as subg., Syll. Fung. 2:47 1883; 24:994 1928.
- Trematosphaerella** Kirschst. Verh. Bot. Brandenb. 48:54 1906; Syll. Fung. 22:248 1913.
- Phaeospora** Hepp em. Zopf Nov. Act. Leop. 70:280 1898.
- Philonectria** Hara Bot. Mag. Tokyo 28:350, ill. 1914.
- Pocosphaeria** Sacc. Syll. Fung. 2:32 1883; 11:325 1895.
- Bysotheciella** Petr. Ann. Myc. 21:281 1923.
- Rebentischia** Karst. Myc. Fenn. 2:14, 97 1873.
- Rhynchosphaeria** Sacc. Syll. Fung. 2:112 1883; 16:524 1902.
- Scleroplella** Hoehn. Ann. Myc. 16:158 1918.
- Sporormia** DeNot. Micr. Ital. Dec. 5:6 1849.
- Sporormiella** Ell. & Ev. N. A. Pyr. 136 1892.
- Titania** Berl. Icon. Fung. 1:49 1901.
- Trematosphaeria** Fkl. Symb. Myc. 161 1869.
- Trematosphaeris** Elenkin Bull. Jard. St. Peters. 146 1901, for Trematosphaeriopsis.
- Xenosphaeria** Trev. Consp. Verruc. 18 1860; Syll. Fung. 17:730 1905.
- M. pulvis-pyrius** (Pers.) Fkl.
- M. vagans** DeN.
- O. modesta** Fkl.
- O. mexicana** Earle
- P. oryzae** Miyake
- L. uliginosa** (Ph. & Pl.) Sacc.
- T. fuscispora** Kirschst.
- P. catolechiaae** Zopf
- P. variabilis** Hara
- P. eriophora** (Cke.) Sacc.
- B. tiliae** Petr.
- R. pomiformis** Karst.
- R. duseni** Henn.
- S. personata** (Niessl) Hoehn.
- S. minima** Auers.
- S. nigropurpurea** E. & E.
- T. berkeleyi** Berl.
- T. pertusa** (Pers.) Fkl.
- T. parmeliiana** Jacz. & Ell.
- X. hookeri** (Schaer.) Trev.

## Hyalodictyae

- Berlesiella** Sacc. Rev. Myc. 10:7, ill. 1888.
- Boerlagella** Penz. & Sacc. Malpighia 11:404 1897.
- Capronia** Sacc. Syll. Fung. 2:288 1883.
- Clathridium** Sacc. Syll. Fung. 11:350 1895; 2:332 1883.
- Julella** H. Fab. Sphaer. Vaubl. 113 1880; Syll. Fung. 2:289 1883.
- Catharinia** Sacc. Syll. Fung. 2:275 1883, as subg.; 11:350 1895.
- Norrlinia** Theiss. & Syd. Ann. Myc. 16:29 1918.
- Pleosphaeropsis** Wainio Act. Soc. Fenn. 49:110 1921.
- Ophiodictyum** Sacc. & Syd. Syll. Fung. 16:555 1902.
- B. nigerrima** (Blox.) Sacc.
- B. velutina** P. & S.
- C. sexdecemspora** (Cke.) Sacc.
- C. burchelli** (Cke.) Sacc.
- J. buxi** H. Fab.
- C. hyalospora** (Speg.) Sacc.
- N. peltigericola** (Nyl.) T.
- P. peltigericola** (Nyl.) Wain.
- O. plumbeum** (Starb.) Sacc.

- Dasysphaeria* Speg. An. Mus. Nac. 23:60  
1912; Syll. Fung. 24:1022 1928.
- Peltosphaeria* Berl. Rev. Myc. 10:17, ill. 1888.
- Placodthis* Syd. Ann. Myc. 26:133 1928.
- Phaeopeltis* Clements Gen. Fung. 52 1909.
- Capnites* Theiss. Verh. z.-b. Ges. Wien  
66:365 1916; Syll. Fung. 22:385 1913.
- Limacinia* Sacc. Syll. Fung. 17:566 1905.
- Phaeosaccardinula* Henn. Hedwigia 44:67  
1905; Syll. Fung. 17:873 1905.
- Tephrosticta* Sacc. & Syd. Syll. Fung.  
17:745 1905; 24:1023 1928.
- Pleomelogramma* Speg. An. Mus. Nac. 19:389  
1909.
- Pringsheimia* Schulzer Verh. z.-b. Ges. Wien  
16:57 1866.
- Pleosphaerulina* Pass. Rend. Accad. Linc.  
2:7:46 1891; cf. Hoehn. Ann. Myc. 18:97  
1920.
- Schizostege* Theiss. Ann. Myc. 14:415, ill.  
1916.
- Pseudoplea* Hoehn. Ann. Myc. 16:162 1918;  
cf. Petr. Ann. Myc. 25:216 1927.
- Hyalocurreya* Theiss. & Syd. Ann. Myc.  
13:640 1915; Syll. Fung. 24:637 1926.
- Rhamphoria* Niessl Not. Pyr. 44 1876.
- Thyridella* Sacc. Syll. Fung. 9:321 1891;  
11:351 1895.
- Curreyella* (Sacc.) Lindau Lind. Nat.  
Pflanzf. 1:1:379 1897; Syll. Fung. 24:1024  
1928; cf. Theiss. & Syd. Ann. Myc. 13:181  
1915.
- Discostroma* Clements Gen. Fung. 50 1909.
- Griphosphaeria* Hoehn. Ann. Myc. 16:87  
1918; cf. Petr. Ann. Myc. 19:32 1921;  
Syll. Fung. 24:1024 1928.
- Griphosphaerioma* Hoehn. Ber. Deut. Bot.  
Ges. 36:312 1918; cf. Petr. Ann. Myc.  
19:193 1921; Syll. Fung. 24:924 1928.
- Leucothyridium* Speg. An. Mus. Nac.  
19:388 1909; Syll. Fung. 22:460 1913.
- Tichosporella* Sacc. Syll. Fung. 2:303 1883;  
11:351 1895.
- D. andicola* Speg.
- P. vitriospora* (C. & H.) Berl.
- P. petraki* Syd.
- P. diospyricola* (Henn.) Clem.
- C. costaricensis* (Speg.) Theiss.
- L. javanica* (Zimm.) S. & D. S.
- P. diospyricola* Henn.
- T. negeriana* S. & S.
- P. argentinense* Speg.
- P. rosarum* Schulz.
- P. sepincola* (Fr.) Pass.
- S. rosaecola* (Fkl.) Theiss.
- P. briosiana* (Poll.) Hoehn.
- H. sandicensis* (E. & E.) T. & S.
- R. delicatula* Niessl
- T. colliculus* (Cke.) Sacc.
- C. rehmi* (Schnabl) Sacc.
- D. rehmi* (Schnabl) Clem.
- G. corticola* (Fkl.) Hoehn.
- G. symphoricarpi* (Rehm) Hoehn.
- L. crustosum* Speg.
- T. dura* (Fkl.) Sacc.

## Phaeodictyae

- Chaetoplea* (Sacc.) Clem.; as subg. Syll.  
Fung. 2:279 1883; Pyrenophora mem-  
branacea, aparaphysata.
- Clathrospora* Rabh. Hedwigia 1:116, ill.  
1857.
- Macrospora* Fkl. Symb. Myc. 139 1869;  
cf. Hoehn. Ann. Myc. 18:77 1920.
- Comoclathris* Clem. Gen. Fung. 37 1909;  
Minn. Bot. Studies 4:186 1911.
- C. calvescens* (Fr.) Sacc.
- C. elyinae* Rabh.
- M. scirpicola* (DC.) Fkl.
- C. lanata* Clem.

- Crotonocarpia* Fkl. Symb. Myc. 163 1869.  
*Cucurbitaria* Gray Nat. Arr. Brit. Pl. 1:519  
 1821.  
*Cucurbitodithis* Petr. Ann. Myc. 19:201 1921.  
*Megalospora* Naumov Mat. Myk. Fitop. 610,  
 ill. 1927.  
*Curreya* Sacc. Syll. Fung. 2:651 1883;  
 Theiss. & Syd. Ann. Myc. 13:642 1915.  
*Epibotrys* Theiss. & Syd. Ann. Myc. 13:644  
 1915; Syll. Fung. 24:637 1926.  
*Delacourea* H. Fab. Spher. Vaucl. 1:114 1878.  
*Fenestella* Tul. Sel. Fung. Carp. 2:208 1863.  
*Karstenula* Speg. Fung. Arg. 1: in. tab. 1880.  
*Leptosphaerulina* McAlpine Fung. Dis. 103  
 1902.  
*Merismatium* Zopf Nov. Act. Leop. 70:259,  
 ill. 1898; cf. Theiss. & Syd. Ann. Myc.  
 16:29 1918.  
*Heterophracta* Nyl. Sacc. Syll. Fung. 17:746  
 1905, as subg.  
*Montagnula* Berl. Icon. Fung. 2:68, ill. 1896.  
*Naetrocymbe* Koerber Lich. Germ. 58 1858;  
 Parerg. Lich. 441 1865.  
*Coccodinium* Mass. Att. Ist. Ven. 3:5:336  
 1860.  
*Phaeopeltium* Berl. Nuov. Giorn. Ital. 24:139  
 1892; for *Phaeopeltosphaeria*.  
*Pleomassaria* Speg. An. Soc. Arg. 9:192 1880.  
*Pleosphaeria* Speg. An. Soc. Arg. 12:181  
 1881.  
*Pleospora* Rabh. Herb. Myc. ed. 2:347 1857;  
 cf. Petr. Ann. Myc. 25:204, 216 1927.  
*Clistotheca* Zukal Myk. Mitt. 4, ill. 1893;  
 cf. Hoehn. Ann. Myc. 15:466 1917; Syll.  
 Fung. 11:270 1895.  
*Clistothecopsis* Stev. & True Ill. Exp. Sta.  
 Bull. 220:530, ill. 1919; Syll. Fung. 24:1333  
 1928.  
*Pleophragmia* Fkl. Symb. Myc. 243 1869.  
*Titarella* Syd. Ann. Myc. 17:36 1919; Syll.  
 Fung. 24:1046 1928.  
*Pyrenophora* Fr. Sum. Veg. Scan. 397 1849.  
*Scleroplea* (Sacc.) Oud. Kon. Akad. Amster.  
 9:152 1900.  
*Thyridium* (Nke.) Sacc. Michelia 1:50 1879.  
*Tichospora* Fkl. Symb. Myc. 100 1869.  
*Strickeria* Koerber Parerg. Lich. 400 1865;  
 Syll. Fung. 2:300 1883.
- C. moriformis* Fkl.  
*C. berberidis* (Pers.) Gray  
*C. pithyophila* (Fr.) Petr.  
*M. gemmicida* Naumov  
*C. conorum* (Fkl.) Sacc.  
*E. bambusicola* (Speg.) T. & S.  
*D. insignis* H. Fab.  
*F. princeps* Tul.  
*K. rhodostoma* (A. & S.) Speg.  
*L. australis* McAlp.  
*M. lopadii* (Arn.) Zopf  
*H. pezizoides* Nyl.  
*M. infernalis* (Niessl) Berl.  
*N. fuliginosa* Koerb.  
*C. bartschi* Mass.  
*P. caudatum* Berl.  
*P. siparia* (B. & Br.) Tul.  
*P. australis* Speg.  
*P. herbarum* (Pers.) Rabh.  
*C. papyrophila* Zukal  
*C. circinans* S. & T.  
*P. leporum* Fkl.  
*T. luzonensis* (Henn.) Syd.  
*P. phaecomis* (Reb.) Sacc.  
*S. cliviae* Oud.  
*T. lividum* (Pers.) Sacc.  
*T. obducens* (Fr.) Fkl.  
*S. kochi* Koerb.

## Scolecosporae

- Acanthotheca* Hoehn. Sitzb. Akad. Wien  
 120:451 1911; Frag. Myk. 706 1911; for  
*Acanthotheciella* Hoehn.  
*A. barbata* (Pat.) Hoehn.



- Acerbiella* Sacc. Syll. Fung. 17:768 1905.  
*Meringosphaeria* Peyron. Nuov. Giorn. Ital. 25:415, ill. 1918; Syll. Fung. 24:1068 1928.  
*Bactrosphaeria* Penz. & Sacc. Malpighia 11:407 1897.  
*Bombardiella* Hoehn. Sitzb. Akad. Wien 118:1192 1909.  
*Bovilla* Sacc. Syll. Fung. 2:360 1883.  
*Ceuthocarpum* Karst. Bid. Kann. Fin. 22 1873.  
*Criserosphaeria* Speg. An. Mus. Nac. 23:72, ill. 1912.  
*Cryptospora* Tul. Sel. Fung. Carp. 2:144 1863.  
*Winterella* Sacc. Syll. Fung. 2:364 1883; 14:620 1899.  
*Cylindrina* Pat. Bull. Soc. Bot. Fr. 33:155 1886.  
*Dilophia* Sacc. Syll. Fung. 2:357 1883.  
*Exillispora* Tehon & Daniels Mycologia 19:112, ill. 1927.  
*Leptosorella* Penz. & Sacc. Malpighia 11:406 1897.  
*Linospora* Fkl. Symb. Myc. 123 1869.  
*Linocarpum* Syd. Ann. Myc. 15:210 1917; Syll. Fung. 24:1078 1928.  
*Ophiognomonina* Sacc. Syll. Fung. 1:419 1882; 14:613 1899.  
*Lulworthia* Sutherland Trans. Brit. Myc. Soc. 5:259, ill. 1915.  
*Maurya* Pat. Bull. Soc. Myc. Fr. 13:56, ill. 1898.  
*Naumovia* Lobozrakova Bolez. Rast. 197, ill. 1927.  
*Neolamyia* Theiss. & Syd. Ann. Myc. 16:29 1918.  
*Lamyella* Berl. Icon. Fung. 2:139 1900, not Fries 1849.  
*Ophiobolus* Riess Hedwigia 1:27, ill. 1854.  
*Acerbia* Sacc. Syll. Fung. 11:353 1895; 14:619 1899.  
*Entodesmium* Riess Hedwigia 1:58 1854.  
*Leptosporopsis* Hoehn. Frag. Myk. 1211. 1920.  
*Leptospora* Rabh. Hedwigia 1:116, ill. 1857.  
*Ophiocarpella* Theiss. & Syd. Ann. Myc. 13:644 1915.  
*Ophioceras* Sacc. Syll. Fung. 2:358 1883.  
*SchizacrospERMUM* Henn. & Nym. Mon-sunia 1:72 1899; cf. Hoehn. Frag. Myc. 693; Syll. Fung. 16:672 1902.  
*Ophiochaeta* Sacc. Syll. Fung. 2:352 1883; 11:352 1895.
- A. macrospora* (Rick) Sacc.  
*M. patellula* Peyron.  
*B. asterostoma* P. & S.  
*B. caespitosa* Hoehn.  
*B. caproni* Sacc.  
*C. populinum* (Pers.) Karst.  
*C. phyllostictis* Speg.  
*C. suffusa* (Fr.) Tul.  
*W. anthostomoides* (Rehm) Sacc.  
*C. delavayi* Pat.  
*D. graminis* (Fkl.) Sacc.  
*E. plurisepta* T. & D.  
*L. gregaria* P. & S.  
*L. capreae* (DC.) Fkl.  
*L. pandani* Syd.  
*O. melanostyla* (DC.) Sacc.  
*L. fucicola* Suther.  
*M. hypoxyloides* Pat.  
*N. abundans* Lobr.  
*N. peltigerae* (Mont.) T. & S.  
*L. peltigerae* (Mont.) Berl.  
*O. porphyrogenus* (Tode) Sacc.  
*A. culmigena* P. & S.  
*E. rude* Riess  
*L. rostrupi* (F. & W.) Hoehn.  
*L. porphyrogena* (Tode) Rabh.  
*O. tarda* (Harkn.) T. & S.  
*O. macrocarpum* Sacc.  
*S. filiforme* H. & N.  
*O. herpotricha* (Fr.) Sacc.

- Acanthophiobolus* Berl. Att. Cong. Genova  
571, ill. 1893.
- Ophiosphaeria* Kirschst. Abh. Bot.  
Brandenb. 48:47, ill. 1906; Syll. Fung.  
22:289 1913; cf. Hoehn. Frag. Myk. 168  
1906.
- Ophiomassarria* Jacz. Bull. Herb. Boiss. 2:685  
1894.
- Ophiosphaerella* Speg. An. Mus. Nac. 19:401  
1909.
- Rhaphidophora* C. & DeN. Sfer. Ital. 59 1863.
- Rhaphidospora* Fr. 1849, not Nees 1832.
- Robergea* Desm. Not. Pl. Crypt. 177 1847.
- Cyanospora* Heald & Wolf Mycologia 2:209  
1910.
- Sillia* Karst. Myc. Fenn. 1:20 1873.
- Trichospermella* Speg. An. Mus. Nac. 23:38,  
ill. 1912.
- Vialaea* Sacc. Bull. Soc. Myc. Fr. 12:66 1896.
- Diatractium* Syd. Ann. Myc. 18:183 1920;  
24:364 1926; for *Trabutiella* Stev. 1920,  
not Theiss. & Syd. 1914.
- A.** *helminthospora* (Rehm) Berl.
- O.** *tenella* Kirschst.
- O.** *selenospora* (Othth) Jacz.
- O.** *graminicola* Speg.
- R.** *thallicola* C. & DeN.
- R.** *unica* Desm.
- C.** *albicedrae* H. & W.
- S.** *ferruginea* (Pers.) Karst.
- T.** *pulchella* Speg.
- V.** *insculpta* (Fr.) Sacc.
- D.** *cordiae* (Stev.) Syd.

## Genera Incertae Sedis Vel Dubia

- Biotyle* Syd. Ann. Myc. 27:16 1929.
- Brenesiella* Syd. Ann. Myc. 27:16 1929.
- Carlia* Rabh. Flora 40:382 1857.
- Creosphaeria* Theiss. Beih. Bot. Cent.  
27:2:396 1910; Syll. Fung. 22:451 1913.
- Cryptoleptosphaeria* Petr. Ann. Myc. 21:196  
1923.
- Delpinoella* Sacc. Bull. Soc. Bot. Belg. 38:162  
1899; Syll. Fung. 16:658 1902; Hoehn.  
Ann. Myc. 16:151 1918.
- Endoconidiophora* Münch Nat. Zeits. J. and.  
Forstw. 5:531 1907; Syll. Fung. 22:297  
1913.
- Eumela* Syd. Ann. Myc. 23:335 1925.
- Haplosporium* Mont. Ann. Sci. Nat. 2:20:372  
1843; Syll. Fung. 9:495 1891.
- Haplostroma* Syd. Ann. Myc. 14:80 1916;  
Syll. Fung. 24:745 1928.
- Isothea* Fr. Sum. Vcg. Scan. 421 1849; Syll.  
Fung. 2:290 1883; cf. Lind. Nat. Pflanzenf.  
1:1:454 1897.
- Leptosacca* Syd. Ann. Myc. 26:109 1928.
- Leptosillia* Hoehn. Ber. Deut. Bot. Ges.  
35:355 1817; cf. Sacc. Syll. Fung. 24:815  
1928.
- Limaciniella* Mendoza Bishop Mus. Bull.  
19:58, ill. 1925.
- Linobolus* Syd. Ann. Myc. 15:204 1917;  
Syll. Fung. 24:1060 1928.
- B.** *ditissima* Syd.
- B.** *erythroxyli* Syd.
- C.** *oxalidis* Rabh.
- C.** *riograndensis* Theiss.
- C.** *moravica* Petr.
- D.** *insignis* S. & Trott.
- E.** *caerulescens* Münch
- E.** *chiococcae* Syd.
- H.** *bulborum* Dur. & Mont.
- H.** *depressum* Syd.
- I.** *nyssae* B. & C.
- L.** *lumae* Syd.
- L.** *notha* Hoehn.
- L.** *psidii* Mend.
- L.** *ramosii* Syd.

- Paracesatiella* Petr. Ann. Myc. 27:344 1929. *P. pulchella* Petr.
- Parodiellina* Henn. Hedwigia 43:358 1904; em. Arnaud Les Asterin. 2:45 1921; Syll. Fung. 24:389 1926. *P. manaosensis* (Henn.) Arn.
- Penzigia* Sacc. Myc. Malac. 20 1888; cf. Lind. Nat. Pflanzenf. 1:1:491 1897. *P. cranioides* Sacc. & Paol.
- Phthora* D'Herelle Bull. Soc. Myc. Fr. 25:184 1909; Syll. Fung. 22:71 1913. *P. vastatrix* D'Her.
- Pseudomassaria* Jacz. Bull. Herb. Boiss. 2:663 1896; cf. Sacc. Syll. Fung. 17:777 1905; Hoehn. Sitzb. Akad. Wien 118:59 1909. *P. chondrospora* (Ces.) Jacz.
- Pseudomeliola* Speg. Fung. Puigg. 282 1890; Syll. Fung. 9:938 1891. *P. brasiliensis* Speg.
- Pseudophyllachora* Speg. Bol. Acad. Cordoba 23:194 1919. *P. tonduzi* Speg.
- Pseudopleospora* Petr. Ann. Myc. 17:84 1919; Syll. Fung. 24:1132 1928. *P. ruthenica* Petr.
- Puiggarina* Speg. Bol. Acad. Cordoba 23:485, ill. 1919. *P. microtheles* Speg.
- Puttemansiella* Henn. Hedwigia 48:10 1908; Syll. Fung. 24:838 1928; cf. Hoehn. Frag. Myk. 697. *P. desmodii* Henn.
- Pyrenodiscus* Petr. Ann. Myc. 25:202 1927. *P. caricis* Petr.
- Pyrenomyxa* Morgan Jour. Cincin. Soc. Nat. Hist. 18:42, ill. 1895; cf. Lind. Nat. Pflanzenf. 1:1:491 1897. *P. invocans* Morgan
- Rhabdostroma* Syd. Ann. Myc. 14:362 1916. *R. rottboelliae* (Rehm) Syd.
- Saccardomyces* Henn. Hedwigia 43:353 1904; Syll. Fung. 17:530 1905; Hoehn. Frag. Myk. 603. *S. bactridicola* Henn.
- Septomazzantia* Theiss. & Syd. Ann. Myc. 13:193 1915; Syll. Fung. 24:665 1926. *S. epitypha* (Cke.) T. & S.
- Stilbohypoxyton* Henn. Hedwigia 41:16 1902; Syll. Fung. 17:633 1905; cf. Hoehn. Frag. Myk. 626. *S. moelleri* Henn.
- Thalassoascus* Ollivier Comp. Rend. 182:1348 1926. *T. tregoubovi* Olliv.
- Xenothecium* Hoehn. Sitzb. Akad. Wien 128:589 1919. *X. iodophilum* Hoehn.

## HYPOCREACEAE

## Allantosporae

- Allantonectria* Earle Plant. Baker. 2:12 1901. *A. miltina* (Mont.) Weese

## Hyalosporae

- Balzania* Speg. Fung. Arg. Nov. 286 1899. *B. platensis* Speg.
- Battarina* Sacc. Syll. Fung. 2:533 1883, as subg. *B. inclusa* (B. & Br.) Sacc.
- Byssonectria* Karst. Symb. Myc. 7:6 1879. *B. obducens* Karst.
- Chilonectria* Sacc. Michelia 1:279 1878. *C. cucurbitula* (Curr.) Sacc.
- Clistosoma* Harkn. Jour. Myc. 1:30 1885. *C. purpureum* Harkn.
- Hyponectria* Sacc. Michelia 1:250, 281 1878. *H. buxi* (DC.) Sacc.

- Lisiella* Cooke Grevillea 16:5, 1887, as subg.  
*Moelleriella* Bres. Hedwigia 35:298 1896.  
*Mycaureola* Maire & Chemin Comp. Rend. 175:321 ill. 1922.  
*Nectriella* Sacc. Michelia 1:51 1877; not Nke. 1869.  
*Notariisiella* Sacc. Syll. Fung. 2:452 1883, as subg.  
*Pseudonectria* Seaver Mycologia 1:48 1909.  
*Peckiella* Sacc. Syll. Fung. 2:472 1883, as subg.; 9:944 1891.  
*Podostroma* Karst. Hedwigia 31:294 1892.  
*Polystigma* DC. Fl. France 5:164 1815.  
*Clypeostigma* Hoehn. Sitzb. Akad. Wien 128:565 1919.  
*Leptocrea* Syd. Ann. Myc. 14:87, ill. 1916; Syll. Fung. 24:645 1926.  
*Physalosporina* Woronich. Ann. Myc. 9:220 1911; cf. Hoehn. Ann. Myc. 15:374 1917.  
*Selinia* Karst. Symb. Myc. 3:57 1876.  
*Hypocreopsis* Winter Hedwigia 14:26 1875, not Karst. 1873.  
*Sphaerostilbella* Henn. Engler Bot. Jahrb. 30:40 1902.  
*Succinaria* Syd. Ann. Myc. 23:363, ill. 1925.  
*Thelocarpum* Nyl. Class. Lich. 1:15 1854.  
*Uropolystigma* Maubl. Bull. Soc. Myc. Fr. 36:36, ill. 1920.
- L. passiflorae* Cke. & Masee  
*M. sulphurea* Bres.  
*M. dilseae* M. & C.  
*N. aurea* Sacc. & Speng.  
*N. rousseliana* (Mont.) Sacc.  
*P. rousseliana* (Mont.) Seaver  
*P. xylophila* (Pk.) Sacc.  
*P. leucopus* Karst.  
*P. rubrum* (Pers.) DC.  
*C. canarii* (Henn.) Hoehn.  
*L. orbiculata* Syd.  
*P. megastoma* (Pk.) Woron.  
*S. pulchra* (Wint.) Karst.  
*H. pulchra* Wint.  
*S. lutea* Henn.  
*S. minuta* Syd.  
*T. laureri* (Fw.) Nyl.  
*U. atrotestaceum* Maubl.

## Phaeosporae

- Baculospora* Zukal Neue Ascom. 3 1890.  
*Cerillum* Clem.; for  
*Colletomanginia* Hariot & Pat. Comp. Rend. 142:224 1906.  
*Erythrocarpum* Zukal Ueb. Pilz. Bakt. 7 1885.  
*Melanospora* Corda. Icon. Fung. 1:24 1837.  
*Gibsonia* Masee Ann. Bot. 23:336 1909; Syll. Fung. 22:452 1913.  
*Melanosporopsis* Naumov Mat. Mic. Fit. 6:6, ill. 1927.  
*Neocosmospora* E. F. Smith Bull. U. S. Dep. Agr. 17:45 1899.  
*Peridoxylum* Shear Mycologia 15:126 1923.  
*Rhynchomelas* Clem. Gen. Fung. 44:173 1909.  
*Sarcoxyllum* Cooke Grevillea 12:50 1883.  
*Chromocrepopsis* Steven. Jour. Dep. Agr. P. R. 1:213 1917; Syll. Fung. 24:1339 1928.  
*Engleromyces* Henn. Engler Bot. Jahrb. 28:327 1900.  
*Entonaema* Moell. Phyc. Ascom. Bras. 309 1901; Syll. Fung. 16:450 1902.  
*Hypoxylina* Starb. Ark. Bot. 5:29 1905; Syll. Fung. 22:453 1913.
- B. pellucida* Zukal  
*C. paradoxa* (Har. & Pat.) C.  
*C. paradoxa* Har. & Pat.  
*E. microstomum* Zukal  
*M. chionea* (Fr.) Corda  
*G. phaeospora* Masee  
*M. subulata* Naumov  
*N. vasinfesta* Smith  
*P. petersi* (B. & C.) Shear  
*R. arenariae* (Mont.) Clem.  
*S. compunctum* (Jungh.) Cke.  
*C. striispora* Steven.  
*E. goetzi* Henn.  
*E. lignescens* Moell.  
*H. umbilicata* Starb.

- Stromne* Clem. Gen. Fung. 44:173 1909. *S. goetzi* (Henn.) Clem.  
*Thuemenella* Penz. & Sacc. Malpighia  
 11:518 1897; Syll. Fung. 14:628 1899. *T. javanica* P. & S.  
*Scopinella* Lev. Dict. Univ. 8:493 1849. *S. pleiospora* (Schroet.) Sacc.  
*Sphaeroderma* Fkl. Symb. Myc. App. 3:23  
 1869. *S. theleboides* Fkl.  
*Guttularia* Obermayer Myc. Cent. 3:9 1913;  
 Syll. Fung. 24:240 1926. *G. geopora* Oberm.  
*Sphaerodermella* Hoehn. Sitzb. Akad. Wien  
 116:105 1907. *S. niessli* (Auers.) Hoehn.  
*Vittadinula* Sacc. Syll. Fung. 2:460 1883, as  
 subg.; 24:650 1926. *V. episphaeria* (P. & P.) Sacc.  
*Erostrotheca* Martin & Charles Phytopath.  
 18:843, ill. 1928. *E. multiformis* M. & C.  
*Nigrosphaeria* Gardner Univ. Cal. Pub. Bot.  
 2:179, ill. 1905; Syll. Fung. 22:452 1913. *N. setchelli* (Harkn.) Gard.  
*Sphaerodes* Clem. Gen. Fung. 44:173 1909. *S. episphaerium* (P. & P.) Clem.  
*Wawelia* Namyslowski Bull. Acad. Cracov.  
 602, ill. 1908. *W. regia* Nam.  
*Xylocrea* Moell. Phyc. Ascom. Bras. 307  
 1901. *X. piriformis* Moell.

## Hyalodidymae

- Apiosphaeria* Hoehn. Sitzb. Akad. Wien  
 118:1218 1909. *A. guaranitica* (Speg.) Hoehn.  
*Aponectria* Sacc. Michelia 1:286 1877. *A. inaurata* (B. & Br.) Sacc.  
*Charonectria* Sacc. Michelia 2:72 1880. *C. consolationis* Sacc.  
*Hydronectria* Kirschst. Verh. Bot. Brandenb.  
 67:87, ill. 1925. *H. kriegeriana* Kirschst.  
*Nectriella* Nke. Fkl. Symb. Myc. 175 1869;  
 not Sacc. 1877. *N. fuckeli* Nke.  
*Cyanocephalum* Zukal Myc. Mitt. 14 1893. *C. murorum* Zukal  
*Hypocrea* Fr. Sum. Veg. Scan. 383 1849. *H. rufa* (Pers.) Fr.  
*Clintoniella* Sacc. Syll. Fung. 2:532 1883,  
 as subg. *C. apiculata* (C. & P.) Sacc.  
*Dialhypocrea* Speg. Bol. Acad. Cordoba  
 23:475, ill. 1919; Syll. Fung. 24:673 1926. *D. puiggariana* Speg.  
*Hypocreopsis* Karst. Symb. Myc. 251 1873. *H. riccioides* (Bolt.) Karst.  
*Mycocitrus* Moell. Phyc. Ascom. Bras. 397  
 1901; Syll. Fung. 16:589 1902. *M. aurantium* Moell.  
*Oswaldia* Rangel Arch. Esc. Sup. Mexico  
 5:37, ill. 1921. *O. icarahyensis* Rangel  
*Phyllocrea* Hoehn. Ann. Myc. 16:38 1918. *P. quitensis* (Pat.) Hoehn.  
*Porphyrosoma* Pat. Mem. Acad. Malgache  
 6:40 1928. *P. episphaerium* Pat.  
*Hypomyces* Tul. Sel. Fung. Carp. 3:38 1865. *H. lactifluorum* (Schw.) Fr.  
*Apiocrea* Syd. Ann. Myc. 18:186 1920;  
 Syll. Fung. 24:675 1926. *A. chrysoesperma* (Tul.) Syd.  
*Bresadolella* Hoehn. Ann. Myc. 1:522  
 1903; Syll. Fung. 17:797 1905. *B. aurea* Hoehn.  
*Nectriopsis* Maire Ann. Myc. 9:323, ill.  
 1911; Syll. Fung. 24:676 1926. *N. violacea* (Fr.) Maire  
*Lambro* Rac. Par. Alg. Pilz. Java 2:13 1900. *L. insignis* Rac.

- Lasionectria* Sacc. Syll. Fung. 2:505 1883,  
 as subg. *L. mantuana* Sacc.  
*Dasyphthora* Clem. Gen. Fung. 44:173  
 1909. *D. lasioderma* (Ell.) Clem.  
*Epinctria* Syd. Ann. Myc. 15:215 1917;  
 Syll. Fung. 24:637 1926. *E. meliolae* Syd.  
*Neohenningsia* Koorders Verh. Akad. Am-  
 sterdam 2:13:164, ill. 1907. *N. stellulata* Koord.  
*Lisea* Sacc. *Michelia* 1:43,300 1877. *L. buxi* (Fkl.) Sacc.  
*Loramycetes* Weston Mycologia 21:72, ill. 1929. *L. junicola* Weston  
*Metanectria* Sacc. *Michelia* 1:300 1878. *M. citrum* (Wallr.) Sacc.  
*Nectria* Fr. Sum. Veg. Scan. 387 1849. *N. cinnabarina* (Tode) Fr.  
*Bionectria* Speg. Bol. Acad. Cordoba 23:563,  
 ill. 1919. *B. tonduzi* Speg.  
*Corallomycetella* Henn. *Hedwigia* 43:245  
 1904; cf. Hoehn. Frag. Myk. 1195. *C. heinsensi* Henn.  
*Creonectria* Seaver Mycologia 1:183 1909. *C. cinnabarina* (Tode) Seav.  
*Cryptopeltosphaeria* Petr. Ann. Myc. 21:196  
 1923. *C. moravica* Petr.  
*Dialonectria* Sacc. Syll. Fung. 2:490 1883,  
 as subg. *D. episphaeria* (Fr.) Sacc.  
*Neonectria* Wr. Ann. Myc. 15:52 1917;  
 Syll. Fung. 24:665 1926. *N. ramulariae* Wr.  
*Pyxidiophora* Bref. & Tav. Unters. Myk.  
 10:2:189 1891. *P. asterophora* (Tul.) Lind.  
*Podocrea* Sacc. Syll. Fung. 2:530 1883, as  
 subg. *P. alutacea* (Pers.) Lind.  
*Podostroma* Karst. *Hedwigia* 31:294 1892;  
 Syll. Fung. 11:255 1895. *P. leucopus* Karst.  
*Prolisea* Clem.; *Lisea lichenicola*. *P. exiguella* (Nyl.) Clem.  
*Pronectria* Clem.; *Nectria lichenicola*. *P. lichenicola* (Ces.) Clem.  
*Rhynchonectria* Hoehn. Sitzb. Akad. Wien  
 111:1023 1902. *R. longispora* (P. & P.) Hoehn.  
*Eleutherosphaera* Grov. Jour. Bot. 45:171,  
 ill. 1907. *E. longispora* (P. & P.) Grove  
*Sphaerostilbe* Tul. Sel. Fung. Carp. 3:103  
 1865. *S. flammea* Tul.  
*Stilbocrea* Pat. Bull. Soc. Myc. Fr. 16:186  
 1900. *S. dussi* Pat.  
*Treleasia* Speg. Rev. Agr. La Plata 235  
 1896. *T. sacchari* Speg.

## Phaeodidymae

- Calostilbe* Sacc. & Syd. Syll. Fung. 16:591  
 1902. *C. longiasca* (Moell.) S. & S.  
*Erispora* Pat. Bull. Soc. Myc. Fr. 38:84 1922. *E. parasitica* Pat.  
*Letendreaea* Sacc. *Michelia* 2:73 1880. *L. eurotioides* Sacc.  
*Corallomyces* B. & C. Exot. Fung. Schwein.  
 289 1854; Syll. Fung. 2:519 1883. *C. elegans* B. & C.  
*Neoskofitzia* Schulzer Oest. Bot. Zeits.  
 30:250 1880; Syll. Fung. 9:981 1891. *N. pallida* Schulz.  
*Macbridella* Seaver Mycologia 1:195 1909. *M. chaetostroma* (E. & M.) Seav.  
*Metadothella* Henn. *Hedwigia* 43:384, ill.  
 1904. *M. stellata* Henn.

- Passerinula* Sacc. *Grevillea* 4:21 1875.  
*Phaeocreopsis* Sacc. & Syd. *Nat. Pflanzenf.* 1:1:541 1897.  
*Chromocrea* Seaver *Mycologia* 2:58, ill. 1910.  
*Chromocreopsis* Seaver *Mycologia* 2:63, ill. 1910.  
*Spegazzinula* Sacc. *Syll. Fung.* 2:537 1883.  
*Xenonectria* Hoehn. *Sitzb. Akad. Wien* 129:149 1920.
- P. candida* Sacc.  
*P. hypoxylodes* (Speg.) S & S.  
*C. gelatinosa* (Tode) Seav.  
*C. cubispora* (E. & H.) Seav.  
*S. dubitationum* (Speg.) Sacc.  
*X. calidariorum* (Henn.) Hoehn.

## Hyalophragmiae

- Actiniopsis* Starb. *Bih. Sven. Akad. Handl.* 25:54, ill. 1899.  
*Berkelella* Sacc. *Syll. Fung.* 2:475 1883, as subg.; 9:989 1891.  
*Amphinectria* Speg. *Bol. Acad. Cordoba* 24:346 1923.  
*Podonectria* Petch *Trans. Brit. Myc. Soc.* 7:146, ill. 1921.  
*Byssocallis* Syd. *Ann. Myc.* 25:14 1927.  
*Calonectria* DeNot. *Comm. Critt.* 2:477 1867.  
*Cryptothecium* Penz. & Sacc. *Malpighia* 11:388 1897; *Syll. Fung.* 14:466 1899.  
*Malmeomyces* Starb. *Bih. Sven. Akad. Handl.* 25:32, ill. 1899; *Syll. Fung.* 16:592 1902.  
*Meliophilpha* Speg. *Bol. Acad. Cordoba* 26:344, ill. 1923.  
*Miyakeamyces* Hara *Bot. Mag. Tokyo* 27:248 1913; *Syll. Fung.* 24:681 1926.  
*Cesatiella* Sacc. *Michelia* 2:250 1881.  
*Chaetocrea* Syd. *Ann. Myc.* 25:18 1927.  
*Debaryella* Hoehn. *Ann. Myc.* 2:274 1904.  
*Gibberella* Sacc. *Michelia* 1:43,317 1877.  
*Hyalocrea* Syd. *Ann. Myc.* 15:214 1917.  
*Lecithium* Zukal *Myk. Mitt.* 9 1893.  
*Micronectriella* Hoehn. *Sitzb. Akad. Wien* 115:1194 1906.  
*Orcadia* Sutherland *Trans. Brit. Myc. Soc.* 5:151, ill. 1915.  
*Paranectria* Sacc. *Michelia* 1:317 1878.  
*Pericoccis* Clem.; *Broomella lichenicola*.  
*Phyllocelis* Syd. *Ann. Myc.* 23:353, ill. 1925.  
*Puttemansia* Henn. *Hedwigia* 41:112, ill. 1902.  
*Stereocrea* Syd. *Ann. Myc.* 15:216 1917.  
*Stilbonectria* Karst. *Hedw.* 28:194 1889.  
*Subulicola* Speg. *Bol. Acad. Cordoba* 25:347 1923.  
*Trailia* Sutherland *Trans. Brit. Myc. Soc.* 5:149, ill. 1915.  
*Trichonectria* Kirschst. *Verh. Bot. Brandenb.* 38:60 1905.
- A. bambusae* Starb.  
*B. caledonica* (Pat.) Sacc.  
*A. portoricensis* Speg.  
*P. coccophila* (E. & E.) Petch  
*B. phoebes* Syd.  
*C. daldiniana* DeN.  
*C. javanicum* P. & S.  
*M. pulchella* Starb.  
*M. graminicola* (Stev.) Speg.  
*M. bambusae* Hara  
*C. australis* S. & Speg.  
*C. parasitica* Syd.  
*D. hyalina* Hoehn.  
*G. pulicaris* (Fr.) Sacc.  
*H. epimyces* Syd.  
*L. aeruginosum* Zukal  
*M. pterocarpi* (Rac.) Hoehn.  
*O. ascophylli* Suther.  
*P. affinis* (Grev.) Sacc.  
*P. leptogicola* (C. & M.) Clem.  
*P. oyedaeae* Syd.  
*P. lanosa* Henn.  
*S. schizostachyi* Syd.  
*S. lateritia* (Berk.) Karst.  
*S. ambigua* Speg.  
*T. ascophylli* Suther.  
*T. aculeata* Kirschst.

## Phaeopragmiae

- Chiajaea* (Sacc.) Hoehn. Hedwigia Rep. 35:33  
1896; Sitzb. Akad. Wien 129:151 1920. C. *rhodomela* (Fr.) Hoehn.  
*Hyalosphaera* Stevens Trans. Ill. Acad. Sci.  
10:172 1917; Syll. Fung. 24:702 1926. H. *miconiae* Stev.  
*Loculistroma* Patterson, Charles & Veihmeyer  
Bur. Pl. Ind. Bull. 171:11 1910. L. *bambusae* P. C. & V.  
*Peloronectria* Moell. Phyc. Ascom. Bras. 297  
1901. P. *vinosa* Moell.  
*Weesea* Hoehn. Sitzb. Akad. Wien 129:150  
1920. W. *balansiae* (Moell.) Hoehn.

## Hyalodictyae

- Calyptronectria* Speg. An. Mus. Nac. 19:412  
1909. C. *platensis* Speg.  
*Chaetomeris* Clem.; for C. *pulcherrima* (Hoehn.) Clem.  
*Treubiomyces* Hoehn. Sitzb. Akad. Wien  
118:180 1909; Syll. Fung. 22:495 1913. T. *pulcherrimus* Hoehn.  
*Ciliomyces* Hoehn. Sitzb. Akad. Wien 115:674,  
ill. 1906. C. *oropensis* (Ces.) Hoehn.  
*Megalonectria* Speg. Fung. Arg. 4:211 1882. M. *pseudotrichia* (Schw.) Speg.  
*Ophiodictyum* Sacc. & Syd. Syll. 16:555 1902. O. *plumbeum* (Starb.) S. & S.  
*Patellonectria* Speg. Bol. Acad. Cordoba  
23:115, ill. 1919. P. *puiggarii* Speg.  
*Pleogibberella* Sacc. Syll. Fung. Add. 2:217  
1886. P. *calamia* (Cke.) Berl & Vogl.  
*Pleonectria* Sacc. Fung. Venet. 5:178 1876. P. *lameyi* Sacc.  
*Thyronectria* Sacc. Grevillea 4:21 1875; cf.  
Petr. Ann. Myc. 23:132 1925. T. *patavina* Sacc.

## Phaeodictyae

- Bivonella* Sacc. Syll. Fung. 2:464 1883, as  
subg.; 9:989 1891. B. *lycopersici* (Pass.) Sacc.  
*Feracia* Rolland Bull. Soc. Myc. Fr. 21:28  
1905. F. *balearica* Rolland  
*Leucocrea* Sacc. & Syd. Nat. Pflanzenf.  
1:1:540 1897. L. *nivea* (Speg.) S. & S.  
*Mattirolia* Berl. & Bres. Micr. Trid. 55 1889. M. *roseovirens* B. & B.  
*Thyronectroidea* Seaver Mycologia 1:206  
1909. T. *chrysogramma* (E. & E.) Seav.  
*Shiraia* Henn. Engler Bot. Jahrb. 28:274  
1900. S. *bambusicola* Henn.  
*Trotterula* Speg. Bol. Acad. Cordoba 25:45,  
ill. 1921. T. *chilensis* Speg.

## Scolecosporae

- Acrospermum* Tode Fung. Meck. 1:8, ill. 1790. A. *compressum* Tode  
*Ascopolyporus* Moell. Phyc. & Ascom. Bras.  
300 1901. A. *polychrous* Moell.



- Balansia* Speg. Fung. Guar. 1:n.253 1883.  
*Balansiopsis* Hoehn. Sitzb. Akad. Wien 119:936 1910.  
*Hyalodothis* Pat. & Har. Bull. Soc. Myc. Fr. 210 1893; Syll. Fung. 11:374 1895.  
*Ophiodothis* Sacc. Syll. Fung. 2:652 1883; cf. Theiss. & Syd. Ann. Myc. 13:187, 180 1915.  
*Barya* Fkl. Symb. Myc. 93 1869; cf. Hoehn. Frag. Myk. 1162.  
*Globulina* Speg. Fung. Puigg. 300; Syll. Fung. 9:993 1891.  
*Borenquenina* Stev. Trans. Ill. Acad. Sci. 10:173, ill. 1917.  
*Claviceps* Tul. Ann. Sci. Nat. 3:20:43 1853.  
*Balansiella* Henn. Hedwigia 43:85 1904.  
*Poroniopsis* Speg. Rev. Mus. La. Plata 26:171, ill. 1922.  
*Copranophilus* Speg. An. Mus. Nac. 12:410 1909.  
*Cordyceps* Fr. Syst. Myc. 2:324 1822.  
*Coscinarina* Ell. & Ev. Jour. Myc. 2:88 1886.  
*Cyanoderma* Hoehn. Sitzb. Akad. Wien 129:561 1920.  
*Dothichloe* Atkinson Bull. Torr. Club. 21:223 1894.  
*Linearistroma* Hoehn. Sitzb. Akad. Wien 119:938 1910.  
*Dussiella* Pat. Bull. Soc. Myc. Fr. 4:106 1890.  
*Echinodothis* Atkinson Bull. Torr. Club 21:224 1894.  
*Epichloe* Fr. Sum. Veg. Scan. 381 1849.  
*Hypocrella* Sacc. Michelia 1:322 1878.  
*Fleischeria* Penz. & Sacc. Syll. Fung. 17:819 1905; Malpighia 15:230 1901; cf. Hoehn. Frag. Myk. 369.  
*Hypocreopsis* Speg. Bol. Acad. Cordoba 23:480, ill. 1919; Syll. Fung. 24:695 1926.  
*Konradia* Rac. Par. Alg. Pilz. Java 2:15 1900.  
*Micronectria* Speg. Fung. Guar. 1:252 1883.  
*Micronectriopsis* Hoehn. Ann. Myc. 16:59 1918.  
*Microstelium* Pat. Bull. Soc. Myc. Fr. 15:208, ill. 1899.  
*Mitosporium* Miyake Bot. Mag. Tokyo 259 1908; for *Aciculosporium*.  
*Mycomalus* Moell. Phyc. Ascom. Bras. 300 1891.  
*Oomyces* B. & Br. Brit. Fung. 590 1851.  
*Ophionectria* Sacc. Michelia 1:323 1878.  
*Scoleconectria* Seaver Mycologia 1:197 1909.  
*Torrubiella* Boudier Rev. Myc. 7:227, ill. 1885.  
*Tubeufia* Penz. & Sacc. Malpighia 11:517 1897.
- B. claviceps* Speg.  
*B. gaduae* (Rehm) Hoehn.  
*H. clavus* P. & H.  
*O. vorax* (B. & C.) Sacc.  
*B. parasitica* Fkl.  
*G. erysiphoides* Speg.  
*B. miconiae* Stev.  
*C. purpurea* (Fr.) Tul.  
*B. orthocladae* Henn.  
*P. bruchi* Speg.  
*C. spinuliformis* Speg.  
*C. militaris* (L.) Link  
*C. langloisi* E. & E.  
*C. viridulum* (B. & C.) Hoehn.  
*D. atramentosa* (B. & C.) Atkin.  
*L. lineare* (Rehm) Hoehn.  
*D. tuberiformis* Pat.  
*E. tuberiformis* (B. & Br.) Atkin.  
*E. typhina* (Pers.) Tul.  
*H. discoidea* (B. & Br.) Sacc.  
*F. sclerotoides* (Henn.) P. & S.  
*H. guaranitica* Speg.  
*K. bambusina* Rac.  
*M. guaranitica* Speg.  
*M. freycinetiae* (Rehm) Hoehn.  
*M. hyalinum* Pat.  
*M. take* Miyake  
*M. bambusinus* Moell.  
*O. carneo-albus* (Lib.) B. & Br.  
*O. trichospora* (B. & Br.) Sacc.  
*S. scoleospora* (Bref.) Seav.  
*T. aranicola* Boud.  
*T. javanica* P. & S.

## Genera Incertae Sedis Vel Dubia

- Creomelanops* Hoehn. Sitzb. Akad. Wien 129:145 1920.  
*C. xanthocephala* (Butl. & Syd.) Hoehn.  
*Hypocreodendrum* Henn. Hedwigia 36:223, ill. 1897; cf. Hoehn. Frag. Myk. 605.  
*H. sanguineum* Henn.  
*Ijuhya* Starb. Bih. Sven. Akad. Handl. 25:30, ill. 1899.  
*I. vitrea* Starb.  
*Mastigocladium* Matruchot Comp. Rend. 152:326 1911.  
*M. blochi* Mat.  
*Microthecium* Corda Icon. Fung. 5:30, 74, ill. 1842; cf. Hoehn. Frag. Myk. 841.  
*M. zobeli* Corda  
*Puiggariella* Speg. Fung. Arg. 4:113, ill. 1882; cf. Hoehn. Frag. Myk. 244.  
*P. apiahyna* Speg.

## LOPHIOSTOMACEAE

- Brigantiella* Sacc. Syll. Fung. 2:707 1883, as subg.; 17:889 1905.  
*B. caudata* (H. Fab.) Sacc.  
*Byssolophis* Clem. cf. Syll. Fung. 24:1106; *Schizostoma byssisedum*.  
*B. byssiseda* (Flag. & Chen.) Clem.  
*Khekia* Petr. Hedwigia 52:284 1921.  
*K. ambigua* (Pass.) Petr.  
*Lambottiella* Sacc. as subg., Syll. Fung. 2:677 1883; 22:547 1913.  
*L. anaxaea* Sacc.  
*Lophidiopsis* Berl. Icon. Fung. 1:19 1902.  
*L. nuculoides* (Sacc.) Berl.  
*Lophiella* Sacc. Michelia 1:337 1878.  
*L. cristata* (Pers.) Sacc.  
*Lophionema* Sacc. Syll. Fung. 2:717 1883.  
*L. vermisporum* (Ell.) Sacc.  
*Lophiosphaera* Trevisan Bull. Soc. Belg. 16:19 1877.  
*L. subcorticalis* (Fkl.) Trev.  
*Lophiostoma* C. & DeN. Sfer. Ital. 45 1863.  
*L. caulium* (Fr.) DeN.  
*Lophiotrema* Sacc. Michelia 1:338 1878.  
*L. nucula* (Fr.) Sacc.  
*Lophiotricha* Richon Bull. Soc. Bot. Fr. 32:11 1885.  
*L. viburni* Rich.  
*Platystomum* Trev. Bull. Soc. Belg. 16:16 1877.  
*P. compressum* (Pers.) Trev.  
*Lophidium* Sacc. Michelia 1:340 1878, not Karst. 1879; Syll. Fung. 2:710 1883; 17:889 1905.  
*L. compressum* (Pers.) Sacc.  
*Sampaioa* G. Frag. Bol. Soc. Broter. 2:2:32, ill. 1924.  
*S. pinastri* Frag.  
*Schizostoma* (C. & DeN.) Sacc. Sfer. Ital. 46 1863, as subg.; Syll. Fung. 2:673 1883.  
*S. montelicum* Sacc.  
*Xenolophium* Syd. Bishop Mus. Bull. 19:96, ill. 1925.  
*X. leve* Syd.  
*Vivianella* Sacc. Syll. Fung. 2:687 1883, as subg.; 22:550 1913.  
*V. sedi* (Fkl.) Sacc.

## CYTTARIACEAE

- Acroscyphus* Lev. Ann. Sci. Nat. 3:5:262 1846.  
*A. sphaerophoroides* Lev.  
*Cordierites* Mont. Ann. Sci. Nat. 2:14:330 1840.  
*C. guyanensis* Mont.  
*Cyttaria* Berk. Trans. Linn. Soc. 19:37 1841.  
*C. darwini* Berk.

## Genus Incertae Sedis

- Rickiella* Syd. Ann. Myc. 2:244 1904; apparently to be referred to Pezizaceae.  
*R. transiens* Syd.

VERRUCARIACEAE

Pyrenidiae

- Calothricopsis* Wain. *Etud. Lich. Bres.* 1:243 1890.  
*Cocciscia* Norm. *Zahlbr. Nat. Pflanzenf.* 8:90 1926.  
*Eolichen* Zukal. *Denks. Akad. Wien* 48:278 1884.  
*Hassea* Zahlbr. *Beih. Bot. Cent.* 13:150 1902.  
*Homopsella* Nyl. *Flora* 70:129 1887.  
*Lichina* Agardh *Sp. Algar.* 1:104 1824.  
*Lichinella* Nyl. *Bull. Soc. Linn. Norm.* 2:6:301 1872.  
*Lichenyllum* Clem. *Lichenella octospora.*  
*Placothelium* Muell. Arg. *Verh. z-b. Ges. Wien* 43:299 1893.  
*Pyrenidium* Nyl. *Flora* 48:210 1865.  
*Pyrenocollema* Reinke *Jahrb. Wiss. Bot.* 28:463. 1895.  
*Rhabdopsora* (Muell. Arg.) Zahlbr. *Hedwigia* 59:301, ill. 1917.
- C. insignis* Wain.  
*C. hammeri* Norm.  
*E. heppi* Zuk.  
*H. bacillosa* (Nyl.) Zahlbr.  
*H. aggregatula* Nyl.  
*L. pygmaea* (Lightf.) Ag.  
*L. stipatula* Nyl.  
*L. lojkanum* (Hue) Clem.  
*P. staurothelis* M. A.  
*P. actinellum* Nyl.  
*P. tremelloides* Reinke  
*R. polymorpha* M. A.

Epigloeae

- Epigloea* Zukal. *Verh. z-b. Ges. Wien* 39:78 1889.
- E. bactrospora* Zuk.

Moriolae

- Dimerisma* Clem. *Gen. Fung.* 39, 173 1909.  
*Moriola* Norm. *Bot. Notis.* 1872:113.  
*Phaeomeris* Clem. *Gen. Fung.* 39, 173 1909.  
*Pleophalis* Clem. *Gen. Fung.* 39, 173 1909.  
*Spheconisca* Norm. *Bot. Notis.* 1876:170.
- D. tenebrosum* (Norm.) Clem.  
*M. descensa* Norm.  
*P. confusa* (Norm.) Clem.  
*P. nova* (Norm.) Clem.  
*S. hypocrita* Norm.

Verrucariae

- Aspidopyrenis* Wain. *Etud. Lich. Bres.* 2:190 1890; for *Aspidopyrenium.*  
*Aspidothelium* Wain. *Etud. Lich. Bres.* 2:188 1890.  
*Geisleria* Nke. *Rabh. Flecht. Eur.* 21:n.574 1861.  
*Gongylia* (Koerb.) Zahlbr. *Nat. Pflanzenf.* 1:1:57 1903.  
*Lithoecea* (Ach.) Koerb. *Syst. Lich. Germ.* 340 1855.  
*Microglaena* Koerb. *Syst. Lich. Germ.* 388 1855.  
*Phaeosporis* Clem. *Gen. Fung.* 39, 173 1909.  
*Phaeothrombis* Clem. *Gen. Fung.* 40, 173 1909.  
*Polyblastia* Lönnr. *Flora* 41:630 1858.  
*Phragmothele* Clem. *Gen. Fung.* 39, 173 1909.  
*Sarcopyrenia* Nyl. *Exp. Syn. Pyren.* 69 1858.
- A. insignis* Wain.  
*A. cinerascens* Wain.  
*G. sychnogonoides* Nke.  
*G. sabuletorum* (Fr.) Stein  
*L. nigrescens* (Pers.)  
*M. muscicola* (Ach.) Lönnr.  
*P. melasperma* (Nyl.) Clem.  
*P. melaspermica* (Stnr.) Clem.  
*P. intercedens* (Nyl.) Lönnr.  
*P. papularis* (Fr.) Clem.  
*S. gibba* Nyl.

- Sporodictyum Mass. Ric. Aut. Lich. 181 1852.  
 Staurothele (Norm.) Th. Fr. Gen. Heterolich.  
 107 1861.  
 Thelenidia Nyl. Flora 69:463 1886.  
 Thelidiopsis Wain. Ann. Acad. Fenn. A:15:347  
 1921.  
 Thelidium Mass. Framm. Lich. 15 1855.  
 Thrombium (Wallr.) Mass. Ric. Aut. Lich.  
 156 1852.  
 Trimmatothele Norm. Blomb. & Forss. Enum.  
 Pl. Scan. 160 1880.  
 Verrucaria (Wigg.) Th. Fr. Gen. Heterolich.  
 109 1861.  
 Willeya Müll. Arg. Flora 66:345 1883.  
 Phalostauris Clem. Gen. Fung. 39, 173. 1909.
- S. henschelianum (Koerb.) Lönnr.  
 S. clopima (Wahlb.) Th. Fr.  
 T. monosporella Nyl.  
 T. robinsoni Wain.  
 T. amylaceum Mass.  
 T. epigaeum (Pers.) Schaer.  
 T. perquisita (Norm.) B. & F.  
 V. sphinctrina (Duf.) Nyl.  
 W. diffractella (Tuck.) M. A.  
 P. diffractella (Tuck.) Clem.

## Pyrenulae

- Anthracotheicum Hampe Mass. Att. Ist. Venet.  
 3:5:330 1860.  
 Arthrospyrenia (Mass.) Müll. Arg. Mem. Soc.  
 Nat. Geneve 16:428 1862.  
 Arthrospyreniella Stur. Ann. Nat. Hofm.  
 24:284 1911; Zahlbr. Nat. Pflanzenf. 8:77  
 1926.  
 Pseudopyrenula Müll. Arg. Flora 66:247  
 1883; Zahlbr. Nat. Pflanzenf. 8:78 1926.  
 Asteroporum Müll. Arg. Bull. Herb. Boiss.  
 3:324 1895.  
 Belonia Koerb. Th. Fr. Gen. Heterolich. 105  
 1861.  
 Clathroporina Müll. Arg. Flora 65:517 1882.  
 Coccotrema Müll. Arg. Miss. Cap. Horn 5:171  
 1889.  
 Diporina Clem. Gen. Fung. 40,173 1909.  
 Dichoporis Clem. Gen. Fung. 40,173 1909.  
 Dipyrenis Clem. Gen. Fung. 40, 173 1909.  
 Dithelopsis Clem. Gen. Fung. 40, 173 1909.  
 Holothelis Clem. Gen. Fung. 40, 173 1909.  
 Leptorhaphis Koerb. Syst. Lich. Germ. 371  
 1855.  
 Microthelia Koerb. Syst. Lich. Germ. 372 1855  
 Monoblastia Riddle Mycologia 15:70 1923.  
 Polyblastiopsis Zahlbr. Nat. Pflanzenf. 1:1:67  
 1903.  
 Polythelis Clem. Gen. Fung. 41, 173 1909.  
 Porina (Ach.) Müll. Arg. Flora 66:320 1883.  
 Porinopsis Malme. Ark. Bot. 22:3 1928.  
 Pyrenothrix Riddle. Bot. Gaz. 64:513 1917.  
 Pyrenula (Ach.) Mass. Ric. Aut. Lich. 162  
 1852.  
 Blastodesmia Mass. Ric. Aut. Lich. 180 1852.  
 Pyrenyllum Clem. Gen. Fung. 41, 173 1909.
- A. variolosum (Pers.) M. A.  
 A. pyrenuloides (Fee) M. A.  
 A. cinerascens (Mass.) Stur.  
 P. diluta (Fee) M. A.  
 A. punctuliforme M. A.  
 B. russula Koerb.  
 C. endochrysea (Bab.) M. A.  
 C. cucurbitula (Mont.) M. A.  
 D. subsimplicans (Nyl.) Clem.  
 D. schizospora (Wain.) Clem.  
 D. trachysperma (Müll. Arg.)  
 Clem.  
 D. subporinella (Nyl.) Clem.  
 H. flaveola (Arn.) Clem.  
 L. epidermidis (Ach.) Th. Fr.  
 M. micula (Fw.) Koerb.  
 M. palmicola Riddle  
 P. naegeli (Hepp) Zahlbr.  
 P. sexlocularis (Müll. Arg.) Clem.  
 P. tetracerae (Ach.) M. A.  
 P. gemmipara Malme  
 P. nigra Riddle  
 P. nitida (Schrad.) Ach.  
 B. nitida Mass.  
 P. analeptum (Ach.) Clem.

*Rhaphidopyris* Müll. Arg. Hedwigia 31:288  
1892, as subg.  
*Rhaphidyllis* Wain. Ann. Acad. Fenn. A:15:355  
1921, as subg.; for *Rhaphidisgestria*.  
*Rhodothrix* Wain. Ann. Acad. Fenn. A:15:30  
1921.  
*Stereochlamys* Müll. Arg. Flora 68:334 1885.  
*Thelopsis* Nyl. Mem. Soc. Cherbourg 3:194  
1855.  
*Xanthopyrenia* Bachm. Nov. Act. Leop. Akad.  
55:65 1919.

*R. rhapsidophora* (Nyl.) M. A.  
*R. aciculosa* Wain.  
*R. phyllogena* Wain.  
*S. horridula* Müll. Arg.  
*T. rubella* Nyl.  
*X. tichothecis* (Arn.) Bachm.

Paratheliae

*Campylothelium* Müll. Arg. Flora 66:245 1883.  
*Ditremsis* Clem. Gen. Fung. 41, 173 1909.  
*Parathelium* (Nyl.) Müll. Arg. Engler Bot.  
Jahrb. 6:388 1885.  
*Pleurotheliopsis* Zahlbr. Cat. Lich. Univ. 1:512  
1922.  
*Pleurotrema* Müll. Arg. Engler Bot. Jahrb.  
6:388 1885.  
*Plagiotrema* Müll. Arg. Engler Bot. Jahrb.  
6:387 1885.  
*Trichotrema* Clem. Gen. Fung. 41, 173 1909.

*C. superbum* (Fr.) M. A.  
*D. dispersa* (Müll. Arg.) Clem.  
*P. superans* Müll. Arg.  
*P. salvatum* (Müll. Arg.) Zahlbr.  
*P. polysemum* (Nyl.) M. A.  
*P. lageniferum* (Ach.) M. A.  
*T. trichosporum* (Müll. Arg.)  
Clem.

Strigulae

*Haplopyrenula* Müll. Arg. Flora 73:195 1890.  
*Micropyrenula* Wain. Ann. Acad. Fenn.  
A:15:324 1921.  
*Microtheliopsis* Müll. Arg. Flora 73:195 1890.  
*Phyllobathelium* Müll. Arg. Flora 73:195 1890.  
*Phylloblastia* Wain. Ann. Acad. Fenn.  
A:15:323 1921.  
*Phylloporina* Müll. Arg. Lich. Epi. Nov. 20  
1890.  
*Phylloporis* Clem. Gen. Fung. 41, 173 1909.  
*Heterodothis* Syd. Phil. Jour. Sci. 9:270, ill.  
1894; Ann. Myc. 13:190 1915.  
*Raciborskiella* Hoehn. Sitzb. Akad. Wien  
118:1485 1909.  
*Strigula* Fr. Vet. Akad. Handl. 323 1821.  
*Trichothelium* Müll. Arg. Engler Bot. Jahrb.  
6:418 1885.  
*Asteropeltis* Henn. Hedwigia 43:380 1904.

*H. minor* Müll. Arg.  
*M. olivacea* Wain.  
*M. uleana* Müll. Arg.  
*P. epiphyllum* Müll. Arg.  
*P. dolichospora* Wain.  
*P. begoniae* Müll. Arg.  
*P. phyllogena* (Müll. Arg.) Clem.  
*H. leptotheca* Syd.  
*R. orbicularis* Hoehn.  
*S. elegans* (Fee) M. A.  
*T. epiphyllum* Müll. Arg.  
*A. ulei* Henn.

Dermatocarpae

*Agonimia* Zahlbr. Oest. Bot. Zeits. 59:351  
1909.  
*Anapyrenium* Müll. Arg. Rev. Myc. 2:81 1880.  
*Dermatocarpum* (Eschw.) Th. Fr. Gen. Hete-  
rolich. 105 1861.

*A. tristicula* Zahlbr.  
*A. aegyptiacum* Müll. Arg.  
*D. miniatum* (L.) Mann

- Endocarpum* (Hedw.) Zahlbr. Nat. Pflanzenf. 1:1:61 1903.  
*Heterocarpum* Müll. Arg. Flora 68:515 1885.  
*Lepolichen* Trev. Spig. Pagl. 5 1855.  
*Mastodia* Hook & Harv. Ant. Voy. Erebus & Terror 2:449 1847.  
*Normandina* (Nyl.) Wain. Etud. Lich. Bres. 2:188 1890.  
*Nylanderella* Hue Ann. Myc. 12:509 1914.  
*Placidiopsis* Beltr. Lich. Bassan. 212 1858.  
*Psoroglaena* Müll. Arg. Flora 74:381 1891.  
*Pyrenothamnia* Tuck. Bull. Torr. Club 10:22 1883.
- E. pusillum* Hedw.  
*H. ochroleucum* (Tuck.) M. A.  
*L. granulatus* (Hook.) M. A.  
*M. tessellata* H. & H.  
*N. pulchella* (Borr.) Leight.  
*N. medioxima* (Nyl.) Hue  
*P. custnani* (Mass.) Zahlbr.  
*P. cubensis* Müll. Arg.  
*P. spraguei* Tuck.

## Trypetheliae

- Bottaria* Mass. Misc. Lich. 42 1856.  
*Laurera* Reichb. Deut. Bot. 15 1841.  
*Melanotheca* (Fee) Müll. Arg. Engler Bot. Jahrb. 6:395 1885.  
*Tomasiella* Mass. Flora 39:283 1856.  
*Trypethelium* Spreng. Anleit. Kennt. 3:309 1805.
- B. cruentata* Müll. Arg.  
*L. varia* (Fee) Zahlbr.  
*M. aggregata* (Fee) M. A.  
*T. arthonioides* Mass.  
*T. eluteriae* Spreng.

## Astrotheliae

- Astrothelium* (Eschw.) Trev. Flora 44:23 1861.  
*Lithothelium* Müll. Arg. Engler Bot. Jahrb. 6:386 1885.  
*Cryptothelium* Mass. Att. Ist. Venet. 3:5:335 1860.  
*Parmentaria* Fee Essai Crypt. 39, 70 1824  
*Pyrenastrum* Eschw. Syst. Lich. 16 1824.
- A. conicum* Eschw.  
*L. cubanum* Müll. Arg.  
*C. sepultum* (Montg.) Zahlbr.  
*P. astroidea* Fee  
*P. lageniferum* (Fee) M. A.

## Genera Incertae Sedis Vel Dubia

(Cf. Zahlbruckner Nat. Pflanzenf. 8:84, 91 1926.)

## DOTHIDEALES

## DOTHIDEACEAE

## Dothideae

- Achorella* Theiss. & Syd. Ann. Myc. 13:340 1915.  
*Amerodothis* Theiss. & Syd. Ann. Myc. 13:295 1915.  
*Amyliroa* Speg. An. Soc. Cien. Arg. 90:178, ill. 1920.  
*Auerswaldia* Sacc. Syll. Fung. 2:626 1883.  
*Auerswaldiella* Theiss. & Syd. Ann. Myc. 12:278 1914.  
*Bagnisiopsis* Theiss. & Syd. Ann. Myc. 13:291, ill. 1915.
- A. ametableta* (Rehm) T. & S.  
*A. ilicis* (Cke.) T. & S.  
*A. aurantiorum* Speg.  
*A. examinans* (M. & B.) Sacc.  
*A. puccinoides* (Speg.) T. & S.  
*B. tijucensis* T. & S.

- Dothidina* Theiss. & Syd. 13:302 1915; cf. Petr. Hedwigia 68:251 1928; Ann. Myc. 25:328 1927; Syll. Fung. 24:541 1926.
- Botryochora* Torrend Broteria 12:65 1914.
- Botryosphaeria* C. & DeN. Sfer. Ital. 211 1863.
- Castagnella* Arnaud Bull. Soc. Myc. Fr. 32:357, ill. 1914.
- Catabotrys* Theiss. & Syd. Ann. Myc. 13:297, ill. 1915.
- Coccoidella* Hoehn. Sitzb. Akad. Wien 118:847 1909.
- Cocodiella* Hara Bot. Mag. Tokyo 25:224, ill. 1910.
- Elmerococcum* Theiss. & Syd. Ann. Myc. 13:281 1915; Syll. Fung. 24:550 1926.
- Coccodiscus* Henn. Hedwigia 43:144 1904.
- Coccodothis* Theiss. & Syd. Ann. Myc. 13:279 1915; Syll. Fung. 24:549 1926.
- Coccodothella* Theiss. & Syd. Ann. Myc. 13:280 1915.
- Coccostroma* Theiss. & Syd. Ann. Myc. 12:269 1914.
- Coccostromopsis* Plunkett Ill. Biol. Mon. 8:176, ill. 1923.
- Pyrenostigma* Syd. Ann. Myc. 24:370 1926.
- Crotone* Theiss. & Syd. Ann. Myc. 13:629 1915.
- Dangeardiella* Sacc. & Syd. Syll. Fung. 14:683 1899; cf. Theiss. & Syd. Ann. Myc. 13:665 1915.
- Dictyodothis* Theiss. & Syd. Ann. Myc. 13:346 1915.
- Didothis* Clem.; for
- Uleodothis* Theiss. & Syd. Ann. Myc. 13:305 1915; Syll. Fung. 24:544 1926.
- Uleodothella* Syd. Ann. Myc. 18:184 1920; Syll. Fung. 24:545 1926.
- Diplochorella* Syd. Ann. Myc. 11:408, ill. 1913.
- Diplochora* Syd. Ann. Myc. 11:60 1913; not Hoehn. 1906.
- Cyclodothis* Syd. Ann. Myc. 11:266 1913; Syll. Fung. 24:633 1926.
- Scirrhachora* Theiss. & Syd. Ann. Myc. 13:626 1915; Syll. Fung. 24:634 1926.
- Discodothis* Hoehn. Sitzb. Akad. Wien 118:853 1909.
- Dothidea* Fr. Syst. Myc. 2:558 1822.
- Systemma* Theiss. & Syd. Ann. Myc. 13:330 1915; Syll. Fung. 24:548 1926.
- Dothideopsella* Hoehn. Sitzb. Akad. Wien 124:22 1915.
- Dothidiovalsa* Speg. Myc. Arg. 4:14 1909.
- Dothophaeis* Clem.; for
- D. leandrae* (Syd.) T. & S.
- B. nigra* Torrend
- B. ribis* Gross. & Dug.
- C. coccifera* Arn.
- C. palmarum* (Pat.) T. & S.
- C. scutula* (B. & C.) Hoehn.
- C. arundinariae* Hara
- E. orbicula* Syd.
- C. quercicola* Henn.
- C. sphæroidea* (Cke.) T. & S.
- C. placida* Syd.
- C. machaerii* (Henn.) T. & S.
- C. palmigena* Plunkett
- P. siparunae* Syd.
- C. drymidis* (Lev.) T. & S.
- D. macrospora* (Schröt.) S. & S.
- D. berberidis* (Rehm) T. & S.
- D. balanseana* (S. R. B.) Clem.
- U. balanseana* (S. R. B.) T. & S.
- U. aphanes* (Rehm) Syd.
- D. fertilissima* Syd.
- D. fertilissima* Syd.
- C. pulchella* Syd.
- S. groveana* (Sacc.) T. & S.
- D. filicum* Hoehn.
- D. sambuci* (Pers.) Fr.
- S. natans* (Tode) T. & S.
- D. agminalis* (S. & M.) Hoehn.
- D. tucumanensis* Speg.
- D. kilimandscharica* (Henn.) Clem.

- Englerodithis* Theiss. & Syd. Ann. Myc. 13:285 1915; Syll. Fung. 24:549 1926.
- Leveillella* Theiss. & Syd. Ann. Myc. 13:284 1915.
- Leveillina* Theiss. & Syd. Ann. Myc. 13:286 1915.
- Symphaeophyma* Speg. An. Mus. Nac. 23:97 1912; Syll. Fung. 24:616 1926.
- Leveillinopsis* Stev. Ill. Biol. Mon. 8:179, ill. 1923.
- Metameris* Theiss. & Syd. Ann. Myc. 13:342, ill. 1915.
- Phragmodothidea* Dearn. & Barth. Mycologia 18:250 1926.
- Sclerodithis* Hoehn. Ann. Myc. 16:69 1918; cf. Petr. Ib. 19:41 1921.
- Microcyclella* Theiss. Ann. Myc. 12:69 1914.
- Microcyclus* Sacc. Syll. Fung. 17:844; Ann. Myc. 2:165 1904.
- Nowellia* Stev. Ill. Biol. Mon. 8:177, ill. 1923.
- Parabotryum* Syd. Ann. Myc. 24:374 1926.
- Pauahia* Stev. Bishop Mus. Bull. 19:17, ill. 1925.
- Perischizum* Syd. Ann. Myc. 12:265 1914.
- Phragmodothella* Theiss. & Syd. Ann. Myc. 13:343 1915.
- Phragmodithis* Theiss. & Syd. Ann. Myc. 12:179 1914.
- Plowrightia* Sacc. Syll. Fung. 2:635 1883; cf. Petr. Ann. Myc. 17:162 1919.
- Anisogramma* Theiss. & Syd. Ann. Myc. 15:451 1917.
- Dothidella* Speg. Fung. Arg. 1 1880; Syll. Fung. 2:627 1883.
- Melanopsammopsis* Stahel Bull. Dept. Landb. Suriname 34:34, ill. 1917; Syll. Fung. 24:919 1928.
- Rosenscheldia* Speg. Fung. Guar. 1:288 1883.
- Schweinitziella* Speg. Fung. Guar. 2:119 1888.
- Scolecoccoidea* Stev. Ill. Biol. Mon. 11:26, ill. 1927.
- Stalagmites* Theiss. & Syd. Ann. Myc. 13:650 1915.
- Trichochora* Theiss. & Syd. Ann. Myc. 13:289 1915.
- Trichodithis* Theiss. & Syd. Ann. Myc. 12:176 1914.
- Yoshinagella* Hoehn. Frag. Myk. 804 1913.
- Zimmermanniella* Henn. Hedwigia 41:142 1902.
- E. kilimandscharica* (Henn.) T. & S.
- L. drymidis* (Lev.) T. & S.
- L. arduinae* (K. & C.) T. & S.
- S. subtropicale* Speg.
- L. palmicola* Stev.
- M. japonica* Syd.
- P. eucalypti* D. & B.
- S. aggregata* (Hoehn.) Petr.
- M. nervisequia* (Hoehn.) T. & S.
- M. angolensis* S. & S.
- N. guianensis* Stev.
- P. connatum* Syd.
- P. sideroxyli* Stev.
- P. oleifolium* (K. & C.) Syd.
- P. kelseyi* (E. & E.) T. & S.
- P. conspicua* (Griff.) T. & S.
- P. ribesia* (Pers.) Sacc.
- A. virgultorum* (Fr.) T. & S.
- D. achalensis* Speg.
- M. ulei* (Henn.) Stahel
- R. paraguayana* Speg.
- S. styracum* Speg.
- S. costaricensis* Stev.
- S. tumefaciens* (Syd.) T. & S.
- T. marginata* Theiss.
- T. comata* (B. & R.) T. & S.
- Y. japonica* Hoehn.
- Z. trispora* Henn.

## Phyllachoreae

- Clypeostroma* Theiss. & Syd. Ann. Myc. 12:272 1914.
- C. hemisphaericum* (Berk.) T. & S.



- Dermatodothis* Rac. Ann. Myc. 12:280 1914.
- Dictyochorella* Theiss. & Syd. Ann. Myc. 13:610 1915.
- Epiphora* Nyl. Flora 59:238 1876.
- Euryachora* Fkl. Symb. Myc. 220 1869.
- Discomycopsis* J. Muell. Dan. Bot. Ark. 5:5 1928.
- Oligostroma* Syd. Ann. Myc. 12:265 1914; Syll. Fung. 24:615 1926.
- Omphalospora* Theiss. & Syd. Ann. Myc. 13:361 1915; Syll. Fung. 24:609 1926.
- Exarmidium* Karst. Myc. Fenn. 2:222 1873.
- Scirrhophragma* Theiss. & Syd. Ann. Myc. 13:423 1915; Syll. Fung. 24:621 1926.
- Geminispora* Pat. Bull. Soc. Myc. Fr. 9:151 1893.
- Diplospor* Clem. Gen. Fung. 27 1909.
- Homostegia* Fkl. Symb. Myc. 223 1869.
- Myriogenis* Atkinson Bull. Torr. Club 21:225 1894; for *Myriogenospora*.
- Ophiodothis* Hoehn. Frag. Myk. 630 1910; Henn. as subg. *Hedwigia* 43:258 1904.
- Scolocodotopsis* Stev. Ill. Biol. Mon. 8:183, ill. 1923.
- Phaeochora* Hoehn. Frag. Myk. 444 1909
- Phaeotrabiella* Theiss. & Syd. Ann. Myc. 13:360 1915; Syll. Fung. 24:609 1926.
- Phaeodothis* Syd. Ann. Myc. 2:166 1904.
- Atopospora* Petr. Ann. Myc. 23:100 1925.
- Coccochora* Hoehn. Frag. Myk. 444, 500 1909; Syll. Fung. 24:616 1926.
- Coccochorella* Hoehn. Frag. Myk. 500 1910; Syll. Fung. 24:613 1926.
- Phaeodothisopsis* Theiss. & Syd. Ann. Myc. 12:192 1914; Syll. Fung. 24:536 1926.
- Robledia* Chardon Jour. Dep. Agr. P. R. 13:10 1929.
- Phragmocarpella* Theiss. & Syd. Ann. Myc. 13:601 1915.
- Phyllachora* Nke. Fkl. Symb. Myc. 216 1869; cf. Petr. Ann. Myc. 22:1 1924; 25:328 1927.
- Catacauma* Theiss. & Syd. Ann. Myc. 12:280 1914; Syll. Fung. 24:559 1926.
- Diachora* J. Muell. Bot. Cent. 57:346 1894; Syll. Fung. 11:374; cf. Petr. Ann. Myc. 22:130 1924.
- Diplochora* Hoehn. Sitzb. Akad. Wien 115:1201 1906; Syll. Fung. 22:432 1913.
- Discochora* Hoehn. Ber. Deut. Bot. Ges. 36:315 1918; Syll. Fung. 24:638 1926.
- Discomycopsella* Henn. *Hedwigia* 41:146 1902; cf. Hoehn. Frag. Myk. 681.
- D. javanica* Rac.
- D. abscondita* T. & S.
- E. encaustica* Nyl.
- E. thoracella* Fkl.
- D. rhytismatoides* J. Muell.
- O. proteae* (Syd.) T. & S.
- O. stellariae* (Lib.) T. & S.
- E. hysteriforme* Karst.
- S. regalis* T. & S.
- G. mimosae* Pat.
- D. mimosae* (Pat.) Clem.
- H. piggotti* (B. & Br.) Karst.
- M. paspali* Atkin.
- O. atromaculans* (Henn.) Hoehn.
- S. ingae* Stev.
- P. chamaerops* (Cke.) Hoehn.
- P. perisporioides* (Sacc.) T. & S.
- P. tricuspidis* Syd.
- A. betulina* (Fr.) Petr.
- C. kusanoi* (Henn.) Hoehn.
- C. quercicola* (Henn.) Hoehn.
- P. zollingeri* (Mont. & Berk.) T. & S.
- R. tetraspora* Chardon
- P. ichnanthi* (Henn.) T. & S.
- P. graminis* (Pers.) Nke.
- C. exanthematicum* (Lev.) T. & S.
- D. onobrychidis* (DC.) J. Muell.
- D. dissospora* (Feltg.) Hoehn.
- D. ilicis* (Schl.) Hoehn.
- D. bambusae* Henn.

- Endophyllachora* Rehm Phil. Jour. Sci. 7:397 1913.  
*Metachora* Syd. & Butler Ann. Myc. 9:400 1911.  
*Plectosphaera* Theiss. Ann. Myc. 14:413, ill. 1916; cf. Hoehn. Ann. Myc. 15:377 1917.  
*Pseudomelasmia* Henn. Hedwigia 41:115 1902; cf. Hoehn. Frag. Myk. 627.  
*Schizochorella* Hoehn. Mitt. Bot. Inst. Wien 3:112 1926.  
*Phyllachorella* Syd. Ann. Myc. 12:489 1914.  
*Catacaumella* Theiss. & Syd. Ann. Myc. 13:400 1915; Syll. Fung. 24:564 1926.  
*Trabutiella* Theiss. & Syd. Ann. Myc. 12:180 1914; Syll. Fung. 24:559 1926.  
*Placostroma* Theiss. & Syd. Ann. Myc. 12:269 1914.  
*Achorodochis* Syd. Ann. Myc. 24:380 1926.  
*Anisochora* Theiss. & Syd. Ann. Myc. 13:406 1915; Syll. Fung. 24:610 1926.  
*Apiotrabutia* Petr. Ann. Myc. 27:334 1929.  
*Endodothella* Theiss. & Syd. Ann. Myc. 13:582, ill. 1915; Syll. Fung. 24:613 1926.  
*Munkiodochis* Theiss. & Syd. Ann. Myc. 13:360 1915; Syll. Fung. 24:609 1926.  
*Platychora* Petr. Ann. Myc. 23:103 1925.  
*Rehmiodochis* Theiss. & Syd. Ann. Myc. 12:192 1914; Syll. Fung. 24:610 1926.  
*Scirrhodochis* Theiss. & Syd. Ann. Myc. 13:415 1915; Syll. Fung. 24:611 1926.  
*Stigmochora* Theiss. & Syd. Ann. Myc. 12:272 1914; Syll. Fung. 24:612 1926.  
*Rhopographina* Theiss. & Syd. Ann. Myc. 13:429 1915.  
*Rhopographus* Nke. Fkl. Symb. Myc. 219 1869.  
*Schizachora* Syd. Ann. Myc. 11:265, ill. 1913.  
*Scirrhia* Nke. Fkl. Symb. Myc. 220 1869.  
*Apiospora* Sacc. Consp. Gen. Pyr. 9 1875; Syll. Fung. 1:539 1882; Theiss. & Syd. Ann. Myc. 13:419 1915.  
*Rhabdostroma* Theiss. & Syd. Ann. Myc. 14:362 1916.  
*Scolecodothis* Theiss. & Syd. Ann. Myc. 12:277 1914.  
*Sphaerodothis* Shear Mycologia 1:162 1909.  
*Phaeochorella* Theiss. & Syd. Ann. Myc. 13:405 1915; Syll. Fung. 24:609 1926.  
*Telimena* Rac. Par. Alg. Pilz. Java 1:18 1900.  
*Camarotella* Theiss. & Syd. Ann. Myc. 13:370, ill. 1915; Syll. Fung. 24:620 1926.  
*Phragmocaula* Theiss. & Syd. Ann. Myc. 13:411 1915; Syll. Fung. 24:620 1926.
- E. pseudus* Rehm  
*M. bambusae* S. & B.  
*P. bersamae* (Ling.) Theiss.  
*P. lauracearum* Henn.  
*S. aceris* (H. & L.) Hoehn.  
*P. micheliae* Syd.  
*C. miconiae* (Henn.) T. & S.  
*T. microthyriodes* (Henn.) T. & S.  
*P. pterocarpi* (Mass.) T. & S.  
*A. poasensis* Syd.  
*A. topographica* (Speg.) T. & S.  
*A. arrabidaeae* (Henn.) Petr.  
*E. helvetica* (Fkl.) T. & S.  
*M. melastomata* (Hoehn.) T. & S.  
*P. ulmi* (Schleich.) Petr.  
*R. ostbeckiae* (B. & Br.) T. & S.  
*S. confluens* (Starb.) T. & S.  
*S. controversa* (Starb.) T. & S.  
*R. chamaemori* (Rostr.) T. & S.  
*R. filicinus* (Fr.) Nke.  
*S. elmeri* Syd.  
*S. rimosa* (A. & S.) Fkl.  
*A. montagnei* Sacc.  
*R. rottboelliae* (Rehm) T. & S.  
*S. hypophylla* (Theiss.) T. & S.  
*S. arengae* (Rac.) Shear  
*P. parinari* (Henn.) T. & S.  
*T. erythrinae* Rac.  
*C. astrocaryae* (Rehm) T. & S.  
*P. viventis* (Cke.) T. & S.

Genera Incertae Sedis Vel Dubia

- Agostaea** Theiss. & Syd. Ann. Myc. 13:359 1915; Syll. Fung. 24:1321 1928.
- Coccoidea** Henn. Engler Bot. Jahrb. 28:275 1900; Syll. Fung. 16:624 1902.
- Coleophoma** Hoehn. Sitzb. Akad. Wien 116:637 1907.
- Cyphospilea** Syd. Ann. Myc. 24:377 1926.
- Dictyochoa** Theiss. & Syd. Ann. Myc. 12:275 1914; 13:610 1915; cf. Petr. & Syd. Ann. Myc. 21:383 1923; a mixture of two genera.
- Griggsia** Stev. & Dalbey. Bot. Gaz. 68:224 1919; Syll. Fung. 24:639 1926.
- Halstedia** Stev. Bot. Gaz. 69:253, ill. 1920; Syll. Fung. 24:554 1926.
- Hyalodothis** Pat. & Har. Bull. Soc. Myc. Fr. 9:210 1893; cf. Theiss. & Syd. Ann. Myc. 13:180 1915; Syll. Fung. 11:374 1895; un-ripe *Ophiodothis* with parasitic *Hyponec- tria*.
- Kullhemia** Karst. Symb. Myc. 4:182 1878; Syll. Fung. 2:591 1883; Theiss. & Syd. Ann. Myc. 13:183, 330 1915.
- Lizoniella** Sacc. & D. Sacc. Syll. Fung. 17:661 1905; Henn. Hedwigia 40:96 1901, as subg.; cf. Theiss. & Syd. Ann. Myc. 13:340 1915.
- Microphiodothis** Spcg. Bol. Acad. Cordoba 23:495 1919.
- Monographus** Fkl. Symb. Myc. Append. 3:24 1875; Syll. Fung. 2:457 1883.
- Peltistroma** Henn. Hedwigia 43:391, ill. 1904; cf. Hoehn. Frag. Myk. 636; immature.
- Phoenicostroma** Syd. Ann. Myc. 23:345, ill. 1925.
- Placodothis** Syd. Ann. Myc. 26:133 1928.
- Roumegueria** (Sacc.) Henn. Hedwigia 47:256 1908; Syll. Fung. 2:650 1883; Ann. Myc. 10:316 1912.
- Scirrhiopsis** Henn. Verh. Bot. Brandenb. 47:12 1905; Syll. Fung. 22:1074 1913; cf. Hoehn. Frag. Myk. 680; mixed material.
- Septochora** Hoehn. Ber. Deut. Bot. Ges. 35:254 1917; Syll. Fung. 24:1638 1926.
- Sirentyloma** Henn. Hedwigia 34:319 1895; cf. Hoehn. Frag. Myk. 628; Theiss. & Syd. Ann. Myc. 13:575 1915.
- Thyriopsis** Theiss. & Syd. Ann. Myc. 13:369 1915; Syll. Fung. 24:617 1926; cf. Petr. Ann. Myc. 23:66 1925.
- Dothicypeolum** Hoehn. Oest. Bot. Zeits. 67:55 1916; Ann. Myc. 14:36 1916.
- A. lantanae** (Henn.) T. & S.
- C. quercicola** Henn.
- C. crateriformis** (Dur. & Mont.) Hoehn.
- C. polylopha** Syd.
- D. rumicis** (Karst.) T. & S.
- G. cyathea** S. & D.
- H. portoricensis** Stev.
- H. clavus** P. & H.
- K. moriformis** (Ach.) Karst.
- L. gastrolobii** (Henn.) S. & D. S.
- M. paraguayensis** Spcg.
- M. aspidiorum** (Lib.) Fkl.
- P. juruanum** Henn.
- P. chamaedorae** Syd.
- P. petraki** Syd.
- R. goudoti** (Lev.) Sacc.
- S. hendersonioides** Henn.
- S. samaricola** (Died.) Hoehn.
- S. salaciae** Henn.
- T. halepensis** (Cke.) T. & S.
- D. pinastri** Hoehn.

*Uleopeltis* Henn. Hedwigia 43:267 1904; Syll.  
Fung. 17:872 1905; Hoehn. Frag. Myk.  
638; Theiss. & Syd. 13:217 1915.  
*Xenomeris* Syd. Ann. Myc. 22:185 1924

U. *manaosensis* Henn.  
X. *pruni* Syd.

## MYCOPORACEAE

*Chlorodothis* Clem. Gen. Fung. 50, 173 1909.  
*Mycoporellum* Müll. Arg. Rev. Myc. 6:14  
1884.  
*Mycoporis* Clem. Gen. Fung. 50, 173 1909.  
*Mycoporum* Fw. Koerb. Grundr. Kräuterkr.  
199 1848.  
*Dermatina* Almq. Svcn. Akad. Handl. 17:8  
1880.  
*Nothostroma* Clem. Gen. Fung. 50, 173 1909.  
*Sciodothis* Clem. Gen. Fung. 50, 173 1909.

C. *lahmi* (Müll. Arg.) Clem.  
M. *trichosporellum* (Nyl.) Zahlbr.  
M. *perexigua* (Müll. Arg.) Clem.  
M. *elabens* Fw.  
D. *elabens* (Fw.) Almq.  
N. *roseolum* (Müll. Arg.) Clem.  
S. *leucoplaca* (Müll. Arg.) Clem.

## MYRIANGIACEAE

*Allosoma* Syd. Ann. Myc. 24:353 1926.  
*Angatia* Syd. Ann. Myc. 12:566 1914.  
*Kusanooopsis* Stev. & Weedon Mycologia  
15:199, ill. 1923.  
*Anhellia* Rac. Par. Alg. Fung. Java 2:10 1900.  
*Ascomycetella* Sacc. Syll. Fung. 8:846 1889;  
not Pk. 1881.  
*Myriangiopsis* Henn. Hedwigia 41:23 1902.  
*Ascostratum* Syd. Ann. Myc. 10:41 1912.  
*Bagnisiella* Speg. Fung. Arg. 3:22 1880; em.  
Theiss. & Syd. Ann. Myc. 13:651 1915.  
*Robertomyces* Starb. Arkiv Bot. 5:7 1905;  
Syll. Fung. 22:754 1913.  
*Butleria* Sacc. Ann. Myc. 12:302 1914.  
*Calolepis* Syd. Ann. Myc. 23:399, ill. 1925.  
*Calopeziza* Syd. Phil. Jour. Sci. 8:499 1913.  
*Cookella* Sacc. Michelia 1:407 1878.  
*Ascomycetella* Pk. Bull. Torr. Club 8:49, ill.  
1881.  
*Dictyonella* Hoehn. Frag. Myk. n. 244, ill.  
1909.  
*Dothiora* Fr. Sum. Veg. Scan. 418 1849.  
*Protoscypha* Syd. Ann. Myc. 23:403 1925.  
*Elsinoe* Rac. Par. Alg. Fung. Java 1:14 1900.  
*Endodothiora* Petr. Ann. Myc. 27:345 1929.  
*Eurytheca* deSeynes Bull. Soc. Bot. Fr. 25:87  
1878.  
*Micromyriangium* Petr. Ann. Myc. 27:43  
1929.  
*Hariotia* Karst. Jour. Bot. 206 1889; cf.  
Hoehn. Ann. Myc. 16:151, 165 1918.  
*Delphinella* Sacc. Syll. Fung. 9:1103 1891.  
*Pleodothis* Clem. Gen. Fung. 49, 173 1909.  
*Pleoglonis* Clem. Gen. Fung. 56, 173 1909.

A. *cestri* Syd.  
A. *eugeniae* Syd.  
K. *guianensis* S. & W.  
A. *tristis* Rac.  
A. *sulphurea* (Wint.) Sacc.  
M. *sulphurea* (Wint.) Henn.  
A. *insigne* Syd.  
B. *australis* Speg.  
R. *mirabilis* Starb.  
B. *inaghatahani* Sacc.  
C. *congesta* Syd.  
C. *mirabilis* Syd.  
C. *microscopica* Sacc.  
A. *quercina* Pk.  
D. *erysiphoides* (Rehm) Hoehn.  
D. *sorbi* (Wahl.) Fr.  
P. *pulla* Syd.  
E. *canavaliae* Rac.  
E. *sydowiana* Petr.  
E. *monspeliensis* de S.  
M. *brenesi* Petr.  
H. *strobiligena* (Desm.) Karst.  
D. *strobiligena* (Desm.) Sacc.  
P. *polyspora* (Bref.) Clem.  
P. *strobiligena* (Desm.) Clem.

- Plowrightiella* Sacc. Syll. Fung. 11:376 1895;  
 24:543 1926.
- Keisslerina* Petr. Ann. Myc. 17:74 1919
- Kusanoa* Henn. Engler Bot. Jahrb. 28:275  
 1900.
- Leptodothiora* Hoehn. Ann. Myc. 18:78 1920.
- Leptophyma* Sacc. Syll. Fung. 8:844 1889.
- Monascostroma* Hoehn. Ann. Myc. 16:160  
 1918.
- Myriangina* (Henn.) Hoehn. Hedwigia 41:55  
 1902; Sitzb. Akad. Wien 118:372 1909.
- Myrianginella* Stev. & Weedon Mycologia  
 15:197 1923; cf. Petr. Ann. Myc. 25:302  
 1927.
- Uleomyces* Henn. Hedwigia 34:107 1895;  
 Syll. Fung. 11:364 1895.
- Myriangium* Mont. & Berk. Lond. Jour. Bot.  
 4:72 1845.
- Diplothea* Starb. Bot. Not. 30 1893; Syll.  
 Fung. 16:555 1902.
- Phymatodiscus* Speg. Bol. Acad. Cordoba  
 23:484, ill. 1919; Syll. Fung. 24:1139 1928.
- Phymatosphaeria* Pass. Nuov. Giorn. Bot.  
 Ital. 7:138 1886; Syll. Fung. 8:847 1889.
- Pyrenotheca* Pat. Bull. Soc. Bot. Fr. 33:155  
 1886; Syll. Fung. 8:847 1889.
- Myxomyriangis* Theiss. Ann. Myc. 11:507  
 1913.
- Zukaliopsis* Henn. Hedwigia 43:351 1904;  
 Syll. Fung. 17:554 1905.
- Plectodiscella* Woronich. Myc. Cent. 4:232  
 1914.
- Pseudosphaeria* Hoehn. Sitzb. Akad. Wien  
 116:129 1907.
- Saccardia* Cooke Grevillea 7:49 1878.
- Byssogene* Syd. Phil. Jour. Sci. 21:144 1922.
- Sydowia* Bres. Hedwigia 34:66 1895; Ann.  
 Myc. 18:64 1920; cf. Hoehn. Ann. Myc.  
 16:166 1918.
- Wettsteinina* Hoehn. Sitzb. Akad. Wien  
 116:126 1907.
- Yoshinagaia* Henn. Hedwigia 43:143 1904;  
 Syll. Fung. 17:860 1905; cf. Hoehn. Frag.  
 Myk. 335, 677; Theiss. & Syd. Ann. Myc.  
 13:265, 653 1915.
- P. polyspora* (Bref.) Sacc.
- K. moravica* Petr.
- K. japonica* Henn.
- L. elliptica* (Fkl.) Hoehn.
- L. aurantiacum* (E. & M.) Sacc.
- M. innumeratum* (Desm.) Hoehn.
- M. mirabilis* (Henn.) Hoehn.
- M. tapirae* S. & W.
- U. parasiticus* Henn.
- M. duriae* M. & B.
- D. tunae* (Spreng.) Starb.
- P. guaraniticus* Speg.
- P. abyssinica* Pass.
- P. yunnanensis* Pat.
- M. ricki* (Rehm) Theiss.
- Z. amazonica* Henn.
- P. piri* Woronich.
- P. callista* (Rehm) Hoehn.
- S. quercina* Cke.
- B. amboinensis* Syd.
- S. gregaria* Bres.
- W. gigaspora* Hoehn.
- Y. quercus* Henn.

## Genera Incertae Sedis Vel Dubia

- Capnodiopsis* Henn. Hedwigia 41:298 1902;  
 Syll. Fung. 17:555 1905.
- Myriangella* Zimm. Cent. Bakt. 8:183 1902;  
 Syll. Fung. 22:580 1913.
- Myxotheca* Ferd. & Wing. Bot. Tids. 30:212  
 1910; Syll. Fung. 22:582 1913.
- C. mirabilis* Henn.
- M. orbicularis* Zimm.
- M. hypocreoides* F. & W.

## MICROTHYRIALES

## POLYSTOMELLACEAE

- Actinodothis* Syd. Phil. Jour. Sci. 9:174 1914;  
 cf. Stev. Ann. Myc. 25:411 1927.
- Armatella* Theiss. & Syd. Ann. Myc. 13:235  
 1915.
- Asterodothis* Theiss. Ann. Myc. 10:179 1912.
- Aulacostroma* Syd. Phil. Jour. Sci. 9:175 1914.
- Blasdalea* Sacc. & Syd. Syll. Fung. 16:634  
 1902.
- Stichodothis* Petr. Ann. Myc. 25:198 1927.
- Chaetaspis* Syd. Ann. Myc. 15:219 1917.
- Cocconia* Sacc. Syll. Fung. 8:738 1889.
- Coscinopeltis* Speg. Myc. Arg. 19:425 1909.
- Cycloschizella* Hoehn. Sitzb. Akad. Wien  
 128:63 1919.
- Cycloschizum* Henn. Engler Bot. Jahrb. 33:39  
 1902.
- Cyclostomella* Pat. Bull. Herb. Boiss. 4:655  
 1896; cf. Syd. Ann. Myc. 25:26 1927.
- Cyclothea* Theiss. Ann. Myc. 12:70 1914.
- Aspidothea* Syd. Ann. Myc. 25:23 1927.
- Dielsiella* Henn. Hedwigia 42:84 1903.
- Maurodothis* Sacc. & Syd. Ann. Myc. 2:166  
 1904.
- Diplocarpum* Wolf Bot. Gaz. 54:231 1912.
- Dothidasteris* Hoehn. Frag. Myk. 491; T. & S.  
 Ann. Myc. 13:229 1915; for *Dothidastero-*  
*mella*.
- Pluriporus* Stev. & Ryan Bishop Mus. Bull.  
 19:65, ill. 1925.
- Dothidasteroma* Hoehn. Frag. Myk. 443; T. &  
 S. Ann. Myc. 13:231 1915.
- Entopeltis* Hoehn. Frag. Myk. 489 1910;  
 Ann. Myc. 15:296 1917.
- Stigmatopeltis* Doidge Bothalia 2:232 1927.
- Gilletiella* Sacc. & Syd. Syll. Fung. 14:691  
 1899.
- Dothithyriella* Hoehn. Ann. Myc. 16:171  
 1918.
- Heterochlamys* Pat. Bull. Soc. Myc. Fr.  
 11:231 1895; not Turcz. 1843.
- Hysterostoma* Theiss. Ann. Myc. 12:509 1914;  
 T. & S. Ib. 13:237 1915.
- Isipinga* Doidge Bothalia 1:15, ill. 1921.
- Hysterostomella* Speg. Fung. Guar. 1:133  
 1883; T. & S. Ann. Myc. 13:222 1915.
- Hysterostomina* Theiss. & Syd. Ann. Myc.  
 13:228 1915.
- Inocyclus* Theiss. & Syd. Ann. Myc. 13:211,  
 ill. 1915.
- A. piperis* Syd.
- A. litseae* (Henn.) T. & S.
- A. solaris* (K. & C.) Theiss.
- A. palawanense* Syd.
- B. disciformis* (Rehm) S. & S.
- S. disciformis* (Wint.) Petr.
- C. stenochlaenae* Syd.
- C. placenta* (B. & Br.) Sacc.
- C. argentinensis* Speg.
- C. araucariae* (Rehm) Hoehn.
- C. brachylaenae* Henn.
- C. disciformis* Pat.
- C. miconiae* (Syd.) Theiss.
- A. blechni* Syd.
- D. pritzeli* Henn.
- M. alyxiae* S. & S.
- D. rosae* Wolf
- D. sepulta* (B. & C.) Hoehn.
- P. gouldiae* Stev. & Ryan
- D. maculosum* (B. & Br.) Hoehn.
- E. interrupta* (Wint.) Hoehn.
- S. royenae* Doidge
- G. chusqueae* (Pat.) S. & S.
- D. litigiosa* (Desm.) Hoehn.
- H. chusqueae* Pat.
- H. evanescens* (Rehm) T. & S.
- I. areolata* Doidge
- H. guaranitica* Speg.
- H. tenella* (Syd.) T. & S.
- I. psychotriae* (Syd.) T. & S.

- Lauterbachiella** Henn. Engler Bot. Jahrb. 25:508 1898; T. & S. Ann. Myc. 13:220 1915.  
**Lembosiodothis** Hoehn. Ann. Myc. 15:369 1917.  
**Leptodothis** Theiss. & Syd. Ann. Myc. 12:268 1914; 13:248 1915.  
**Leptopeltis** Hoehn. Ber. Deut. Bot. Ges. 35:358 1917.  
**Leptopeltella** Hoehn. Ber. Deut. Bot. Ges. 35:418 1917; Syll. Fung. 24:1115 1928.  
**Lichenopeltella** Hoehn. Sitzb. Akad. Wien 128:553 1919.  
**Macowaniella** Doidge Bothalia 1:9, ill. 1921.  
**Marchalia** Sacc. Syll. Fung. 8:737 1889; T. & S. Ann. Myc. 13:251 1915.  
**Melanochlamys** Syd. Mem. Soc. Neuch. 5:438 1912; Ann. Myc. 13:264 1915.  
**Melanoplaca** Syd. Ann. Myc. 15:222 1917.  
**Mendogia** Rac. Par. Alg. Pilz. Java 3:31 1900.  
**Uleopeltis** Henn. Hedwigia 43:267 1904; Hoehn. Frag. Myk. 638; T. & S. Ann. Myc. 13:217 1915.  
**Microdothella** Syd. Phil. Jour. Sci. 9:169 1914.  
**Ellisiodothis** Theiss. Ann. Myc. 12:73 1914; T. & S. 13:246 1915.  
**Monorhiza** Theiss. & Syd. Ann. Myc. 13:218 1915.  
**Monorhizina** Theiss. & Syd. Ann. Myc. 13:220 1915.  
**Munkiella** Speg. Fung. Guar. 1:283 1883; T. & S. Ann. Myc. 13:262 1915.  
**Isomunkia** Theiss. & Syd. Ann. Myc. 13:261 1915.  
**Placosoma** Syd. Ann. Myc. 22:303, ill. 1924.  
**Synostomella** Syd. Ann. Myc. 25:43 1927.  
**Palawania** Syd. Phil. Jour. Sci. 9:171, ill. 1914.  
**Palawaniella** Doidge Bothalia 1:16, ill. 1921.  
**Parastigmatea** Doidge Ib. 1:22 1921.  
**Parmulariella** Henn. Hedwigia 43:266 1904; Hoehn. Frag. Myk. 639; T. & S. Ann. Myc. 13:205 1915.  
**Parmulina** Theiss. & Syd. Ann. Myc. 12:194 1914; 13:195 1915.  
**Placasterella** Sacc. Ann. Myc. 8:338 1910; T. & S. 13:236 1915.  
**Pleostomella** Syd. Ann. Myc. 15:221 1917.  
**Polycyclina** Theiss. & Syd. Ann. Myc. 13:212 1915.  
**Polycyclus** Hoehn. Frag. Myc. 465; T. & S. Ann. Myc. 13:210 1915.  
**Cocconiopsis** Arnaud Ann. Agr. Montp. 16:113, ill. 1918.
- L. pteridis** Henn.  
**L. dickiae** Hoehn.  
**L. atramentaria** (B. & C.) T. & S.  
**L. filicina** (Lib.) Hoehn.  
**L. perexigua** (Speg.) Hoehn.  
**L. maculans** (Zopf) Hoehn.  
**M. congesta** (Wint.) Doidge  
**M. constellata** (B. & Br.) Sacc.  
**M. leucoptera** Syd.  
**M. dipteridis** Syd.  
**M. bambusina** Rac.  
**U. manaosensis** Henn.  
**M. culmicola** Syd.  
**E. inquinans** (E. & E.) Theiss.  
**M. longissima** Rac.  
**M. filicina** (B. & Br.) T. & S.  
**M. caaguazu** Speg.  
**I. pulvinula** (Pat.) T. & S.  
**P. nothopanacis** Syd.  
**S. costaricensis** Syd.  
**P. grandis** (Niessl.) Syd.  
**P. eucleae** Doidge  
**P. nervisita** Doidge  
**P. vernoniae** Henn.  
**P. exculpta** (Berk.) T. & S.  
**P. schweinfurthi** (Henn.) T. & S.  
**P. philippinensis** Syd.  
**P. rhytismoides** (Speg.) T. & S.  
**P. andinus** (Pat.)  
**C. theissenii** (Rick.) Arn.

- Polyrhizum* Theiss. & Syd. Ann. Myc. 12:281 1914.
- Polystomella* Speg. Fung. Guar. 2:137 1886; T. & S. Ann. Myc. 12:63 1914; 13:242 1915; Hoehn. Frag. Myk. 316, 533, 664; 1913.
- Protothyrium* Arnaud Comp. Rend. 164:574 1917.
- Pseudolembosia* Theiss. Ann. Myc. 11:257 1913; T. & S. Ib. 13:257 1915.
- Rhagadolobium* Henn. & Lind. Engler Bot. Jahrb. 23:287, ill. 1897; Hoehn. Frag. Myk. 633, 1061.
- Myriostigma* Arnaud Ann. Sci. Nat. 10:7:721, ill. 1925.
- Rhipidocarpum* Theiss. & Syd. Ann. Myc. 13:197, ill. 1915.
- Schneepia* Speg. Fung. Guar. 1:133 1883; T. & S. Ann. Myc. 13:199 1915.
- Parmularia* Lev. Ann. Sci. Nat. 3:5:236 1846.
- Scolionema* Theiss & Syd. Ann. Myc. 15:410 1917.
- Stigmatea* Fr. Sum. Veg. Scan. 421 1849; cf. Hoehn. Ann. Myc. 16:172 1918.
- Stigmatodothis* Syd. Phil. Jour. Sci. 9:173, ill. 1914; Ann. Myc. 13:263 1915.
- Synpeltis* Syd. Ann. Myc. 15:221 1917.
- Vizella* Sacc. Syll. Fung. 2:662 1883; Theiss. Broteria 12:13 1914.
- P. terminaliae* (Syd.) T. & S.
- P. pulcherrima* Speg.
- P. salvadorae* (Cke.) Arn.
- P. geographica* (Mass.) Theiss.
- R. hermiteliae* Henn. & Lind.
- M. guatteriae* Arn.
- R. javanicum* (Pat.) T. & S.
- S. guaranitica* Speg.
- P. styracis* Lev.
- S. palmarum* (Kze.) T. & S.
- S. robertiani* Fr.
- S. palawanensis* Syd.
- S. loranthi* Syd.
- V. conferta* (Cke.) Sacc.

## MICROTHYRIACEAE

- Actinomyxa* Syd. Ann. Myc. 15:146 1917.
- Amazonia* Theiss. Ann. Myc. 11:499, ill. 1913.
- Asterina* Lev. Ann. Sci. Nat. 3:3:59 1845.
- Anariste* Syd. Ann. Myc. 25:76 1927.
- Asterella* Sacc. Syll. Fung. 9:393 1891; Theiss. Myc. Cent. 3:274 1913.
- Asterolibertia* Arnaud Ann. Agr. Montp. 16:165, ill. 1918.
- Clypeolella* Hoehn. Frag. Myk. 478 1910; Theiss. Cent. Bakt. 2:229 1912.
- Dimerosporium* Fkl. Symb. Myc. 89 1869; Hoehn. Frag. Myk. 477.
- Halbanina* Arnaud Ann. Agr. Montp. 16:63 1918.
- Myxasterina* Hoehn. Sitzb. Akad. Wien 118:870 1909.
- Opeasterina* Speg. Bol. Acad. Cordoba 23:498 1919.
- Prillieuxina* Arnaud Ann. Agr. Montp. 16:161, ill. 1918.
- Trichasterina* Arnaud Ib. 16:172, ill. 1918.
- Wardina* Arnaud Ib. 16:165 1918.
- A. australiensis* Syd.
- A. psychotriae* (Henn.) Theiss.
- A. azarae* Lev.
- A. poliothea* Syd.
- A. megalospora* (B. & C.) Theiss.
- A. couepiae* (Henn.) Arn.
- C. inversa* Hoehn.
- D. veronicae* (Lib.) Fkl.
- H. irregularis* (Syd.) Arn.
- M. strychni* Hoehn.
- O. aspidii* (Henn.) Theiss.
- P. winteriana* (Pass.) Arn.
- T. styracis* (Theiss.) Arn.
- W. mycocoproides* (S. & B.) Arn.



- Asterinella* Theiss. Ann. Myc. 10:160 1912.  
*Hariotula* Arnaud Les Asterin. 201 1918.  
*Maublancia* Arnaud Ann. Agr. Montp. 16:158 1918.  
*Asteromyxa* Theiss. Ann. Myc. 15:419 1917.  
*Aulographella* Hoehn. Ann. Myc. 15:367 1917.  
*Aulographis* Hoehn. Ann. Myc. 15:364 1917; 16:150 1918.  
*Beelia* Stev. & Ryan Bishop Mus. Bull. 19:71, ill. 1925.  
*Brefeldiella* Speg. Bol. Acad. Cordoba 11:558 1888.  
*Caenothyrium* Theiss. & Syd. Ann. Myc. 15:417 1917.  
*Calothyriella* Hoehn. Ann. Myc. 15:371 1917; cf. Petr. Ann. Myc. 25:326 1927.  
*Calothyriolum* Speg. Bol. Acad. Cordoba 23:498 1919.  
*Calothyris* Stev. & Ryan Bishop Mus. Bull. 19:71, ill. 1925; for *Calothyriopeltis*.  
*Calothyrium* Theiss. Ann. Myc. 10:160 1912; cf. Petr. Ann. Myc. 25:326 1927.  
*Leptopeltina* Speg. Bol. Acad. Cordoba 27:397 1923.  
*Ptychopeltis* Syd. Ann. Myc. 25:78, ill. 1927.  
*Campoia* Speg. Bol. Acad. Cordoba 25:90 ill. 1921.  
*Caudella* Syd. Ann. Myc. 14:90, ill. 1916; Hoehn. Frag. Myk. 1085.  
*Chaetothyriopsis* Stev. & Dorman Mycologia 19:237, ill. 1927.  
*Clypeolina* Theiss. Ann. Myc. 15:419 1917.  
*Opeasterinella* Speg. Bol. Acad. Cordoba 23:498 1919.  
*Polythyrium* Syd. Ann. Myc. 27:64 1929.  
*Coscinopeltis* Speg. An. Mus. Nac. 19:425, ill. 1909; Theiss. Myc. Cent. 3:276, ill. 1913.  
*Echinodella* Theiss. & Syd. Ann. Myc. 15:422 1917.  
*Echinodes* Theiss. & Syd. Ib.  
*Englerulaster* Hoehn. Frag. Myk. 520 1910; Theiss. Broteria, 78 1914.  
*Hadotia* Maire Bull. Soc. Sci. Nancy 1906:11.  
*Halbania* Rac. Crypt. Par. Java 89 1889; Theiss. Myc. Cent. 3:277 1913; Hoehn. Sitzb. Akad. Wien 118:1168 1909.  
*Scutellum* Speg. Fung. Arg. 4:161 1881.  
*Halbaniella* Theiss. Ann. Myc. 14:430 1916.  
*Asteridium* Speg. Bol. Acad. Cordoba 26:349 1923.  
*Asteridiellina* Seaver & Toro Sci. Surv. P.R. 8:25 1926.  
*Platypeltella* Petr. Ann. Myc. 27:62 1929.  
*A. puiggari* (Speg.) Theiss.  
*H. loranthi* (K. & H.) Arn.  
*M. myrtacearum* Arn.  
*A. hirtula* (Speg.) Theiss.  
*A. epilobii* (Lib.) Hoehn.  
*A. hederæ* (Lib.) Hoehn.  
*B. suttoniae* S. & R.  
*B. brasiliensis* Speg.  
*C. alang-alang* (Rac.) T. & S.  
*C. pinophylla* Hoehn.  
*C. caaguazuense* Speg.  
*C. scaevola* S. & R.  
*C. nebulosum* (Speg.) Theiss.  
*L. antarctica* Speg.  
*P. roupalæ* Syd.  
*C. pulcherrima* Speg.  
*C. oligotricha* Syd.  
*C. panamensis* S. & D.  
*C. apus* Theiss.  
*O. brasiliensis* Speg.  
*P. costaricensis* Syd.  
*C. argentinensis* Speg.  
*E. linearis* Syd.  
*E. lituræ* (Cke.) T. & S.  
*E. orbicularis* (B. & C.) Hoehn.  
*H. nivalis* Maire  
*H. cyathearum* Rac.  
*S. paradoxum* Speg.  
*H. javanica* (Rac.) Theiss.  
*A. portoricense* Speg.  
*A. portoricensis* (Speg.) S. & T.  
*P. smilacis* Petr.

- Kriegeriella* Hoehn. Ann. Myc. 16:39 1918. K. *mirabilis* Hoehn.  
*Lembosia* Lev. Ann. Sci. Nat. 3:3:58 1845. L. *tenella* Lev.  
*Balansina* Arnaud Ann. Agr. Montp. 16:123, ill. 1918.  
*Cirsosia* Arnaud Ib. 127. B. *stellata* Arn.  
*Maurodothella* Arnaud Ib. 124. C. *manasensis* Arn.  
*Lembosiella* Sacc. Syll. Fung. 9:1101 1891; M. *psychotriae* Arn.  
Theiss. Myc. Cent. 3:278 1913. L. *polyspora* (Pat.) Sacc.  
*Lembosina* Theiss. Ann. Myc. 11:437 1913. L. *aulographoides* (B. R. S.) Theiss.  
*Lembosiopsis* Theiss. Ann. Myc. 11:435 1913. L. *andromedae* (Tracy & Earle) Theiss.  
*Uleothyrium* Petr. Ann. Myc. 27:388 1929. U. *amazonicum* Petr.  
*Meliolaster* Doidge Trans Roy. Soc. S. Afr. 8:123 1920. M. *mackenzi* Doidge  
*Micropeltopsis* Wain. Act. Soc. Fenn. 49:118 1921. M. *cetraricola* Wain.  
*Microthyris* Clem.; *Microthyrium* lichenicolum. M. *maculans* (Zopf) Clem.  
*Microthyrium* Desm. Ann. Sci. Nat. 2:15:138 1841. M. *microscopicum* Desm.  
*Aphanopeltis* Syd. Ann. Myc. 25:82 1927. A. *phoebes* Syd.  
*Calopeltis* Syd. Ann. Myc. 23:392, ill. 1925. C. *acnisti* Syd.  
*Microthyriolum* Speg. Bol. Acad. Cordoba 23:136 1919. M. *apiahynum* Speg.  
*Niessella* Hoehn. Ber. Deut. Bot. Ges. 36:468 1918. N. *scirpicola* (Fkl.) Hoehn.  
*Morenella* Speg. Fung. Guar. 1:258 1883. M. *ampulluligera* Speg.  
*Cirsosiella* Arnaud Ann. Agr. Montp. 16:127, ill. 1918. C. *transversalis* (Syd.) Arn.  
*Morenina* Theiss. Ann. Myc. 11:432 1913. M. *antarctica* (Speg.) Theiss.  
*Myiocoprella* Sacc. Nuov. Giorn. Ital. 23:199 1916. M. *bakeri* Sacc.  
*Myiocoprum* Speg. Fung. Arg. 2:142 1880; Theiss. Myc. Cent. 3:279 1913. M. *corrientinum* Speg.  
*Parasterina* Theiss. & Syd. Ann. Myc. 15:246 1917. P. *melastomatis* (Lev.) Theiss.  
*Peltella* Syd. Ann. Myc. 15:237 1917. P. *conjuncta* Syd.  
*Phragmoscutella* Woron. & Abram. Ann. Myc. 24:231 1926. P. *abchastica* W. & A.  
*Phragmothyrium* Hoehn. Sitzb. Akad. Wien 121:347 1912. P. *hymenophylli* (Pat.) Hoehn.  
*Pycnocarpum* Theiss. Abh. z-b. Ges. Wien 7:31, ill. 1913. P. *magnificum* (Syd. & Butl.) Theiss.  
*Eupelte* Syd. Ann. Myc. 22:426, ill. 1924. E. *amicta* Syd.  
*Pycnoderma* Syd. Ann. Myc. 12:563 1914. P. *bambusinum* Syd.  
*Pycnopeltis* Syd. Ann. Myc. 14:365 1916. P. *bakeri* Syd.  
*Rhaphidocyrtis* Wain. Act. Soc. Fenn. 49:217 1921. R. *trichosporella* (Nyl.) Wain.  
*Seynesia* Sacc. Syll. Fung. 2:668 1883. S. *nobilis* (W. & C.) Sacc.  
*Arnaudiella* Petr. Ann. Myc. 25:339 1927. A. *caronae* (Pass.) Petr.  
*Ferrarisia* Sacc. Att. Acad. Ven. 3:10:61 1919. F. *philippina* Sacc.  
*Seynesiola* Speg. Bol. Acad. Cordoba 23:498 1919. S. *chilensis* Speg.

- Stegothyrium* Hoehn. Sitzb. Akad. Wien 127:382 1918.  
*Stephanotheca* Syd. Phil. Jour. Sci. 9:178, ill. 1914.  
*Symphaster* Theiss. & Syd. Ann. Myc. 13:217, 668 1915.  
*Thallochaete* Theiss. Ann. Myc. 11:501, ill. 1913.  
*Anariste* Syd. Ann. Myc. 25:76 1927.  
*Thyrosoma* Syd. Ann. Myc. 19:307 1921.  
*Trichopeltella* Hoehn. Frag. Myk. 521 1910.  
*Trichopeltina* Theiss. Cent. Bakt. 39:630, ill. 1914.  
*Trichopeltopsis* Hoehn. Sitzb. Akad. Wien 118:861 1909.  
*Trichopeltis* Speg. Bol. Acad. Cordoba 11:571 1889.  
*Trichopeltula* Theiss. Cent. Bakt. 39:636, ill. 1914.  
*Yatesula* Syd. Ann. Myc. 15:237 1917.
- S. denudans* (Rehm) Hoehn.  
*S. micromera* Syd.  
*S. gesneraceae* (Henn.) T. & S.  
*T. ingae* Theiss.  
*A. poliothea* Syd.  
*T. pulchellum* Syd.  
*T. montana* (Rac.) Hoehn.  
*T. labecula* (Mont.) Theiss.  
*T. reptans* (B. & C.) Hoehn.  
*T. puichella* Speg.  
*T. hedycaryae* Theiss.  
*Y. calami* Syd.

## MICROPELTACEAE

- Aphysa* Theiss. & Syd. Ann. Myc. 15:134 1917.  
*Chaetopeltopsis* Theiss. Ann. Myc. 11:496 1913.  
*Plochmopeltidella* Mendoza Bot. Gaz. 79:291, ill. 1925.  
*Chaetoplaca* Syd. Ann. Myc. 15:232,432 1917.  
*Clypeolum* Speg. Fung. Arg. 4:143 1882.  
*Calothyriopsis* Hoehn. Sitz. Akad. Wien 128:552 1919.  
*Clypeolina* Speg. Bol. Acad. Cordoba 26:393, ill. 1924.  
*Clypeolopsis* Stev. & Manter Bot. Gaz. 79:287 1925.  
*Dictyopeltis* Theiss. Ann. Myc. 11:468 1913.  
*Dictyothyrina* Theiss. Ib.  
*Dictyothyrium* Theiss. Oest. Bot. Zeits. 62:277 1912.  
*Eremotheca* Theiss. & Syd. Ann. Myc. 15:235,431 1917.  
*Endocycla* Syd. Ann. Myc. 25:90 1927.  
*Gymnopeltis* Stev. Ill. Biol. Mon. 8:191, ill. 1923.  
*Eremothecella* Syd. Ann. Myc. 15:236 1917; cf. Hoehn. Frag. Myk. 1145.  
*Griggia* Stev. & Dalbey Bot. Gaz. 68:224, ill. 1919.  
*Haplopeltis* Theiss. Broteria 12:88 1914.  
*Metathyriella* Syd. Ann. Myc. 25:96 1927.  
*Micropeltella* Syd. Ann. Myc. 11:404 1913.  
*Parapeltella* Speg. Bol. Acad. Cordoba 23:143 1919.
- A. rhynchosiae* (K. & C.) T. & S.  
*C. tenuissima* (Petch) Theiss.  
*P. smilacina* Mendoza  
*C. memecyli* Syd.  
*C. atrareolatum* Speg.  
*C. conferta* (Theiss.) Hoehn.  
*C. cubensis* Speg.  
*C. cubensis* (Speg.) S. & M.  
*D. vulgaris* (Rac.) Theiss.  
*D. fecunda* (Sacc.) Theiss.  
*D. chalybeum* (Rehm) Theiss.  
*E. rufula* (B. & C.) T. & S.  
*E. phoebes* Syd.  
*G. trinidadensis* Stev.  
*E. calamicola* Syd.  
*G. cyathea* S. & D.  
*H. bakeriana* (Rehm) Theiss.  
*M. roupalae* Syd.  
*M. clavisporea* Syd.  
*P. macrosperma* Speg.

- Phragmothyriella* Spieg. Bol. Acad. Cordoba 23:506 1919; Syd. Ann. Myc. 18:186 1920.
- Micropeltis* Mont. Plant. Cell. Cuba 325 1842; Theiss. Myc. Cent. 3:278 1913.
- Dictyothyriella* Rehm Broteria 12:92 1914.
- Hormopeltis* Spieg. Myc. Arg. 6:84 1912.
- Scolecopeltidella* Mendoza Bot. Gaz. 79:293, ill. 1925.
- Theciopeltis* Stev. & Manter Bot. Gaz. 79:285 1925.
- Microthyriella* Hoehn. Sitzb. Akad. Wien 118:370, ill. 1909.
- Mitopeltis* Spieg. Bol. Acad. Cordoba 25:93, ill. 1923.
- Moesziella* Petr. Ann. Myc. 25:323 1927.
- Phaeaspis* Petch Ann. Bot. Gard. Peradeniya 7:33 1919; for *Phaeopeltis* Petch, not Clements 1909.
- Phragmothyriella* Hoehn. Frag. Myk. 725 1912.
- Plochmopeltis* Theiss. Broteria 12:87 1914.
- Polyclypeolum* Theiss. Ann. Myc. 12:67 1914.
- Protopeltis* Syd. Ann. Myc. 25:87 1927.
- Saccardinula* Spieg. Fung. Guar. 1:257 1883; Syll. Fung. 9:1071 1891.
- Schizothyrium* Desm. Ann. Sci. Nat. 3:11:360 1849.
- Epipeltis* Theiss. Abh. z-b. Ges. Wien 7:26 1913.
- Scolecopeltis* Spieg. Bol. Acad. Cordoba 574 1889; Theiss. Myc. Cent. 3:280 1913.
- Ophiopeltis* Alm. & Cam. Rev. Agron. 1:175, ill. 1903; Syll. Fung. 17:873 1905.
- Scolecopeltopsis* Hoehn. Frag. Myk. 218 1909.
- Scolecopeltium* Stev. & Manter Bot. Gaz. 79:282, ill. 1925; for *Scolecopeltidium*.
- Stigmatophragma* Tehon & Stout Mycologia 21:180, ill. 1929.
- Stomiopeltella* Theiss. Broteria 12:86 1914.
- Stomiopeltis* Theiss. Ib. 85
- P. albomarginata* Spieg.
- M. applanata* Mont.
- D. bauhiniiae* Rehm
- H. bonplandi* Spieg.
- S. palmarum* Mendoza
- T. guianensis* S. & M.
- M. ricki* (Rehm) Hoehn.
- M. chilensis* Spieg.
- M. pulchella* Petr.
- P. gomphispora* (B. & Br.) Petch
- P. molleriana* (Sacc.) Hoehn.
- P. intricata* (E. & M.) Theiss.
- P. abietis* (Hoehn.) Theiss.
- P. roupalae* Syd.
- S. guaranitica* Spieg.
- S. ptarmicae* Desm.
- E. gaultheriae* (Curt.) Theiss.
- S. tropicalis* Spieg.
- O. oleae* A. & C.
- S. aeruginea* (Zimm.) Hoehn.
- S. salacense* (Rac.) S. & M.
- S. sassafrasicola* T. & S.
- S. nubecula* (B. & C.) Theiss.
- S. aspersa* (Berk.) Theiss.

## Genera Incertae Sedis Vel Dubia

- Anomothallus* Stev. Bishop Mus. Bull. 19:91, ill. 1925. Asci and spores uncertain, sec. author.
- Cryptopeltis* Rehm. Ann. Myc. 4:409 1906; cf. Hoehn. Frag. Myk. 324 1909.
- Hyalasterina* Spieg. Bol. Acad. Cordoba 23:498 1919.
- Microthyrites* Pampaloni Att. Acad. Linc. 5:11:251 1902; Jour. Myc. 12:64 1906.
- Murashkinskija* Petr. Hedwigia 68:203 1928.
- A. erraticus* Stev.
- C. obtecta* Rehm
- (no species given)
- M. disodilis* Pamp.
- M. juniperina* Petr.

- Neostomella* Syd. Ann. Myc. 25:38 1927.  
*Opethyrium* Speg. Bol. Acad. Cordoba 23:498  
 1919.  
*Patouillardina* Arnaud Comp. Rend. 159:890  
 1917.  
*Phaeoscutella* Henn. Hedwigia 43:382, ill.  
 1904. Not a fungus, sec. Hoehn. Frag.  
 Myk. 685.  
*Piptostoma* B. & Br. Fung. Ceylon 1135  
 1870; Syll. Fung. 9:1054 1891.  
*Rheumatopeltis* Stev. Ill. Biol. Mon. 11:24, ill.  
 1927.  
*Synesiella* Arnaud Ann. Agr. Montp. 16:202,  
 ill. 1918.  
*Synsiopeltis* Stev. & Ryan Bishop Mus.  
 Bull. 16:69, ill. 1925.  
*Thyriascus* Schulzer Flora 60:51 1877;  
 Theiss. & Syd. Ann. Myc. 15:433 1917.  
*Trichothallus* Stev. Bishop Mus. Bull. 19:85,  
 ill. 1925. Sterile thallus without peri-  
 thecia or pycnidia, sec. author.  
*N. tabernaemontanae* Syd.  
 (no species given)  
*P. clavispora* (Pat.) Arn.  
*P. gynerii* Henn.  
*P. spilota* B. & Br.  
*R. querci* Stev.  
*S. juniperi* (Desm.) Arn.  
*S. tetraplasandrae* S. & R.  
*T. quercinus* Schulz.  
*T. hawaiiensis* Stev.

## PHACIDIALES

## HYSTERIACEAE

- Aldona* Rac. Par. Alg. Pilz. Java 1:19 1900.  
*Aulographum* Lib. Crypt. Ard. n. 272 1834.  
*Bifusella* Hoehn. Ann. Myc. 15:318 1917.  
*Bulliardella* Sacc. Syll. Fung. 2:764, as subg.;  
 17:902 1905.  
*Ostreionella* Seaver Sci. Surv. P. R. 8:77  
 1926.  
*Dichaena* Fr. Sum. Veg. Scan. 403 1849.  
*Farlowiella* Sacc. Syll. Fung. 9:1100 1891;  
 for *Farlowia* Sacc. Ib. 2:727 1883, not  
 Agardh 1876.  
*Gloniella* Sacc. Syll. Fung. 2:765 1883.  
*Gloniopsis* DeNot. Pir. Ister. 23 1847.  
*Glonium* Mühlenberg Cat. Am. 101 1813; cf.  
 Fr. Syst. Myc. 2:594 1821.  
*Psiloglonium* Hoehn. Ann. Myc. 16:147  
 1918 as subg.; Petrak Ann. Myc. 21:227  
 1923.  
*Graphyllum* Clem. Rep. Bot. Surv. Nebr. 5:6  
 1901; cf. Hoehn. Ann. Myc. 16:212 1918.  
*Hadotia* Maire Bull. Soc. Nancy 3:7:174  
 1906.  
*Hypoderma* DC. Flor. Fr. 2:304 1805.  
*Hysteropeltella* Petrak Ann. Myc. 21:9  
 1923.  
*Hypodermella* Tubeuf Bot. Cent. 1:48 1895.  
*Hypodermellina* Hoehn. Ann. Myc. 15:303  
 1917.  
*A. stella-nigra* Rac.  
*A. vagum* Desm.  
*B. linearis* (Pk.) Hoehn.  
*B. beccarini* Paoli  
*O. fusispora* Seav.  
*D. quercina* (Pers.) Fr.  
*F. repanda* (Blox.) Sacc.  
*G. lapponica* (Karst.) Sacc.  
*G. decipiens* DeN.  
*G. stellatum* Mühl.  
*P. lineare* (Fr.) Petrak  
*G. chloes* Clem.  
*H. nivalis* Maire  
*H. virgultorum* DC.  
*H. moravica* Petrak  
*H. laricis* Tubeuf  
*H. ruborum* Hoehn.

- Lophodermella* Hoehn. Sitz. Akad. Wien  
126:294 1917.
- Hypodermopsis* Earle Jour. N. Y. Bot. Gard.  
3:345 1902.
- Hysterium* Tode Fung. Meckl. 2:4 1790.
- Hysteroglonium* Rehm Rabh. Krypt. Flor.  
3:35 1896; Lindau Nat. Pflanzenf. 1:1:274  
1897.
- Xyloschizum* Syd. Ann. Myc. 20:192 1922.
- Hysterographium* Corda Icon. 5:34 1842.
- Fragosoa* Cif. Bol. Espan. Hist. Nat.  
26:194, ill. 1926.
- Hysteropsis* Speg. Rev. Fac. La Plata 2:308,  
ill. 1906.
- Polhysterium* Speg. An. Mus. Nac. 23:37  
1912; Syll. Fung. 24:1122 1928.
- Hysteropsis* Rehm Rabh. Krypt. Flor. 3:36  
1896.
- Lophium* Fr. Syst. Myc. 2:533 1821.
- Lophodermium* Chevallier Fl. Gen. Paris 1:436  
1826.
- Lophodermellina* Hoehn. Ann. Myc. 15:311  
1917.
- Lophodermina* Hoehn. Ann. Myc. 15:312  
1917.
- Mytilidium* Duby Mem. Hyster. 62 1881.
- Ostreium* Duby Mem. Hyster. 21, ill. 1881;  
Syll. Fung. 2:765 1883.
- L. sulcigena* (Link) Hoehn.
- H. sequoiae* Earle
- H. pulicare* Pers.
- H. ovatum* (Cke.) Lind.
- X. weirianum* Syd.
- H. fraxini* (Pers.) DeN.
- F. aterrima* Cif.
- H. brasiliensis* Speg.
- P. cuyanum* Speg.
- H. culmigena* Rehm
- L. mytilinum* (Pers.) Fr.
- L. arundinaceum* (Schrad.) Chev.
- L. hysteroioides* (Pers.) Hoehn.
- L. melaleucum* (Fr.) Hoehn.
- M. aggregatum* Duby
- O. americanum* Duby

## GRAPHIDACEAE

## Arthoniae

- Allarthonia* Nyl. Flora 61:246 1878.
- Allarthothelium* (Wain.) Zahlbr. Nat.  
Pflanzenf. 1:1:91 1903.
- Arthonia* (Ach.) Zahlbr. Nat. Pflanzenf. 1:1:89  
1903.
- Arthoniopsis* Müll. Arg. Lich. Epi. Nov. 17  
1890.
- Arthothelium* Mass. Ric. Aut. Lich. 54 1852.
- Celidium* Tul. Ann. Sci. Nat. 3:17:120 1852.
- Conida* Mass. Flora 40:488 1856
- Coniocarpum* DC. Flor. Fr. ed. 3 2:323 1805.
- Diarthonis* Clem. Gen. Fung. 58,174 1909.
- Gymnographa* Müll. Arg. Flora 70:62 1887.
- Lecidiopsis* Rehm. Rabh. Krypt. Fl. 3:432  
1896.
- Merarthonis* Clem. Gen. Fung. 40,174 1909.
- Phacopsis* Tul. Ann. Sci. Nat. 3:17:124 1852.
- Plearthonis* Clem. Gen. Fung. 40,174 1909.
- Synarthonia* Müll. Arg. Bull. Soc. Bot. Belg.  
30:85 1891.
- Trichophyma* Rehm Hedwigia 44:7 1905.
- A. patellulata* (Nyl.) Zahlbr.
- A. albovirescens* (Wain.) Zahlbr.
- A. radiata* (Pers.) Th. Fr.
- A. obesa* Müll. Arg.
- A. spectabile* (Fw.) Mass.
- C. stictarum* (DeN.) Tul.
- C. clemens* Tul.
- C. gregarium* (Weig.) Koerb.
- D. lurida* (Ach.) Clem.
- G. medusulina* Müll. Arg.
- L. galactites* (DC.) Rehm
- M. leptosperma* (Müll. Arg.) Clem.
- P. vulpina* Tul.
- P. caesia* (Fw.) Clem.
- S. bicolor* Müll. Arg.
- T. buchosiae* Rehm

Graphidae

- Acanthothecis Wain. Clem. Gen. Fung. 59  
1909, for  
Acanthothecium Wain. Etud. Lich. Bres.  
2:93 1890; not Speg. 1889.  
Acanthotheciopsis Zahlbr. Nat. Pflanzenf.  
8:117 1926.  
Anomorpha Nyl. Lich. Ins. Guin. 50 1889.  
Digraphis Clem. Gen. Fung. 59,174 1909.  
Aulaxina Fee Essai Crypt. 60 1824.  
Diplogramma Müll. Arg. Nuov. Giorn. Ital.  
23:399 1891.  
Encephalographa Mass. Gen. Lich. 13 1854.  
Fouragea Trev. Ren. Ist. Lomb. 13:67 1880.  
Graphina Müll. Arg. Flora 63:22 1880.  
Graphinella Zahlbr. Cat. Lich. Univ. 285  
1923.  
Graphis (Adans.) Müll. Arg. Mem. Soc.  
Geneve 29:28 1887.  
Helminthocarpum Fee Essai Crypt. 156 1824.  
Dictyographa Müll. Arg. Bull. Herb. Boiss.  
1:131 1893.  
Lithographa Nyl. Act. Soc. Linn. Bord.  
21:393 1856.  
Melaspilea Nyl. Act. Soc. Linn. Bord. 21:416  
1856.  
Micrographa Müll. Arg. Flora 73:194 1890.  
Opegrapha Humb. Fl. Frib. Spec. 57 1793.  
Phaeographina Müll. Arg. Flora 65:398 1882.  
Phaeographis Müll. Arg. Flora 65:336 1882.  
Psorographis Clem. Gen. Fung. 59,174 1909.  
Ptychographa Nyl. Jour. Bot. 12:257 1874.  
Sclerographis Zahlbr. Nat. Pflanzenf. 8:111  
1926.  
Spirographa Zahlbr. Nat. Pflanzenf. 1:1:96  
1903.  
Xylographa Fr. Fl. Scan. 334 1835.  
Xyloschistes Wain. Medd. Soc. Fenn. 10:149  
1883.
- A. pachygraphoides Wain.  
A. pachygraphoides (Wain.) Zahlbr.  
A. turbulenta Nyl.  
D. turbulenta (Nyl.) Clem.  
A. opegraphina Fee  
D. australiense Müll. Arg.  
E. cerebrina (Ram.) Mass.  
F. filicina (Mont.) Trev.  
G. globosa (Fee) M. A.  
G. fusisporrella (Nyl.) Zahlbr.  
G. scripta (L.) Ach.  
H. leprevosti Fée  
D. arabica Müll. Arg.  
L. tesserata (DC.) Nyl.  
M. arthonioides (Fee) Nyl.  
M. anisomera Müll. Arg.  
O. varia Pers.  
P. prosiliens (M. & B.) M. A.  
P. sordida (Fee) M. A.  
P. clavuliger (Wain.) Clem.  
P. xylographoides Nyl.  
S. quinqueseptata (Wain.) Zahlbr.  
S. fusisporrella (Nyl.) Zahlbr.  
X. parallela (Ach.) Fr.  
X. platytropa (Nyl.) Wain.

Dirinae

- Cyclographa Wain. Ann. Acad. Fenn.  
A:15:295 1921.  
Dirina Fr. Syst. Orb. Veg. 1:244 1825.  
Dirinastrum Müll. Arg. Bull. Herb. Boiss.  
1:55 1893.  
C. interposita Wain.  
D. repanda (Fr.) Nyl.  
D. australiense Müll. Arg.

Roccellae

- Combea DeN. Giorn. Bot. Ital. 1:1:225 1846.  
Darbishirella Zahlbr. Ber. Deut. Bot. Ges.  
16:13 1898.  
Dendrographa Darbishire Ber. Deut. Bot.  
Ges. 13:313 1895.  
C. mollusca (Ach.) DeN.  
D. gracillima (Darb.) Zahlbr.  
D. leucophaea (Tuck.) Darb.

- Ingaderia* Darbshire Ber. Deut. Bot. Ges.  
16:14 1898. I. *pulcherrima* Darb.
- Pentagenella* Darbshire Ber. Deut. Bot. Ges.  
15:5 1897. P. *fragillima* Darb.
- Reinkella* Darbshire Bull. Herb. Boiss. 5:764  
1897. R. *lirellina* Darb.
- Roccella* DC. Flor. Fr. ed. 3 2:334 1805. R. *fuciformis* DC.
- Roccellaria* Darbshire Ber. Deut. Bot. Ges.  
15:6 1897. R. *intricata* (Mont.) Darb.
- Roccellina* Darbshire Ber. Deut. Bot. Ges.  
16:11 1898. R. *condensata* Darb.
- Roccellographa* Stnr. Denks. Akad. Wien  
71:98 1902. R. *cretacea* Stnr.
- Schizopelte* Th. Fr. Flora 58:143 1875. S. *californica* Th. Fr.
- Simonyella* Stnr. Denks. Akad. Wien 71:96.  
1902. S. *variegata* Stnr.

## Chiodectae

- Chiodectum* (Ach.) Müll. Arg. Mem. Soc.  
Geneve 29:65 1887. C. *sphaerale* Ach.
- Enterodictyum* Müll. Arg. Jour. Linn. Soc.  
29:230 1892. E. *indicum* Müll. Arg.
- Medusulina* Müll. Arg. Bull. Herb. Boiss.  
2:93 1894. M. *nitida* (Eschw.) M. A.
- Enterostigma* Müll. Arg. Flora 68:254 1885. E. *compunctum* (Ach.) M. A.
- Glyphis* (Ach.) Fee Essai Crypt. 38,61 1824. G. *cicatrosa* (Ach.) Zahlbr.
- Mazosia* Mass. Neag. Lich. 9 1854. M. *rotula* (Mont.) M. A.
- Minksia* Müll. Arg. Proc. Roy. Soc. Edin.  
11:469 1882. M. *caesiella* Müll. Arg.
- Pycnographa* Müll. Arg. Flora 73:194 1890. P. *radians* Müll. Arg.
- Rotularia* Zahlbr. Nat. Pflanzenf. 8:122 1926. R. *bambusae* (Wain.) Zahlbr.
- Sarcographa* Fee Essai Crypt. 35,58 1824. S. *labyrinthica* (Ach.) M. A.
- Sarcographina* Müll. Arg. Flora 70:425 1887. S. *cyclospora* Müll. Arg.
- Sclerophyllum* Eschw. Syst. Lich. 14 1824. S. *elegans* Eschw.

## Genera Incertae Sedis Vel Dubia

- Cf. *Zahlbruckner* Nat. Pflanzenf. 8:107,127  
1926.

## PHACIDIACEAE

- Bifusella* Hoehn. Ann. Myc. 15:318 1917. B. *linearis* (Pk.) Hoehn.
- Bonanseia* Sacc. Jour. Myc. 12:50 1906; Ann.  
Myc. 4:362 1906. B. *mexicana* Sacc.
- Clithriss* Fr. Syst. Myc. 2:189 1822. C. *quercina* (Pers.) Fr.
- Colpoma* Wallr. Fl. Crypt. Germ. 2:422  
1833. C. *quercinum* (Pers.) Wallr.
- Sporomega* Corda Icon. Fung. 5:34 1840. S. *degenerans* (Fr.) Corda
- Coccomyces* DeNot. Giorn. Bot. Ital. 2:38  
1847. C. *coronatus* (Schum.) DeN.
- Coccomycella* Hoehn. Ann. Myc. 15:323  
1917. C. *quercina* (Desm.) Hoehn.
- Coccomycetella* Hoehn. Ann. Myc. 15:309  
1917. C. *belonospora* (Nyl.) Hoehn.



- Coccophacidium* Rehm. Rabh. Krypt. Fl. 3:97 1896.
- Therrya* Sacc. *Michelia* 2:604 1882; cf. Hoehn. *Frag. Myk.* 778.
- Criella* Sacc. *Syll. Fung.* 8:756 1889; 16:786 1902.
- Nymanomyces* Henn. *Monsunia* 1:28 1900; cf. Hoehn. *Ann. Myc.* 16:154 1918.
- Phaeorhytisma* Henn. *Monsunia* 1:29 1900.
- Synglonium* Penz. & Sacc. *Malpighia* 11:526 1897; cf. Hoehn. *Ann. Myc.* 16:154 1918.
- Cryptomyces* Grev. *Scot. Crypt. Fl.* 4:206 1826.
- Cryptomycina* Hoehn. *Ann. Myc.* 15:321 1917.
- Dothiora* Fr. *Sum. Veg. Scan.* 419 1849.
- Keisslerina* Petr. *Ann. Myc.* 17:75 1919.
- Keithia* Sacc. *Syll. Fung.* 10:49 1892.
- Didymascella* Maire & Sacc. *Syll. Fung.* 18:162 1906; 22:748 1913.
- Phacidium* Fr. *Syst. Myc.* 2:371 1822.
- Phacidiella* Poteb. *Zeits. Pflanzenk.* 22:147, ill. 1912; *Syll. Fung.* 24:1261 1928.
- Phacidina* Hoehn. *Ann. Myc.* 15:324 1917.
- Phacidiostroma* Hoehn. *Ann. Myc.* 15:324 1917.
- Rhabdocline* Syd. *Ann. Myc.* 20:194 1922.
- Phaeophacidium* Henn. & Lind. *Hedwigia* 36:234 1897.
- Hymenobolus* Dur. & Mont. *Ann. Sci. Nat.* 3:4:359 1845; Hoehn. *Frag. Myk.* 647,1139.
- Pseudotrochila* Hoehn. *Ber. Deut. Bot. Ges.* 35:416 1917.
- Pseudographis* Nyl. *Herb. Fenn.* 96. 1855.
- Pseudophacidium* Karst. *Act. Soc. Fenn.* 2:157.
- Leptophacidium* Hoehn. *Sitzb. Akad. Wien* 127:331 1918.
- Myxophacidiella* Hoehn. *Sitzb. Akad. Wien* 126:301 1917.
- Myxophacidium* Hoehn. *Sitzb. Akad. Wien* 126:301 1917.
- Rhytisma* Fr. *Syst. Myc.* 2:569 1822.
- Duplicaria* Fkl. *Symb. Myc.* 265, ill. 1869.
- Pachyrhytisma* Hoehn. *Ann. Myc.* 15:317 1917.
- Placuntium* Ehrenb. *Sylv. Myc. Berol.* 17 1818.
- Xyloma* Pers. *Tent. Disp. Fung.* 5, ill. 1797.
- Schizothyrium* Desm. *Ann. Sci. Nat.* 3:11:360 1852.
- Epipeltis* Theiss. *Abh. z-b. Ges. Wien* 7:3:30 1913; cf. Hoehn. *Ann. Myc.* 15:296 1917.
- C. pini* (A. & S.) Rehm
- T. gallica* Sacc. & Penz.
- C. austrocaledona* (Crie) Sacc.
- N. aceris-laurini* (Pat.) Rac.
- P. Ionicerae* Henn.
- S. insigne* P. & S.
- C. maximus* (Fr.) Rehm.
- C. pteridis* (Rebent.) Hoehn.
- D. sphaeroides* (Pers.) Fr.
- K. moravica* Petr.
- K. tetraspora* (Phill.) Sacc.
- D. oxycedri* Maire & Sacc.
- P. lacerum* Fr.
- P. discolor* (M. & S.) Poteb.
- P. gracile* (Niessl) Hoehn.
- P. multivalve* (DC.) Hoehn.
- R. pseudotsugae* Syd.
- P. escalloniae* H. & L.
- H. agaves* D. & M.
- P. rhododendri* (Rac.) Hoehn.
- P. pinicola* (Nyl.) Rehm
- P. ledi* (A. & S.) Karst.
- L. umbelliferarum* (Rabh.) Hoehn.
- M. microsperma* (Fkl.) Hoehn.
- M. degenerans* (Karst.) Hoehn.
- R. acerinum* (Pers.) Fr.
- D. empetri* (Fr.) Fkl.
- P. symmetricum* (J. Mull.) Hoehn.
- P. andromedae* (Pers.) Ehrenb.
- X. salicinum* Pers.
- S. ptarmicae* Desm.
- E. gaultheriae* (Curt.) Theiss.

- Schizothyrioma* Hoehn. Ann. Myc. 15:297  
1917; Syll. Fung. 24:1112 1928.
- Sphaeropezia* Sacc. Consp. Gen. Disc. 14  
1884.
- Tridens* Massee Jour. Myc. 10:221 1904.
- Haplophyse* Theiss. Ann. Myc. 14:267, ill.  
1916.
- S. ptarmicae* (Desm.) Hoehn.
- S. vaccinii* (Rehm.) Sacc.
- T. elegantissimum* (B. & C.)  
Massee
- H. oahuensis* Theiss.

## Genera Incertae Sedis Vel Dubia

- Aporhytisma* Hoehn. Ann. Myc. 15:318 1917.
- Macroderma* Hoehn. Ber. Deut. Bot. Ges.  
35:419 1917.
- Microsticta* Desm. Pl. Crypt. Fr. 1000 1839.
- Nothodiscus* Sacc. Nuov. Giorn. Ital. 24:38  
1917; Syll. Fung. 24:1264 1928.
- A. urticae* (Wallr.) Hoehn.
- M. curtisi* (B. & R.) Hoehn.
- M. pomi* Desm.
- N. antoniae* Sacc.

## STICTIDACEAE

- Briardia* Sacc. Rev. Myc. 7:159 1885.
- Carestiella* Bres. Malpighia 11:274 1897.
- Coccopeziza* Har. & Karst. Rev. Myc. 12:128  
1890.
- Cryptodiscus* Corda Icon. Fung. 2:37 1838.
- Propoliopsis* Rehm. Leaf. Phil. Bot. 6:2279  
1914.
- Diplocryptis* Clem. Gen. Fung. 63:174 1909.
- Diploneaevia* Sacc. Syll. Fung. 8:666 1889.
- Ploettnera* Henn. Verh. Bot. Brandenb.  
41:94 1899.
- Eupropolella* Hoehn. Ann. Myc. 15:311 1917.
- Eupropolis* DeN. Comm. Critt. 1:364 1864.
- Janseella* Henn. Monsunia 1:30,171 1889;  
cf. Hoehn. Frag. Myk. 646.
- Flaminia* Sacc. & Syd. Syll. Fung. 16:777  
1902.
- Habrostictis* Fkl. Symb. Myc. 249 1869.
- Iridionia* Rac. Par. Alg. Pilz. Java 3:20 1900.
- Laquearia* Fr. Sum. Veg. Scan. 366 1849.
- Lasiostictis* Sacc. Misc. Myc. 2:24, ill. 1884.
- Lindauella* Rehm. Hedwigia 82 1900.
- Melittosporium* Corda Icon. Fung. 2:38 1838.
- Delpontia* Penz. & Sacc. Syll. Fung. 18:151  
1906.
- Platysticta* Cooke & Massee Grevillea 17:95  
1889.
- Merostictis* Clem. Gen. Fung. 64:174 1909.
- Melittosporiella* Hoehn. Ann. Myc. 16:211  
1918; Syll. Fung. 24:1251 1928.
- Moutoniella* Penz. & Sacc. Syll. Fung. 18:163  
1906; Hoehn. Frag. Myk. 777.
- Naemacyclus* Fkl. Symb. Myc. App. 2:49  
1869.
- Naevia* Fr. Sum. Veg. Scan. 373 1849.
- Asteronaevia* Petr. Ann. Myc. 27:408 1929.
- B. compta* Sacc.
- C. socia* Bres.
- C. ootheca* Har. & Karst.
- C. pallidus* (Pers.) Cda.
- P. arengae* Rehm
- D. foveolaris* (Rehm) Clem.
- D. caricum* (Auers.) Sacc.
- P. coeruleoviridis* (Rehm.) Henn.
- E. vaccinii* (Rehm) Hoehn.
- E. guthnickiana* DeN.
- J. asteriscus* Henn. & Nym.
- F. amylospora* (Rehm) S. & S.
- H. pallida* (Fkl.) Clem.
- I. filicis* Rac.
- L. sphaeralis* Fr.
- L. conigena* Sacc. & Berl.
- L. pyrenocarpis* Rehm
- M. aeruginosum* (Pers.) Rehm.
- D. pulchella* Penz.
- P. simulans* C. & M.
- M. emergens* (Karst.) Clem.
- M. pulchella* Hoehn.
- M. polita* P. & S.
- N. niveus* (Pers.) Sacc.
- N. minutula* (S. & M.) Rehm
- A. trichophori* Petr.

- Stictostroma* Hoehn. Ann. Myc. 15:322 1917.  
*Naeviella* Clem. Gen. Fung. 63,174 1909.  
*Ocellaria* Tul. Sel. Fung. Carp. 3:129 1865.  
*Ostropa* Fr. Sum. Veg. Scan. 401 1849.  
*Phragmonaevia* Rehm Rabh. Krypt. Fl. 3:160 1896.  
*Pleostictis* Rehm Ascom. Lojk. 70 1882.  
*Propolidium* Sacc. Consp. Gen. Disc. 11 1884.  
*Propolina* Sacc. Consp. Gen. Disc. 11 1884.  
*Propolis* Fr. Sum. Veg. Scan. 372 1849.  
*Schizoxylum* Pers. Ann. Wett. 1:11 1810.  
*Stegia* Fr. Obs. Myc. 2:352 1818.  
*Hysterostegiella* Hoehn. Sitzb. Akad. Wien 126:313, ill. 1929.  
*Stegopeziza* Hoehn. Frag. Myk. 1010 1917.  
*Stegopezizella* Syd. Ann. Myc. 22:392 1924.  
*Stictophacidium* Rehm Ascom. 916 1888.  
*Stictis* Pers. Observ. 2:73 1796.  
*Cerion* Masee Bull. Misc. Inf. Kew 159 1901; Syll. Fung. 18:154 1906.  
*Karstenia* Fr. Karst. Rev. 166 1885.  
*Trochila* Fr. Sum. Veg. Scan. 387 1849.  
*Pyrenotrochila* Hoehn. Ann. Myc. 15:332 1917.  
*Sarcotrochila* Hoehn. Sitzb. Akad. Wien 126:309, ill. 1917.  
*Xyloglyphis* Clem. Gen. Fung. 64,174 1909.  
*Xylogramma* Wallr. Fl. Crypt. Germ. 509 1833.  
*Xylographa* Fr. Syst. Myc. 2:197 1822.  
*S. leopoldinum* (Rehm.) Hoehn.  
*N. fuckeli* (Rehm) Clem.  
*O. aurea* Tul.  
*O. cinerea* (Pers.) Fr.  
*P. libertiana* (S. & R.) Rehm  
*P. propolidis* Rehm.  
*P. glaucum* (Ell.) Sacc.  
*P. cervina* Sacc.  
*P. faginea* (Schrad.) Karst.  
*S. berkeleyanum* (D. & L.) Fkl.  
*S. lauri* (Cald.) Sacc.  
*H. fenestrata* (Rob.) Hoehn.  
*S. lauri* (Cald.) Hoehn.  
*S. balsameae* (Davis) Syd.  
*S. carniolicum* Rehm  
*S. radiata* (L.) Pers.  
*C. coccineum* M. & Rodway  
*K. sorbina* (Karst.) Fr.  
*T. craterium* (DC.) Fr.  
*P. laurocerasi* (Desm.) Hoehn.  
*S. alpina* (Fkl.) Hoehn.  
*X. striola* (Fr.) Clem.  
*X. sticticum* (Fr.) Wallr.  
*X. parallela* (Ach.) Fr.

## Genera Incertae Sedis Vel Dubia

- Didymascina* Hoehn. Ann. Myc. 3:331 1905.  
*Leptocrea* Syd. Ann. Myc. 14:87 1916; cf. Hoehn. Frag. Myk. 1164.  
*Phaneroomyces* Speg. & Har. Rev. Myc. 11:93 1889; Syll. Fung. 8:677 1889; cf. Lind. Nat. Pflanzenf. 1:1:349 1897.  
*D. salicicola* (All.) Hoehn.  
*L. orbiculata* Syd.  
*P. macrosporus* (Boud.) Speg.

## TRYBLIDIACEAE

- Asterocalyx* Hoehn. Sitzb. Akad. Wien 121:402 1912.  
*Caldesia* (Trev.) Rehm em. Lich. Ven. n. 152 1869.  
*Henriquesia* Pass. & Thucm. Cont. Myc. Lus. 228 1879.  
*Heterosphaeria* Grev. Scot. Crypt. Flor. 2:103 1824.  
*Hysteropeziza* Rabh. Hedwigia 13:174 1874.  
*Odontotrema* Nyl. Lich. Scan. 249 1861.  
*Odontura* Clem. Gen. Fung. 65,174 1909.  
*Odontotremella* Rehm. Ber. Bot. Ges. München 13:166 1912.  
*A. mirabilis* Hoehn.  
*C. sabina* (DeN.) Rehm  
*H. lusitanica* P. & T.  
*H. patella* (Tode) Grev.  
*H. petiolaris* (A. & S.) Rabh.  
*O. minus* Nyl.  
*O. rhabdospora* (Rehm) Clem.  
*O. rhabdospora* Rehm

*Phaeoderris* Hoehn. Sitzb. Akad. Wien 120:462  
1911; Sacc. Syll. Fung. 8:599 1889, as sub-  
genus.  
*Scleroderris* Fr. Syst. Myc. 2:178 1822.  
*Trybliidiopsis* Karst. Myc. Fenn. 24 1871.  
*Tryblidis* Clem. Gen. Fung. 65,174 1909.  
*Tryblidium* Rebert. Prod. Flo. Neomarch. 388  
1804.  
*Blytridium* DeNot. Prop. Disc. 20 1863.  
*Tryblis* Clem.; *Trybliidiopsis* phragmospora.

*P. caespitosa* (Niessl) Hoehn.  
*S. ribesia* (Pers.) Karst.  
*T. pinastri* (Pers.) Karst.  
*T. pinastri* (Pers.) Clem.  
*T. calyciforme* (Fr.) Rebert.  
*B. calyciforme* (Fr.) DeN.  
*T. arnoldi* (Rehm) Clem.

#### Genera Incertae Sedis

*Actinomyxa* Syd. Ann. Myc. 15:146 1917.  
*Hysteropezizella* Hoehn. Sitzb. Akad. Wien  
126:310, ill. 1917.

*A. australiensis* Syd.  
*H. subvelata* (Rehm) Hoehn.

## PEZIZALES

### DERMATEACEAE

*Cenangella* Sacc. Consp. Gen. Disc. 9 1884.  
*Dermatella* Karst. Myc. Fenn. 1:209 1871  
*Cenangioopsis* Rehm Ber. Ges. München 13:189  
1912.  
*Cenangium* Fr. Syst. Myc. 2:177 1822.  
*Ameghiniella* Speg. Fung. Fueg. n. 347 1888.  
*Cenangina* Hoehn. Sitzb. Akad. Wien  
118:882 1909.  
*Encoelia* (Fr.) Karst. Myc. Fenn. 1:218  
1871.  
*Ephelina* Sacc. Syll. Fung. 8:585 1889.  
*Pezomela* Syd. Ann. Myc. 26:121 1923.  
*Choriactis* Kupfer Bull. Torrey Club 29:142  
1902; cf. Seaver N. A. Cup-fungi 198 1928.  
*Crumenula* DeNot. Prop. Disc. 9 1864.  
*Dermatea* Fr. Sum. Veg. Scan. 362 1849.  
*Durandia* Rehm Ascom. no. 2027; Ann. Myc.  
11:166 1913; cf. Hoehn. Ber. Deut. Bot.  
Ges. 36:310 1918.  
*Encoeliella* Hoehn. Sitzb. Akad. Wien 119:619  
1910.  
*Godronia* Moug. Consid. Gen. Veg. 355 1845.  
*Godroniopsis* Diehl & Cash Mycologia 21:243,  
ill. 1929.  
*Midotiopsis* Henn. Hedwigia 41:17 1902.  
*Midotis* Fr. Syst. Orb. Veg. 363 1825.  
*Wynnea* Berk. & Curt. Jour. Linn. Soc.  
Lond. 9:424 1867.  
*Wynnella* Boudier Bull. Soc. Myc. Fr. 1:102  
1885.  
*Pezolepis* Syd. Ann. Myc. 23:408, ill. 1925.  
*Phaeangella* Sacc. Syll. Fung. 18:128 1906.  
*Phaeangium* Sacc. Syll. Fung. 16:764 1902.  
*Perizomatium* Syd. Ann. Myc. 25:98 1927.  
*Scytopezis* Clem. Bull. Torr. Club. 30:87 1903

*C. pinastri* (Tul.) Sacc.  
*D. frangulae* (Fr.) Karst.  
*C. quercicola* (Romell) Rehm  
*C. furfuraceum* (Roth) DeN.  
*A. australis* Speg.  
*C. inocarpi* (Henn.) Hoehn.  
*E. furfuracea* (Fr.) Karst.  
*E. rhinanthi* (Phill.) Sacc.  
*P. saxegothaeae* Syd.  
*C. geaster* (Pk.) Kupfer  
*C. pinicola* (Rebert.) Karst.  
*D. cerasi* (Pers.) DeN.  
*D. fraxini* (Schw.) Rehm  
*E. raveneli* Hoehn.  
*G. urceolus* (A. & S.) Karst.  
*G. querneae* (Schw.) D. & C.  
*M. bambusicola* Henn.  
*M. gigantea* (B. & C.) Sacc.  
*W. gigantea* B. & C.  
*W. leporina* (Batsch) Boud.  
*P. denigrata* Syd.  
*P. aceris* (Hazsl.) Sacc.  
*P. rubi* (Bäumli.) Sacc. & Syd.  
*P. lachnoides* (Rehm) Syd.  
*S. stellata* Clem.

- Stilbopeziza* Speg. An. Mus. Nac. 3:10:131 1909.
- Tryblidiella* Sacc. Syll. Fung. 2:757 1883.
- Hysteropatella* Rehm. Rabh. Krypt. Fl. 3:367 1896.
- Rhytidhysterium* Speg. Fung. Arg. 4:191 1892; Syll. Fung. 2:759 1883.
- Rhytidopeziza* Speg. Fung. Guar. 1:138 1886; Syll. Fung. 10:65 1891.
- Tympanis* Tode Fung. Meck. 1:23 1790.
- Biatorellina* Henn. Hedwigia Beibl. 42:(307), ill. 1903.
- Urnulla* Fr. Sum. Veg. Scan. 364 1849.
- Podophaacidium* Niessl Verh. Nat. Ver. Brünn 10:63, ill. 1872; Rehm. Rabh. Krypt. Flor. 3:999 1896; Syll. Fung. 8:550 1889.
- S. yerbae* Speg.
- T. rufula* (Spreng.) Sacc.
- H. prosti* (Duby) Rehm
- R. brasiliense* Speg.
- R. balansae* Speg.
- T. conspersa* Fr.
- B. buchsi* Henn.
- U. craterium* (Schw.) Fr.
- P. terrestre* Niessl
- BULGARIACEAE**
- Agyrina* Keissl. Ann. Nat. Mus. Wien 39:199 1925; Rabh. Krypt. Fl. 8:57 1930.
- Agyrina* Clem. Gen. Fung. 67, 173 1909; Sacc. Syll. Fung. 8:636 1889, as subg.
- Agyriopsis* Sacc. & Syd. Syll. Fung. 14:805 1899.
- Agyrium* Fr. Syst. Myc. 2:231 1822.
- Ahlesia* Fkl. Symb. Myc. 281 1869; Syll. Fung. 9:946 1891.
- Bulgaria* Fr. Syst. Myc. 2:166 1822.
- Bulgariella* Karst. Rev. Mon. 139 1885; Syll. Fung. 8:638 1889.
- Voeltzknowiella* Henn. Voeltz. Reise Ostaf. 3:31, ill. 1908.
- Bulgariastrum* Syd. Phil. Jour. Sci. 8:497, ill. 1913.
- Calloria* Fr. Sum. Veg. Scan. 359 1849.
- Calloriella* Hoehn. Sitzb. Akad. Wien 127:345 1918.
- Didymocoryne* Sacc. & Trotter Syll. Fung. 22:730 1913.
- Coryne* Tul. Sel. Fung. Carp. 3:190 1865.
- Calloriopsis* Syd. Ann. Myc. 15:254 1917.
- Harknessiella* Sacc. Syll. Fung. 8:845 1889.
- Dictyonia* Syd. Ann. Myc. 2:549 1904.
- Rehmiomyces* Henn. Hedwigia 43:270, ill. 1904; not Sacc. & Syd. 1902.
- Gloeopeziza* Zukal Flora 74:100, ill. 1891.
- Haematomyces* B. & Br. Fung. Ceylon 963 1870.
- Haematomyxa* Sacc. Consp. Gen. Disc. 11 1884.
- Holwaya* Sacc. Syll. Fung. 8:646 1889.
- Claussenomyces* Kirschst. Verh. Bot. Brandenb. 65:122 1923.
- Crinula* (Fr.) Sacc. Syll. Fung. 8:606 1889.
- A. crozalsi* Keissl.
- A. sexdecimspora* (Fkl.) Clem.
- A. betheli* (E. & E.) S. & S.
- A. rufum* (Pers.) Fr.
- A. lichenicola* Fkl.
- B. inquinans* (Pers.) Fr.
- B. pulla* (Fr.) Karst.
- V. madagascarensis* Henn.
- B. caespitosum* Syd.
- C. fusarioides* (Berk.) Fr.
- C. umbrinella* (Desm.) Hoehn.
- D. striata* (E. & E.) S. & S.
- C. sarcoides* (Jacq.) Tul.
- C. gelatinosa* (E. & M.) Syd.
- H. purpurea* (P. & H.) Sacc.
- D. pouroumae* (Henn.) Syd.
- R. pouroumae* Henn.
- G. rehmi* Zukal
- H. spadiceus* B. & Br.
- H. vinosa* (C. & E.) Sacc.
- H. ophiobolus* (Ell.) Sacc.
- C. jahnianus* Kirschst.
- C. mucida* (Schulz.) Sacc.

- Myridium* Clem. Gen. Fung. 67, 174 1909.  
*Ombrophila* Fr. Sum. Veg. Scan. 357 1849.  
*Bulgariopsis* Henn. Syll. Fung. 18:135 1906.  
*Neobulgaria* Petr. Ann. Myc. 19:44 1921.  
*Stamnaria* Fkl. Symb. Myc. 309 1869; Syll. Fung. 8:620.  
*Ophiogloea* Clem. Bull. Torr. Club 30:86 1903.  
*Orbilina* Fr. Sum. Veg. Scan. 357 1849.  
*Hyalinia* Boud. Bull. Soc. Myc. Fr. 1:114 1885.  
*Orbiliopsis* Syd. Ann. Myc. 22:308, ill. 1924; Sacc. Syll. Fung. 18:139 as subgenus.  
*Pteromyces* B. R. S. Ann. Myc. 3:507 1905; Syll. Fung. 22:725 1913.  
*Orthoscypha* Syd. Ann. Myc. 25:100 1927.  
*Paryphedria* Zukai Flora 74:92, ill. 1891.  
*Physmatomyces* Rehm. Hedwigia 39:216 1900; cf. Hoehn. Frag. Myk. 455 1909.  
*Pulparia* Karst. Myc. Fenn. 1:9 1871.  
*Sarcomyces* Masee Jour. Myc. 6:178, ill. 1891.  
*Sarcosoma* Caspary in litt. Rabh. Krypt. Flor. 1:3:497, ill. 1891.  
*Burkardia* Schmidel Anal. Plant. 3:261, ill. 1797.  
*Gloeocalyx* Masee Bull. Misc. Inf. Kew 1901:155.  
*Sorokinia* Sacc. Syll. Fung. 10:42 1892.
- M. myriosporum* (P. & H.) Clem.  
*O. violacea* (Hedw.) Fr.  
*B. moellerianus* Henn.  
*N. pura* Petr.  
*S. equiseti* (Hoffm.) Sacc.  
*O. linospora* Clem.  
*O. leucostigma* Fr.  
*H. crystallina* (Quel.) Boud.  
*O. coleosporodes* (Sacc.) Syd.  
*P. ambiguus* B. R. S.  
*O. concinna* Syd.  
*P. heimerli* Zukai  
*P. melioloides* Rehm  
*P. arctica* Karst.  
*S. vinosus* Masee  
*S. globosum* (Schmid.) Casp.  
*B. globosa* Schmid.  
*G. bakeri* Masee  
*S. microspora* (Berk.) Sacc.

## PATELLARIACEAE

- Abrothallus* DeNot. Giorn. Bot. Ital. 2:192 1846.  
*Actinoscypha* Karst. Symb. Myc. 23:5 1887.  
*Bactrospora* Mass. Ric. Aut. Lich. 133, ill. 1852.  
*Baggea* Auersw. Hedwigia 5:1 1866.  
*Biatorella* DeNot. Giorn. Bot. Ital. 1:192 1846.  
*Tromera* Mass. Flora 41:507 1858.  
*Durella* Tul. Sel. Fung. Carp. 3:177 1865.  
*Leptopeziza* Rostrup Medd. Groenl. 5:542 1888; Syll. Fung. 22:758 1913; 8:794.  
*Epilichen* Clem. Gen. Fung. 69, 174 1909.  
*Johansonia* Sacc. Syll. Fung. 8:785 1889.  
*Karschia* Koerb. Parerg. Lich. 459 1865.  
*Catinella* Boud. Hist. Disc. Eur. 150 1907.  
*Lagerheimia* Sacc. Syll. Fung. 10:55 1892.  
*Lahmia* Koerb. Parerg. Lich. 281 1865.  
*Leciographa* Mass. Genera 14 1854.  
*Lecioglyphis* Clem. Gen. Fung. 70, 174 1909.  
*Melaspilea* Nyl. Prod. Lich. 170 1857.  
*Mycobacidia* Rehm. Rabh. Krypt. Flor. 3:337 1896.
- A. parmeliarum* (Somm.) Nyl.  
*A. graminis* Karst.  
*B. dryina* (Ach.) Mass.  
*B. pachyasca* Auersw.  
*B. pinicola* (Mass.) Th. Fr.  
*T. xanthostigma* Mass.  
*D. compressa* (Pers.) Tul.  
*L. groenlandica* Rostr.  
*E. scabrosus* (Ach.) Clem.  
*J. setosa* (Wint.) Sacc.  
*K. lignyota* (Fr.) Sacc.  
*C. olivacea* (Batsch) Boud.  
*L. sphaerospora* (B. & C.) Sacc.  
*L. kunzei* (Fw.) Koerb.  
*L. zwackhi* Mass.  
*L. centrifuga* (Mass.) Clem.  
*M. arthonioides* (Fee) Nyl.  
*M. flavovirescens* (Dicks.) Rehm

- Mycobilimbia* Rehm. Rabh. Krypt. Flor. 3:327 1896.
- Mycolecidea* Karst. Sacc. Syll. Fung. 24:1290 1928.
- Mycolecis* Clem. Gen. Fung. 70, 174 1909.
- Nesolechia* Mass. Misc. Lich. 13 1856.
- Discocera* Smith & Rams. Trans. Brit. Myc. Soc. 6:48 1917.
- Pachypatella* Theiss. & Syd. Ann. Myc. 13:228 1915.
- Parathalle* Clem. Gen. Fung. 70, 174 1909.
- Patellaria* Fr. Sum. Veg. Scan. 366 1849.
- Lecanidion* Rabh. Krypt. Flor. 3:342 1896.
- Patellea* Fr. Syst. Myc. 2:149 1823.
- Patinella* Sacc. Grevillea 4:22 1875.
- Odontoschizum* Syd. Ann. Myc. 12:568 1914.
- Placographa* Th. Fr. Lich. Arct. 339 1861; Rehm Ascom. 313, 1896, as subg.
- Pleopatella* Rehm. Ann. Myc. 6:314 1908.
- Pleoscutula* Vouaux Bull. Soc. Myc. Fr. 29:434 1913.
- Pleosporis* Clem. Gen. Fung. 69, 174 1909.
- Pragmopara* (Mass.) Rehm Rabh. Krypt. Flor. 3:340 1896.
- Scutularia* Karst. Rev. 153 1885.
- Pseudotryblidium* Rehm. Rabh. Krypt. Flor. 3:370 1896.
- Psilothecium* Clem. Bull. Torr. Club 30:85 1903.
- Ravenelula* Speg. Fung. Arg. 4:229 1882.
- Rhombocarpus* Zopf. Nov. Act. 70:128, ill. 1897.
- Scutula* Tul. Ann. Sci. Nat. 3:17:118, ill. 1852.
- Starbaeckia* Rehm Bih. Sven. Vet. Handl. 16:11, ill. 1890.
- Tryblidaria* Sacc. Syll. Fung. 8:805 1889, as subg.; 14:33 1899; Rehm Ann. Myc. 2:525 1904.
- Woodiella* Sacc. & Syd. Hedwigia Beibl. 38:(133) 1899.
- M. obscurata* (Somm.) Rehm
- M. lecideina* Rehm
- M. lecideina* (Rehm) Clem.
- N. oxyspora* (Tul.) Mass.
- D. lichenicola* S. & R.
- P. alsophilae* (Rac.) T. & S.
- P. fuistingi* (Koerb.) Clem.
- P. atrata* (Hedw.) Fr.
- L. atratum* (Hedw.) Rabh.
- P. sanguinea* (Pers.) Rehm
- P. sanguineo-atra* (Rehm) Sacc.
- O. parvulum* Syd.
- P. flexella* (Ach.) Th. Fr.
- P. harperi* Rehm
- P. arsenii* Vouaux
- P. vermifera* (Leight.) Clem.
- P. bacillifera* (Karst.) Rehm
- S. reducta* Karst.
- P. neesi* (Fw.) Rehm
- P. incurvum* Clem.
- R. gainesvillensis* Speg.
- R. punctiformis* Zopf
- S. wallrothi* Tul.
- S. pseudotryblis* Rehm
- T. fenestrata* (C. & E.) Rehm
- W. natalensis* S. & S.

## Genera Incertae Sedis Vel Dubia

- Benguetia* Syd. Ann. Myc. 15:152, ill. 1917.
- Robertomyces* Starb. Ark. Bot. 5:5, ill. 1905.
- B. omphalodes* Syd.
- R. mirabilis* Starb.

## CALICIACEAE

- Acolium* Ach. Lich. Univ. 232 1810; cf. DeN. Giorn. Bot. Ital. 2:10 1846.
- Acrosyphus* Lev. Ann. Sci. Nat. 3:5:262 1846.
- Calicium* (Pers.) DeN. Giorn. Bot. Ital. 2:309 1846.
- A. sessile* (Pers.) Ach.
- A. sphaerophoroides* Lev.
- C. hyperellum* (Ach.) Pers.

- Protocalicium* Woronich. Trudy Bot. Akad.  
21:103 1927.  
*Calycidium* Stirt. Proc. Phil. Soc. Glasgow  
10:292 1877.  
*Carlosia* Samp. Not. Cong. Salani. 1 1923.  
*Chaenotheca* Th. Fr. Nov. Act. Soc. Sci.  
3:3:350 1861.  
*Coniocybe* Ach. Vet. Akad. Handl. 286 1816.  
*Cyphelium* (Ach.) Th. Fr. Oefv. Vet. Akad.  
Handl. 263 1815.  
*Ditylis* Clem. Gen. Fung. 71, 174 1909.  
*Eucyphelis* Clem. Gen. Fung. 71, 174 1909.  
*Farriola* Norm. Oefv. Vet. Akad. Handl. 41:34  
1884.  
*Holocyphis* Clem. Gen. Fung. 71, 174 1909.  
*Mycocalicium* Wain. Act. Soc. Fenn. 7:181  
1890.  
*Pleurocybe* Müll. Arg. Flora 67:613 1884.  
*Pseudocolium* Stzbg. Ber. St. Gall. Ges.  
1861:177 1862.  
*Pyrgidium* Nyl. Flora 50:3 1867.  
*Pyrgillus* Nyl. Syn. Lich. 1:68 1860.  
*Roesleria* Thuem. & Pass. Sacc. Syll. Fung.  
8:826 1889.  
*Schistophorum* Stirt. Trans. Glasgow Soc.  
Nat. 4:165 1876.  
*Sphaerophorus* Pers. Neue Ann. Bot. 23 1794.  
*Sphinctrina* Fr. Syst. Orb. Veg. 120 1825.  
*Sphinctrinopsis* Woronich. Trudy Bot. Akad.  
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*Stenocybe* Nyl. Bot. Notis. 84 1854.  
*Tholurna* Norm. Flora 44:409 1861.  
*Tylophorella* Wain. Etud. Lich. Bres. 2:174  
1890.  
*Tylophorum* Nyl. Bot. Zeit. 20:279 1862.
- P. *jaczewski* Woron.  
 C. *cuneatum* Stirt.  
 C. *lusitanica* Samp.  
 C. *trichialis* (Ach.) Th. Fr.  
 C. *furfuracea* Ach.  
 C. *tigillare* (Pers.) Fr.  
 D. *moderata* (Nyl.) Clem.  
 E. *acicularis* (Smith) Clem.  
 F. *distans* Norm.  
 H. *bolanderi* (Tuck.) Clem.  
 M. *parietinum* (Ach.) Wain.  
 P. *madagascarea* (Nyl.) Zahlbr.  
 P. *notarisi* (Tul.) Stzbg.  
 P. *bengalense* (Krh.) Nyl.  
 P. *americanus* Nyl.  
 R. *hyalinella* (Nyl.) Sacc.  
 S. *tenue* Stirt.  
 S. *coralloides* Pers.  
 S. *turbinata* (Pers.) Fr.  
 S. *pertusariae* Woron.  
 S. *major* Nyl.  
 T. *dissimilis* Norm.  
 T. *polyspora* Wain.  
 T. *protrudens* Nyl.

## CHRYSOTRICHACEAE

- Chrysothrix* Mont. Ann. Sci. Nat. 3:18:312  
1852.  
*Coenogonium* Ehrb. Nees Fl. Phys. Berol. 120  
1820.  
*Crocynia* Mass. Att. Ist. Venet. 3:5:251 1860.  
*Holocoenis* Clem. Gen. Fung. 72, 174. 1909.  
*Racodium* Pers. Tent. Disp. 76 1797.
- C. *nolitangere* Mont.  
 C. *linki* Ehrb.  
 C. *gossypina* (Sw.) Nyl.  
 H. *leprieuri* (Mont.) Clem.  
 R. *rupestre* Pers.

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- Anema* Nyl. Flora 62:353 1879.  
*Arctomia* Th. Fr. Nov. Act. Sci. Upsal. 3:3:387  
1861.  
*Collema* (Wigg.) Zahlbr. Nat. Pflanzenf.  
1:1:171 1906.  
*Collemis* Clem.; *Collema phragmosporum*.  
*Collemodes* Fink Mycologia 10:236 1918.  
*Collemopsidium* Nyl. Flora 66:6 1881.
- A. *decipiens* (Mass.) Forss.  
 A. *delicatula* Th. Fr.  
 C. *pulposum* (Bernh.) Ach.  
 C. *rupestris* (L.) Clem.  
 C. *bachmannianum* Fink  
 C. *iocarpum* Nyl.



- Cryptothele* Th. Fr. Bot. Notis. 59 1866.  
*Dicollema* Clem. Gen. Fung. 74, 174 1909.  
*Ephebe* Fr. Syst. Orb. Veg. 1:256 1825.  
*Ephebeia* Nyl. Flora 58:6 1875.  
*Forssellia* Zahlbr. Nat. Pflanzenf. 1:1:161 1906.  
*Gonohymenia* Stnr. Verh. z-b. Ges Wien 52:484 1902.  
*Gyrocollema* Wain. Mycologia 21:36 1929.  
*Homopsella* Nyl. Flora 70:129 1887.  
*Hormothecium* Mass. Alc. Gen. Lich. 7 1855.  
*Jenmania* Wächt. Flora 74:349 1897.  
*Koerberia* Mass. Gen. Lich. 51 1854.  
*Leciophysma* Th. Fr. Bot. Notis. 102 1865.  
*Lecopyrenopsis* Wain. Hedwigia 46:172 1907; for *Lecidopyrenopsis*.  
*Lemmopsis* Zahlbr. Nat. Pflanzenf. 1:1:171 1906.  
*Lempholemma* (Koerb.) Zahlbr. Cat. Lich. Univ. 3:12 1924.  
*Leprocollema* Wain. Etud. Lich. Bres. 1:232 1890.  
*Leptogidium* Nyl. Flora 56:195 1873.  
*Leptogiopsis* Müll. Arg. Flora 65:291 1882.  
*Leptogium* Gray Nat. Arrang. Brit. Pl. 1:400 1821.  
*Lichinodium* Nyl. Flora 58:297 1875.  
*Paulia* Fee Linnaea 10:471 1846.  
*Peccania* (Mass.) Forss. Nov. Act. Sci. Upsal. 3:13:40 1885.  
*Petractis* Fr. Sum. Veg. Scan. 1:120 1846.  
*Phloeopeccania* Stnr. Denks. Akad. Wien 71:93 1902.  
*Phylliscidium* Forss. Nov. Act. Sci. Upsal. 3:13:38 1885.  
*Phylliscium* Nyl. Mass. Gen. Lich. 7 1854.  
*Physma* Mass. Gen. Lich. 6 1854.  
*Pleocanis* Clem. Gen. Fung. 73, 174 1909.  
*Pleopyrenis* Clem. Gen. Fung. 72, 174 1909.  
*Polychidium* (Mass.) Zahlbr. Nat. Pflanzenf. 1:1:150 1906.  
*Porocyphus* Koerb. Syst. Lich. Germ. 425 1855.  
*Psorotichia* (Mass.) Forss. Nov. Act. Sci. Upsal. 3:13:39 1885.  
*Pterygiopsis* Wain. Etud. Lich. Bres. 1:288 1890.  
*Pterygium* Nyl. Bull. Soc. Bot. Fr. 1:328 1854.  
*Pyrenopsidium* Forss. Nov. Act. Sci. Upsal. 3:13:39 1885.  
*Pyrenopsis* Nyl. Syn. Lich. 1:67 1858.  
*Ramalodium* Nyl. Jour. Linn. Soc. 17:392 1880.  
*C. promiscens* (Nyl.) Th. Fr.  
*D. pycnocarpum* (Nyl.) Clem.  
*E. lanata* (L.) Wain.  
*E. hispidula* (Ach.) Nyl.  
*F. affinis* (Mass.) Zahlbr.  
*G. algerica* Stnr.  
*G. scyphuliferum* Wain.  
*H. aggregatula* Nyl.  
*H. opulentum* Mont.  
*J. goebeli* Wächt.  
*K. bififormis* Mass.  
*L. finmarkicum* Th. Fr.  
*L. corticola* Wain.  
*L. arnoldiana* (Hepp) Zahlbr.  
*L. chalazanum* (Ach.) Arn.  
*L. americanum* Wain.  
*L. byssoides* (Carr.) Zahlbr.  
*L. reticulata* (Mont.) M. A.  
*L. lacerum* (Sw.) Gray  
*L. sirosiphodes* Nyl.  
*P. pullata* Fee  
*P. corallinoides* Mass.  
*P. clausa* (Hoffm.) Arn.  
*P. pulvinula* Stnr.  
*P. monophyllum* (Krp.) Forss.  
*P. demangeoni* (M. & M.) Nyl.  
*P. byrsinum* (Ach.) M. A.  
*P. kansana* (Tuck.) Clem.  
*P. picina* (Nyl.) Clem.  
*P. muscicolum* (Sm.) Gray  
*P. coccodes* (Fr.) Koerb.  
*P. montini* (Mass.) Forss.  
*P. atra* Wain.  
*P. subradiatum* (Nyl.) Forss.  
*P. granuliforme* (Nyl.) Forss.  
*P. foederata* Nyl.  
*R. succulentum* (R. Br.) Nyl.

- Spilonema* Born. Mem. Soc. Cherbourg 4:226  
 1856.  
*Steinera* Zahlbr. Deut. Südpol-Exped. 7:41  
 1906.  
*Synalissa* Fr. Syst. Orb. Veg. 1:297 1825.  
*Thermutis* Fr. Syst. Orb. Veg. 1:392 1825.  
*Thyrea* Mass. Flora 39:210 1856.  
*Trichobacidia* Wain. Ann. Akad. Fenn.  
 A:15:32 1921.  
*Zahlbrucknerella* Herre. Jour. Wash. Acad.  
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- S. paradoxum Born.  
 S. molybdoplaca (Nyl.) Zahlbr.  
 S. ramulosa (Hoffm.) Fr.  
 T. velutina (Ach.) Th. Fr.  
 T. plectospora Mass.  
 T. robinsoni Wain.  
 Z. calcarea Herre

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- Actinoplaca* Müll. Arg. Bull. Soc. Belg. 30:56  
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*Arthotheliopsis* Wain. Jour. Bot. 34:206 1896.  
*Asterothyrium* Müll. Arg. Lich. Epi. Nov. 12  
 1890.  
*Byssolecania* Wain. Ann. Akad. Fenn.  
 A:15:167 1921.  
*Calenia* Müll. Arg. Lich. Epi. Nov. 3 1890.  
*Gonolecania* Zahlbr. Cat. Lich. Univ. 2:681  
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*Gonothecis* Clem. Gen. Fung. 75,174 1909.  
*Heppia* Naeg. Hepp. Flecht. Eur. n. 49 1853.  
*Neoheppia* Zahlbr. Denks. Akad. Wien  
 83:144 1909.  
*Latzelia* Zahlbr. Nat. Pflanzenf. 8:175 1926.  
*Lopadiopsis* Wain. Jour. Bot. 34:205 1896.  
*Nephroma* Ach. Lich. Univ. 101 1810.  
*Nephromium* Nyl. Syn. Lich. 1:318 1860.  
*Peltidea* Nyl. Act. Soc. Fenn. 7:594 1863.  
*Chloropeltis* Clem. Gen. Fung. 75,174 1909.  
*Peltigera* Pers. Neue Ann. Bot. 1:21 1794.  
*Phlegmophiale* Zahlbr. Nat. Pflanzenf. 8:142  
 1926.  
*Pseudoheppia* Zahlbr. Ann. Myc. 1:356 1903.  
*Solorina* Ach. Vet. Akad. Handl. 228 1808.  
*Solorinella* Anzi Cat. Lich. Sondr. 37 1860.  
*Sporopodium* Mont. Ann. Sci. Nat. 3:16:54  
 1851.  
*Tapellaria* Müll. Arg. Lich. Epi. Nov. 11  
 1890.  
*Tricharia* (Fee) Wain. Ann. Acad. Fenn.  
 A:15:159 1921.
- A. strigulacea Müll. Arg.  
 A. hymenocarpis Wain.  
 A. monosporum Müll. Arg.  
 B. fuscolivida Wain.  
 C. pulchella Müll. Arg.  
 G. hymenocarpa (Wain.) Zahlbr.  
 G. phyllocharis (Mont.) Clem.  
 H. virescens (Despr.) Nyl.  
 N. brasiliensis Zahlbr.  
 L. terrenea (Nyl.) Zahlbr.  
 L. coffeae (Müll. Arg.) Wain.  
 N. arcticum (L.) Fr.  
 N. resupinatum (L.) Fw.  
 P. apthosa (L.) Nyl.  
 C. apthosa (L.) Clem.  
 P. canina (L.) Hoffm.  
 P. epidendri (Rehm) Zahlbr.  
 P. schuleri Zahlbr.  
 S. saccata (L.) Ach.  
 S. asteriscus Anzi  
 S. filicinum (Müll. Arg.) Zahlbr.  
 T. heterospora Müll. Arg.  
 T. melanothrix Fee

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- Agyrophora* Nyl. Flora 61:247 1878.  
*Merophora* Clem. Gen. Fung. 77, 174 1909.  
*Amphischizonia* Mont. Syll. Gen. Crypt. 331  
 1856.
- A. haplocarpa Nyl.  
 M. haplocarpa (Nyl.) Clem.  
 A. holleana (M. & B.) Zahlbr.

- Arthoniactis* Wain. Cat. Welw. Afr. Pl. 2:430  
1901.
- Asteristium* Leight. Trans. Linn. Soc. 27:163  
1869.
- Bacidia* Zahlbr. Nat. Pflanzenf. 1:1:135 1905.
- Biatora* (Fr.) Koerb. Syst. Lich. Germ. 192  
1855.
- Biatorella* Th. Fr. Nov. Act. Sci. Upsal.  
3:3:299 1861.
- Biatorina* Mass. Ric. Aut. Lich. 134 1852.
- Byssoloma* Trev. Spig. Pagl. 6 1853.
- Catillaria* (Mass.) Th. Fr. Lich. Scan. 1:563  
1874.
- Catinaria* Wain. Act. Soc. Fenn. 53:143 1922.
- Catocarpus* Arn. Flora 55:147 1871.
- Diphæis* Clem. Gen. Fung. 77, 174 1909.
- Charcotia* Hue Bull. Soc. Bot. Fr. 62:16  
1915.
- Dermaticum* Nyl. Bot. Zeit. 25:133 1867.
- Diphanis* Clem. Gen. Fung. 77, 174 1909.
- Gyrophora* Ach. Meth. Lich. 100 1803.
- Lecanactis* Eschw. Syst. Lich. 14 1824.
- Lecidea* (Ach.) Zahlbr. Nat. Pflanzenf. 1:1:130  
1905.
- Lopadium* Koerb. Syst. Lich. Germ. 210  
1855.
- Megalospora* Mey. & Fw. Nov. Act. Acad.  
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- Melampyridium* Stirt. Jour. Linn. Soc. 14:471  
1875.
- Mycoblastus* Norm. Nyt. Mag. Nat. 7:24  
1853.
- Orphniospora* Koerb. Zahlbr. Nat. Pflanzenf.  
8:195 1926.
- Phalodictyum* Clem. Gen. Fung. 77,174 1909.
- Phyllopsora* Müll. Arg. Bull. Herb. Boiss.  
2:11 1894.
- Pleolecis* Clem. Gen. Fung. 76,174 1909.
- Pseudolecanactis* Zahlbr. Denks. Akad. Wien  
81:242 1907.
- Psora* Hall. Hist. Stirp. Helv. 93 1798.
- Psorella* Müll. Arg. Bull. Herb. Boiss. 2:11  
1894.
- Psoromaria* Nyl. Lich. Nov. Zel. 54 1888.
- Rhizocarpum* (Ram.) Th. Fr. Lich. Scan.  
1:611 1874.
- Schismatomma* Mass. Ric. Aut. Lich. 55 1852.
- Scolecactis* Clem. Gen. Fung. 76,174 1909.
- Scoliosporum* Mass. Ric. Aut. Lich. 104  
1852.
- Sphaerophoropsis* Wain. Etud. Lich. Bres. 2:7  
1890.
- Thalloedema* Mass. Ric. Aut. Lich. 95 1852.
- Diphloëis* Clem. Gen. Fung. 76,174 1909.
- A. ostrearum* Wain.
- A. erumpens* Leight.
- B. rosella* (Pers.) DeN.
- B. vernalis* (L.) Ach.
- B. fossarum* (Duf.) Th. Fr.
- B. ehrhartiana* (Ach.) Th. Fr.
- B. tricholomum* (Mont.) Zahlbr.
- C. grossa* (Pers.) Blomb.
- C. leucophaea* (DC.) Zahlbr.
- C. badiater* (Flk.) Th. Fr.
- D. badiatra* (Flk.) Clem.
- C. rufidula* Hue
- D. thunbergi* (Ach.) Nyl.
- D. polycarpa* (Hepp) Clem.
- G. vellea* (L.) Ach.
- L. abietina* (Ach.) Koerb.
- L. enteroleuca* Ach.
- L. pezizoideum* (Ach.) Koerb.
- M. sulphurata* M. & F.
- M. metabolum* (Nyl.) Müll. Arg.
- M. sanguinarius* (L.) Th. Fr.
- O. groenlandica* Koerb.
- P. obscuratum* (Ach.) Clem.
- P. breviuscula* (Nyl.) M. A.
- P. geophana* (Nyl.) Clem.
- P. filicicola* Zahlbr.
- P. decipiens* (Ehrh.) Ach.
- P. pannarioides* (Kn.) M. A.
- P. subdescendens* Nyl.
- R. geographicum* (L.) DC.
- S. abietinum* (Ehrh.) Koerb.
- S. myriadea* (Fee) Clem.
- S. umbrinum* (Ach.) Mass.
- S. stereocaulis* Wain.
- T. candidum* (Web.) Th. Fr.
- D. candida* (Web.) Clem.

- Toninia* (Mass.) Th. Fr. Lich. Scan. 1:320  
1874.  
*Umbilicaria* Ach. Vet. Akad. Handl. 15:255  
1794.
- T. *squarrosa* (Ach.) Th. Fr.  
U. *pustulata* (L.) Hoffm.

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- Argopsis* Th. Fr. Nov. Act. Sci. Upsal.  
3:2:325 1858.  
*Baeomyces* Pers. Neue Ann. Bot. 19 1794.  
*Chlorocaulum* Clem. Gen. Fung. 78,175 1909.  
*Cladonia* (Hill) Wain. Mon. Cladon. 5 1887.  
*Cyanobaeis* Clem. Gen. Fung. 78,175 1909.  
*Dibaëis* Clem. Gen. Fung. 78,175 1909.  
*Glossodium* Nyl. Mem. Soc. Cherbourg 3:169  
1855.  
*Gomphillus* Nyl. Mem. Soc. Cherbourg 3:186  
1855.  
*Gymnoderma* Nyl. Syn. Lich. 2:27 1863.  
*Heteromyces* Müll. Arg. Flora 72:505 1889.  
*Lachnocaulum* Wain. Etud. Lich. Bres. 1:67  
1890.  
*Pilophorum* Th. Fr. Ster. Philoph. Comm. 40  
1857.  
*Stereocaulum* Schreb. Gen. Pl. 2:768 1796.  
*Thysanothecium* Berk. & Mont. Lond. Jour.  
Bot. 5:257 1846.
- A. *megalospora* Th. Fr.  
B. *byssoides* (L.) Schwer.  
C. *salazinum* (Bory) Clem.  
C. *rangiferina* (L.) Web.  
C. *paeminosa* (Krhph.) Clem.  
D. *rosea* (Pers.) Clem.  
G. *aversum* Nyl.  
G. *calicioides* (Del.) Nyl.  
G. *coccocarpum* Nyl.  
H. *rubescens* Müll. Arg.  
L. *colensoi* (Bab.) Wain.  
P. *robustum* Th. Fr.  
S. *paschale* (L.) Ach.  
T. *hookeri* B. & M.

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## Lecanorae

- Adermatis* Clem. Gen. Fung. 79,175 1909.  
*Calenia* Müll. Arg. Lich. Epi. Nov. 3 1890.  
*Candelariella* Müll. Arg. Bull. Herb. Boiss.  
2:11 1894.  
*Conotrema* Tuck. Proc. Am. Acad. Art. Sci.  
1:199 1848.  
*Diploschistes* Norm. Nyt. Mag. Nat. 7:232  
1853.  
*Dyslecanis* Clem. Gen. Fung. 79,175 1909.  
*Haematomma* Mass. Ric. Aut. Lich. 32 1852.  
*Harpidium* Koerb. Syst. Lich. Germ. 157  
1855.  
*Icmadophila* Trev. Riv. Accad. Padova 267  
1851.  
*Lecania* (Mass.) Zahlbr. Nat. Pflanzenf.  
1:1:204 1907.  
*Lecanora* (Ach.) Th. Fr. Nov. Act. Sci. Upsal.  
3:3:199 1861.  
*Myriolecis* Clem. Gen. Fung. 79,175 1909.  
*Myxodictyum* Mass. Att. Ist. Venet. 3:5:254  
1860.  
*Ochrolechia* Mass. Ric. Aut. Lich. 30 1852.  
*Phlyctella* Krph. Verh. z-b. Ges. Wien 26:462  
1876.
- A. *nylanderiana* (Mass.) Clem.  
C. *pulchella* Müll. Arg.  
C. *cerinella* (Flk.) Zahlbr.  
C. *urceolatum* (Ach.) Tuck.  
D. *scruposus* (L.) Norm.  
D. *syringea* (Ach.) Clem.  
H. *ventosum* (L.) Mass.  
H. *rutilans* (Fw.) Koerb.  
I. *ericetorum* (L.) Zahlbr.  
L. *cyrtella* (Ach.) Oliv.  
L. *subfusca* (L.) Ach.  
M. *sambuci* (Pers.) Clem.  
M. *chrysostictum* (Tayl.) Mass.  
O. *tartarea* (L.) Mass.  
P. *brasiliana* (Nyl.) Zahlbr.

- Phlyctidia Müll. Arg. Hedwigia 34:141 1895. P. ludoviciensis Müll. Arg.  
 Phlyctis Fw. Bot. Zeit. 8:571 1850. P. agelaea (Ach.) Koerb.  
 Psoroma Nyl. Mem. Soc. Cherbourg. 3:175  
 1855. P. hypnorum (Dicks.) Hoffm.  
 Solenopsora Mass. Framm. Lich. 20 1855. S. candicans (Fr.) Zahlbr.

Pertusariae

- Perforaria Müll. Arg. Nuov. Giorn. Ital. 23:126  
 1891. P. cucurbitula (Mont.) M. A.  
 Pertusaria DC. Flor. Fr. ed. 3 2:319 1805. P. bryontha (Ach.) Nyl.  
 Varicellaria Nyl. Lich. Scan. 162 1861. V. rhodocarpa (Koerb.) Th. Fr.

Acarosporae

- Acarospora Mass. Ric. Aut. Lich. 27 1852. A. glaucocarpa (Wahlb.) Koerb.  
 Glypholecia Nyl. Ann. Sci. Nat. 2:20:317  
 1863. G. scabra (Pers.) Th. Fr.  
 Maronea Mass. Flora 39:291 1856. M. constans (Nyl.) Th. Fr.  
 Pleochroma Clem. Gen. Fung. 80,175 1909. P. vitellinum (Ehrh.) Clem.

Gyalectae

- Bryophagus Nke. Flora 45:58 1862. B. leucaspis (Krh.) Nke.  
 Diplopeltopsis Hoehn. Bub. & Kab. Fung.  
 Imp. Exs. n. 76 1904; for Diplopeltis  
 Henn. 41:146 1902. D. zimmermanniana Henn.  
 Gyalecta (Ach.) Zahlbr. Nat. Pflanzenf.  
 1:1:125 1905. G. cupularis (Ehrh.) Fr.  
 Gyrostomum Fr. Syst. Orb. Veg. 1:268 1825. G. scyphuliferum (Ach.) Fr.  
 Jonaspis Th. Fr. Lich. Scan. 1:273 1871. J. chrysohana (Kbr.) Stein  
 Lecaniopsis Zahlbr. Nat. Pflanzenf. 8:147  
 1926. L. perminuta (Wain.) Zahlbr.  
 Leptotrema Mont. & Bosch. Plant. Jungh.  
 4:483 1855. L. leiospodium (Nyl.) Zahlbr.  
 Microphiale Zahlbr. Nat. Pflanzenf. 1:1:25  
 1905. M. lutea (Dicks.) Stnr.  
 Ocellularia (Mey.) Müll. Arg. Mem. Soc.  
 Geneve 29:5 1887. O. berkleyana (Mont.) Zahlbr.  
 Pachyphiale Lönnr. Flora 41:611 1858. P. fagicola (Hepp.) Zwackh  
 Phaeotrema Müll. Arg. Mem. Soc. Geneve  
 29:10 1887. P. subfarinosum (Fee) M. A.  
 Phanotylum Clem. Gen. Fung. 81,175 1909. P. australiense (Müll. Arg.) Clem.  
 Phyllobrassia Wain. Ann. Acad. Fenn.  
 A:15:173 1921. P. mirifica (Krh.) Wain.  
 Phyllophtharmaria Zahlbr. Nat. Pflanzenf.  
 1:1:120 1905. P. zamiae (Müll. Arg.) Zahlbr.  
 Polystroma Clemente. Ensay. 299 1807. P. ferdinandezii Clemente  
 Ramonia Stzbr. Ber. St. Gall. Ges. 168 1862. R. valenzuelana (Mont.) Stzbrgr.  
 Sagirolechia Mass. Gen. Lich. 11 1854. S. protuberans (Ach.) Mass.  
 Semigyalecta Wain. Ann. Acad. Fenn.  
 A:15:153 1921. S. paradoxa Wain.  
 Thelotrema (Ach.) Müll. Arg. Mem. Soc.  
 Geneve 29:10 1887. T. lepadinum Ach.  
 Tremotylum Nyl. Bull. Soc. Linn. Norm.  
 2:2:513 1868. T. occultum Stirt.

## Stictae

- Cystolobis* Clem. Gen. Fung. 81,175 1909. C. *leucocarpa* (Müll. Arg.) Clem.  
*Diphaeosticta* Clem. Gen. Fung. 81,175 1909. D. *physciospora* (Nyl.) Clem.  
*Diphanocticta* Clem. Gen. Fung. 81,175 1909. D. *cellulifera* (H. & T.) Clem.  
*Dysticta* Clem. Gen. Fung. 81,175 1909. D. *sinuosa* (Pers.) Clem.  
*Lobaria* (Schreb.) Zahlbr. Nat. Pflanzenf. L. *pulmonaria* (L.) Hoffm.  
 1:1:185 1906. P. *freycineti* (Del.) Clem.  
*Phanosticta* Clem. Gen. Fung. 81,175 1909. S. *aurata* Ach.  
*Sticta* Schreb. Gen. Pl. 768 1791.

## Parmeliae

- Anzia* Stzbgr. Flora 44:390 1861. A. *colpodes* (Michx.)  
*Candelaria* Mass. Flora 35:567 1852. C. *concolor* (Dicks.) Wain.  
*Cetraria* Ach. Meth. Lich. 292 1803. C. *islandica* (L.) Ach.  
*Heterodea* Nyl. Bull. Soc. Linn. Norm. 2:2:47 H. *muelleri* (Hpe.) Nyl.  
 1868. M. *cylindrophora* (Tayl.) Wain.  
*Megalopsora* Wain. Ann. Acad. Fenn. A:15:27 N. *ciliaris* (Ach.) Hue  
 1921.  
*Nephromopsis* Müll. Arg. Flora 74:374 1891.  
*Parmelia* (Ach.) DeN. Giorn. Bot. Ital. 2:189 P. *conspersa* (Ehrh.) Ach.  
 1847. P. *ambigua* (Ach.) Nyl.  
*Parmeliopsis* Nyl. Syn. Lich. 2:53 1863. P. *cyphellata* Lyngé  
*Pseudoparmelia* Lyngé Ark. Bot. 13:15 1913.  
*Physcidia* Tuck. Proc. Am. Acad. Art. Sci. P. *wrighti* (Tuck.) Nyl.  
 5:399 1862.

## Usneae

- Alectoria* Ach. Lich. Univ. 120 1810. A. *sarmentosa* Ach.  
*Bryopogon* Link Grund. Kräuter. 3:164 B. *jubata* (L.) Nyl.  
 1833. D. *arctica* (Hook.) Nyl.  
*Dactylina* Nyl. Syn. Lich. 1:286 1860. D. *madreporiformis* (Wulf.) Ach.  
*Dufourea* Ach. Lich. Univ. 103 1810.  
*Endocena* Cromb. Jour. Linn. Soc. 15:226 E. *informis* Cromb.  
 1876. E. *prunastri* (L.) Ach.  
*Evernia* Ach. Lich. Univ. 84 1810. E. *trulla* (Ach.) Nyl.  
*Everniopsis* Nyl. Syn. Lich. 1:374 1860. L. *vulpina* (L.) Wain.  
*Letharia* Zahlbr. Hedwigia 31:34 1892. O. *loxensis* (Fee) Th. Fr.  
*Oropogon* Th. Fr. Gen. Heterolich. 49 1861. R. *calicaris* (L.) Fr.  
*Ramalina* Ach. Lich. Univ. 122 1810. S. *ceratites* (Wahlb.) Fr.  
*Siphula* Fr. Syst. Orb. Veg. 1:238 1825. T. *vermicularis* (Sw.) Ach.  
*Thamnolia* Ach. Schaer. Enum. Crit. Lich. U. *florida* (L.) Hoffm.  
 Eur. 243 1850.  
*Usnea* Wigg. Prim. Flor. Holsat. 90 1780.

## Stictinae

- Dystictina* Clem. Gen. Fung. 81,175 1909. D. *tomentosa* (Sw.) Clem.  
*Lobarina* Nyl. Flora 60:233 1877. L. *scrobiculata* (Scop.) DC.  
*Merostictina* Clem. Gen. Fung. 81,175 1909. M. *mougeotiana* (Del.) Clem.  
*Phycodiscis* Clem. Gen. Fung. 83,175 1909. P. *retigera* (Bory) Clem.  
*Podostictina* Clem. Gen. Fung. 82,175 1909. P. *endochrysoides* (Müll. Arg.)  
 Clem.  
*Stictina* Nyl. Syn. Lich. 1:333 1860. S. *crocata* (Ach.) Nyl.

## Pannariae

- Coccocarpia* Pers. Goudich. Voy. Uran. Bot.  
206 1824.
- Erioderma* Fee Essai Crypt. 146 1824.
- Hueella* Zahlbr. Nat. Pflanzenf. 8:180 1926.
- Hydrothyria* Russ. Proc. Essex Inst. 1:188  
1853.
- Lepidocollema* Wain. Etud. Lich. Bres. 1:231  
1890.
- Lepidogium* A. L. Smith Jour. Linn. Soc.  
46:79 1922; for *Lepidoleptogium*.
- Massalongia* Koerb. Syst. Lich. Germ. 109  
1855.
- Pannaria* Del. Bory Dict. Hist. Nat. 13:20  
1828.
- Parmeliella* Müll. Arg. Mem. Soc. Geneve  
16:376 1862.
- Placynthium* Gray Nat. Arrang. Brit. Pl.  
1:395 1821.
- C. pellita* (Ach.) M. A.
- E. polycarpum* Fee
- H. fauri* (Hue) Zahlbr.
- H. venosa* Russ.
- L. carassense* Wain.
- L. montagnei* Smith
- M. carnosa* (Dicks.) Koerb.
- P. pezizoides* (Web.) Lightf.
- P. triptophylla* (Ach.) M. A.
- P. nigrum* (Huds.) Gray

## PHYSICIACEAE

- Anaptychia* Koerb. Mass. Mem. Lich. 33 1853.
- Blastenia* Mass. Att. Ist. Venet. 2:3:101 1852.
- Bombyliospora* DeN. Mass. Ric. Aut. Lich.  
114 1852.
- Buellia* DeN. Giorn. Bot. Ital. 1:195 1846.
- Caloplaca* Th. Fr. Lich. Scan. 1:167 1871.
- Dictyorinis* Clem. Gen. Fung. 84,175 1909.
- Diplotomma* Th. Fr. Lich. Scan. 1:607 1874.
- Dirinaria* Tuck. Proc. Am. Acad. Art. Sci.  
12:166 1877.
- Hyperphyscia* Müll. Arg. Bull. Herb. Boiss.  
2:10 1894.
- Lethariopsis* Zahlbr. Nat. Pflanzenf. 8:253  
1926.
- Meroplacis* Clem. Gen. Fung. 84,175 1909.
- Merorinis* Clem. Gen. Fung. 84,175 1909.
- Niorma* Mass. Mem. Ist. Ven. 10:83 1861.
- Phragmopyxine* Clem. Gen. Fung. 84,175  
1909.
- Physcia* (Ach.) Wain. Etud. Lich. Bres. 1:138  
1890.
- Pleorinis* Clem. Gen. Fung. 84, 175 1909.
- Protoblastenia* Stnr. Verh. z-b. Ges. Wien  
61:47 1911.
- Pyxine* Fr. Syst. Orb. Veg. 1:267 1825.
- Rinodina* (Gray) Mass. Ric. Aut. Lich. 14  
1852.
- Theloschistes* Norm. Nyt. Mag. Nat. 7:228  
1853.
- Xanthocarpia* Mass. & DeN. Alc. Gen. Lich.  
11 1853.
- Xanthoria* Th. Fr. Nov. Act. Sei. Upsal.  
3:3:166 1861.
- A. ciliaris* (L.) Mass.
- B. ferruginea* (Huds.) Arn.
- B. domingensis* (Pers.) Zahlbr.
- B. parasema* (Ach.) Th. Fr.
- C. aurantiaca* (Lightf.) Th. Fr.
- D. diplinthia* (Nyl.) Clem.
- D. atralba* (Hoffm.) Th. Fr.
- D. picta* (Sw.)
- H. synthalea* (Kn.)
- L. wandelensis* (Hue) Zahlbr.
- M. brebissoni* (Fee) Clem.
- M. conradi* (Koerb.) Clem.
- N. hypoglaucia* (Nyl.)
- P. eschweileri* (Tuck.) Clem.
- P. stellaris* (L.) Nyl.
- P. polyspora* (Th. Fr.) Clem.
- P. rupestris* (Scop.) Zahlbr.
- P. cocoes* (Sw.) Nyl.
- R. sophodes* (Ach.) Th. Fr.
- T. chrysophthalmus* (L.) Th. Fr.
- X. ochracea* (Schaer.) M. & DeN.
- X. parietina* (L.) Th. Fr.

## Genera Incertae Sedis Vel Dubia

Cf. Zahlbruckner Nat. Pflanzenf. 8:136, 153,  
160, 163, 172, 182, 201, 209, 220, 229, 238,  
246, 261. 1926.

## MOLLISIIACEAE

- Beloniella** (Sacc.) Rehm Rabh. Krypt. Flor.  
3:638 1896.
- Belonopeziza** Hoehn. Ann. Myc. 15:310,  
343 1917.
- Belioscyphella** Hoehn. Sitzb. Akad. Wien  
127:589 1918.
- Belonidium** Mont. & Dur. Flor. Alg., ill.  
1846; Rehm Ascom. 561 1880.
- Manilaea** Syd. Ann. Myc. 12:569 1914.
- Belonopsis** Sacc. Syll. Fung. 8:351 1889;  
16:752 1902.
- Bioscypha** Syd. Ann. Myc. 25:102 1927.
- Ciliella** Sacc. & Syd. Syll. Fung. 16:748  
1902.
- Dibelonis** Clem. Gen. Fung. 86, 175 1909.
- Dictyomollis** Rehm. Ann. Myc. 7:540 1909;  
for Dictyomollisia.
- Calopeziza** Syd. Phil. Jour. Sci. 8:499, ill.  
1913; Syll. Fung. 24:1216 1928.
- Fabraea** Sacc. Michelia 2:331 1881.
- Gonothecium** Wainio Act. Soc. Fenn. 7:29  
1890 as subgenus of Lecidea.
- Hyphodiscus** Kirschst. Abh. Bot. Brandenb.  
43:44, ill. 1906.
- Linhartia** Sacc. & Syd. Syll. Fung. 16:744  
1902; Jour. Myc. 10:213 1904.
- Mollisia** Fr. Syst. Myc. 2:137 1822.
- Lemalis** Fr. Sum. Veg. Scan. 360 1849;  
Syll. Fung. 3:672 1884; cf. Hoehn. Syst.  
Fung. Imp. 360 1923.
- Mollisiella** Sacc. Syll. Fung. 18:64 1906;  
cf. Hoehn. Frag. Myk. 528.
- Unguiculariopsis** Rehm Ann. Myc. 7:400  
1909.
- Mollisiopsis** Rehm Ann. Myc. 6:315 1908.
- Neofabraea** Jackson Rep. Oreg. Exp. Sta.  
1911-12:187 1913.
- Niptera** Fr. Sum. Veg. Scan. 359 1849.
- Angelinia** Fr. Sum. Veg. Scan. 358 1849;  
cf. Durand Jour. Myc. 8:108 1902; Hoehn.  
Ann. Myc. 16:150 1918.
- Calycellina** Hoehn. Sitzb. Akad. Wien  
127:601 1918.
- Perrotiella** Naumov Trav. Bur. Myc. 26,  
ill. 1915.
- Pazschkea** Rehm Rabh.-Pazsch. Fung. Eur.  
4172. 1898.
- B. graminis** (Desm.) Rehm
- B. graminis** (Desm.) Hoehn.
- B. hypnorum** (Syd.) Hoehn.
- B. lacustre** (Fr.) Phill.
- M. bambusina** Syd.
- B. excelsior** (Karst.) Rehm
- B. cyatheae** Syd.
- C. epidendri** (Rehm) S. & S.
- D. vossi** (Rehm) Clem.
- D. albigranulata** Rehm
- C. mirabilis** Syd.
- F. ranunculi** (Fr.) Karst.
- L. glaucovirescens** Wainio
- H. gregarius** Kirschst.
- L. tropicalis** (Rehm) S. & S.
- M. cinerea** (Batsch) Karst.
- L. alismatis** (Pers.) Fr.
- M. ilicincola** (B. & Br.) Sacc.
- U. ilicincola** (B. & Br.) Rehm
- M. subcinerea** Rehm
- N. malicorticis** (Cordley) Jack.
- N. ramealis** Karst.
- A. rufescens** (Schw.) Duby
- C. punctiformis** (Grev.) Hoehn.
- P. uralensis** Naumov
- P. lichenoides** Rehm



- Psorotheciella* Sacc. & Syd. Syll. Fung. 16:746 1902.
- Phaeofabraea* Rehm Ann. Myc. 7:541 1909.
- Pirottaea* Sacc. Michelia 1:424 1878.
- Protoscypha* Syd. Ann. Myc. 23:402, ill. 1925.
- Pseudopeziza* Fkl. Symb. Myc. 290 1869.
- Drepanopeziza* (Klebahn) Hoehn. Ann. Myc. 15:323 1917.
- Phaeorhytisma* Henn. & Nym. Monsunia 1:29 1899; cf. Hoehn. Ann. Myc. 15:315 1917.
- Pseudorhytisma* Juel Vet. Akad. Förh. 498, ill. 1894; cf. Rehm Rabh. Krypt. Flor. 3:1264 1896.
- Psorotheciopsis* Rehm Hedwigia 39:217 1900.
- Pyrenopezis* Hoehn. Ber. Deut. Bot. Ges. 35:251 1917; for *Pyrenopezizopsis*.
- Pyrenopeziza* Fkl. Symb. Myc. 293 1869.
- Excipula* Fr. Syst. Myc. 2:190 1822; Syll. Fung. 3:664 1884; cf. Hoehn. Frag. Myk. 913 1915; not Sacc. et al. l. c.
- Placopeziza* Hoehn. Frag. Myk. 961 1916; cf. Hoehn. Ann. Myc. 15:334 1917.
- Spilopodia* Boud. Bull. Soc. Myc. Fr. 1:120 1885.
- Spilopezis* Clem. Gen. Fung. 85, 175 1909.
- Stictoclypeolum* Rehm Hedwigia 44:9 1904.
- Strossmayera* Schulz. Oest. Bot. Zeits. 31:314 1881.
- Tapesia* Pers. Myc. Eur. 1:220 1822.
- Trichobelonium* Sacc. Syll. Fung. 8:495 1889, as subg.; 16:747 1902.
- Velutaria* Fkl. Symb. Myc. 400 1869.
- P. biseptata* (Rehm) S. & S.
- P. miconiae* Rehm
- P. veneta* Sacc. & Speg.
- P. pulla* Syd.
- P. trifolii* (Biv.) Fkl.
- D. populorum* (Desm.) Hoehn.
- P. loniceræ* H. & N.
- P. bistortæ* (Lib.) Juel
- P. decipiens* Rehm
- P. noppeneyana* (Feltg.) Hoehn.
- P. rubi* (Fr.) Rehm
- E. rubi* Fr.
- P. phyteumatis* (Fkl.) Hoehn.
- S. nervisequia* (Pers.) Boud.
- S. radians* (Rob.) Clem.
- S. decipiens* Rehm
- S. racki* Schulz.
- T. fusca* (Pers.) Fkl.
- T. retincolum* (Rabh.) Sacc.
- V. rufolivacea* (A. & S.) Fkl.

## Genus Incertae Sedis

- Melittosporiopsis* Rehm Hedwigia 39:90 1900; Hoehn. Ann. Myc. 15:359 1917.
- M. violacea* Rehm

## HELOTIACEAE

- Archnopeziza* Fkl. Symb. Myc. 303 1869.
- Arenaea* Penz. & Sacc. Syll. Fung. 18:75 1906.
- Belonioscypha* Rehm Rabh. Krypt. Flor. 3:743 1896.
- Belonioscyphella* Hoehn. Sitzb. Akad. Wien 127:589 1918.
- Belonium* Sacc. Consp. Gen. Disc. 7 1884.
- Leptobelonium* Hoehn. Sitzb. Akad. Wien 132:112 1924.
- Manilaea* Syd. Ann. Myc. 12:569, ill. 1914; Syll. Fung. 24:1213 1928.
- Pseudohelotium* Fkl. Symb. Myc. 298 1869.
- A. aurelia* (Pers.) Fkl.
- A. javanica* P. & S.
- B. vexata* (DeN.) Rehm
- B. hypnorum* (Syd.) Hoehn.
- B. pineti* (Batsch) Rehm
- L. basitrichum* (Sacc.) Hoehn.
- M. bambusina* Syd.
- P. pineti* (Batsch) Fkl.

- Belospora* Clem. Gen. Fung. 87, 175 1909.  
*Chlorosplenium* Fr. Sum. Veg. Scan. 356 1849.  
*Comesia* Sacc. Consp. Gen. Disc. 6 1884.  
*Cryptopezia* Hoehn. Sitzb. Akad. Wien 128:571 1919.  
*Cyathicula* DeNot. Comm. Critt. 1:381 1864.  
*Dasyscypha* Fr. Syst. Myc. 2:89 1822; Fkl. Symb. Myc. 304 1869.  
*Microscypha* Syd. Ann. Myc. 17:38 1919.  
*Torrendiella* Boud. & Torr. Bull. Soc. Myc. Fr. 27:133 1911.  
*Dasyscyphella* Transch. Hedwigia Beibl. 38:11 1899.  
*Dasypezis* Clem. Gen. Fung. 88, 175 1909.  
*Chaetoscypha* Syd. Ann. Myc. 22:305, ill. 1924.  
*Davincia* Penz. & Sacc. Syll. Fung. 18:101 1906.  
*Diplocarpa* Masee Brit. Fung. Fl. 4:307 1895.  
*Dyslachnum* Clem. Gen. Fung. 87, 175 1909.  
*Endoscypha* Syd. Ann. Myc. 22:306, ill. 1924.  
*Erinella* Sacc. Syll. Fung. 8:507 1889.  
*Eriopeziza* Sacc. Syll. Fung. 8:381 1889, as subg.; Rehm Ascom. 695 1896.  
*Eubelonis* Clem. Gen. Fung. 87, 175 1909.  
*Gorgoniceps* Karst. Myc. Fenn. 1:15 1871.  
*Apostemidium* Karst. Myc. Fenn. 1:15, 186 1871; cf. Rehm Rabh. Krypt. Flor. 3:1232 1896.  
*Helolachnum* Torrend Broteria Bot. 9:53 1910.  
*Helotiopsis* Hoehn. Sitzb. Akad. Wien 119:623 1910.  
*Tangella* Hoehn. Sitzb. Acad. Wien 127:606 1918.  
*Helotium* Fr. Sum. Veg. Scan. 354 1849.  
*Bisporella* Sacc. Consp. Gen. Disc. 6 1884.  
*Calycella* Sacc. Syll. Fung. 8:248 1889, as subg.; 14:31 1899.  
*Calycellina* Hoehn. Frag. Myk. 1129 1918.  
*Chlorospleniella* Sacc. Syll. Fung. 8:645 1889, as subg.; 16:774 1902.  
*Ciboria* Fkl. Symb. Myc. 311 1869.  
*Micropodia* Boud. Bull. Soc. Myc. Fr. 1:118 1885; cf. Hoehn. Frag. Myk. 1127.  
*Moellerodiscus* Henn. Hedwigia 41:33 1902; Syll. Fung. 18:8 1906.  
*Rhizocalyx* Petr. Hedwigia 68:233 1928.  
*Hymenoscypha* (Fr.) Phill. Man. Brit. Disc. 111 1887.  
*Hypohoscypha* Bres. Jour. Myc. 10:212 1904.
- B. ciliatospora* (Fkl.) Clem.  
*C. aeruginosum* (Oeder) Fr.  
*C. felicitatis* (Crouan) Sacc.  
*C. mirabilis* Hoehn.  
*C. coronata* (Bull.) DeN.  
*D. cerina* (Pers.) Fkl.  
*M. grisella* (Rehm) Syd.  
*T. ciliata* B. & T.  
*D. albolutea* (Pers.) Clem.  
*D. cassandrae* Transch.  
*C. nidulans* Syd.  
*D. helios* P. & S.  
*D. curreyana* Masee  
*D. mollissimum* (Lasch) Clem.  
*E. perforans* Syd.  
*E. juncicola* (Fkl.) Sacc.  
*E. caesia* (Pers.) Rehm.  
*E. drosodes* (Rehm) Clem.  
*G. aridula* Karst.  
*A. fiscella* Karst.  
*H. aurantiacum* Torr.  
*H. apicalis* (B. & Br.) Hoehn.  
*T. austriaca* Hoehn.  
*H. citrinum* (Hedw.) Fr.  
*B. monilifera* (Fkl.) Sacc.  
*C. alutacea* (B. & Br.) Sacc.  
*C. punctiformis* (Grev.) Hoehn  
*C. fennica* (Karst.) Sacc.  
*C. amentacea* (Balb.) Fkl.  
*M. pteridina* (Nyl.) Boud.  
*M. brockesia* Henn.  
*R. abietis* Petr.  
*H. virgultorum* (Wahl.) Phill.  
*H. virginea* Bres.

- Lachnaster** Hoehn. Ber. Deut. Bot. Ges. 35:250 1917.  
**Lachnella** Fr. Sum. Veg. Scan. 365 1849.  
**Perrotia** Boud. Bull. Soc. Myc. Fr. 17:23 1901.  
**Lachnellula** Karst. Medd. Soc. Fenn. 11:138 1884.  
**Lachnum** Retz. Prod. 329 1779.  
**Hyalopeziza** Fkl. Symb. Myc. 297 1869.  
**Lambertella** Hoehn. Sitzb. Akad. Wien 127:375 1918.  
**Lanzia** Sacc. Consp. Gen. Disc. 6 1884.  
**Lasiobelonis** Sacc. Syll. Fung. 8:502 1889, as subg.; 14:789 1899; for *Lasiobelonium*.  
**Masseea** Sacc. Syll. Fung. 18:99 1906.  
**Merodontis** Clem. Gen. Fung. 87, 175 1909.  
**Davinciella** Sacc. Syll. Fung. 18:101 1906, as subg.; 24:1214 1928.  
**Pezizella** Fkl. Symb. Myc. 299 1869; Rehm Rabh. Krypt. Flor. 3:653 1896.  
**Hyaloscypha** Boud. Bull. Soc. Myc. Fr. 1:118 1885.  
**Pezizellaster** Hoehn. Ann. Myc. 15:349 1917.  
**Pezoloma** Clem. Gen. Fung. 86, 175 1909.  
**Phaeociboria** Hoehn. Sitzb. Akad. Wien 127:593 1918.  
**Phalothrix** Clem. Gen. Fung. 88, 175 1909.  
**Unguicularia** Hoehn. Ann. Myc. 3:404, ill. 1905; Syll. Fung. 24:1202 1928.  
**Phialea** Fr. Obs. Myc. 2:305 1818.  
**Pocillum** DeNot. Prof. Disc. 361 1864.  
**Rutstroemia** Karst. Myc. Fenn. 1:12 1871.  
**Kriegeria** Winter Hedwigia 17:32 1878.  
**Scelobelonium** (Sacc.) Hoehn. Ann. Hofmus. Wien 20:3 1905; Sitzb. Akad. Wien 127:40 1918.  
**Sclerotinia** Fkl. Symb. Myc. 330 1869.  
**Stromatinia** Boud. Bull. Soc. Myc. Fr. 1:115 1885.
- L. gracilis** Hoehn.  
**L. flammea** (A. & S.) Fr.  
**P. flammea** (A. & S.) Boud.  
**L. chrysophthalma** (Pers.) Karst.  
**L. bicolor** (Bull.) Karst.  
**H. patula** (Pers.) Fkl.  
**L. corni-maris** Hoehn.  
**L. flavorufa** Sacc.  
**L. amoenum** (Speg.) Sacc.  
**M. quisquiliarum** (B. & C.) Sacc.  
**M. tenella** (P. & S.) Clem.  
**D. tenella** (P. & S.) Trott.  
**P. granulosella** (Karst.) Rehm  
**H. dentata** (Pers.) Boud.  
**P. radiostriatus** (Feltg.) Hoehn.  
**P. griseum** Clem.  
**P. sejournei** (Boud.) Hoehn.  
**P. hyalotricha** (Rehm) Clem.  
**U. unguiculata** Hoehn.  
**P. vulgaris** (Fr.) Rehm  
**P. cesati** (Mont.) DeN.  
**R. firma** (Pers.) Karst.  
**K. elatina** (A. & S.) Hoehn.  
**S. melanosporum** (Rehm) Hoehn.  
**S. sclerotiorum** (Lib.) Mass.  
**S. pseudotuberosa** (Rehm) Boud.

## PEZIZACEAE

- Acetabula** Fr. Syst. Myc. 2:43 1822.  
**Paxina** Kuntze Rev. Gen. Pl. 2:864 1891.  
**Phleboscypus** Clem. Bull. Torr. Club 30:93 1903.  
**Aleuria** Fkl. Symb. Myc. 325 1869.  
**Aleurina** Sacc. Syll. Fung. 8:472 1889, as subg.; 18:88 1906; cf. *Seaver Mycologia* 6:277, ill. 1914.  
**Catinella** Boud. Hist. Class. Disc. 190 1907; cf. Hoehn. Frag. Myc. 457.  
**Desmazierella** Lib. Ann. Sci. Nat. 17:82 1829.  
**Discina** Fr. Sum. Veg. Scan. 348 1849.
- A. vulgaris** Fkl.  
**P. acetabulum** (L.) Kuntze  
**P. vulgaris** (Fkl.) Clem.  
**A. aurantia** (Muell.) Fkl.  
**A. retiderma** (Cke.) S. & S.  
**A. olivacea** (Batsch) Boud.  
**D. acicola** Lib.  
**D. venosa** (Pers.) Sacc.

- Galactinia* Cooke Mycographia 253 1879.  
*Heteroplegma* Clem. Bull. Torr. Club 30:92 1903.  
*Geopyxis* Pers. Myc. Eur. 1:42 1822.  
*Humaria* Fr. Syst. Myc. 2:42 1822.  
*Humarina* Seaver Mycologia 19:87 1927.  
*Pseudombrophila* Boud. Hist. Disc. Eur. 65 1907.  
*Iotidea* Clem. Gen. Fung. 89, 175 1909.  
*Lamprospora* DeNot. Comm. Critt. Ital. 1:388 1864.  
*Barlaea* Sacc. Syll. Fung. 8:111 1889; not Reich. 1877.  
*Barlaeina* Sacc. & Syd. Syll. Fung. 14:30 1899.  
*Detonia* Sacc. Syll. Fung. 8:105 1889.  
*Otidella* Sacc. Syll. Fung. 8:99 1889.  
*Leucopezis* Clem. Gen. Fung. 90 1909; Minn. Bot. Studies 4:187 1911.  
*Macropodia* Fkl. Symb. Myc. 331 1869.  
*Melachroia* Boud. Bull. Soc. Myc. Fr. 1:112 1885.  
*Neottiella* Cooke Mycographia 261 1879.  
*Neottiopezis* Clem. Gen. Fung. 90 1909.  
*Otidea* Pers. Myc. Eur. 1:220 1822; cf. Seaver N.A. Cup-fungi 184 1928.  
*Scodellina* S. F. Gray Nat. Arr. Brit. Pl. 1:668 1821.  
*Pelodiscus* Clem. Rep. Bot. Surv. Nebr. 5:8 1901.  
*Peziza* (Dill.) L. Sp. Pl. 2:1180 1753.  
*Plicaria* Fkl. Symb. Myc. 325 1869.  
*Pustularia* Fkl. Symb. Myc. 328 1869.  
*Phaeomacropus* Henn. Monsunia 1:172 1899.  
*Phaeopezia* Sacc. Michelia 1:71 1877.  
*Pitya* Fkl. Symb. Myc. 317 1869.  
*Pityella* Boud. Hist. Disc. Eur. 125 1907.  
*Plectania* Fkl. Symb. Myc. 324 1869.  
*Plicariella* Sacc. Consp. Gen. Disc. 6 1884.  
*Podaleuris* Clem. Gen. Fung. 89, 175 1909.  
*Pseudoplectania* Fkl. Symb. Myc. 324 1869.  
*Pyronema* Carus Nov. Act. Leop. 17:370 1835.  
*Phycascus* Moell. Phyc. Ascom. Bras. 309 1901.  
*Pyrenomella* Sacc. Michelia 1:564 1879.  
*Sarcoscypha* Fr. Syst. Myc. 2:78 1822.  
*Cookeina* Kuntze Rev. Gen. Pl. 2:849 1891.  
*Pilocratera* Henn. Engler Bot. Jahrb. 14:363 1892.  
*Pseudopityella* Seaver Mycologia 19:87 1927.  
*Trichoscypha* Cooke Mycographia 252 1879.  
*Sarcosphaera* Auers. Hedwigia 8:82 1869.
- G. saniosa* (Schrad.) Cke.  
*H. caeruleum* Clem.  
*G. cupularis* (L.) Sacc.  
*H. leucoloma* (Hedw.) Boud.  
*H. leucoloma* (Hedw.) Seaver  
*P. deerrata* (Karst.) Seaver  
*I. pleurota* (Phill.) Clem.  
*L. miniata* (Crouan) DeN.  
*B. miniata* (Crouan) Sacc.  
*B. miniata* (Crouan) S. & S.  
*D. leiocarpa* (Curr.) Sacc.  
*O. fulgens* (Pers.) Sacc.  
*L. excipulata* Clem.  
*M. macropus* (Pers.) Fkl.  
*M. xanthomela* (Pers.) Boud.  
*N. callichroa* (Boud.) Sacc.  
*N. callichroa* (Boud.) Clem.  
*O. cochleata* (L.) Fkl.  
*S. leporina* (Batsch) Gray  
*P. piliseta* Clem.  
*P. vesiculosa* Bull.  
*P. badia* (Pers.) Fkl.  
*P. vesiculosa* (Bull.) Fkl.  
*P. fleischerianus* Henn.  
*P. murina* (Fkl.) Sacc.  
*P. vulgaris* Fkl.  
*P. hypnina* (Quel.) Boud.  
*P. melastoma* (Sow.) Fkl.  
*P. leiocarpa* (Curr.) Rehm  
*P. reperta* (Boud.) Clem.  
*P. nigrella* (Pers.) Fkl.  
*P. omphalodes* (Bull.) Fkl.  
*P. tremellosus* Moell.  
*P. araneosa* Sacc.  
*S. coccinea* (Jacq.) Cke.  
*C. tricholoma* (Mont.) Kuntze  
*P. tricholoma* (Mont.) Henn.  
*P. minuscula* (B. & T.) Seaver  
*T. tricholoma* (Mont.) Cke.  
*S. coronaria* (Jacq.) Schroet.

- Scutellinia Cooke Mycographia 260 1879.  
 Cheilymenia Boud. Bull. Soc. Myc. Fr. 1:105  
 1885.  
 Ciliaria Quelet Bull. Soc. Myc. Fr. 1:105  
 1885; not Stackh. 1809, or Haworth 1821.  
 Humariella Schroet. Schles. Krypt. 3:2:87.  
 Lachnea Fr. Syst. Myc. 2:77 1822; not  
 Lachnaea L. 1753.  
 Melastiza Boud. Bull. Soc. Myc. Fr. 1:106  
 1885.  
 Stereolachnea Hoehn. Ann. Myc. 15:353  
 1917.  
 Tricharia Boud. Bull. Soc. Myc. Fr. 1:104  
 1885.  
 Sepultaria Cooke Mycographia 259 1879.  
 Sphaerospora Sacc. Michelia 1:594 1879.  
 Tarzetta Cooke Mycographia 252 1879.  
 Trichaleuris Clem. Gen. Fung. 89, 175 1909.  
 Trichaleurina Rehm Leaf. Phil. Bot. 6:2234  
 1914; Syll. Fung. 24:1207 1928.  
 Urnula Fr. Sum. Veg. Scan. 364 1849.
- S. scutellata (L.) Lamb.  
 C. stercorea (Pers.) Boud.  
 C. scutellata (L.) Boud.  
 H. scutellata (L.) Schroet.  
 L. scutellata (L.) Gill.  
 M. charteri (Smith) Boud.  
 S. echinus Hoehn.  
 T. gilva (Boud. & Cke.) Boud.  
 S. sepulta (Fr.) Cke.  
 S. trechispora (B. & Br.) Sacc.  
 T. rapulum (Bull.) Cke.  
 T. crinita (Bull.) Clem.  
 T. polytricha Rehm.  
 U. craterium (Schw.) Fr.

Genera Incertae Sedis

- Phillipsia Berk. Austral. Fung. 2:388 1881;  
 cf. Sacc. Syll. Fung. 8:151 1889; Lind.  
 Nat. Pflanzenf. 1:1:178 1897; Seaver N. A.  
 Cup-Fungi 182 1928.  
 Peltigeromyces Moell. Phyc. Ascom. Bras.  
 276, 310 1901.
- P. domingensis Berk.  
 P. microsporus Moell.

HELVELLACEAE

- Cudonia Fr. Sum. Veg. Scan. 348 1849.  
 Leotiella Ploettner Hedwigia 39:197 1900.  
 Cudoniella Sacc. Syll. Fung. 8:41 1889.  
 Geoglossum Pers. Obs. Myc. 1:11 1795.  
 Gloeoglossum Durand Ann. Myc. 6:418 1908.  
 Gyromitra Fr. Sum. Veg. Scan. 346 1849.  
 Helvella L. Sp. Pl. 1648 1763.  
 Hemiglossum Pat. Rev. Myc. 12:135 1890.  
 Leotia Hill Hist. Plant. 43 1751.  
 Microglossum Gill. Disc. Fr. 25 1879.  
 Corynetes Hazsl. Akad. Term. Kor. 11:8  
 1881.  
 Leptoglossum Cooke. Mycographia 250  
 1879.  
 Mitrula Fr. Syst. Myc. 1:491 1822.  
 Spragueola Masee Jour. Bot. 34:149, ill.  
 1896.  
 Morchella Dill. Nov. Gen. 74 1719.  
 Neolecta Speg. Fung. Arg. 4:83 1882.  
 Phaeoglossum Petch Ann. Bot. Gard. Ceylon  
 7:309 1922.
- C. circinans (Pers.) Fr.  
 L. caricicola Ploett.  
 C. acicularis (Bull.) Schroet.  
 G. glabrum Pers.  
 G. glutinosum (Pers.) Dur.  
 G. esculenta (Pers.) Fr.  
 H. lacunosa Afz.  
 H. yunnanense Pat.  
 L. gelatinosa Hill.  
 M. viride (Pers.) Gill.  
 C. purpurascens (Pers.) Dur.  
 L. tremellosum (Cke.) Sacc.  
 M. phalloides (Bull.) Chev.  
 S. americana Masee  
 M. esculenta (L.) Pers.  
 N. flavovirescens Speg.  
 P. zeylanicum Petch

- Psilopezia* Berk. Dec. Fung. 138 1847.  
*Fleischhakea* Rabh. Just Bot. Jahresb. 2:305 1878.  
*Peltidium* Kalchbr. Rabh. Fung. Europ. 521 1857; not Zoll. 1820.  
*Rhizina* Fr. Obs. Myc. 1:161 1815.  
*Spathularia* Pers. Tent. Disp. 36 1797.  
*Mitruliopsis* Peck Bull. Torr. Club 30:100 1903.  
*Sphaerosoma* Klotzsch Dietr. Fl. Boruss. 467 1840.  
*Ruhlandiella* Henn. Hedwigia 42:24 1903; cf. Hoehn. Frag. Myk. 655.  
*Trichoglossum* Boud. Bull. Soc. Myc. Fr. 1:110 1885.  
*Underwoodia* Peck Rep. N. Y. Mus. 43:32 1890.  
*Verpa* Swartz Vet. Akad. Handl. 129 1815.  
*Vibrissea* Fr. Syst. Myc. 2:31 1822.
- P. nummularia* Berk.  
*F. rhizinoides* Rabh.  
*P. oocardii* Kalchbr.  
*R. inflata* (Schaeff.) Quel.  
*S. clavata* (Schaeff.) Sacc.  
*M. flavida* Pk.  
*S. fuscescens* Klotzsch  
*R. berolinensis* Henn.  
*T. hirsutum* (Pers.) Boud.  
*U. columnaris* Pk.  
*V. conica* (Muell.) Swartz  
*V. truncorum* (A. & S.) Fr.

## Genera Incertae Sedis

- Cidaris* Fr. Sum. Veg. Scan. 347 1849.  
*Durandiomyces* Seaver N. A. Cup-Fungi 242, ill. 1928.  
*Paracudonia* Petrak Ann. Myc. 25:246 1927.
- C. caroliniana* (Schw.) Fr.  
*D. phillipsi* (Mass.) Seav.  
*P. sphaerospora* Petrak

## ASCOBOLACEAE

- Ascobolus* Pers. Tent. Disp. 35 1791.  
*Ascophanus* Boud. Mem. Ascob. 51 1869.  
*Boudiera* Cooke Grevillea 6:76 1877.  
*Boudierella* Sacc. Bull. Soc. Bot. Belg. 34:130 1895.  
*Cubonia* Sacc. Syll. Fung. 8:527 1889.  
*Dasybolus* Sacc. Syll. Fung. 11:421 1895.  
*Lasiobolus* Sacc. Consp. Gen. Disc. 8 1884.  
*Ramsbottomia* Buckley Trans. Brit. Myc. Soc. 9:44 1923.  
*Rhyarobius* Boud. Mem. Ascob. 47 1869.  
*Thecotheus* Boud. Mem. Ascob. 45, ill. 1869.  
*Saccobolus* Boud. Mem. Ascob. 38 1869.  
*Streptotheca* Vuill. Jour. de Bot. 33, ill. 1887.  
*Thelebolus* Tode Fung. Meckl. 1:41, ill. 1790.
- A. stercorarius* (Bull.) Schroet.  
*A. carneus* (Pers.) Boud.  
*B. areolata* Cke. & Phill.  
*B. cana* (March.) Sacc.  
*C. brachyasca* (March.) Sacc.  
*D. immersus* (Pers.) Sacc.  
*L. equinus* (Muell.) Karst.  
*R. lamprosporoides* Buck.  
*R. crustaceus* (Fkl.) Rehm  
*T. pelletieri* (Crouan) Boud.  
*S. kerverni* (Crouan) Boud.  
*S. boudieri* Vuill.  
*T. stercorarius* Tode

## AGYRIALES

## AGYRIACEAE

- Agyrina* Keissl. Ann. Nat. Mus. Wien 39:199 1925; Rabh. Krypt. Fl. 8:57 1930.  
*Agyrina* Clem. Gen. Fung. 67, 174 1909; Sacc. Syll. Fung. 8:636 1889, as subg.  
*Agyriopsis* Sacc. & Syd. Syll. Fung. 14:805 1899.
- A. crozalsi* Keissl.  
*A. sexdecimspora* (Fkl.) Clem.  
*A. betheli* (E. & E.) S. & S.

- Agyriella* Ell. & Ev. Bull. Torr. Club 24:470 1897; not Sacc. 1884.
- Agyrium* Fr. Syst. Myc. 2:231 1822.
- Exogone* Henn. Verh. Bot. Brandenb. 50:130 1908.
- Agyronella* Hoehn. Sitzb. Akad. Wien 118:1229 1909.
- Ascocalathium* Eidam Cohn Krypt. Schles. 3:32 1893.
- Ascodesmis* van Tiegh. Bull. Soc. Bot. Fr. 23:271 1876.
- Atichia* Flotow Linnaea 23:149 1850.
- Actinomma* Sacc. Misc. Myc. 1:28 1884; Syll. Fung. 4:753 1886.
- Euthryptum* Theiss. Verh. z-b. Ges. Wien 66:325 1916; cf. Petr. Ann. Myc. 26:392 1928.
- Heterobotrys* Sacc. Michelia 2:21 1880.
- Phycopsis* Mangin & Pat. Comp. Rend. 154:1480, ill. 1912.
- Seuratia* Pat. Bull. Soc. Myc. Fr. 20:136 1904.
- Didymascella* Maire & Sacc. Bull. Soc. Myc. Fr. 17:205 1901.
- Didymascus* Sacc. Malpighia 10:278, ill. 1896.
- Discomycella* Hoehn. Sitzb. Akad. Wien 121:400 1912.
- Gloeopeziza* Zukal Flora 74:100, ill. 1891.
- Haematomyces* B. & Br. Fung. Ceylon 963 1870.
- Haematomyxa* Sacc. Consp. Gen. Disc. 11 1884.
- Henningsiella* Rehm. Hedwigia 34:160 1895.
- Lecideopsella* Hoehn. Sitzb. Akad. Wien 118:1229 1909.
- Medeolaria* Thaxter Proc. Am. Acad. Arts Sci. 57:432 1922.
- Microdiscus* Sacc. Nuov. Giorn. Ital. 23:190 1916; Syll. Fung. 24:1143 1928.
- Brachyascus* Syd. Ann. Myc. 15:285 1917.
- Mollerella* Wint. Bol. Soc. Brot. 4:199 1886.
- Nostotheca* Starb. Bih. Sven. Handl. 25:20 1899; cf. Petr. Ann. Myc. 26:401 1928.
- Nesolechia* Mass. Misc. Lich. 13 1856.
- Phillipsiella* Cooke Grevillea 7:48 1878; Syll. Fung. 22:584 1913; cf. Hoehn. Frag. Myk. 244 1909.
- Pyronema* Carus Nov. Act. Leop. 17:370 1835.
- Pyronemella* Sacc. Michelia 1:564 1879.
- Ramosiella* Syd. Ann. Myc. 15:254 1917.
- Solanella* Vanha Monatsch. Landw. 3:268, ill. 1910.
- Zukalina* O. Kuntze Rev. Gen. Pl. 2:875 1891.
- Zukaliopsis* Henn. Fung. Amaz. 3:367. 1904.
- A. *betheli* Ell. & Ev.
- A. *rufum* (Pers.) Fr.
- E. *kaiseriana* Henn.
- A. *lagunculariae* (Wint.) Hoehn.
- A. *stipitatum* Eidam
- A. *nigricans* van Tiegh.
- A. *glomerulosa* (Ach.) Fw.
- A. *gastonis* Sacc.
- E. *globiferum* (E. & E.) Theiss.
- H. *paradoxa* Sacc.
- P. *vanillae* (Pat.) M. & P.
- S. *coffeicola* Pat.
- D. *oxycedri* M. & S.
- D. *kitmanoffi* Sacc.
- D. *tjibodensis* Hoehn.
- G. *rehmi* Zukal.
- H. *spadiceus* B. & Br.
- H. *vinosa* (C. & E.) Sacc.
- H. *quitensis* (Pat.) Rehm
- L. *gelatinosa* Hoehn.
- M. *farlowi* Thaxter
- M. *americanus* Sacc.
- B. *americanus* (Sacc.) Syd.
- M. *mirabilis* Wint.
- N. *ambigua* Starb.
- N. *oxyspora* (Tul.) Mass.
- P. *graminicola* Hoehn.
- P. *omphalodes* (Bull.) Fkl.
- P. *araneosa* Sacc.
- R. *calami* (Rac.) Syd.
- S. *rosea* Vanha
- Z. *neglecta* (Zukal) O. K.
- Z. *amazonica* Henn.

## Genera Incertae Sedis

- Capnodiopsis* Henn. Hedwigia 41:298 1902;  
Hoehn. Frag. Myk. 651 1911.      C. *mirabilis* Henn.
- Schenckia* Henn. Engler Bot. Jahrb. 17:523  
1893; Hoehn. Frag. Myk. 598; Theiss. &  
Syd. Ann. Myc. 15:457 1917.      S. *marcgraviae* Henn.
- Protasia* Rac. Par Alg. Pilz. Java 3:42 1900;  
Syll. Fung. 22:584 1913; nomen nudum.      (no species given)

## EXASCACEAE

- Ascocorticium* Brefeld Unters. Myk. 9:145, ill.  
1891.      A. *albidum* Brefeld
- Ascosorus* Henn. & Ruhl. Engler Bot. Jahrb.  
28:276 1900.      A. *floridianus* (Ell.) H. & R.
- Exascus* Fkl. Enum. Fung. Nass. 29 1860.      E. *deformans* (Berk.) Fkl.
- Taphridium* Lag. & Juell Bih. Sven. Vet.  
Handl. 27:16 1902.      T. *umbelliferarum* (Rostr.) L. & J.
- Volkartia* Maire Bull. Soc. Bot. Fr. 54:145  
1907.      V. *rhaetica* (Volk.) Maire
- Taphrina* Fr. Obs. Myc. 1:217 1815.      T. *aurea* (Pers.) Fr.
- Magnusiella* Sadebeck Par. Exoasc. 2:86  
1893.      M. *potentillae* (Farlow) Sade.

## TUBERALES

## ONYGENACEAE

- Dendrosphaera* Pat. Bull. Soc. Myc. Fr. 23:69  
1907.      D. *eberhardti* Pat.
- Onygena* Pers. Syn. Fung. 203 1801.      O. *equina* Pers.
- Trichocoma* Junghuhn Praem. Jav. 9, ill. 1839.      T. *paradoxa* Jungh.

## ELAPHOMYCETACEAE

- Elaphomyces* Nees Syn. Myc. 68 1820.      E. *granulatus* Fr.
- Mesophellia* Berk. Trans. Linn. Soc. 22:131  
1857.      M. *arenaria* Berk.

## Genus Dubium

- Cenococcum* Fr. Syst. Orb. Veg. 364 1825.      C. *geophilum* Fr.

## TUBERACEAE

- Balsamia* Vittad. Mon. Tuber. 30, ill. 1831.      B. *vulgaris* Vitt.
- Barssia* Gilkey Mycologia 17:253, ill. 1925.      B. *oregonensis* Gilkey
- Choeromyces* Vittad. Mon. Tuber. 50 1831.      C. *meandriformis* Vitt.
- Delastria* Tul. Ann. Sci. Nat. 2:19:379 1843.      D. *rosea* Tul.
- Delastriopsis* Mattirollo Bol. Soc. Brot. 21:10  
1905; Syll. Fung. 22:594 1913.      D. *oligosperma* (Tul.) Matt.
- Eoterezia* Atkin. Bot. Gaz. 34:40 1902.      E. *parasitica* Atkin.
- Genabea* Tul. Giorn. Bot. Ital. 2:60 1844.      G. *fragilis* Tul.
- Genea* Vittad. Mon. Tuber. 27 1831.      G. *verrucosa* Vitt.
- Myrmecocystis* Harkness Proc. Cal. Acad.  
Sci. 3:1:269, ill. 1899; cf. Gilkey Univ. Cal.  
Pub. Bot. 6:296 1916.      M. *cerebriformis* Hark.



- Geopora** Harkness Pac. Coast Fung. 168  
1885.
- Hydnobolites** Tul. Ann. Sci. Nat. 2:19:278  
1843.
- Hydnocystis** Tul. Giorn. Bot. Ital. 2:59 1844;  
cf. Rehm Rabh. Krypt. Fl. 1:3:1076 1896.
- Hydnotrya** Berk. & Br. Ann. Nat. Hist. 18:28  
1846.
- Gyrocratera** Henn. Verh. Bot. Brandenb.  
41:8 1899.
- Hydnotryopsis** Gilkey Univ. Cal. Pub. Bot.  
6:336, ill. 1916.
- Napomyces** Setchell Mycologia 16:240, ill.  
1924; for Daleomyces.
- Pachyphloeus** Tul. Giorn. Bot. Ital. 2:69 1844.
- Cryptica** Hesse Jahrb. Wiss. Bot. 13:198, ill.  
1885.
- Phaeangium** Pat. Jour. de Bot. 155 1894.
- Picoa** Vittad. Mon. Tuber. 54 1831.
- Leucangium** Quélet Assoc. Fr. 18, ill. 1882.
- Piersonia** Harkness Proc. Cal. Acad. Sci.  
3:1:275 1899.
- Pseudobalsamea** Fisch. Ber. Deut. Bot. Ges.  
25:374 1907.
- Pseudogenea** Bucholtz Mattiolo Malpighia  
14:250 1900.
- Pseudohydnotrya** Fisch. Nat. Pflanzenf.  
1:1:282 1897.
- Stephensia** Tul. Comp. Rend. 21:1433 1845.
- Terfezia** Tul. Ann. Sci. Nat. 3:3:350 1845.
- Terfeziopsis** Harkness Proc. Cal. Acad. Sci.  
3:1:278 1899.
- Tirmania** Chat. La Truffe 80, ill. 1892.
- Tuber** Mich. Nov. Pl. Gen. 22i, ill. 1729.
- Fischerula** Mattiolo Giorn. Bot. Ital.  
34:1348 1928.
- G.** cooperi Hark.
- H.** cerebriformis Tul.
- H.** piligera Tul.
- H.** tulasnei B. & Br.
- G.** ploettneriana Henn.
- H.** setchelli Gilkey
- N.** gardneri Setch.
- P.** melanoxanthus Tul.
- C.** lutea Hesse
- P.** lefeburei Pat.
- P.** juniperi Vitt.
- L.** ophthalmosporum Quel.
- P.** alveolata Hark.
- P.** setchelli Fisch.
- P.** vallumbrosae Buch.
- P.** harknessi Fisch.
- P.** bombycina (Vitt.) Tul.
- T.** leonis Tul.
- T.** lignaria Hark.
- T.** ovalispora Pat.
- T.** aestivum Vitt.
- F.** macrospora Fisch.

# PUCCINIALES

## PUCCINIACEAE

### Amerosporae

- Accidium* Pers. Gmelin Syst. Nat. 2:1472  
1791.  
*Monosporidium* Barclay Jour. Soc. Bengal  
56:367 1887.  
*Alveolaria* Lagerh. Ber. Deut. Bot. Ges. 9:346  
1891.  
*Ameris* Arth. Res. Cong. Vienne 342 1905.  
*Aplopsora* Mains Am. Jour. Bot. 8:442, ill.  
1921.  
*Argomycetella* Syd. Ann. Myc. 20:124 1922.  
*Poliotelium* Syd. Ib.  
*Baeodromus* Arth. Ann. Myc. 3:19 1905.  
*Blastospora* Diet. Ann. Myc. 6:222, ill. 1908.  
*Botryorhiza* Whetzel & Olive Am. Jour. Bot.  
4:47, ill. 1917.  
*Caeoma* Link. Mag. Ges. Naturf. Berlin 3:5  
1809.  
*Calidium* Syd. Ann. Myc. 16:242 1918.  
*Cerotelium* Arth. Bull. Torr. Club 33:30 1906.  
*Phragmidiella* Henn. Engler Bot. Jahrb.  
38:104 1907; Dietel 57.  
*Physopella* Arth. Res. Cong. Vienne 338  
1906.  
*Chaonia* Juel Bih. Sven. Akad. Handl. 23:12  
1897.  
*Chrysella* Syd. Ann. Myc. 24:292 1926.  
*Chrysocelis* Lagerh. & Diet. Mem. Soc. Neu-  
chat, 5:542 1913.  
*Cionothrix* Arth. N. A. Fl. 7:124 1907.  
*Ctenoderma* Syd. Ann. Myc. 17:102 1919.  
*Cystospora* Butler Ann. Myc. 8:448, ill. 1910.  
*Diabole* Arth. Bull. Torr. Club 49:194 1922.  
*Dichirinia* Arth. N. A. Fl. 7:147 1907.  
*Dichlamys* Syd. Ann. Myc. 17:105 1919.  
*Dietelia* Henn. Hedwigia 30:215 1897.  
*Endophylloides* Whetzel & Olive Am. Jour.  
Bot. 4:50, ill. 1917.  
*Endophyllum* Lev. Mem. Soc. Linn. Paris  
4:208 1825.  
*Gerwasia* Rac. Bull. Acad. Cracovie 1909:270.  
*Goplana* Rac. Par. Alg. Pilz. Java 2:24 1900.  
*Haplopyxis* Syd. Ann. Myc. 17:105 1919.  
*Hemileia* B. & Br. Gard. Chron. 1869:1157.  
*Hemileiopsis* Rac. Par. Alg. Pilz. Java 1:25  
1900.
- A. *berberidis* Pers.  
M. *euphorbiae* Barclay  
A. *cordiae* Lagerh.  
A. *rosicola* (E. & E.) Arth.  
A. *nyssae* (E. & T.) Mains  
A. *pressa* (Arth. & Holw.) Syd.  
P. *iresines* (Lagerh.) Syd.  
B. *holwayi* Arth.  
B. *smilacis* Diet.  
B. *hippocrateae* W. & O.  
C. *saxifragarum* (DC.) Lk.  
C. *lindsaeae* (Henn.) Syd.  
C. *canavaliae* Arth.  
P. *markhamiae* Henn.  
P. *vitis* (Thuem.) Arth.  
C. *alutacea* Juel  
C. *mikaniae* Syd.  
C. *lupini* L. & D.  
C. *praelonga* (Wint.) Arth.  
C. *cristatum* (Speg.) Syd.  
C. *oleae* Butler  
D. *cubensis* Arth.  
D. *binata* (Berk.) Arth.  
D. *trollipi* (K. & MacO.) Syd.  
D. *verruciformis* Henn.  
E. *portoricensis* W. & O.  
E. *sempervivi* (A. & S.) De B.  
G. *rubi* Rac.  
G. *mirabilis* Rac.  
H. *crotalariae* (Arth.) Syd.  
H. *vastatrix* B. & Br.  
H. *wrightii* Rac.

- Kuehneola* Magn. Bot. Cent. 74:169 1898.  
*Kunkelia* Arth. Bot. Gaz. 63:504 1917.  
*Maravalia* Arth. Bot. Gaz. 73:60 1922.  
*Masseella* Diet. Ber. Deut. Bot. Ges. 13:332 1895.  
*Ochropsora* Diet. Ber. Deut. Bot. Ges. 13:401 1895.  
*Olvea* Arth. Mycologia 9:60 1917.  
*Peridermium* Link Obs. Myc. 2:29 1816.  
*Pileolaria* Cast. Obs. Ured. 1:22 1842.  
*Skierkia* Rac. Par. Alg. Pilz. Java 2:30 1900.  
*Spirechina* Arth. Jour. Myc. 13:30 1907.  
*Trachyspora* Fkl. Bot. Zeit. 19:250 1861.  
*Trachysporella* Syd. Ann. Myc. 19:168 1921.  
*Trichopsora* Lagerh. Ber. Deut. Bot. Ges. 9:346 1891.  
*Trochodium* Syd. Ann. Myc. 17:106 1919.  
*Uredo* Pers. N. Mag. Bot 1:93 1794.  
*Uromyces* Link Mag. Ges. Naturf. Berlin 7:28 1816.  
*Groveola* Syd. Ann. Myc. 19:173 1921.  
*Haplotelium* Syd. Ann. Myc. 20:124 1922  
*Klebahnia* Arth. Res. Cong. Vienne 345 1906.  
*Nielsenia* Syd. Ann. Myc. 19:171 1921.  
*Ontoteliium* Syd. Ann. Myc. 19:174 1921.  
*Teleutospora* Arth. & Bisby Bull. Torr. Club 48:38 1921.  
*Telospora* Arth. Res. Cong. Vienne 346 1906.  
*Uromycopsis* Arth. Res. Cong. Vienne 345 1906.  
*Uromycladium* McAlp. Ann. Myc. 3:321 1905.  
*Macalpinia* Arth. Res. Cong. Vienne 340 1906.  
*Zaghouania* Pat. Bull. Soc. Myc. Fr. 17:185 1901.
- K. *albida* (Kuehn) Magn.  
 K. *nitens* (Schw.) Arth.  
 M. *pallida* Arth. & Thaxt.  
 M. *capparidis* (Hobson) Diet.  
 O. *sorbi* (Oud.) Diet.  
 O. *capituliformis* (Henn.) Arth.  
 P. *pini* (Willd.) Kleb.  
 P. *terebinthi* (DC.) Cast.  
 S. *agallocha* Rac.  
 S. *rubi* (D. & H.) Arth.  
 T. *alchimillae* (Pers.) Fkl.  
 T. *melospora* (Therry) Syd.  
 T. *tournefortiae* Lagerh.  
 T. *ipomoeae* (Thuem.) Syd.  
 U. *helioscopiae* Pers.  
 U. *appendiculatus* (Pers.) Lév.  
 G. *indurata* (S. & H.) Syd.  
 H. *amoenum* Syd.  
 K. *glycyrrhizae* (Rabh.) Arth.  
 N. *dactylidis* (Otth) Syd.  
 O. *digitatum* (Halst.) Syd.  
 T. *rudbeckiae* (A. & H.) A. & B.  
 T. *hyalina* (Pk.) Arth.  
 U. *excavata* (DC.) Arth.  
 U. *simplex* McAlp.  
 M. *tepperiana* (Sacc.) Arth.  
 Z. *phillyreae* Pat.

## Didymosporae

- Chrysocyclus* Syd. Ann. Myc. 23:322, ill. 1925.  
*Holwayella* Jackson Mycologia 18:48 1926; cf. Syd. Ann. Myc. 23:322 1925.  
*Chrysopsora* Lagerh. Ber. Deut. Bot. Ges. 9:345 1891.  
*Cleptomycetes* Arth. Bot. Gaz. 65:464 1918.  
*Coleopuccinia* Pat. Rev. Myc. 11:35 1889.  
*Desmella* Syd. Ann. Myc. 16:241 1918.  
*Didymopsora* Diet. Hedwigia 38:254 1899.  
*Diorchidium* Kalchbr. Grevillea 9:26 1882.  
*Gambleola* Masee Bull. Mis. Kew 115 1898.
- C. *cestri* (D. & H.) Syd.  
 H. *mikaniae* (Arth.) Jack.  
 C. *gynoxidis* Lagerh.  
 C. *lagerheimianus* (Diet.) Arth.  
 C. *sinensis* Pat.  
 D. *aneimiae* (Henn.) Syd.  
 D. *solani* (Henn.) Diet.  
 D. *woodi* K. & C.  
 G. *cornuta* Masee

- Gymnoconia* Lagerh. Trom. Mus. Aarsh. 16:140 1894.
- Gymnosporangium* Hedwig f. DC. Fl. Fr. 2:216 1805.
- Gymnotelium* Syd. Ann. Myc. 19:170 1921.
- Hamaspora* Koern. Hedwigia 16:22 1877.
- Hamasporella* Hoehn. Zeits. Gär. 1:226 1912.
- Roestelia* Reb. Prod. Fl. Neom. 350 1804.
- Miyagia* Miyabe Ann. Myc. 11:107 1913.
- Prosopodium* Arth. Jour. Myc. 13:31 1907.
- Nephlyctis* Arth. Jour. Myc. 13:31 1907.
- Puccinia* Pers. Tent. Disp. 38 1797.
- Allodus* Arth. Res. Cong. Vienne 345 1906.
- Bullaria* DC. Fl. Fr. 2:226 1805.
- Coronotelium* Syd. Ann. Myc. 19:174 1921.
- Cutomycetes* Thuem. Jour. Sci. Lisboa 6:239 1878.
- Dasyspora* B. & C. Jour. Acad. Phil. 2:2:281 1853.
- Dicaeoma* Gray Nat. Arr. Brit. Pl. 1:541 1821.
- Eriosporangium* Bertero Ann. Sci. Nat. 3:5:269 1846.
- Jackya* Bub. Oest. Bot. Zeit. 52:42 1902.
- Leptinia* Juel Bih. Sven. Akad. Handl. 23:15 1897.
- Leptopuccinia* Rostrup Plant. Haandb. 268 1902.
- Lindrothia* Syd. Ann. Myc. 20:119 1922.
- Linkiella* Syd. Ann. Myc. 19:173 1921.
- Lysospora* Arth. Res. Cong. Vienne 340 1906.
- Micropuccinia* Rostr. Plant. Haandb. 266 1902.
- Peristemma* Syd. Ann. Myc. 19:175 1921.
- Persooniella* Syd. Ann. Myc. 20:118 1922.
- Pleomeris* Syd. Ann. Myc. 19:171 1921.
- Polioma* Arth. Jour. Myc. 13:29 1907.
- Poliomella* Syd. Ann. Myc. 20:122 1922.
- Pseudopuccinia* Hoehn. Mitt. Bot. Hochs. Wien 2:41 1925.
- Rostrupia* Lagerh. Jour. de Bot. 3:188 1889.
- Schroeterella* Syd. Ann. Myc. 20:119 1922.
- Sclerotelium* Syd. Ann. Myc. 19:172 1921.
- Solenodonta* Cast. Cat. Pl. Mars. 202 1845.
- Trailia* Syd. Ann. Myc. 20:121 1922.
- Puccinosira* Lagerh. Ber. Deut. Bot. Ges. 9:344 1891.
- Aecidiella* Ell. & Kels. Bull. Torr. Club 24:208 1897.
- Schizospora* Diet. Ber. Deut. Bot. Ges. 13:334, ill. 1895.
- G. interstitialis* (Schl.) Lagerh.
- G. clavariaeforme* (Jacq.) DC.
- G. nootkatense* (Trel.) Syd.
- H. longissima* (Thuem.) Koern.
- H. longissima* (Thuem.) Hoehn.
- R. cancellata* Reb.
- M. anaphalidis* Miy.
- P. appendiculatum* (Wint.) Arth.
- N. elegans* (Schroet.) Arth.
- P. graminis* Pers.
- A. podophylli* (Schw.) Arth.
- B. umbelliferarum* DC.
- C. mesnierianum* (Thuem.) Syd.
- C. asphodeli* Thuem.
- D. foveolata* B. & C.
- D. persicariae* Gray
- E. baccharidis* (Lev.) Bert.
- J. cirsi lanceolati* (Schr.) Bub.
- L. brasiliensis* Juel
- L. malvacearum* (Mont.) Rostr.
- L. ambigua* (A. & S.) Syd.
- L. tenuis* (Burr.) Syd.
- L. singularis* (Magn.) Arth.
- M. ribis* (DC.) Rostr.
- P. sonchi* (Rob.) Syd.
- P. punctata* (Lk.) Syd.
- P. dispersa* (Eriks.) Syd.
- P. nivea* (Holw.) Arth.
- P. ancizari* (Mayor) Syd.
- P. thermopsidis* (Harkn.) Hoehn.
- R. elymi* (West.) Lagerh.
- S. stachydis* (DC.) Syd.
- S. compactum* (De B.) Syd.
- S. graminis* Cast.
- T. buxi* (DC.) Syd.
- P. pallidula* (Speg.) Lagerh.
- A. triumfettae* E. & K.
- S. mitragynes* Diet.

- Pucciniostele* Tranz. & Komar. Arb. Petersb. Nat. Ges. 30:138 1899.  
*Klastospora* Diet. Ann. Myc. 2:24 1904.  
*Sphenospora* Diet. Nat. Pflanzenf. 1:1:70 1897.  
*Stereostratum* Magn. Ber. Deut. Bot. Ges. 17:181 1899.  
*Tranzschelia* Arth. Res. Cong. Vienne 340 1906.  
*Lipospora* Arth. Bull. Torr. Club 48:36 1921.  
*Polythelis* Arth. Res. Cong. Vienne 341 1906.  
*Uropyxis* Schroet. Hedwigia 14:165 1875.  
*Calliospora* Arth. Bot. Gaz. 39:390 1905.  
*Xenostele* Syd. Ann. Myc. 18:178 1920.
- P. clarkiana* (Barcl.) T. & K.  
*K. komarovi* Diet.  
*S. pallida* (Wint.) Diet.  
*S. corticioides* (B. & Br.) Magn.  
*T. punctata* (Pers.) Arth.  
*L. tucsonensis* Arth.  
*P. fusca* (Pers.) Arth.  
*U. amorphae* (Curt.) Schroet.  
*C. holwayi* Arth.  
*X. echinacea* (Berk.) Syd.

## Phragmosporae

- Frommea* Arth. Bull. Torr. Club. 44:503 1917.  
*Phragmidium* Link Sp. Pl. 2:84 1824.  
*Earlea* Arth. Res. Cong. Vienne 341 1906.  
*Phragmotelium* Syd. Ann. Myc. 19:167 1921.  
*Teloconia* Syd. Ann. Myc. 19:168 1921.  
*Phragmopyxis* Diet. Nat. Pflanzenf. 1:1:70 1897.  
*Tricella* Long Mycologia 4:282 1912.  
*Xenodochus* Schl. Linnaea 1:237 1826.
- F. obtusa* (Str.) Arth.  
*P. mucronatum* (Pers.) Schl.  
*E. speciosa* (Fr.) Arth.  
*P. barnardi* (P. & W.) Syd.  
*T. rosae* (Barcl.) Syd.  
*P. deglubens* (B. & C.) Diet.  
*T. acuminata* Long  
*X. carbonarius* Schl.

## Dictyosporae

- Anthomyces* Diet. Hedwigia 38:253 1899.  
*Anthomycetella* Syd. Ann. Myc. 14:353 1916.  
*Reyesiella* Sacc. Att. Accad. Ven. 3:10:58 1919.  
*Cystomyces* Syd. Ann. Myc. 24:290, ill. 1926.  
*Nothoravenelia* Diet. Ann. Myc. 8:310 1910.  
*Nyssospora* Arth. Res. Cong. Vienne 342 1906.  
*Ravenelia* Berk. Gard. Chron. 10:132 1853.  
*Cephalotelium* Syd. Ann. Myc. 19:165 1921.  
*Cystingophora* Arth. N. A. Fl. 7:131 1907.  
*Cystotelium* Syd. Ann. Myc. 19:165 1921.  
*Dendroecia* Arth. Res. Cong. Vienne 340 1906.  
*Haploravenelia* Syd. Ann. Myc. 19:165 1921.  
*Longia* Syd. Ann. Myc. 19:165 1921.  
*Neoravenelia* Long. Bot. Gaz. 35:131, ill. 1903.  
*Pleoravenelia* Long. Bot. Gaz. 35:127, ill. 1902.  
*Sphaerophragmium* Magn. Ber. Deut. Bot. Ges. 9:121 1891.
- A. brasiliensis* Diet.  
*A. canarii* Syd.  
*R. anthomycoides* Sacc.  
*C. costaricensis* Syd.  
*N. japonica* Diet.  
*N. echinata* (Lev.) Arth.  
*R. epiphylla* (Schw.) Diet.  
*C. macowanianum* (Pazschke) Syd.  
*C. hieronymi* (Speg.) Arth.  
*C. inornatum* (Diet.) Syd.  
*D. farlowiana* (Diet.) Arth.  
*H. indica* (Berk.) Syd.  
*L. naralensis* (Syd. & Ev.) Syd.  
*N. holwayi* (Diet.) Long  
*P. levis* (Diet. & Holw.) Long  
*S. acaciae* (Cke.) Magn.

- Triphragmiopsis* Naumov Bull. Soc. Myc. Fr.  
 30:15 1914. T. *jeffersoniae* Naum.  
*Nyssopsorella* Syd. Ann. Myc. 19:169 1921. N. *isopyri* (M. & N.) Syd.  
*Triphragmium* Link Sp. Pl. 2:84 1824. T. *ulmariae* (Schum.) Lk.  
*Hapalophragmium* Syd. Hedwigia 40:64,  
 ill. 1901. H. *derridis* Syd.  
*Triactella* Syd. Ann. Myc. 19:169 1921. T. *pulchra* (Rac.) Syd.

#### Genera Incertae Sedis vel Dubia

- Achrotelium* Syd. Ann. Myc. 26:425 1928. A. *ichnocarpi* Syd.  
*Aecidiolum* Unger Exanth. Pfl. 300 1833;  
 Syll. Fung. 7:773 1888. A. *exanthematum* Ung.  
*Pericladium* Pass. Nuov. Giorn. Ital. 7:185,  
 ill. 1875; Syll. Fung. 7:838 1888. P. *greviae* Pass.

#### MELAMPSORACEAE

##### Amerosporae

- Chnoopsora* Diet. Ann. Myc. 4:423 1906. C. *butleri* Diet. & Syd.  
*Chrysomyxa* Unger Beitr. Vergl. Path. 24  
 1840. C. *abietis* (Wallr.) Unger  
*Barclayella* Diet. Hedwigia 29:266 1890. B. *deformans* Diet.  
*Melampsoropsis* Arth. Res. Cong. Vienne  
 338 1906. M. *ledi* (A. & S.) Arth.  
*Coleosporium* Lev. Ann. Sci. Nat. 3:8:373  
 1847. C. *senecionis* (Pers.) Lev.  
*Stichopsora* Diet. Engl. Bot. Jahrb. 27:565,  
 ill. 1899. S. *asterum* Diet.  
*Synomyces* Arth. N. A. Fl. 7:661. 1924. S. *reichei* (Diet.) Arth.  
*Cronartium* Fr. Obs. Myc. 1:220 1815. C. *flaccidum* (A. & S.) Wint.  
*Crossopsora* Syd. Ann. Myc. 16:243 1918. C. *zizyphi* (Syd. & Butl.) Syd.  
*Gallowaya* Arth. Res. Cong. Vienne 336 1906. G. *pinicola* Arth.  
*Melampsora* Cast. Obs. Myc. 2:18 1848. M. *euphorbiae* (Schub.) Cast.  
*Necium* Arth. N. A. Fl. 7:114 1907. N. *farlowi* Arth.  
*Melampsorella* Schroet. Hedwigia 13:85 1874. M. *cerastii* (Pers.) Schroet.  
*Melampsoridium* Kleb. Zeits. Pflanzenkr. 9:21  
 1899. M. *betulinum* (Pers.) Kleb.  
*Mesopsora* Diet. Ann. Myc. 20:30 1922. M. *hypericorum* (DC.) Diet.  
*Micronegeria* Diet. Engler Bot. Jahrb. 27:16  
 1899. M. *fagi* Diet.  
*Phacopsora* Diet. Ber. Deut. Bot. Ges. 13:333  
 1895. P. *punctiformis* (Barc. & D.) Diet.  
*Bubakia* Arth. Res. Cong. Vienne 338  
 1906. B. *crotonis* (Cke.) Arth.  
*Schroeteriaster* Magn. Ber. Deut. Bot. Ges.  
 14:130 1896. S. *alpinus* (Schroet.) Magn.

##### Phragmosporae

- Calypsoptora* Kuehn Hedwigia 8:81 1869. C. *goeppertiana* Kuehn  
*Hyalopsora* Magn. Ber. Deut. Bot. Ges. 19:582  
 1901. H. *aspidiotus* (Pk.) Magn.  
*Milesia* White Scot. Nat. 4:162 1877. M. *polypodii* White  
*Milesina* Magn. Ber. Deut. Ges. 27:325  
 1909. M. *kriegeriana* Magn.

- Pucciniastrum* Otth Mitt. Nat. Ges. Bern  
1861:71.  
*Thecopsora* Magn. Hedwigia 14:123 1875.  
*Uredinopsis* Magn. Att. Cong. Genova 167  
1893.
- P. pustulatum* (Pers.) Diet.  
*T. areolata* (Fr.) Magn.  
*U. filicina* (Niessl) Magn.

## USTILAGINALES

## USTILAGINACEAE

- Cintractia* Cornu Ann. Sci. Nat. 6:15:279  
1883.  
*Anthracoidea* Bref. Unter. Ges. Myk. 12:144  
1895; Syll. Fung. 14:420 1899.  
*Farysia* Rac. Bull. Acad. Cracovie 1909:354,  
ill.  
*Elateromyces* Bub. Houb. Cesk. Dil 2:32  
1912.  
*Melanopsichium* Beck Ann. Nat. Hofmus.  
Wien 9:122 1894.  
*Mycosyrinx* Beck Ann. Nat. Hofmus. Wien  
9:123 1894.  
*Schizonella* Schroet. Beitr. Biol. 2:362 1877.  
*Sorosporium* Rud. Linnaea 4:116 1829.  
*Sphacelotheca* De Bary Vergl. Morph. Pilze  
187 1884.  
*Testicularia* Klotzsch Linnaea 7:202 1832.  
*Thecaphora* Fingerh. Linnaea 10:230 1835.  
*Poecilosporium* Diet. Flora 83:87, ill. 1897;  
Syll. Fung. 16:380 1902.  
*Tolyposporella* Atkin. Bull. Cornell Univ.  
3:16 1897.  
*Tolyposporium* Woron. Abh. Senck. Nat.  
Ges. 12:577 1882.  
*Ustilago* (Pers.) Roussel Fl. Calvados ed.  
2:47 1806.
- C. axicola* (Berk.) Cornu  
*A. caricis* (Pers.) Bref.  
*F. merrilli* (Henn.) Syd.  
*E. olivaceus* (DC.) Bub.  
*M. austramericanum* (Speg.) Beck  
*M. cissi* (DC.) Beck  
*S. melanogramma* (DC.) Schroet.  
*S. saponariae* Rud.  
*S. hydropiperis* (Thuem.) De B.  
*T. cyperi* Klotzsch  
*T. hyalina* Fingerh.  
*P. davidsohni* (D. & H.) Diet.  
*T. chrysopegonis* Atkin.  
*T. junci* (Schroet.) Woron.  
*U. segetum* Pers.

## TILLETIACEAE

- Burrillia* Setch. Proc. Am. Acad. 26:18 1891.  
*Doassansia* Cornu Ann. Sci. Nat. 6:15:285  
1883.  
*Setchellia* Magn. Ber. Deut. Bot. Ges.  
13:468, ill. 1895.  
*Doassansiopsis* (Setch.) Diet. Nat. Pflanzenf.  
1:1:21 1897.  
*Entorrhiza* Web. Bot. Zeit. 42:369 1884.  
*Schinzia* Naeg. Linnaea 16:281 1842; not  
Dennst. 1818.  
*Entyloma* De Bary Bot. Zeit. 32:101 1874.  
*Rhamphospora* Cunningham Sci. Mem.  
India 3:32 1888; Syll. Fung. 9:287 1891.  
*Melanotaenium* De Bary Bot. Zeit. 32:105  
1874.
- B. pustulata* Setch.  
*D. alismatis* (Nees) Cornu  
*S. punctiformis* (Niessl) Magn.  
*D. deformans* (Setch.) Diet.  
*E. cypericola* Web.  
*S. cellulicola* Naeg.  
*E. microsporum* (Ung.) Schroet.  
*R. nymphaeae* Cunningham  
*M. endogenum* (Ung.) De B.

- Neovossia* Koern. Oest. Bot. Zeit. 29:217  
 1879.
- Perichlamys* Henn. Sacc. Syll. Fung. 14:430  
 1899; for
- Didymochlamys* Henn. Hedwigia 36:246  
 1897.
- Kuntzeomyces* Henn. Syll. Fung. 14:430  
 1899.
- Polysaccopsis* Henn. Hedwigia 37:206 1898.
- Tilletia* Tul. Ann. Sci. Nat. 3:7:112 1847.
- Tracya* Syd. Hedwigia Beibl. 40:3 1901.
- Cornuella* Setch. Proc. Am. Acad. 26:19  
 1891; Syll. Fung. 11:236 1895.
- Tuburcinia* (Fr.) Woron. Abh. Senck. Nat.  
 Ges. 12:561 1882.
- Urocystis* Rabh. Klotzsch Herb. Myc. ed.  
 2:393 1856.
- N. molinia* (Thuem.) Koern.
- P. ustilaginodes* Henn.
- D. ustilaginoidea* Henn.
- K. ustilaginoideus* Henn.
- P. hieronymi* (Schroet.) Henn.
- T. tritici* (Bjerk.) Wint.
- T. lemnae* (Setch.) Syd.
- C. lemnae* Setch.
- T. trientalis* (B. & Br.) Woron.
- U. occulta* (Wallr.) Rabh.

#### Genera Incertae Sedis vel Dubia

- Schroeteria* Wint. Rabh. Krypt. Fl. 1:1:117  
 1884; Syll. Fung. 7:500 1888.
- Ustilagopsis* Speg. Fung. Arg. 2:11 1880;  
 Syll. Fung. 7:498 1888.
- S. delastrina* (Tul.) Wint.
- U. deliquescens* Speg.

#### GRAPHIOLACEAE

- Graphiola* Poit. Ann. Sci. Nat. 1824:473, ill.
- Stylina* Syd. Ann. Myc. 18:192 1920.
- G. phoenicis* (Moug.) Poit.
- S. disticha* (Ehrenb.) Syd.



## TREMELLALES

### AURICULARIACEAE

- Auricularia* Bull. Champ. 277 1795.  
*Helicobasis* Pat. Bull. Soc. Bot. Fr. 32:171  
1885; for *Helicobasidium*.  
*Herpobasidium* Lind Ark. Bot. 7:5 1908  
*Stypinella* Schroet. Pilz. Schles. 1:383 1887;  
Syll. Fung. 14:244 1899.  
*Hirneola* Fr. Syst. Orb. Veg. 256 1825.  
*Auriculariella* Sacc. Syll. Fung. 6:407 1888.  
*Jola* Moell. Protobas. 162 1895.  
*Patouillardina* Bres. Ann. Myc. 18:52 1920.  
*Pilacre* Fr. Syst. Myc. 3:204 1829; cf. Shear  
& Dodge Jour. Agr. Res. 30:407 1925;  
Killermann 109.  
*Ecchyna* Fr. Nov. Fl. Suec. 5:80 1819.  
*Phleogena* Link Handb. Erk. Gew. 3:396  
1833; Killermann 109.  
*Pilacrella* Schroet. Pilz. Schles. 1:384 1889.  
*Platygløea* Schroet. Pilz. Schles. 1:384 1889.  
*Achroomyces* Bon. Handb. Myk. 135, ill.  
1851; cf. Hoehn. Ann. Myc. 2:271 1904.  
*Helicogloea* Pat. Bull. Soc. Myc. Fr. 8:121  
1892.  
*Kriegeria* Bres. Rev. Myc. 13:14, ill. 1891;  
cf. Hoehn. Frag. Myk. 354.  
*Saccoblastia* Moell. Protobas. 162 1895.  
*Septobasidium* Pat. Jour. de Bot. 6:61 1892.  
*Hoehnelomyces* Weese Ber. Deut. Bot. Ges.  
37:514 1919.
- A. mesenterica* (Dicks.) Fr.  
*H. purpureus* (Tul.) Pat.  
*H. filicinum* (Rostr.) Lind  
*S. purpurea* (Tul.) Schroet.  
*H. auricula-judae* (L.) Berk.  
*A. tremellosa* (Fr.) Sacc.  
*J. hookeriana* Moell.  
*P. cinerea* Bres.  
*P. faginea* Fr.  
*E. faginea* Fr.  
*P. faginea* (Fr.) Lk.  
*P. solani* Cohn & Schroet.  
*P. nigricans* Schroet.  
*A. tumidus* Bon.  
*H. lagerheimi* Pat.  
*K. eriophori* Bres.  
*S. ovispora* Moell.  
*S. pedicellatum* Pat.  
*H. delectans* (Moell.) Weese

### Genera Incertae Sedis Vel Dubia

- Delortia* Pat. & Gaill. Bull. Soc. Myc. Fr. 4:43  
1888; Syll. Fung. 6:795 1888; Killermann  
108.  
*Eocronartium* Atkin. Jour. Myc. 8:107 1902;  
Syll. Fung. 17:211 1906; cf. Pat. Bull. Soc.  
Myc. Fr. 36:176 1920.  
*Mohortia* Rac. Bull. Acad. Crac. 1909:361;  
Syll. Fung. 21:447 1912; Killermann 108.  
*Mylittopsis* Pat. Jour. de Bot. 9:245 1895.  
*Tjibodasia* Holterm. Myk. Unters. 44 1898;  
Syll. Fung. 16:216 1902.
- D. palmicola* Pat.  
*E. typhuloides* (Pk.) Atkin.  
*M. tropica* Rac.  
*M. langloisi* Pat.  
*T. pezizoides* Holterm.

### TREMELLACEAE

- Craterocola* Bref. Unters. 7:98 1888.  
*Exidia* Fr. Syst. Myc. 2:220 1822.
- C. cerasi* (Schum.) Bref.  
*E. glandulosa* (Bull.) Fr.

- Ulocolla* Bref. Unters. 7:95 1888; Syll. Fung. 6:777 1888; Killermann 115.  
*Exidiopsis* Olsen Bref. Unters. 7:94 1888.  
*Gloeosoma* Bres. Ann. Myc. 18:51 1920.  
*Gyrocephalus* Pers. Mem. Soc. Linn. Paris 3:77 1824.  
*Heterochaete* Pat. Bull. Soc. Myc. Fr. 8:120 1892.  
*Heterochaetella* Bourd. Trans. Brit. Myc. Soc. 7:53 1920.  
*Hirneolina* Pat. Ess. Tax. 25 1900, as subg.; Sacc. Syll. Fung. 17:208 1906.  
*Eichleriella* Bres. Ann. Myc. 1:115 1903; Syll. Fung. 17:208 1906.  
*Hyaloria* Moell. Protobas. 173 1895.  
*Clavariopsis* Holterm. Myc. Unters. Trop. 85, ill. 1898.  
*Phaeotremella* Rea Trans. Brit. Myc. Soc. 3:377, ill. 1912.  
*Protohydnum* Moell. Protobas. 173 1895.  
*Protodontia* Hoehn. Sitzb. Akad. Wien 116:83 1907.  
*Protomerulius* Moell. Bras. Pilzbl. 60 1895.  
*Sebacina* Tul. Ann. Sci. Nat. 5:15:223 1872.  
*Bourdodia* Bres. Ann. Myc. 6:46 1908; Syll. Fung. 23:450 1915.  
*Tremellodendrum* Atkin. Jour. Myc. 7:106 1902; Syll. Fung. 17:208 1906.  
*Seismosarca* Cke. Grevillea 18:25 1889.  
*Sirobasidium* Lagerh. & Pat. Jour. de Bot. 6:465 1892.  
*Stypella* Moell. Protobas. 166 1895.  
*Tremella* (Dill.) Fr. Syst. Myc. 2:210 1823.  
*Naematelia* Fr. Syst. Myc. 2:227 1823.  
*Tremellodon* Pers. Myc. Eur. 2:172 1825.  
*Tulasnella* Schroet. Pilz. Schles. 1:397 1889.
- U. *saccharina* Fr.  
 E. *effusa* Olsen  
 G. *vitellinum* (Lev.) Bres.  
 G. *rufus* (Jacq.) Bref.  
 H. *andina* Pat.  
 H. *crystallina* Bourd.  
 H. *incarnata* (Bres.) Sacc.  
 E. *incarnata* Bres.  
 H. *pilacre* Moell.  
 C. *pinguis* Holterm.  
 P. *pseudofolia* Rea  
 P. *cartilagineum* Moell.  
 P. *uda* Hoehn.  
 P. *brasiliensis* Moell.  
 S. *laciniata* (Bull.) Bres.  
 B. *galzini* Bres.  
 T. *candidum* (Schw.) Atkin.  
 S. *hydrophora* Cke.  
 S. *sanguineum* Lagerh. & Pat.  
 S. *papillata* Moell.  
 T. *frondosa* Fr.  
 N. *encephala* (Willd.) Fr.  
 T. *gelatinosum* (Scop.) Pers.  
 T. *anceps* Bres. & Syd.

## DACRYOMYCETACEAE

- Arrhytidia* Berk. Jour. Bot. & Kew Misc. 1:235 1849.  
*Ceracea* Cragin Jour. Myc. 1:58 1885; Syll. Fung. 6:805 1888.  
*Calocera* Fr. Syst. Myc. 1:485 1822.  
*Dacryomitra* Tul. Ann. Sci. Nat. 5:15:217 1872.  
*Dacryopsis* Masee Grevillea 20:23 1891; Syll. Fung. 11:149 1895.  
*Dacryopsella* Hoehn. Sitzb. Akad. Wien 124:50 1915; Syll. Fung. 23:583 1925.  
*Dacryomyces* Nees Syst. Pilz. 89 1817.  
*Ditiola* Fr. Syst. Myc. 2:160 1822.  
*Femsjonina* Fr. Sum. Veg. Scan. 341 1849.  
*Guepinia* Fr. Syst. Orb. Veg. 92 1825.
- A. *flava* B. & C.  
 C. *vernica* Cragin  
 C. *viscosa* (Pers.) Fr.  
 D. *pusilla* Tul.  
 D. *gyrocephala* (B. & C.) Mass.  
 D. *typhae* Hoehn.  
 D. *stillatus* Nees  
 D. *radicata* (A. & S.) Fr.  
 F. *luteo-alba* Fr.  
 G. *spathularia* (Schw.) Fr.

## Genera Incertae Sedis Vel Dubia

- Apyrenium** Fr. Sum. Veg. Scan. 470 1849;  
Syll. Fung. 6:814 1888.
- Cladosterigma** Pat. Bull. Soc. Myc. Fr. 8:138  
1892; Syll. Fung. 11:640 1891.
- Collyria** Fr. Sum. Veg. Scan. 340 1849; Syll.  
Fung. 6:811 1888.
- Ductifera** Lloyd. Myc. Notes 50:711, ill. 1917;  
Syll. Fung. 23:581 1915.
- Heterotextus** Lloyd Myc. Notes 67:1151, ill.  
1922.
- Hormomyces** Bon. Handb. Myk. 150 1851;  
Syll. Fung. 6:812 1888.
- Myxomycidium** Masee Kew Bull. 179 1899;  
Syll. Fung. 16:220 1902.
- Phyllotremella** Lloyd Myc. Notes 64:1007, ill.  
1920.
- Tremellopsis** Pat. Duss Enum. Champ. Guad.  
1903:13; Syll. Fung. 17:193 1906.
- A. lignatile** Fr.
- C. fusisporum** Pat.
- C. helvelloides** (Schw.) Fr.
- D. millei** Lloyd
- H. flavus** Lloyd
- H. aurantiacus** Bon.
- M. pendulum** Mass.
- P. africanus** Lloyd
- T. antillarum** Pat.

## AGARICALES

## HYPOCHNACEAE

- Aureobasis** Viala & Boyer Rev. Gen. Bot.  
3:369, ill. 1891; for *Aureobasidium*.
- Botryoconis** Syd. Ann. Myc. 4:344 1906.
- Cryptobasidium** Lendner Bull. Soc. Geneve  
2:12, ill. 1920.
- Exobasidium** Woronin Verh. Nat. Ges. Frei-  
burg 4:397 1867.
- Clinoconidium** Pat. Bull. Soc. Myc. Fr.  
14:156 1898; Syd. Ann. Myc. 24:283 1926.
- Hypochnus** Fr. Obs. Myc. 2:278 1818; em.  
Bres. Ann. Myc. 1:105 1903.
- Kordyana** Rac. Par. Alg. Pilz. Java 2:35  
1900.
- Microstroma** Niessl Oest. Bot. Zeits. 11:252  
1861.
- Tomentellina** H o e h n. Sitzb. Akad. Wien  
115:1604 1906.
- Urobasidium** Giesenh. Flora 76:139 1892.
- A. vitis** V. & B.
- B. saccardoii** Syd.
- C. ocoteae** Lend.
- E. vaccinii** (Fkl.) Wor.
- C. farinosum** (Henn.) Pat.
- H. ferrugineus** (Pers.) Fr.
- K. pinangae** Rac.
- M. album** (Desm.) Sacc.
- T. ferruginosa** H. & L.
- U. rostratum** Giesenh.

## Genera Incertae Sedis Vel Dubia

- Aldridgea** Masee Fungus Flora 1:103 1892;  
Syll. Fung. 11:129 1895; Killermann 135.
- Endobasidium** Speschnew Fung. Transcasp.  
Turk. 12 1901; Syll. Fung. 17:190 1906;  
Killermann 133.
- Lelum** Rac. Par. Alg. Pilz. Java 3:16 1900;  
Syll. Fung. 16:199 1902; Killermann 133.
- Ordonia** Rac. Bull. Acad. Crac. 1909:360;  
Sacc. 21:447 1912; Killermann 135.
- A. gelatinosa** Masee
- E. clandestinum** Spesch.
- L. ustilaginodes** Rac.
- O. orthobasidium** Rac.

- Protocoronis* Atkin. & Edgert. Jour. Myc. 13:186 1907; Syll. Fung. 21:421 1912; Killermann 133; for *Protocoronospora*. *P. nigricans* A. & E.

## THELEPHORACEAE

- Aleurodiscus* Rabh. Hedwigia 13:184 1874. *A. amorphus* (Pers.) Rabh.  
*Asterostroma* Masee Jour. Linn. Soc. 25:154 1889. *A. corticolum* Mass.  
*Asterostromella* Hoehn. & Litsch. Sitzb. Akad. Wien 116:773 1907. *A. investiens* H. & L.  
*Dichostereum* Pilat Ann. Myc. 24:223, ill. 1926. *D. induratum* (Berk.) Pilat  
*Bonia* Pat. Bull. Soc. Myc. Fr. 8:48 1892. *B. papyrina* Pat.  
*Dendrothele* Hoehn. & Litsch. Sitzb. Akad. Wien 116:819 1907; Syll. Fung. 21:404 1912, as subg.; Killermann 143. *D. griseo-cana* (Bres.) B. & G.  
*Cladoderris* (Pers.) Fr. Fung. Natal. 20 1848. *C. dendritica* (Pers.) Fr.  
*Beccariella* Ces. Myc. Born. 9 1879; Syll. Fung. 6:550 1888. *B. insignis* Ces.  
*Coniophora* DC. Fl. Gall. 6:34 1815. *C. cerebella* (Pers.) Schroet.  
*Jaapia* Bres. Ann. Myc. 9:428 1911; Syll. Fung. 23:541 1925; Killermann 142. *J. argillacea* Bres.  
*Prillieuxia* Sacc. & Syd. Syll. Fung. 14:225 1899; Killermann 140. *P. favinea* (Britz.) S. & S.  
*Coniophorella* Karst. Finl. Basidsv. 438 1889. *C. olivacea* (Fr.) Karst.  
*Cora* Fr. Syst. Orb. Veg. 1:100 1825. *C. pavonia* Fr.  
*Corella* Wain. Etud. Lich. Bres. 2:242 1890. *C. brasiliensis* Wain.  
*Corticium* Pers. Myc. Eur. 1:128 1822. *C. roseum* Pers.  
*Cerocorticium* Henn. Monsunia 1:138 1899; Syll. Fung. 16:196 1902; Killermann 137. *C. bogoriense* Henn.  
*Galzinia* Bourd. Assoc. Fr. Av. Sci. 45:577 1921; Killermann 138. *G. pedicellata* Bourd.  
*Craterellus* Pers. Myc. Eur. 2:4 1825. *C. cornucopiodes* (L.) Pers.  
*Cyphella* Fr. Syst. Myc. 2:201 1822. *C. digitalis* (A. & S.) Fr.  
*Catilla* Pat. Bull. Soc. Myc. Fr. 31:32, ill. 1915. *C. pandani* Pat.  
*Dendrocypbella* Petch Ann. Bot. Gard. Ceylon 7:289 1922. *D. setosa* Petch  
*Phaeocypbella* Speg. An. Mus. Nac. 3:12:278 1909; Killermann 150. *P. sphaerospora* Speg.  
*Cytidia* Quel. Fl. Myc. 25 1888. *C. flocculenta* (Fr.) H. & L.  
*Dictyonema* (Ag.) Zahlbr. Nat. Pflanzenf. 1:1:237 1907. *D. membranaceum* Ag.  
*Epithele* Pat. Bull. Soc. Myc. Fr. 15:202 1899. *E. typhae* (Pers.) Pat.  
*Hymenochaete* Lev. Ann. Sci. Nat. 3:5:150 1846. *H. tabacina* (Sow.) Lev.  
*Duportella* Pat. Phil. Jour. Sci. 10:87 1915. *D. velutina* Pat.  
*Lloydiella* Bres. Lloyd Myc. Notes 6:51 1901; Syll. Fung. 16:116 1902. *L. cinerascens* (Schw.) Bres.  
*Hypolyssus* Berk. Lond. Jour. Bot. 1:139 1842. *H. montagnei* Berk.

- Peniophora* Cke. *Grevillea* 7:20 1879.  
*Gloeocystidium* Karst. *Bot. Cent.* 43:385  
 1890; *Syll. Fung.* 16:193 1902, as subg.;  
 Killermann 140.  
*Geoopeniophora* Hoehn. & Litsch. *Sitzb.*  
*Akad. Wien* 111:815 1907; Killermann 139.  
*Kneiffia* Fr. *Epicr.* 529 1838.  
*Peniophorina* Hoehn. *Sitzb. Akad. Wien.*  
 126:283 1917; Killermann 138.  
*Wiesnerina* Hoehn. *Denks. Akad. Wien*  
 83:7 1907; *Syll. Fung.* 21:385 1912; Kil-  
 lermann 139.  
*Skepperia* Berk. *Trans. Linn. Soc. Lond.*  
 22:130 1859.  
*Friesula* Spg. *Fung. Arg.* 2:9 1881.  
*Skepperiella* Pilat *Bull. Soc. Myc. Fr.* 43:56  
 1927.  
*Solenia* Hoffm. *Deut. Fl. t. 8* 1795.  
*Stereum* Pers. *Obs. Myc.* 1:35 1797; em. Fr.  
*Epicr.* 545 1838.  
*Thelephora* Ehrhart *Crypt. Exs. n. 178* 1785;  
 em. Fr. *Syst. Myc.* 1:428 1821.  
*Bresadolina* Brinkm. *Ann. Myc.* 7:289  
 1909; Killermann 146.
- P. quercina* (Fr.) Cke.  
*G. lactescens* (Berk.) H. & L.  
*G. incarnata* (Fr.) H. & L.  
*K. setigera* Fr.  
*P. pedicellata* (Pr.) Hoehn.  
*W. horrida* Hoehn.  
*S. convoluta* Berk.  
*F. platensis* Spg.  
*S. spathularia* (B. & C.) Pilat  
*S. candida* Pers.  
*S. hirsutum* (Willd.) Pers.  
*T. terrestris* Ehrh.  
*B. pallida* (Pers.) Br.

## Genera Incertae Sedis Vel Dubia

- Dendrocladium* Pat. *Jour. de Bot.* 3:33 1889;  
 Killermann 150.
- D. peckolti* (Lloyd) Pat.

## CLAVARIACEAE

- Clavaria* (Vaill.) L. *Sp. Pl.* 2:1132 1753.  
*Phaeoclavulina* Brinkm. *Jahresb. Westf.*  
*Ver. Bot.* 25:197 1897.  
*Lachnocladium* Lev. *Orbigny Dict.* 8:487  
 1849.  
*Phaeopterula* Henn. *Hedwigia* 43:175 1904;  
 cf. Hoehn. *Frag. Myk.* 687 1911; *Syll.*  
*Fung.* 17:201 1906.  
*Physalacria* Pk. *Bull. Torr. Club* 9:2 1882.  
*Baumannella* Henn. *Engler Bot. Jahrb.*  
 23:543 1897; *Syll. Fung.* 14:244 1899; cf.  
 Hoehn. *Ann. Myc.* 9:174 1911.  
*Pistillaria* Fr. *Syst. Myc.* 1:496 1821  
*Pterula* Fr. *Syst. Orb. Pl. Hom.* 90 1825.  
*Sparassis* Fr. *Syst. Myc.* 1:464 1821.  
*Typhula* Pers. *Syn. Fung.* 28 1801; *Fr. Obs.*  
*Myc.* 2:296 1818.
- C. botrytis* Pers.  
*P. macrospora* Brinkm.  
*L. furcellatum* (Fr.) Lev.  
*P. hirsuta* Henn.  
*P. inflata* Pk.  
*B. togoensis* Henn.  
*P. micrans* Fr.  
*P. multifida* Fr.  
*S. crispa* (Wulf.) Fr.  
*T. sclerotoides* Fr.

## Genera Incertae Sedis Vel Dubia

- Acurtis* Fr. *Sum. Veg. Scan.* 337 1849; *Syll.*  
*Fung.* 6:691 1888; Killermann 150.
- A. gigantea* (Schw.) Fr.

- Hirsutella* Pat. Rev. Myc. 14:67 1892; Syll. Fung. 11:140 1895; cf. Speare Trans. Brit. Myc. Soc. 9:93 1923; Killermann 156. H. entomophila Pat.  
*Matruchotia* Boul. Rev. Gen. Bot 5:401 1893; Syll. Fung. 11:118 1895. M. varians Boul.

## HYDNACEAE

- Asterodon* Pat. Bull. Soc. Myc. Fr. 10:130 1894. A. ferruginosus Pat.  
*Hydnochaete* Pk. Rep. N. Y. Mus. 50:113 1897; not Bres. 1896. H. setigera Pk.  
*Echinodontium* Ell. & Ev. Bull. Torr. Club 37:49 1900. E. tinctorum E. & E.  
*Hydnofomes* Henn. Engler Bot. Jahrb. 28:267 1900; Syll. Fung. 16:177 1902. H. tsugicola Henn.  
*Gloeothele* Bres. Ann. Myc. 18:44 1920. G. lamellosa (Henn.) Bres.  
*Grammothele* B. & C. Cub. Fung. 327 1867. G. lineata B. & C.  
*Grandinia* Fr. Epicr. 527 1838. G. granulosa Fr.  
*Hydnochaete* Bres. Hedwigia 35:287 1896. H. badia Bres.  
*Hydnum* L. Sp. Pl. 2:1178 1753. H. imbricatum L.  
*Hericum* Pers. Comm. Clav. 28 1797. H. echinus (Scop.) Pers.  
*Hydnodon* Banker Mycologia 5:297 1913. H. telephorum (Lev.) Bank.  
*Irpex* Fr. Elench. Fung. 1:142 1828. I. lacteus Fr.  
*Lopharia* Kalchb. & MacOw. Grevillea 10:58 1882. L. lirellosa K. & M.  
*Thwaitesiella* Massee Grevillea 21:2 1892; Syll. Fung. 11:112 1895. T. mirabilis (B. & Br.) Mass.  
*Mucronella* Fr. Hym. Eur. 629 1874. M. calva (A. & S.) Fr.  
*Odontia* Pers. Obs. Myc. 1:88 1796. O. fimbriata Pers.  
*Caldesiella* Sacc. Michelia 1:97 1877; Syll. Fung. 6:477 1888. C. italica Sacc.  
*Dacryobolus* Fr. Sum. Veg. Scan. 404 1849. D. uda Fr.  
*Grandiniella* Karst. Hedwigia 34:8 1895. G. livescens Karst.  
*Phlebia* Fr. Syst. Myc. 1:426 1821. P. radiata Fr.  
*Radulum* Fr. Elench. Fung. 1:148 1828. R. orbiculare Fr.  
*Phaeoradulum* Pat. Bull. Soc. Myc. Fr. 16:178 1900; Syll. Fung. 16:179 1902. P. guadalupense Pat.  
*Sistotrema* Pers. Tent. Disp. 28 1797. S. confluens Pers.

## Genus Incertae Sedis

- Kordyanella* Hoehn. Ann. Myc. 2:273 1904. K. austriaca Hoehn.

## POLYPORACEAE

- Boletinus* Kalchbr. Bot. Zeit. 25:181 1867. B. cavipes Opat.  
*Boletus* (Dill.) L. Sp. Pl. 2:1176 1753. B. subtomentosus L.  
*Boletopsis* Henn. Nat. Pflanzenf. 1:1:194 1900; Syll. Fung. 14:164 1899. B. rufus (Schaeff.) Henn.  
*Fistulinella* Henn. Engl. Bot. Jahrb. 30:43 1901; Syll. Fung. 17:101 1906; cf. Hoehn. Frag. Myk. 583. F. staudti Henn.  
*Leucobolites* Beck Zeits. Pilzk. 2:142 1923. L. castaneus (Poir.) Beck  
*Leucoconius* (Reichenb.) Beck Zeits. Pilzk. 2:146 1923. L. cyanescens (Bull.) Beck

- Rhodobolites** Beck Zeits. Pilzk. 2:147 1923.  
**Rostkovites** Karst. Rev. Myc. 3:9:16 1881.  
**Suillus** (Michel.) Karst. Bidr. Finl. Nat. Folk. 37:5 1882; Syll. Fung. 16:142 1899.  
**Tylophilus** Karst. Hattsv. 2:2 1882; Syll. Fung. 16:142 1899.  
**Cryptoporus** Shear Bull. Torr. Club. 29:450 1902; Killermann 177.  
**Cyclomyces** Kze. Linnaea 5:512, ill. 1830.  
**Daedalea** Pers. Syn. Meth. 499 1801.  
**Elmerina** Bres. Ann. Myc. 10:507 1912; for *Elmeria* Bres. Hedwigia 51:318 1912.  
**Favolus** Fr. Elench. Fung. 44 1828.  
**Filoboletus** Henn. Monsonia 1:146 1900; cf. Hoehn. Frag. Myk. 173, 582 1908, 1910.  
**Fistulina** Bull. Champ. 1:314 1791.  
**Fomes** Fr. Nov. Symb. 59 1851.  
**Ganoderma** Karst. Rev. Myc. 3:17 1881; Syll. Fung. 9:176 1891; Killermann 192.  
**Heterobasidium** Bref. Unters. 8:154 1889.  
**Gloeoporus** Mont. Ramon Hist. Phys. Cuba 385 1842.  
**Gyrodon** Opat. Wieg. Arch. Naturg. 1:5 1856.  
**Hexagonia** Fr. Epicr. 496 1838.  
**Hymenogramme** Berk. & Mont. Lond. Jour. Bot. 3:329 1844; cf. Henn. Nat. Pflanzenf. 1:1:197 1900.  
**Laschia** Mont. Fl. Chil. 7:395 1845; not Fr. 1830.  
**Lenzites** Fr. Gen. Hymen. 10 1836.  
**Merulius** (Haller) Fr. Syst. Myc. 1:326 1821.  
**Phylloporus** Quel. Fl. Myc. Fr. 49 1888.  
**Polyporus** (Michel.) Fr. Epicr. 427 1838.  
**Laccocephalum** MacAlp. & Tepper Proc. Soc. Victoria 7:166 1894; Syll. Fung. 11:87 1895.  
**Polystictus** Fr. Nov. Symb. 70 1851.  
**Mucronoporus** Ell. & Ev. Jour. Myc. 5:28 1889; Syll. Fung. 9:188 1891; Killermann 184.  
**Poria** Pers. Syn. Meth. 542 1801.  
**Porothelium** Fr. Obs. Myc. 2:272 1818.  
**Strobilomyces** Berk. Outl. 236 1860.  
**Trametes** Fr. Gen. Hymen. 11 1836.  
**Sclerodepsis** Cke. Grevillea 19:49 1890.  
**R. roseus** (Wint.) Beck  
**R. granulatus** (L.) Karst.  
**S. castaneus** (Bull.) Karst.  
**T. felleus** (Bull.) Karst.  
**C. volvatus** (Pk.) Shear  
**C. fuscus** Kze.  
**D. unicolor** (Bull.) Fr.  
**E. cladophora** (Berk.) Bres.  
**F. europaeus** Fr.  
**F. mycenoides** Henn.  
**F. hepatica** (Schaeff.) Fr.  
**F. officinalis** (Vill.) Fr.  
**G. lucidum** (Leys.) Karst.  
**H. annosum** Bref.  
**G. amorphus** Fr.  
**G. lividus** (Bull.) Opat.  
**H. crinigera** Fr.  
**H. javensis** B. & M.  
**L. papulata** Mont.  
**L. betulina** (L.) Fr.  
**M. tremellosus** (Schrad.) Fr.  
**P. rhodoxanthus** (Schw.) Bres.  
**P. brumalis** (Pers.) Fr.  
**L. basilapidodes** M. & T.  
**P. versicolor** (L.) Fr.  
**M. circinatus** (Fr.) E. & E.  
**P. vaporaria** Pers.  
**P. fimbriatum** (Pers.) Fr.  
**S. strobilaceus** (Scop.) Berk.  
**T. pini** (Brot.) Fr.  
**S. berkeleyi** Cke.

## Genera Incertae Sedis Vel Dubia

- Bresadolia** Speg. Fung. Guar. 1:15 1887; Syll. Fung. 6:388 1888; Killermann 210.  
**Campbellia** Cke. & Mass. Grevillea 18:87 1890; Syll. Fung. 9:205 1891; Killermann 210.  
**B. paradoxa** Speg.  
**C. africana** C. & M.

- Rodwaya* Syd. Hedwigia 40:b1.2 1901;  
Syll. Fung. 16:172 1902; Killermann 210.
- Ceratomyces* Corda Sturm Deut. Crypt. Fl.  
3:3:133, ill. 1837; Syll. Fung. 6:385 1888;  
Killermann 203.
- Henningsia* Moell. Protobas. 44 1895; Syll.  
Fung. 14:188 1899; Killermann 210.
- Muciporus* Juel Bih. Sven. Akad. Handl.  
23:3:23, ill. 1897; Killermann 210.
- Mycodendrum* Masee Jour. Bot. 29:1, ill.  
1891; Syll. Fung. 9:206 1891; Killermann  
210.
- Myriadoporus* Pk. Bull. Torr. Club 11:27  
1884; Syll. Fung. 6:384 1888; Killermann  
203.
- Poropyche* Beck Verh. z-b. Ges. Wien  
38:657 1888; Syll. Fung. 9:206 1891; Kil-  
lermann 210.
- Theloporus* Fr. Fung. Natal. 18 1848; Syll.  
Fung. 6:421 1888; Killermann 204.
- Volvoboletus* Henn. Nat. Pflanzenf. 1:1:196  
1900; Syll. Fung. 14:164 1899; Killermann  
210.
- R. *africana* (C. & M.) Syd.
- C. *albus* (Corda) Sacc.
- H. *geminella* Moell.
- M. *corticola* (Fr.) Juel
- M. *paradoxum* Mass.
- M. *adustus* Pk.
- P. *candida* Beck
- T. *cretaceus* Fr.
- V. *volvatus* Henn.

## AGARICACEAE

## Leucosporae

- Amanita* Pers. Syn. Meth. 246 1801.
- Amanitopsis* Roze Karsten Hattsv. 1:6 1879.
- Armillaria* Fr. Syst. Myc. 1:26 1821.
- Arrhenia* Fr. Sum. Veg. Scan. 312 1849
- Campanella* Henn. Nat. Pflanzenf. 1:1:199  
1900; Syll. Fung. 14:100 1899; Killermann  
248.
- Dictyolus* Quel. Enchir. 139 1886; Syll.  
Fung. 5:482 1887; Killermann 248.
- Rimbachia* Pat. Bull. Soc. Myc. Fr. 8:159  
1891; Syll. Fung. 11:32 1895; Killermann  
248.
- Cantharellus* Adanson Juss. Gen. Pl. 6 1789.
- Clitocybe* Fr. Syst. Myc. 1:78 1821.
- Aeruginospora* Hoehn. Sitzb. Akad. Wien  
117:1012 1908; Syll. Fung. 21:46 1912;  
Killermann 246.
- Leucopaxillus* Boursier Bull. Soc. Myc. Fr.  
41:393 1925.
- Collybia* Fr. Syst. Myc. 1:129 1821.
- Heliomyces* Lev. Ann. Sci. Nat. 3:2:177 1844.
- Hiatula* Fr. Nov. Symb. 27 1851.
- Hygrophorus* Fr. Epicr. 320 1838.
- Godfrinia* Maire Rev. Myc. 28:66, ill. 1906.
- Lactarius* Fr. Epicr. 333 1838.
- Lactaria* Pers. Tent. Disp. 63 1797.
- A. *muscaria* (L.) Pers.
- A. *vaginata* (Bull.) Roze
- A. *mellea* (Vahl) Fr.
- A. *cupularis* (Wahl.) Fr.
- C. *büttneri* Henn.
- D. *lobatus* (Pers.) Quel.
- R. *paradoxa* Pat.
- C. *cibarius* Fr.
- C. *infundibulis* (Schaeff.) Fr.
- A. *singularis* Hoehn.
- L. *paradoxus* (C. & D.) Bour.
- C. *dryophila* (Bull.) Fr.
- H. *elegans* Lev.
- H. *benzoni* Fr.
- H. *miniatus* Fr.
- H. *conicus* (Scop.) Maire
- L. *piperatus* (L.) Fr.
- L. *piperata* (L.) Pers.



- Lactariopsis* Henn. Engl. Bot. Jahrb. 30:51  
1901; Syll. Fung. 17:30 1906; cf. Hoehn.  
Frag. Myk. 587 1910.
- Lentinus* Fr. Elench. Fung. 45 1828.
- Lentodiopsis* Bub. Hedwigia 43:106 1904.
- Lentodium* Morg. Jour. Cinc. Soc. Nat.  
Hist. 18:36 1895; Killermann 283.
- Lepiota* Fr. Syst. Myc. 1:19 1821.
- Chlorophyllum* Masee Kew Bull. 1898:135;  
Syll. Fung. 21:46 1912; Killermann 247.
- Amanitella* Maire Ann. Myc. 11:337 1913;  
Killermann 276.
- Lepidella* Gilbert Bull. Soc. Myc. Fr.  
41:303 1925.
- Marasmius* Fr. Epicr. 372 1838.
- Mycena* Fr. Syst. Myc. 1:140 1821.
- Eomycenella* Atkin. Bot. Gaz. 34:36 1902;  
Syll. Fung. 17:21 1906.
- Gloecephala* Masee Grevillea 21:33 1892;  
Syll. Fung. 11:142 1895; Killermann 151.
- Nyctalis* Fr. Syst. Orb. Veg. 203 1825.
- Omphalia* Pers. Syn. Meth. 448 1801.
- Panus* Fr. Epicr. 396 1838.
- Pleurotus* Fr. Syst. Myc. 1:178 1821.
- Russula* Pers. Obs. Myc. 1:100 1796.
- Schizophyllum* Fr. Obs. Myc. 1:103 1815.
- Schulzeria* Bres. Schulzeria Nov. Gen. 7, ill.  
1886.
- Chlorospora* Masee Kew Bull. 1898:136;  
Syll. Fung. 21:46 1912; Killermann 247.
- Tilotus* Kalchbr. Grevillea 9:137 1881.
- Tricholoma* Fr. Syst. Myc. 1:36 1821.
- Trogia* Fr. Epicr. 402 1838.
- Xerotus* Fr. Syst. Orb. Veg. 1:78 1825.
- L. zenkeri* Henn.  
*L. tigrinus* (Bull.) Fr.  
*L. albida* Bub.
- L. squamulosum* Morg.  
*L. procera* (Scop.) Fr.
- C. esculentum* Mass.
- A. lenticularis* Maire
- L. vittadini* Gilbert  
*M. rotula* (Scop.) Fr.  
*M. galericulata* (Scop.) Fr.
- E. echinocephala* Atkin.
- G. epiphylla* Mass.  
*N. asterophora* Fr.  
*O. campanella* (Batsch) Pers.  
*P. stipticus* (Bull.) Fr.  
*P. ostreatus* (Jacq.) Fr.  
*R. alutacea* Pers.  
*S. commune* Fr.
- S. rimulosa* S. & B.
- C. eyrei* Mass.  
*T. lenzitiformis* K.  
*T. personatum* Fr.  
*T. crispa* (Pers.) Fr.  
*X. romanus* Fr.

Rhodosporae

- Annularia* Schulz. Verh. z-b. Ges. Wien 16:809  
1866.
- Claudopus* W. G. Smith Seemann's Jour. 8:215  
1870.
- Clitopilus* Fr. Epicr. 148 1836.
- Eccilia* Fr. Syst. Myc. 1:207 1821.
- Entoloma* Fr. Epicr. 143 1836.
- Leptonia* Fr. Syst. Myc. 1:201 1821.
- Metraria* Cke. & Mass. Sacc. Syll. 9:82 1891.
- Nolanea* Fr. Syst. Myc. 1:204 1821.
- Pluteus* Fr. Epicr. 140 1836.
- Schinzinia* Fayod Verh. Bot. Brandenb.  
31:227 1890.
- Volvaria* Fr. Syst. Myc. 1:277 1821.
- Volvariella* Speg. Fung. Arg. Nov. 118  
1899; Syll. Fung. 16:70 1902; Henn. Nat.  
Pflanzenf. 1:1:555 1900.
- A. fenzli* Schulz.
- C. variabilis* (Pers.) Smith  
*C. primulus* (Scop.) Fr.  
*E. parkensis* Fr.  
*E. sinuatum* Fr.  
*L. euchroa* (Pers.) Fr.  
*M. insignis* C. & M.  
*N. pascua* (Pers.) Fr.  
*P. cervinus* (Schaeff.) Fr.
- S. pustulosa* Fayod  
*V. speciosa* Fr.
- V. argentina* Speg.

## Ochrosporae

- Bolbitius* Fr. *Epicr.* 253 1838.  
*Cortinarius* Fr. *Epicr.* 255 1838.  
*Crepidotus* Fr. *Syst. Myc.* 1:272 1821.  
*Flammula* Fr. *Syst. Myc.* 1:250 1821.  
*Galera* Fr. *Syst. Myc.* 1:264 1821.  
*Epicorticium* Velenovsky *Mykologia* 3:72  
 1926.  
*Hebeloma* Fr. *Syst. Myc.* 1:249 1821.  
*Inocybe* Fr. *Syst. Myc.* 1:254 1821.  
*Locellina* Gill. *Champ. Fr.* 428 1874.  
*Naucoria* Fr. *Syst. Myc.* 1:260 1821.  
*Phaeomarasmius* Scherf. *Hedwigia* 36:287  
 1897; cf. *Henn. Nat. Pflanzenf.* 1:1:241  
 1900; *Ann. Myc.* 13:58 1915.  
*Paxillus* Fr. *Gen. Hymen.* 8 1836.  
*Pholiota* Fr. *Syst. Myc.* 1:240 1821.  
*Pholiotella* Speg. *Bol. Acad. Cordoba* 11:412  
 1889; *Killermann* 227.  
*Rozites* (Karst.) *Singer Ann. Myc.* 20:299,  
 ill. 1922; *Killermann* 229.  
*Pluteolus* Fr. *Hymen. Eur.* 966 1874.  
*Tubaria* W. G. Smith *Seemann's Jour.* 8:219  
 1870.
- B. titubans* (Bull.) Fr.  
*C. violaceus* (L.) Fr.  
*C. mollis* (Schaeff.) Fr.  
*F. flavida* (Schaeff.) Fr.  
*G. tenera* (Schaeff.) Fr.  
*E. sulcatum* Velen.  
*H. fastibile* (Pers.) Fr.  
*I. hystrix* Fr.  
*L. acetabulosa* (Sow.) Sacc.  
*N. semorbicularis* (Bull.) Fr.  
*P. rimulicola* (Lasch) Scherf.  
*P. involutus* (Batsch) Fr.  
*P. praecox* (Pers.) Fr.  
*P. blattariopsis* Speg.  
*R. caperata* (Pers.) Karst.  
*P. reticulatus* (Pers.) Fr.  
*T. furfuracea* (Pers.) Smith

## Melanosporae

- Agaricus* L. *Sp. Pl.* 2:1171 1753.  
*Micropsalliota* Hoehn. *Sitzb. Akad. Wien*  
 123:79 1914; *Killermann* 240.  
*Psalliota* Fr. *Syst. Myc.* 1:280 1821.  
*Anellaria* Karst. *Hattsv.* 1:518 1879.  
*Anthrachyphyllum* Ces. *Grevillea* 9:137  
 1880; cf. *Killermann* 256.  
*Chitonia* Fr. *Hymen. Eur.* 277 1874.  
*Clarkeinda* O.K. *Rev. Gen. Pl.* 1:848 1891;  
*Syll. Fung.* 16:112 1902.  
*Chitoniella* Henn. *Nat. Pflanzenf.* 1:1:240  
 1900.  
*Coprinus* Pers. *Tent. Disp.* 62 1797.  
*Deconica* W. G. Smith *Seemann's Jour.* 8:221  
 1870.  
*Gomphidius* Fr. *Epicr.* 319 1838.  
*Hypholoma* Fr. *Syst. Myc.* 1:287 1821.  
*Montagnites* Fr. *Epicr.* 240 1838.  
*Panaeolus* Fr. *Epicr.* 234 1836.  
*Copelandia* Bres. *Hedwigia* 53:51 1912;  
*Killermann* 235.  
*Pilosace* Fr. *Nov. Symb. Myc.* 9 1851.  
*Psathyra* Fr. *Syst. Myc.* 1:295 1821.  
*Psathyrella* Fr. *Epicr.* 237 1836.  
*Psilocybe* Fr. *Syst. Myc.* 1:289 1821.  
*Stropharia* Fr. *Mon. Hymen.* 1:408 1863.
- A. campestris* L.  
*M. minima* (Rick.) Hoehn.  
*P. campestris* (L.) Fr.  
*A. separata* (L.) Karst.  
*A. nigrita* (Lev.) Kalchbr.  
*C. rubriceps* C. & M.  
*C. rubriceps* (C. & M.) Rea  
*C. poderes* (B. & Br.) Henn.  
*C. comatus* Fr.  
*D. bullacea* (Bull.) Smith  
*G. viscidus* (L.) Fr.  
*H. appendiculatum* (Bull.) Fr.  
*M. candollei* Fr.  
*P. campanulatus* (L.) Fr.  
*C. papilionacea* (Bull.) Bres.  
*P. tricholepis* Fr.  
*P. corrugis* (Pers.) Fr.  
*P. disseminata* (Pers.) Fr.  
*P. merdaria* Fr.  
*S. aeruginosa* (Curt.) Fr.

## Genera Incertae Sedis Vel Dubia

- Catathelasma* Lovejoy Bot. Gaz. 50:383 1910.  
*Clavulinopsis* Overeem Bull. Jard. Buitenz. 3:5:278, ill. 1923.  
*Coprinopsis* Beeli Bull. Soc. Bot. Belg. 61:98, ill. 1928.  
*Cymatella* Pat. Bull. Soc. Myc. Fr. 15:193 1899; Syll. Fung. 16:49 1902; cf. Hoehn. Sitzb. Akad. Wien 119:887 1910; Killermann 259, 283.  
*Discocyphella* Henn. Monunia 1:141 1899; Syll. Fung. 16:202 1902; cf. Pat. Essai Tax. 147 1900; Hoehn. Sitzb. Akad. Wien 119:887 1910; Killermann 283.  
*Hemigaster* Juel Sver. Vet. Akad. Handl. 21:111 1895; Syll. Fung. 11:173 1895; Killermann 283.  
*Marasmiopsis* Henn. Nat. Pflanzenf. 1:1:230 1900.  
*Oudemansiella* Speg. Fung. Arg. 4:11 1882; Syll. Fung. 5:653 1887; 21:127 1912; cf. Hoehn. Frag. Myk. 170, 585 1910; Killermann 283.  
*Phaeolimacium* Henn. Monunia 1:14 1899; Syll. Fung. 16:110 1902; cf. Hoehn. Frag. Myk. 584 1910; Killermann 283.  
*Phaeohygrocybe* Henn. Engl. Bot. Jahrb. 30:50 1901; Syll. Fung. 17:81 1906.  
*Phlebophora* Lev. Ann. Sci. Nat. 2:16:238 1841; Syll. Fung. 16:215 1902; Killermann 283.  
*Pterophyllus* Lev. Ann. Sci. Nat. 3:2:178 1844; Syll. Fung. 5:654 1887; Killermann 283.  
*Rhacophyllus* Berk. Jour. Linn. Soc. 11:559 1871; Syll. Fung. 5:654 1887; Killermann 283.  
*Rhodocybe* Maire Bull. Soc. Myc. Fr. 40:299, ill. 1926.  
*Rhodopaxillus* Maire Ann. Myc. 11:338 1913.  
*Rhodotus* Maire Bull. Soc. Myc. Fr. 40:308 1926.  
*Stylobates* Fr. Afz. Fung. Guin. 5 1837; Syll. Fung. 5:502 1887; Killermann 252.
- C. evanescens* Lovejoy  
*C. sulcata* Overeem  
*C. calaensis* Beeli  
*C. minima* Pat.  
*D. marasmoides* Henn.  
*H. candidus* Juel  
*M. subannulatus* (Trog) Henn.  
*O. platensis* Speg.  
*P. bulbosum* Henn.  
*P. zenkeri* Henn.  
*P. rugilosa* Lev.  
*P. bovei* Lev.  
*R. lilacinus* B. & Br.  
*R. caelata* (Fr.) Maire  
*R. panaeolus* Maire  
*R. palmatus* (Fr. & Bull.) Maire  
*S. paradoxus* Fr.

## LYCOPERDALES

## PHALLACEAE

- Anthurus* Kalchbr. Grevillea 9:2 1880.  
*Aporophallus* Moell. Bras. Pilzblum. 68, 147 1895.  
*Aseroe* LaBill. Rel. Voy. Rech. 1799:145.  
*Blumenavia* Moell. Bras. Pilzblum. 57, 146 1895.  
*A. muellerianus* Kalchbr.  
*A. subtilis* Moell.  
*A. rubra* LaBill.  
*B. rhacodes* Moell.

- Calathiscus* Mont. Ann. Sci. Nat. 2:16:278  
1841.
- Clathrella* Fisch. Nat. Pflanzenf. 1:1:284 1900.
- Clathrus* Michel. L. Sp. Pl. 2:1179 1753.
- Colus* Cav. & Sech. Ann. Sci. Nat. 2:3:251  
1835.
- Cryptophallus* Pk. Bull. Torr. Club 34:147  
1897.
- Dictyobole* Atkin. Bot. Gaz. 34:43, ill. 1902.
- Dictyophora* Desv. Jour. de Bot. 2:92 1809.
- Echinophallus* Henn. Engler Bot. Jahrb.  
25:505 1898.
- Ileodictyum* Tul. Ann. Sci. Nat. 3:2:114 1844.
- Kalchbrennera* Berk. Gard. Chron. 5:785, ill.  
1876; Hedwigia 15:115 1876.
- Lysurus* Fr. Syst. Myc. 2:285 1823.  
*Mycopharus* Petch Trans. Brit. Myc. Soc.  
10:281 1925.
- Mutinus* Fr. Sum. Veg. Scan. 2:434 1849.  
*Floccomutinus* Henn. Engler Jahrb. 22:109  
1895; Syll. Fung. 14:254 1899; Fischer 555.
- Jansia* Penz. Ann. Jard. Buitenz. 16:139  
1899; Syll. Fung. 16:226 1902.
- Staheliomyces* Fisch. Mitt. Ges. Bern  
1920:142, ill. 1921.
- Phallus* Michel. L. Sp. Pl. 2:1178 1753.  
*Ithyphallus* Fr. Syst. Myc. 2:283 1823.  
*Albofiella* Speg. Fung. Arg. Nov. 183 1899;  
Syll. Fung. 16:227 1902.
- Itajahya* Moell. Bras. Pilzblum. 79, 148 1895.
- Simblum* Klotzsch Hooker Bot. Misc. 2:164,  
ill. 1831.
- C. sepia* Mont.  
*C. pusilla* (Berk.) Fisch.  
*C. cancellatus* Tourn.  
*C. hirudinosus* C. & S.  
*C. albipes* Pk.  
*D. texensis* Atkin. & Long  
*D. phalloidea* Desv.  
*E. lauterbachii* Henn.  
*I. cibarium* Tul.  
*K. corallocephala* (W. & C.) Fisch.  
*L. mokusin* (Cib.) Fr.  
*M. gardneri* (Berk.) Petch  
*M. caninus* (Huds.) Fr.  
*F. zenkeri* Henn.  
*J. elegans* Penz.  
*S. cinctus* Fisch.  
*P. impudicus* L.  
*I. impudicus* (L.) Fr.  
*A. argentina* Speg.  
*I. galericulata* Moell.  
*S. periphragmoides* Klotzsch

## Genus Incertae Sedis

- Claustula* Curtis Ann. Bot. 40:476, ill. 1926. *C. fischeri* Curtis

## LYCOPERDACEAE

- Astraeus* Morg. Jour. Cinc. Soc. Nat. Hist.  
12:19, ill. 1889.  
*Battarrea* Pers. Syn. Fung. 129 1801.  
*Battarreopsis* Henn. Hedwigia 41:212, ill.  
1902.  
*Bovista* Pers. Tent. Disp. 6 1797.  
*Arachniopsis* Long Mycologia 9:272 1917.  
*Bovistella* Morg. Jour. Cinc. Soc. Nat. Hist.  
14:141, ill. 1892.  
*Broomeia* Berk. Lond. Jour. Bot. 3:193 1844;  
Syll. Fung. 7:92 1888; cf. Fischer 324.  
*Calvatia* Fr. Sum. Veg. Scan. 442 1849.  
*Catastoma* Morg. Jour. Cinc. Soc. Nat. Hist.  
14:142, ill. 1892.  
*A. stellatus* (Scop.) Morg.  
*B. phalloides* (Dicks.) Pers.  
*B. artini* Henn.  
*B. plumbea* Pers.  
*A. albicans* Long.  
*B. ohiensis* Ell. & Morg.  
*B. congregata* Berk.  
*C. craniiformis* (Schw.) Fr.  
*C. circumscissum* (B. & C.) Morg.

- Cauloglossum* Grev. Fr. Syst. Myc. 3:60 1829.  
*Chaenoderma* Masee Grevillea 19:46 1890.  
*Corditubera* Henn. Engler Bot. Jahrb. 23:557, ill. 1897.  
*Hoehnelogaster* Lohwag Beih. Bot. Cent. 42:2:325 1926.  
*Dictyocephalus* Underwood Bull. Torr. Club 28:441, ill. 1901.  
*Geaster* (Michel.) Fr. Syst. Myc. 3.8 1829.  
*Geasteroides* Long Mycologia 9:271 1917.  
*Geasteropsis* Hollos Kul. Nov. Kozl. 2:2 1903; Syll. Fung. 17:229 1906.  
*Globaria* Quel. Champ. Jura & Vosges 2:370 1873.  
*Gyrophragmium* Mont. Ann. Sci. Nat. 2:20:77 1843.  
*Lycogalopsis* Fisch. Ber. Deut. Bot. Ges. 4:193, ill. 1886; Nat. Pflanzenf. 1:1:312 1900; cf. Syll. Fung. 7:153 1888.  
*Lycoperdum* (Tourn.) L. Sp. Pl. 2:1183 1753.  
*Macowanites* Kalchbr. Gard. Chron. 5:785 1876; Hedwigia 15:115, ill. 1876.  
*Mitromyces* Nees Syst. Pilz. 136 1817.  
*Calostoma* Desv. Jour. de Bot. 2:94 1809.  
*Husseyia* Berk. Lond. Jour. Bot. 6:508 1847; Syll. Fung. 7:67 1888.  
*Mycenastrum* Desv. Ann. Sci. Nat. 2:17:143 1842.  
*Pila* Speg. Rev. Chil. Hist. Nat. 25:77 1923.  
*Phellorina* Berk. Lond. Jour. Bot. 2:521, ill. 1843.  
*Xylopodium* Mont. Ann. Sci. Nat. 3:4:364 1843; Syll. Fung. 7:143 1888; cf. Fischer 334.  
*Pisolithus* A. & S. Consp. Fung. 82, ill. 1805.  
*Polysaccum* DC. Fl. Fr. 5:103 1815; Syll. Fung. 7:146 1888.  
*Podaxon* Fr. Syst. Myc. 3:62 1829.  
*Polyplodium* Berk. Hook. Lond. Jour. Bot. 2:202 1843.  
*Queletia* Fr. Ofver. Sv. Akad. Förh. 1871:171, ill. 1872.  
*Sclerangium* Lev. Ann. Sci. Nat. 3:9:130 1848.  
*Stella* Masee Jour. Myc. 5:185, ill. 1889; Syll. Fung. 9:272 1891.  
*Scleroderma* Pers. Syn. Fung. 150, ill. 1801.  
*Areolaria* Forq. Champ. Super. 155, ill. 1886; Syll. Fung. 7:144 1888.  
*Caloderma* Petri Malpighia 14:136 1900.  
*Pompholyx* Corda Sturm Deut. Crypt. Fl. 3:3:47, ill. 1841; Syll. Fung. 7:180 1888.  
*Secotium* Kze. Flora 23:321 1840.  
*Elasmomyces* Cav. Malpighia 11:426, ill. 1897; Syll. Fung. 14:258 1899.
- C. transversarium* (Bosc) Fr.  
*C. drummondii* Mass.  
*C. staudti* Henn.  
*H. microspora* (Hoehn.) Lohwag  
*D. curvatus* Underw.  
*G. pectinatus* Pers.  
*G. texensis* Long  
*G. conrathi* Hollos  
*G. furfuracea* (Schaeff.) Quel.  
*G. delilei* Mont.  
*L. solmsi* Fisch.  
*L. gemmatum* Batsch  
*M. agaricinus* Kalchbr.  
*M. lutescens* Schw.  
*C. cinnabarinum* Desv.  
*H. insignis* Berk.  
*M. corium* Desv.  
*P. fragilis* (Lev.) Speg.  
*P. inquinans* Berk.  
*X. delestrei* D. & M.  
*P. arenarius* A. & S.  
*P. crassipes* DC.  
*P. carcinomalis* (L.) Fr.  
*P. inquinans* Berk.  
*Q. mirabilis* Fr.  
*S. polyrhizum* (Gmel.) Lev.  
*S. americana* Mass.  
*S. verrucosum* (Bull.) Pers.  
*A. tabellata* (Kalch.) Forq.  
*C. echinatum* Petri  
*P. sapida* Corda  
*S. erythrocephalum* Tul.  
*E. mattiroleanus* Cav.

- Sphaericeps** Welw. & Curr. Trans. Linn. Soc.  
26:290 1867. **S. lignipes** W. & C.  
**Tylostoma** Pers. Syn. Fung. 139 1801. **T. mammosum** (Mich.) Pers.  
**Chlamydopus** Speg. An. Mus. Nac. 6:189  
1898; Syll. Fung. 16:234 1902. **C. clavatus** Speg.

**Genera Incertae Sedis Vel Dubia**

- Abstoma** Cunningham Trans. Proc. N. Z.  
Inst. 57, 206, ill. 1927. **A. purpureum** (Lloyd) Cunn.  
**Anixia** Fr. Nov. Fl. Suec. 80 1819. **A. difformis** Fr.  
**Arachnium** Schw. Syn. Fung. Carol. n. 14, ill.  
1822; Syll. Fung. 7:150 1888; cf. Fischer  
339. **A. album** Schw.  
**Boletogaster** Lohwag Beih. Bot. Cent.  
42:2:274 1926. (no species given)  
**Bovistoides** Lloyd Myc. Notes 61:883 1919. **B. simplex** Lloyd  
**Castoreum** Cke. & Mass. Grevillea 15:100  
1887; Syll. Fung. 7:142 1888; cf. Fischer  
338. **C. radicum** C. & M.  
**Ciliciocarpus** Corda Sturm Deut. Crypt. Fl.  
3:3:5, ill. 1831; Syll. Fung. 7:152 1888;  
cf. Fischer 339. **C. hypogaeus** Corda  
**Clavogaster** Henn. Hedwigia 35:303 1896;  
Syll. Fung. 14:266 1899; cf. Fischer 299;  
Hoehn. Frag. Myk. 594 1910. **C. novozelandicus** Henn.  
**Coelomyces** B. & C. Jour. Acad. Nat. Hist.  
Phil. 2:2:279 1853; Syll. Fung. 7:94 1888;  
cf. Fischer 321. **C. schweinitzi** B. & C.  
**Cycloderma** Klotzsch Linnaea 7:203 1832;  
Syll. Fung. 7:56 1888; cf. Fischer 341. **C. indicum** Klotzsch  
**Cyphellomyces** Speg. An. Mus. Nac. 3:9:25,  
ill. 1908. **C. argentinensis** Speg.  
**Diplocystis** B. & C. Jour. Linn. Soc. 10:344  
1869; Syll. Fung. 7:92 1888; cf. Fischer  
324. **D. wrighti** B. & C.  
**Diploderma** Link Diss. 2:44 1816; Syll. Fung.  
7:92 1888; cf. Fischer 342. **D. tuberosum** Lk.  
**Disciseda** Czern. Bull. Soc. Nat. Moscou  
18:2:153 1845; Syll. Fung. 7:92 1888; cf.  
Fischer 323. **D. collabescens** Czern.  
**Favillea** Fr. Fung. Natal. 32 1848; Syll.  
Fung. 7:146 1888; cf. Fischer 339. **F. argillacea** Fr.  
**Gastroboletus** Lohwag Beih. Bot. Cent.  
42:2:273 1926. (no species given)  
**Hippoperdum** Mont. Ann. Sci. Nat. 2:17:121  
1842. **H. crucibulum** Mont.  
**Lanopila** Fr. Fung. Natal. 31 1848; Syll.  
Fung. 7:95 1888; cf. Fischer 323. **L. wahlbergi** Fr.  
**Lasiosphaera** Reich. Reise Freg. Novara Bot.  
1:135 1870. **L. fenzli** Reich.  
**Eriosphaera** Reich. Sacc. Syll. 7:96 1888;  
not DC. 1828. **E. fenzli** Reich.

- Lycoperdellon* Torrend *Broteria* 11:92 1913. *L. torrendi* (Bres.) Torr.  
*Lycoperdopsis* Henn. *Monsunia* 1:158 1899; Syll. Fung. 16:242 1902; cf. Fischer 557. *L. arcyrioides* Henn. & Nym.  
*Nepotatus* Lloyd *Myc. Notes* 75:1355, ill. 1925. *N. stellatus* Lloyd  
*Paurocotylis* Berk. *Hook. Fl. N. Zeal.* 2:188, ill. 1855; Syll. Fung. 7:152 1888; cf. Fischer 313. *P. pila* Berk.  
*Pirogaster* Henn. *Hedwigia* 40:b27, ill. 1901; Syll. Fung. 16:256 1902; *Hoehn. Frag. Myk.* 593 1910. *P. fleischerianus* Henn.  
*Polygaster* Fr. *Syst. Myc.* 2:295 1823; Syll. Fung. 7:146 1888; cf. Fischer 339. *P. sampadarius* (Rumph.) Fr.  
*Scolecioarpus* Berk. *Lond. Jour. Bot.* 2:520 1843; Syll. Fung. 7:151 1888; cf. Fischer 338. *S. tener* Berk.  
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*Trichaster* Czern. *Bull. Soc. Nat. Moscou* 18:2:149 1845; Syll. Fung. 7:93 1888; cf. Fischer 322. *T. melanocephalus* Czern.

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*Dendrogaster* Bucholtz *Beitr. Hypog.* 148, ill. 1902. *D. connectens* Buch.  
*Gautieria* Vittad. *Mon. Tuber.* 25 1831. *G. morchelliformis* Vittad.  
*Gymnoglossum* Masee *Grevillea* 19:97 1891. *G. stipitatum* Mass.  
*Hydnangium* Wallr. *Dietr. Fl. Boruss.* 7:465, ill. 1839. *H. carneum* Wallr.  
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*Hysterangium* Vittad. *Mon. Tuber.* 13 1831. *H. clathroides* Vittad.  
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*Martellia* Mattir. *Malpighia* 14:78 1900. *M. mistiformis* Mattir.  
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*Phallogaster* Morg. *Jour. Cinc. Soc. Nat. Hist.* 15:171, ill. 1893. *P. saccatus* Morg.  
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*Protuberia* Moell. *Bras. Pilzblum.* 10, 145, ill. 1895. *P. maracuja* Moell.  
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*Sclerogaster* Hesse *Hypog. Deut.* 1:84 1891. *S. lanatus* Hesse  
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*Cyathus* Hall. Hist. Stirp. Helv. 3:127 1768. *C. striatus* (Huds.) Hoffm.  
*Nidula* White Bull. Torr. Club 29:271, ill. 1902. *N. candida* (Pk.) White  
*Nidularia* Bull. Herb. Fr. Pl. 488 1780. *N. farcta* (Roth) Fr.  
*Sphaerobolus* Tode Fung. Meckl. 1:43 1790. *S. stellatus* Tode

## Genera Incertae Sedis Vel Dubia

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# PHOMALES

## PHOMACEAE

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- Sclerodothiorella* Died. *Kryptfl. Mark Brand.* 9:299 1912; Hoehn. *Frag. Myk.* 969.
- Ceratophoma* Hoehn. *Hedwigia* 59:276 1917.
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- Siroplaconema* Petr. *Ann. Myc.* 20:331 1922; *Ib.* 22:108 1924.
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- Chaetocytostroma* Petr. *Ann. Myc.* 17:91 1919.
- Chaetophoma* Cke. *Grevillea* 3:25 1874.
- Chaetophomella* Speg. *Physis* 4:291 1918.
- Chaetospaeronema* Moesz *Bot. Koezlem.* 14:152 1915.
- Chondropodiella* Hoehn. *Hedwigia* 59:281 1917.
- Cicinnobolus* Ehrenb. *Bot. Zeit.* 11:16 1853.
- Byssocystis* Riess *Hedwigia* 1:23, ill. 1853.
- Ciliochora* Hoehn. *Ber. Deut. Bot. Ges.* 37:159 1919.
- Ciliophora* Petr. *Ann. Myc.* 27:71 1929.
- Clypeochorella* Petr. *Ann. Myc.* 21:236 1923.
- Coleophoma* Hoehn. *Mitt. Bot. Techn. Hochsch. Wien* 2:76 1925.
- Constroma* Moesz. *Bot. Koezlem.* 19:44, ill. 1920-21.
- A. hookeri* Speg.
- A. complanata* (Fr.) Berk.
- A. ampullula* (Speg.) Sacc.
- E. magnoliae* Weedon
- A. vignae* Henn.
- A. phyteumae* DC.
- H. helietae* Speg.
- A. ovata* Thuem.
- S. heraclei* Hoehn.
- B. pinicola* Shear
- B. populicola* Karst.
- C. rostrata* (Fkl.) Hoehn.
- C. phacidioides* Grev.
- S. moravica* Petr.
- C. erysiphoides* (G. & M.) Speg.
- C. arundinacea* Petr.
- C. quercifolia* Cke.
- C. asterinarum* (Speg.) Sacc.
- C. hispidulum* (Corda) Moesz.
- C. clethrincola* (Ell.) Hoehn.
- C. cesati* De Bary
- B. textilis* Riess
- C. longiseta* (Rac.) Hoehn.
- C. cryptica* Petr.
- C. orientalis* Petr.
- C. crateriformis* (D. & M.) Hoehn.
- C. didymium* (F. & R.) Moesz.

- Cornucopiella* Hoehn. Sitzb. Akad. Wien 124:118 1915.
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- Cytospora* Ehrenb. Syl. Berol. 28 1818.  
*Lamyella* Fr. Sum. Veg. Scan. 410 1849.  
*Leucocytospora* Hoehn. Ann. Myc. 16:130 1918; cf. Petr. Ib. 19:128 1921.
- Cytosporella* Sacc. Michelia 2:100 1880.
- Dasysticta* Speg. An. Mus. Nac. 23:108 1912.
- Dasystictella* Hoehn. Ber. Deut. Bot. Ges. 37:114 1919.
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- Dendrophoma* Sacc. Michelia 2:4 1880.
- Diachorella* Hoehn. Syst. Fung. Impf. n. 247 1923.
- Dothichiza* Lib. em. Sacc. & Roum. Rel. Lib. 1:627 1880.  
*Parasclerophoma* Petr. Ann. Myc. 22:53 1924.  
*Sclerophoma* Hoehn. Sitzb. Akad. Wien. 118:1234 1909; cf. Petr. Ann. Myc. 22:99 1924.
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- Dothiorellina* Bubak Ber. Deut. Bot. Ges. 29:72 1911.
- Endothiella* Sacc. Ann. Myc. 4:273 1906.
- Epheliopsis* Henn. Hedwigia 47:270 1908.  
*Calopactis* Syd. Ann. Myc. 10:82, ill. 1912.
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- Gamosporella* Speg. Fung. Guar. 2 n. 165. 1888.
- Glutinium* Fr. Sum. Veg. Scan. 46 1849; em. Starb. Stud. 58 1894.  
*Malacodermis* Bub. & Kab. Hedwigia 62:344 1912; cf. Hoehn. Syst. Fung. Imp. 360 1923.
- Hapalosphaeria* Syd. Ann. Myc. 6:305, ill. 1908.
- Hypodermina* Hoehn. Frag. Myc. 962 1916.  
*Mazzantiella* Hoehn. Mitt. Bot. Techn. Hochsch. Wien 2:61 1925; Syst. Fung. Imp. n. 275 1923.
- Lasiophoma* Speg. Physis 4:290 1918.
- Lasiostroma* Griff. & Maubl. Ann. Inst. Agron. 2:10:99 1911.
- Leptoxyphium* Speg. Physis 4:294 1918.
- Lichenophoma* Keissler Hedwigia 50:296 1911.
- Lichenosticta* Zopf. Nov. Act. Leop. 70:263, ill. 1898.
- C. mirabilis* Hoehn.
- C. umbellulariae* Hoehn.
- C. leucostoma* (Pers.) Sacc.
- L. sphaerocephala* (Schw.) Fr.  
 (no species given)
- C. sycina* Sacc.
- D. sapindophila* Speg.
- D. sphaerospora* (S. & T.) Hoehn.
- D. annulatus* Bubak
- D. pleurospora* Sacc.  
 (no species given)
- D. populæ* Sacc. & Br.
- P. quercus* (Lamb.) Petr.
- S. endogenospora* (Sacc.) Hoehn.
- D. gregaria* Sacc.
- D. tankoffi* Bubak
- E. gyrosa* Sacc.
- E. turnerae* Henn.
- C. singularis* Syd.
- F. aesculi* Corda
- G. hysterioides* Speg.
- G. levatum* (Fr.) Starb.
- M. aspera* (Lev.) B. & K.
- H. deformans* Syd.
- H. nervisequia* (Lk.) Hoehn.
- M. sepium* (Brunaud) Hoehn.
- L. allicola* (Tassi) Sacc.
- L. pirorum* G. & M.
- L. graminum* (Pat.) Sacc.
- L. haematommatis* Keissler
- L. podeticola* Zopf

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*Myrioconium* Syd. Ann. Myc. 10:449 1912.  
*Neophoma* Petr. & Syd. Beih. Rep. Fedde 42:265 1927.  
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*Neottiospora* Desm. Not. Crypt. 10:12 1843.  
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*Phellostroma* Syd. Phil. Jour. Sci. 9:185, ill. 1914.  
*Phoma* Fr., em Desm. Not. Crypt. 13:6 1846; Sacc. *Michelia* 2:4 1880.  
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*Bakerophoma* Died. Ann. Myc. 14:62 1916.  
*Leptophoma* Hoehn. Sitzb. Akad. Wien 124:73 1915.  
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*Macrophomina* Petr. Ann. Myc. 21:314 1923.  
*Macroplodiella* Speg. An. Mus. Nac. 10:134 1909.  
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*Trematophoma* Petr. Ann. Myc. 22:152 1924.  
*Phomachora* Petr. & Syd. Ann. Myc. 23:236 1925.  
*Phomopsis* Sacc. Syll. Fung. 18:264 1906.  
*Cleistophoma* Petr. & Syd. Beih. Rep. Fedde 42:294 1927.  
*Haplolepis* Syd. Ann. Myc. 23:411 1925.  
*Leucophomopsis* Hoehn. Ber. Deut. Bot. Ges. 35:255 1917.  
*Macrophomopsis* Petr. Ann. Myc. 22:108 1924.  
*Myxolibertella* Hoehn. Ann. Myc. 1:526 1903.  
*Phaeophomopsis* Hoehn. Mitt. Bot. Techn. Hochsch. Wien 2:80 1925.  
*Pseudophomopsis* Hoehn. Mitt. Bot. Techn. Hochsch. Wien 3:28 1926.  
*Phomyces* Clem.; *Chaetophoma fungicola*.  
*Phyllosticta* Pers. Fr. Syst. Myc. 2:257 1821-22.  
*Phyllostictina* Syd. Ann. Myc. 14:185 1916.  
*Stictochorellina* Petr. Ann. Myc. 20:337 1922.  
*Placonema* (Sacc.) Petr. Ann. Myc. 19:60 1921.  
*Placophomopsis* Grove. Jour. Bot. 59:315 1921.  
*L. atrata* Naumov  
*M. ovalis* (Pass.) Hoehn.  
*M. scirpi* Syd.  
*N. graminella* (Sacc.) P. & S.  
*P. quercicola* (Oud.) Petr.  
*N. caricum* Desm.  
*P. sarraceniae* Pk. & C.  
*P. hypoxyloides* Syd.  
*P. herbarum* West.  
*A. cytisporae* (Fr.) Petr.  
*B. sacchari* Died.  
*L. acuta* Hoehn.  
*M. pandani* Died.  
*M. philippinensis* Petr.  
*M. maticola* Speg.  
*P. lamii* Petr.  
*T. lignicola* Petr.  
*P. lucida* (B. & C.) P. & S.  
*P. oncostoma* (Theiss.) Hoehn.  
*C. suberis* (P. & D.) P. & S.  
*H. polyadelpha* Syd.  
*L. inclusa* Hoehn.  
*M. coronillae* (Desm.) Petr.  
*M. aceris* Hoehn.  
*P. hederiae* (Desm.) Hoehn.  
*P. betulina* (S. & R.) Hoehn.  
*P. meliolicola* (Speg.) Clem.  
*P. convallariae* Pers.  
*P. murrayae* Syd.  
*S. carpatica* Petr.  
*P. bambusacearum* (S. & S.) Petr.  
*P. heveae* Grove.

- Placosphaeria* Sacc. *Michelia* 2:115 1880.  
*Plectonaemella* Hoehn. *Sitzb. Akad. Wien* 124:81 1915.  
*Plectophoma* Hoehn. *Sitzb. Akad. Wien* 116:639 1907.  
*Plectophomopsis* Petr. *Ann. Myc.* 20:326 1922.  
*Ludwigiella* Petr. *Ann. Myc.* 20:319 1922.  
*Plectosira* Petr. *Ann. Myc.* 27:398 1929.  
*Plenodomus* Preuss *Sturm Deut. Flor.* 3:6:143 1862; cf. Petr. *Ann. Myc.* 22:100 1924.  
*Rhizosphaerella* Hoehn. *Hedwigia* 59:254 1917.  
*Sclerophomella* Hoehn. *Hedwigia* 59:237 1917.  
*Pleuronaema* Hoehn. *Hedwigia* 59:257 1917.  
*Pleurophoma* Hoehn. *Sitzb. Akad. Wien* 123:117 1914.  
*Pleurohomella* Hoehn. *Sitzb. Akad. Wien* 123:123 1914.  
*Pleurophomopsis* Petr. *Ann. Myc.* 22:156 1924.  
*Pleuroplaconema* Petr. *Ann. Myc.* 21:300 1923.  
*Pleurostromella* Petr. *Ann. Myc.* 20:336 1922.  
*Podoplaconema* Petr. *Ann. Myc.* 19:83 1921.  
*Podoxyphium* Speg. *Physis* 4:294 1918.  
*Pseudophoma* Hoehn. *Sitzb. Akad. Wien* 125:74 1916; cf. Petr. *Ann. Myc.* 22:99 1924.  
*Pycnis* Brefeld *Bot. Unters.* 4:122, ill. 1881.  
*Pyrenochaeta* DeN. *Micr. Ital.* 5:15, ill. 1845.  
*Herpotrichiopsis* Hoehn. *Sitzb. Akad. Wien* 123:115 1914.  
*Pyrenochaetella* Karst. *Hedwigia* 24:74 1885.  
*Pyrenochaetina* Syd. *Ann. Myc.* 14:94 1916; cf. Hoehn. *Hedwigia* 60:132 1918; Petr. *Ann. Myc.* 22:100 1924.  
*Rabenhorstia* Fr. *Sum. Veg. Scan.* 410 1849.  
*Rhizophoma* Petr. & Syd. *Beih. Rep. Fedde* 42:472 1927.  
*Rhizosphaera* Mang. & Har. *Bull. Soc. Myc. Fr.* 23:56, ill. 1907.  
*Ectosticta* Speg. *An. Mus. Nac.* 23:107 1912.  
*Sclerochaeta* Hoehn. *Hedwigia* 59:239 1917; cf. Petr. *Ann. Myc.* 22:101 1924.  
*Scleromeris* Syd. *Ann. Myc.* 24:419 1926.  
*Sclerotiopsis* Speg. *Fung. Arg.* 4:282 1880.  
*Sclerophomina* Hoehn. *Hedwigia* 59:240 1917.  
*Selenophoma* Maire *Bull. Soc. Bot. Fr.* 53:87 1906.  
*Sirococcus* Preuss *Fung. Hoyers. n.* 306, 716 1854.
- P. sedi* Sacc.  
*P. fuckeliana* (Sacc.) Hoehn.  
*P. umbelliferarum* Hoehn.  
*P. rivularis* Petr.  
*L. asterina* (B. & Br.) Petr.  
*P. adeana* Petr.  
*P. rabenhorsti* Preuss  
*R. lentisci* (D. & M.) Hoehn.  
*S. complanata* (Desm.) Hoehn.  
*P. procumbens* (Fkl.) Hoehn.  
*P. pleurospora* (Sacc.) Hoehn.  
*P. eumorpha* (P. & S.) Hoehn.  
*P. salicicola* Petr.  
*P. sambuci* Petr.  
*P. ulmicola* Petr.  
*P. melaenum* (Fr.) Petr.  
*P. trichothecium* Speg.  
*P. dictamni* (Fkl.) Hoehn.  
*P. sclerotivora* Bref.  
*P. nobilis* DeN.  
*H. callimorpha* Hoehn.  
*P. complanata* Karst.  
*P. obtegens* Syd.  
*R. tiliae* Fr.  
*R. pini* (Desm.) P. & S.  
*R. abietis* M. & H.  
*E. bignonicola* Speg.  
*S. penicillata* (Fkl.) Hoehn.  
*S. guazumae* Syd.  
*S. australasica* Speg.  
*S. elymi* (Died.) Hoehn.  
*S. catananches* Maire  
*S. strobilinus* Preuss

- Sirodothis* Clem. Gen. Fung. 123, 176 1909;  
 Minn. Bot. Studies 4:185, ill. 1911.
- Sirolegniella* Naumov Mat. Mik. Fitop. 5:7, ill.  
 1926.
- Sirophoma* Hoehn. Hedwigia 59:257 1917.
- Sirosperma* Syd. Engler Bot. Jahrb. 54:258,  
 ill. 1916.
- Sirosphaera* Syd. Phil. Jour. Sci. 8:502, ill.  
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- Sirostromella* Hoehn. Sitzb. Akad. Wien  
 125:78 1916.
- Sphaeronema* (Fr.) Jacz. Obs. Myc. 1:187  
 1815; cm. Mem. Soc. Nat. Mosc. 15:280  
 1898.
- Eleutheromyces* Fkl. Symb. Myc. 183 1869.
- Sphaerophoma* Petr. Ann. Myc. 22:76 1924.
- Staurochaeta* Sacc. Fung. Venet. 4:40 1875.
- Staurophoma* Hoehn. Denk. Akad. Wien  
 83:34, ill. 1907.
- Strasseria* Bres. & Sacc. Verh. z-b. Ges. Wien  
 436 1902; cf. Hoehn. Frag. Myk. 944  
 1916.
- Plagiorhabdus* Shear Bull. Torr. Club. 34:310  
 1907.
- Tiarosporella* Hoehn. Mitt. Bot. Techn.  
 Hochsch. Wien 1:83 1924.
- Trichocicinnus* (Sacc.) Hoehn. Ib. 3:115 1926.
- Trichophila* Oud. Hedwigia 28:361 1889.
- Trigonosporium* Tassi Bull. Lab. Ort. Bot.  
 Siena 90 1900.
- S. populi* Clem.
- S. salicicola* Naumov
- S. singularis* Hoehn.
- S. hypocrellae* Syd.
- S. botryosa* Syd.
- S. populi* (Jaap) Hoehn.
- S. aquaticum* Jacq.
- E. subulatus* (Tode) Fkl.
- S. brencklei* Petr.
- S. minima* Sacc.
- S. panici* Hoehn.
- S. carpophila* B. & S.
- P. crataegi* Shear
- T. paludosa* (S. & F.) Hoehn.
- T. eryliphoides* (Sacc.) Hoehn.
- T. myrmecophagae* Oud.
- T. australiense* Tassi

## Phaeosporae

- Asteropsis* Frag. Trab. Madrid Mus. Cienc.  
 12:50 1917.
- Botryosphaeria* Petr. Hedwigia 62:302 1921;  
 for *Botryosphaerostroma*.
- Coniothyriopsis* Petr. Ann. Myc. 21:5 1923;  
 not Speg. 1911.
- Capnodiastrum* Speg. Fung. Guar. 1:145  
 1883.
- Chaetomella* Fkl. Symb. Myc. 402 1869.
- Cicinobella* Henn. Fung. Amaz. 3:386 1904.
- Cladochaete* Sacc. Ann. Myc. 10:318 1912.
- Coniella* Hoehn. Mitt. Bot. Techn. Hochsch.  
 Wien 2:1 1925.
- Baeumleria* Petr. & Syd. Beih. Rep. Fedde  
 42:268 1927.
- Phaeohomopsis* Hoehn. Mitt. Bot. Techn.  
 Hochsch. Wien 2:81 1925.
- Coniothyrina* Syd. Ann. Myc. 10:233 1912;  
 for
- Coniothyrella* Speg. An. Mus. Nac. 3:13:360  
 1911; not 1889; cf. Petr. Ann. Myc. 23:3  
 1925.
- A. epidendri* Frag.
- B. quercina* Petr.
- C. insitiva* (Sacc.) Petr.
- C. guaraniticum* Speg.
- C. atra* Fkl.
- C. parodiellae* Henn.
- C. setosa* (Wint.) Sacc.
- C. pulchella* Hoehn.
- B. nothofagi* (Henn.) P. & S.
- P. hederiae* (Desm.) Hoehn.
- C. agavicola* (Speg.) Syd.
- C. agavicola* Speg.



- Conithyriopsis* Speg. An. Mus. Nac. 13:361  
1911.  
*Chaetosphaeropsis* Czi. & Bni. Att. Ist.  
Pavia 3:3:180, ill. 1927.  
*Coniothyrium* Corda, em. Sacc. Syll. Fung.  
3:305 1884.  
*Coniothyrinula* Petr. Ann. Myc. 21:2 1923.  
*Cyclothyrium* Petr. Ann. Myc. 21:5 1923.  
*Dothisphaeropsis* Hoehn. Ber. Deut. Bot.  
Ges. 36:214 1918; cf. Petr. Ann. Myc.  
21:6 1923.  
*Microsphaeropsis* Hoehn. Hedwigia 59:267  
1917; cf. Petr. Ann. Myc. 21:6 1923.  
*Sclerosphaeropsis* Bub. Ann. Nat. Hofm.  
Wien 28:209 1914.  
*Sclerothyrium* Hoehn. Hedwigia 60:181  
1918.  
*Cryptophaella* Hoehn. Sitz. Akad. Wien  
126:360 1917.  
*Cytoplea* Bizz. & Sacc. Flor. Venet. Critt.  
401 1885.  
*Cytosphaera* Died. Ann. Myc. 14:205 1916.  
*Endocalyx* B. & Br. Jour. Linn. Soc. 15:84  
1876.  
*Epistigme* Syd. Ann. Myc. 22:431 1924.  
*Haplosporella* Speg. Fung. Arg. 3:34 1880.  
*Epicyta* Syd. Ann. Myc. 24:413 1926.  
*Microsporella* Hoehn. Hedwigia 60:146  
1918; cf. Petr. Ann. Myc. 21:5 1923.  
*Lasmeniella* Petr. & Syd. Beih. Rep. Fedde  
42:301 1927.  
*Lichenonium* Petr. & Syd. Beih. Rep.  
Fedde 42:432 1927.  
*Melanconiopsis* Ell. & Ev. Bull. Torr. Club  
27:575 1900.  
*Cyclothyrium* Petr. Ann. Myc. 21:5 1923.  
*Microthecium* Corda Icon. Fung. 5:30, 74, ill.  
1842.  
*Naemosphaera* Sacc. Syll. Fung. 3:198 1884,  
as subg.; Karst. Sphaer. Fenn. 68 1890.  
*Naemosphaerella* Hoehn. Petr. & Syd. Gatt.  
Pyren. 3:478 1927.  
*Polyopeus* Horne Jour. Bot. 58:239 1920.  
*Oothecium* Speg. Bol. Acad. Cordoba 23:519  
1919.  
*Phaeocytostroma* Petr. Ann. Myc. 19:45  
1921.  
*Phaeodomus* Hoehn. Sitzb. Akad. Wien  
118:1529 1909; cf. Petr. Ann. Myc. 23:5  
1925.  
*Placodiplodia* Bub. Ber. Deut. Bot. Ges.  
34:305 1916.  
*Pleosphaeropsis* Died. Ann. Myc. 14:203, ill.  
1916.
- C. hualaniae* Speg.  
*C. truncata* C. & B.  
*C. fuckeli* Sacc.  
*C. carpatica* Petr.  
*C. ulmigenum* (Berk.) Petr.  
*D. hellebori* Hoehn.  
*M. olivaceus* (Bon.) Hoehn.  
*S. heldreichiae* Bub.  
*S. tamarisci* (Mont.) Hoehn.  
*C. heteropatellae* Hoehn.  
*C. arundinicola* B. & S.  
*C. mangiferae* Died.  
*E. thwaitesi* B. & Br.  
*E. nidulans* Syd.  
*H. chlorostroma* Speg.  
*E. ampliata* Syd.  
*M. pityophila* Hoehn.  
*L. guaranitica* (Speg.) P. & S.  
*L. lichenicolum* (Karst.) P. & S.  
*M. inquinans* Ell. & Ev.  
*C. ulmigenum* (Berk.) Petr.  
*M. zobeli* Corda  
*N. magnoliae* (Pk.) Sacc.  
*N. ceratophora* (Speg.) P. & S.  
*P. purpureus* Horne  
*O. megalosporum* Speg.  
*P. isticum* Petr.  
*P. lauracearum* Hoehn.  
*P. copelandi* Bub.  
*P. dalbergiae* Died.

- Pseudohaplis* Speg. An. Sci. Arg. 90:182, ill. 1920; for *Pseudohaplosporella*.  
*Pseudothiopsella* Petr. Hedwigia 68:259 1928.  
*Pycnodothis* Stev. Ill. Biol. Mon. 8:198, ill. 1923.  
*Metabotryum* Syd. Ann. Myc. 24:412 1926.  
*Readeriella* Syd. Ann. Myc. 6:484 1908.  
*Sirothecium* Karst. Medd. Soc. Fenn. 14:105 1887.  
*Sphaeropsis* Lev. Demid. Voy. 112 1842; em. Sacc. Syll. Fung. 3:291 1884.  
*Macrophoma* Berl. & Vogl. Att. Soc. Venet. 10:172 1886.  
*Melanosphaeria* Sawada Rep. Res. Inst. Formosa 2:119, ill. 1922.  
*Neosphaeropsis* Petr. Ann. Myc. 19:67 1921.  
*Piptostomum* Lev. Ann. Sci. Nat. 3:3:65 1845.  
*Spilomyces* Petr. & Syd. Beih. Rep. Fedde 42:293 1927.
- P. aurantiorum* Speg.  
*P. hirtella* Petr.  
*P. tetracerae* Stev.  
*M. connatum* Syd.  
*R. mirabilis* Syd.  
*S. lagenarium* Karst.  
*S. malorum* Pk.  
*M. pinea* (Desm.) P. & S.  
*M. circumdata* Saw.  
*N. polonica* Petr.  
*P. domingense* Lev.  
*S. atramentarius* (Schroet.) P. & S.

## Hyalodidymae

- Ascochyta* Lib. Sacc. Michelia 1:16; 1878.  
*Apiocarpella* Syd. Ann. Myc. 17:43 1919.  
*Apiosporella* Speg. An. Mus. Nac. 20:364 1910; cf. Petr. Ann. Myc. 23:5 1925.  
*Ascochyula* (Poteb.) Died. Ann. Myc. 10:141 1912; cf. Petr. Ann. Myc. 23:5 1925.  
*Ascochyrella* (Tassi) Died. Ann. Myc. 10:141 1912.  
*Stagonosporopsis* Died. Ann. Myc. 10:42 1912; cf. Petr. Ann. Myc. 23:5 1925.  
*Ascochyulina* Petr. Ann. Myc. 20:342 1922.  
*Clypeodiplodina* Stev. Mycologia 21:235, ill. 1927.  
*Botryella* Syd. Ann. Myc. 14:95 1916.  
*Ceratopycnium* Maubl. Bull. Soc. Myc. Fr. 23:148 1907; for *Ceratopycnidium*.  
*Chaetodiplodina* Speg. An. Mus. Nac. 20:368 1910.  
*Corollospora* Werderm. Notizb. Mus. Berlin-Dahlem 8:248, ill. 1922.  
*Cryptorhynchella* Hoehn. Sitzb. Akad. Wien 124:88 1915.  
*Cytodiplospora* Oud. Ned. Kruid. Arch. 2:6:292 1894.  
*Ceuthodiplospora* Died. Ann. Myc. 10:149 1912.  
*Cytotriplospora* Elliott & Chance Trans. Brit. Myc. Soc. 7:47 1920.  
*Darluca* Cast. Cat. Pl. Marseill. Suppl. 53 1845.
- A. pisi* Lib.  
*A. macrospora* (Speg.) Syd.  
*A. macrospora* Speg.  
*A. obionis* (Jaap) Died.  
*A. deformis* (Karst.) Died.  
*S. boltshauseri* Died.  
*A. deflectens* (Karst.) Petr.  
*C. baccharidis* Stev.  
*B. nitidula* Syd.  
*C. citricola* Maubl.  
*C. graminicola* Speg.  
*C. maritima* Werderm.  
*C. lantanae* (Died.) Hoehn.  
*C. castaneae* Oud.  
*C. robineae* (Bub.) Died.  
*C. pini* E. & C.  
*D. filum* (Biv.) Cast.

- Diplodothiorella* Bub. Mitt. Bot. Techn. Hochsch. Wien 4:53 1927.
- Darlucis* Clem.; *Darlucis non uredinicola*.
- Daviisiella* Petr. Ann. Myc. 22:134 1924.
- Didymochaete* Sacc. & Ell. Bull. Torr. Club 25:510 1898.
- Sclerochaetella* Hoehn. Hedwigia 59:251 1917.
- Vermiculariella* Oud. Cont. Fl. Myc. 16:67 1898.
- Diplodina* West. Not. 5:19 1857.
- Diploplenodomopsis* Petr. Ann. Myc. 21:208 1923.
- Diplosclerophoma* Petr. Ann. Myc. 21:293 1923; 22:103 1924.
- Diplodinis* Clem.; *Diplodina basidiis ramosis*.
- Diploplacis* Petr. Hedwigia 62:308 1921; for *Diploplacosphaeria*.
- Diploplenodomus* Died. Ann. Myc. 10:140 1912; Krypt. Mark Brandenb. 9:415 1912; cf. Hoehn. Hedwigia 59:245 1917; Petr. Ann. Myc. 22:102 1924.
- Hoehneliella* Bres. & Sacc. Verh. z-b. Ges. Wien 52:437 1902.
- Kellermannia* Ell. & Ev. Jour. Myc. 1:153 1885.
- Amphorula* Grove Jour. Bot. 60:82 1922.
- Brencklea* Petr. Ann. Myc. 21:326 1923.
- Chaetoconis* Clem. Gen. Fung. 125, 176 1909.
- Lonchospermella* Speg. Rev. Mus. La Plata 15:37 1908.
- Microxyphiella* Speg. Physis 4:294 1918.
- Pazschkella* Syd. Bull. Herb. Boiss. 83 1901.
- Placosphaerella* Pat. Cat. Pl. Tunis. 121 1897.
- Puccinospora* Speg. Fung. Guar. 1:147 1886.
- Rhynchophoma* Karst. Hedwigia 23:19 1884.
- Robillardia* Sacc. Michelia 2:8 1880.
- Sirodiplospora* Naumov Mat. Mik. Fitop. 1:22, ill. 1915.
- Sirexipulina* Petr. Ann. Myc. 21:278 1923; 25:233 1927.
- Thoracella* Oud. Cont. Fl. Myc. 17:267 1901.
- Tiarospora* Sacc. & March. Rev. Myc. 7:148 1885.
- D. laburni* Bub.
- D. longiseta* (Henn.) Clem.
- D. elymina* (Davis) Petr.
- D. americana* Ell. & Sacc.
- S. rivini* (Allesch.) Hoehn.
- V. elymi* Oud.
- D. salicis* West.
- D. mirabilis* Petr.
- D. salicis* (Sacc.) Petr.
- D. rostrupi* (Vestg.) Clem.
- D. ruthenica* Petr.
- D. malvae* Died.
- H. perplexa* Bres. & Sacc.
- K. yuccigena* E. & E.
- A. sachalinensis* Grove
- B. sisyrinchii* (E. & E.) Petr.
- C. polygoni* (E. & E.) Clem.
- L. tetraspora* Speg.
- M. fuligo* (B. & D.) Speg.
- P. brasiliensis* Syd.
- P. tragacanthae* Pat.
- P. chusqueae* Speg.
- R. crypta* Karst.
- R. sessilis* Sacc.
- S. spiraeae* Lebedj.
- S. moravica* Petr.
- T. ledi* Oud.
- T. westendorpi* S. & M.

## Phaeodidymae

- Botrydiplis* Sacc. Michelia 2:7 1880; for *Botryodiplodia*.
- Chaetodiplis* Clem.; *Chaetodiplodia erumpens*.
- Chaetodiplodia* Karst. Hedwigia 23:62 1884.
- B. juglandicola* (Schw.) Sacc.
- C. hirta* (Sacc.) Clem.
- C. caulina* Karst.



- Diblastospermella* Speg. Bol. Acad. Cordoba 23:579, ill. 1919; Physis 4:291 1918.
- Didymosporis* Trav. & Migl. Flor. Mic. Venez. 4 1911; for *Didymosporiella*.
- Diplodia* Fr. Sum. Veg. Scan. 416 1849.
- Holcomyces* Lind. Verh. Bot. Brandenb. 155 1903; Syll. Fung. 18:431 1906; Hoehn. Syst. Fung. Imp. 359 1923.
- Microdiplodia* Allesch. Rabh. Krypt. Flor. ed. 2 7:78 1901.
- Stenocarpella* Syd. Ann. Myc. 15:258 1917.
- Diplodiella* Karst. Hedwigia 22:62 1884.
- Macrodiplodia* Sacc. Syll. Fung. 3:374 1884.
- Paradiplodia* Speg. An. Cien. Arg. 90:183, ill. 1920.
- Dothideodiplodia* Murasch. Mat. Myk. Fitop. 6:67, ill. 1927.
- Pellionella* Sacc. Syll. 14:941 1899.
- Rhynchodiplodia* Briosi & Farnetti Att. Ist. Pavia 2:10 1906.
- D. aequatorialis* Speg.
- D. aeluropodis* T. & M.
- D. mutica* F. & M.
- H. exiguus* Lind.
- M. conigena* Allesch.
- S. zeae* Syd.
- D. crustacea* Karst.
- M. curreyi* S. & R.
- P. aurantiorum* Speg.
- D. agropyri* Murasch.
- P. cardonia* (Flag. & Sacc.) Sacc.
- R. citri* B. & F.

## Hyalophragmiae

- Asteromidium* Speg. Fung. Guar. 2: n. 174 1888.
- Dearnessia* Bub. Hedwigia 58:25 1916.
- Bartalinia* Tassi Bull. Lab. Bot. Siena 3:3 1900.
- Botryogene* Syd. Ann. Myc. 15:259, ill. 1917.
- Chiroconium* Hoehn. Frag. Myk. n. 562 1910.
- Cryptostictella* Grove Jour. Bot. 50:52 1912.
- Amphiciliella* Hoehn. Hedwigia 62:58 1920.
- Dasypyrena* Speg. An. Mus. Nac. 23:109 1912.
- Chaetosticta* Petr. & Syd. Ann. Myc. 23:270 1925.
- Trotteria* Sacc. Att. Accad. Ven-Trent. 3:10:79 1919.
- Mastomyces* Mont. Ann. Sci. Nat. 3:10:134, ill. 1848.
- Topospora* Fr. Fung. Natal. 33 1848.
- Microperella* Hoehn. Sitzb. Acad. Wien 118:879 1909.
- Polychaetum* Speg. Physis 4:294 1918.
- Septoriella* Oud. Cont. Myc. 13:52 1889.
- Linochorella* Syd. Ann. Myc. 10:43, ill. 1912.
- Staganospora* Sacc. Syll. Fung. 3:445 1884.
- Diedickella* Petr. Ann. Myc. 22:305 1924.
- Rhabdostromina* Died. Ann. Myc. 19:297 1921.
- Sclerostagonospora* Hoehn. Hedwigia 59:252 1917; cf. Petr. Ann. Myc. 23:4 1925.
- Stagonostromella* Petr. & Syd. Beih. Rep. Fedde 42:163 1927.
- A. imperspicuum* Speg.
- D. apocyni* Bub.
- B. robillardoides* Tassi
- B. visci* Syd.
- C. beaumonti* (B. & C.) Hoehn.
- C. bractearum* Grove
- A. eriobotryae* Hoehn.
- D. lauricola* Speg.
- C. perforata* (E. & E.) P. & C.
- T. setulosa* Sacc.
- M. friesi* Mont.
- T. uberiformis* Fr.
- M. quercus* Hoehn.
- P. carolinense* (B. & D.) Speg.
- S. phragmitis* Oud.
- L. striiformis* Syd.
- S. populi* (Cda.) Sacc.
- D. moravica* Petr.
- R. empetri* (Rostr.) Died.
- S. heraclei* (Sacc.) Hoehn.
- S. citri* P. & S.

## Phaeophragmiae

- Alysisporium* Peyron. Bull. Soc. Myc. Fr. 28:140, ill. 1922.
- Angiopoma* Lev. Ann. Sci. Nat. 2:16:235 1841.
- Ceratopycnis* Hoehn. Sitzb. Akad. Wien 124:86 1915.
- Hendersoniopsis* Hoehn. Ann. Myc. 16:123 1918.
- Rhynchophorus* Hollos Math. Term. Kozlem. 35:54, ill. 1926.
- Couturea* Cast. Cat. Pl. Marseill. 192 1845.
- Eriosporina* Togn. Sec. Cont. Tosc. 13 1895.
- Hendersonia* West. Bull. Brux. 18: n. 60, ill. 1851.
- Hendersoninula* Tassi Bull. Lab. Bot. Siena 5:56, ill. 1902.
- Neohendersonia* Petr. Ann. Myc. 19:190 1921.
- Santiella* Tassi Bull. Lab. Bot. Siena 3:90 1900; Syll. Fung. 16:947 1902.
- Scolecosporeiella* Petr. Ann. Myc. 19:30 1921, not Hoehn. 1923.
- Hendersoniella* Sacc. Syll. Fung. 18:386 1906.
- Hendersonula* Speg. Fung. Arg. 2:127 1880.
- Macrodiplis* Petr. Ann. Myc. 20:343 1922; for *Macrodiplodiopsis*.
- Prosthemium* Kze. Myk. Heft. 1:17, ill. 1817.
- Uroconis* Clem. Gen. Fung. 126 1909; for *Urohendersonia* Speg. Myc. Arg. 2:84 1902.
- Wojnowicia* Sacc. Syll. Fung. 18:960 1906.
- Angiopomopsis* Hoehn. Sitzb. Akad. Wien 121:406 1912.
- A. *rivoclarinum* Peyron.
- A. *campanulatum* Lev.
- C. *clematidis* Hoehn.
- H. *thelebola* (Sacc.) Hoehn.
- R. *clematidis* Hollos
- C. *castagnei* Desm.
- E. *tritici* Togn.
- H. *sarmentorum* West.
- H. *raphiolepidis* Tassi
- N. *piriformis* (Oth) Petr.
- S. *putaminum* Tassi
- S. *typhae* (Oud.) Petr.
- H. *spinosae* (Roll.) Sacc.
- H. *australis* Speg.
- M. *desmazieri* (Mont.) Petr.
- P. *betulinum* Kze.
- U. *platensis* (Speg.) Clem.
- W. *hirta* (Schroet.) Sacc.
- A. *lophostoma* Hoehn.

## Hyalodictyae

- Camarographium* Bub. Ber. Deut. Bot. Ges. 34:306. 1916.
- Hyalothyris* Tassi Bull. Lab. Bot. Siena 3:91 1900; for *Hyalothyridium*; cf. Clem. Gen. Fung. 127 1909.
- Polychaetella* Speg. Physis 4:295 1918.
- C. *stephensi* (B. & Br.) Bub.
- H. *viburnicola* Tassi
- P. *schweinitzi* (B. & D.) Speg.

## Phaeodictyae

- Camarosporium* Schulz. Myk. Beitr. 649 1870.
- Camarosporellum* Tassi Bull. Lab. Bot. Siena 5:62, ill. 1902.
- C. *quaternatum* Schulz.
- C. *nervisequium* Tassi

- Camarosporulum* Tassi Bull. Lab. Bot. Siena 5:63, ill. 1902.  
*Thyrococcum* Sacc. Syll. Fung. 10:672 1892; cf. Hoehn. Syst. Fung. Imp. 362 1923.  
*Cytosporium* Pk. Bot. Gaz. 4:171 1879.  
*Dichomera* Cke. Praec. Hend. 24 1878.  
*Fumagospora* Arnaud Ann. Agr. Montp. 10:326 1911.  
*Myxocyclus* Riess Fres. Beitr. Myk. 1:62, ill. 1852.  
*Piringa* Speg. An. Mus. Nac. 3:13:378 1911.  
*Pleocouturea* Arnaud Ann. Agr. Montp. 10:326 1910.  
*Pseudodichomera* Hoehn. Hedwigia 60:186 1918.  
*Sclerotheca* Bub. & Vieug. Sven. Bot. Tids. 2:314 1917.  
*Shearia* Petr. Ann. Myc. 22:180 1924.
- C. ampelopsidis* Tassi  
*T. punctiforme* Sacc.  
*C. sphaerosporum* Pk.  
*D. saubineti* (Mont.) Cke.  
*F. elongata* (B. & D.) Arn.  
*M. confluens* Riess  
*P. andina* Speg.  
*P. castagnei* Arn.  
*P. varia* (Pers.) Hoehn.  
*S. strobilina* (BRS) B. & V.  
*S. magnoliae* (Shear) Petr.

## Scolecosporae

- Chaetophiophoma* Speg. An. Mus. Nac. 3:13:388 1911.  
*Ciferria* Frag. Bol. Soc. Esp. Hist. Nat. 25:363, ill. 1925.  
*Cornularia* Karst. Hedwigia 23:57 1884; for *Cornicularia* and *Corniculariella* Karst.  
*Collonaema* Grove Jour. Bot. 24:136 1886.  
*Collonaemella* Hoehn. Sitzb. Akad. Wien 124:82 1915.  
*Pseudographium* Jacz., em. Hoehn. Sitzb. Akad. Wien 124:117 1915.  
*Subulariella* Hoehn. Sitzb. Akad. Wien 124:118 1915.  
*Cytosporina* Sacc. Michelia 2:263 1881.  
*Cytostaganis* Bub. Ann. Myc. 14:150, ill. 1916; for *Cytostaganospora*.  
*Clypeoseptoria* Stev. & Young Bishop Mus. Bull. 19:141, ill. 1925.  
*Dilophospora* Desm. Ann. Sci. Nat. 2:14:67 1840.  
*Eriospora* B. & Br. Ann. Nat. Hist. 2:5 n. 438 1850.  
*Gamospora* Sacc. Syll. Fung. 10:402 1892.  
*Gamonaemella* Fairman Proc. Roch. Acad. Sci. 6:123 1922.  
*Gelatinosporis* Pk. Rep. N. Y. Mus. 25:48 1873; for *Gelatinosporium*.  
*Hemidothis* Syd. Ann. Myc. 14:95 1916.  
*Oswaldina* Rangel Arch. Agr. Med. Vet. Mexico 5:37, ill. 1921.  
*Septocyta* Petr. Ann. Myc. 25:330 1927.
- C. tremae* Speg.  
*C. coccothrinacis* Frag.  
*C. abietis* Karst.  
*C. papillatum* Grove  
*C. microscopica* (Fkl.) Hoehn.  
*P. persicae* (Schw.) Jacz.  
*S. macrospora* (B. & C.) Hoehn.  
*C. ludibunda* Sacc.  
*C. photinicola* Bub.  
*C. rocki* Stev. & Young  
*D. graminis* Desm.  
*E. leucostoma* B. & Br.  
*G. eriosporis* Sacc.  
*G. divergens* Fairman  
*G. betulinum* Pk.  
*H. miconiae* Syd.  
*O. icarahyensis* Rangel  
*S. ramealis* (Rob.) Petr.

- Leptochlamys* Died. Ann. Myc. 19:299 1921.  
*Megaloseptoria* Naumov Bolezn. Rast. 14:144, ill. 1926.
- Linochora* Hoehn. Sitzb. Akad. Wien 119:638 1910.
- Micropera* Lev. Ann. Sci. Nat. 3:5:283 1846.  
*Micula* Duby Hedwigia 2:8, ill. 1858.
- Phaeoseptoria* Speg. Rev. Mus. La Plata 15:39 1908.
- Phaeophleospora* Rangel Arch. Mus. Rio Jan. 18:162, ill. 1916.
- Phleospora* Wallr. Fl. Crypt. 2:176 1833; cf. Hoehn. Syst. Fung. Imp. 341 1923; Petr. Ann. Myc. 23:6 1925.
- Pseudoseptoria* Speg. An. Mus. Nac. 3:13:388 1911.
- Rhabdospora* Mont. Fl. Alg. Bot. 592 1846-49; em. Sacc. *Michelia* 2:6 1880.  
*Jahnella* Petr. Ann. Myc. 18:123 1920.
- Septoriopsis* Hoehn. Bull. Jard. Bot. Buitenz. 3:6:6 1924; not Frag. & Paul. 1915.
- Scopophoma* Dearn. & House Bull. N. Y. Mus. 266:83 1925.
- Septoria* Fr. Syst. Myc. 3:480 1832; em. Sacc. *Michelia* 2:6 1880.  
*Nemastroma* Hoehn. Mitt. Lab. Techn. Hochs. Wien 2:83 1925.
- Rhabdostromina* Died. Ann. Myc. 19:297 1921.
- Septoriopsis* Frag. & Paul Bol. Soc. Hist. Nat. 15:127, ill. 1915.
- Sphaerographium* Sacc. Syll. Fung. 3:597 1884.  
*Coleonaema* Hoehn. Mitt. Lab. Techn. Hochs. Wien 1:95 1924.
- Cryptorhynchella* Hoehn. Sitzb. Akad. Wien 124:88 1915.
- Trichoseptoria* Cav. Malatt. Limon. 4 1892.  
*Macroseptoria* Petr. Ann. Myc. 21:250 1923.
- L. scapicola* (Karst.) Died.  
*M. mirabilis* Naumov  
*L. leptospermi* (Cke.) Hoehn.  
*M. drupacearum* Lev.  
*M. mougeoti* Duby  
*P. papayae* Speg.  
*P. eugeniae* Rang.  
*P. ulmi* (Fr.) Wallr.  
*P. donacicola* Speg.  
*R. herbarum* (Preuss) Sacc.  
*J. bohemia* Petr.  
*S. pandani* Hoehn.  
*S. corioli* D. & H.  
*S. urticae* Rob.  
*N. junci* (Desm.) Hoehn.  
*R. empetri* (Rostr.) Died.  
*S. citri* F. & P.  
*S. squarrosus* (Riess) Sacc.  
*C. oleae* (DC.) Hoehn.  
*C. lantanae* (Died.) Hoehn.  
*T. alpei* Cav.  
*M. moravica* Petr.

#### Genera Incertae Sedis Vel Dubia

A large number of the following are segregates of *Cytospora* and other stromate genera, but the characters are so inconstant in many at least, as to render it impossible to place them definitely. (cf. Petrak Ann. Myc. 23:83 1925.) For the others, the disposition is chiefly that of Hoehn. (Myk. Unters. Ber. 1:358-362 1923) and Petrak (l. c. 23:1 1925).

- Actinopelte* Sacc. Ann. Myc. 11:315 1913;  
 cf. Petr. Ib. 22:54 1924.  
*Amphicytostroma* Petr. Ann. Myc. 19:63 1921.  
*A. japonica* Sacc.  
*A. tiliae* (Sacc.) Petr.

- Apocytospora* Hoehn. Mitt. Bot. Techn. Hochs. Wien 1:43 1924.  
*Aposphaeriopsis* Died. Ann. Myc. 11:44 1913; cf. Petr. & Syd. Ib. 22:341 1924; Petr. Ib. 23:3 1925.  
*Avettaea* Petr. & Syd. Beih. Rep. Fedde 42:299 1927.  
*Basilocula* Bub. Ann. Myc. 12:210 1914.  
*Ceuthosira* Petr. Ann. Myc. 22:265 1924.  
*Ceuthosporella* Petr. & Syd. Ann. Myc. 21:371 1923.  
*Chaetodiplodia* Karst. Hedwigia 23:62 1884; Syll. Fung. 3:374 1884.  
*Chaetopyrena* Pass. Erb. Critt. Ital. 2:1088 1881; cf. Petr. Ann. Myc. 22:101 1924; 23:139 1925.  
*Chaetosclerophoma* Petr. Ann. Myc. 22:178 1924.  
*Chondropodium* Hoehn. Sitzb. Akad. Wien 125:45 1916.  
*Cliostomum* Fr. Syst. Orb. Veg. 1:116 1825.  
*Rhizismella* Karst. Hedwigia 23:60 1884.  
*Colpomella* Hoehn. Mitt. Lab. Techn. Hochs. Wien 3:16 1926.  
*Cryptoceuthospora* Petr. Ann. Myc. 19:57 1921.  
*Cryptomycella* Hoehn. Mitt. Lab. Techn. Hochs. Wien 2:48 1926.  
*Cryptosporiopsis* Bub. & Kab. Hedwigia 53:360 1912.  
*Cyphellopycnis* Tehon & Stout Mycologia 21:189, ill. 1929.  
*Cytonaema* Hoehn. Sitzb. Akad. Wien 123:131 1914.  
*Cytophoma* Hoehn. Sitzb. Akad. Wien 123:133 1914.  
*Cytoplacosphaeria* Petr. Ann. Myc. 17:79 1919.  
*Diplodiopsis* Henn. Hedwigia 43:386 1904; Syll. Fung. 3:335 1884.  
*Discomycopsis* Muell. Bot. Cent. 57:347 1894; Syll. Fung. 11:517 1895.  
*Dothiopsis* Karst. Hedwigia 23:20 1884; Syll. Fung. 10:228 1892.  
*Endogloea* Hoehn. Zeit. Gär. 5:207 1915; cf. Petr. Ann. Myc. 22:99 1924.  
*Enthallopycnidium* Stev. Bishop Mus. Bull. 19:85, ill. 1925.  
*Hendersonina* Butler Mem. Dept. Agr. India Bot. 6:198, ill. 1913.  
*Hormococcus* Preuss. Linnaea 25:738 1852.  
*Hypocenia* B. & C. N. A. Fung. n. 423 1874; Syll. Fung. 3:320 1884.
- A. *visci* Hoehn.  
 A. *domesticum* (Henn.) Died.  
 A. *philippinensis* P. & S.  
 B. *lauricola* Bub.  
 C. *aesculicarpa* Petr.  
 C. *acerina* P. & S.  
 C. *caulina* Karst.  
 C. *hesperidum* Pass.  
 C. *coluteae* Petr.  
 C. *spina* (B. & Rav.) Hoehn.  
 C. *corrugatum* (Ach.) Fr.  
 R. *corrugata* (Ach.) Karst.  
 C. *pini* Hoehn.  
 C. *moravica* Petr.  
 C. *pteridis* (Kalchb.) Hoehn.  
 C. *nigra* Bub. & Kab.  
 C. *pastinaceae* T. & S.  
 C. *spinella* (Kalchb.) Hoehn.  
 C. *pruinosa* (Fr.) Hoehn.  
 C. *rimosa* (Oud.) Petr.  
 D. *tarapotensis* Henn.  
 D. *rhytismoides* Muell.  
 D. *spiraeae* Karst.  
 E. *taleola* (Sacc.) Hoehn.  
 E. *gouldiae* Stev.  
 H. *sacchari* Butl.  
 H. *populi* Preuss  
 H. *obtusa* B. & C.

- Janospora* Starb. Bih. Sven. Akad. Handl. 19:86 1894, as subg.; cf. Hoehn. Syst. Fung. Imp. 319 1923; Petr. & Syd. Ann. Myc. 21:350 1923.
- Lasiodiplodia* Ell. & Ev. Bot. Gaz. 21:92 1896; Syll. Fung. 14:939 1899.
- Leeina* Petr. Ann. Myc. 25:315 1927.
- Levieuxia* Fr. Fung. Natal. 32; Sum. Veg. Scan. 415 1849; Syll. Fung. 3:321 1884.
- Manginia* Vial. & Pacot. Comp. Rend. 139:88 1904; Syll. Fung. 18:266 1906.
- Microxyphium* Sacc., em. Speg. Physis 4:293 1918.
- Monopycnis* Naumov Bull. Soc. Oural. 35:36 1915.
- Mypriopyxis* Ces. Flora 34:73 1851.
- Myxofusicoccum* Died. Ann. Myc. 10:71 1912; cf. Petr. 18:25 1920.
- Paracytospora* Petr. Ann. Myc. 23:82 1925.
- Perizomella* Syd. Ann. Myc. 25:106 1927.
- Phylloedia* Fr. Syst. Orb. Veg. 1:195 1825.
- Phyllonochaeta* Frag. & Cif. Bol. Soc. Hist. Nat. 27:171, ill. 1927.
- Plaenemina* Petr. Ann. Myc. 19:197 1921.
- Plectophomella* Moesz Mag. Bot. Lap. 21:13 1922.
- Plenophysa* Syd. Ann. Myc. 17:142 1919.
- Pleocyta* Petr. & Syd. Beih. Rep. Fedde 42:454 1927.
- Pleurocytospora* Petr. Ann. Myc. 21:256 1923.
- Pleurodiscula* Hoehn. Mitt. Lab. Techn. Hochs. Wien 3:25 1926.
- Pleuroplacosphaeria* Syd. Ann. Myc. 26:115 1928.
- Pseudocytospora* Petr. Ann. Myc. 21:295 1923.
- Pseudodiscula* Laubert Gartenfl. 60:76 1911.
- Pseudosclerophoma* Petr. Ann. Myc. 21:283 1923; Ib. 22:102 1924.
- Pycnidiostroma* Stev. Ill. Biol. Mon. 11:45, ill. 1927.
- Pycnomma* Syd. Ann. Myc. 22:187 1924.
- Pycnosporium* Siegel Cent. Bakt. 51:515, ill. 1909.
- Rhabdostromella* Hoehn. Sitzb. Akad. Wien 124:145 1915.
- Rhabdostromellina* Hoehn. Ann. Myc. 15:303 1917.
- Scirrhiopsis* Henn. Verh. Bot. Brandenb. 47:12 1905; Syll. Fung. 22:1074 1913.
- Septocytella* Syd. Ann. Myc. 27:428 1929.
- Septodothideopsis* Henn. Hedwigia 43:388 1904; Syll. Fung. 18:405 1906.
- J. lineolans* (Schw.) Starb.
- L. tubericola* E. & E.
- L. philippinensis* Petr.
- L. natalensis* Fr.
- M. ampelina* V. & P.
- M. footi* (B. & D.) Harv.
- M. crataegi* Naumov
- M. caricicola* Ces.
- M. obtusulum* (S. & B.) Died.
- P. salicis* Petr.
- P. inquinans* Syd.
- P. epiphylla* Fr.
- P. solani* F. & C.
- P. dothideoides* (Mont.) Petr.
- P. visci* Moesz.
- P. mirabilis* Syd.
- P. sacchari* (Masse) P. & S.
- P. vestita* Petr.
- P. neglecta* (Desm.) Hoehn.
- P. negeriana* Syd.
- P. allantospora* Petr.
- P. endogenospora* Laub.
- P. negundinis* Petr.
- P. eugeniae* Stev.
- P. canariense* Syd.
- P. lommeni* Sieg.
- R. rubi* (Lib.) Hoehn.
- R. ruborum* Hoehn.
- S. hendersoniodes* Henn.
- S. bambusina* Syd.
- S. manaosensis* Henn.

- Septorella** Allesch. Hedwigia 36:241 1897;  
Syll. Fung. 18:981 1906.
- Shropshiria** Stev. Mycologia 19:231, ill. 1927.
- Sphaerothyrium** Bub. Ber. Deut. Bot. Ges.  
34:298 1916.
- Neoplasosphaeria** Petr. Ann. Myc. 19:74  
1921; 22:102 1924.
- Stichospora** Petr. Ann. Myc. 25:195 1927.
- Systemmopsis** Petr. Ann. Myc. 21:191 1923.
- Thyriostroma** Died. Ann. Myc. 11:176 1913.
- Torsellia** Fr. Sum. Veg. Scan. 412 1849;  
Syll. Fung. 11:510 1895.
- Weinmannodora** Fr. Sum. Veg. Scan. 409  
1849; Syll. Fung. 3:325 1884.
- Circinastrum** Clem. Gen. Fung. 124 1909.
- Xenodorus** Petr. Ann. Myc. 20:206 1922.
- Xylocladium** Syd. Nat. Pflanzenf. 1:1:494  
1900.
- S. salaciae** Allesch.
- S. chusqueae** Stev.
- S. filicinum** Bub.
- N. polonica** Petr.
- S. disciformis** Petr.
- S. ribesia** Petr.
- T. spiraeae** (Fr.) Died.
- T. sacculus** (Schw.) Fr.
- W. ruthenica** Fr.
- C. ruthenica** (Fr.) Clem.
- X. taxi** Petr.
- X. clautriavi** (Pat.) Syd.

## ZYTHIACEAE

## Hyalosporae

- Allantozythia** Hoehn. Ann. Myc. 22:203  
1924.
- Blennoriopsis** Petr. Ann. Myc. 17:92 1919.
- Cicinnobella** Henn. Fung. Amaz. 3:386 1904.
- Ciliospora** Zimm. Cent. Bakt. 2:8:217 1902
- Collacystis** Kze. Güntz Das Leich. Neug.  
1:212 1827.
- Cyanophomella** Hoehn. Hedwigia 60:156  
1918.
- Diplozythia** Bub. Ann. Myc. 2:399 1904;  
Syll. Fung. 18:417 1906; cf. Hoehn. Syst.  
Fung. Imp. 359 1923.
- Dothiorina** Hoehn. Sitzb. Akad. Wien 120:464  
1911.
- Eleutheris** Hoehn. Sitzb. Akad. Wien 17:1023  
1908; for Eleutheromycella.
- Lagynodella** Petr. Ann. Myc. 20:207 1922.
- Mastigospora** Hoehn. Sitzb. Akad. Wien  
123:135 1914.
- Matula** Mass. Jour. Roy. Mic. Soc. 4:173, ill.  
1888.
- Microdiscula** Hoehn. Frag. Myk. n. 938  
1915.
- Plenozythia** Syd. Ann. Myc. 14:215 1916.
- Pseudosclerophoma** Petr. Ann. Myc. 21:283  
1923.
- Rhodosticta** Woronich. Bull. Jard. Bot.  
Petersb. 11:13 1911.
- Sarcophoma** Hoehn. Sitzb. Akad. Wien  
125:75 1916.
- A. alutacea** (Sacc.) Hoehn.
- B. moravica** Petr.
- C. parodiellis** Henn.
- C. gelatinosa** Zimm.
- C. putredinis** Kze.
- C. acervalis** (Sacc.) Hoehn.
- D. scolecospora** Bub.
- D. tulasnei** (Sacc.) Hoehn.
- E. mycophila** Hoehn.
- L. pruinosa** (Pk.) Petr.
- M. hyalina** (E. & E.) Hoehn.
- M. poroniaeformis** (B. & Br.)  
Mass.
- M. rubicola** (Bres.) Hoehn.
- P. euphorbiae** Syd.
- P. negundinis** Petr.
- R. caraganae** Woronich.
- S. pachybasium** (Sacc.) Hoehn.

- Sphaeronemina* Hoehn. Hedwigia 59:274  
1917. S. *cylindrica* (Tode) Hoehn.  
*Mycorhynchella* Hoehn. Hedwigia 60:155  
1918. M. *exilis* Hoehn.  
*Sirogloea* Petr. Ann. Myc. 21:247 1923. S. *euonymi* Petr.  
*Siroplaconema* Petr. Ann. Myc. 20:331 1922. S. *moravicum* Petr.  
*Sirozythia* Hoehn. Ann. Myc. 2:48 1904. S. *rosea* Hoehn.  
*Trelesiella* Speg. Rev. Agr. Vet. La Plata  
241 1896. T. *sacchari* Speg.  
*Tremellidium* Petr. Ann. Myc. 25:387 1927. T. *piskorzi* Petr.  
*Verrucaster* Tobler Abh. Nat. Ver. Bremen  
21:384, ill. 1913. V. *lichenicola* Tobler  
*Xenostroma* Hoehn. Sitzb. Akad. Wien  
124:149 1915. X. *caespitosum* (Fkl.) Hoehn.  
*Zythia* Fr. Sum. Veg. Scan. 407 1849. Z. *resinae* (Ehrb.) Fr.  
*Pycnidiella* Hoehn. Sitzb. Akad. Wien  
124:91 1915. P. *resinae* (Ehrb.) Hoehn.

## Phaeosporae

- Caudosporella* Hoehn. Sitzb. Akad. Wien  
123:135 1914. C. *antarctica* (Speg.) Hoehn.  
*Harknessia* Cke. Grevillea 9:85 1880. H. *eucalypti* Cke.  
*Martinella* (Cke. & Masee) Sacc. Syll. Fung.  
10:409 1892. M. *eucalypti* (C. & M.) Sacc.  
*Mastigonetrum* Klebahn Myc. Cent. 4:17, ill.  
1914. M. *fuscum* Klebahn

## Hyalodidymae

- Clypeopycnis* Petr. Ann. Myc. 23:76 1925. C. *aeruginascens* Petr.  
*Cyanochyta* Hoehn. Sitzb. Akad. Wien 124:92  
1915. C. *cyanogena* (Speg.) Hoehn.  
*Fuckelia* Bon. Abh. Geb. Myk. 135 1870. F. *ribis* Bon.  
*Stylonectria* Hoehn. Sitzb. Akad. Wien  
124:152 1915. S. *applanata* Hoehn.

## Phaeodidymae

- Pseudodiplodia* Karst. Symb. Myc. 15:156  
1886. P. *ligniaria* (Karst.) Sacc.

## Hyalophragmiae

- Aschersonia* Mont. Syll. Crypt. 260 n. 929  
1856. A. *taitensis* Mont.  
*Chiaospora* Riess Fres. Beitr. Myk. 43  
1850. C. *parasitica* Riess  
*Ciliosporella* Petr. Ann. Myc. 25:217 1927. C. *selenospora* Petr.  
*Sirozythiella* Hoehn. Sitzb. Akad. Wien  
118:1532 1909. S. *sydowiana* (Sacc.) Hoehn.  
*Stagonopsis* Sacc. Syll. Fung. 3:621 1884. S. *pallida* (B. & C.) Sacc.  
*Stagonostroma* Died. Fl. Mark. Brandb. 9:561  
1914. S. *dulcamarae* (Pass.) Died.



## Scolecosporae

- Chromocytospora* Speg. An. Mus. Nac. 3:13:392 1911.  
*Nemozythiella* Hoehn. Mitt. Lab. Techn. Hochsch. Wien 2:70 1925.  
*Mycorhynchus* Sacc. Syll. Fung. 18:418 1906; for *Rhynchomyces* Sacc. & March. Syll. Fung. 10:411 1892, not Willk. 1866.  
*Phlyctaeniella* Petr. Ann. Myc. 20:323 1922.  
*Polystigmia* Sacc. Syll. Fung. 3:622 1892.  
*Polylagenochromatia* Camara Rev. Agron. 17:23, ill. 1929.  
*Rhodoseptoria* Naumov Bull. Soc. Myc. Fr. 29:278 1913.  
*Scolecozythia* Curzi Att. Ist. Pavia 3:3:185, ill. 1927.
- C. *ricinella* Speg.  
N. *loniceriae* (Died.) Hoehn.  
M. *betae* (Holl.) Sacc.  
P. *polonica* Petr.  
P. *rubra* (Desm.) Sacc.  
P. *theobromae* Camara  
R. *ussuriensis* Naumov  
S. *valsivora* Curzi

## Genera Incertae Sedis Vel Dubia

- Ampullaria* A. L. Smith Jour. Bot. 41:258 1903; Syll. Fung. 18:416 1906; cf. Hoehn. Syst. Fung. Imp. 358 1923.  
*Chaetozythia* Karst. Symb. Myc. 28:41 1888; Syll. Fung. 10:406 1892; cf. Hoehn. Syst. Fung. Imp. 358 1923.  
*Hypocreodendrum* Henn. Hedwigia 36:223 1897; Syll. Fung. 14:992 1899.  
*Leptodermella* Hoehn. Zeit. Gär. 5:212 1914.  
*Pachydiscula* Hoehn. Zeit. Gär. 5:210 1914; Syst. Fung. Imp. 335 1923; cf. Petr. Ann. Myc. 21:272 1923.  
*Roumegueriella* Speg. Rev. Myc. 2:18 1880; Syll. Fung. 3:616 1884; Hoehn. Syst. Fung. Imp. 361 1923.  
*Sphaerocista* Preuss Linnaea 25:734 1852; em. Hoehn. Frag. Myk. 948 1916; Syst. Fung. Imp. 336 1923.  
*Sphaeronemella* Karst. Hedwigia 33:17 1884; Syll. Fung. 3:617 1884; cf. Hoehn. Syst. Fung. Imp. 362 1923.  
*Xanthopsora* Speg. An. Mus. Nac. 31:430 1922.
- A. *aurea* Smith  
C. *pulchella* Karst.  
H. *sanguineum* Henn.  
L. *incarnata* (Bres.) Hoehn.  
P. *diplodioides* (Allesch.) Hoehn.  
R. *muricospora* Speg.  
S. *schizothecioides* Preuss  
S. *hevellae* Karst.  
X. *melanostoma* Speg.

## LEPTOSTROMACEAE

## Hyalosporae

- Acarella* Syd. Ann. Myc. 25:123 1927.  
*Actinothecium* Ces. Rabh. Herb. Myc. 1854.  
*Brunchorstia* Eriks. Bot. Cent. 47:298 1891.  
*Columnothyrium* Bub. Ber. Deut. Bot. Ges. 34:308 1916.  
*Crandallia* Ell. & Sacc. Bull. Torr. Club 34:466 1897.  
*Creothyrium* Petr. Ann. Myc. 23:79 1925.
- A. *costaricensis* Syd.  
A. *caricicolum* Ces.  
B. *destruens* Eriks.  
C. *myriospermum* (Mass.) Bub.  
C. *juncicola* E. & S.  
C. *pulchellum* Petr.

- Helicia* Dearness & House Bull. N. Y. Mus.  
266:91 1925.
- Diedickeia* Syd. Ann. Myc. 11:266, ill. 1913.
- Elachopeltis* Syd. Ann. Myc. 25:121, ill. 1927.
- Eriothyrium* Speg. Fung. Fueg. n. 426 1887.
- Gloeodes* Colby Trans. Ill. Acad. Sci. 13:157,  
ill. 1920.
- Labrella* (Fr.) Sacc. Syll. Fung. 3:648 1884;  
cf. Hoehn. Syst. Fung. Imp. 360 1923.
- Thyriostoma* Died. Ann. Myc. 11:176 1913.
- Leptostroma* Fr. Obs. Myc. 2:361 1818.
- Leptothyrium* Kze. & Schm. Myk. Heft. 2:79  
1823.
- Leptothyria* Hoehn. Sitzb. Akad. Wien  
124:123 1915.
- Myxodiscus* Hoehn. Sitzb. Akad. Wien  
115:671 1906.
- Platycarpium* Karst. Act. Soc. Fenn. 27:10  
1905.
- Porterula* Speg. Rev. Chil. Hist. Nat. 24:13,  
ill. 1920.
- Rhabdothyrella* Hoehn. Sitzb. Akad. Wien  
126:290 1917.
- Rhabdothyrium* Hoehn. Sitzb. Akad. Wien  
124:125 1915.
- Massalongina* Bub. Ber. Deut. Bot. Ges.  
34:319 1916.
- Melasmia* Lev. Ann. Sci. Nat. 3:5:276 1846.
- Merismella* Syd. Ann. Myc. 25:114 1927.
- Myxothyrium* Bub. & Kab. Sven. Bot. Tids.  
9:379 1915.
- Peltaster* Syd. Ann. Myc. 15:261 1917.
- Piggotia* B. & Br. Ann. Nat. Hist. 2:7:95, ill.  
1851.
- Plectopeltis* Syd. Ann. Myc. 25:125, ill. 1927.
- Plenotrichum* Syd. Ann. Myc. 25:131, ill. 1927.
- Pleurothyriella* Petr. & Syd. Ann. Myc. 23:210  
1925.
- Sirothyriella* Hoehn. Sitzb. Acad. Wien  
119:451 1910.
- Sirothyrium* Syd. Ann. Myc. 14:218 1916.
- Tracyella* Sacc. Syll. Fung. 18:424 1906.
- Trichopeltulum* Speg. Fung. Puigg. n. 342  
1889.
- Trichopeltium* Clem. Gen. Fung. 131 1909.
- H. *buccina* D. & H.  
D. *singularis* Syd.  
E. *phoebes* Syd.  
E. *dubiosum* Speg.
- G. *pomigena* (Schw.) Colby
- L. *heraclei* (Lib.) Sacc.  
T. *pteridis* (Ehrb.) Died.  
L. *scirpinum* Fr.
- L. *lunariae* Kze.
- L. *rubi* (Duby) Hoehn.
- M. *confluens* (Schw.) Hoehn.
- P. *fructigenum* Karst.
- P. *alstroemeriae* Speg.
- R. *microscopica* Hoehn.
- R. *convalliarum* (Oud.) Hoehn.
- M. *aquilina* (Mass.) Bub.  
M. *acerina* Lev.  
M. *concinna* Syd.
- M. *leptideum* (Fr.) B. & K.  
P. *hedyotidis* Syd.
- P. *astroidea* B. & Br.  
P. *egenula* Syd.  
E. *mirabile* Syd.
- P. *pinastri* (Oud.) P. & S.
- S. *pinastri* (Fkl.) Hoehn.  
S. *taxi* Syd.  
T. *spartinae* (Pk.) Tassi
- T. *pulchellum* Speg.  
T. *pulchellum* (Speg.) Clem.

## Phaeosporae

- Asterostomella* Speg. An. Soc. Cien. Arg.  
22:198 1886.
- Asteronia* Sacc. Syll. Fung. 1:47 1882, as  
subg.; cf. Theiss. Myc. Cent. 3:275 1913.
- Hyphaster* Henn. Baum Kun. Sambes Exp.  
169 1903.
- A. *paraguayensis* Speg.
- A. *erysiphoides* (K. & C.) Sacc.
- H. *kutuensis* Henn.

- Oothecium* Speg. Bol. Acad. Cordoba 23:519 1919; cf. Petr. Ann. Myc. 26:390 1928.  
*Asterostomula* Theiss. Ann. Myc. 14:270 1916.  
*Lasmenia* Speg. Fung. Guar. 1:152 1886.  
*Manginula* Arnaud Ann. Agr. Montp. 16:218, ill. 1918.  
*Peltostroma* Henn. Hedwigia 43:391, ill. 1904.  
*Achoropeltis* Syd. Ann. Myc. 27:79 1929.  
*Phaeolabrella* Speg. An. Mus. Nac. 23:117 1912.  
*Piggotia* B. & Br. Ann. Nat. Hist. 2:7:95, ill. 1851.  
*Basiascella* Bub. Ann. Hofm. Wien 28:216 1914; cf. Hoehn. Syst. Fung. Imp. 358 1923.  
*Pirostoma* (Fr.) Sacc. Bull. Soc. Myc. Fr. 12:70, ill. 1896.  
*Pirostomella* Sacc. Ann. Myc. 12:308 1914.  
*Poropeltis* Henn. Hedwigia 43:390, ill. 1904.  
*Pycnostemma* Syd. Ann. Myc. 25:113 1927.
- O. megalosporum* Speg.  
*A. loranthi* Theiss.  
*L. balansae* Speg.  
*M. perseae* Arn.  
*P. juruanum* Henn.  
*A. modesta* Syd.  
*P. eryngicola* Speg.  
*P. astroidea* B. & Br.  
*B. gallarum* Bub.  
*P. coniothyris* Sacc.  
*P. raimundi* Sacc.  
*P. davillae* Henn.  
*P. disciforme* Syd.

## Hyalodidymae

- Chaetalysis* Peyron. Bull. Soc. Myc. Fr. 38:141, ill. 1922.  
*Discosiella* Syd. Leaf. Phil. Bot. 5:1546 1912.  
*Discotheciella* Syd. Ann. Myc. 15:260 1917; for *Discothecium* Syd. Ib. 14:371 1916, not Zopf.  
*Kabatia* Bub. Oest. Bot. Zeits. 54:28, ill. 1904.  
*Leptothyrella* Sacc. Syll. Fung. 10:426 1892; cf. Hoehn. Syst. Fung. Imp. 360 1923.
- C. myrioblephara* Peyron.  
*D. cylindrospora* Syd.  
*D. bakeri* Syd.  
*K. latemarensis* Bub.  
*L. mougeotiana* S. & R.

## Phaeodidymae

- Didymochora* Hoehn. Hedwigia 60:172 1918.  
*Diplopeltis* Pass. Diag. Fung. Nov. 4:13 1890.  
*Pycnothyrium* Died. Ann. Myc. 11:175 1913; cf. Hoehn. Syst. Fung. Imp. 361 1923.  
*Leprieurina* Arnaud Ann. Agr. Montp. 16:210, ill. 1918.  
*Peltostromella* Hoehn. Denk. Akad. Wien 83:35 1907.  
*Seynesiopsis* Henn. Hedwigia 43:392, ill. 1904.
- D. betulina* Hoehn.  
*D. spartii* Pass.  
*P. litigiosum* (Desm.) Died.  
*L. winteriana* Arn.  
*P. brasiliensis* Hoehn.  
*S. rionegrensis* Henn.

## Hyalophragmiae

- Cystothyrium* Speg. Fung. Fueg. n. 430 1887.  
*Discosia* Lib. Exsic. n. 345, Fl. Crypt. Ard. 1839; Fr. Sum. Veg. Scan. 423 1849.  
*Rhizothyrium* Naumov. Bull. Soc. Myc. Fr. 30:429, ill. 1914.  
*Septothyrella* Hoehn. Sitzb. Akad. Wien. 120:393 1911; for *Asterothyrium* Henn. Engler Bot. Jahrb. 54 1903, not Muell. Arg. 1890.
- C. magellanicum* Speg.  
*D. artocreas* (Tode) Fr.  
*R. abietis* Naumov  
*S. microthyris* (Henn.) Hoehn.

## Phaeophragmiae

- Labridium* Vesterg. Oefv. Vet.-Akad. Förh. 1:43 1897.  
*Peltosoma* Syd. Leaf. Phil. Bot. 9:3129 1925.  
*Phragmopeltis* Henn. Hedwigia 43:392, ill. 1904.  
*Methysterostomella* Speg. An. Mus. Nac. 3:13:396 1911.  
*Pseudodictya* Tehon & Stout Mycologia 21:192, ill. 1929.
- L. *hians* Vesterg.  
P. *freycinetiae* Syd.  
P. *siparunae* Henn.  
M. *argentinensis* Speg.  
P. *sassafrasicola* T. & S.

## Scolecosporae

- Actinothyrium* Kze. Myk. Heft. 2:81 1823.  
*Cylindrothyrium* Maire Bull. Soc. Bot. Fr. 53:189 1906.  
*Giulia* Tassi Bull. Lab. Bot. Siena 6:92 1904.  
*Ischnostroma* Syd. Phil. Jour. Sci. 9:186, ill. 1914.  
*Leptostromella* Sacc. Michelia 2:632 1882, as subg.  
*Discostromella* Petr. Ann. Myc. 22:34 1924.  
*Sphaeristromella* Bub. Ber. Deut. Bot. Ges. 34:297 1916.  
*Melophia* Sacc. Syll. Fung. 3:658 1884.  
*Petasodes* Clem. Gen. Fung. 133, 176 1909.  
*Placothyrium* Bub. Ber. Deut. Bot. Ges. 34:302 1916.  
*Pleurothyrium* Bub. Ber. Deut. Bot. Ges. 34:322 1916.  
*Stigmopeltis* Syd. Ann. Myc. 25:127, ill. 1927.  
*Stigmopeltella* Syd. Ann. Myc. 25:130 1927.  
*Tassia* Syd. Ann. Myc. 17:44 1919; for  
*Chaetopeltis* Sacc. Bull. Lab. Bot. Siena 14 1898; not Berth.  
*Chaetothyriolum* Speg. Bol. Acad. Cordoba 23:522 1919.  
*Thyrinula* Petr. & Syd. Ann. Myc. 22:373 1924.  
*Trachythyriolum* Speg. Bol. Acad. Cordoba 23:523 1919.
- A. *graminis* Kze.  
C. *subiculum* Maire  
G. *tenuis* (Sacc.) Tassi  
I. *merrilli* Syd.  
L. *septorioides* S. & R.  
D. *hysterioides* (Fr.) Petr.  
S. *pteridina* (S. & R.) Bub.  
M. *ophiospora* (Lev.) Sacc.  
P. *umbellatum* (Vestg.) Clem.  
P. *athyrinum* Bub.  
P. *longissimum* (Lib.) Bub.  
S. *roupalae* Syd.  
S. *costaricana* Syd.  
T. *laurina* (Tassi) Syd.  
C. *laurina* (Tassi) Sacc.  
C. *puiggarii* Speg.  
T. *eucalyptina* P. & S.  
T. *brasilianum* Speg.

## Genera Incertae Sedis Vel Dubia

- Chaetopeltiopsis* Hara Bot. Mag. Tokyo 27:253 1913.  
*Cheilaria* Lib. Ann. Sci. Nat. 2:7:125 1837; cf. Hoehn. Syst. Fung. Imp. 329 1923.  
*Anaphysmene* Bub. Ann. Myc. 4:122 1906.  
*Cytoplacosphaeria* Petr. Ann. Myc. 17:79 1919; 22:102 1924.  
*Discomycopsella* Henn. Hedwigia 41:146 1902; Syll. Fung. 18:429 1906; cf. Hoehn. Syst. Fung. Imp. 359 1923.
- C. *sasae* Hara  
C. *agrostidis* Lib.  
A. *heraclei* Bub.  
C. *rimosa* Petr.  
D. *bambusae* Henn.

- Hysteridium** Karst. Act. Soc. Fenn. 27:10  
1905; Syll. Fung. 22:1163 1913; cf. Hoehn.  
Syst. Fung. Imp. 360 1923.      **H.** *phragmitis* Karst.
- Lasiothyrium** Syd. Phil. Jour. Sci. 8:503, ill.  
1913.      **L.** *cycloschizum* Syd.
- Sacidium** Nees. Kze. & Schm. Myc. Heft.  
2:64 1823; Syll. Fung. 3:649 1884.      **S.** *chenopodii* Nees
- Sphaerothyrium** Bub. Ber. Deut. Bot. Ges.  
34:298 1916.      **S.** *filicinum* Bub.
- Termitaria** Thaxt. Bot. Gaz. 69:3, ill. 1920.      **T.** *snyderi* Thaxt.
- Titaeosporina** van Luyk Ann. Myc. 17:112  
1919; cf. Petr. Ann. Myc. 25:199 1927.      **T.** *tremulae* (Lib.) v. L.

## DISCELLACEAE

## Discellae

## Hyalosporae

- Agyriellopsis** Hoehn. Ann. Myc. 1:404 1903.      **A.** *caeruleo-atra* Hoehn.
- Amerosporium** Speg. Fung. Arg. 4:306 1882.      **A.** *polynemate* Speg.
- Acleista** Elliott Trans. Brit. Myc. Soc. 5:420,  
ill. 1914.      **A.** *alniella* Elliott
- Chaetostroma** (Corda) Sacc. em. *Michelia*  
2:174; Syll. Fung. 4:749 1886; cf. Hoehn.  
Syst. Fung. Imp. 358 1923.      **C.** *atrum* Sacc.
- Euchaetomella** Sacc. Syll. Fung. 3:321  
1884, as subg. of *Chaetomella*; cf. Hoehn.  
Ib. 359.      **E.** *atra* (Fkl.) Hoehn.
- Catinula** Lev. Ann. Sci. Nat. 3:9:247 1848.      **C.** *aurea* Lev.
- Desmopatella** Hoehn. Mitt. Lab. Techn.  
Hochsch. Wien 1:76 1924.      **D.** *salicis* Hoehn.
- Dinemasporium** Lev. Ann. Sci. Nat. 3:5:274  
1846.      **D.** *graminum* Lev.
- Dinemasporiopsis** Bub. & Kab. Krypt. Fl.  
Brand. 9:750 1914, for *Dinemasporiella*  
B. & K. Hedwigia 52:358 1912; not Speg.  
1910.      **D.** *hispidula* Bub. & Kab.
- Heteropatella** Fkl. Symb. Myc. App. 2:54  
1869.      **H.** *lacera* Fkl.
- Lophodermopsis** Speg. Rev. Fac. Agron. 6:175  
1910.      **L.** *hysterioides* Speg.
- Neopatella** Sacc. Ann. Myc. 6:530 1908.      **N.** *straussiana* Sacc.
- Falcispora** Bub. & Ser. Hedwigia 52:269  
1912.      **F.** *androssoni* B. & S.
- Polynema** Lev. Ann. Sci. Nat. 3:5:274 1846.      **P.** *ornatum* (DeN.) Lev.
- Psilospora** Rabh. Hedwigia 1:107 1856.      **P.** *faginea* (Pers.) Rabh.
- Sirexipula** Bub. Hedwigia 46:295 1907.      **S.** *kabatiana* Bub.
- Sporonema** Desm. Not. 14:182 1847.      **S.** *phacidoides* Desm.
- Clinterium** Fr. Sum. Veg. Scan. 418 1849.      **C.** *obturatum* Fr.
- Stauronema** Syd. Ann. Myc. 14:217 1916.      **S.** *cruciferum* S. & B.
- Stictopatella** Hoehn. Hedwigia 60:166 1918.      **S.** *euonymi* (Desm.) Hoehn.
- Traversoa** Sacc. & Syd. Ann. Myc. 11:317  
1913.      **T.** *excipuloides* S. & S.
- Xenopeltis** Syd. Ann. Myc. 17:38, ill. 1919.      **X.** *philippinensis* Syd.

## Phaeosporae

- Coniothyris* Speg. Fung. Puigg. n. 439 1889;  
for *Coniothyriella* Speg., cf. Clem. Gen.  
Fung. 133 1909; Hoehn. Syst. Fung. Imp.  
358 1923; Petr. Ann. Myc. 23:3 1925.
- Phaeopolynema* Speg. An. Mus. Nac. 23:117,  
ill. 1912; Syll. Fung. 22:977 1913.
- Schoenbornia* Bub. Bull. Herb. Boiss.  
2:6:483 1906.
- Myxormia* B. & Br. Ann. Nat. Hist. 2:5:457 n.  
447, ill. 1850.
- Chaetodiscula* Bub. & Kab. Hedwigia 50:44  
1910; cf. Hoehn. Hedwigia 60:159 1918;  
Petr. Ann. Myc. 19:97 1921.
- Godroniella* Karst. Symb. Myc. 15:158 1884.
- Hymenopsis* Sacc. Michelia 2:367 1881.
- Phaediscula* Cuboni Nuov. Giorn. Ital. 33:577  
1891.
- Vouauxiella* Petr. & Syd. Beih. Rep. Fedde  
42:482 1927.
- C. *phyllostictoides* Speg.  
P. *argentinense* Speg.  
S. *basidio-annulata* Bub.  
M. *atro-viridis* B. & Br.  
C. *hysteriformis* B. & K.  
G. *juncigena* Karst.  
H. *trochiloides* Sacc.  
P. *celotti* Cub.  
V. *verrucosa* (Vouaux) P. & S.

## Hyalodidymae

- Acarosporium* Bub. & Vleug. Ber. Deut. Bot.  
Ges. 19:385, ill. 1911.
- Dinemasporis* Speg. An. Mus. Nac. 20:366, ill.  
1910; for *Dinemasporiella* Speg.  
*Dinemasporiella* Bub. & Kab. Hedwigia  
52:358 1912.
- Discella* B. & Br. Ann. Nat. Hist. 2:5:376, ill.  
1850.
- Pseudolachnea* Ranoj. Ann. Myc. 8:393, ill.  
1910.
- Scaphidium* Clem. Rep. Bot. Surv. Nebr. 5:5  
1905; Gen. Fung. 134 1909
- Siropatella* Hoehn. Ann. Myc. 1:401 1903.
- Ramulariospora* Bub. Ann. Hofm. Wien.  
28:216 1914.
- A. *sympodiale* B. & V.  
D. *poiophila* Speg.  
D. *hispidula* (Schrad.) B. & K.  
D. *carbonacea* (Fr.) B. & Br.  
P. *bubaki* Ranoj.  
S. *boutelouae* Clem.  
S. *rhodophaea* Hoehn.  
R. *asperulina* Bub.

## Hyalophragmiae

- Excipularia* Sacc. Syll. Fung. 3:689 1884.
- Excipulina* Sacc. Syll. Fung. 3:688 1884; cf.  
Hoehn. Syst. Fung. Imp. 359 1923.
- Excipulella* Hoehn. Sitzb. Akad. Wien  
124:109 1915.
- Harposporella* Hoehn. Verh. Bot. Brandenb.  
58:28 1916.
- Bactrexipula* Hoehn. Hedwigia 60:161  
1918.
- Japonia* Hoehn. Sitzb. Akad. Wien 118:879  
1909.
- Yoshinagamycetes* Hara Bot. Mag. Tokyo  
26:143 1912.
- E. *fusispora* B. & Br.  
E. *recurvispora* (B. & C.) Sacc.  
E. *patella* Hoehn.  
H. *eumorpha* Hoehn.  
B. *strasseri* Hoehn.  
J. *quercus* Hoehn.  
Y. *quercus* (Henn.) Hara

- Oncospora* Kalchbr. *Grevillea* 9:19 1880  
*Stagonopatella* Petr. *Ann. Myc.* 25:219 1927.  
*Ypsilonia* Lev. *Ann. Sci. Nat.* 3:5:284 1846.  
*Acanthothecium* Speg. *Fung. Puigg.* n. 440  
 1889.  
*Psalidosperma* Syd. *Ann. Myc.* 12:571, ill.  
 1914.

- O. *bullata* K. & C.  
 S. *aeruginosa* Petr.  
 Y. *cuspidata* Lev.  
 A. *mirabile* Speg.  
 P. *mirabile* Syd.

## Phaeophragmiae

- Dichaenopsis* Paoli *Nuov. Giorn. Ital.* 1:97  
 1905.  
*Psilosporina* Died. *Krypt. Brandenb.* 9:754,  
 ill. 1924.  
*Excipularia* Sacc. *Syll. Fung.* 3:689 1884.  
*Sirothecium* Karst. *Symb. Myc.* 20:105 1887;  
 cf. Petr. & Syd. *Ann. Myc.* 23:214 1925.

- D. *notarisi* Paoli  
 P. *quercus* (Rabh.) Died.  
 E. *fusispora* (B. & Br.) Sacc.  
 S. *sepiarium* Karst.

## Phaeodictyae

- Taeniophora* Karst. *Symb. Myc.* 17:163 1885.

- T. *acerina* Karst.

## Scolecosporae

- Ephelidium* Speg. *An. Cient. Arg.* 90:184, ill.  
 1920.  
*Ephelis* Fr. *Sum. Veg. Scan.* 370 1849.  
*Phlyctaena* Mont. & Desm. *Ann. Sci. Nat.*  
 3:6:16 1847.  
*Pilidium* Kze. *Myk. Heft* 2:292 1823.  
*Protostegia* Cke. *Grevillea* 9:19 1880.  
*Pseudocenangium* Karst. *Symb. Myc.* 17:163  
 1885.  
*Septopatella* Petr. *Ann. Myc.* 23:128 1925.

- E. *aurantiorum* Speg.  
 E. *mexicana* Fr.  
 P. *vagabunda* Desm.  
 P. *euclae* (K. & C.) Sacc.  
 P. *magnoliae* (Rav.) Sacc.  
 P. *pinastri* Karst.  
 S. *septata* (Jaap.) Petr.

## Patellinae

## Hyalosporae

- Crocicreas* Fr. *Sum. Veg. Scan.* 418 1849.  
*Cyphina* Sacc. *Syll. Fung.* 3:623 1884.  
*Discozythia* Petr. *Ann. Myc.* 20:313 1922.  
*Entomopatella* Petr. *Ann. Myc.* 25:215 1927.  
*Hainesia* Ell. & Sacc. *Syll.* 3:699 1884.  
*Hyphostereum* Pat. *Bull. Soc. Myc. Fr.* 8:139  
 1892.  
*Gyrostroma* Naumov *Bull. Soc. Myc. Fr.*  
 33:383, ill. 1914.  
*Libertiella* Speg. & Roum. *Rev. Myc.* 2:21  
 1880.  
*Microdiscula* Hoehn. *Sitzb. Akad. Wien*  
 124:142 1915.  
*Munkia* Speg. *Fung. Guar.* 1:155 1886.  
*Aschersoniopsis* Henn. *Hedwigia* 41:7  
 1902; cf. Hoehn. *Syst. Fung. Imp.* 358, 361  
 1923.  
*Pycnostroma* Clem. *Gen. Fung.* 130 1909.

- C. *gramineum* Fr.  
 C. *lanuginosa* (Pk.) Sacc.  
 D. *sydowiana* Petr.  
 E. *mirabilis* Petr.  
 H. *rhoina* (Sacc.) Ell. & Sacc.  
 H. *pendulum* Pat.  
 G. *sinuosum* Naumov  
 L. *malmedyensis* Speg.  
 M. *rubicola* (Bres.) Hoehn.  
 M. *martyris* Speg.  
 A. *globosa* Henn.  
 P. *globosum* (Henn.) Clem.

- Ollula* Lev. Ann. Sci. Nat. 4:20:299 1863. **O.** *pezizoides* Lev.  
*Siroscyphellina* Petr. Ann. Myc. 21:255  
 1923. **S.** *arundinaceae* Petr.  
**P.** *italichroma* Speg.  
*Patellina* Speg. Fung. Arg. 3:164 1880.  
*Pseudopatellina* Hoehn. Sitzb. Akad. Wien  
 17:1025 1908. **P.** *conigena* (Niessl) Hoehn.  
**P.** *pusilla* Hoehn.  
*Pseudozythia* Hoehn. Frag. Myk. 33 1903.  
*Schizothyrella* Thuem. Myc. Univ. n. 1684  
 1880. **S.** *quercina* (Lib.) Thuem.  
*Scleropycnium* Heald & Lewis Trans. Am.  
 Mic. Soc. 31:5, ill. 1912. **S.** *aureum* H. & L.  
*Fragosoella* Petr. & Syd. Beil. Rep. Fedde  
 42:183 1927. **F.** *nevadensis* (Frag.) P. & S.  
*Selenophomopsis* Petr. Ann. Myc. 22:182  
 1924. **S.** *juncea* (Mont.) Petr.  
*Sirexipulina* Petr. Ann. Myc. 21:278 1923;  
 cf. Petr. Ann. Myc. 25:233 1927. **S.** *moravica* Petr.  
*Sirocyphis* Clem. Gen. Fung. 130 1909; Minn.  
 Bot. Studies 4:188, ill. 1911. **S.** *nivea* Clem.  
*Siroscyphella* Hoehn. Sitzb. Akad. Wien  
 119:650 1910. **S.** *fumosellina* (Starb.) Hoehn.

## Phaeosporae

- Michenera* B. & C. Jour. Linn. Soc. 10:333  
 1869. **M.** *artocreas* B. & C.  
*Trullula* Ces. Bot. Zeit. 10:287 1852. **T.** *olivascens* Sacc.

## Hyalodidymae

- Cystotricha* B. & Br. Ann. Nat. Hist. 2:5:457,  
 ill. 1850. **C.** *striola* B. & Br.  
*Pseudopatella* Sacc. Syll. Fung. 3:688 1884;  
 cf. Hoehn. Syst. Fung. Imp. 361 1923. **P.** *tulasnei* Sacc.  
*Diplozythiella* Died. Ann. Myc. 14:215, ill.  
 1916. **D.** *bambusina* Died.  
*Fioriella* Sacc. & D. Sacc. Syll. Fung. 18:432  
 1906. **F.** *vallumbrosana* S. & D. S.  
*Myriellina* Hoehn. Sitzb. Akad. Wien 124:100  
 1915. **M.** *cydoniae* Hoehn.

## Hyalophragmiae

- Stagonopatella* Petr. Ann. Myc. 25:219 1927. **S.** *aeruginosa* Petr.

## Phaeophragmiae

- Lecanosticta* Syd. Ann. Myc. 20:211 1922. **L.** *pini* Syd.

## Scolecosporae

- Pyrenotrichum* Mont. Syll. Gen. 267 1856. **P.** *splitgerberi* Mont.  
*Trichocrea* March. Bull. Soc. Belg. 30:2:145  
 1891. **T.** *stenospora* March.  
*Trichosperma* Speg. An. Soc. Cien. Arg.  
 26:67 1888. **T.** *pulchellum* Speg.



## Genera Incertae Sedis Vel Dubia

- Ceuthosira** Petr. Ann. Myc. 22:265 1924.  
**Disculina** Hoehn. Frag. Myk. n. 988 1916; cf. Petr. Ann. Myc. 23:6 1925.  
**Exotrichum** Syd. Ann. Myc. 12:571 1914; cf. Hoehn. Syst. Fung. Imp. 359 1923.  
**Hysteromyxa** Sacc. & Ell. *Michelia* 2:574 1882; cf. Hoehn. Syst. Fung. Imp. 360 1923; Syll. Fung. 3:622 1884.  
**Pleococcum** Desm. & Mont. Ann. Sci. Nat. 3:11:53 1849; Syll. Fung. 3:679 1884; cf. Hoehn. Syst. Fung. Imp. 361 1923.  
**Pseudodiscula** Laub. Gartenfl. 60:78 1911.  
**Pseudostictis** Fautr. Rev. Myc. 12:119 1890; Syll. Fung. 11:553 1895; cf. Hoehn. Syst. Fung. Imp. 361 1923.  
**Stichospora** Petr. Ann. Myc. 25:195 1927.  
**Tryblidiopycnis** Hoehn. Sitzb. Akad. Wien 127:562 1918.
- C. aesculicarpa** Petr.  
**D. neesi** (Cda.) Hoehn.  
**E. leucomelas** Syd.  
**H. effugiens** S. & E.  
**P. robergei** D. & M.  
**P. endogenospora** Laub.  
**P. silvestris** Fautr.  
**S. disciformis** Petr.  
**T. pinastri** Hoehn.

## MELANCONIALES

## MELANCONIACEAE

## Hyalosporae

- Aureobasis** Viala & Boyer Rev. Gen. Bot. 3:369, ill. 1891; for *Aureobasidium*.  
**Exobasidiopsis** Karak. Not Syst. Inst. Crypt. Petr. 1:83 1922.  
**Kabatiella** Bub. *Hedwigia* 46:297 1907; Syll. Fung. 22:1297 1913.  
**Pachybasidiella** Bub. & Syd. Ann. Myc. 13:9, ill. 1915.  
**Polyspora** Lafferty Sci. Proc. Dublin Soc. 21:258, ill. 1921.  
**Bloxamia** B. & Br. Ann. Nat. Hist. 2:13:468, ill. 1854.  
**Gloeosporiopsis** Speg. An. Mus. Nac. 3:13:404 1911; Syll. Fung. 22:1193 1913.  
**Thecostroma** Clem. Gen. Fung. 135, 176 1909.  
**Colletotrichum** Corda Sturm Deut. Crypt. Fl. 3:3:41, ill. 1831.  
**Colletotrichella** Hoehn. Sitzb. Akad. Wien 125:99 1916.  
**Colletotrichopsis** Bub. Oest. Bot. Zeit. 54:184 1904.  
**Conoplea** Pers. Tent. Disp. 55 1797.  
**Cryptosporiopsis** Bub. & Kab. *Hedwigia* 52:360 1912.  
**Discosporiopsis** Petr. Ann. Myc. 19:217 1921.  
**Tuberculariella** Hoehn. Syst. Fung. Imp. 1:343 1923.
- A. vitis** V. & B.  
**E. viciae** Karak.  
**K. microsticta** Bub.  
**P. polyspora** B. & S.  
**P. lini** Laff.  
**B. truncata** B. & B.  
**G. vinal** Speg.  
**T. nitidulum** (Sacc.) Clem.  
**C. gloeosporodes** Penz.  
**C. periclymeni** (Desm.) Hoehn.  
**C. pyri** (Noack) Bub.  
**C. sphaerica** Pers.  
**C. nigra** B. & K.  
**D. piri** (Fkl.) Petr.  
 (no species given)

- Cytogloeum* Petr. Ann. Myc. 23:77 1925.  
*Discosporella* Hoehn. Mitt. Bot. Hochs. Wien 4:80 1927.  
*Eriosporella* Hoehn. Sitzb. Akad. Wien 125:109 1916.  
*Gloeosporium* Desm. & Mont. Ann. Sci. Nat. 3:12:295 1849.  
*Calogloeum* Syd. Ann. Myc. 22:401 1924.  
*Cryptocline* Petr. Ann. Myc. 22:402 1924.  
*Cylindrosporella* Hoehn. Sitzb. Akad. Wien 125:96 1916.  
*Discosporiella* Petr. Ann. Myc. 21:14 1923.  
*Discula* Sacc. Syll. Fung. 3:674 1884.  
*Gloeosporidiella* Petr. Hedwigia 62:318 1921.  
*Gloeosporidina* Petr. Ann. Myc. 19:214 1921.  
*Gloeosporidium* Hoehn. Sitzb. Akad. Wien 125:95 1916.  
*Gloeosporina* Hoehn. Sitzb. Akad. Wien 125:94 1916.  
*Microgloeum* Petr. Ann. Myc. 20:215 1922.  
*Monostichella* Hoehn. Sitzb. Akad. Wien 125:95 1916.  
*Myxosporina* Hoehn. Mitt. Bot. Hochs. Wien 4:73 1927.  
*Hyperomyxa* Corda Icon. Fung. 3:34, ill. 1839.  
*Hypodermium* Link Spec. Pl. Fung. 2:88 1825.  
*Hypodermina* Hoehn. Sitzb. Akad. Wien 125:55 1916.  
*Hypogloeum* Petr. Ann. Myc. 21:263 1923.  
*Mastigonema* Speg. Bol. Acad. Cordoba 29:177 1926.  
*Myxosporella* Sacc. Michelia 2:381 1881.  
*Myxosporium* Link Spec. Pl. Fung. 2:99 1825.  
*Discogloeum* Petr. Ann. Myc. 21:14 1923.  
*Discosporium* Hoehn. Zeit. Gär. 5:196 1914.  
*Phaeomonostichella* Keissl. Anz. Akad. Wien 60:75 1924.  
*Naemospora* Pers. Syn. Fung. 110 1801; em. Sacc. Michelia 2:12 1880.  
*Pestalozziella* Sacc. & Ell. Michelia 2:575 1882.  
*Protocoronis* Atkin. & Edgert. Jour. Myc. 13:186 1907; em. Wolf Jour. Elish. Mitch. Soc. 36:82 1920; for *Protocoronospora*.  
*Rhabdogloeopsis* Petr. Ann. Myc. 23:52 1925.  
*Rhabdogloeum* Syd. Ann. Myc. 20:215 1922.  
*Thyrsidiella* Hoehn. Oest. Bot. Zeit. 55:100 1905.  
*Vermicularia* Fr. Sum. Veg. Scan. 419 1849.
- C. tiliae* Petr.  
*D. didyma* (F. & R.) Hoehn.  
*E. calami* (Niessl) Hoehn.  
*G. cingulatum* Atkin.  
*C. weirianum* (Sacc.) Syd.  
*C. effusa* Petr.  
*C. carpini* (Lib.) Hoehn.  
*D. phaeosora* (Sacc.) Petr.  
*D. platani* (Pk.) Sacc.  
*G. ribis* (Lib.) Petr.  
*G. moravica* Petr.  
*G. acericolum* (All.) Hoehn.  
*G. inconspicua* (Cav.) Hoehn.  
*M. pruni* Petr.  
*M. robergei* (Desm.) Hoehn.  
*M. subtecta* (Rob.) Hoehn.  
*H. stilbosporoides* Cda.  
*H. nervisequium* Link.  
*H. nervisequia* (Lk.) Hoehn.  
*H. euonymi* Petr.  
*M. bruchianum* Speg.  
*M. miniata* Sacc.  
*M. croceum* (Pers.) Link  
*D. phaeosora* (Sacc.) Petr.  
*D. hyalinum* (Ell.) Hoehn.  
*P. symploci* Keissl.  
*N. croceola* Sacc.  
*P. subsessilis* S. & E.  
*P. nigricans* A. & E.  
*R. balsameae* (Dav.) Petr.  
*R. pseudotsugae* Syd.  
*T. lignicola* Hoehn.  
*V. dematium* Fr.



## Hyalophragmiae

- Diploceras Sacc. Syll. Fung. 10:484 1892, as subg.; Hoehn. Syst. Fung. Imp. 342 1923.  
 Endocladis Petr. Ann. Myc. 21:290 1923.  
 Entomosporium Lev. Bull. Soc. Bot. Fr. 3:31 1856.  
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 E. ulmi Petr.  
 E. maculatum Lev.  
 P. unicolor (B. & C.) Sacc.  
 P. formosa Sacc. & Malbr.  
 P. dianthi H. & L.  
 S. acerinum (Pass.) Sacc.  
 T. ditospora (Sacc.) Bub.  
 R. andropogonis Miura

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 Thyrostromella Syd. Ann. Myc. 22:406 1924.  
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 Siridina Hoehn. Syst. Fung. Imp. 334 1923.  
 Siridium Nees Syst. Pilz. 22 1816.  
 Hyaloceras Dur. & Mont. Fl. Alg. 587 1846.  
 Septotrullula Hoehn. Frag. Myk. 1902:39; Syll. Fung. 18:487 1906.  
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 D. arbuti Bonar  
 A. hoffmanni Kze.  
 C. umbonatum Nees  
 E. loculosum (Sacc.) Petr.  
 L. corni-albae (Roum.) Petr.  
 (no species given)  
 T. trimera (Sacc.) Syd.  
 C. hysteroioides Fkl.  
 H. flageoleti Sacc.  
 M. monochaeta (Desm.) Sacc.  
 P. funerea Desm.  
 S. fagi Lib.  
 (no species given)  
 S. ramealis Karst.  
 (no species given)  
 S. marginatum Nees  
 H. notarisi M. & D.  
 S. bacilligera Hoehn.  
 S. macrosperma Pers.  
 T. abietinum Vuill.

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*Endobotryella* Hoehn. *Sitzb. Akad. Wien* 118:1536 1909. *E. oblonga* (Fkl.) Hoehn.  
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*Phragmotrichum* Kze. & Schm. *Myk. Heft.* 2:84, ill. 1823. *P. chailleti* Kze.  
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*Stigmopsis* Bub. *Ann. Myc.* 12:218 1914. *S. celtidis* (Pass.) Bub.  
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*Cryptosporium* Sacc. *Syll. Fung.* 3:740 1884. *C. neesi* Corda  
*Disculina* Hoehn. *Sitzb. Akad. Wien* 125:104 1916. *D. neesi* (Corda) Hoehn.  
*Phloeosporella* Hoehn. *Ann. Myc.* 22:201 1924. *P. ceanothi* (E. & E.) Hoehn.  
*Phloeosporina* Hoehn. *Ann. Myc.* 22:202 1924. *P. minor* (E. & E.) Hoehn.  
*Sphaceliopsis* Speg. *An. Mus. Nac.* 20:45 1910; *Syll. Fung.* 22:1468 1913. *S. cypericola* Speg.  
*Libertella* Desm. *Ann. Sci. Nat.* 1:19:277 1830. *L. betulina* Desm.  
*Libertina* Hoehn. *Ann. Myc.* 22:197 1924. *L. stipata* (Lib.) Hoehn.  
*Pseuderospora* Keissl. *Anz. Akad. Wien* 60:76 1924. *P. castanopsidis* Keissl.  
*Pseudostegia* Bub. *Jour. Myc.* 12:56 1906; cf. *P. nubilosa* Bub.  
*Trichodytes* Klebahn *Ber. Deut. Bot. Ges.* 15:527 1897. *T. anemones* Kleb.

## Staurosporae

- Asterosporium* Syd. *Ann. Myc.* 1:36 1903. *A. saccardoi* Syd.

## Genera Incertae Sedis Vel Dubia

- Basilocula* Bub. *Ann. Myc.* 12:210 1914; cf. *B. lauricola* Bub.  
 Hoehn. *Syst. Fung. Imp.* 358 1923. *E. cinnamomi* Syd.  
*Elaeodema* Syd. *Ann. Myc.* 20:64 1922. *H. populi* Preuss  
*Hormococcus* Preuss *Linnaea* 25:73 1852; cf. *H. populi* (Preuss) Clem.  
*Hormyllum* Clem. *Gen. Fung.* 135, 176 1909; cf. *H. populi* (Preuss) Clem.  
 Hoehn. *Syst. Fung. Imp.* 360 1923. *M. fusarioides* Corda  
*Melanostroma* Corda *Icon. Fung.* 1:5 1837; cf. *M. fusarioides* Corda  
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 Hoehn. *Syst. Fung. Imp.* 361 1923; *Syll. Fung.* 10:498 1892. *T. pteridis* (Ehrenb.) Died.  
*Thyriostroma* Died. *Ann. Myc.* 11:176 1913; cf. *T. pteridis* (Ehrenb.) Died.

## MONILIALES

## MONILIACEAE

## Hyalosporae

- Acladium** Link. Obs. Myc. 1:9, ill. 1809.  
**Acontium** Morgan Jour. Myc. 8:4 1902.  
**Acremonium** Link. Obs. Myc. 1:13 1809; em.  
 Sacc. *Michelia* 2:17 1880.  
**Thermomyces** Tsil. Ann. Inst. Pasteur  
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**Acrocylindrium** Bon. Handb. Myk. 97 1851.  
**Acrostalagmus** Corda Icon. Fung. 2:15 1838.  
**Harziella** Cost. & Matr. Bull. Soc. Myc. Fr.  
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**Amblyosporium** Fres. Beitr. Myk. 99, ill.  
 1863.  
**Articularia** Hoehn. Sitzb. Akad. Wien  
 118:407 1909.  
**Aspergillus** (Michel.) Lk. Sp. Pl. 1:65 1824.  
**Alliospora** Pim Jour. Bot. 21:234 1883.  
**Briarea** Corda Sturm Deut. Crypt. Fl.  
 3:3:11, ill. 1831.  
**Sterigmatocystis** Cram. Viert. Nat. Ges.  
 Zürich 4:323 1859.  
**Asterophora** Ditm. Schrad. Jour. Bot. 3:56,  
 ill. 1809.  
**Basidiobotrys** Hoehn. Sitzb. Akad. Wien  
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**Xylocladium** Syd. Nat. Pflanzenf. 1:1:494  
 1900; Syll. Fung. 16:1089 1902, 22:1262  
 1913; cf. Hoehn. Syst. Fung. Imp. 362  
 1923.  
**Blastomyces** Cost. & Roll. Bull. Soc. Myc.  
 Fr. 4:153 1888.  
**Botryosporium** Corda Sturm Deut. Crypt. Fl.  
 3:11 1833.  
**Radaisella** Bainier Bull. Soc. Myc. Fr.  
 26:382, ill. 1910; Syll. Fung. 22:1253 1913.  
**Botrytis** Michel., em. Link. Sp. Pl. Fung. 1:53  
 1824.  
**Acmosporium** Corda Icon. Fung. 3:11, ill.  
 1839.  
**Calcarisporium** Preuss Linnaea 24:124 1851.  
**Cephalosporium** Corda Anleit. 61 1842.  
**Chaetoconidium** Zukal Verh. Ges. Wien  
 37:45 1887.  
**Chantransiopsis** Thaxt. Bot. Gaz. 58:246, ill.  
 1914.  
**Chromosporium** Corda Sturm Deut. Crypt.  
 Fl. 3:2:119, ill. 1829.  
**Cladobotryum** Sacc. *Michelia* 1:272 1878.  
**Clonostachys** Corda Prachtfl. 15 1839.  
**Clonostachyopsis** Hoehn. Sitzb. Akad. Wien  
 116:149 1907.
- A. conspersum** Lk.  
**A. album** Morg.  
**A. alternatum** Lk.  
**T. lanuginosus** Tsil.  
**A. elegans** Bon.  
**A. cinnabarinus** Corda  
**H. capitata** C. & M.  
**A. botrytis** Fres.  
**A. quercina** (Pk.) Hoehn.  
**A. glaucus** (L.) Lk.  
**A. sapucaya** Pim  
**B. elegans** Sturm  
**S. nigra** van Tiegh.  
**A. agaricicola** Corda  
**B. clautriavi** (Pat.) Hoehn.  
**X. clautriavi** (Pat.) Syd.  
**B. luteus** C. & R.  
**B. pulchrum** Corda  
**R. elegans** Bain.  
**B. cinerea** Pers.  
**A. botryoideum** Corda  
**C. arbuscula** Preuss  
**C. acremonium** Corda  
**C. arachnoideum** Zuk.  
**C. decumbens** Thaxt.  
**C. viride** Corda  
**C. thuemeri** Sacc  
**C. araucaria** Corda  
**C. populi** (Harz) Hoehn.

- Coccosporella* Karst. Symb. Myc. 32:9 1893.  
*Coemansia* van Tiegh. Ann. Sci. Nat. 5:17:392  
 1873.  
*Coemansiella* Sacc. Syll. Fung. 2:815 1883;  
 4:55 1886.  
*Corethrospis* Corda Prachtfl. 1, ill. 1839.  
*Coronella* Crouan Fl. Fin. 12, ill. 1867.  
*Corymbomyces* Appel & Strunk Cent. Bakt.  
 2:11:632 1904.  
*Cristulariella* Hoehn. Sitzb. Akad. Wien  
 125:124 1916; cf. Bowen Conn. Exp. Sta.  
 Bull. 316 1930.  
*Cylindrium* Bon. Handb. Myk. 34, 1851; em.  
 Sacc. Michelia 2:14 1880.  
*Cylindrocephalum* Bon. Handb. Myk. 103  
 1851.  
*Cylindrodendrum* Bon. Handb. Myk. 97, ill.  
 1851.  
*Cylindrophora* Bon. Handb. Myk. 92, ill.  
 1851.  
*Cylindrotrichum* Bon. Handb. Myk. 88 1851.  
*Dimargaris* van Tiegh. Ann. Sci. Nat. 6:1:154,  
 ill. 1875.  
*Dispira* van Tiegh. Ann. Sci. Nat. 6:1:160, ill.  
 1875.  
*Doratomyces* Corda Icon. Fung. 1:19, ill.  
 1837.  
*Fusidium* Sacc. Michelia 2:14 1880.  
*Geotrichum* Link Obs. Myc. 1:53 1809.  
*Oosporidea* Sumstine Mycologia 5:53 1913.  
*Gliobotrys* Hoehn. Sitzb. Akad. Wien 111:1048  
 1902.  
*Sporodiniopsis* Hoehn. Ann. Myc. 1:528  
 1903.  
*Gliocladium* Corda Icon. Fung. 4:30 1840.  
*Gloeosphaera* Hoehn. Sitzb. Akad. Wien  
 111:1038 1902.  
*Glomerularia* Pk. Rep. N. Y. Mus. 32:43, ill.  
 1879.  
*Glyphophila* Mont. Comp. Rend. 33:395 1851.  
*Gonatobotrys* Corda Prachtfl. 5 1839.  
*Gonatorhodus* Thaxt. Bot. Gaz. 45:202 1891.  
*Graphidium* Lind. Rabh. Krypt. Fl. 9:748  
 1909.  
*Haplaria* Link Obs. Myc. 1:9, ill. 1809.  
*Haplotrichum* Link Sp. Pl. Fung. 1:52 1824.  
*Hyalopus* Corda Anleit. 58 1842.  
*Hyphoderma* Fr. Sum. Veg. Scan. 447 1849.  
*Langloisula* Ell. & Ev. Jour. Myc. 5:68 1889;  
 cf. Hoehn. Frag. Myk. 1155 1917.  
*Malbranchea* Sacc. Michelia 2:639 1882.  
*Thermoidium* Mieke Ber. Deut. Bot. Ges.  
 35:510, ill. 1910; Syll. Fung. 22:1240 1913.
- C. calospora* Karst.  
*C. reversa* van Tiegh.  
*C. alabastrina* Sacc.  
*C. paradoxa* Corda  
*C. nivea* Crouan  
*C. albus* A. & S.  
*C. depraedans* (Cke.) Hoehn.  
*C. elongatum* Bon.  
*C. aureum* (Corda) Bon.  
*C. album* Bon.  
*C. tenera* Bon.  
*C. album* Bon.  
*D. crystalligena* van Tiegh.  
*D. cornuta* van Tiegh.  
*D. tenuis* Corda  
*F. carneolum* Sacc.  
*G. candidum* Lk.  
*O. lactis* (Fres.) Sumst  
*G. alboviridis* Hoehn.  
*S. dichotomus* Hoehn.  
*G. penicillis* Corda  
*G. globuligera* Hoehn.  
*G. corni* Pk.  
*G. versicolor* Mont.  
*G. simplex* Corda  
*G. parasitica* Thaxt.  
*G. corrensi* Lind.  
*H. grisea* Lk.  
*H. capitatum* Lk.  
*H. mycophilus* Corda  
*H. roseum* (Pers.) Fr.  
*L. spinosa* E. & E.  
*M. pulchella* S. & P.  
*T. sulphureum* Mieke

- Martensella** Coem. Bull. Acad. Belg. 2:15:292, ill. 1863.  
**Meria** Vuill. Bull. Soc. Nancy 2:14:13, ill. 1896.  
**Hartigiella** Syd. Nat. Pflanzenf. 1:1:558 1900; Syll. Fung. 16:1031 1902.  
**Monilia** Pers., em. Sacc. Michelia 2:17 1880.  
**Halobysus** Zukal Oest. Bot. Zeit. 43:279 1893.  
**Moniliopsis** Ruhland Arb. Anst. Landw-Forstw. 6:71, ill. 1908; Syll. Fung. 22:1247 1913.  
**Monopodium** Delacr. Bull. Soc. Myc. Fr. 6:99 1890.  
**Monosporium** Bon. Handb. Myk. 95 1851.  
**Monosporiella** Speg. Physis 4:293 1918.  
**Myceliophthora** Cost. Rev. Gen. Bot. 6:289 1894.  
**Nematogonium** Desm. Ann. Sci. Nat. 2:2:69 1834.  
**Nomuraea** Maubl. Bull. Soc. Myc. Fr. 19:295 1903.  
**Oedocephalum** Preuss Linnaea 24:131 1851.  
**Amblyosporiopsis** Fairman Proc. Roch. Acad. Sci. 6:132, ill. 1922.  
**Oidiopsis** Scalia Agricolt. Calabro-Siculo 27:396 1902.  
**Oidium** Link, em. Sacc. Michelia 2:15 1880.  
**Acrosporium** Nees Syst. Pilz. 53, ill. 1817.  
**Olpitrichum** Atkin. Bot. Gaz. 48:244 1894.  
**Oospora** Wallr. Fl. Crypt. 2:182 1833; em. Sacc. Michelia 2:14 1880.  
**Toruloidea** Sumstine Mycologia 5:53, ill. 1913.  
**Ophiocladium** Cav. Zeits. Pflanzenkr. 3:26 1893.  
**Ovularia** Sacc. Michelia 2:17 1880.  
**Pseudovularia** Speg. An. Mus. Nac. 3:13:418 1911.  
**Pachybasium** Sacc. Rev. Myc. 7:160, ill. 1885.  
**Paepalopsis** Kuehn Hedwigia 22:11, 28 1883.  
**Pellicularia** Cke. Grevillea 4:116, ill. 1876.  
**Penicillium** Link Sp. Pl. Fung. 1:69 1824.  
**Citromyces** Wehmer Ber. Deut. Bot. Ges. 11:333 1893.  
**Paecilomyces** Bainier Bull. Soc. Myc. Fr. 23:26 1907.  
**Scopulariopsis** Bainier Bull. Soc. Myc. Fr. 23:98 1907.  
**Phymatotrichum** Bon. Handb. Myk. 116, ill. 1851; Syll. Fung. 16:1033 1902.  
**Beauveria** Vuill. Bull. Soc. Bot. Fr. 59:40, ill. 1912.
- M. pectinata** Coem.  
**M. laricis** Vuill.  
**H. laricis** (Hart.) Syd.  
**M. fructigena** Pers.  
**H. moniliformis** Zuk.  
**M. aderholdi** Ruhl.  
**M. uredopsis** Delacr.  
**M. spinosum** Bon.  
**M. meliolicola** Speg.  
**M. lutea** Cost.  
**N. aurantiacum** Desm.  
**N. prasina** Maubl.  
**O. glomerulosum** (Bull.) Sacc.  
**A. parasphenoides** Fairman  
**O. sicola** Scalia  
**O. erysiphoides** Fr.  
**A. monilioides** Nees  
**O. carpophilum** Atkin.  
**O. virescens** (Lk.) Wallr.  
**T. effusa** Sums.  
**O. hordei** Cav.  
**O. obovata** Sacc.  
**P. trifolii** Speg.  
**P. hamatum** (Bon.) Sacc.  
**P. irmischiae** Kuehn  
**P. koleroga** Cke.  
**P. expansum** Lk.  
**C. glaber** Wehmer  
**P. varioti** Bain.  
**S. brevicaulis** (Sacc.) Bain.  
**P. gemellum** Bon.  
**B. bassiana** (Bals.) Vuill.



- Physospora* Fr. Sum. Veg. Scan. 495 1849.  
*Plectothrix* Shear Bull. Torr. Club. 29:457  
 1902.  
*Polyscytalum* Riess Bot. Zeit. 11:138 1853.  
*Ramulaspera* Lindr. Act. Soc. Fenn. 22:5  
 1902.  
*Rhinotrichum* Corda Icon. Fung. 1:17 1837.  
*Jidymotrichum* Hoehn. Sitzb. Akad. Wien  
 123:140 1914.  
*Mastigocladium* Matr. Comp. Rend. 152:325  
 1911.  
*Rhopalomyces* Corda Prachtfl. 3, ill. 1839.  
*Sceptromyces* Corda Sturm. Deut. Crypt. Fl.  
 3:3:7, ill. 1831.  
*Selenotila* Lagerh. Ber. Deut. Bot. Ges. 10:531  
 1892.  
*Sepedonium* Link Obs. Myc. 1:16 1809.  
*Sigmoidomyces* Thaxt. Bot. Gaz. 45:22, ill.  
 1891.  
*Spermatoloncha* Speg. An. Mus. Nac. 3:10:139  
 1909.  
*Spicaria* Harz Hyphom. 51 1871.  
*Spicularia* Pers. Myc. Eur. 1:39 1822; em.  
 Fkl. Symb. Myc. 359 1869.  
*Sporotrichella* Karst. Symb. Myc. 20:96 1887.  
*Sporotrichum* Link Sp. Pl. Fung. 1:1 1824;  
 em. Sacc. Michelia 2:16 1880.  
*Leiosepium* Sacc. Bull. Soc. Myc. Fr. 16:24  
 1900; Syll. Fung. 16:1036 1902.  
*Tolypomyria* Preuss Linnaea 26:707 1853.  
*Trichoderma* Pers. Tent. Disp. 12 1797; em.  
 Harz Hyphom. 29 1871.  
*Sporoderma* Mont. Syll. Crypt. n. 1069  
 1856; Syll. Fung. 4:676 1886; cf. Hoehn.  
 Syst. Fung. Imp. 360 1923.  
*Uncigera* Sacc. Misc. Myc. 2:135 1884.  
*Verticilliopsis* Cost. Compt. Rend. 114:850  
 1892.  
*Verticillium* Nees. Syst. Pilz. 57 1817.  
*Volutellis* Torrend Bull. Jard. Bot. Brux. 4:12  
 1914; for *Volutellopsis* Torr., not Speg.  
 1910.  
*Xenopus* Penz. & Sacc. Malpighia 15:240  
 1901.
- P. rubiginosa* Fr.  
*P. globosa* Shear  
*P. fecundissimum* Riess  
*R. salicina* (Vest.) Lindr.  
*R. repens* Preuss  
*D. chrysospermum* (Sacc.) Hoehn.  
*M. blochi* Matr.  
*R. elegans* Corda  
*S. opizi* Corda  
*S. nivalis* Lagerh.  
*S. chrysospermum* (Bull.) Lk.  
*S. dispiroides* Thaxt.  
*S. maticola* Speg.  
*S. elegans* (Corda) Harz  
*S. icterus* Fkl.  
*S. rosea* Karst.  
*S. roseum* Lk.  
*L. aureum* S. & F.  
*T. microspora* (Corda) Sacc.  
*T. lignorum* (Tode) Harz  
*S. chlorogenum* Mont.  
*U. cordae* S. & B.  
*V. infestans* Cost.  
*V. agaricinum* (Lk.) Corda  
*V. sulphurea* Torr.  
*X. farinosus* P. & S.

## Hyalodidymae

- Arthrobotrys* Corda Prachtfl. 21 1839.  
*Bostrichonema* Ces. Erb. Critt. Ital. n. 149  
 1859.  
*Cephalothecium* Corda Anleit. 57 1842.  
*Cylindrocladium* Morgan Bot. Gaz. 46:191  
 1892.  
*Didymaria* Corda Icon. Fung. 6:8 1854.
- A. superba* Corda  
*B. alpestre* Ces.  
*C. roseum* Corda  
*C. scoparium* Morg.  
*D. ungeri* Corda

- Didymocladium* Sacc. Syll. Fung. 4:186 1886.  
*Didymopsis* Sacc. & March. Bull. Soc. Bot. Belg. 24:61 1885.  
*Diplocladium* Bon. Handb. Myk. 98 1851.  
*Diploospora* Grove Jour. Bot. 54:220 1916.  
*Diplorhinotrichum* Hoehn. Sitzb. Akad. Wien 111:1040 1902.  
*Diplosporium* Bon. Handb. Myk. 98 1851.  
*Haplariopsis* Oud. Ned. Arch. 3:2:902 1903.  
*Hormiactina* Bub. Hedwigia 57:336, ill. 1916.  
*Hormiactis* Preuss. Fung. Hoyersw. 128 1851.  
*Landaopsis* Zahlbr. Cent. Bakt. 2:20:187 1907.  
*Mycogone* Link. Sp. Pl. Fung. 1:29 1824.  
*Chlamydomyces* Bainier Bull. Soc. Myc. Fr. 23:240, ill. 1907; Syll. Fung. 22:130 1913.  
*Ramulariopsis* Speg. An. Mus. Nac. 20:421 1910.  
*Rhynchosporium* Heinsen Jahrb. Hamburg Wiss. 18:43 1901.  
*Trichothecium* Link. Sp. Pl. Fung. 1:28 1824.
- D. ternatum* (Bon.) Sacc.  
*D. perexigua* S. & M.  
*D. minus* Bon.  
*D. rosea* Grove  
*D. candidulum* Hoehn.  
*D. album* Bon.  
*H. fagicola* Oud.  
*H. wroblewski* Bub.  
*H. alba* Preuss  
*L. caloplacae* Zahlbr.  
*M. rosea* Lk.  
*C. diffusus* Bain.  
*R. cnidoscoli* Speg.  
*R. graminicola* Hein.  
*T. roseum* Lk.

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- Allantospora* Wakk. Meddeel. Proefst. Oost-Java 2:28:4 1895.  
*Amastigis* Bond. Mont. Mat. Mik. Ross. 5:2 1921; for *Amastigosporium*.  
*Blastotrichum* Corda Icon. Fung. 2:10, ill. 1838.  
*Candelospora* Rea & Hawley Proc. Roy. Irish Acad. 13:11 1912.  
*Cephaliphora* Thaxt. Bot. Gaz. 37:157 1903.  
*Dactylaria* Sacc. Michelia 2:20 1880.  
*Dactylella* Grove Jour. Bot. 22:199, ill. 1884.  
*Dactylium* Nees Syst. Pilz. 58 1817.  
*Fusoma* Corda Icon. Fung. 1:7 1837.  
*Gueguenia* Bainier Bull. Soc. Myc. Fr. 23:107, ill. 1907.  
*Mastigosporium* Riess Fres. Beitr. Myk. 56 1852.  
*Milowia* Masee Jour. Roy. Micr. Soc. 2:4:841 1884.  
*Moeszia* Bub. Bot. Koezlem. 13:94, ill. 1914.  
*Monacrosporium* Oud. Neder. Kruidk. Arch. 2:4:250 1884.  
*Mucrosporium* Preuss. Linnaea 24:128 1851.  
*Paraspora* Grove Jour. Bot. 22:196, ill. 1884.  
*Piricularia* Sacc. Michelia 2:20 1880.  
*Pithomyces* B. & Br. Jour. Linn. Soc. 14:100 1875.  
*Neomichelia* P. & S. Malpighia 15:246 1901; Syll. Fung. 10:393 1902.
- A. radicolica* Wakk.  
*A. graminicola* B. M.  
*B. confervoides* Corda  
*C. ilicicola* Hawley  
*C. tropica* Thaxt.  
*D. purpurella* Sacc.  
*D. minuta* Grove  
*D. dendroides* (Bull.) Fr.  
*F. glandarium* Corda  
*G. caespitosa* Bain.  
*M. album* Riess  
*M. nivea* Mass.  
*M. cylindroides* Bub.  
*M. elegans* Oud.  
*M. tenellum* (Fr.) Sacc.  
*P. septata* Grove  
*P. grisea* (Cke.) Sacc.  
*P. flavus* B. & Br.  
*N. melaxantha* P. & S.

- Psammia* Rouss. & Sacc. Bull. Soc. Bot. Belg. 29:295 1891.
- Ramularia* Unger Exanthem. 169 1833; em. Sacc. *Michelia* 2:20 1880.
- Eriomycopsis* Speg. An. Mus. Nac. 3:13:429 1911; Syll. Fung. 22:1328 1913.
- Rotaea* Ces. Bot. Zeit. 9:180 1851.
- Septocylindrium* Bon. Handb. Myk. 35 1851; cf. Hoehn. Mitt. Bot. Hochs. Wien 4:102 1927.
- Trichoconis* Clem. Gen. Fung. 145, 176. 1909.
- Triposporina* Hoehn. Sitzb. Akad. Wien 121:410 1912.
- Varicosporium* Kegel Ber. Deut. Bot. Ges. 24:213 1906.
- P. bommeriae* R. & S.
- R. urticae* Ces.
- E. bonplandi* Speg.
- R. flava* Ces.
- S. septatum* Bon.
- T. caudata* (Ap. & Str.) Clem.
- T. uredinicola* Hoehn.
- V. elodeae* Keg.

## Hyalodictyae

- Coniodictyum* Har. & Pat. Bull. Soc. Myc. Fr. 25:13 1909.
- Hyalodema* Magnus Ber. Deut. Bot. Ges. 28:379 1910; Syll. Fung. 22:1330 1913.
- Stemphyliopsis* A. L. Smith Jour. Roy. Micr. Soc. 1901:617, ill.
- C. chevalieri* H. & P.
- H. evansi* Magn.
- S. heterospora* Smith

## Scolecosporae

- Cercospora* Sacc. *Michelia* 2:20 1880.
- C. persica* Sacc.

## Staurospora

- Aorate* Syd. Ann. Myc. 27:84, ill. 1929.
- Lemonniera* De Wild. Ann. Soc. Belg. Micr. 18:143 1894.
- Monogrammia* Stev. Trans. Ill. Acad. Sci. 10:202, ill. 1917.
- Pedilospora* Hoehn. Sitzb. Akad. Wien 111:1047 1902.
- Prismaria* Preuss Fung. Hoyersw. n. 86 1851.
- Stephanoma* Wallr. Fl. Crypt. 2:269 1833.
- Synthetospora* Morgan Bot. Gaz. 46:192 1892; Syll. Fung. 11:608 1895.
- Titaea* Sacc. Nuov. Giorn. Ital. 8:193 1876.
- Maxillospora* Hoehn. Sitzb. Akad. Wien 123:138 1914.
- Tetracladium* De Wild. Ann. Soc. Belg. Micr. 17:35, ill. 1893.
- Trinacrium* Riess Fres. Beitr. Myk. 42 1852.
- A. costaricana* Syd.
- L. aquatica* De Wild.
- M. iniconiae* Stev.
- P. parasitans* Hoehn.
- P. alba* Preuss
- S. strigosum* Wallr.
- S. electa* Morg.
- T. callispora* Sacc.
- M. maxilliformis* (Rostr.) Hoehn.
- T. marchalianum* De Wild.
- T. subtile* Riess

## Helicosporae

- Helicodendrum* Peyron. Nuov. Giorn. Ital. n. s. 25:460, ill. 1918.
- Helicodesmus* Linder Am. Jour. Bot. 12:267 1925.
- Helicomycetes* Link Obs. Myc. 1:19 1809.
- Helicoum* Morgan. Jour. Cinc. Soc. Nat. Hist. 15:49 1892.
- H. paradoxum* Peyron.
- H. albus* Linder
- H. roseus* Lk.
- H. sessile* Morg.

## Genera Incertae Sedis Vel Dubia

- Acaulium** Sopp Videns. Skrift. 1:42 1912. **A. nigrum** Sopp  
**Acrospira** Mont. Ann. Sci. Nat. 4:8:299 1857; Syll. Fung. 14:1056 1899. **A. crouani** Mont.  
**Andreaea** Palm & Jochems Dept. Proef. Medan-Sumatra Bull. 19:19, ill. 1923; name later changed to *Andreaeana* because of *Andreaea* Ehrh. 1778. **A. deliensis** P. & J.  
**Aposporella** Thaxt. Bot. Gaz. 69:11, ill. 1920. **A. elegans** Thaxt.  
**Corollium** Sopp Videns. Skrift. 1:33, 98, ill. 1912. **C. dermatophagum** Sopp  
**Dactylomyces** Sopp Videns. Skrift. 1:35 1912. **D. thermophilus** Sopp  
**Diploidium** Arnaud Ann. Epiphyt. 9:33 1923. **D. sweetiae** Arn.  
**Elaeodema** Syd. Ann. Myc. 20:64 1922. **E. cinnamomi** Syd.  
**Gemmophora** Schkorbatov Ber. Deut. Bot. Ges. 30:474 1912. **G. purpurascens** Schkor.  
**Grallomyces** Stev. Bot. Gaz. 65:245, ill. 1918. **G. portoricensis** Stev.  
**Helostroma** Pat. Bull. Soc. Myc. Fr. 18:52, ill. 1902; Syll. Fung. 18:630 1906. **H. album** Pat.  
**Heptasporium** Brefeld Unters. Myk. 15:111 1912. **H. gracile** Bref.  
**Hormisciopsis** Sumstine Mycologia 6:32, ill. 1914. **H. gelatinosa** Sumst.  
**Mauginiella** Cav. Rend. Accad. Linc. 6:1:67 1925. **M. scaettae** Cav.  
**Pericystis** Betts Ann. Bot. 26:798, ill. 1912; Syll. Fung. 24:10, 1331 1928. **P. alvei** Betts  
**Phacellula** Syd. Ann. Myc. 25:139 1927. **P. gouaniae** Syd.  
**Phyllocarbon** Lloyd Myc. Notes 65:1066 1921. **P. yasudai** Lloyd  
**Polymorphomyces** Coupin Rev. Gen. Bot. 26:248, ill. 1914. **P. bonnieri** Coupin  
**Sachsia** C. Bay. Ber. Deut. Bot. Ges. 12:90, ill. 1894. **S. albicans** Bay  
**Sarcinomyces** Lindner Mikr. Betriebs. Ed. 3:300 1901. **S. crustaceus** Lindn.  
**Sporoclema** Tiesenh. Arch. Hydr. Plankt. 7:302, ill. 1912. **S. piriforme** Tiesenh.  
**Vasculomyces** Ashby. Bull. Dept. Agr. Jamaica 2:151 1913. **V. xanthosomae** Ashby

## DEMATIACEAE

## Amerosporae

- Acremoniella** Sacc. Syll. Fung. 4:302 1886. **A. atra** (Corda) Sacc.  
**Acrodesmia** Syd. Ann. Myc. 24:424 1926. **A. cestri** Syd.  
**Acrospira** B. & Br. Ann. Nat. Hist. 3:7:449 1861. **A. mirabilis** B. & Br.  
**Acrotheca** Fkl. Symb. Myc. 380 1869. **A. caulium** Sacc.  
**Actinochaete** Ferro Nuov. Giorn. Ital. 14:232 1907. **A. arachnoidea** Ferro  
**Arthrimum** Kze. Myk. Heft. 1:9 1817. **A. caricicolum** Kze. & Schm.  
**Camptoum** Link Sp. Pl. Fung. 1:44 1824; Syll. Fung. 4:276 1886. **C. curvatum** (K. & S.) Lk.

- Pseudocampoum* Frag. & Cif. Bol. Espan. Hist. Nat. 25:453, ill. 1925.
- Aspergillopsis* Speg. An. Mus. Nac. 3:13:434 1911.
- Basisporium* Molliard Bull. Soc. Myc. Fr. 18:168 1902.
- Nigrospora* Zimm. Cent. Bakt. 2:8:220 1902; Syll. Fung. 18:571 1906.
- Phaeoconis* Clem. Gen. Fung. 148 1909.
- Botryotrichum* Sacc. & March. Bull. Soc. Bot. Belg. 24:66 1885.
- Cadophora* Lagerb. & Melin Sven. Skogs. Tids. 25:263, ill. 1927.
- Campotrichum* Ehrenb. Silv. Myc. Berol. 11 1818.
- Catenularia* Grove Syll. Fung. 4:303 1886.
- Cephalotrichum* Berk. Outl. 344 1860.
- Haplographium* B. & Br. Ann. Nat. Hist. 3:3:360 1859; Syll. Fung. 4:304 1886.
- Chaetopsis* Grev. Scot. Crypt. Fl. 4 t. 236 1826; em. Sacc. Michelia 2:26 1881.
- Monilochaetes* (E. & Hals.) Harter Jour. Agr. Res. 5:791, ill. 1916.
- Chalara* Corda Icon. Fung. 2:9 1838.
- Chalaropsis* Peyron. Staz. Sper. Agr. Ital. 49:595, ill. 1916.
- Chloridium* Link Obs. Myc. 1:11 1809.
- Circinotrichum* Nees Syst. Pilz. 19 1817.
- Cirromycés* Hoehn. Ann. Myc. 1:529 1903.
- Cladorhinum* Sacc. & March. Bull. Soc. Bot. Belg. 24:64 1885.
- Columnophora* Bub. & Vleug. Ann. Myc. 14:349, ill. 1916.
- Conioscypha* Hoehn. Ann. Myc. 2:58 1904.
- Coniosporium* Link Obs. Myc. 1:3 1809; em. Sacc. Michelia 2:21 1881.
- Constantinella* Matr. Rech. Dev. Muced. 1892:92, ill.
- Cordella* Speg. An. Soc. Arg. 22:210 1886.
- Cystodendrum* Bub. Ann. Myc. 12:212, ill. 1914.
- Cystophora* Rabh. Krypt. Fl. Deut. 75 1844.
- Dematium* Pers. Tent. Disp. 41 1797.
- Dictyochaeta* Speg. Physis 7:18, ill. 1923.
- Dicyma* Boul. Rev. Gen. Bot. 9:25, ill. 1897.
- Echinobotryum* Corda Anleit. 10 1842.
- Ellisiella* Sacc. Michelia 2:26 1881.
- Eriomene* Sacc. Syll. Fung. 4:326 1886, as subg.
- Fuckelina* Sacc. Nuov. Giorn. Bot. Ital. 7:326 1875.
- Fusella* Sacc. Syll. Fung. 4:246 1886.
- Glenspora* B. & C. Grevillea 4:161 1876.
- P. citri* F. & C.
- A. nigra* (van Tiegh.) Speg.
- B. gallarum* Moll.
- N. panici* Zimm.
- P. panici* (Zimm.) Clem.
- B. piluliferum* S. & M.
- C. fastigiata* L. & M.
- C. unicolor* Ehrenb.
- C. simplex* Grove
- C. curtum* Berk.
- H. delicatum* B. & Br.
- C. grisea* (Ehrenb.) Sacc.
- M. infuscans* (E. & H.) Hart.
- C. fusidioides* Corda
- C. thielavioides* Peyron.
- C. viride* Lk.
- C. maculiforme* Nees
- C. caudigerus* Hoehn.
- C. fecundissimum* S. & M.
- C. rhytmatis* Bub.
- C. lignicola* Hoehn.
- C. apiosporis* Sacc.
- C. cristata* Matr.
- C. spinulosa* Speg.
- C. dryophilum* (Pass.) Bub.
- C. craterioides* Rabh.
- C. hidpidulum* (Pers.) Fr.
- D. fuegiana* Speg.
- D. ampullifera* Boul.
- E. atrum* Corda
- E. caudatum* (Pk.) Sacc.
- E. ciliata* (Corda) Sacc.
- F. microspora* Sacc.
- F. patellata* (Bon.) Sacc.
- G. curtisi* B. & C.



- Rhopalocystis* Grove Jour. Econ. Biol. 6:40  
1911.
- Sarcopodium* Ehrenb. Silv. Myc. Berol. 12, 23  
1818.
- Scopularia* Preuss Linnaea 24:133 1851.
- Spondonema* Desm., em. Oud. Verh. Acad.  
Amsterdam 3:2:115, ill. 1885.
- Stachybotryella* Ell. & Barth. Jour. Myc.  
8:177 1902.
- Stachybotrys* Corda Anleit. 57 1842.
- Stachylidium* Link. Obs. Myc. 1:13 1809; em.  
Sacc. *Michelia* 2:27 1881.
- Stirochaete* A. Br. & Casp. Krank. Pfl. 28, ill.  
1853.
- Streptothrix* Corda Anleit. 43 1842.
- Synsporium* Preuss Linnaea 24:121 1851; cf.  
Hoehn. Frag. Myk. 789. 1912.
- Thielaviopsis* Went. De Anan. 4, ill. 1893.
- Torula* Pers. Syn. Fung. 693 1801; em. Sacc.  
*Michelia* 2:21 1881.
- Torulina* Sacc. & D. Sacc. Syll. Fung. 18:566  
1906.
- Torulopsis* Oud. Ned. Kruidk. Arch.  
3:12 1903; not Berl. 1894.
- Trichobotrys* Penz. & Sacc. *Malpighia* 15:245  
1901.
- Trichosporium* Fr. Sum. Veg. Scan. 492 1849.
- Urophiala* Vuill. Bull. Soc. Nancy 3:11:169,  
ill. 1910.
- Ustilaginodes* Bref. Unters. Myk. 12:195 1895.
- Verticicladium* Preuss Linnaea 24:127 1851.
- Virgaria* Nees Syst. Pilz. 54 1817.
- Dichotomella* Sacc. Ann. Myc. 12:312 1914.
- Zygodesmella* Fragoso Bol. Espan. Hist. Nat.  
17:260, ill. 1917.
- Zygodemus* Corda Icon. Fung. 1:11 1837.
- Zygosporium* Mont. Ann. Sci. Nat. 2:17:120  
1842.
- R. nigra* (van Tiegh.) Grove
- S. fuscum* (Corda) Sacc.
- S. venusta* Preuss
- S. terrestre* Oud.
- S. repens* E. & B.
- S. atra* Corda
- S. bicolor* Lk.
- S. malvarum* Br. & Casp.
- S. fusca* Corda
- S. biguttatum* Preuss
- T. ethacetica* Went.
- T. herbarum* Lk.
- T. serotinae* (Oud.) S. & D. S.
- T. serotinae* Oud.
- T. pannosa* P. & S.
- T. fuscum* (Lk.) Sacc.
- U. mycophila* Vuill.
- U. oryzae* Bref.
- V. trifidum* Preuss
- V. nigra* Nees
- D. areolata* Sacc.
- Z. casaresi* Frag.
- Z. fuscus* Corda
- Z. oescheoides* Mont.

## Didymosporae

- Arthrobotryella* Sibil. Bol. Staz. Pat. Rome  
8:448, ill. 1928.
- Asperisporium* Maubl. Lavoura; Bol. Soc.  
Agr. Rio Jan. 16:212 1913.
- Beltrania* Penz. Nuov. Giorn. Ital. 14:72 1882.
- Bispora* Corda. Icon. Fung. 1:9 1837.
- Cephalomyces* Bain. Bull. Soc. Myc. Fr.  
23:109 1907.
- Cladosporium* Link Sp. Pl. Fung. 1:39 1824.
- Cladotrichum* Corda Sturm Deut. Crypt. Fl.  
3:3:39, ill. 1831.
- Cordana* Preuss Linnaea 24:129 1851.
- Cycloconium* Cast. Cat. Pl. Marseilles 220, ill.  
1845.
- A. hernica* Sibil.
- A. caricae* (Speg.) Maubl.
- B. rhombica* Penz.
- B. monilioides* Corda
- C. nigricans* Bain.
- C. herbarum* (Pers.) Lk.
- C. polysporum* Corda
- C. pauciseptata* Preuss
- C. claeatinum* Cast.

- Dicoccum* Corda Sturm Deut. Crypt. Fl. 3:2:117, ill. 1829.
- Diplococcium* Grove Jour. Bot. 23:167 1885.
- Epochnium* Link Obs. Myc. 1:16 1809.
- Fusicladium* Bon. Handb. Myk. 80 1851; em. Sacc. *Michelia* 2:27 1881.
- Basiascum* Cav. Att. Ist. Pavia 2:1:433 1888; Syll. Fung. 10:474 1892.
- Didymariopsis* Speg. An. Mus. Nac. 3:13:424 1911; Syll. Fung. 22:1373 1913.
- Fusicladiella* Hoehn. Ber. Deut. Bot. Ges. 37:155 1919.
- Napicladium* Thuem. Hedwigia 14:3 1875; Syll. Fung. 4:481 1886.
- Passalora* Fr. & Mont. Ann. Sci. Nat. 2:6:31 1836; Syll. Fung. 4:344 1886.
- Gonyella* Syd. Ann. Myc. 17:44 1919.
- Arthrobotryum* Rostrup Dan. Bot. Arch. 2:46 1916; not Cesati 1854.
- Hadronema* Syd. Ann. Myc. 7:172 1909.
- Muchmorina* Sacc. Ann. Myc. 4:277 1906.
- Polythrincium* Kze. & Schm. Myk. Heft. 1:13 1817.
- Pseudobeltrania* Henn. Hedwigia 41:310 1902.
- Scolecobasis* Abbott Mycologia 19:30, ill. 1927; for *Scolecobasidium*.
- Scolecotrichum* Kze. & Schm. Myk. Heft. 1:10 1817.
- Trichocladium* Harz Hyphom. 38 1871.
- D. minutissimum* Corda
- D. spicatum* Grove
- E. monilioides* Lk.
- F. dendriticum* (Wallr.) Fkl.
- B. eriobotryae* Cav.
- D. cuphaeicola* Speg.
- F. aronici* (Sacc.) Hoehn.
- N. soraueri* Thuem.
- P. bacilligera* F. & M.
- G. typica* (Rostr.) Syd.
- A. typicum* Rostr.
- H. orbiculare* Syd.
- M. portoricensis* Sacc.
- P. trifolii* Kze.
- P. cedrelae* Henn.
- S. terrea* Abbott
- S. virescens* Kze.
- H. asperum* Harz

## Phragmosporae

- Acrothecium* Sacc. Syll. Fung. 4:483 1886.
- Pleurothecium* Hoehn. Ber. Deut. Bot. Ges. 37:154 1919.
- Sirospora* Mang. & Vinc. Bull. Soc. Myc. Fr. 36:96, ill. 1920; cf. Peyron. Ib.
- Atractina* Hoehn. Hedwigia 43:298 1904.
- Blodgettia* Wright Trans. Irish Acad. 28:25 1881.
- Brachysporium* Sacc. *Michelia* 2:28 1881.
- Camarosporium* Harkn. Bull. Calif. Acad. Sci. 1:37 1884.
- Ceratophorum* Sacc. *Michelia* 2:22 1881.
- Cercosporidium* Earle *Muhlenbergia* 1:16 1901.
- Camptomeris* Syd. Ann. Myc. 25:141 1927.
- Chaetotrichum* Syd. Ann. Myc. 25:150, ill. 1927.
- Chiropodium* Syd. Ann. Myc. 13:42 1915.
- Clasterosporium* Schw. Trans. Am. Phil. Soc. n. s. 4:300 1834; em. Sacc. *Michelia* 2:22 1881.
- A. bulbosum* Sacc.
- P. recurvatum* (Morg.) Hoehn.
- S. castaneae* M. & V.
- A. biseptata* Hoehn.
- B. borneti* Wright
- B. obovatum* (Berk.) Sacc.
- C. antennatum* Harkn.
- C. helicosporum* Sacc.
- C. helleri* Earle
- C. calliandrae* Syd.
- C. solani* Syd.
- C. flagellatum* Syd.
- C. caricinum* Schw.



- Napicladium* Sacc. Syll. Fung. 4:482 1886.  
*Phaneroconyelia* Hoehn. Ber. Deut. Bot. Ges. 37:157 1919.  
*Septoideum* Arnaud Ann. Epiphyt. 7:106 1921.  
*Dendryphiella* Bub. & Ran. Ann. Myc. 12:417 1914.  
*Dendryphium* Wallr. Fl. Crypt. 2:300 1833.  
*Ormathoidium* Syd. Ann. Myc. 26:138 1928.  
*Drepanospora* B. & C. Grevillea 3:105 1875; cf. Hoehn. Frag. Myk. 566. 1910.  
*Endophragma* Duvern. & Maire Bull. Soc. Myc. Fr. 36:88, ill. 1920.  
*Eriomenella* Peyron. Bull. Soc. Myc. Fr. 35:180, ill. 1919.  
*Excioconis* Plunk. Bishop Mus. Bull. 19:156, ill. 1925; for *Excioconidium*.  
*Fusariella* Sacc. Misc. Myc. 1:29 1884.  
*Helminthosporium* Link Berl. Mag. 3:10 1809; em. Sacc. Michelia 2:641 1881.  
*Heterosporium* Klotzsch Herb. Myc. 1:67 1832.  
*Hyphosoma* Syd. Ann. Myc. 22:315 1924.  
*Jainesia* Frag. & Cif. Bol. Espan. Hist. Nat. 25:514 1925.  
*Ophiotrichum* Fr. Sum. Veg. Scan. 503 1849.  
*Peyronelia* Cif. & Frag. Bol. Espan. Hist. Nat. 27:334, ill. 1927.  
*Polydesmus* Mont. Ann. Sci. Nat. 3:4:365 1845.  
*Rhynchomyces* Willk. Mikr. Feind. Wald. 87, ill. 1866; not Sacc. 1885.  
*Septonema* Corda Icon. Fung. 1:9 1837.  
*Pseudocercospora* Speg. An. Mus. Nac. 3:13:437 1911.  
*Spondylocladium* Mart. Fl. Crypt. Erlang. 355 1817.  
*Sporoschisma* B. & Br. Gard. Chron. 1847:540.  
*Stemphyliomma* Sacc. & Trav. Syll. Fung. 20:886 1911; 22:1394 1913.  
*Stemphyliopsis* Speg. Rev. Fac. Agron. 6:193 1910; not A. L. Smith 1901; Syll. Fung. 22:1394 1913.  
*Stigmaia* Sacc. Michelia 2:22 1881.  
*Urosporium* Fingerh. Linnaea 10:231 1836.
- N. brunaudi* Sacc.  
*P. fungorum* (Fr.) Hoehn.  
*S. clusiaceae* Arn.  
*D. interseminata* (B. & R.) Bub. & Ran.  
*D. comosum* Wallr.  
*O. styracis* Syd.  
*D. pannosa* B. & C.  
*E. mirabilis* D. & M.  
*E. tortuosa* (Corda) Peyron.  
*E. cibotti* Plunk.  
*F. viridi-atra* Sacc.  
*H. curvatum* Corda  
*H. ornithogali* Klotzsch  
*H. hypoxyloides* Syd.  
*J. meliolicola* F. & C.  
*O. phlomidis* Fr.  
*P. sirodesmis* C. & F.  
*P. elegans* D. & M.  
*R. violaceus* Willk.  
*S. secedens* Corda  
*P. spora-vitis* (Lev.) Speg.  
*S. fumosum* Mart.  
*S. mirabile* B. & Br.  
*S. valparadis* (Speg.) S. & T.  
*S. valparadis* Speg.  
*S. platani* (Fkl.) Sacc.  
*U. curvatum* Fingerh.

## Dictyosporae

- Alternaria* Nees Syst. Pilz. 2:72 1817.  
*Rhopalidium* Mont. & Fr. Ann. Sci. Nat. 2:6:30 1836; cf. Hoehn. Syst. Fung. Imp. 361 1923.  
*Coccosporium* Corda Sturm Deut. Crypt. Fl. 3:3:49, ill. 1831.
- A. tenuis* Nees  
*R. brassicae* M. & Fr.  
*C. maculiforme* Corda

- Coleodictys* Charles Phytopath. 19:1051, ill. 1929; for *Coleodictyospora*.
- Coniothecium* Corda Icon. Fung. 1:2 1837.
- Conotheciella* Speg. Physis 4:295 1919.
- Dactylosporium* Harz. Hyphom. 44 1871.
- Dictyosporium* Corda Weitw. Beitr. Nat. 1:87 1836; Icon. Fung. 2:6 1838.
- Fumago* Pers. Myc. Eur. 1:9 1822; cf. Speg. Physis 4:292 1918.
- Caldariomyces* Woronich. Ann. Myc. 24:264 1926.
- Macrosporium* Fr. Syst. Myc. 3:373 1832.
- Fusicladiopsis* Maire Bull. Soc. Bot. Fr. 53:187 1906.
- Mystrosporium* Corda Icon. Fung. 1:12 1837; Syll. Fung. 4:539 1886.
- Sirosporium* Bub. & Sereb. Hedwigia 52:273, ill. 1912.
- Thyrospora* Teh. & Dan. Phytopath. 15:718, ill. 1925.
- Oncopodium* Sacc. Ann. Myc. 2:19 1904.
- Sarcinella* Sacc. Fung. Ital. t. 126 1877; Michelia 2:31 1881.
- Septosporium* Corda Sturm Deut. Crypt. Fl. 3:3:33, ill. 1831.
- Sirodesmium* DeN. Mem. Accad. Sci. Torino 10:347 1849.
- Spira* Corda Icon. Fung. 1:9 1837.
- Sporodesmium* Link Sp. Pl. 2:120 1825.
- Stemphylium* Wallr. Fl. Crypt. 2:300 1833.
- Stigmella* Lev. Demid. Voy. 2:111, ill. 1842.
- Tetracoccosporis* Szabo Hedwigia 44:77, ill. 1905; for *Tetracoccosporium*.
- Tetraploa* B. & Br. Ann. Nat. Hist. 2:5:459 1850.
- Trichaegum* Corda Icon. Fung. 1:15 1837.
- Xenosporella* Hoehn. Cent. Bakt. 2:60:17 1923.
- Xenosporium* Penz. & Sacc. Malpighia 15:248 1901.
- C. *cubensis* Charles
- C. *effusum* Corda
- C. *phyllogena* (Desm.) Speg.
- D. *macropus* (Corda) Harz
- D. *elegans* Corda
- F. *vagens* Pers.
- C. *fumago* Woronich.
- F. *sarcinula* Berk.
- F. *conviva* Maire
- M. *stemphylium* Corda
- S. *antennaeforme* B. & S.
- T. *sarciniforme* T. & D.
- O. *antoniae* S. & D. S.
- S. *heterospora* Sacc.
- S. *atrum* Corda
- S. *granulosum* DeN.
- S. *toruloides* Corda
- S. *cellulosum* Sacc.
- S. *botryosum* Wallr.
- S. *dryina* (Corda) Lev.
- T. *paxiana* Szabo
- T. *aristata* B. & Br.
- T. *cladosporis* Corda
- X. *pleurococca* Hoehn.
- X. *mirabile* P. & S.

## Scolecosporae

- Casaresia* Frag. Bol. Espan. Hist. Nat. 20:112, ill. 1920.
- Cercospora* Fres. Beitr. Myk. 90 1863.
- Cercoseptoria* Petr. Ann. Myc. 23:69 1925; for
- Cercosporina* Speg. An. Mus. Nac. 3:13:424 1911; Syll. Fung. 22:1432 1913.
- Cercosporiopsis* Miura Fl. Manchur. 3:527 1928.
- Corynespora* Guessow Zeits. Pflanzenk. 16:10, ill. 1906; Syll. Fung. 22:1435 1913.
- C. *sphagnorum* Frag.
- C. *apii* Fres.
- C. *chamaesyceae* (S. & D.) Petr.
- C. *asparagicola* Speg.
- C. *menispermi* (E. & H.) Miura
- C. *mazei* Guessow

- Septoriopsis Stev. & Dalb. Mycologia 11:4,  
ill. 1919. S. chamaesyceae S. & D.  
Sporhelminthium Speg. Physis 4:292 1918. S. anomalum Speg.

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- Ceratosporium Schw. Trans. Am. Phil. Soc.  
n. s. 4:300, ill. 1834. C. fuscescens Schw.  
Desmidiospora Thaxt. Bot. Gaz. 16:203 1891. D. myrmecophila Thaxt.  
Hirundinaria Ces. Hedwigia 1:104, ill. 1856. H. mespili Ces.  
Teratosperma Syd. Ann. Myc. 7:172 1909. T. singulare Syd.  
Triposporium Corda Icon. Fung. 1:16 1837. T. elegans Corda  
Ceratosporella Hoehn. Ber. Deut. Bot. Ges.  
37:155 1919. C. elegans (Morg.) Hoehn.  
Tripospermum Speg. Physis 4:295 1918. T. acerinum (Syd.) Speg.

## Helicosporae

- Helicoma Corda Icon. Fung. 1:15, ill. 1837. H. muelleri Corda  
Helicopsis Karst. Rev. Myc. 11:96 1889. H. olivaceus Karst.  
Helicosporium Nees Syst. Pilz. 63 1817. H. vegetum Nees

## Genera Incertae Sedis Vel Dubia

- Harpagomyces Wilcz. Kosmos 36:314, ill.  
1911. H. lomnicki Wilcz.  
Hormonema Lagerb. & Melin Sven. Skogs.  
Tids. 25:233, ill. 1927. H. dematioides L. & M.  
Isthmospora Stev. Bot. Gaz. 65:244, ill. 1918. I. spinosa Stev.  
Leandria Rangel Bol. Agr. S. P. 16:324, ill.  
1915. L. momordicae Rang.  
Muiaria Thaxt. Bot. Gaz. 58:241, ill. 1914. M. gracilis Thaxt.  
Muigone Thaxt. Bot. Gaz. 58:239, ill. 1914. M. chromopteri Thaxt.  
Myceloderma Ducomet Rech. Dev. Champ.  
199, ill. 1907; Syll. Fung. 22:1372 1913. M. cuticulare Ducom.  
Mycobacillaria Naumov Mat. Mik. Fit. 1:26,  
ill. 1915. M. simplex Naumov  
Penomyces Giard Comp. Rend. 112:1519  
1891; Syll. Fung. 22:1372 1913. P. telarius Giard  
Phaeharziella Loubière Rech. Muced. Cas. 52,  
ill. 1924. P. heterospora Loub.  
Pseudofumago Br. & Far. Att. Inst. Pavia  
2:10:31, ill. 1906; Syll. Fung. 22:1379 1913. P. citri B. & F.  
Spirospora Mang. & Vinc. Bull. Soc. Myc. Fr.  
36:96, ill. 1920. S. castaneae M. & V.  
Wardomyces Brooks & Hansford Trans. Brit.  
Myc. Soc. 8:137 1923. W. anomala B. & H.

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## Mucedineae

## Amerosporae

- Aegerita Pers. Tent. Disp. 684 1797. A. candida Pers.  
Aegeritopsis Hoehn. Ann. Myc. 1:532 1903. A. nulliporoides Hoehn.  
Amphichaetella Hoehn. Sitzb. Akad. Wien  
125:92 1916. A. echinata (Kleb.) Hoehn.

- Amphichaete* Klebahn Myc. Cent. 4:17, ill. 1914; not McAlpine 1904.
- Beniowskia* Rac. Par. Alg. Pilz. Java 2:37 1900.
- Blennoria* Fr. Syst. Myc. 3:480 1832.
- Cephalodochium* Bon. Handb. Myk. 135 1851.
- Chaetospermum* Sacc. Syll. Fung. 10:706 1892.
- Coccospora* Wallr. Fl. Crypt. 2:176 1833.
- Allescheriella* Henn. Hedwigia 36:244 1897; Syll. Fung. 14:1075 1899.
- Bactridiopsis* Henn. Hedwigia 43:397 1904; Syll. Fung. 18:662 1906.
- Sphaerosporium* Schw. Syn. Am. Fung. 303; 1834; Syll. Fung. 4:664 1886.
- Collodochium* Hoehn. Sitzb. Akad. Wien 111:1029 1902.
- Cylindrocolla* Bon. Handb. Myk. 149 1851.
- Dacrymycella* Bizz. Att. Ist. Venet. 6:3:308 1885.
- Dacryodochium* Karst. Hedwigia 35:47 1896.
- Dendrodochium* Bon. Handb. Myk. 135 1851.
- Patouillardia* Roum. Rev. Myc. 7:177 1885; Syll. Fung. 4:677 1886; cf. Hoehn. Syst. Fung. Imp. 360 1923.
- Endoconidium* Prill. & Delacr. Bull. Soc. Myc. Fr. 7:116 1891.
- Fusicolla* Bon. Handb. Myk. 150 1851.
- Leptosporium* Sacc. Syll. Fung. 4:721 1886, as subg.; Hoehn. Syst. Fung. Imp. n. 436 1923.
- Granularia* Sacc. Michelia 2:648 1882.
- Guelichia* Speg. An. Soc. Arg. 22:220 1886.
- Haplariella* Syd. Ann. Myc. 6:497 1908.
- Haplariopsis* Henn. Hedwigia 48:114 1908; not Oud. 1903; cf. Hoehn. Syst. Fung. Imp. 359 1923.
- Hymenella* Fr. Syst. Myc. 2:234 1822.
- Hymenula* Fr. Syst. Myc. 2:233 1822.
- Illosporium* Mart. Fl. Crypt. Erl. 325 1817.
- Myxonema* Corda Icon. Fung. 1:10 1837; Syll. Fung. 10:714 1892; cf. Hoehn. Syst. Fung. Imp. 360 1923.
- Lachnodochium* March. Bull. Soc. Bot. Belg. 34:144 1895.
- Leucodochium* Syd. Ann. Myc. 15:266 1917.
- Menoidea* Mang. & Har. Bull. Soc. Myc. Fr. 23:67, ill. 1907.
- Microdochium* Syd. Ann. Myc. 22:267, ill. 1924.
- Necator* Masee Kew Bull. 1898:119.
- Neottiosporis* Hoehn. Syst. Fung. Imp. 345 1923; for *Neottiosporella*.
- A. *echinata* Kleb.
- B. *graminis* Rac.
- B. *buxi* Fr.
- C. *album* Bon.
- C. *tubercularis* Sacc.
- C. *aurantiaca* Wallr.
- A. *uredinoides* Henn.
- B. *ulei* Henn.
- S. *lignatile* Schw.
- C. *atroviole* Hoehn.
- C. *urticae* (Pers.) Bon.
- D. *fertilissima* Bizz.
- D. *fluxile* Karst.
- D. *aurantiacum* Bon.
- P. *lichenoides* Roum.
- E. *temulentum* P. & D.
- F. *betae* Bon.
- L. *salmonicolor* B. & C.
- G. *euotioides* S. & E.
- G. *paradoxa* Speg.
- H. *cordiae* (Henn.) Syd.
- H. *cordiae* Henn.
- H. *arundinis* Fr.
- H. *ciliata* Fr.
- I. *roseum* Mart.
- M. *assimile* Corda
- L. *candidum* March.
- L. *pipturi* Syd.
- M. *abietis* M. & F.
- M. *phragmitis* Syd.
- N. *decretus* Mass.

(no species given)

- Periopsis* Maire Ann. Myc. 11:357, ill. 1913.  
*Pleurocolla* Petr. Ann. Myc. 22:15 1924.  
*Psilonia* Fr. Syst. Orb. Veg. 1:187 1825;  
 Syst. Myc. 3:450 1831; Syll. Fung. 4:685  
 1886.  
*Ranojevicia* Bub. Ann. Myc. 8:400 1910.  
*Sigmatomyces* Sacc. & Syd. Ann. Myc. 11:319  
 1913.  
*Sirodochiella* Hoehn. Mitt. Bot. Hochs. Wien  
 2:67 1925.  
*Sphacelia* Lev. Mem. Soc. Linn. 5:578 1827.  
*Myrioconium* Syd. Ann. Myc. 10:449, ill.  
 1912; cf. Ferd. & Wing. Ann. Myc. 11:21  
 1913.  
*Sphaeridium* Fres. Beitr. Myk. 46 1852.  
*Sphaerocolla* Karst. Hedwigia 31:294 1892.  
*Thozetia* Berk. & Muell. Jour. Linn. Soc.  
 18:388 1881.  
*Thysanopyxis* Rabh. Abh. Nat. Ges. Halle  
 8:136 1864.  
*Trichofusarium* Bub. Bull. Herb. Boiss.  
 2:6:488 1906.  
*Tubercularia* Tode Fung. Meckl. 1:18 1790.  
*Tubercularis* Hoehn. Sitzb. Akad. Wien  
 118:421 1909; for *Tuberculariopsis*.  
*Tuberculina* Sacc. Michelia 2:34 1880.  
*Tuberculis* Hoehn. Zeit. Gär. 5:209 1914; for  
*Tuberculariella*.  
*Verticillis* Bub. Ann. Myc. 12:220, ill. 1914;  
 for *Verticillidochium tubercularioides*.  
*Volutella* Tode Fung. Meckl. 1:28 1790; em.  
 Sacc. Michelia 2:35 1880.  
*Volutellaria* Sacc. Michelia 2:580 1882, as  
 subg.; Syll. Fung. 4:682 1886.  
*Volutina* Penz. & Sacc. Malpighia 15:257  
 1901.
- P. helicochaeta* Maire  
*P. tiliae* Petr.  
  
*P. gilva* Fr.  
*R. vagans* Ran. & Bub.  
  
*S. bakeri* S. & S.  
  
*S. rhodella* Hoehn.  
*S. segetum* Lev.  
  
*M. scirpi* Syd.  
*S. vitellinum* Fres.  
*S. aurantiaca* Karst.  
  
*T. nivea* Berk.  
  
*T. pulchella* Ces.  
  
*T. rusci* (Sacc.) Bub.  
*T. vulgaris* Tode  
  
*T. anomala* Hoehn.  
*T. persicina* (Ditm.) Sacc.  
  
*T. sanguinea* (Fkl.) Hoehn.  
  
*V. tuberculis* (Speg.) Bub.  
  
*V. ciliata* (A. & S.) Fr.  
  
*V. acaroides* Sacc.  
  
*V. concentrica* P. & S.

## Didymosporae

- Cosmariospora* Sacc. Michelia 2:44 1880.  
*Dithozetia* Rangel Bol. Agr. S. P. 16:325, ill.  
 1915; for *Didymothozetia*.  
*Endodesmia* B. & Br. Ann. Nat. Hist. 4:7:432  
 1874.  
*Fusisporella* Speg. An. Mus. Nac. 3:13:454  
 1911.  
*Gymnodochium* Mass. & Salm. Ann. Bot.  
 16:89 1902.  
*Leptotrichum* Corda Icon. Fung. 5:51 1842.  
*Patouillardella* Speg. Bol. Acad. Cordoba  
 11:381 1889.  
*Auerswaldiopsis* Henn. Hedwigia 43:143  
 1904.
- C. bizzozzeriana* Sacc.  
  
*D. mimosensis* Rangel  
  
*E. glauca* B. & Br.  
  
*F. bufonis* Speg.  
  
*G. fimicolum* M. & S.  
*L. glaucum* Corda  
  
*P. guaranítica* Speg.  
  
*A. quercicola* Henn.

## Phragmosporae

- Bactridium* Kze. Myk. Heft. 1:5 1817.      B. *flavum* Kze. & Schm.  
*Bactridiopsis* Frag. & Cif. Bol. Soc. Nat.  
 Hist. Madrid 27:330, ill. 1927; not Henn.  
 1904.      B. *crescentiae* F. & C.  
*Discocolla* Prill. & Delacr. Bull. Soc. Myc.  
 Fr. 10:86 1894.      D. *pirina* P. & D.  
*Fusarium* Link Berl. Mag. 3:10 1809.      F. *roseum* Lk.  
*Discofusarium* Petch Trans. Brit. Myc. Soc.  
 7:164 1921.      D. *tasmaniense* (McAlp.) Petch  
*Microcera* Desm. Ann. Sci. Nat. 3:10:359  
 1848.      M. *coccophila* Desm.  
*Phragmodochium* Hoehn. Bull. Bot. Buit-  
 enz. 3:6:6 1924.      P. *modestum* Hoehn.  
*Pionnotes* Fr. Sum. Veg. Scan. 481 1849.      P. *capitata* (Schw.) Fr.  
*Pseudomicrocera* Petch Trans. Brit. Myc.  
 Soc. 7:164 1921.      P. *henningsi* Petch  
*Rachisia* Lindner Deut. Essigind. 17:467, ill.  
 1913.      R. *spiralis* Lindner  
*Septorella* Allesch. Hedwigia 36:241 1897.      S. *salaciae* Allesch.  
*Heliscus* Sacc. Michelia 2:35 1880.      H. *lugdunensis* S. & T.  
*Volutellopsis* Speg. Rev. Fac. Agron. 6:197  
 1910.      V. *chilensis* Speg.  
*Xenogloea* Syd. Ann. Myc. 17:44 1919.      X. *eriophori* (Bres.) Syd.  
*Kriegeria* Bres. Rev. Myc. 13:14 1891; not  
 Winter 1878.      K. *eriophori* Bres.

## Dictyosporae

- Sarcinodochium* Hoehn. Oest. Bot. Zeits.  
 55:15 1905.      S. *heterosporium* Hoehn.  
*Sporocystis* Morgan Jour. Myc. 8:169 1902.      S. *condita* Morg.

## Scolecosporae

- Kmetia* Bres. & Sacc. Syll. Fung. 16:1158  
 1902.      K. *exigua* B. & S.  
*Linodochium* Hoehn. Sitzb. Akad. Wien  
 118:1239 1909.      L. *hyalinum* (Lib.) Hoehn.

## Staurosporae

- Amallospora* Penz. Malpighia 11:461 1897.      A. *dacrydia* P.  
*Araneomyces* Hoehn. Sitzb. Akad. Wien  
 118:894 1909.      A. *acariferus* Hoehn.  
*Dicranidium* Harkn. Bull. Calif. Acad. Sci.  
 1:163 1885.      D. *fragile* Harkn.  
*Tetracium* Henn. Hedwigia 41:116 1902.      T. *aurantii* Henn.  
*Triglyphium* Fres. Beitr. Myk. 44 1852.      T. *album* Fres.

## Helicosporae

- Delortia* Pat. & Gaill. Bull. Soc. Myc. Fr.  
 4:43:1888; cf. Killermann 108.      D. *palmicola* Pat.  
*Drepanoconis* Schroet. & Henn. Hedwigia  
 35:211 1896.      D. *larvaeformis* Speg.  
*Hobsonia* Berk. Ann. Bot. 5:509, ill. 1891.      H. *gigaspora* Berk.

- Lituarina* Riess Bot. Zeit. 11:136 1853. *L. stigmatea* Riess  
*Troposporium* Harkn. Bull. Calif. Acad. Sci. 1:39 1884. *T. album* Harkn.

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## Amerosporae

- Actinodochium* Syd. Ann. Myc. 25:146, ill. 1927. *A. concinnum* Syd.  
*Agyriella* Sacc. Misc. Myc. 1:20 1884. *A. nitida* (Lib.) Sacc.  
*Amerosporis* Hoehn. Syst. Fung. Imp. 348 1923; for *Amerosporiella*. (no species given)  
*Arthrinium* Kze. Myk. Heft. 1:9 1817; cf. Hoehn. Syst. Fung. Imp. pp. 358-62 1923. for the following synonyms.  
*Camptoum* Link Sp. Pl. Fung. 1:44 1824. *A. caricolum* Kze. & Schm.  
*Goniosporium* Link Sp. Pl. Fung. 1:45 1824. *C. curvatum* (K. & S.) Lk.  
*Astrodochium* Ell. & Ev. Am. Nat. 31:430 1897. *G. puccinioides* (K. & S.) Lk.  
*Bonplandiella* Speg. An. Soc. Arg. 22:222 1886. *A. coloradense* E. & E.  
*Chaetosira* Clem.; for *B. guaranitica* Speg.  
*Wiesneriomyces* Koord. Verh. Akad. Amsterdam 2:13:246, ill. 1907. *C. javanica* (Koord.) Clem.  
*Chaetostroma* Corda Sturm Deut. Crypt. Fl. 2:122 1829. *W. javanicus* Koord.  
*Epicoccum* Link Obs. Myc. 2:32 1816. *C. atrum* Sacc.  
*Exosporina* Oud. Kon. Akad. Amsterdam 6:498 1904. *E. nigrum* Lk.  
*Hadrotrichum* Fkl. Symb. Myc. 221 1869; Hoehn. Syst. Fung. Imp. 349 1923. *E. laricis* Oud.  
*Microbasidium* Bub. & Ran. Ann. Myc. 12:415, ill. 1914; cf. Hoehn. Syst. Fung. Imp. 360 1923. *H. phragmitis* Fkl.  
*Hymenobactrum* Sacc. Syll. Fung. 4:747 1886, as subg.; Hoehn. Syst. Fung. Imp. 342 1923. *M. sorghi* (Passer.) Bub. & Ran.  
*Mapea* Pat. Bull. Soc. Myc. Fr. 22:46 1906. *H. desmazieri* (Cast.) Sacc.  
*Melanobasis* Maubl. Bull. Soc. Myc. Fr. 22:69 1906; for *Melanobasidium*. *M. radiata* Pat.  
*Melanodiscus* Hoehn. Ber. Deut. Bot. Ges. 36:309 1918. *M. mali* Maubl.  
*Myrotheciella* Speg. An. Mus. Nac. 3:13:460 1911. *M. nervisequius* Hoehn.  
*Myrothecium* Tode Fung. Meckl. 1:25 1790. *M. catenuligera* Speg.  
*Exotrichum* Syd. Ann. Myc. 12:571 1914; cf. Hoehn. Mitt. Bot. Hochs. Wien 2:95 1925. *M. roridum* Tode  
*Papularia* Fr. Syst. Orb. Veg. 1:195 1825. *E. leucomelas* Syd.  
*Periola* Fr. Syst. Myc. 2:266 1822; cf. Hoehn. Mitt. Bot. Hochs. Wien 3:1 1926. *P. fagi* Fr.  
*Gliocladochium* Hoehn. Mitt. Bot. Hochs. Wien 3:4 1926. *P. tomentosa* Fr.  
*G. tomentosum* (Fr.) Hoehn.

- Sclerococcum* Fr. Syst. Orb. Veg. 1:172 1825. *S. sphaerale* Fr.  
*Sclerodiscus* Pat. Jour. de Bot. 4:66 1890. *S. nitens* Pat.  
*Sphaeromyces* Mont. Ann. Sci. Nat. 3:4:365  
 1845. *S. algeriensis* D. & M.  
*Spilodochium* Syd. Ann. Myc. 25:158 1927. *S. vernoniae* Syd.  
*Spilomium* Nyl. Prod. Lich. Gall. 91 1856. *S. siliceum* (Fee) Nyl.  
*Strumella* Sacc. Michelia 2:36 1880. *S. olivatra* Sacc.  
*Strumellopsis* Hoehn. Sitzb. Akad. Wien  
 118:896 1909. *S. annularis* (Rac.) Hoehn.  
*Tripliplicaria* Karst. Hedwigia 28:195 1889. *T. hypoxyloides* Karst.  
*Xiphomyces* Syd. Ann. Myc. 14:374 1916. *X. sacchari* Syd.

## Didymosporae

- Anomomyces* Hoehn. Ber. Bot. Deut. Ges.  
 37:153 1919; Mitt. Bot. Hochs. Wien 5:90  
 1928. *A. arbuticolus* (Sow.) Hoehn.  
*Epiclinium* Fr. Sum. Veg. Scan. 475 1849. *E. pezizoideum* (Schw.) Fr.  
*Erysiphopsis* Speg. An Mus. Nac. 20:462  
 1910. *E. myrothecis* Speg.  
*Pucciniopsis* Speg. An. Soc. Arg. 26:2:74  
 1888. *P. guaranitica* Speg.  
*Trichodochium* Syd. Ann. Myc. 25:159 1927. *T. disseminatum* Syd.

## Phragmosporae

- Acrotheciella* Koord. Verh. Akad. Amsterdam  
 2:13:250, ill. 1907. *A. javanica* Koord.  
*Ciliofusa* Rostr. Bot. Tidskr. 18:77 1892; for  
*Ciliofusarium*. *C. umbrosa* Rostr.  
*Cryptocoryneum* Fkl. Symb. Myc. 372 1869. *C. fasciculatum* Fkl.  
*Cylomyces* Clem.; for *C. insignis* (P. & S.) Clem.  
*Listeromyces* Penz. & Sacc. Malpighia  
 15:258 1901. *L. insignis* P. & S.  
*Excipularia* Sacc. Syll. Fung. 3:689 1884; cf.  
 Hoehn. Ann. Myc. 2:52 1904. *E. fuispora* (B. & Br.) Sacc.  
*Exosporium* Link. Berl. Mag. 3:9 1809. *E. tiliae* Lk.  
*Exosporina* Arnaud. Ann. Epiphyt. 7:46, 105  
 1921; not *Exosporina* Oud. 1904. *E. manaosensis* Arn.  
*Marcosia* Syd. Ann. Myc. 14:96 1916. *M. ulei* Syd.  
*Thyrostromella* Syd. Ann. Myc. 22:406  
 1924. *T. trimera* (Sacc.) Syd.  
*Trimmatostroma* Corda. Icon. Fung. 1:9 1837. *T. salicis* Corda

## Dictyosporae

- Bonordeniella* Penz. & Sacc. Malpighia 15:259  
 1901. *B. memoranda* P. & S.  
*Cerebella* Ces. Bot. Zeit. 9:669 1851. *C. andropogonis* Ces.  
*Chaetostromella* Karst. Hedwigia 34:8 1895. *C. tiliae* Karst.  
*Clathrococcum* Hoehn. Sitzb. Akad. Wien  
 120:473 1911. *C. compactum* (B. & C.) Hoehn.  
*Myriophysella* Speg. Rev. Fac. Agron. 6:198  
 1910. *M. chilensis* Speg.  
*Petrakia* Syd. Ann. Myc. 11:406, ill. 1913. *P. echinata* (Pegl.) Syd.



- Tetrachia** Sacc. Bull. Ort. Bot. Napoli 6:65  
1921. T. singularis Sacc.
- Thyrodochium** Werd. Ann. Myc. 22:168, ill.  
1924. T. dracaenae Werd.
- Thyrostroma** Hoehn. Sitzb. Akad. Wien  
120:472 1911. T. compactum (Sacc.) Hoehn.

## Scolecosporae

- Exosporella** Hoehn. Sitzb. Akad. Wien  
121:414 1912. E. symploci Hoehn.
- Schizotrichum** McAlpine Proc. Linn. Soc. N.  
S. Wales 28:562 1903. S. lobeliae McAlp.

## Staurosporae

- Chelisporium** Speg. An. Mus. Nac. 3:13:463  
1911. C. hysterioides Speg.
- Chiromycella** Hoehn. Sitzb. Akad. Wien  
119:664 1910. C. spiroidea Hoehn.
- Chiromyces** B. & C. Intr. Bot. Crypt. 313, ill.  
1857. C. stellatus B. & C.
- Fumagopsis** Speg. An. Mus. Nac. 3:13:464  
1911. F. triglifoides Speg.
- Spegazzinia** Sacc. Michelia 2:37 1880; em.  
Overeem Bull. Bot. Buitenz. 3:5:287, ill.  
1923. S. ornata Sacc.

## Helicosporae

- Everhartia** Sacc. & Ell. Michelia 2:580 1882. E. hymenuloides S. & E.
- Tropospora** Karst. Hedwigia 31:299 1892. T. fumosa Karst.

## Genera Incertae Sedis Vel Dubia

- Bizzozzeriella** Speg. An. Soc. Arg. 26:2:73  
1888; Syll. Fung. 4:716 1886; cf. Hoehn.  
Syst. Fung. Imp. 358 1923. B. phyllogena Speg.
- Cylindrocarpum** Wollenw. Phytopathology  
3:225, ill. 1913. C. cylindroides Wollenw.
- Diaphanium** Fr. Fl. Scan. 307 1835; Syll.  
Fung. 4:672 1886; cf. Hoehn. l. c. 359  
1923. D. maximum Fr.
- Epidochiopsis** Karst. Hedwigia 31:294 1892;  
Syll. Fung. 11:648 1895; cf. Hoehn. l. c.  
359 1923. E. atrovirens Karst.
- Epidochium** Fr. Sum. Veg. Scan. 471 1849;  
Syll. Fung. 4:747 1886; cf. Hoehn. l. c. 351  
1923. E. atrovirens Fr.
- Jaczewskiella** Murash. Mat. Mik. Fit. 5:3, ill.  
1926. J. altajensis Mur.
- Miriophysa** Fr. Sum. Veg. Scan. 481 1849;  
Syll. Fung. 4:742 1886; cf. Hoehn. l. c. 360  
1923. M. atra Fr.
- Pactilia** Fr. Fl. Scan. 363 1835; Syll. Fung.  
4:672 1886; cf. Hoehn. l. c. 360 1923. P. mycophila M. & Fr.

- Pseudopolystigma* Murash. Trans. Siber. Inst. 9:235, ill. 1928.
- Scoriomyces* Ell. & Sacc. Misc. Myc. 2:18 1884; Syll. Fung. 4:680 1886; cf. Hoehn. l. c. 361 1923.
- Spermodermia* Tode Fung. Meckl. 1:1 1790; Syll. Fung. 4:742 1886; cf. Hoehn. l. c. 362 1923.
- Stigmatella* B. & C. Intr. Bot. Crypt. 313, ill. 1857; Syll. Fung. 4:679 1886; cf. Hoehn. l. c. 362 1923.
- Thelospora* Harkn. Bull. Calif. Acad. Sci. 1:41 1884; Syll. Fung. 4:679 1886; cf. Hoehn. l. c. 362 1923.
- Trichostroma* Corda Sturm Deut. Crypt. Fl. 3:2:131, ill. 1829; Syll. Fung. 4:752 1886; cf. Hoehn. l. c. 362 1923.
- Trichotheca* Karst. Symb. Myc. 20:101 1887; Syll. Fung. 4:4:714 1886; cf. Hoehn. l. c. 362 1923.
- P. spiraeicola* Mur.
- S. cragini* Ell.
- S. clandestina* Tode
- S. aurantiaca* B. & C
- T. bifida* Harkn.
- T. purpurascens* Corda
- T. alba* Karst.

## STILBACEAE

## Hyalostilbeae

## Amerosporae

- Actiniceps* B. & Br. Jour. Linn. Soc. 15:85 1877.
- Alphitomyces* Riessek Sitzb. Akad. Wien 21:326, ill. 1856.
- Articulus* Hoehn. Sitzb. Akad. Wien 118:410 1909; for *Articulariella*.
- Atractiella* Sacc. Fung. Gall. 5:8. Att. Ist. Venet. 6:1:1280 1883.
- Ciliciopus* Corda Sturm Deut. Crypt. Fl. 3:3:57 1831; em. Sacc. *Michelia* 2:562 1882; for *Ciliciopodium*.
- Clavularia* Karst. Symb. Myc. 9:67 1883; Syll. Fung. 10:686 1892.
- Clathrotrichum* Pat. Bull. Soc. Myc. Fr. 37:35, ill. 1921.
- Corallo dendrum* Jungh. Praem. Fl. Bot. 7 1838.
- Coremiella* Bub. & Krieg. Ann. Myc. 10:52 1912.
- Heydeniopsis* Naumov Mat. Mik. Fit. 1:25 1915.
- Coremium* Link Sp. Pl. Fung. 71 1824.
- Pritzeliella* Henn. Hedwigia 42:88 1903; Syll. Fung. 18:644 1906.
- Dendrostilbella* Hoehn. Oest. Bot. Zeits. 55:22 1905.
- Gibellula* Cavara Att. Ist. Pavia 2:3:347 1894.
- A. thwaitesi* B. & Br.
- A. schrötteri* Ries.
- A. aurantiaca* (E. & M.) Hoehn.
- A. brunaudiana* Sacc.
- C. sanguineus* Corda
- C. fuispora* Karst.
- C. subcarneum* Pat.
- C. leucocephalum* Jungh.
- C. cystopoides* B. & K.
- H. ingraca* Naumov
- C. glaucum* Fr.
- P. caerulea* Henn.
- D. prasinula* Hoehn.
- G. pulchra* (Sacc.) Cav.

- Heterocephalum* Thaxt. Bot. Gaz. 35:157 1903.  
*Isaria* Pers. Tent. Disp. 41 1797.  
*Macrostilbum* Pat. Bull. Soc. Myc. Fr. 14:197 1898.  
*Martindalia* Sacc. & Ell. Misc. Myc. 2:16 1884.  
*Microspatha* Karst. Rev. Myc. 11:207 1889.  
*Pirobasidium* Hoehn. Sitzb. Akad. Wien 111:1001 1902.  
*Rhombostilbella* Zimm. Cent. Bakt. 2:8:221 1909.  
*Stilbum* Tode Fung. Meckl. 1:10 1790; em. Sacc. Michelia 2:32. 1880.  
*Stilbella* Lindau Nat. Pflanzenf. 1:1:489 1900.  
*Stilbella* Syd. Bull. Herb. Boiss. 2:1:85 1901; Syll. Fung. 16:1083 1902.  
*Tilachlidium* Preuss Linnaea 24:126 1851.  
*Trichosterigma* Petch Trans. Brit. Myc. Soc. 8:215 1923.
- H. aurantiacum* Thaxt.  
*I. farinosa* (Dicks.) Fr.  
*M. radicosum* Pat.  
*M. spironema* S. & E.  
*M. glauca* Karst.  
*P. sarcoides* (Jacq.) Hoehn.  
*R. rosea* Zimm.  
*S. cinnabarinum* Mont.  
*S. erythrocephala* (Ditm.) Lind.  
*S. rubescens* Syd.  
*T. pinnatum* Preuss  
*T. clavisorum* Petch

## Didymosporae

- Actinostilbe* Petch Ann. Bot. Gard. Peradeniya 9:327 1925.  
*Didymobotrys* Henn. Hedwigia 41:149 1902; for *Didymobotryopsis*.  
*Didymostilbe* Henn. Hedwigia 41:148 1902.  
*Hartiella* Masee Bull. Misc. Inform. Kew 1910:5; Syll. Fung. 22:1446 1913.
- A. vanillae* Petch  
*D. parasitica* Henn.  
*D. coffeae* Henn.  
*H. coccinea* Mass.

## Phragmosporae

- Atractium* Link Berl. Mag. 3:10 1809.  
*Arthrosporium* Sacc. Michelia 2:32 1880; Syll. Fung. 4:598 1886.  
*Stilbomyces* Ell. & Ev. Proc. Acad. Phil. 1895:441. 1896.  
*Symphyosira* Preuss Linnaea 25:742 1852.  
*Atractilina* Dearn. & Barth. Mycologia 16:175 1924.
- A. micropus* (Pers.) Sacc.  
*A. albicans* Sacc.  
*S. berenice* E. & E.  
*S. lutea* Preuss  
*A. callicarpae* D. & B.

## Helicosporae

- Helicostilbe* Hoehn. Sitzb. Akad. Wien 111:1028 1902.
- H. simplex* Petch

## Phaeostilbeae

## Amerosporae

- Antromycopsis* Pat. & Trab. Bull. Soc. Myc. Fr. 13:215, ill. 1897.  
*Basidiella* Cke. Grevillea 6:118 1878.  
*Briosia* Cavara Att. Ist. Pavia 2:1:321 1888.  
*Ceratocladium* Corda Prachtfl. 41 1839.
- A. broussonetiae* P. & T.  
*B. sphaerocarpa* Cke.  
*B. ampelophaga* Cav.  
*C. microspermum* Corda

- Cladographium** Peyron. Nuov. Giorn. Ital. 25:439, ill. 1918.
- Coelographium** (Sacc.) Gäumann Bull. Jard. Buitenz. 3:2:13, ill. 1920.
- Crinula** Fr. Syst. Myc. 1:493 1821.
- Graphiopsis** Bainier Bull. Soc. Myc. Fr. 23:19, ill. 1907.
- Phaeisaria** Hoehn. Sitzb. Akad. Wien 18:330 1909.
- Graphiothecium** Fkl. Symb. Myc. 366 1869.
- Stromatostysanus** Hoehn. Ber. Deut. Bot. Ges. 37:153 1919.
- Graphium** Corda Icon. Fung. 1:18, ill. 1837.
- Phaeostilbella** Hoehn. Mitt. Bot. Hochs. Wien 2:71 1925.
- Harpographium** Sacc. Michelia 2:33 1880.
- Melanographium** Sacc. Ann. Myc. 11:557 1913.
- Pycnostysanus** Lindau Abh. Bot. Brandenb. 45:160, ill. 1903.
- Stysanopsis** Ferraris Ann. Myc. 7:281 1909; Syll. Fung. 22:1454 1913.
- Saccardaea** Cavara Att. Ist. Bot. Pavia 2:3:346 1894.
- Sarophorum** Syd. Engler Bot. Jahrb. 54:360, ill. 1916.
- Sporocybe** Fr. Syst. Orb. Veg. 1:170 1825; em. Bon. Handb. Myk. 138 1851.
- Sporostachys** Sacc. Att. Accad. Ven-Trent. 3:10:92 1919.
- Stemmaria** Preuss Linnaea 24:137 1851.
- Stilbochalara** Ferd. & Wing. Bot. Tids. 30:220 1910.
- Stilbodendrum** Syd. Ann. Myc. 14:260, ill. 1916.
- Stilbothamnium** Henn. Engler Bot. Jahrb. 23:542 1897.
- Stromatographium** Hoehn. Denk. Akad. Wien 83:37 1907.
- Stysanus** Corda Icon. Fung. 1:21 1837.
- Capnostysanus** Speg. Physis 4:295 1918.
- Synnematium** Speare Mycologia 12:74, ill. 1920.
- Tilachliidiopsis** Keissler Ann. Nat. Mus. Wien 37:215, ill. 1924.
- Trichurus** Clem. & Shear Bot. Surv. Neb. 4:7 1896.
- C. rivulorum** Peyron.
- C. caviceps** (Oud.) Sacc.
- C. caliciformis** Fr.
- G. cornui** Bain.
- P. sacchari** (Speg.) Hoehn.
- G. freseni** Fkl.
- S. caprifoliorum** (Desm.) Hoehn.
- G. penicillis** Corda
- P. atra** (Desm.) Hoehn.
- H. fasciculatum** Sacc.
- M. pleniosporum** Sacc.
- P. resinae** (Fr.) Lind.
- S. media** (Sacc.) Ferr.
- S. echinocephala** Cav.
- S. ledermanni** Syd.
- S. byssoides** (Pers.) Bon.
- S. maxima** Sacc.
- S. globosa** Preuss
- S. dimorpha** F. & W.
- S. camerunense** Syd.
- S. togoense** Henn.
- S. stromaticum** (Berk.) Hoehn.
- S. stemonites** (Pers.) Corda
- C. stysanophorus** (P. & S.) Speg
- S. jonesi** Speare
- T. racemosa** Keissl.
- T. cylindricus** Clem. & Shear

## Didymosporae

- Antromyces** Fres. Beitr. Myk. 37 1850.
- Didymobotryum** Sacc. Syll. Fung. 4:626 1886.
- Hoehneliella** Bres. & Sacc. Verh. z-b. Ges. Wien 52:437. 1902.
- A. copridis** Fres.
- D. pubescens** (C. & E.) Sacc.
- H. perplexa** B. & S.

## Phragmosporae

- Arthrobotryum* Ces. Hedwigia 1: pl. 4, fig. 1  
1854.
- Lindauomyces* Koord. Verh. Akad. Amster.  
13:240. ill. 1907.
- Calostilbella* Hoehn. Ber. Deut. Bot. Ges.  
37:160 1919.
- Dendrographium* Masee Grevillea 21:5 1892.
- Isariopsis* Fr. Sacc. Michelia 2:33 1880.
- Phaeisariopsis* Ferraris Ann. Myc. 7:280  
1909; Syll. Fung. 22:1456 1913.
- Podosporiella* Ell. & Ev. Proc. Acad. Sci.  
Phil. 1894:385 1895.
- Podosporium* Schw. Syn. Fung. Am. Bor. n.  
2609 1834.
- A. *stilboideum* Ces.
- L. *javanicus* Koord.
- C. *calostilbe* Hoehn.
- D. *atrum* Mass.
- I. *griseola* Sacc.
- P. *griseola* (Sacc.) Ferr.
- P. *humilis* E. & E.
- P. *rigidum* Schw.

## Dictyosporae

- Hermatomyces* Speg. An. Mus. Nac. 3:13:446  
1911.
- Negeriella* Henn. Hedwigia 36:244 1897.
- Sclerographium* Berk. Hook Lond. Jour. Bot.  
6:209 1854.
- H. *tucumanensis* Speg.
- N. *chilensis* Henn.
- S. *aterrimum* Berk.

## Staurosporae

- Riessia* Fres. Beitr. Myk. 74 1852.
- R. *semiophora* Fres.

## Genera Incertae Sedis Vel Dubia

- Cladosterigma* Pat. Bull. Soc. Myc. Fr. 8:138  
1892; Syll. Fung. 11:640 1895.
- Harpocephalum* Atkin. Bull. Cornell Univ.  
3:41 1897; Syll. Fung. 14:1111 1899.
- Heydenia* Fres. Beitr. Myk. 47 1852; cf.  
Hoehn. Syst. Fung. Imp. 359, 320 1923.
- Riccoa* Cav. Ann. Myc. 1:44, ill. 1903; cf.  
Hoehn. Syst. Fung. Imp. 361 1923.
- Isariella* Henn. Hedwigia 48:19 1909.
- Mycovellosiella* Rangel Arch. Jard. Bot. Rio  
Jan. 2:71 1917.
- Vellosiella* Rangel Bol. Agr. S. P. 16:151,  
ill. 1915; not *Velloziella* Baill. 1886.
- Peribotryum* Fr. Syst. Myc. 3:287 1832; Syll.  
Fung. 4:596 1886.
- Pseudogaster* Hoehn. Denk. Akad. Wien  
83:38 1907; Syll. Fung. 22:1457 1913.
- Xylocladium* Syd. Lindau Nat. Pflanzenf.  
1:1:494 1900; Syll. Fung. 16:1089 1902.
- C. *fusisporum* Pat.
- H. *dematioides* Atkin.
- H. *alpina* Fres.
- R. *aetensis* Cav.
- I. *auerswaldiae* Henn.
- M. *cajani* (Henn.) Rang.
- V. *cajani* (Henn.) Rang.
- P. *pavoni* Fr.
- P. *singularis* Hoehn.
- X. *clautriavi* (Pat.) Syd.

## Dermophyta

- Achorium* Remak Diag. Path. Unters. 193  
1845.
- Bodinia* Ota & Lang. Ann. Paras. Hum.  
Comp. 1:330 1923.
- A. *schoenleini* Remak
- B. *violacea* (Bodin) O. & L.

- Grubyella* Ota & Lang. Ann. Paras. Hum. Comp. 1:330 1923.
- Epidermophyllum* Lang. Viertj. Derm. Syph. 6:255 1879; for *Epidermidophyton*.
- Malassezia* Baill. Trait. Bot. Med. Crypt. 234 1889.
- Microsporum* Gruby Comp. Rend. 17:301 1843.
- Closteraleurosporia* Grigor. Comp. Rend. 179:1424 1924.
- Closterosporia* Grigor. Comp. Rend. 179:1424 1924.
- Lophophyllum* Matr. & Dass. Rev. Gen. Bot. 11:432 1899.
- Sabouraudites* Ota & Lang. Ann. Paras. Hum. Comp. 1:326 1923.
- Spirailia* Grigor. Comp. Rend. 179:1424 1924.
- Montoyella* Castellani Man. Trop. Med. ed. 3:1023 1919.
- Pinoyella* Castell. & Chalm. Man. Trop. Med. ed. 3:1023 1919.
- Trichophyllum* Malm. Arch. Anat. Phys. 1 1848.
- Aleurosporia* Grigor. Comp. Rend. 179:1425 1924.
- Atrichophyllum* Castell. & Chalm. Man. Trop. Med. ed. 3:1008 1919.
- Chlamydaleurosporia* Grigor. Comp. Rend. 179:1425 1924.
- Ectotrichophyllum* Castell. & Chalm. Man. Trop. Med. ed. 3:1002 1919.
- Neotrichophyllum* Castell. & Chalm. Man. Trop. Med. ed. 3:1001 1919.
- G. schoenleini* (Rem.) O. & L.
- E. cruris* Castell.
- M. furfur* (Robin) Baill.
- M. audouini* Gruby
- C. audouini* (Gruby) Grigor.
- C. lanosa* (Sab.) Grigor.
- L. gallinae* (Megn.) M. & D.
- S. asteroides* (Sab.) O. & L.
- S. asteroides* (Sab.) Grigor.
- M. nigra* Castell.
- P. simii* (Pinoy) C. & C.
- T. tonsurans* Malm.
- A. acuminata* (Bodin) Grigor.
- A. albiscans* (Nieuwh.) C. & C.
- C. granulosa* (Sab.) Grigor.
- E. mentagrophytes* (Robin) C. & C.
- N. flavum* (Bodin) C. & C.

#### Genera Dubia

- Ateleothylax* Ota & Lang. Ann. Paras. Hum. Comp. 1:333 1923.
- Blastomycoides* Castell. Fungi & Fung. Dis. 24 1928.
- Coccidioides* Rixford & Gilchr. Johns Hopkins Hosp. Rep. 1:243 1896.
- Endodermophyllum* Castell. Man. Trop. Med. ed. 3:1016 1919.
- Indiella* Brumpt. Arch. Paras. 10:547 1906.
- Madurella* Brumpt. Comp. Rend. 158:997 1905.
- Proteomyces* Moses & Vianna Mem. Inst. Oswaldo Cruz 5:192, ill. 1913.
- A. curri* (C. & M.) O. & L.
- B. immitis* Castell.
- C. immitis* R. & G.
- E. tropicale* Castell.
- I. mansonii* Brumpt.
- M. mycetomi* (Lav.) Brumpt.
- P. infestans* M. & V.

#### Sterile Mycelia

- Acinula* Fr. Syst. Myc. 2:267 1822.
- Anthina* Fr. Syst. Myc. 2:281 1823.
- A. candidans* Fr.
- A. flammae* Fr.

- Capillaria** Pers. Myc. Eur. 1:50 1822.  
**Clavariopsis** de Wilde. Ann. Soc. Belg. Micr.  
 19:200, ill. 1895.  
**Cuticularia** Ducomet Ann. Agr. Rennes 1:235,  
 ill. 1907.  
**Ectostroma** Fr. Syst. Myc. 2:601 1823.  
**Helicosporangium** H. Karst. Bot. Unters.  
 Lab. Landw. 1:76 1865.  
**Himantia** Pers. Myc. Eur. 1:88 1822.  
**Hypa** Pers. Myc. Eur. 1:63 1822.  
**Multipatina** Sawada Rep. Agr. Res. Inst. For-  
 mosa 35:121, ill. 1928.  
**Ozonium** Link Berl. Mag. 3:21 1809.  
**Papulospora** Preuss Linnaea 24:112 1851.  
**Phloeconis** Fr. Sum. Veg. Scan. 2:520 1849.  
**Rhacodium** Pers. Syn. Fung. 701 1801.  
**Rhizoctonia** DC. Flor. Fr. 6:111 1815.  
**Coccobotrys** Boud. & Pat. Bull. Soc. Myc.  
 Fr. 16:141 1900.  
**Rhizohypha** Chod. & Sigr. Bull. Soc. Bot.  
 Geneve 2:3:350 1911.  
**Rhizomorpha** Roth Cat. 1:231 1797.  
**Scenomyces** Stev. Ill. Biol. Mon. 11:60, ill.  
 1927.  
**Sclerotium** Tode Fung. Meckl. 1:2 1790.  
**Xylostroma** Tode Fung. Meckl. 1:36 1790.
- C. arundinis** Pers.  
**C. aquatica** de W.  
**C. ilicis** Ducomet  
**E. liriodendri** (Kze.) Fr.  
**H. parasiticum** Karst.  
**H. candida** Pers.  
**H. bombycina** Pers.  
**M. citricola** Saw.  
**O. auricomum** Lk.  
**P. sepedonioides** Pr.  
**P. violacea** (Ces.) Fr.  
**R. cellare** Pers.  
**R. violacea** Tul.  
**C. xylophilus** (Fr.) B. & P.  
**R. radicis** C. & S.  
**R. subcorticalis** Pers.  
**S. perplexans** Stev.  
**S. complanatum** Tode  
**X. giganteum** Tode

## Pseudosaccharomycetes

(Non-ascogenous forms of Saccharomycetaceae or fermentation forms of Hyphomycetes, many of them very doubtful)

- Aleurodomyces** Buchner Arch. Protistenk.  
 26:100, ill. 1912; Syll. Fung. 22:788 1913.  
**Amphiernia** Gruess Jahrb. Wiss. Bot. 66:146,  
 ill. 1926.  
**Asporomyces** Chaborski Bull. Soc. Geneve  
 2:11:91, ill. 1919.  
**Blastoderma** Fisch. & Breb. Morph. Biol.  
 Kahmp. 47, ill. 1894.  
**Bullera** Derx Ann. Myc. 28:11 1930.  
**Endoblastoderma** F. & B. Morph. Biol.  
 Kahmp. 52, ill. 1894; Syll. Fung. 22:788  
 1913.  
**Sporobolomyces** Kluv. & van Niel Cent.  
 Bakt. 2:63; 19, ill. 1924.  
**Cicadomyces** Sulc. Sitzb. Boehm. Ges. Wiss.  
 1910:11, ill. 1911; Syll. Fung. 22:783 1913.  
**Coccidomyces** Buchner Arch. Protistenk.  
 26:102 1912; Syll. Fung. 22:788 1913.  
**Histoplasma** Darling Jour. Am. Med. Assoc.  
 46:1285, ill. 1906.  
**Kerminicola** Sulc. Sitzb. Boehm. Ges. Wiss.  
 1906:1 1907.
- A. signoreti** Buch.  
**A. rubra** Gruess  
**A. asporus** Chab.  
**B. salmonicolor** F. & B.  
**B. grandispora** Derx  
**E. amycoides** F. & B.  
**S. salmonicolor** K. & vN.  
**C. ptyeli** Sulc.  
**C. pierantoni** Buch.  
**H. capsulata** Darl.  
**K. kermesina** Sulc.

- Lecaniascus* Moniez Bull. Soc. Zool. Fr. 12:150 1887.
- Medusomyces* Lind. Ber. Deut. Bot. Ges. 31:243 1913; Syll. Fung. 24:1314 1928.
- Pseudomycoderma* Will. Cent. Bakt. 2:46:226 1916.
- Mycoderma* Pers. Myc. Eur. 1:96 1822.
- Nectaromyces* Syd. Ann. Myc. 16:244 1918; Syll. Fung. 24:1311 1928.
- Anthomyces* Gruess Ber. Deut. Bot. Ges. 35:746 1917; not Dietel 1899.
- Parendomyces* Queyrat & Laroche Bull. & Mem. Soc. Med. Paris 3:28:111 1909.
- Pseudomonilia* Geiger Cent. Bakt. 2:27:134 1910.
- Blastodendrum* Ota Derm. Wochens. 78:224 1924, as subg.; Ciferri & Redaelli Att. Ist. Pavia 3:2:189 1925.
- Candida* Berkhout Schimm. Monilia, etc. 72 1923.
- Enanthothamnus* Pinoy Ann. Derm. Syph. 5:2:599 1911.
- Mycotorula* Will. Cent. Bakt. 2:46:263 1916.
- Rhodomycus* Wettst. Sitzb. Akad. Wien 1:91:39, ill. 1885.
- Sachsia* Bay Ber. Deut. Bot. Ges. 12:90 1894.
- Pseudosaccharomyces* Kloecker Comp. Rend. Lab. Carlsb. 10:323, ill. 1913, not Briosi & Farn. (Syll. Fung. 22:780), Syll. Fung. 24:1307 1928.
- Psyllidomyces* Buchner Arch. Protistenk. 26:97, ill. 1912; Syll. Fung. 22:788 1913.
- Pullularia* Berkhout Schimm. Monilia, etc. Univ. Utrecht 1923.
- Torulopsis* Berl. Giorn. Vit. Enol. 54 1894; Syll. Fung. 18:495 1906; not Oud. 1903.
- Chromotorula* Harrison Trans. Roy. Soc. Canada 3:21:350, ill. 1927.
- Cryptococcus* Kuetz., em. Vuill. Rev. Gen. Sci. 12:741, ill. 1901.
- Eutorula* Will. Cent. Bakt. 2:46:241 1916.
- Eutorulopsis* Cif. Att. Ist. Pavia 3:2:141 1925.
- Rhodotorula* Harrison Trans. Roy. Soc. Canada 3:21:349, ill. 1927.
- Torula* Turpin Comp. Rend. 7:379 1838; Pasteur Etudes Biere 73 1876; Hansen Comp. Rend. Carlsberg 2:50 1883; not Pers. 1801.
- Tyridiomyces* Wheeler Bull. Am. Mus. Nat. Hist. 23:669 1907; Syll. Fung. 24:1034 1928.
- L. polymorphus* Mon.
- M. gisevi* Lind.
- P. vini* Will.
- M. cerevisiae* Desm.
- N. reukaufi* (Gruess) Syd.
- A. reukaufi* Gruess
- P. albus* Q. & L.
- P. albomarginata* Geig.
- B. krausi* Ota
- C. vulgaris* Berkh.
- E. braulti* Pinoy
- M. craterica* Will.
- R. kochi* Wettst.
- S. albicans* Bay
- P. apiculatus* (Reess) Kloeck.
- P. tenuis* Buch.
- P. hispidula* (Pers.) Berkh.
- T. rosea* Berl.
- C. kitae* Harr.
- C. fermentum* Kuetz.
- E. vulgaris* Will.
- E. ellipsoidea* (Will.) Cif.
- E. glutinis* Harr.
- T. cerevisiae* Turpin
- T. formicarum* Wheel.



Genera Omnino Dubia

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(publication not seen)
- D. vastatrix**
- D. viridis** Lloyd  
(publication not seen)
- P. multiplex** Lloyd
- S. gossypii** A. & H.
- T. spiczakovi** Niez.  
(publication not seen)
- V. heterodoxa** Peyron.

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# Glossary of Latin and English Terms

## A

a, an, without (in comp.)

ab, from

abbreviatus, shortened

abeuns, deviating, going into

abhorreo, abhor, differ from

abiegnus, fir

abietinus, fir

abnormis, abnormal

abortivus, abortive, poor, abnormal

abortus, aborted, undeveloped

abrupte, abruptly

absconditus, concealed, hidden

absque, apart from, but for

abundans, abundant

abunde, abundantly

ac, and

acaudatus, without a tail

accedo, to approach

accessory, additional

accipio, to accept

acerinus, maple

acervulatus, heaped, massed

acervulus, i. m., a little heap

acervus, i. m., a heap

achromaticus, without color

achrous, colorless

acicularis, acicular, needle-shaped

acidulus, slightly acid

acies, ei, f., edge

acotyledon, nis, m., cryptogam

acquirō, to acquire

acris, sharp

acrogenus, acrogenous, borne at tip

acropleurogenus, borne at the tip and on the sides

aculeatus, aculeate, spiny, pointed

aculeolatus, somewhat spiny or pointed

acuminatus, acuminate, long-pointed

acus, us, f., needle

acutatus, acute

acutiusculus, somewhat acute

acutus, acute

ad, to

adesse, to be present

adhibitus, used, applied

adhuc, as yet, hitherto

adinterim, meanwhile

adlatus, allatus, brought, carried

admiro, to look, wonder at

admodum, at least, fully, very

adnatus, adnate, touching broadly

adparenter, apparently

adproximatus, drawn near

adscendens, ascending

adsociatus, clustered

adspectus, us, m., sight, appearance

adultus, fully grown

adustus, burned, blackened

aecidiiformis, aecidium-shaped

aeciospore, aecidiospore, the conidium of the rust cluster-cup

aecium, aecidium, the cluster-cup of rusts

aegre, poorly, with difficulty

aegrotans, languishing, diseased

aemulans, rivalling

aemulor, to emulate, excel

aemulus, similar

aeneus, brazen, coppery

aequalis, equal

aequans, equalling

aequidistans, equally distant

aequiparo, to compare, equal

aer, is, m., air, atmosphere

aerius, aerial

aerobius, growing in the air

aerophilus, aerial

aeruginosus, copper-colored

aestas, atis, f., summer

aetas, atis, f., age, lifetime

aeternus, eternal

affectus, affected

affero, to bring, carry

affixus, attached

afflatus, swollen

agamicus, asexual

agamus, asexual

agaricole, living on mushrooms

ager, ri, m., field

agglomeratus, heaped together

aggregatus, grouped together

agnosco, to recognize, identify

alatus, winged

- albens**, whitened, white  
**albicans**, whitening  
**albidus**, white  
**albofarctus**, white-stuffed  
**albolutescens**, whitish-yellow  
**albus**, white  
**alcoholicus**, containing or producing alcohol  
**aleurisporium**, simple lateral conidium of the dermatophytes  
**algicole**, living on algae  
**alicui**, some, any  
**alienus**, foreign, strange  
**aliquando**, at sometime, once  
**aliquantisper**, for a while  
**aliquantulus**, somewhat, a little  
**alius**, another, other  
**alius—alius**, some—others  
**allantoideus**, **allantoid**, sausage-shaped, short and curved  
**alliaceus**, onion-like  
**alliciens**, attracting  
**alpis**, f., mountain  
**alte**, deeply  
**alternus**, alternate, other  
**altitudo**, inis, f., height  
**altus**, high, tall  
**alutaceus**, leather-colored, grayish-yellow  
**alveolatus**, **alveolate**, honey-combed, with hollows  
**alveolus**, i, m., a little hollow  
**amaricans**, making bitter, irritating  
**amarus**, bitter, pungent  
**ambiens**, surrounding  
**ambitus**, us, m., periphery, circle, edge  
**amentum**, i, n., catkin  
**amerosporus**, with one-celled spores  
**amethysteus**, amethyst-colored  
**amictus**, us, m., garment, cover  
**amissus**, lost, dismissed  
**ammoniacalis**, ammonia-like  
**amnis**, is, m., brook  
**amoeboides**, amoeboid, amoeba-like  
**amoebiformis**, amoeba-form  
**amoene**, beautifully  
**amoenus**, beautiful, pleasant  
**amoveo**, to withdraw  
**amphibius**, **amphibious**, living on land and in water, or in mud  
**amphigenus**, borne on both sides  
**amplectens**, clasping  
**amplecto**, to wind or clasp  
**amplus**, broad, ample  
**ampulliformis**, **ampulliform**, cushion-like  
**amyelicus**, without mycelium  
**amygdalinus**, almond-like, pink  
**an**, or, whether—or  
**analogus**, similar  
**anastomosans**, **anastomosing**, running together  
**anceps**, cipitis, two-headed, double  
**androgynus**, with male and female  
**anfractuosus**, tortuous, prolix  
**angularis**, **angular**, angled  
**angulosus**, **angulose**, angled  
**angustus**, narrowed  
**angustus**, narrow  
**anhistus**, without cellular structure  
**animalcula**, ae, f., little animal  
**annularis**, ring-like  
**annulatum**, in a ring  
**annulatus**, **annulate**, with a ring, ringed  
**annuliform**, ring-like  
**annulus**, i, m., a ring  
**annuosus**, aged, old  
**anormaliter**, abnormally  
**anserinus**, of or pertaining to geese  
**ante**, before  
**antecedens**, preceding  
**antennarioideus**, with dark mycelium or subiculum  
**antheridiiformis**, antheridium-like  
**antheridium**, ii, m., **antherid**, male sex-organ  
**antherozidium**, ii, n., **antherozoid**, motile male cell  
**antice**, in front  
**aparaphysatus**, without paraphyses  
**aperio**, to open, uncover  
**apertus**, open  
**apex**, icis, m., tip  
**apiculatus**, **apiculate**, with a point  
**apiculiformis**, like a little point  
**apophysatus**, with a supporting cell  
**apophysis**, is, f., swelling, swollen filament, often paraphysis-like  
**apothecium**, ii, n., cup or disk containing ascus  
**appendicula**, ae, f., little appendage  
**appendiculatus**, **appendiculate**, appendaged  
**appendix**, icis, f., appendage  
**applanatus**, **applanate**, flattened  
**approximatus**, close, near  
**apricus**, wild  
**apud**, at  
**apus**, odis, without a stalk  
**aquaeductus**, us, m., aqueduct

aquaticus, aquatic, living in water  
 aquosus, watery  
 arachnoideus, cobwebby  
 araneosus, cobwebby  
 arbor, is, f., tree  
 arbusculiformis, shrub-like  
 arcte, closely  
 arcticus, arctic  
 arcuatim, bow-like, curved  
 arcuatus, arcuate, bow-like  
 area, ae, f., space, spot  
 areola, ae, f., little space  
 areolatus, areolate, marked by areas or spaces  
 arescens, drying  
 aresco, to become dry  
 argenteus, silvery  
 argentinus, silvery  
 argillaceus, clay-color  
 aridus, dry  
 arista, ae, f., awn  
 aristatus, aristate, awned  
 arrectus, upright, stiff  
 arrhizus, without roots or rhizoids  
 arthrospore, a seriate spore or joint  
 articulatus, jointed  
 articulus, i, m., joint  
 asciger, ascus-bearing  
 ascogenic, producing asci  
 ascogenous, producing asci  
 ascoma, atis, n., a sporocarp containing asci  
 ascophorus, ascus-bearing  
 ascus, i, m., sack  
 asiaticus, Asiatic  
 asper, rough  
 asperatus, asperate, roughened  
 aspergo, to scatter, sprinkle  
 asperulus, slightly roughened  
 asser, eris, m., branch, beam, post  
 assurgens, ascending  
 asterigmaticus, without stalks  
 asterineus, star-like, radiate  
 asteroid, star-like, radiate  
 asteroma-like, with radiate subicle  
 astomous, mouthless  
 astromatoideus, without a stroma  
 asymmetricus, irregular  
 ater, dark, black  
 atomatus, with small particles  
 atomisticus, tiny  
 atque, also  
 atrans, blackening

atratus, dark  
 atrofuscus, dark  
 atroinquinans, blackening  
 atronitidus, black and shining  
 atropiceus, black as pitch  
 atropurpureus, dark purple  
 attenuatus, tapering  
 attingens, touching  
 attolens, raising  
 atypicus, abnormal  
 auctio, onis, f., growth  
 auctor, is, comm., author  
 auctus, enlarged  
 audeo, to dare  
 augmentum, i, n., increase, growth  
 aurantiacus, orange, golden  
 aurantinus, orange  
 auratus, golden  
 aureus, golden  
 auriformis, ear-shaped  
 australis, southern  
 aut, or  
 autem, moreover  
 authenticus, authentic, valid  
 autonomus, complete, independent  
 autumnus, i, m., autumn  
 avellaneus, hazel, gray-brown  
 avulsus, torn-off, separated  
 axicola, growing on the axis  
 axiformis, axis-like  
 axillaris, axillary, growing in an axis  
 azonus, without zones  
 azygospore, a zygospore formed without conjugation

## B

bacca, ae, f., berry  
 baccatus, berry-like  
 bacillaris, bacillar, rod-shaped  
 bacteriformis, bacterium-like  
 bactrosporus, with rod-shaped spores  
 baculum, i, n., rod  
 badius, brown  
 basidiosporus, with spores borne on stalks  
 basidium, ii, n., basidium, rod  
 basilaris, basal  
 basis, is, f., base  
 bene, plainly, well  
 benevole, kindly  
 betulicola, growing on birch  
 betulinus, birchen  
 bi-, two, twice

- biatorine**, like *Biatora*, with a proper but not carbonous exciple  
**bibulus**, absorbing  
**biclavuligerus**, bearing two club-shaped branches  
**biconic**, conic at each end  
**biconvexus**, **biconvex**, convex on both sides  
**bicornus**, with two horns, two-branched  
**biformis**, or -us, of two forms  
**bifrons**, on both sides of the leaf  
**bifurcatus**, two-forked  
**biguttulatus**, with two globules or vacuoles  
**bilabellulatus**, two-lipped  
**bilabiatus**, two-lipped  
**bilobus**, two-lobed  
**bilocularis**, two-celled  
**binatim**, by twos  
**binucleolatus**, with two oil-drops  
**binus**, two-fold  
**biogenus**, **biogenous**, growing on living organisms, parasitic  
**biophilus**, **biophilous**, parasitic  
**bipartitus**, two-parted or-divided  
**bipunctatus**, with two vacuoles  
**bis**, twice  
**biscoctiformis**, biscuit-shaped  
**biserialis**, in two rows  
**biseriatus**, in two rows  
**bisporus**, two-spored  
**bitunicatus**, with two walls  
**biuncinatus**, two-hooked  
**bombardus**, cannon-like  
**borealis**, northern  
**botryosus**, **botryose**, clustered like grapes  
**botuliformis**, **botuliform**, sausage-shaped  
**brachiatus**, with arms  
**bractea**, ae, f., bract  
**brevicollis**, short-necked  
**brevis**, short  
**breviter**, shortly  
**breviusculus**, somewhat short  
**brunneolus**, brownish  
**brunneus**, brown  
**bulla**, ae, f., bubble  
**bullatus**, bubble-like, swollen  
**bullula**, ae, f., a little swelling  
**bursiformis**, bag- or pouch-like  
**byssinus**, cottony  
**byssisedus**, **byssisede**, seated on cotton  
**byssoides**, **byssoid**, cottony  
**byssus**, i, f., cotton
- C**
- cacuminalis**, pointed  
**cadavericole**, living on dead bodies  
**caducus**, fallen, deciduous  
**caecitas**, atis, f., blindness  
**caerulescens**, turning blue  
**caesius**, bluish-gray  
**caespes**, itis, m., tuft  
**caespitosus**, **caespitose**, in dense groups or tufts  
**caesus**, fallen  
**calamus**, i, m., stem  
**calcaratus**, with a spur  
**calcareus**, **calcareous**, of lime, limy  
**calcariferus**, bearing lime  
**calcifer**, bearing lime  
**calidarium**, ii, n., hot-house  
**callosus**, roughened  
**calvescens**, becoming bare  
**calvitium**, ii, n., bald spot  
**calvus**, bare, bald, not pubescent  
**calx**, **calcis**, f., lime  
**calycicola**, living on the calyx  
**calyciformis**, cup-shaped  
**calycularis**, cup-shaped  
**calyptra**, ae, f., cap  
**calyx**, ycis, m., **calyx**, cup  
**campaniformis**, bell-shaped  
**campanulatus**, bell-shaped  
**campylotropus**, curved  
**canaliculatus**, **canaliculate**, channeled  
**candicans**, becoming white  
**cannabinus**, of hemp, hempen  
**canus**, hoary  
**capillaris**, hair-like  
**capillatura**, ae, f., mass of hair  
**capilliform**, hair-like, filiform  
**capillitium**, ii, n., mass of threads  
**capillus**, i, m., hair  
**capitatus**, **capitate**, in heads  
**capitulatus**, borne in little heads  
**capitulum**, i, n., a little head  
**capreolus**, i, m., goat  
**caprinus**, of or pertaining to goats  
**capsula**, ae, f., capsule  
**caput**, itis, n., head  
**carbo**, onis, m., carbon, charcoal  
**carbonaceus**, like coal  
**carbonicola**, on burned-over ground or on charcoal  
**carens**, lacking  
**caries**, ei, f., decay  
**carinatus**, keeled



- cariosus*, decaying  
*carneus*, flesh-colored  
*carnosulus*, *carnosule*, somewhat fleshy  
*carnosus*, *carnose*, fleshy  
*caro*, *carnis*, f., flesh  
*carpogenus*, living on fruit  
*carpogonium*, ii, n., *carpogone*, female sex-organ, developing a fruit-body  
*cartilagineus*, *cartilaginous*, tough but pliable  
*caryopsis*, *idis*, f., grain  
*castaneus*, chestnut-brown  
*catenate*, in chains  
*catenifer*, chain-bearing  
*catenigerus*, bearing chains  
*catenulatus*, *catenulate*, in chains  
*catenuliformis*, chain-like  
*catenulus*, m., -a, f., a small chain  
*caterva*, ae, f., heap, crowd  
*catervatim*, in heaps, in groups  
*cauda*, ae, f., tail  
*caudatus*, *caudate*, tailed  
*caudex*, *icis*, m., stalk  
*caudicula*, ae, f., a little stalk  
*caulicola*, growing on stems  
*caulis*, is, m., stem  
*caulogenus*, on stems  
*caverna*, ae, f., a cavern, hollow  
*cavernosus*, with hollows  
*cavernula*, ae, f., a little cavity  
*cavitas*, *atis*, f., cavity  
*cavitatus*, hollow  
*cavus*, i, m., hollow  
*celans*, hiding  
*cella*, ae, f., a cell  
*celluliformis*, cell-shaped  
*cellulosus*, cellular, consisting of cells  
*censeo*, to think, estimate  
*centrifugus*, *centrifugal*, around the margin  
*centrum*, i, n., the center  
*cephalodium*, ii, n., a globose to club-shaped projection on a lichen thallus, containing alien algae  
*ceraceus*, waxy  
*cerebriformis*, brain-like  
*cerebro-convolute*, with brain-like folds  
*cerebroid*, with convolutions or folds  
*cereus*, waxy  
*cerno*, to perceive, separate  
*cernuus*, nodding, inclined  
*cerumen*, *inis*, n., wax  
*cervinus*, tawny  
*cervus*, i, m., deer  
*cespitose*, clustered, crowded  
*ceteroquin*, otherwise, for the rest  
*ceterum*, remaining  
*chalybeus*, of steel, steel-blue  
*character*, *eris*, m., *character*, style  
*charta*, ae, f., paper  
*chartaceus*, papery  
*chlamydospore*, a spore with a thick membrane  
*chlamydosporicus*, with chlamydospores  
*chlorinus*, greenish  
*chlorophyllous*, with chlorophyll, green  
*chorda*, ae, f., twine, cord  
*cibaria*, ae, f., food  
*cicatrix*, *icis*, f., a scar  
*cidaris*, is, f., diadem  
*ciliatulus*, slightly ciliate  
*ciliatus*, *ciliate*, with long hairs on the margin  
*ciliolatus*, *ciliolate*, with cilia  
*cincinnatus*, curled  
*cinctus*, surrounded  
*cinerescens*, becoming ashen  
*cineresco*, to become ashen or gray  
*cinereus*, ash-colored  
*cingens*, surrounding  
*cingulatus*, surrounded, bordered  
*cingulus*, i, m., a little belt  
*cinnabarinus*, orange-red  
*cinnamomeus*, cinnamon-colored  
*circa*, near  
*circinatus*, *circinate*, coiled  
*circino*, to circle  
*circiter*, about  
*circuitus*, us, m., a circuit  
*circulus*, i, m., a circle  
*circumambiens*, encircling  
*circumdatus*, surrounded  
*circumscissile*, splitting circularly  
*circumscribitus*, circumscribed  
*circumtextus*, surrounded  
*circumvallatus*, surrounded  
*cirrhatus*, curled  
*cirrhosus*, *cirrhose*, curly  
*cirrus*, i, m., curl  
*citatus*, cited  
*cito*, to name, mention  
*cito*, soon, rather  
*citriformis*, *citriform*, lemon-shaped  
*citrinus*, lemon-yellow  
*cladodium*, ii, n., a flattened branch  
*cladogenus*, borne on branches  
*clathratus*, *clathrate*, latticed  
*clausus*, closed

- clava**, ae, f., a club  
**clavaria-like**, club-shaped, or coral-like  
**clavatus**, club-shaped  
**clavis**, is, f., a key  
**clavoid**, club-like  
**clavula**, ae, f., a little club  
**clavulatus**, **clavulate**, somewhat club-shaped  
**clivosus**, hilly  
**clypeatus**, shield-like  
**clypeus**, i, m., a shield  
**coacervatus**, **coacervate**, heaped together  
**coactus**, collected, crowded  
**coadunatio**, onis, f., a summing up  
**coadunatus**, united, collected  
**coalescens**, **coalesced**, running together  
**coalitus**, joined, running together  
**coarctatus**, crowded  
**coccineus**, bright-red  
**coccus**, i, m., round cell, berry  
**cochleariformis**, spoon-shaped  
**cochleatus**, shell-like, ear-like  
**coctus**, cooked  
**coenobium**, ii, n., a colony  
**coerulescens**, turning blue  
**coffeatus**, coffee-like  
**coffeicolor**, coffee-colored  
**coffeiformis**, coffee-shaped  
**cognatus**, related  
**cogo**, to act, collect  
**cohabitans**, living together  
**cohaerens**, cohering  
**-cola**, inhabiting, growing on  
**collabasco**, to fall in  
**collabens**, **collabent**, collapsing, falling in  
**collapsus**, **collapsed**, sunken  
**collariatus**, collared, attached to a collar  
**collectivus**, collected  
**colliculosus**, with tiny elevations  
**collum**, i, n., a neck  
**colonia**, ae, f., a colony  
**color**, is, m., color  
**coloratio**, onis, f., coloration, color  
**coloratus**, colored  
**coloreus**, colored  
**columella**, ae, f., columella, a small pillar  
**columnaris**, **columnar**, cylindroid  
**comatus**, shaggy  
**comestibilis**, eatable  
**commissura**, ae, f., **commissure**, path, cleft  
**commixtus**, mingled  
**communico**, to share, communicate  
**communis**, common  
**comosus**, hairy  
**compactus**, dense  
**compaginatus**, packed closely  
**complectens**, comprising, clasping  
**complecto** (r), to clasp  
**complures**, several, many  
**compositus**, composed, compound  
**compressus**, compressed  
**concatenatus**, in chains  
**concavus**, **concave**, hollowed  
**concentricus**, **concentric**, having a common center  
**conceptaculum**, i, n., **conceptacle**, hollow, chamber  
**conchiformis**, **conchiform**, shell-shaped  
**concolor**, **concolorous**, of like color  
**concrescens**, growing together  
**concretus**, united  
**condensus**, condensed  
**conditio**, onis, f., condition  
**confero**, to collect  
**confertus**, crowded  
**confirmatio**, onis, f., confirmation  
**conflatus**, swollen  
**confluens**, **confluent**, running together  
**confluo**, to merge  
**conformis**, all alike, similar  
**confundo**, to mingle, confuse  
**congestus**, crowded  
**conglobatus**, **conglobate**, heaped together  
**conglomeratus**, heaped  
**conglutinatus**, **conglutinate**, glued together  
**congregatus**, aggregated, grouped  
**congruo**, to agree  
**conicus**, conical  
**conidium**, ii, n., an asexual spore  
**conidial**, producing or pertaining to conidia  
**conidicus**, conidial  
**conidiferus**, conidia-bearing  
**conidiole**, small conidium usually borne on another  
**conidiome**, conidial-bearing body  
**conidiophorum**, i, n., **conidiophore**, a hypha bearing conidia  
**conjugatio**, onis, f., **conjugation**, fusion of two more or less equal sex-cells  
**connatus**, **connate**, joined  
**connexus**, connected, united  
**connivens**, **connivent**, approaching  
**conoideus**, **conoid**, cone-shaped  
**consitus**, sown, strewn  
**consociatus**, joined, associated

- consortium**, ii, n., company  
**conspersus**, sprinkling  
**conspersus**, scattered, sprinkled  
**conspiciens**, observing  
**conspicuus**, **conspicuous**, marked, prominent  
**conspurcatus**, polluted  
**constanter**, firmly, consistently  
**constipatio**, onis, f., a crowding  
**constituens**, constituting  
**consuetudo**, inis, f., a habit  
**consumptus**, destroyed  
**contemno**, to condemn, disparage  
**contextum**, i, n., texture, context  
**contiguus**, close  
**continens**, containing  
**continuus**, **continuous**, one-celled  
**contortus**, twisted  
**contra**, against  
**contractus**, narrowed  
**contusus**, bruised  
**conus**, i, m., a cone  
**convergens**, coming together  
**convolutus**, **convolute**, coiled, folded  
**convolutio**, onis, f., a fold  
**coopertus**, covered, buried  
**copiosus**, abundant  
**coprophilus**, growing on dung  
**copulans**, copulating  
**coralloideus**, **coralloid**, like much-branched coral  
**coriacellular**, somewhat leathery  
**coriaceus**, **coriaceous**, **corious**, leathery  
**corneus**, **corneous**, **horny**  
**corniculatus**, **corniculate**, **horned**  
**corniformus**, **corniform**, **horn-shaped**  
**cornu**, us, n., horn  
**cornutus**, **horned**  
**coronatus**, **crowned**  
**corpusculum**, i, n., a little body  
**corrugatus**, **corrugate**, **ridged**  
**corruptus**, **corrupted**, **spoiled**  
**cortex**, icis, m., the bark  
**corticalis**, **cortical**, of bark, on bark  
**corticatus**, **corticate**, with a bark or epiderm  
**corticola**, **corticole**, growing on bark  
**cortina**, ae, f., veil  
**cortinate**, with a curtain-like veil  
**corvinus**, pertaining to the raven, black  
**costa**, ae, f., ridge  
**costatus**, **costate**, **ridged**  
**crassities**, ei, f., thickness  
**crassitudo**, inis, f., thickness, width  
**crassiusculus**, somewhat broad  
**crassus**, broad  
**crateriformis**, **crateriform**, hollowed out  
**creber**, crowded  
**cremeus**, cream-colored  
**cremicolor**, cream-colored  
**crescens**, growing, arising  
**cribrosus**, sieve-like  
**crinitus**, hairy, crested  
**crispatus**, curled, curly  
**crispulus**, somewhat crisp  
**crispus**, crisp  
**crista**, ae, f., crest  
**cristatus**, crested  
**croceus**, yellow  
**croceus**, yellow  
**cruciate**, cross-like  
**cruciatim**, **cruciately**, cross-like  
**cruentatus**, bloody  
**crusta**, ae, f., crust  
**crustaceus**, **crustaceous**, crust-like  
**crustiformis**, crust-like  
**crustose**, forming a crust, more or less interrupted  
**crustula**, ae, f., a little crust  
**cubile**, is, n., a bed  
**cuboideus**, cuboid, cubical  
**cucullatus**, hooded  
**cucumeriformis**, cucumber-shaped  
**culmicola**, **culmicole**, growing on grass-stems  
**culmus**, i, m., culm, a stalk, stem  
**cultellus**, i, m., a small knife  
**culter**, tri, m., a knife  
**cultriformis**, knife-like  
**cultus**, cultivated  
**cum**, with  
**cumulatus**, heaped up  
**cuneatus**, wedge-shaped  
**cuneiformis**, wedge-shaped  
**cuniculus**, i, m., a rabbit  
**cupreus**, coppery  
**cuprinus**, coppery  
**cupula**, ae, f., a little cup  
**cupularis**, **cupulatus**, **cupuliformis**, cup-shaped  
**cupuloid**, more or less cup-shaped  
**curtus**, short  
**curvatus**, curved  
**curvus**, curved, bent  
**cusps**, a point  
**cuspidatus**, **cuspidate**, with a tooth  
**cuticula**, ae, f., cuticle  
**cuticularized**, with firm cover or cuticle

cutis, is, f., the skin  
 cyanescens, turning blue  
 cyaneus, blue  
 cyathiformis, cup-like  
 cyclus, i, m., a cycle, circle  
 cylindræus, cylindricus, cylindric  
 cymbiformis, boat-shaped  
 cyphella, ae, f., an opening or hollow in a  
 thallus, more or less cup-shaped  
 cystidium, ii, n., cyst  
 cystophore, the stalk which bears a cell  
 or cyst

## D

daedaleus, labyrinthine  
 dealbatus, whitened  
 debilis, weak  
 deciduus, falling  
 decies, ten times  
 declivis, sloping  
 decolor, without color  
 decorticatus, without bark  
 decumbens, prostrate  
 decuplus, tenfold  
 decurrens, decurrent, running down the  
 stem  
 defectus, lacking  
 deficiens, lacking  
 deficio, to lack  
 definitus, definite, fixed, limited  
 deflexus, deflexed, turned downward  
 deformus, deformed, abnormal, misshapen  
 defossus, dug, hidden  
 degenero, to degenerate  
 dehiscens, dehiscent, splitting  
 dein, then, at length  
 dejectus, fallen  
 delapsus, fallen, sunken  
 delicatulus, delicate, fine  
 delineatus, figured  
 deliquesces, deliquescing, liquefying  
 delitescens, hiding  
 delitescio, to conceal, lurk  
 deltoideus, delta-like, triangular  
 dematium-like, black and cobwebby  
 dematius, black and cottony  
 demonstro, to show  
 demum, at length  
 dendritic, tree-like, branched  
 dendritice, dendritically, tree-like  
 dendroideus, dendroid, tree-like  
 denigratus, blackened  
 denique, at length  
 densus, close, dense  
 dentatus, toothed  
 denticulatus, denticulate, with little teeth  
 denticuligerus, bearing little teeth  
 denudans, denuding, uncovering  
 denudatus, denuded, bare  
 deorsum, downward  
 dependens, hanging  
 deplanatus, flattened  
 depressus, depressed, flattened  
 derasus, rubbed off, smoothed  
 derumpens, breaking  
 descendens, descending  
 desciscens, leaving, deviating  
 describo, to describe  
 descriptus, described  
 desicco, to dry up  
 desinens, ending, closing  
 desquamatus, rubbed off, not scaly  
 destitutus, lacking  
 destruens, destroying  
 destruo, to destroy  
 desum, to fail, to be absent  
 detergibilis, removable, breakable  
 deustus, burnt  
 diametralis, of the diameter  
 diametrum, i, n., diameter  
 diaphanus, diaphanous, translucent  
 diatrypoid, like Diatrype, with a stroma  
 different from the tissue of the matrix  
 dichotomus, dichotomous, two-forked  
 diclinus, with separate sexes  
 dictyosporus, having spores with cross  
 and longitudinal walls  
 didymosporus, with two-celled spores  
 didymus, two-fold or two-celled  
 differo, to differ  
 difficilis, difficult  
 diffuens, diffuent, dissolving  
 difformis, diformis, of two forms, of un-  
 usual or abnormal form  
 diffractus, broken  
 digestus, broken up  
 digitaliformis, digitate, finger-like  
 digitatus, digitate, finger-like  
 digitiformis, finger-shaped  
 dignosco, to distinguish  
 dignotus, set apart  
 dilabens, breaking apart  
 dilatus, spread out  
 dilute, dilutely  
 dilutus, dilute  
 dimidiatus, dimidiate, halved, shelf-like  
 dimidius, half  
 dimorphus, of two forms

**dioecious**, sex organs on separate plants  
**diphyletic**, arising from two distinct ancestral groups  
**directio**, onis, f., direction  
**directus**, straight  
**dirumpens**, breaking apart  
**disciformis**, disk-shaped  
**discoïd**, more or less disk-like  
**discolorus**, discolorous, discolored  
**discretus**, discrete, separate  
**discrimen**, inis, n., difference  
**disculus**, i, m., little disk  
**disparens**, disappearing  
**dispergens**, scattering, spreading  
**dispositus**, arranged  
**dirumpens**, breaking to pieces, shattering  
**disruptus**, broken  
**disseco**, to cut up  
**dissectus**, cut up  
**disseminatus**, scattered  
**dissentio**, to disagree  
**dissepimentum**, i, n., partition, wall  
**disseptum**, i, n., barrier, partition  
**dissiliens**, bursting, splitting  
**distal**, distant, farther  
**distans**, remote  
**distichus**, distichous, in two rows  
**distinguo**, to distinguish  
**disto**, to be separate  
**diu**, long  
**divaricatus**, spreading  
**divello**, to tear apart, destroy, remove  
**divergens**, diverging  
**diversus modus**, in different ways  
**diversus**, diverse, different  
**divinans**, conjecturing  
**divisio**, onis, f., a division  
**divisus**, divided  
**dolabriform**, resembling a pickaxe  
**doliiformis**, doliiform, cask-shaped, jar-shaped  
**dolium**, ii, n., cask, jar  
**donacinus**, of a reed  
**donatus**, furnished  
**dorsiventral**, with two unlike sides  
**dorsum**, i, n., back  
**dothideaceus**, like *Dothidea*, i. e., loculate  
**dothideoid**, like *Dothidea*, the perithecia reduced to locules in a stroma  
**dubitanter**, doubtfully  
**dubius**, doubtful  
**duco**, to lead  
**ductus**, led

**dulcis**, sweet  
**dum**, adv., now, yet; conj., while, where  
**dumetum**, i, n., a thicket  
**duo**, two  
**duodecim**, twelve  
**duplo**, twice  
**durities**, ei, f., hardness  
**duriusculus**, somewhat hard  
**durus**, hard

## E

**eburneus**, ivory-white  
**ecalcaratus**, without a spur  
**ecaudatus**, without a tail  
**eccentricus**, eccentric, lateral  
**echinatus**, spiny  
**echinulatus**, echinulate, spiny  
**edulis**, edible  
**efferent**, leading outward  
**efficiens**, causing, producing  
**effiguratus**, shaped, formed  
**effoetus**, worn out  
**efformatus**, formed  
**effundo**, to pour out, shed  
**effusus**, effuse, spread out  
**egomet**, myself  
**egrediens**, growing out  
**elasticus**, elastic, flexible  
**elater**, an elastic filament or capillitium  
   thread  
**elatus**, tall  
**elevatus**, raised  
**ellipsoideus**, ellipsoid, somewhat elliptic  
**ellipticus**, elliptical  
**elongatus**, lengthened  
**emarcidus**, withered, decayed  
**emarginatus**, without a margin  
**emergens**, emerging  
**emergeo**, to emerge  
**emersus**, emerging  
**emittens**, emitting  
**emortuus**, dead  
**enatus**, arising from  
**endobasidial**, continuous with the basidium; with enclosed basidia  
**endobiotic**, growing within living things  
**endochroma**, atis, n., colored contents  
**endogenous**, endogenous, borne within  
**endoparasiticus**, internally parasitic  
**endoperidium**, ii, n., inner peridium  
**endophytic**, growing in plants  
**endoplasma**, atis, n., protoplasm  
**endoxylus**, within wood  
**endozoic**, growing in animals

- enim**, for  
**entomogenus**, **entomogenous**, living in insects  
**eodem**, in the same place; besides  
**epelliculosus**, without a covering or pellicle  
**epidermis**, **idis**, *f.*, epiderm, the surface skin  
**epigaeus**, **epigean**, on the ground  
**epigenus**, borne above  
**epiphloeodus**, on the bark  
**epiphragma**, an upper wall or division  
**epiphyllus**, on the upper side of the leaf  
**epiphytic**, upon plants  
**episporium**, *ii*, *n.*, outer wall of spore  
**epithecium**, a layer above the asci, usually formed of the tips of the paraphyses  
**epizoic**, growing on animals  
**equinus**, **equine**, belonging to horses  
**erectus**, erect  
**ergo**, therefore  
**erostratus**, without a beak  
**erostris**, without a beak  
**erraticus**, erratic, wandering  
**error**, *is*, *m.*, error  
**eructans**, emitting, belching  
**eructatus**, thrown up  
**erumpens**, **erumpent**, bursting out  
**erysiphoides**, like Erysiphe, cobwebby  
**eseptate**, without cross walls  
**estriatus**, without lines or markings  
**etiam**, also  
**etsi**, although  
**eumorphus**, well-formed  
**eutypoid**, **eutypous**, like Eutype, with an effuse stroma similar to the tissue of the matrix  
**evacuans**, emptying  
**evacuatus**, emptied  
**evado**, to escape  
**evaginatus**, without a sheath  
**evanesens**, **evanescent**, disappearing  
**evanidus**, vanishing  
**evidentius**, more clearly  
**evolutus**, developed  
**evolvatus**, without a volva  
**evolvens**, developing  
**exacte**, exactly  
**exalbescens**, becoming white  
**exalbidus**, whitish  
**exalbugo**, to whiten  
**exannulatus**, without a ring  
**exappendiculatus**, not appendaged  
**exaridus**, dried out  
**exasperans**, roughening  
**exasperatus**, roughened  
**exaspero**, to roughen  
**excavatio**, **onis**, *f.*, an excavation, hollowing out  
**excavatus**, hollowed out  
**excedens**, exceeding  
**excentric**, out of the center, lateral  
**exciple**, the outer wall or covering of an apothecium  
**excipuliformis**, cup-shaped  
**excipulum**, *i*, *n.*, exciple, margin  
**exclusus**, excluded, separated  
**excrecens**, growing out  
**excussus**, made, molded  
**excutiens**, shaking out  
**exemplaris**, model  
**exemplarium**, *ii*, *n.*, specimen, sample  
**exemplum**, *i*, *n.*, an example  
**exesus**, consumed, destroyed  
**exhibens**, exhibiting  
**exigens**, scanty  
**exiguitas**, **atis**, *f.*, smallness, scantiness  
**exiguus**, little, small  
**exilis**, thin, slender  
**eximie**, exceedingly  
**existimo**, to estimate  
**exitus**, *us*, *m.*, a departure, escape  
**exobasidial**, separated by a wall from the basidium; with exposed basidia  
**exogenus**, arising on the outside  
**exoletus**, disused, obsolete  
**exoperidium**, *ii*, *n.*, outer peridium  
**exordiens**, beginning  
**exoriens**, arising  
**exornatus**, furnished, adorned  
**exosporium**, *ii*, *n.*, exospore, outer wall of the spore  
**expallens**, becoming pale  
**expers**, free from, without  
**explodens**, exploding  
**expulsus**, expelled  
**exquisite**, beautifully  
**exsertus**, **exserted**, thrust out  
**exsiccatio**, **onis**, *f.*, a drying out  
**exsiccatus**, dried out  
**exsiliens**, escaping  
**exsuccus**, without milk or juice  
**exsurgo**, to rise up  
**extans**, projecting, protruding  
**extensio**, **onis**, *f.*, extension  
**externus**, external  
**extimus**, outermost, ultimate  
**extra**, without, outside

extrico, to extricate  
 extrinsecus, from without  
 extrorsum, toward the edge  
 extus, outside  
 exuvium, i, n., spoils, waste

## F

fabiformis, bean-shaped  
 fabrica, ae, f., texture  
 facies, ei, f., face, form  
 facilis, easily  
 fagineus, beechen  
 falcatus, falcate, scythe-shaped, curved  
 falciformis, beak-shaped, scythe-shaped  
 familia, ae, f., family  
 familiola, ae, f., a little family  
 farctus, stuffed  
 farina, ae, f., meal, flour  
 farinaceus, mealy  
 fascia, ae, f., fascicle  
 fasciatus, grouped  
 fasciculatus, fasciculate, fascicled, in bundles  
 fastigiatus, bunched  
 fatiscens, disappearing, breaking up  
 favosus, hollow  
 femineus, feminine  
 fenestratus, with windows or openings  
 fere, almost  
 fermentatio, onis, f., fermentation  
 fermentum, i, n., yeast  
 ferruginascens, turning rust-colored  
 ferrugineus, rust-colored  
 ferrumequinum, i, n., a horse-shoe  
 ferrum, i, n., iron  
 fibra, ae, f., a fiber, filament  
 fibrilla, ae, f., small fiber  
 fibrillula, ae, f., a little fibril  
 fibrosus, fibrous  
 fictitious, fictitious, false  
 filamentosus, filamentous, thread-like  
 filia, ae, f., daughter  
 filiformis, filiform, thread-shaped  
 filiger, filament-bearing  
 filum, i, n., thread  
 fimbria, ae, f., fringe  
 fimbrians, fringing  
 fimbriatulus, slightly fringed  
 fimbriatus, fimbriate, fringed  
 fimicola, fimicole, dwelling on dung  
 fimus, i, m., dung  
 findo, to cleave, divide  
 finis, is, m., end, limit

firmulus, somewhat firm  
 fissilis, cleft, ruptured  
 fissuratus, fissured, split  
 fissus, split  
 fistulosus, hollow  
 flabellate, fan-like  
 flabelliformis, fan-shaped  
 flaccidus, weak  
 flagella, ae, f., lash  
 flagellatus, bearing a long bristle or thread  
 flagelliformis, lash-like  
 flamens, flame-colored  
 flavens, yellowing  
 flavidus, yellowish  
 flavus, yellow  
 flexuosus, flexuous, full of turns or windings  
 flexus, bent  
 flocciformis, tuft-like  
 floccosus, floccose, cottony  
 floccus, i, m., tuft  
 floralis, floral, of flowers, flowery  
 floricole, living on flowers  
 flumen, inis, n., river  
 fluvius, ij, m., a river  
 fluxilis, flowing  
 foedatus, dark, soiled  
 foetidus, with a bad odor  
 foetus, productive  
 foli-caulicole, growing on leaves and stems  
 foliicola, folicole, living on leaves  
 foliose, like a leaf in form  
 folium, ii, n., leaf  
 foramen, inis, n., a hole  
 forficulate, scissor-shaped  
 forma, ae, f., form  
 formans, forming  
 formo, to form  
 formosus, beautiful  
 fornicatus, arched, vaulted  
 fornix, icis, m., a vault  
 forsan, perhaps  
 forsitan, perhaps  
 fortasse, perhaps  
 forte, strongly  
 fovens, nourishing  
 fracidus, soft, mellow  
 fractus, broken  
 fragilis, fragile  
 fragmentum, i, n., fragment  
 frequens, frequent

- friabilis*, falling to pieces  
*frigidarium*, ii, n., a cold place, cold storage  
*frondosus*, leafy  
*frons*, dis, f., a leaf  
*fruticola*, living on fruits  
*fructiferus*, *fructifer*, fruit-bearing  
*fructificans*, fruiting  
*fructificatio*, nis, f., a fruiting  
*fructus*, us, m., fruit  
*frustulatus*, fragmentary  
*frustum*, i, n., a bit, piece  
*fruticosus*, *fruticose*, shrub-like  
*fruticulosus*, *fruticulose*, somewhat shrub-like  
*fucatus*, colored  
*fucicole*, living on *Fucus*  
*fugans*, fleeting  
*fulciens*, supporting, propping  
*fuliginus*, *fuliginous*, sooty  
*fuligo*, inis, f., soot  
*fultus*, supported  
*fulvellus*, somewhat tawny  
*fulvescent*, becoming tawny  
*fumagineus*, *fumaginous*, smoky  
*fumago*, inis, f., smoke, soot, sooty subiculum  
*fumidus*, smoky  
*fumosus*, smoky  
*fundus*, i, m., bottom  
*fungicola*, *fungicole*, growing on fungi  
*fungillus*, i, m., a little fungus  
*fungus*, i, m., a fungus  
*funicularis*, rope-like  
*funiculus*, i, m., a little rope  
*funiformis*, rope-like  
*funis*, is, m., rope, cord  
*furcatus*, *furcate*, forked  
*furfur*, uris, m., bran  
*furfuraceus*, bran-like, powdered  
*furfurellus*, somewhat covered with bran  
*fuscatus*, darkened  
*fuscillus*, somewhat dark  
*fuscescens*, darkening  
*fuscidulus*, dark  
*fuscidus*, dark  
*fuscus*, dark, or dark brown  
*fusiformis*, *fusiform*, spindle-shaped  
*fusisporus*, with spindle-shaped spores  
*fusoideus*, *fusoid*, spindle-shaped
- G**
- galeiformis*, helmet- or hood-shaped  
*galeriformis*, cap-shaped  
*gamete*, sex-cell  
*gangliiformis*, forming knots  
*gangligerus*, bearing knots  
*gaudeo*, to rejoice, delight  
*gelatina*, ae, f., gelatine  
*geminatus*, *geminat*, paired, twinned  
*gemmaferus*, bearing buds  
*gemmaiparus*, producing buds  
*generans*, generating  
*genesis*, is, f., origin  
*geniculatus*, bent  
*genuflexus*, bent  
*genuinus*, genuine, authentic  
*genus*, eris, n., genus  
*gerens*, bearing  
*germinans*, germinating  
*germinatio*, onis, f., germination  
*germinativus*, germinating  
*gero*, to bear, have, exhibit  
*gibbosus*, swollen  
*gigastylosporus*, with very large stylospores  
*gignens*, producing  
*gigno*, to bear  
*gilvus*, brownish  
*glaber*, smooth  
*glabrescens*, becoming smooth  
*glacies*, ei, f., glacier, ice  
*glans*, glandis, f., nut  
*glareosus*, gravelly  
*glaucescens*, turning bluish-green  
*glaucus*, sea-green  
*gleba*, ae, f., soil, mass  
*globosus*, *globose*, rounded  
*globuliger*, bearing a ball  
*globulus*, i, m., a globule  
*gloeocystidia*, cystidia of gelatinous or horny consistency  
*glomerula*, ae, f., a little mass  
*glomerulatum*, in heaps  
*gluten*, inis, n., glue  
*glutinosus*, *glutinous*, gluey  
*gonidium*, ii, n., an algal cell  
*gossypinus*, cottony  
*gracilis*, graceful, slender  
*gradatim*, gradually  
*gradus*, us, m., grade, step  
*gramen*, inis, n., grass  
*gramineus*, grassy  
*graminicola*, growing on grass  
*grandis*, large  
*grandiusculus*, somewhat large  
*granulatus*, granular  
*granulosus*, granular



**graphidoideus**, like *Graphis*, long and cleft  
**gratia**, ae, f., favor, acknowledgment  
**graveolens**, of unpleasant odor  
**gregarius**, **gregarious**, in clusters  
**gregatim**, in clusters  
**grex**, gregis, m., a flock  
**griseolus**, grayish  
**griseus**, gray  
**grossus**, thick  
**grumosus**, heaped  
**grumulus**, i, m., a heap  
**gumosus**, gummy  
**gutta**, ae, f., a vacuole  
**guttatus**, with little drops  
**guttula**, ae, f., a drop or vacuole  
**guttulosus**, with drops  
**gyalectoideus**, like *Gyalecta*  
**gypseus**, gypsum-like  
**gyrosus**, **gyrose**, spiral

## H

**habeo**, to have  
**habitatio**, onis, f., habitat  
**habitus**, us, m., habit  
**hactenus**, up to the present time  
**haemophile**, **hemophile**, living in blood  
**haerens**, adhering  
**haereo**, to hold to  
**halos**, o, f., a circle, halo  
**hamatus**, **hamate**, hooked  
**haud**, not at all  
**haustorium**, ii, n., a sucker  
**helicoides**, spiral-like  
**heliotropicus**, **heliotropic**, turning to the sun  
**helvolus**, deep purple  
**herba**, ae, f., a plant  
**herbicola**, dwelling on herbs  
**heteroecus**, **heteroecious**, on two hosts  
**heterogamete**, one of two unlike sex-cells  
**heterogamic**, with unlike sex-cells  
**heterogeneous**, **heterogeneous**, different  
**heteromorphus**, **heteromorphic**, of different kinds  
**hexagonus**, **hexagonal**, six-angled  
**hexasporus**, six-spored  
**hians**, gaping  
**hiascens**, gaping  
**hibernans**, resting  
**hic**, haec, hoc, this  
**hiccilic**, here and there  
**hiems**, emis, f., winter  
**hilum**, i, n., dot, mark, scar

**himantoideus**, like *Himantia*, velvety  
**hinc**, hence  
**hinc illinc**, on each side, here and there  
**hirtellus**, somewhat shaggy  
**histogenus**, produced directly from tissue, without conidiophores  
**histolysis**, the dissolving of a wall or tissue  
**hodiernus**, of today  
**holophytic**, chlorophyllous, independent  
**homoeecus**, on one host  
**homogeneous**, **homogeneous**, uniform  
**homomorphus**, alike, of one form  
**horizontalis**, horizontal  
**hornotinus**, of this year  
**horny**, like horn in texture  
**horridus**, rough, shaggy  
**hortus**, i, m., a garden  
**hospes**, itis, m., a host  
**hospitalis**, of a host  
**huc**, hither, in this direction  
**humectatus**, wet  
**humectus**, moist  
**humicole**, growing on soil  
**humidulus**, moist  
**humilis**, low, small  
**humistratus**, moist  
**humosus**, earthy  
**hyalinulus**, somewhat clear  
**hyalinus**, hyaline, clear  
**hyalosporus**, with clear, one-celled spores  
**hydrophilus**, aquatic  
**hygrometricus**, absorbing moisture  
**hygrophanus**, translucent  
**hymeniferus**, membrane-bearing  
**hymenium**, ii, n., fruiting surface, consisting of asci or of basidia  
**hymenophorum**, i, n., that which bears the hymenium  
**hypertrophians**, **hypertrophying**, enlarging  
**hypertrophy**, abnormal development, overgrowth  
**hypha**, ae, f., fungus filament  
**hyphasma**, atis, n., the mycelium  
**hyphoideus**, hypha-like  
**hyphomycetus**, mold-like, cobwebby  
**hyphopodium**, a more or less lobed appendage to a hypha  
**hyphula**, a short or delicate hypha  
**hypocreaceus**, like *Hypocrea*, fleshy and bright-colored  
**hypodermicus**, under the epiderm  
**hypogaeus**, **hypogean**, underground

hypogenus, on the under side  
 hypophloeodus, under the bark  
 hypophyllus, on the under side of leaf  
 hypostroma, atis, n., a foot-like base, usually of a stroma  
 hypothallus, i, m., hypothallus  
 hypothecium, the area just below the layer of asci  
 hypoxylod, like Hypoxylum, forming a pulvinate or crustose stroma  
 hysteriformis, like Hysterium, long and cleft  
 hysterinus, long and cleft as in Hysterium  
 hysteroid, like Hysterium, long and cleft  
 hysterophytic, without chlorophyll, dependent  
 hysterothecium, an oblong or linear perithecium opening by a cleft

## I

ibi, there, then  
 icon, onis, f., an image, figure  
 idem, the same  
 ideoque, therefore  
 idoneus, fit  
 igitur, therefore, accordingly  
 ignotus, unknown  
 ilico, there, on the spot  
 imbricatus, imbricate  
 immaculatus, without spots  
 immarginatus, without a margin  
 immaturus, young  
 immediate, directly  
 immersus, sunken  
 immotus, firm, immovable  
 immutatus, unchanged  
 impalpabilis, extremely fine and minute  
 imperspicuus, not clear  
 impervius, impervious, impassable  
 implens, filling  
 implexus, infolded  
 impolitus, not polished  
 impositus, imposed  
 imprimis, especially  
 improbabile, improbably  
 imus, lowest  
 inaequaliter, unequally  
 inaequilateralis, unequal-sided  
 inaequipolaris, with unequal poles  
 inanis, empty  
 inarticulatus, without divisions  
 incarcerationatus, hidden  
 incarnatus, pink  
 incertus, uncertain  
 incisio, onis, f., incision, cutting  
 incisus, cut  
 inclinatus, bent  
 inclusus, included, inclosed  
 incoctus, not cooked  
 incolens, dwelling in  
 incoloratus, without color  
 inconditus, confused, unformed  
 incrassatus, somewhat thickened  
 incrassatus, broadened, thickened  
 resco, to grow in, increase  
 incrustans, encrusting  
 incrustatus, encrusted  
 incumbens, lying down  
 incurviusculus, somewhat incurved  
 incusus, forged, made  
 inde, then, thence, therefore  
 indeterminatus, indefinite  
 indico, to indicate  
 indigito, to utter, announce  
 indivisus, undivided  
 indoles, is, f., nature, natural ability  
 indumentum, i, n., a covering  
 induratus, hardened  
 indurescens, growing hard  
 indusium, ii, n., indusium, cover  
 indutus, covered  
 ineptum, improper  
 inermis, unarmed  
 infarciens, stuffing, filling  
 infectus, spoiled, diseased  
 inferior, lower  
 inferus, below, lower  
 infestans, infesting  
 inficiens, infecting  
 infimus, lowest  
 infixus, fastened in  
 inflans, inflating  
 inflatus, inflated  
 infossus, sunken  
 infra, lower, below  
 infundibuliformis, funnel-shaped  
 infuscatus, darkened  
 initio, at first  
 initium, ii, n., the beginning  
 innatus, innate, internal, covered  
 innotesco, to become clear  
 innumerus, innumerable  
 inordinatus, without order  
 inquinans, blackening  
 inquinatus, dirty  
 inquirendus, to be investigated  
 insculptus, insculptate, hollowed in

*insectum*, i, n., insect  
*insertio*, onis, f., insertion  
*insertus*, inserted  
*insidens*, seated upon  
*insimul*, at the same time  
*insitus*, ingrafted  
*inspersus*, scattered  
*inspissatus*, thickened  
*instar*, like  
*instructus*, built up  
*insuetus*, unusual  
*insula*, ae, f., an island  
*integer*, whole  
*intense*, intensely  
*intercalary*, in the midst of, between  
*interdum*, sometimes  
*interim*, meanwhile  
*intermedius*, intermediate  
*intermixtus*, mixed with  
*internervius*, between the nerves  
*internodus*, internode, space between two  
     nodes or joints  
*internus*, internal  
*interspersus*, interspersed, scattered  
*interstitium*, ii, n., a space  
*intertextus*, intertwined  
*intracellularis*, within a cell  
*intrans*, entering  
*intricatus*, intertwined  
*intuitus*, us, m., look, view  
*intumescens*, swelling  
*intus*, within  
*invasus*, invaded  
*inveniens*, finding  
*inversus*, inverted  
*investiens*, covering  
*invicem*, in turn, mutually  
*involucrum*, i, n., involucre  
*involute*, with the edges rolled inward  
*ipse*, self  
*irregularis*, irregular  
*irregulariter*, irregularly  
*irrepens*, creeping in  
*irroratus*, bedewed  
*isabellinus*, dull, tawny  
*isarioideus*, isarioid, like *Isaria*, with a  
     cylinder of hyphae  
*isogamete*, one of two similar sex-cells  
*isogamic*, producing equal sex-cells  
*isthmus*, i, m., a connection  
*itaque*, therefore  
*iteratus*, repeatedly  
*iterum*, again, once more

## J

*jacio*, to throw  
*jam*, now, already  
*jamdudum*, this long time  
*jodicus*, of iodine  
*jodus*, i, m., iodine  
*junior*, younger, young  
*jus*, juris, n., law, right  
*juvenilis*, young  
*juventus*, utis, f., youth  
*juxta*, near

## K

*kermesinus*, carmine

## L

*labefactus*, sunken, shaken, ruined  
*labiatus*, lipped  
*labium*, ii, n., lip  
*labrum*, i, n., lip  
*labyrinthine*, like a maze  
*lac*, lactis, n., milk  
*laccatus*, varnished, shining  
*lacerans*, tearing  
*laceratus*, lacerate, torn  
*lacerus*, torn  
*lacinia*, ae, f., a tear  
*laciniatus*, laciniate, torn lobed  
*lacrimiformis*, tear-like  
*lactescens*, milky  
*lacteus*, milky  
*lactiginosus*, filled with milk, milky  
*lacuna*, ae, f., a hole  
*lacunosus*, lacunose, with hollows  
*lacus*, us, m., a lake  
*laeticolor*, bright-colored  
*laetus*, bright  
*laevis*, smooth  
*lageniformis*, lageniform, flask-shaped  
*lamella*, ae, f., gill  
*lamelloid*, plate-like, resembling the gills  
     of mushrooms  
*lamina*, ae, f., scale, layer, blade  
*laminaris*, leaf-like  
*lanatus*, lanate, woolly  
*lanceolatus*, lance-shaped  
*languens*, languescens, drooping, wilting,  
     withering  
*languidus*, weak, drooping  
*lanosus*, woolly  
*lanuginosus*, woolly  
*laricinus*, of larch  
*larva*, ae, f., larva

- lateritius*, brick-red  
*latitans*, concealing, hiding  
*latitudo*, inis, f., width  
*latusculus*, somewhat wide  
*latus*, eris, n., the side  
*latus*, broad, wide  
*laxus*, loose  
*lecanorine*, like *Lecanora*, the exciple containing algae  
*lecideine*, like *Lecidea*, with carbonous proper exciple  
*lectus*, collected  
*lego*, to collect  
*leiosporus*, with smooth spores  
*lenis*, soft, smooth, mild  
*leniter*, slightly, gently  
*lenticularis*, *lenticular*, lens-shaped  
*lentiformis*, *lentiform*, lens-shaped  
*lentus*, tough, flexible  
*leporinus*, of a hare  
*leprosus*, scab-like  
*leptodermus*, thin-walled  
*leucosporus*, with white spores  
*levigatus*, smooth  
*levis*, light, smooth  
*liber*, free  
*liberans*, freeing  
*liberatus*, freed  
*licet*, it is permitted  
*lichenicola*, *lichenicole*, growing on lichens  
*lichenoides*, lichen-like  
*lignatilis*, of wood  
*ligneus*, woody  
*lignicola*, *lignicole*, growing on wood  
*lignum*, i, n., wood  
*lilacinus*, lilac-colored  
*limbatus*, bordered  
*limbum*, i, n., limb, border  
*limes*, itis, m., limit  
*limitatus*, limited  
*limoniformis*, *limoniform*, lemon-shaped  
*linea*, ae, f., line  
*linearis*, linear  
*lineola*, ae, f., little line  
*lineolatus*, with fine lines  
*linguiformis*, tongue-shaped  
*liquefaciens*, liquefying  
*liquo*, to melt  
*lirella*, ae, f., furrow  
*lirelliform*, furrow-like  
*lividus*, livid, purple  
*lobulatus*, somewhat lobed  
*locatus*, located  
*locellatus*, with chambers  
*locellus*, i, m., a little cell  
*loco*, to place, locate  
*loculatus*, with chambers or hollows  
*loculiferus*, containing hollows  
*loculiform*, chamber-like  
*loculoid*, chamber-like or containing chambers  
*loculus*, i, m., *locule*, place, cell, hollow  
*locus*, i, m., place  
*longicollus*, with long beaks  
*longior*, longer  
*longitrorsum*, longitudinally  
*longitudinalis*, lengthwise  
*longus*, long  
*lophus*, i, m., a crest  
*lubricus*, slippery  
*lucidus*, *lucid*, clear  
*luculenter*, very well  
*ludibundus*, playful  
*lumen*, inis, n., opening  
*lunatus*, *lunate*, crescent-shaped  
*lunulate*, crescent-shaped  
*luridus*, lurid  
*lutescens*, yellowish  
*luteus*, yellow  
*lutosus*, muddy  
*lux*, lucis, f., light

## M

- maceratus*, softened  
*macro-*, large  
*macula*, ae, f., a spot  
*macularis*, spotted  
*maculicola*, *maculicole*, dwelling in spots  
*maculiformis*, spot-shaped  
*madidus*, moist, wet  
*mador*, oris, m., moisture  
*magis*, more  
*magniguttatus*, with one or two large globules  
*magnitudo*, inis, f., size  
*magnus*, great, large  
*majusculus*, somewhat large  
*male*, poorly  
*mamillaris*, protuberant  
*mamilliformis*, shaped like a papilla  
*maneo*, to stay, remain  
*manifestus*, evident  
*manipulus*, i, m., bundle  
*mappa*, ae, f., a map  
*marcescens*, withering  
*marginatus*, margined  
*margo*, inis, m., and f., margin  
*marmoratus*, marble-like

- massa*, ae, f., mass  
*massula*, ae, f., a little mass  
*matrix*, belonging to the matrix  
*matrix*, icis, f., *matrix*, layer or tissue of host  
*maturescens*, ripening  
*maturus*, mature  
*maxime*, greatly  
*mazaedium*, i, n., a dough-like mass of spores and paraphyses  
*medietas*, atis, f., middle  
*mediocris*, average  
*mediocriter*, moderately  
*medius*, i, m., medium  
*medulla*, ae, f., the pith, medulla  
*medullary*, belonging to the pith or medulla  
*medullatus*, stuffed, pithy  
*melanosporus*, with black spores  
*melioideus*, like *Meliola*  
*melius*, better  
*melleus*, honey-colored  
*mellinus*, honey-colored  
*membrana*, ae, f., membrane  
*membranaceus*, *membranaceous*, *membranous*, thin or membrane-like  
*memoria*, ae, f., memory  
*mens*, mentis, f., mind  
*mensis*, is, m., month  
*merda*, ae, f., dung  
*merenchymaticus*, with many cells  
*merens*, deserving  
*meridionalis*, southern  
*mesogenus*, *mesogenous*, borne in the middle  
*mesopus*, with central stalk  
*metallicus*, metallic  
*metiens*, measuring  
*metuliformis*, pyramid-like  
*micans*, sparkling, glittering  
*micro-*, small  
*microconidiophorus*, bearing small conidia  
*microcystis*, small-celled  
*micronemeus*, with short hyphae  
*microscopium*, ii, n., microscope  
*migro*, to move  
*miniatus*, bright red  
*minimum*, least  
*minor*, smaller  
*minuties*, ei, f., detail  
*minutus*, minute  
*mire*, wonderfully, exceedingly  
*mitis*, pleasant, mild  
*mitratus*, miter-shaped  
*mobilis*, *mobile*, moving  
*modice*, moderately  
*molecularis*, molecule-like  
*mollis*, smooth  
*molliusculus*, somewhat smooth  
*monascus*, *monascous*, containing a single ascus  
*moneo*, to caution, warn  
*monile*, is, n., a chain, necklace  
*moniliformis*, *moniliform*, chain-like  
*monocephalus*, *monocephalic*, one-headed  
*monocyclus*, with one cycle  
*monoecus*, *monoecious*, with both sex organs on the same plant  
*monophagous*, mycelium confined to a single host-cell  
*monoplastus*, uniform, with one protoplast  
*monospermus*, one-spored  
*monosporus*, one-spored  
*monostichus*, *monostichous*, in one row  
*mons*, tis, m., a mountain  
*monstrosus*, monstrous  
*montanus*, of mountains, mountainous  
*montosus*, mountainous  
*morbosus*, diseased  
*morbus*, i, m., disease, malady  
*moriens*, dying  
*moriformis*, mulberry-like  
*mos*, moris, m., manner, use  
*motilis*, *motile*, able to move  
*movens*, moving  
*mox*, at length  
*mucedineus*, white and cottony  
*mucidus*, moldy  
*mucilago*, inis, f., mucilage  
*mucor*, oris, m., mold  
*mucosus*, *mucose*, slimy, mucous  
*mucro*, onis, m., a point  
*mucronatus*, pointed  
*mucronulatus*, with a little point  
*mucronulus*, i, m., a little point  
*mucus*, i, m., mucus, mucilage  
*multifidus*, *multifid*, many-divided  
*multiform*, of various shapes  
*multiguttatus*, with many oil-drops  
*multilocularis*, many-celled  
*multiloculatus*, with many cells  
*multinucleate*, with many nuclei  
*multisporus*, many-spored  
*multizonatus*, with many zones  
*multoties*, many times, often  
*multus*, much

*munitus*, furnished  
*murialis*, muriform  
*muricatus*, muricate, dotted, spiny  
*muriculatus*, muriculate, spiny  
*muriformis*, muriform, with cross and longitudinal walls  
*murinus*, mouse-colored  
*murus*, i, m., wall  
*muscosus*, mossy  
*mutans*, changing  
*mutatus*, changed  
*muticus*, muticate, not pointed  
*muto*, to change  
*mutue*, mutually  
*mutuus*, mutual  
*mycelialis*, mycelial  
*mycelicus*, mycelial  
*mycelium*, ii, n., *mycelium*, web of hyphae  
*mycogenus*, dwelling on fungi  
*mycologus*, i, m., a student of fungi  
*myochrous*, mouse-colored  
*myriosporous*, with numerous spores  
*mytiliform*, shell-like

## N

*napiformis*, turnip-shaped  
*nascens*, arising  
*nascor*, to be born  
*natalis*, native  
*nafragium*, ii, n., shipwreck  
*nauseosus*, ill-smelling  
*navel*, point of attachment  
*navicularis*, boat-shaped  
*nebulosus*, *nebulous*, cloudy, dark  
*ne*, no, not  
*nec-non*, *necnon*, and also  
*nectriaceus*, like *Nectria*  
*nemorosus*, woody, shady  
*nempe*, certainly, without doubt  
*neque*, and not  
*nervicola*, growing on veins  
*nervisequus*, *nervisequens*, following the veins  
*nescio*, not to know  
*neutiquam*, by no means, not quite  
*nidulans*, nesting  
*nidulor*, to nest  
*niduo*, to nest  
*niger*, black  
*nigredo*, inis, f., blackness  
*nigresco*, to grow black  
*nigricans*, blackening  
*nigrifactus*, blackened  
*nigrificatus*, made black

*nigrolimitatus*, black-lined  
*nigropilus*, black-hairy  
*nigropunctulatus*, black-dotted  
*nigrostrigosus*, black-hairy  
*nimis*, too much, exceedingly  
*niinium*, too, too much  
*nisi*, unless  
*nitens*, shining  
*niteo*, to shine  
*nitor*, oris, m., splendor, luster  
*niveus*, snow-white  
*nobilis*, grand  
*nodosus*, with many or large joints  
*noduliferus*, bearing knots  
*nodulosus*, with joints  
*nodus*, i, m., a joint, knot  
*nomen*, inis, n., a name  
*non*, not  
*nondum*, not yet  
*nonne*, not  
*nonnihil*, somewhat  
*nonnisi*, except  
*nonnullus*, some  
*nonnumquam*, sometimes  
*notatus*, marked  
*notus*, known  
*novus*, new  
*nubecula*, ae, f., a little cloud  
*nubilosus*, cloudy  
*nucleiferus*, nucleus-bearing  
*nucleus*, i, m., center, nucleus  
*nudiusculus*, somewhat naked  
*nudus*, naked  
*nullimodus*, in no wise  
*nullus*, none  
*numerousus*, numerous, many  
*numerus*, i, m., a number  
*numquam*, never  
*nunc*, now  
*nutiquam*, *ne-utiquam*, by no means  
*nuto*, to incline  
*nutrix*, icis, f., host  
*nux*, nucis, f., a nut

## O

*ob*, for, toward, on account of  
*obclavatus*, reverse club-shaped  
*obconicus*, reverse conical  
*obducens*, covering  
*obduco*, to cover  
*oblique*, obliquely  
*obliterans*, disappearing  
*obliteratus*, lost, destroyed  
*oblongatus*, oblong

- obpyriformis*, *obpyriform*, reverse pear-shaped  
*obrutus*, covered  
*obscurus*, dark  
*observandum*, to be observed  
*observatus*, seen, found  
*obsessus*, surrounded  
*obsitus*, covered, filled  
*obsolescent*, nearly obsolete, disappearing  
*obsolete*, rudimentary or lacking  
*obsoletus*, *obsolete*, lacking  
*obtectus*, covered  
*obtegens*, covering  
*obtritus*, broken, crushed, rubbed  
*obturaculum*, i, n., opening  
*obtusangulus*, with obtuse angles  
*obtusatus*, obtuse  
*obtutus*, us, m., a looking at  
*obvallatus*, surrounded  
*obvelo*, to cover  
*obvius*, clear, open  
*obvolutus*, wrapped up, rolled up  
*obvolvens*, enveloping  
*occupans*, occupying  
*ocellatus*, with openings  
*ochraceus*, pale yellow  
*ochrosporous*, with yellow or yellow-brown spores  
*octavus*, eighth  
*octo*, eight  
*octonus*, in eights  
*octoseptatus*, with eight cross-walls  
*octosporus*, eight-spored  
*octuplus*, eightfold  
*oculo armato*, with the microscope or lens  
*oculo nudo*, with unaided eye  
*oleosus*, oily, with oil drops  
*olidus*, smelling, odorous  
*oligosporus*, few-spored  
*olim*, formerly  
*olivaceus*, olive  
*olivascens*, *olivascens*, becoming olive  
*omissus*, omitted  
*omnino*, everywhere, entirely  
*oosporous*, with resting spores formed by the union of unlike sex-cells, e. g., of egg and sperm  
*opacus*, opaque  
*opalinus*, clear  
*ope*, by means of  
*operculatus*, *operculate*, with a lid  
*operculiformis*, lid-shaped  
*operculum*, i, n., a cover, lid  
*oppidum*, i, n., a town  
*oppletus*, filled  
*oppositus*, placed against, opposed  
*orbicularis*, *orbicular*, round  
*orbiculatim*, circularly  
*orbis*, is, m., a circle  
*ordo*, inis, m., order  
*organum*, i, n., an organ  
*oriens*, arising  
*orientalis*, eastern  
*orificium*, i, n., opening  
*origo*, inis, f., origin  
*orior*, to arise  
*oriundus*, descended  
*ornatus*, furnished  
*orthotropus*, straight  
*ortus*, arisen  
*os*, oris, n., mouth  
*oscillans*, oscillating  
*osculum*, i, n., little mouth or opening  
*ostendo*, to show  
*ostiolatus*, *ostiolate*, with a mouth  
*ostiolum*, i, n., ostiole, opening  
*ovalis*, oval  
*ovaricola*, growing in ovaries  
*ovatus*, egg-shaped  
*ovinus*, of or belonging to sheep  
*ovoideus*, nearly egg-shaped

## P

- pachydermaticus*, thick-walled  
*pachypleurus*, thick-walled  
*paene*, nearly  
*paenultimus*, next to the last  
*pagina*, ae, f., page, side  
*paleaceus*, chaffy, chaff-like  
*paliformis*, *paliform*, stake-shaped, *palisade-like*  
*pallescens*, turning pale  
*pallidus*, pale  
*palmatus*, *palmate*, hand-like  
*palmicola*, growing on palms  
*palpebra*, ae, f., eyelid  
*paludosus*, marshy  
*palumbinus*, dove-colored, grayish  
*palus*, udis, f., a marsh, swamp  
*palus*, i, m., stake  
*panicula*, ae, f., a panicle  
*paniculatus*, *paniculate*, branched  
*panis*, is, m., bread  
*pannosus*, *pannose*, ragged  
*pannum*, i, n., a rag, cloth  
*papilla*, ae, f., nipple  
*papillaris*, *papillate*, with a nipple

- papilliformis*, like a nipple  
*papillula*, ae, f., a little nipple  
*papillulatus*, *papillulate*, with a very small nipple  
*papulosus*, with many pustules  
*papyraceus*, papery  
*paradoxus*, strange, contrary  
*paraphysate*, with paraphyses  
*paraphyses*, sterile hyphae between asci  
*paraphysoids*, plates of cellular tissue between asci, more or less like paraphyses  
*paratus*, prepared, designed  
*parcus*, few, scanty  
*parenchymaticus*, parenchyma-like  
*parenchymic*, like parenchyma, cellular or appearing so  
*parenchymoid*, more or less like parenchyma, cellular  
*paries*, etis, m., a wall  
*paritas*, atis, f., equality  
*pariter*, equally, as well  
*paroechia*, ae, f., parish  
*pars*, partis, f., a part  
*partim*, partly, some  
*partitus*, divided  
*parum*, too little, not very  
*parvulus*, small  
*parvus*, small  
*pascuum*, i, n., pasture  
*passim*, everywhere  
*patellaris*, dish-like  
*patellate*, like a plate  
*patelliformis*, shaped like a dish  
*patelloid*, more or less dish-like  
*patens*, spreading  
*patenter*, openly  
*pateo*, to extend, to be clear  
*pator*, to support, endure  
*patulus*, spreading  
*paucilocularis*, few-celled  
*paucus*, few  
*paulatim*, gradually  
*paulisper*, for a little while  
*paulo*, a little, somewhat  
*pectinate*, like a comb  
*pectinatus*, comb-like  
*pedatus*, foot-like  
*pedicellatus*, *pedicellate*, with a pedicel  
*pedicellus*, i, m., a pedicel  
*pediculatus*, pedicelled  
*pedunculatus*, stalked  
*pedunculicola*, growing on peduncles  
*pellicle*, skin, covering  
*pellicula*, ae, f., a little skin  
*pelliculosus*, with a covering  
*pelluciditas*, atis, f., clearness  
*pellucidus*, *pellucid*, clear  
*peltatus*, shield-shaped  
*pendo*, to hang  
*pendulus*, hanging  
*penetrans*, penetrating  
*penicillate*, brush-like  
*penicilliformis*, brush-like  
*penitus*, inward, inner, inwardly  
*pentagonus*, *pentagonal*, five-sided  
*per*, through, very  
*peraffinis*, closely related  
*perbrevis*, very short  
*percipiens*, perceiving  
*percurrent*, running throughout  
*percursus*, run through  
*perdurans*, hardening, lasting  
*perduro*, to last  
*perennans*, perennial  
*perennis*, perennial  
*perenno*, to continue, endure  
*perexiguus*, very thin  
*perexilis*, very slender  
*perfectus*, perfect, complete  
*perforans*, perforating  
*perforate*, pierced  
*perforatus*, perforated  
*perfossus*, hollowed out  
*pericarpium*, ii, n., *pericarp*, covering; also, the whole spore-body  
*peridermicus*, belonging to the periderm  
*peridermium*, ii, n., *periderm*, covering  
*peridiole*, a small seed-like body in a peridium  
*peridium*, ii, n., *peridium*, wall; else, the whole spore-body  
*periphericus*, *peripheral*, around the edge  
*periphyses*, filaments in an ostiole or canal  
*peristomium*, ii, n., mouth  
*perithecialis*, perithecial  
*perithecicole*, parasitic in a perithecium  
*perithecigerus*, perithecium-bearing  
*perithecioideus*, perithecium-like  
*peritheciphorus*, bearing perithecia  
*perithecium*, a closed ascus fruit  
*perluceo*, to shine through  
*permultus*, very much  
*peronatus*, rough, rough-booted  
*perparum*, very little  
*perquam*, extremely  
*perrumpens*, breaking through



- persicinus, peach-colored  
 persistans, persistent  
 perspicuus, transparent  
 perspicuus, clear  
 persuasus, convinced  
 pertenuis, very thin  
 pertineo, to belong  
 pertusus, protruded  
 pervius, passable  
 pes, pedis, m., foot  
 petiolum, i, n., petiole  
 petrifactus, made like rock, hardened  
 pezizoideus, pezizoid, cup-fungus-like, cup-like  
 phacidoideus, like Phacidium, black and disk-like  
 phaeophragmeus, with dark, transeptate spores  
 phaeosporus, with dark, one-celled spores  
 phaseoliformis, bean-shaped  
 phialiformis, saucer- or cup-shaped  
 phomatoideus, like Phoma  
 phyllachoroid, like Phyllachora, the stroma fused with the epiderm  
 phyllogenus, phyllogenus, borne on leaves  
 phyllostictoides, like Phyllosticta  
 phytogenus, phytogenous, dwelling on plants  
 phytographus, i, m., a botanist  
 phytophilus, phytophilous, growing on plants  
 pictura, ae, f., a painting  
 pictus, colored  
 pileatus, pileate, cap-shaped  
 pileiform, like a cap  
 pileus, i, m., a cap  
 pilosellus, somewhat hairy  
 pilosus, pilose, with hairs  
 pilum, i, n., a hair  
 pineus, piny  
 pingo, to paint  
 pinna, ae, f., a feather, leaflet  
 pinnatus, pinnate, feather-like  
 piperatus, peppery, pungent  
 piriform, pear-shaped  
 pirinversiformis, reverse pear-shaped  
 piscis, is, m., a fish  
 pisum, i, n., pea  
 placenta, ae, f., placenta, ovuliferous tissue  
 placentiformis, placenta-like, cake-like  
 plaga, ae, f., a spot  
 plagula, ae, f., a little spot  
 plaguliformis, spot-like  
 planta, ae, f., a plant  
 plantula, ae, f., a little plant  
 planus, plane, flat  
 plasma, atis, n., plasm, mass  
 plasmodium, ii, n., protoplasm-like mass  
 plectenchym, tissue woven of fibers or hyphae  
 plectenchymic, plectenchymoid, like plectenchym, woven or fibrous  
 pleiosporus, many-spored  
 plenus, full  
 plerumque, for the most part  
 pleuracrogenus, borne at the tip and at the sides  
 pleurogenus, pleurogenous, borne on the walls or sides  
 plica, ae, f., a fold  
 plicatus, plicate, folded  
 pliciformis, fold-form  
 plumbeus, lead-colored  
 plumosus, plumose, plummy, feathery  
 plures, many  
 pluriarticulatus, many-celled, many-jointed  
 pluriciliate, with many cilia  
 pluries, often  
 plurifurcatus, many-forked  
 pluriguttulatus, many-guttulate  
 plurilocellatus, with many hollows  
 pluriperforate, with several openings  
 pluristratosus, many-layered  
 poculiformis, cup-shaped  
 podetium, i, n., a stalk-like or cup-like erect thallus  
 polaris, polar  
 politus, polished  
 polleo, to be able, avail  
 pollex, icis, m., thumb  
 pollicaris, thumb-like, an inch long  
 polus, i, m., a pole  
 poly-, many  
 polyascus, with the asci in a single hymenium, not separated by sterile bands  
 polyascus, with many asci  
 polyblastus, many-celled  
 polycephalus, polycephalous, with many heads  
 polyedricus, polyhedral, many-sided  
 polygonus, with many angles  
 polyphagous, mycelium occupying several to many host-cells  
 polyrhizus, with many roots

- polystichus, polystichous**, in many rows  
**pondus, eris, n.**, weight  
**populus, i, f.**, poplar  
**poroid**, with more or less evident pores  
**porosus**, with pores  
**porrectus**, extended, protracted  
**porrigo**, to stretch out  
**portiuncula, ae, f.**, small gallery  
**porus, i, m.**, a pore  
**positus**, placed  
**possum**, to be able  
**postea**, hereafter  
**posterius**, later, afterward  
**postice**, at the back  
**postremus**, last  
**potius**, rather  
**praebens**, offering, exhibiting  
**praecedens**, preceding  
**praecipue**, especially  
**praeclarus**, distinguished  
**praecox**, early, abundant  
**praeditus**, furnished  
**praefendum**, preferred  
**praelongus**, very long  
**praeprimis**, especially  
**praesens**, present  
**praesertim**, particularly  
**praestans**, distinguishing, excelling  
**praesumptus**, assumed, presumed  
**praeter**, past, against, besides  
**praetereaue**, besides, moreover  
**praeteritus**, past  
**pratium, i, n.**, a meadow  
**primitivus, primitive**, original  
**primitus**, at first  
**primus**, first  
**prioritas, atis, f.**, priority  
**prismaticus**, prism-like  
**pristinus, pristine**, early, original, primitive  
**privus**, without, deprived  
**pro**, for  
**proba, ae, f.**, proof  
**probabilis**, probable  
**procerus**, tall  
**processus, us, m.**, projection  
**procreans**, generating, producing  
**procul**, far, remote  
**procumbens, procumbent**, prostrate  
**prodeuns**, projected  
**productus**, carried out, produced  
**proferens**, offering, producing  
**profiscor**, to begin, arise  
**profunditas, atis, f.**, depth  
**profundus**, deep  
**projectus**, thrown off  
**proles, is, f.**, race, offspring  
**proliferate**, to extend by offshoots or renewed growth  
**proliferus, proliferous**, produced, proliferate  
**proliger**, bearing offspring  
**prolongatio, onis, f.**, prolongation, lengthening  
**promiscuus, promiscuous**, mixed, indiscriminate  
**promycelium, i, n.**, promycelium, germinating tube or cell series  
**prope**, near  
**proper exciple**, an apothecial covering or wall without algae  
**propinquus**, adjacent  
**propius**, more nearly, closer  
**propter**, near, because of, on account of  
**propulsus**, expelled  
**proratione**, comparatively  
**prorsus**, forwards, exactly  
**prorumpo**, to break through  
**prosenchymaticus, prosenchymatic**, consisting of long cells or filaments  
**prosenchymic**, like prosenchyma, fibrous in structure  
**proteus**, changing, variable  
**prothecium**, a primitive or rudimentary perithecium, as in Gymnascaceae  
**protractus**, extended  
**protrudens**, projecting  
**provectus**, prolonged, advanced  
**proveniens**, coming  
**pruinosis, pruinose**, powdery  
**pruinulosus**, somewhat powdery  
**pseudo-**, false  
**pseudocyphella**, a pit-like structure resembling a cyphella, on the under side of some lichen thalli  
**pseudoparaphysis**, a paraphysis-like filament found in other groups than Ascomycetes  
**pseudoparenchyma**, false parenchyma, a tissue looking like parenchyma but formed of threads  
**pseudoperidium**, a peridium, an enclosing membrane  
**pseudoplasmodium, ii, n.**, false plasmodium  
**pseudopodium, ii, n.**, false root, lobe  
**pseudostiolum, ii, n.**, false ostiole  
**pseudostroma, atis, n.**, false stroma

*pseudostromaticus*, resembling a stroma  
*pseudothallus*, i, m., false thallus  
*puberulus*, somewhat hairy  
*pubes*, is, f. hairy  
*pubescens*, hairy  
*puccinoideus*, like *Puccinia*  
*pulchellus*, beautiful  
*pulcher*, beautiful  
*pulchre*, beautifully  
*pulpa*, ae, f., pulp, mass  
*pulposus*, pulpy, fleshy  
*pulveraceus*, powdery  
*pulverulentus*, powdery  
*pulvinatus*, *pulvinate*, like a cushion,  
 strongly convex  
*pulvinoid*, more or less cushion-like  
*pulvinulus*, i, m., a little cushion  
*pulvis*, eris, m., powder  
*punctiformis*, *punctiform*, dot-like  
*punctulans*, dotting  
*punctulatus*, punctate, dotted  
*purpurascens*, becoming purple  
*purus*, pure  
*pusillus*, tiny  
*pusio*, onis, m., a growth  
*pustula*, ae, f., a small swelling  
*pustulate*, pertaining to a swollen mass  
*putamen*, inis, n., shell  
*puto*, to clean, adjust, consider  
*putredo*, to decay  
*putrescens*, decaying  
*putris*, decaying  
*pycnicole*, living in pycnium or pycnidium  
*pycnidicus*, pycnidial, of a pycnidium.  
*pycnidium*, i, n., *pycnidium*, receptacle  
 bearing conidia  
*pycnium*, ii, n., the spermagonium or  
 pycnidium of rusts  
*pyconoconidium*, the conidium produced  
 in a pycnidium  
*pycnospore*, a pycnidial conidium  
*pyreniformis*, *pyreniform*, shaped like a  
 nut  
*pyriformis*, pear-shaped  
*pyxidatus*, like a box

## Q

*quadrococcus*, of four round cells  
*quadripartitus*, four-divided  
*quadrisporus*, four-spored  
*quadrum*, i, n., a square  
*qualis*, like  
*quam*, than  
*quandoque*, whenever, at some time

*quartus*, fourth  
*quasi*, almost  
*quater*, four times  
*quaternus*, by fours  
*quattuor*, four  
*quercinus*, oaken  
*quia*, because  
*quidam*, a certain, somebody, something  
*quinqueseptatus*, five-septate  
*quisque*, each  
*quisquiliae*, arum, f., dirt, trash  
*quoad*, as long as, as much as  
*quod*, that  
*quoque*, also  
*quotannis*, annually  
*quovis*, to any place whatever

## R

*racemulus*, i, m., a little raceme  
*racemus*, *raceme*, i, m., a bunch of grapes  
*rachis*, is, f., axis  
*radians*, radiating  
*radiatim*, radiately  
*radicalis*, basal  
*radicans*, root-like, rooting  
*radicatus*, *radicate*, more or less rooted  
*radiciformis*, root-shaped  
*radicosus*, having many roots  
*radix*, icis, f., a root  
*ramicola*, *ramicole*, living on twigs  
*ramosus*, *ramose*, much branched  
*ramulus*, i, m., a little branch  
*ramus*, i, m., a branch  
*rarius*, more rarely  
*raro*, rarely  
*rasus*, leveled  
*ratio*, onis, f., reckoning, list, affair  
*reabsorptus*, reabsorbed  
*recedo*, to recede, differ  
*recens*, entis, *recent*, fresh, young  
*recensio*, onis, f., a reviewing  
*receptaculum*, i, n., *receptacle*, reservoir,  
 chamber  
*recludens*, opening  
*reclusus*, disclosed, revealed  
*recognoscens*, recognizing  
*rectangularis*, *rectangular*, right-angled  
*rectangulus*, rectangular  
*rectus*, straight, true  
*recurvus*, *recurved*, bent back  
*reddo*, to return, restore  
*refertus*, returned, referred  
*refractus*, turned back  
*refrangens*, refracting, breaking

- refringens, refracting  
 regio, onis, f., region  
 rejectamentum, something thrown away, rubbish  
 relatus, related  
 relaxatus, relaxed, loosened, opened  
 relinquens, leaving  
 relinquo, to leave  
 reliquus, left, remaining  
 remote, distantly  
 remotiusculus, somewhat distant  
 reniformis, reniform, kidney-shaped  
 repandus, turned back  
 repens, creeping  
 reperio, to find  
 repertorium, ii, n., an inventory, catalogue  
 repertus, found  
 repete, repeatedly  
 repetitus, repeated  
 repletus, full  
 repo, to crawl  
 reptans, creeping  
 res, rei, f., a thing  
 resolvens, breaking up  
 resorptus, absorbed  
 restituo, to replace, restore, rebuild  
 resupinatus, resupinate, horizontal, the hymenium turned up  
 rete, n., retis, is, f., net  
 reticulatus, reticulate, net-like  
 reticulum, i, n., a net  
 retiformis, net-like  
 retineo, to retain, keep  
 retis, is, f., a net  
 retrorsus, backward  
 retusus, with a little sinus  
 revelo, to reveal, uncover  
 revera, indeed, in fact  
 revivescens, reviving  
 revoco, to recall  
 revolutus, folded back  
 rhabarbarinus, yellow  
 rhizoid, root  
 rhizoideus, root-like  
 rhizomorphoideus, root-like  
 rhizophilus, growing on roots  
 rhodosporus, with rose-colored spores  
 rhomboideus, rhomboid  
 rhytismoideus, like Rhytisma  
 ricciformis, like Riccia, a liverwort  
 rigens, stiff, rigid  
 rigidulus, somewhat stiff  
 rigidus, stiff  
 rima, ae, f., cleft  
 rimosus, rimose, cleft, cracked  
 ripa, ae, f., bank  
 rite, rightly, fitly, well  
 rivulosus, with channels  
 rivus, i, m., brook  
 robustus, robust  
 roridus, like dew, bedewed  
 ros, roris, m., dew  
 roseolus, somewhat rosy  
 roseus, rose-colored  
 rostellatus, somewhat beaked  
 rostratus, rostrate, beaked  
 rostriformis, beak-like  
 rostrum, i, n., beak  
 rosulatus, rosette-like  
 rotundatus, rounded  
 rubedo, inis, f., redness  
 rubellus, somewhat reddish  
 rubens, reddening  
 rubeolus, somewhat reddish  
 ruber, red  
 rubescens, growing red  
 rubiginosus, rust-colored  
 rubricosus, reddish  
 rufescens, becoming reddish  
 rufus, reddish  
 rugosiusculus, more or less wrinkled  
 rugosus, rugose, creased, wrinkled  
 rugulosus, furrowed, roughened  
 rumpens, breaking  
 ruptus, broken  
 rursus, backward  
 rutilus, red

## S

- saccatus, saccate, sack-like  
 saccharatus, sugared, sugary  
 saccharinus, sugary  
 saccharum, i, n., sugar  
 sacciformis, sack-shaped  
 sacculiformis, like a little sack  
 sacculus, i, m., a little sack  
 saepe, often  
 salicinus, of willow  
 salmonicolor, salmon-colored  
 salmonius, salmon-colored  
 saltem, at least  
 samara, ae, f., key fruit  
 samariform, key-shaped  
 sanguineus, bloody, blood-colored  
 sapidus, filled with sap, savory  
 sapor, oris, m., flavor  
 saprogenus, saprogenous, growing on decayed matter

- saprophilus*, growing on decaying matter  
*sarciniformis*, sarciniform, packet-like  
*sarmentum*, i, n., twig  
*sat*, enough, sufficiently  
*satis*, sufficient  
*saturatus*, saturated  
*scaber*, rough  
*scabridus*, rough  
*scabriusculus*, somewhat rough  
*scalaris*, of a ladder, or staircase  
*scaliformis*, ladder-like  
*scariosus*, thin, papery  
*scheda*, ae, f., sheet of paper  
*scio*, to know  
*scissilis*, splitting  
*sclerotiformis*, sclerotium-like  
*sclerotioideus*, sclerotoid, sclerotium-like  
*sclerotium*, i, n., sclerotium, a hard black mass  
*scobis*, is, f., sawdust, filings  
*scolecosporus*, with thread-shaped or acicular spores  
*scopulate*, like a brush  
*scrobiculatus*, roughened, furrowed  
*scrotiformis*, bladder-like  
*scruposus*, rough  
*scrutator*, oris, m., an investigator  
*scutatus*, shield-shaped  
*scutellatus*, like a small shield  
*scutellum*, i, n., the shield-like cover of the ascoma of *Microthyriales*  
*scutiformis*, shield-shaped  
*secedens*, separating  
*secernibilis*, separable  
*sectio*, onis, f., a section  
*secundarius*, secondary  
*secundum*, according to  
*secus*, otherwise, badly  
*secussus*, separated  
*sed*, but  
*sedulus*, diligent, careful  
*segmentiformis*, segment-like  
*sejunctus*, separate  
*semel*, once  
*semen*, inis, n., a seed  
*semi*, half  
*semixertus*, half extended  
*semiimmersus*, half immersed  
*seminalis*, seed-like  
*seminicola*, growing on seeds  
*semipellucidus*, partly clear  
*semiteres*, half columnar  
*semiuncialis*, a half inch  
*semper*, always  
*senescens*, growing old  
*sensim*, gradually  
*sensus*, us, m., opinion, sense  
*separabilis*, *separable*, separating  
*separo*, to separate  
*sepimentum*, i, n., partition  
*sepono*, to separate  
*septatus*, *septate*, divided into cells  
*septentrionalis*, northern  
*septulum*, i, n., a little septum  
*sepulchrum*, i, n., grave  
*sepultus*, buried  
*sequens*, following  
*sericellus*, somewhat silky  
*sericeus*, silky  
*series*, ei, f., a series  
*serotinus*, late  
*serpens*, creeping  
*serpentinus*, *serpentine*, of a serpent  
*serratus*, *serrate*, saw-toothed  
*serus*, late  
*servatus*, saved, preserved  
*sesqui*, more by half  
*sesquilinea*, one inch and a half  
*sesquipedalian*, very long  
*sessilis*, seated, without a stalk  
*seta*, ae, f., a bristle  
*setaceus*, bearing one or more bristles  
*setiformis*, bristle-shaped  
*setiger*, bristle-bearing  
*setosus*, *setose*, with bristles  
*setula*, ae, f., a little bristle  
*setulose*, with bristles or spines  
*seu*, or  
*sexies*, sixfold  
*sexilocularis*, with six cells or locules  
*sexsporus*, six-spored  
*sexsulcatus*, six-furrowed  
*siccans*, drying  
*siccus*, dry  
*sigillatim*, seal-like  
*sigmoideus*, sigmoid, s-like  
*signatus*, marked  
*sileo*, to be silent  
*silva*, ae, f., a forest  
*similaris*, like  
*similis*, similar  
*simple*, not branched; one-celled (of spores)  
*simplex*, icis, simple  
*simul*, at the same time  
*simulate*, apparently  
*simulo*, to imitate, copy, represent  
*sine*, without

- singularis*, peculiar, not in chains  
*singulus*, each  
*sinuatus*, sinuate, indented  
*sinuosus*, crooked  
*sistens*, comprising  
*sisto*, to stand, place, contain  
*situs*, placed  
*sociatus*, grouped together  
*soleo*, to be accustomed  
*solidiusculus*, somewhat solid  
*solitarius*, solitary  
*solitus*, usual  
*sollertus*, distinguished  
*solubilis*, dissolving  
*solutus*, dissolved  
*solvo*, to loosen, dissolve  
*sordes*, is, f., dirt  
*sordidus*, dirty  
*sorus*, i, m., spore mass  
*spadiceus*, brownish  
*spargo*, to scatter  
*sparsus*, scattered, sparse  
*spatha*, ae, f., a spathe  
*spatium*, i, n., space  
*spatulatus*, *spatulate* (*spathulate*), spoon-shaped  
*species*, ei, f., species  
*spectans*, looking  
*specto*, to look  
*spermagonium*, ii, n., a pycnidium-like body  
*spermatiferus*, spermatia-bearing  
*spermatiformis*, like a spermatium  
*spermatioideus*, spermatium-like  
*spermatium*, ii, n., a conidium-like body; a male sex-cell  
*spero*, to hope  
*sphaericus*, spherical  
*sphaeroideus*, nearly spherical  
*sphaerula*, ae, f., a sphere  
*spica*, ae, f., a point, ear  
*spicatus*, spike-like  
*spiculosus*, spiny  
*spiculum*, i, n., a little spine  
*spindle*, a conidium-like structure in dermophytes  
*spiniformis*, *spiniform*, spine-shaped, spiny  
*spinuligerus*, spine-bearing  
*spinulosus*, with little spines  
*spira*, ae, f., a spiral  
*spiraliter*, spirally  
*spissus*, thick, dense  
*splendens*, shining, splendid  
*spongilliformis*, sponge-like  
*spongiosus*, spongy  
*sponte*, spontaneously  
*sporangiferus*, bearing sporangia  
*sporangiolerus*, bearing small sporangia  
*sporangiolum*, i, n., a little sporangium  
*sporangiophore*, the stalk of a sporangium  
*spore-print*, the spore mass obtained by placing the cap of a mushroom flat on a piece of white paper  
*sporicus*, sporal  
*sporidiolum*, i, n., a little spore  
*sporidium*, i, n., a spore  
*sporiferus*, spore-bearing  
*sporodochium*, a compact conidial body; mass of sporophores  
*sporogenous*, producing or bearing spores  
*sporomorphus*, spore-shaped  
*sporophora*, ae, f., *sporophore*, spore-body  
*spurius*, false  
*squama*, ae, f., a scale  
*squamosus*, scaly  
*squarrose*, with spreading scales or hairs  
*stans*, stantis, standing, remaining  
*statim*, steadily; forthwith  
*statuo*, to erect, establish  
*statura*, ae, f., stature, height  
*status*, us, m., stage  
*stellatus*, *stellate*, star-like  
*stelliformis*, star-shaped  
*stercoratus*, manured  
*stercus*, oris, n., dung  
*sterigma*, atis, n., stalk  
*stilbeus*, *Stilbum*-like, mallet-like  
*stilbiformis*, stalk-like  
*stilboid*, with a stalked head, *Stilbum*-like  
*stipatus*, crowded  
*stipes*, itis, m., a stalk  
*stipitatus*, *stipitate*, stalked  
*stipitellus*, i, m., a little stalk  
*stiptiformis*, stalk-like  
*stirps*, pis, f., stem, stalk; source, race  
*stoloniferous*, producing runners  
*stoloniformis*, runner-like  
*stramineus*, straw-colored  
*stratosus*, in layers  
*stratum*, i, n., a layer  
*strenuus*, prompt, vigorous  
*stria*, ae, f., a line  
*strigosus*, *strigose*, long or coarsely hairy  
*striiformis*, line-like

**strobilus**, i, m., a cone  
**stroma**, atis, n., a covering, layer  
**stromate**, with a stroma  
**stromaticus**, stromatic, with a stroma  
**stromatiferus**, bearing a stroma  
**stromoid**, stromatoid, stroma-like  
**structura**, ae, f., a structure  
**stuppeus**, made of tow, tow-like  
**stuposus**, tow-like  
**stylospora**, ae, f., stylospore, spore borne on a hypha  
**sudens**, persuading  
**suavis**, pleasant  
**suavolens**, fragrant  
**sub**, affix meaning somewhat, slightly  
**subacutus**, somewhat acute  
**subaequans**, nearly equal  
**subalbus**, nearly white  
**subalutaceus**, somewhat yellow  
**subastomus**, more or less mouthless  
**subbulbosus**, somewhat bulbous  
**subcarbonaceus**, slightly carbonaceous  
**subcarnulosus**, slightly fleshy  
**subclypeate**, somewhat shield-shaped  
**subcolumelliformis**, somewhat like a columella  
**subconoideus**, slightly conical  
**subcrustose**, somewhat crust-like  
**subcuboideus**, somewhat cubical  
**subcutaneus**, under the epidermis  
**subdeterminatus**, limited  
**subdiscoideus**, somewhat disc-shaped  
**subelevatus**, somewhat raised  
**suberosus**, suberose, corky  
**subfuscus**, subfuscous, somewhat dark  
**subglobosus**, subglobose  
**subiculoid**, more or less like a subicle  
**subiculum**, i, n., subicle, a compact cottony mycelium  
**subimmersus**, slightly immersed  
**subinde**, presently, forthwith, now and then  
**subito**, suddenly  
**subnullus**, nearly lacking  
**substantia**, ae, f., substance  
**subterraneus**, subterranean, underground  
**subtilis**, thin, slender  
**subtilitas**, atis, f., fineness, thinness  
**subtiliter**, finely, thinly  
**subulatus**, subulate, awl-shaped  
**subuliformis**, awl-shaped  
**subvitro**, under the lens  
**succineus**, like amber  
**succresco**, to grow under

**succus**, i, m., sap, moisture  
**suffultus**, supported  
**suffusus**, spread out, diffuse; tinged  
**sulcatus**, sulcate, furrowed  
**sulcula**, ae, f., a little furrow  
**sulcus**, i, m., a furrow  
**sulphurellus**, sulphurish  
**sulphureus**, sulphur-colored  
**summa**, ae, f., highest point; sum  
**superans**, exceeding  
**superficialis**, superficial, arising on the surface or epidermis, opposed to innate and erumpent  
**superficies**, ei, f., the surface  
**superimpositus**, superimposed  
**superne**, above, upwards  
**superpositus**, superposed  
**superus**, upper  
**supremus**, uppermost  
**surculus**, i, m., a shoot  
**sursum**, upward  
**suspensor**, supporting cell or group of cells  
**sustinens**, supporting  
**sylva**, ae, f., a forest (see *silva*)  
**sympodice**, sympodially, alternately  
**synnema**, atis, n., an erect fascicle of hyphae, as in *Stilbaceae*

## T

**tabacinus**, tobacco-colored  
**tabesco**, to melt  
**tabidus**, dissolving, decaying  
**tactus**, touched; us, m., touch  
**taeniola**, ae, f., a little band  
**talis**, such  
**tamen**, however, yet  
**tandem**, at length  
**tantillus**, so little  
**tantum**, so, so much; only  
**tapetum**, i, n., nutritious layer  
**tarde**, slowly, late  
**tartareus**, powdery  
**tectus**, covered  
**tegens**, covering  
**tegmen**, inis, n., a cover  
**teleutospora**, ae, f., teleutospore, winter spore  
**teleutosporiferus**, bearing teleutospores  
**teliospore**, the winter spore of rusts  
**telium**, the final stage in the life-cycle of rusts, consisting of teliospores  
**tenacellum**, somewhat tenacious  
**tenellus**, delicate

- tentacula*, ae, f., a tentacle  
*tentaculiformis*, tentacle-shaped  
*tenuatim*, drawn out  
*tenuis*, slender  
*ter*, three times  
*terete*, *teres*, *etis*, rounded, cylindrical  
*teretiusculus*, round, cylindrical  
*terminalis*, terminal, end  
*terminatus*, terminated, ended  
*ternate*, in threes  
*ternus*, three-fold  
*terra*, ae, f., soil, earth  
*terrestris*, terrestrial, on the ground  
*terricole*, living on soil  
*tertius*, third  
*tessellatus*, checkered  
*testa*, ae, f., a shell, coat  
*testaceus*, brick-colored  
*tetradidymus*, four-fold  
*tetragonus*, four-angled  
*tetrasporus*, four-spored  
*thalamium*, i, n., a room  
*thallicola*, growing on a thallus  
*thalliformis*, thallus-like  
*thalline excipile*, applied to an excipile containing algae  
*thallus*, a more or less definite mass of hyphae typically parasitic on algae  
*thelephoroideus*, like *Thelephora*  
*tigrinus*, marked like a tiger  
*tinctus*, tinged  
*tingens*, tingeing  
*tomentellus*, hairy  
*tomentosus*, hairy  
*tornatus*, rounded-off  
*tortuosus*, flexuous  
*tortus*, twisted  
*toruloideus*, chain-like  
*torulosus*, torulose, necklace-like  
*totaliter*, totally  
*totidem*, just as many  
*totus*, all  
*trabs*, is, f., a beam  
*tractus*, us, m., a tract  
*trahendum*, to be drawn  
*trama*, ae, f., filling, weft  
*transeptate*, with all cross-walls transverse  
*translucidus*, clear  
*transiens*, temporary  
*transversalis*, transverse, crosswise  
*trapezoideus*, trapezium-like, irregularly four-sided  
*tremelloideus*, tremelloid, gelatinous  
*tremellosus*, jelly-like  
*triangularis*, *triangular*, three-angled  
*tribus*, us, f., a tribe  
*tricornutus*, with three horns  
*trifoveolatus*, with three hollows  
*trigonus*, *trigonous*, three-angled  
*trilobus*, three-lobed  
*trinacriformis*, three-pronged  
*tripartitus*, three-divided  
*tripedalis*, three feet long  
*tripollicaris*, three inches long  
*triquetrus*, three-cornered  
*trisporus*, three-spored  
*tristichus*, in three rows  
*tropicus*, tropical  
*truncatus*, cut-off  
*truncicola*, growing on trunks  
*trunculus*, i, m., little trunk, stem  
*truncus*, i, m., trunk  
*tuber*, *eris*, n., tuber, swelling  
*tubercularinus*, like *Tubercularia*  
*tubercularoideus*, tubercularoid, like *Tubercularia*, warted  
*tuberculiformis*, wart-like  
*tuberculosus*, roughened  
*tuberiformis*, *tuberiform*, tuber-shaped  
*tubulosus*, tubular  
*tubulus*, i, m., a tube  
*tum*, then  
*tumescens*, swelling  
*tumidulus*, somewhat swollen  
*tumidus*, swollen  
*tumifactus*, swollen  
*tunc*, then  
*tunica*, ae, f., cloak, coating  
*tunicatus*, *tunicate*, covered  
*turbinatus*, *turbinate*, top-shaped  
*turgescens*, swollen  
*turgidus*, swollen  
*turriiformis*, shaped like a tower  
*turritus*, turreted, tower-like  
*tympaniform*, drum-like  
*typice*, usually, characteristically  
*typus*, i, m., a type

## U

- uber*, rich  
*ubi*, where  
*ubiquemque*, everywhere  
*udus*, wet  
*uliginosus*, rich, muddy  
*ullus*, any  
*ulterior*, farther  
*ultimus*, last



**ultra**, beyond or more  
**-ulus**, suffix, meaning small  
**umbellatus**, umbellate, umbelled  
**umbelliformis**, like an umbel  
**umbilicatus**, umbilicate, with a navel,  
     sunken in the center, somewhat funnel-  
     form  
**umbilicus**, i. m., navel  
**umbo**, onis, is, m., boss, knob  
**umbonatus**, umbonate, with a boss  
**umbra**, ae, f., shade  
**umbrinus**, brown  
**umbrosus**, shady  
**uncia**, ae, f., an inch  
**uncialis**, an inch long  
**uncinatus**, hooked  
**unde**, whence  
**undique**, in all directions  
**undulatus**, wavy  
**unguis**, is, f., nail  
**uniarticulatus**, one-jointed  
**unicus**, single  
**uniformis**, of one form  
**unilateralis**, one-sided  
**unilocular**, with a single cavity or cell  
**uniserialis**, one-rowed  
**uniseriatus**, one-rowed  
**unistratosus**, one-layered  
**unitus**, joined  
**unquam**, ever  
**urceolatus**, urceolate, pitcher-shaped  
**uredinicola**, uredicole, growing on rusts  
**uredium**, sorus bearing summer spores  
**uredospora**, urediospore, summer spore  
     of rusts  
**uredosporiferus**, bearing uredospores  
**urniformis**, urn-shaped  
**uromorphus**, tail-like  
**usque**, up to  
**usurpatus**, usurped  
**ut**, uti, as  
**uterque**, both  
**ut-plurimum**, for the most part  
**utricularis**, bladderly  
**utriculiformis**, bladder-shaped  
**utrimque**, on both sides, in both direc-  
     tions  
**utroque**, both ways  
**avidus**, moist, wet

## V

**vaccinus**, pertaining to a cow  
**vacuus**, empty  
**vage**, vaguely

**vagina**, ae, f., a sheath  
**vaginatus**, sheathed  
**vagus**, vague  
**valde**, strongly  
**validiusculus**, more or less stout  
**valsoid**, **valsous**, like Valsa, with the  
     perithecia in a circle in the stroma  
**valva**, ae, f., a valve  
**valvatim**, **valvate**, with valves or doors  
**variabilis**, variable  
**varicolor**, of several colors  
**varicosus**, dilated  
**varie**, variously  
**variegatus**, of different colors  
**varius**, different  
**-ve**, or  
**vegetus**, fresh, vegetating  
**vehementer**, strongly  
**vel**, or  
**velatus**, veiled  
**vellus**, eris, n., fleece, wool  
**velo**, to cover  
**velocitas**, atis, f., swiftness  
**velum**, i, n., a veil  
**veluti**, as  
**velutinus**, velvety  
**vena**, ae, f., a vein  
**venenatus**, poisonous  
**veniformis**, vein-like  
**ventricosus**, swollen  
**venula**, ae, f., veinlet  
**vere**, truly  
**vergo**, to approach  
**verisimiliter**, apparently  
**vermicularis**, worm-like  
**vermiformis**, **vermiform**, worm-shaped  
**vernalis**, **vernal**, of or belonging to  
     spring  
**vero**, truly  
**verruca**, ae, f., height; wart  
**verruciformis**, **verruciform**, wart-like  
**verruculosus**, **verrucose**, warted  
**versatus**, poured  
**versicolor**, of different colors  
**versiformis**, of different forms  
**versus**, towards  
**vertens**, turning  
**vertex**, icis, m., the tip  
**verticalis**, vertical  
**verticillatim**, in whorls  
**verticillatus**, **verticillate**, whorled  
**vescus**, small, weak  
**vesicula**, ae, f., **vesicle**, swollen cell  
**vesiculosus**, **vesiculose**, swollen, bladderly

**vestiens**, covering  
**vestiguum**, i, n., vestige, remnant  
**vestio**, to cover  
**vestitus**, furnished, covered  
**vetustus**, old  
**vexo**, to shake; injure  
**vibrans**, changing  
**videor**, to seem  
**vigens**, growing  
**villosulus**, somewhat woolly  
**villosus**, woolly  
**villus**, i, m., a hairy covering  
**vinarius**, of wine  
**vineus**, of or belonging to wine  
**vinum**, i, n., wine  
**violaceus**, violet  
**violascens**, turning violet  
**virens**, becoming green  
**virgatus**, rod-shaped  
**virgultum**, i, n., bush, copse  
**viridarium**, i, n., greenhouse  
**viridifuscus**, greenish brown  
**viridis**, green  
**viridulus**, greenish  
**virosus**, slimy, fetid; poisonous  
**viscidulus**, viscid, somewhat sticky  
**visibilis**, visible  
**visus**, seen  
**vita**, ae, f., life  
**vitellinus**, yellow  
**vitreus**, glassy  
**vitrum**, i, n., glass  
**vittatus**, striped or ridged lengthwise  
**vivens**, living

**vividus**, living, vivid  
**vivus**, alive  
**vix**, hardly  
**volva**, ae, f., a cup-like sheath at the base  
     of a stem  
**volvaceus**, with a volva  
**volvatus**, with a volva  
**vulgatus**, common  
**vulgo**, commonly  
**vulpinus**, of a fox

## X

**x-celled**, with 2 or more transverse septa,  
     two or more septate crosswise  
**xeric**, xerophytic, dry  
**xylogenus**, **xylogenous**, growing on wood  
**xylophilus**, growing on wood

## Z

**zona**, ae, f., a zone  
**zonula**, ae, f., a little zone  
**zoogenus**, on animals  
**zoogonid**, zoospore, a motile propagative  
     cell  
**zoospora**, ae, f., zoospore, motile cell,  
     usually asexual  
**zoosporangium**, ii, n., **zoosporange**, vessel  
     containing zoospores  
**zoosporiferus**, producing zoospores  
**zygosporiacus**, pertaining to a zygosporangium  
**zygosporous**, with resting spores formed  
     by the conjugation of similar sex cells  
**zymogenus**, ferment-producing

# Index

Accepted names are in bold-face, synonyms, dubia, etc., in thin-face type. In the case of the former, the first number or group refers to the key, the second to the list of types, and the third to the plates and legends, these numbers being in bold-face.

## A

- Abrothallus**, 118; 314; 27  
**Absidia**, 35; 236  
Abstoma, 354  
**Acallomyces**, 43; 236  
**Acantharia**, 69; 250; 267  
**Acanthonitschkea**, 60; 257  
Acanthophiobolus, 278  
**Acanthorhynchus**, 64; 261  
**Acanthostigma**, 70; 270  
Acanthostigmella, 270  
Acanthostigmina, 270  
**Acanthostoma**, 69; 267  
**Acanthotheca**, 75; 276  
Acanthotheciella, 276  
Acanthotheciopsis, 307  
**Acanthothecis**, 106; 307; 23  
Acanthothecium, 307, 379  
**Acarella**, 189; 373  
**Acarospora**, 128; 321; 17  
**Acarosporae**, 128  
**Acarosporium**, 193; 378  
Acaulium, 392  
Acerbia, 277  
**Acerbiella**, 75; 277  
**Acetabula**, 138; 327; 34  
**Achlya**, 38; 239  
**Achlyella**, 33; 234  
**Achlyogeton**, 39; 240  
**Achorella**, 90; 290  
**Achorium**, 231; 409  
Achorodochis, 294  
Achoropeltis, 375  
Achroomyces, 341  
Achrotelium, 338  
Aciculosporium, 285  
**Acinula**, 231; 410  
Ackermannia, 238  
**Acladium**, 204; 386  
Acleista, 377  
Acosporium, 386  
**Acolium**, 119; 315; 28  
**Acompsomyces**, 43; 243  
**Acontium**, 203; 386  
**Acremoniella**, 212; 392  
**Acremonium**, 205; 386; 54  
**Acrocylindrium**, 203; 386  
**Acrodesmis**, 211; 392  
**Acroschyphus**, 84, 120; 286, 315  
**Acrospermum**, 81; 284; 22  
**Acrospira**, 212; 392  
Acrosporium, 388  
**Acrostalagmus**, 203; 386; 54  
**Acrotheca**, 211; 392  
**Acrotheciella**, 225; 404  
**Acrothecium**, 216; 396; 56  
**Actiniceps**, 227; 406  
Actinidothiopsis, 271  
**Actiniopsis**, 79; 283  
Actinocephalum, 237  
**Actinochaete**, 214; 392  
**Actinocymbe**, 57; 255  
**Actinodochium**, 224; 403  
**Actinodochis**, 98; 298  
Actinomma, 331  
Actinomucor, 238  
**Actinomyxa**, 98; 300, 312  
Actinopelte, 368  
Actinopeltella, 256  
**Actinopeltis**, 58; 256; 8  
**Actinoplaca**, 123; 318  
**Actinoscypha**, 117; 314  
**Actinostilbe**, 288; 407  
**Actinothecium**, 189; 373  
**Actinothyrium**, 192; 376; 51  
Acurtis, 345  
**Adelococcus**, 64; 261  
**Adelopus**, 56; 253  
**Adermatis**, 128; 320  
Aecidiella, 336  
Aecidiolum, 338  
**Aecidium**, 150; 334  
**Aegerita**, 221; 399  
Aegeritopsis, 399  
Aeruginospora, 348  
Aethaloderma, 253  
**Aethalomyces**, 57; 254  
**Agaricaceae**, 160, 164; 348; 44, 45  
**Agaricales**, 159; 343  
**Agaricus**, 167; 350; 45  
**Aglaospora**, 73; 272; 13  
**Agonimia**, 88; 289  
Agostaea, 295, 413  
**Agyriaceae**, 142; 330  
**Agyriales**, 141; 330  
**Agyriella**, 224; 403  
Agyriella, 331  
**Agyriellopsis**, 193; 377  
**Agyrina**, 116, 142; 330  
Agyrina, 313, 330  
**Agyriopsis**, 117, 143; 313, 330  
**Agyrium**, 116, 142; 313, 331; 26  
**Agyronella**, 143; 331  
**Agyrophora**, 126; 318  
**Ahlesia**, 115; 313  
Alboffia, 262  
Albofiella, 352  
**Albuginae**, 40  
**Albugo**, 40; 241; 4  
**Aldona**, 103, 108; 305  
Aldridgea, 343  
**Alectoria**, 130; 322; 32  
**Aleuria**, 138; 327; 34  
**Aleurina**, 138; 327  
**Aleurodiscus**, 161; 344  
Aleurodomyces, 411  
Aleurospora, 410  
**Alina**, 54; 250  
**Allantonectria**, 76; 279; 15  
Allantophomopsis, 359  
Allantoportha, 264  
**Allantospora**, 208; 390  
**Allantozythia**, 187; 371  
**Allarthonia**, 105; 306  
**Allarthothelium**, 105; 306  
Allescheria, 247  
Allescheriella, 400  
Allescherina, 257  
Alliospora, 386

- Allodus, 336  
 Allomyces, 242  
 Allosoma, 93; 296  
 Aloysiella, 69; 267  
 Alphitomyces, 228; 406  
 Alternaria, 217; 397; 57  
 Alveolaria, 149; 334  
 Alysissporium, 184; 366  
 Amallospora, 223; 402  
 Amanita, 165; 348; 44  
 Amanitella, 349  
 Amanitopsis, 165; 348  
 Amastigis, 207; 390  
 Amastigosporium, 390  
 Amaurascus, 49; 246  
 Amazonia, 99; 300; 21  
 Amblyosporiopsis, 388  
 Amblyosporium, 202; 386; 53  
 Ameghiniella, 312  
 Ameris, 149; 334  
 Amerodochis, 89; 290  
 Amerosporiella, 403  
 Amerosporis, 223; 403  
 Amerosporium, 192; 377  
 Amerostege, 261  
 Amoebocytrium, 34; 234  
 Amorphomyces, 44, 243  
 Amphichaeta, 199; 384  
 Amphichaete, 400  
 Amphichaetella, 220; 399  
 Amphiciliella, 365  
 Amphicytostroma, 368  
 Amphididymella, 267  
 Amphiernia, 411  
 Amphinectria, 283  
 Amphischizonia, 125; 318  
 Amphisphaeria, 69; 267; 12  
 Amphorula, 364  
 Ampullaria, 373  
 Amyliosa, 90; 290  
 Amylis, 62; 258  
 Anaphysmene, 376  
 Anaptychia, 132; 323; 32  
 Anapyrenium, 87; 289  
 Anariste, 300, 303  
 Anataxis, 252  
 Ancylistaceae, 39; 240; 3  
 Ancylistes, 39; 240; 3  
 Andreaea, 392  
 Andreaeana, 392  
 Anellaria, 168; 350  
 Anema, 121; 316  
 Angatia, 93; 296  
 Angelinia, 324  
 Angiopoma, 184; 366  
 Angiopomopsis, 366  
 Anhellia, 93; 296  
 Anisochora, 294  
 Anisogramma, 264, 292  
 Anisomyces, 269  
 Anisomyxa, 233  
 Anisostomula, 260  
 Anixia, 247, 354  
 Anixiopsis, 51; 247  
 Annularia, 166; 349  
 Anomomyces, 22; 404  
 Anomorpha, 106; 307  
 Anomothallus, 304  
 Antenella, 57; 253  
 Antenellina, 56; 253  
 Antennulariella, 255  
 Anthina, 232; 410  
 Anthomyces, 152; 337  
 Anthomyces, 412  
 Anthomycetella, 153; 337  
 Anthostoma, 64; 261; 10  
 Anthostomaria, 63; 261  
 Anthostomella, 63; 261; 10  
 Anthostomellina, 258  
 Anthracoderma, 180; 357  
 Anthracoida, 339  
 Anthracophyllum, 168; 350  
 Anthracothecium, 86; 288  
 Anthurus, 170; 351; 46  
 Antromyces, 230; 408  
 Antromycopsis, 229; 407  
 Anzia, 129; 322  
 Aorate, 209; 391  
 Aphanascus, 51; 247  
 Aphanomyces, 38; 240; 3  
 Aphanomycopsis, 240  
 Aphanopeltis, 302  
 Aphanostigme, 70; 270  
 Aphysa, 101; 303  
 Apiocarpella, 363  
 Apiocrea, 281  
 Apiognomonina, 265  
 Apioportha, 264  
 Apioporthella, 264  
 Apiorhynchostoma, 272  
 Apiosphaeria, 78; 281  
 Apiospora, 294  
 Apiosporella, 264, 363  
 Apiosporina, 54, 67, 69; 250, 263  
 Apiosporina, 264  
 Apiosporium, 255  
 Apiosporopsis, 264  
 Apiotrabutia, 294  
 Apiotypa, 268  
 Aplacodina, 265  
 Aplanes, 38; 240; 3  
 Aplopsora, 148; 334  
 Apocytospora, 369  
 Apodachlya, 39; 240; 3  
 Apodya, 240  
 Aponectria, 78; 281  
 Aporhytisma, 310  
 Aporphallus, 169; 351  
 Aposphaeria, 178; 357  
 Aposphaeriella, 272  
 Aposphaeriopsis, 369  
 Aposporella, 392  
 Apostemidium, 326  
 Appendicularia, 244  
 Apyrenium, 343  
 Arachniopsis, 352  
 Arachniotus, 49; 246  
 Arachnium, 354  
 Arachnomyces, 51; 247  
 Arachnopeziza, 137; 325  
 Araeospora, 39; 240  
 Araneomyces, 223; 402  
 Arcangelia, 66; 264  
 Arcangeliella, 173; 355  
 Arctomia, 122; 316  
 Arenaea, 136; 325  
 Areolaria, 353  
 Argomycetella, 150, 334  
 Argopsis, 127; 320; 30  
 Argynna, 255  
 Armatella, 97; 298  
 Armillaria, 165; 348  
 Arnaudiella, 302  
 Arrhenia, 165; 348  
 Arrhytidia, 159; 342  
 Arthonia, 105; 306; 23  
 Arthoniactis, 125; 319  
 Arthonia, 105  
 Arthoniopsis, 105; 306  
 Arthotheliopsis, 124; 318  
 Arthothelium, 105; 306  
 Arthrimum, 212, 224; 392, 403; 55  
 Arthrobotryella, 214; 395  
 Arthrobotryes, 206; 389; 54  
 Arthrobotryum, 230; 409  
 Arthrobotryum, 396  
 Arthropyrenia, 87; 288  
 Arthropyreniella, 288  
 Arthrorhynchus, 44; 243; 5

- Arthrosporium, 407  
**Articularia**, 203; 386  
 Articulariella, 406  
 Articulis, 228; 406  
**Asbolisia**, 179; 357  
**Aschersonia**, 188; 372; 50  
 Aschersoniopsis, 379  
**Ascobolaceae**, 140; 330; 37  
**Ascobolae**, 141  
**Ascobolus**, 141; 330; 37  
**Ascocalathium**, 142; 331  
**Ascochyta**, 182; 363; 49  
 Ascochyrella, 363  
**Ascochytopsis**, 180; 357  
 Ascochyula, 363  
**Ascochyulina**, 182; 363  
**Ascocorticium**, 144; 332; 37  
**Ascodesmis**, 142; 331  
**Ascoidea**, 37; 239  
**Ascoideaceae**, 37; 239  
**Ascomycetella**, 93; 296  
**Ascomycetes**, 42  
**Ascophanae**, 141  
**Ascophanus**, 141; 330; 37  
**Ascopolyporus**, 82; 284  
**Ascosorus**, 144; 332  
**Ascospora**, 67; 264  
**Ascostratum**, 93; 296  
 Ascotricha, 262  
**Aseroe**, 170; 351; 46  
 Ashbia, 246  
**Aspergillae**, 202  
 Aspergillopsis, 393  
**Aspergillus**, 202; 386  
 Aspergillus, 247  
**Asperisporium**, 215; 395  
**Aspidopyrenis**, 85; 287  
**Aspidopyrenium**, 287  
 Aspidothea, 298  
**Aspidothelium**, 85; 287;  
     18  
 Asporomyces, 411  
 Asterella, 300  
 Asteridiella, 254  
 Asteridiellina, 301  
 Asteridium, 251, 301  
**Asterina**, 99; 300; 21  
**Asterineae**, 99  
**Asterinella**, 99; 301  
**Asteristium**, 125; 319  
**Asterocalyx**, 112; 311  
**Asteroconium**, 200; 385  
**Asterodon**, 162; 346  
**Asterodothis**, 97; 298  
**Asterolibertia**, 300  
**Asteroma**, 179; 357  
 Asteromassaria, 273  
**Asteromella**, 178; 357  
**Asteromidium**, 184; 365  
**Asteromyxa**, 99; 301  
 Asteronaevia, 310  
 Asteronia, 374  
 Asteropeltis, 289  
**Asterophlyctis**, 33, 234  
**Asterophora**, 205; 386; 54  
**Asteroporum**, 87; 288  
**Asteropsis**, 181; 361  
**Asterosporium**, 199, 200;  
     384; 52  
**Asterostomella**, 190; 374  
**Asterostomula**, 190; 375  
**Asterostroma**, 161; 344  
**Asterostromella**, 161; 344  
**Asterothyrium**, 123; 318  
 Asterothyrium, 375  
**Astraeus**, 171; 352  
**Astrocystis**, 64; 262  
**Astrodochium**, 224; 403  
 Astrosphaeriella, 268  
**Astrotheliae**, 88  
**Astrothelium**, 88; 290  
**Atichia**, 143; 331  
 Atopospora, 293  
**Atractiella**, 227; 406  
 Atractilina, 407  
**Atractina**, 216; 396  
**Atractium**, 228; 407; 57  
 Atrichophytum, 410  
**Auerswaldia**, 89; 290  
**Auerswaldiella**, 90; 290  
 Auerswaldiopsis, 401  
**Aulacostroma**, 96; 298; 21  
**Aulaxina**, 105; 307  
**Aulographella**, 99; 301  
**Aulographis**, 100; 301  
**Aulographum**, 103; 305; 10  
 Aureobasidium, 343, 381  
**Aureobasis**, 160, 197; 343,  
     381  
**Auricularia**, 157; 341; 41  
**Auriculariaceae**, 157; 341  
 Auriculariella, 341  
**Autoecomyces**, 45; 244  
 Avettaea, 369
- B**
- Bacidia**, 125; 319; 30  
 Bactrexipula, 378  
 Bactridiopsis, 400, 402  
**Bactridium**, 222; 402; 58  
**Bactrosphaeria**, 75; 277  
**Bactrospora**, 119; 314  
**Baculospora**, 77; 280  
**Baeodromus**, 149; 334  
**Baeomyces**, 126; 320; 30  
 Baeumleria, 361  
**Baggea**, 118; 314; 27  
**Bagnisiella**, 94; 296; 20  
**Bagnisiopsis**, 89; 290; 19  
 Bakeromyces, 261  
 Bakerophoma, 359  
**Balansia**, 82; 285  
 Balansiella, 285  
 Balansina, 285  
 Balansiopsis, 285  
**Balladyna**, 56; 253  
**Balladynella**, 56; 253  
**Balladynopsis**, 56; 253  
**Balsamia**, 146; 332; 38  
**Balzanina**, 77; 279  
 Barclayella, 338, 383  
**Bargellinia**, 46; 245  
 Barlaea, 328  
 Barlaeina, 328  
**Barsia**, 145; 332  
**Bartalinia**, 184; 365  
**Barya**, 81; 285  
 Basiascella, 375  
 Basiascum, 396  
**Basidiella**, 229; 407  
**Basidiobolus**, 37; 239; 2  
**Basidiobotrys**, 202; 386  
**Basidiomycetes**, 157  
**Basidiophora**, 40; 241; 4  
 Basilocella, 369, 385  
**Basisporium**, 212; 393  
**Battarina**, 77; 279  
**Battarrea**, 171; 352  
**Battarreopsis**, 171; 352  
 Baumanniella, 345  
**Baumiella**, 71; 270  
 Beauveria, 388  
 Beccariella, 344  
**Beelia**, 99; 301  
**Belonia**, 86; 288  
**Belonidium**, 133; 324  
**Beloniella**, 134; 324  
**Belonioscypha**, 136; 325  
 Belonioscyphella, 324, 325  
**Belonium**, 136; 325  
 Belonopeziza, 324  
**Belonopsis**, 134; 324

**Belospora**, 136; 325  
**Beltrania**, 214; 395; 56  
 Benguetia, 315  
**Beniowskia**, 221; 400  
**Berkelella**, 80; 283  
**Berlesiella**, 73; 274; 14  
**Bertia**, 67; 264  
**Bertiella**, 70; 270  
 Bertiella, 265  
**Biatora**, 125; 319; 30  
**Biatorella**, 117, 125; 314,  
 319; 27  
 Biatorellina, 313  
**Biatorina**, 125; 319  
**Bifusella**, 103, 108; 305, 308  
 Biopetria, 282  
 Bioportha, 265  
**Bioscypha**, 134; 324  
 Biotyle, 278  
**Bispora**, 214; 395; 56  
 Bisporella, 326  
**Bivonella**, 81; 284  
 Bizzozeria, 271  
 Bizzozeriella, 405  
**Blakeslea**, 36; 236  
**Blasdalea**, 96; 298; 21  
**Blastenia**, 132; 323  
**Blastocladia**, 41; 242  
**Blastocladaceae**, 40; 242  
 Blastodendrum, 412  
 Blastoderma, 411  
 Blastodesmia, 288  
**Blastomyces**, 204; 386  
 Blastomycoides, 410  
**Blastospora**, 150; 334  
**Blastotrichum**, 207; 390; 54  
**Blennoria**, 220; 400; 52  
**Blennoriopsis**, 187; 371  
 Blepharospira, 241  
**Blodgettia**, 216; 396  
**Bloxamia**, 197; 381  
**Blumenavia**, 169; 351  
 Blytridium, 312  
 Bodinia, 409  
**Boerlagella**, 73; 274  
 Bolacotricha, 262  
**Bolbitius**, 167; 350  
**Boletinus**, 164; 346  
 Boletogaster, 354  
 Boletopsis, 346  
**Boletus**, 164; 346  
**Bolinia**, 65; 262  
**Bolosphaera**, 69; 267  
**Bombardia**, 64; 262; 10

**Bombardiastrum**, 71; 270  
**Bombardiella**, 75; 277  
**Bombyliospira**, 132; 323  
**Bommerella**, 64; 262  
**Bonansea**, 108; 308  
**Bonia**, 161; 344  
**Bonordeniella**, 226; 404  
**Bonplandiella**, 224; 403  
**Borenquenina**, 82; 285  
**Bostrichonema**, 206; 389  
**Bothrodiscus**, 179; 357  
**Botrydiplis**, 183; 364  
**Botryella**, 183; 363  
**Botryochora**, 89; 291  
**Botryoconis**, 160, 197; 343,  
 383  
**Botryogene**, 184; 365  
**Botryophoma**, 180; 357  
**Botryorhiza**, 149; 334  
**Botryosphaeria**, 63, 89; 258,  
 291; 10  
 Botryosphaerostroma, 361  
**Botryosporium**, 203; 386; 53  
 Botryostroma, 264  
**Botryotrichum**, 213; 393  
**Botrysphaeris**, 182; 361  
**Botrytidae**, 204  
**Botrytis**, 204; 386; 54  
**Bottaria**, 88; 290  
**Boudiera**, 141; 330; 37  
**Boudierella**, 141; 330  
 Bourdotia, 342  
**Bovilla**, 75; 277  
**Bovista**, 172; 352; 47  
**Bovistella**, 171; 352  
 Bovistoides, 354  
 Boydia, 266  
 Brachyascus, 331  
**Brachysporium**, 216; 396  
**Brefeldiella**, 100; 301  
**Bremia**, 40; 241; 4  
 Bremiella, 241  
 Brencklea, 364  
 Brenesiella, 278  
 Bresadolella, 281  
 Bresadolia, 347  
 Bresadolina, 345  
 Brevilegnia, 240  
**Briardia**, 110; 310  
 Briarea, 386  
**Brigantiella**, 83; 286  
**Briosia**, 229; 407  
**Broomeia**, 172; 352; 47  
**Broomella**, 71, 72; 270; 16

**Brunchorstia**, 373  
**Bryophagus**, 129; 321  
 Bryopogon, 322  
 Bubakia, 338  
**Buellia**, 132; 323; 30  
 Bulbothamnidium, 238  
**Bulgaria**, 116; 313; 26  
**Bulgariaceae**, 115; 313; 26  
**Bulgariastrum**, 116; 313  
 Bulgariella, 313  
 Bulgariopsis, 314  
 Bullaria, 336  
 Bullera, 411  
**Bulliardella**, 103; 305  
 Burkardia, 314  
**Burrillia**, 156; 339  
**Butleria**, 93; 296  
**Byssocallis**, 80; 283  
**Byssochlamys**, 46; 245  
 Byssocystis, 357  
 Byssogene, 297  
**Byssolecania**, 123; 318  
**Byssoloma**, 125; 319  
**Byssolomae**, 125  
**Byssolophis**, 83; 279  
**Byssonectria**, 77; 279  
 Byssotheciella, 274

## C

**Cacosphaeria**, 66; 264  
**Cadophora**, 210; 393  
**Caenomyces**, 45; 245  
**Caenothyrium**, 98; 301  
**Caoma**, 150; 334  
**Calathiscus**, 170; 352  
**Calcarisporium**, 203; 386  
 Caldariomyces, 398  
**Caldesia**, 112; 311; 27  
 Caldesiella, 346  
**Calenia**, 123, 127; 318, 320  
**Caleniae**, 123  
**Caliciaceae**, 119; 315; 23, 28  
**Caliciopsis**, 58; 256; 23  
**Calicium**, 120; 316; 28  
**Calidion**, 150; 334  
 Calliospora, 337  
**Calloria**, 116; 313; 26  
 Calloriella, 313  
 Calloriopsis, 313  
**Calocera**, 159; 342; 42  
 Calocladia, 249  
 Caloderma, 353  
 Calogloeum, 382  
**Calolepis**, 93; 296

- Calonectria**, 79; 283  
**Calopactis**, 358  
**Calopeltis**, 302  
**Calopeziza**, 93; 296  
**Calopeziza**, 324  
**Caloplaca**, 132; 323; 32  
**Calosphaeria**, 60; 257; 9  
**Calospora**, 71; 270; 12  
**Calosporella**, 270  
**Calostilbe**, 79; 282  
**Calostilbella**, 230; 409  
**Calostoma**, 353  
**Calothyriella**, 99; 301  
**Calothyriolum**, 99; 301  
**Calothyriopeltis**, 301  
**Calothyriopsis**, 303  
**Calothyris**, 99; 301  
**Calothyrium**, 99; 301  
**Calotrichopsis**, 85; 287  
**Calvatia**, 171; 352  
**Calycella**, 326  
**Calycellina**, 324, 326  
**Calycidium**, 120; 315  
**Calyculosphaeria**, 267  
**Calyptospora**, 154; 338; 40  
**Calyptra**, 56; 253  
**Calyptralegnia**, 240  
**Calyptronectria**, 80; 284  
**Camarographium**, 185; 366  
**Camarops**, 262  
**Camarosporellum**, 366  
**Camarosporium**, 185, 216;  
 366, 396; 50  
**Camarosporulum**, 367  
**Camarotella**, 294  
**Camillea**, 65; 262  
**Campanella**, 348  
**Campbellia**, 347  
**Campoa**, 99; 301  
**Campsotrichum**, 212; 393  
**Camptomeris**, 396  
**Camptomyces**, 43; 243; 5  
**Camptosphaeria**, 61; 258  
**Camptoum**, 393, 403  
**Campylothelium**, 87; 289; 18  
**Candelaria**, 130; 322  
**Candelariella**, 127; 320  
**Candelospora**, 207; 390  
**Candida**, 412  
**Cantharellus**, 165; 348; 44  
**Cantharomyces**, 42; 243; 5  
**Cantharosphaeria**, 66; 264  
**Capillaria**, 232; 411  
**Capnites**, 254; 275  
**Capnodaria**, 57; 254  
**Capnodiaceae**, 56; 253  
**Capnodiastrum**, 181; 361  
**Capnodiella**, 256  
**Capnodina**, 254  
**Capnodinula**, 253  
**Capnodiopsis**, 297, 332  
**Capnodium**, 57; 254; 8  
**Capnophaeum**, 57; 254  
**Capnostysanus**, 408  
**Capronia**, 73; 274  
**Carestiella**, 111; 310  
**Carlia**, 278  
**Carlosia**, 120; 316  
**Carothecis**, 51; 247  
**Carpenteles**, 49; 247  
**Caryospora**, 72; 272  
**Casaresia**, 218; 398  
**Castagnella**, 91; 291  
**Castoreum**, 354  
**Catabotrys**, 89; 291; 20  
**Catacauma**, 293  
**Catacaumella**, 294  
**Catastoma**, 171; 352; 47  
**Catathelasma**, 351  
**Catenaria**, 34; 235; 1  
**Catenularia**, 211; 393  
**Catharina**, 274  
**Catilla**, 344  
**Catillaria**, 125; 319  
**Catinaria**, 125; 319  
**Catinella**, 314, 327  
**Catinula**, 99; 377  
**Catocarpus**, 125; 319  
**Caudella**, 99; 301  
**Caudospora**, 67; 264  
**Caudosporella**, 188; 372  
**Cauloglossum** 170; 353; 47  
**Causalis**, 62; 258  
**Celidium**, 105; 306  
**Celtidea**, 248  
**Cenangella**, 115; 312  
**Cenangina**, 312  
**Cenangiopsis**, 114; 312  
**Cenangium**, 114; 312; 26  
**Cenococcum**, 332  
**Cephalophora**, 207; 390  
**Cephalodochium**, 220; 400  
**Cephalomyces**, 214; 395  
**Cephalosporiae**, 202  
**Cephalosporium**, 202; 386  
**Cephalotelium**, 337  
**Cephalotheca**, 51; 248; 6  
**Cephalothecium**, 206; 389; 54  
**Cephalotrichum**, 211; 393  
**Ceracea**, 342  
**Ceraeomyces**, 44; 244  
**Cerastomis**, 62; 259  
**Ceratocarpia**, 52; 248  
**Ceratochaete**, 253  
**Ceratochaetopsis**, 56; 253  
**Ceratocladium**, 230; 408; 55  
**Ceratomyces**, 45; 245; 5  
**Ceratomycetaceae**, 45; 244  
**Ceratophoma**, 176; 357  
**Ceratophorum**, 215; 396  
**Ceratoporphite**, 265  
**Ceratopycnidium**, 363  
**Ceratopycnis**, 182, 184; 366  
**Ceratopycnium**, 363  
**Ceratosperma**, 55; 251  
**Ceratospaeria**, 70; 270; 12  
**Ceratosporella**, 399  
**Ceratosporium**, 218; 399  
**Ceratostoma**, 64; 262; 10  
**Ceratostomella**, 62; 259; 9  
**Cercidospora**, 265  
**Cercoseptoria**, 398  
**Cercosphaerella**, 266  
**Cercospora**, 218; 398; 56  
**Cercosporella**, 208; 391  
**Cercosporidium**, 217; 396  
**Cercosporina**, 398  
**Cercosporiopsis**, 398  
**Cerebella**, 226; 404  
**Cerillum**, 65, 77; 262, 280  
**Ceriomyces**, 348  
**Cerion**, 311  
**Ceriophora**, 268  
**Ceriospora**, 68; 268  
**Ceriosporella**, 66; 264  
**Cerocorticium**, 344  
**Cerotelium**, 148; 334  
**Cesatiella**, 79; 283  
**Cetraria**, 130; 322; 32  
**Chthocarpum**, 75; 277  
**Ceuthodiplospora**, 363  
**Ceuthosira**, 369, 381  
**Ceuthospora**, 179; 357  
**Ceuthosporella**, 369  
**Chaconia**, 148; 334  
**Chaenoderma**, 170; 353  
**Chaenotheca**, 120; 316; 28  
**Chaetalysis**, 190; 375  
**Chaetasbolisia**, 179; 357  
**Chaetaspis**, 96; 298  
**Chaetasterina**, 254  
**Chaetobasidiella**, 383

- Chaetobasis**, 197; 383  
**Chaetobotrys**, 56; 253  
**Chaetoceratostoma**, 262  
**Chaetocercis**, 64; 262  
**Chaetocladia**, 36  
**Chaetocladium**, 36; 237; 2  
**Chaetoconidium**, 205; 386  
**Chaetoconis**, 364  
**Chaetocrea**, 80; 283  
**Chaetocystostroma**, 180; 357  
**Chaetodiplis**, 183; 364  
**Chaetodiplodia**, 183; 364, 369; 50  
**Chaetodiplodina**, 183; 363  
**Chaetodiscula**, 378  
**Chaetolentomita**, 66; 264  
**Chaetomastia**, 273  
**Chaetomella**, 181; 361; 49  
**Chaetomeris**, 57, 80; 254, 284  
**Chaetomidium**, 262  
**Chaetomium**, 64; 262; 10  
**Chaetomyces**, 45; 244; 5  
**Chaetopeltiopsis**, 376  
**Chaetopeltis**, 376  
**Chaetopeltopsis**, 101; 303  
**Chaetophiophoma**, 186; 367  
**Chaetophoma**, 179; 357  
**Chaetophomella**, 179; 357  
**Chaetoplaca**, 101; 303  
**Chaetoplea**, 74; 275  
**Chaetopsis**, 214; 393  
**Chaetopyrena**, 369  
**Chaetopyrenis**, 70; 270  
**Chaetosclerophoma**, 369  
**Chaetoscypha**, 326  
**Chaetosira**, 223; 403  
**Chaetospermum**, 220; 400  
**Chaetosphaeria**, 72; 273; 13  
**Chaetosphaeroneuma**, 176; 357  
**Chaetosphaeropsis**, 362  
**Chaetosticta**, 365  
**Chaetostigme**, 54; 250; 8  
**Chaetostigmella**, 54; 250  
**Chaetostroma**, 223; 403; 58  
**Chaetostroma**, 377  
**Chaetostromella**, 226; 404  
**Chaetostylum**, 238  
**Chaetotheca**, 51; 247  
**Chaetothyrina**, 56; 253  
**Chaetothyriolum**, 376  
**Chaetothyriopsis**, 98; 301  
**Chaetothyrium**, 57; 253  
**Chaetotrichum**, 217; 396  
**Chaetozythia**, 373  
**Chaetyllis**, 56; 253  
**Chalara**, 213; 393  
**Chalaropsis**, 210; 393  
**Chalcosphaeria**, 271  
**Chamonixia**, 173; 355  
**Chantransiopsis**, 205; 386  
**Charcotia**, 126; 319  
**Charonectria**, 78; 281  
**Charrinia**, 271  
**Cheilaria**, 376  
**Cheilymenia**, 329  
**Chelisorium**, 226, 405  
**Cheliera**, 250  
**Chevalieropsis**, 53; 250  
**Chiajea**, 80; 284  
**Chiaospora**, 188; 372  
**Chiloella**, 260  
**Chilomyces**, 53; 249  
**Chilonectria**, 77; 279; 15  
**Chiodectae**, 107  
**Chiodectum**, 107; 308; 23  
**Chiroconium**, 184; 365  
**Chiromycella**, 226; 405  
**Chiromyces**, 226; 405  
**Chiropodium**, 217; 396  
**Chitonia**, 167; 350  
**Chitoniella**, 167; 350  
**Chitonomyces**, 43; 243; 5  
**Chitonospora**, 273  
**Chlamydaleurosporia**, 410  
**Chlamydomucor**, 237  
**Chlamydomyces**, 390  
**Chlamydopus**, 354  
**Chlamydosporium**, 413  
**Chloridium**, 214; 393  
**Chlorocaulum**, 127; 320  
**Chlorodothis**, 94; 296  
**Chloropeltis**, 318  
**Chlorophyllum**, 349  
**Chlorosplenella**, 326  
**Chlorosplenium**, 135; 326  
**Chlorospora**, 349  
**Chnoospora**, 154; 338  
**Choanophora**, 36; 237; 2  
**Choanophorae**, 36  
**Choeromyces**, 146; 332  
**Chondrogaster**, 356  
**Chondropodiella**, 176; 357  
**Chondropodium**, 369  
**Choriactis**, 114; 312  
**Chorostate**, 68; 264; 12  
**Chorostella**, 68; 264  
**Chromocrea**, 283  
**Chromocreopsis**, 280, 283  
**Chromocytophora**, 189; 373  
**Chromosporium**, 201; 386; 53  
**Chromotorula**, 412  
**Chrysella**, 150; 334  
**Chrysocelis**, 148; 334  
**Chrysocyclus**, 151; 335  
**Chrysomyces**, 54; 250  
**Chrysomyxa**, 153; 338; 39  
**Chrysopsora**, 151; 335  
**Chrysothrix**, 120; 316; 28  
**Chrysothricaceae**, 120; 316  
**Chytridiaceae**, 32; 234  
**Chytridiales**, 30; 233; 1  
**Chytridium**, 33; 235; 1  
**Ciboria**, 326  
**Cicadomyces**, 411  
**Ciccinobella**, 181, 187; 361, 371  
**Ciccinobolus**, 177; 357  
**Cidaris**, 330  
**Ciferria**, 186; 367  
**Ciliaria**, 329  
**Ciliciocarpus**, 354  
**Ciliciopodium**, 406  
**Ciliciopus**, 228; 406; 57  
**Ciliella**, 133; 324  
**Ciliochora**, 176; 357  
**Ciliofusa**, 225; 404  
**Ciliofusarium**, 404  
**Ciliomyces**, 80; 284  
**Ciliophora**, 177; 357  
**Ciliospora**, 187; 371  
**Ciliosporella**, 188; 372  
**Cintractia**, 155; 339  
**Cionothrix**, 149; 334  
**Circinastrum**, 371  
**Circinella**, 35; 237  
**Circinotrichum**, 213; 393  
**Cirromyces**, 213; 393  
**Cirsosia**, 302  
**Cirsociella**, 302  
**Citromyces**, 388  
**Cladobotryum**, 203; 386  
**Cladochaete**, 181; 361  
**Cladochytriae**, 34  
**Cladochytrium**, 34; 235  
**Cladoderris**, 161; 344  
**Cladographium**, 230; 408  
**Cladonia**, 127; 320; 30  
**Cladoniaceae**, 126, 320; 30  
**Cladorhinum**, 214; 393



- Cladosphaeria, 273  
 Cladosporium, 215; 395  
 Cladosterigma, 343, 409  
 Cladotrichum, 215; 395; 56  
 Clarkeinda, 350  
 Clasterosporium, 215; 396  
 Clathrella, 170; 352  
 Clathridium, 73; 274  
 Clathrococcum, 226; 404  
 Clathrogaster, 172; 355  
 Clathroporina, 86; 288  
 Clathrospora, 74; 275  
 Clathrotrichum, 228; 406  
 Clathrus, 169; 352; 46  
 Claudopus, 166; 349; 45  
 Claussenomyces, 313  
 Claustula, 352  
 Clavaria, 162; 345; 42  
 Clavariaceae, 162; 345; 42  
 Clavariopsis, 232; 411  
 Clavariopsis, 342  
 Claviceps, 82; 285; 16  
 Clavogaster, 354  
 Clavularia, 406  
 Clavulinopsis, 351  
 Cleistophoma, 359  
 Cleistosoma, 76; 279  
 Cleistosphaera, 53; 249  
 Cleistotheca, 276  
 Cleistothecopsis, 276  
 Clematomyces, 45; 244  
 Cleptomycetes, 151; 335  
 Clidiomyces, 43; 243  
 Cliniconidium, 343  
 Clinterium, 377  
 Clintoniella, 281  
 Cliostomum, 369  
 Clistophoma, 359  
 Clistosoma, 76; 279  
 Clistosphaera, 53; 249  
 Clistotheca, 276  
 Clistothecopsis, 276  
 Clithris, 109; 308; 24  
 Clitocybe, 165; 348  
 Clitopilus, 166; 349; 45  
 Clonostachyopsis, 386  
 Clonostachys, 203; 386  
 Closteraleurosporia, 410  
 Closterosporia, 410  
 Clypeochorella, 176; 357  
 Clypeodiplodina, 363  
 Clypeolella, 300  
 Clypeolina, 99; 301  
 Clypeolina, 303  
 Clypeolopsis, 303  
 Clypeolum, 101; 303  
 Clypeoportha, 265  
 Clypeoporthella, 261  
 Clypeopycnis, 188; 372  
 Clypeoseptoria, 367  
 Clypeosphaeria, 71; 273; 13  
 Clypeostigma, 280  
 Clypeostroma, 92; 292  
 Clypeothecium, 70; 270  
 Clypeotrabutia, 259  
 Coccidiascus, 47; 245  
 Coccidiodes, 410  
 Coccidomyces, 411  
 Coccidophthora, 72; 273  
 Cocciscia, 84; 287  
 Coccobotrys, 411  
 Coccocarpia, 131; 323  
 Coccochora, 293  
 Coccochorella, 293  
 Coccodiella, 91; 291  
 Coccodinium, 255, 276  
 Coccodiscus, 91; 291  
 Coccodothella, 91; 291  
 Coccodothis, 291  
 Coccoidea, 295  
 Coccoidella, 91; 291  
 Coccomycella, 308  
 Coccoomyces, 109; 308; 24  
 Coccomycetella, 308  
 Cocconia, 96; 298; 21  
 Cocconiopsis, 299  
 Coccopeziza, 110; 310  
 Coccophacidium, 109; 309  
 Coccozozyma, 221; 400  
 Coccozozymella, 201; 387  
 Coccozozymium, 218; 398  
 Coccozozymula, 90; 291; 20  
 Coccozozymopsis, 90; 291  
 Coccozozymula, 86; 288  
 Coelographium, 229; 408  
 Coelomyces, 242, 354  
 Coelomycidium, 233  
 Coelosphaeria, 258  
 Coemansia, 203; 238, 387  
 Coemansiella, 203; 238, 387  
 Coenogonium, 120; 316  
 Coleodictyospora, 398  
 Coleodictys, 218; 398  
 Coleonaema, 368  
 Coleophoma, 178; 295, 357  
 Coleopuccinia, 152; 335  
 Coleosporium, 153; 338  
 Coleroa, 66; 264  
 Collacystis, 187; 371  
 Collema, 122; 316; 29  
 Collemaceae, 121, 316; 28, 29  
 Collemis, 122; 316  
 Collemodes, 122; 316  
 Collemopsidium, 121; 316  
 Colletomanginia, 262, 280  
 Colletotrichella, 381  
 Colletotrichopsis, 381  
 Colletotrichum, 196; 381  
 Collodochium, 220; 400  
 Collonaema, 367  
 Collonaemella, 367  
 Collybia, 166; 348; 44  
 Collyria, 343  
 Colpoma, 308  
 Colpomella, 369  
 Columnophora, 210; 393  
 Columnothyrium, 189; 373  
 Colus, 169; 353; 46  
 Combea, 107; 307  
 Comesia, 135; 326  
 Comoclatris, 73; 275  
 Complectoria, 37; 239  
 Compsomyces, 45; 244; 5  
 Confervales, 40  
 Conida, 105; 306  
 Conidiascus, 48; 239, 246  
 Conidiobolus, 37; 239; 2  
 Coniella, 181; 361  
 Coniocarpum, 105; 306  
 Coniochaeta, 64; 262  
 Coniocybe, 120; 316; 28  
 Coniodictyum, 208; 391  
 Coniophora, 161; 344; 42  
 Coniophorella, 161; 344  
 Conioscypha, 210; 393  
 Coniosporium, 210; 393; 55  
 Coniothecium, 217; 398  
 Coniothyrella, 361  
 Coniothyriella, 378  
 Coniothyrina, 181; 361  
 Coniothyrinula, 362  
 Coniothyriopsis, 181; 362  
 Coniothyriopsis, 361  
 Coniothyris, 193; 378  
 Coniothyrium, 181; 362; 49  
 Conoplea, 197; 381  
 Conostroma, 178; 358  
 Conotheciella, 398  
 Conotrema, 128; 320  
 Constantinella, 213; 393  
 Cookeina, 328

- Cookella**, 93; 296  
**Copelandia**, 350  
**Copranophilus**, 81; 285  
**Coprinopsis**, 351  
**Coprinus**, 168; 350; 45  
**Coprolepa**, 262  
**Cora**, 161; 344  
**Corallodendrum**, 227; 406  
**Corallomyces**, 282  
**Corallomycetella**, 282  
**Cordana**, 214; 395  
**Cordella**, 210; 393  
**Cordierites**, 84; 286  
**Corditubera**, 172; 353  
**Cordyceps**, 82; 285; 16  
**Corella**, 161; 344  
**Coremiella**, 227; 406  
**Coremium**, 227; 406; 57  
**Coreomyces**, 45; 245  
**Corethromyces**, 44; 244; 5  
**Corethrospis**, 202; 387  
**Cornicularia**, 367  
**Corniculariella**, 367  
**Cornucopiella**, 178; 358  
**Cornuella**, 340  
**Cornularia**, 186; 367  
**Corollium**, 392  
**Corollospora**, 183; 363  
**Coronella**, 202, 387  
**Coronophora**, 60; 257  
**Coronophorella**, 60; 257  
**Coronotellium**, 336  
**Corticium**, 161; 344; 42  
**Cortinarius**, 167; 350  
**Corymbomyces**, 203; 387  
**Coryne**, 116; 313; 26  
**Corynelia**, 58; 256; 17  
**Coryneliaceae**, 58; 256; 17  
**Coryneliella**, 257  
**Corynespora**, 398  
**Corynetes**, 329  
**Coryneum**, 199; 384; 52  
**Coscinaria**, 81; 285  
**Coscinopeltis**, 96; 298, 301; 21  
**Cosmariospora**, 222; 401; 58  
**Coutinia**, 260  
**Couturea**, 185; 366  
**Crandallia**, 189; 373  
**Craterellus**, 161; 344; 42  
**Craterocolla**, 158; 341  
**Creomelanops**, 286  
**Creonectria**, 282  
**Creosphaeria**, 278  
**Creothyrium**, 189; 373  
**Crepidotus**, 167; 350; 45  
**Criella**, 108; 309  
**Crinula**, 229; 408  
**Crinula**, 313  
**Criserosphaeria**, 75; 277  
**Cristulariella**, 202; 387  
**Crocicreas**, 194; 379; 49  
**Crocynia**, 120; 316  
**Cronartium**, 154; 338; 39  
**Crossopsora**, 154; 338  
**Crotone**, 90; 291; 19  
**Crotonocarpia**, 74; 276  
**Crucibulum**, 174; 356; 48  
**Crumenula**, 115; 312; 26  
**Cryphonectria**, 265  
**Cryptascus**, 64; 262  
**Cryptica**, 333  
**Cryptobasidium**, 343  
**Cryptocenthospora**, 369  
**Cryptocline**, 382  
**Cryptococcus**, 412  
**Cryptocoryneum**, 225; 404  
**Cryptoderis**, 70; 271  
**Cryptodiaporthe**, 264  
**Cryptodidymosphaeria**, 268  
**Cryptodiscus**, 110; 310; 25  
**Cryptoleptosphaeria**, 278  
**Cryptomela**, 198; 383  
**Cryptomycella**, 369  
**Cryptomyces**, 108; 309; 24  
**Cryptomycina**, 309  
**Cryptonectriopsis**, 62; 259  
**Cryptopeltis**, 304  
**Cryptopeltosphaeria**, 282  
**Cryptopezia**, 135; 326  
**Cryptophaella**, 181; 362  
**Cryptophallus**, 169; 352  
**Cryptoporus**, 163; 347; 43  
**Cryptopus**, 253  
**Cryptorhynchella**, 182; 363  
**Cryptorhynchella**, 368  
**Cryptosphaerella**, 60, 61; 257  
**Cryptosphaeria**, 60, 61; 257  
**Cryptosphaerina**, 73; 273  
**Cryptospora**, 75; 277; 15  
**Cryptosporella**, 63; 259  
**Cryptosporina**, 259  
**Cryptosporiopsis**, 179, 197; 369, 381  
**Cryptosporium**, 369  
**Cryptostictella**, 184; 365  
**Cryptostictis**, 199; 384  
**Cryptothecium**, 283  
**Cryptothele**, 121; 317  
**Cryptothelium**, 88; 290  
**Cryptovalsa**, 61; 257  
**Ctenoderma**, 150; 334  
**Ctenomyces**, 49; 246  
**Cubonia**, 141; 330  
**Cucurbitodithis**, 276  
**Cucurbitaria**, 74; 276; 14  
**Cucurbitariella**, 263  
**Cudonia**, 140; 329; 36  
**Cudoniella**, 140; 329  
**Cunninghamella**, 36; 237  
**Cunninghamia**, 237  
**Curreya**, 74; 276  
**Curreyella**, 275  
**Cuticularia**, 232; 411  
**Cutomyces**, 336  
**Cyanobaeis**, 126; 320  
**Cyanocephalum**, 78; 281  
**Cyanochyta**, 188; 372  
**Cyanoderma**, 81; 285  
**Cyanophomella**, 187; 371  
**Cyanospora**, 278  
**Cyathicula**, 135; 326; 33  
**Cyathus**, 174; 356; 48  
**Cyloconium**, 214; 395  
**Cycloderma**, 354  
**Cyclodomus**, 177; 358  
**Cyclodothis**, 291  
**Cyclographa**, 106; 307  
**Cyclomyces**, 164; 347; 44  
**Cycloschizella**, 96; 298  
**Cycloschizum**, 96; 298  
**Cyclostomella**, 96; 298  
**Cyclotheca**, 97; 298; 21  
**Cyclothyrium**, 362  
**Cylindrina**, 75; 277  
**Cylindrium**, 201; 387  
**Cylindrocarpum**, 405  
**Cylindrocephalum**, 203; 387  
**Cylindrocladium**, 206; 389  
**Cylindrocolla**, 220; 400; 58  
**Cylindrodendrum**, 205; 387  
**Cylindrophora**, 205; 387  
**Cylindrosporella**, 382  
**Cylindrosporium**, 200; 385; 52  
**Cylindrothyrium**, 376  
**Cylindrotrichum**, 204; 387  
**Cylomyces**, 225; 404  
**Cymatella**, 351  
**Cypheium**, 120; 316; 23  
**Cypheila**, 161; 344

- Cyphellomyces, 354  
 Cyphellopyncis, 369  
**Cyphina**, 195; 379  
**Cyphospilea**, 67; 264, 295  
 Cystingophora, 337  
**Cystodendrum**, 213; 393  
**Cystolobis**, 129; 322  
**Cystomyces**, 153; 337  
**Cystophora**, 212; 393  
**Cystopsora**, 148; 334  
 Cystopus, 241  
 Cystospora, 233  
 Cystotelium, 337  
 Cystotheca, 249  
**Cystothyrium**, 191; 375  
**Cystrichia**, 195; 380  
**Cytidia**, 161; 344  
**Cytodiplospora**, 183; 363  
**Cytogloeum**, 197; 382  
 Cytonaema, 369  
 Cytophoma, 369  
 Cytoplacosphaeria, 369, 376  
**Cytoplea**, 181; 362  
**Cytosphaera**, 181; 362  
**Cytospora**, 179; 358; 49  
**Cytosporella**, 179; 358  
**Cytosporina**, 186; 367; 50  
**Cytosporium**, 185; 367  
**Cytostaganis**, 185; 367  
 Cytostaganospora, 367  
**Cytriospora**, 183; 363  
**Cyttaria**, 84; 286; 38  
**Cyttariaceae**, 83; 286; 38
- D**
- Dacrymycella**, 220; 400  
 Dacryobolus, 346  
**Dacryodochium**, 221; 400  
**Dacryomitra**, 159; 342; 41  
**Dacryomyces**, 159; 342; 41  
**Dacryomycetaceae**, 159; 342  
 Dacryopsella, 342  
 Dacryopsis, 342  
**Dactylaria**, 207; 390  
**Dactylella**, 207; 390  
**Dactylina**, 130; 322  
**Dactylium**, 207, 390  
 Dactylomyces, 392  
**Dactylosporium**, 217; 398  
**Daedalea**, 164; 347; 43  
**Daldinia**, 65; 262; 11  
 Daleomyces, 333  
**Dangeardia**, 32; 235  
**Dangeardiella**, 90; 291; 19  
**Darbishirella**, 106; 307  
**Darluca**, 182; 363; 49  
**Darluca**, 182; 364  
 Darwiniella, 270  
**Dasybolus**, 141; 330  
**Dasypezis**, 136; 326  
 Dasyphthora, 282  
**Dasyphyrena**, 184; 256, 365  
**Dasyscypha**, 136; 326; 33  
**Dasyscyphae**, 136  
**Dasyscyphella**, 137; 326  
 Dasysphaeria, 275  
 Dasyspora, 336  
**Dasysticta**, 179; 358  
**Dasystictella**, 179; 358  
**Davincia**, 136; 326  
 Davinciella, 327  
**Davisiella**, 182; 364  
 Dearnessia, 365  
**Debaryella**, 79; 283  
 Debaryomyces, 245  
**Deconica**, 168; 350  
**Delacourea**, 74; 276  
**Delastria**, 146; 332; 38  
 Delastriopsis, 332  
**Delitschia**, 69; 268  
**Delitschiella**, 69; 268  
 Delortia, 223; 341, 402  
 Delphinella, 296  
 Delpinoella, 278  
 Delpontia, 310  
**Dematiaceae**, 209; 392; 55-57  
**Dematium**, 211; 393  
 Dendrocladium, 345  
 Dendrocypbella, 344  
**Dendrodochium**, 220; 400; 58  
**Dendrodomus**, 177; 358  
 Dendroecia, 337  
**Dendrogaster**, 173; 355  
**Dendrographa**, 106; 307  
**Dendrographium**, 230; 409  
**Dendrophoma**, 177; 358; 49  
**Dendrosphaera**, 144; 332  
**Dendrostilbella**, 227; 406  
 Dendrothele, 344  
**Dendryphiella**, 216; 397  
**Dendryphium**, 216; 397  
**Dermatea**, 114; 312; 26  
**Dermateaceae**, 114; 312; 26  
 Dermatella, 312  
 Dermatina, 296  
**Dermaticum**, 126; 319  
**Dermatocarpae**, 87  
**Dermatocarpum**, 88; 289; 18  
**Dermatodothis**, 92; 292  
**Dermophyta**, 231, 409  
**Desmazierella**, 139; 327; 35  
**Desmella**, 150; 335  
**Desmidiospora**, 218; 399  
**Desmopatella**, 192; 377  
 Desmotascus, 259  
 Detonia, 328  
**Deuteromycetes**, 175  
**Dexteria**, 52; 248  
**Diabole**, 149; 334  
 Diachora, 293  
**Diachorella**, 179; 358  
 Dialhypocrea, 281  
 Dialonectria, 282  
 Diaphanium, 405  
**Diaporthe**, 68; 264  
 Diaporthella, 264  
 Diaporthopsis, 259  
 Diarthonis, 306  
 Diathryptum, 252  
 Diatractium, 278  
**Diatrype**, 61; 257; 9  
**Diatrypella**, 61; 257  
**Dibaeis**, 126; 320  
**Dibelonis**, 134; 324  
**Diblastospermella**, 183; 255, 365  
 Diblepharis, 242  
 Dicaeoma, 336  
**Dicarpella**, 62; 259  
**Dichaena**, 103; 305; 22  
**Dichaenopsis**, 194; 379  
**Dichaetis**, 54; 250  
**Dichirinia**, 149; 334  
**Dichlaena**, 51; 247  
**Dichlamys**, 150; 334  
**Dichomera**, 185; 367; 50  
**Dichomyces**, 43; 243; 5  
 Dichoporis, 288  
**Dichosporium**, 71; 271  
 Dichostereum, 344  
 Dichothrix, 249  
 Dichotomella, 395  
 Dichotonium, 246  
**Dicocum**, 214; 396  
**Dicollema**, 122; 317  
**Dicranidium**, 223; 402  
**Dicranophora**, 35; 237  
**Dictyobole**, 169; 353; 46

- Dictyocephalus**, 172; 353  
**Dictyochoeta**, 213; 393  
**Dictyochora**, 295  
**Dictyochorella**, 92; 293  
**Dictyodochis**, 90; 291  
**Dictyographa**, 307  
**Dictyolus**, 348  
**Dictyomollis**, 133; 324  
**Dictyonella**, 93; 296; 20  
**Dictyonema**, 161; 344  
**Dictyonia**, 116; 313  
**Dictyopeltineae**, 100  
**Dictyopeltis**, 100; 303  
**Dictyophora**, 169; 352; 46  
**Dictyorinis**, 132; 323  
**Dictyosporium**, 217; 398; 56  
**Dictyothyriella**, 304  
**Dictyothyriina**, 100; 303  
**Dictyothyrium**, 100; 303  
**Dictyuchus**, 38; 240; 3  
**Dicyma**, 211; 393  
**Didochis**, 90; 291  
**Didymaria**, 206; 389  
**Didymariopsis**, 396  
**Didymascella**, 143; 331  
**Didymascella**, 309  
**Didymascina**, 268, 311  
**Didymascus**, 143; 331  
**Didymella**, 66; 264; 11  
**Didymellina**, 266  
**Didymellopsis**, 66; 265  
**Didymobotryopsis**, 407  
**Didymobotrys**, 228; 407  
**Didymobotryum**, 230; 408  
**Didymochaete**, 182; 364  
**Didymochlamys**, 340  
**Didymochora**, 191; 375  
**Didymocladium**, 205; 390  
**Didymocoryne**, 313  
**Didymopsamma**, 264  
**Didymopsis**, 206; 390  
**Didymopsora**, 152; 335  
**Didymosphaeria**, 68; 268; 12  
**Didymosporiella**, 365  
**Didymosporina**, 383  
**Didymosporis**, 183; 365  
**Didymosporium**, 198; 383; 52  
**Didymostilbe**, 228; 407  
**Didymothozetia**, 401  
**Didymotricha**, 269  
**Didymotrichum**, 389  
**Diedicke**, 190; 374  
**Diedickella**, 365  
**Dielsiella**, 96; 298; 21  
**Dietelia**, 148; 334  
**Digraphis**, 307  
**Dilophia**, 75; 277; 15  
**Dilophospora**, 186; 367  
**Dimargaris**, 202; 238, 387  
**Dimeriella**, 54; 250  
**Dimeriellopsis**, 54; 251  
**Dimerina**, 54; 250  
**Dimerinopsis**, 67; 265  
**Dimeriopsis**, 250  
**Dimerisma**, 85; 287  
**Dimerium**, 54; 250  
**Dimeromyces**, 42; 243; 5  
**Dimerosporiella**, 253, 255  
**Dimerosporina**, 56; 253  
**Dimerosporiopsis**, 269  
**Dimerosporium**, 300  
**Dimorphomyces**, 42; 243  
**Dinemasporiella**, 377, 378  
**Dinemasporiopsis**, 377  
**Dinemasporis**, 193; 378  
**Dinemasporium**, 192; 377; 51  
**Dioecomyces**, 44; 244; 5  
**Dioranotropis**, 413  
**Diorchidium**, 151; 335  
**Diphaeis**, 319  
**Diphaeostica**, 129; 322  
**Diphanis**, 125; 319  
**Diphanosticta**, 129; 322  
**Diphloeis**, 319  
**Diplocarpa**, 137; 326  
**Diplocarpum**, 95; 298  
**Diploceras**, 198; 384  
**Diplochora**, 291, 293  
**Diplochorella**, 90; 291; 19  
**Diplocladium**, 206; 390  
**Diplococcium**, 215; 396  
**Diplocryptis**, 110; 310  
**Diplocystis**, 354  
**Diplodascus**, 37; 239  
**Diploderma**, 354  
**Diplodia**, 183; 365; 50  
**Diplodiella**, 183; 365  
**Diplodina**, 182; 364; 49  
**Diplodinis**, 182; 364  
**Diplodiopsis**, 369  
**Diplodothiorella**, 364  
**Diplogramma**, 105; 307  
**Diploidium**, 392  
**Diplomyces**, 45; 244; 5  
**Diplonaevia**, 110; 310  
**Diploospora**, 206; 390  
**Diplopeltis**, 191; 375  
**Diplopeltis**, 321  
**Diplopeltopsis**, 128; 321  
**Diplophlyctis**, 33; 235  
**Diplophysa**, 31; 233; 1  
**Diploscleris**, 183; 364  
**Diploplacosphaeria**, 364  
**Diploplenodomopsis**, 364  
**Diploplenodomus**, 182; 364  
**Diplothinotrichum**, 206; 390  
**Diploschistes**, 128; 320; 31  
**Diplosclerophoma**, 364  
**Diplosphaerella**, 266  
**Diplosporid**, 259, 293  
**Diplosporium**, 206; 390  
**Diplostephanus**, 49; 246  
**Diplothea**, 297  
**Diplothomma**, 132; 323  
**Diplozythia**, 185; 371; 50  
**Diplozythiella**, 195; 380  
**Diporina**, 86; 288  
**Dipyrenis**, 86; 288  
**Dirina**, 106; 307; 23  
**Dirinae**, 106  
**Dirinaria**, 132; 323  
**Dirinastrum**, 106; 307  
**Disaeta**, 384  
**Discella**, 193; 378; 51  
**Discellaceae**, 192; 377; 51  
**Discellae**, 192  
**Discina**, 138; 327; 34  
**Disciseda**, 354  
**Discocera**, 315  
**Discochora**, 293  
**Discocolla**, 222; 402  
**Discocyphella**, 352  
**Discodiaportha**, 264  
**Discodothis**, 91; 291  
**Discofusarium**, 402  
**Discogloeum**, 382  
**Discomycella**, 142; 331  
**Discomycopsella**, 293, 376  
**Discomycopsis**, 293, 369  
**Discosia**, 191; 375; 51  
**Discosiella**, 190; 375  
**Discosphaerina**, 260  
**Discospora**, 197; 382  
**Discosporiella**, 382  
**Discosporiopsis**, 381  
**Discosporium**, 382  
**Discostroma**, 275  
**Discostromella**, 376  
**Discotheciella**, 190; 375  
**Discothecium**, 268, 375

- Discozythia**, 194; 379  
**Discula**, 382  
**Disculina**, 381, 385  
**Disperma**, 259  
**Dispira**, 36, 202; 237, 387  
**Dissophora**, 36; 237  
**Distichomyces**, 45; 244  
**Dithelopsis**, 86; 288  
**Dithozetia**, 222; 401  
**Ditiola**, 159; 342  
**Ditopella**, 62; 259  
**Ditremis**, 87; 289  
**Ditylis**, 120; 316  
**Doassansia**, 156; 339; 40  
**Doassansiopsis**, 156; 339  
**Doratomyces**, 203; 387  
**Dothichiza**, 178; 358; 51  
**Dothichloe**, 82; 285  
**Dothicypeolum**, 295  
**Dothidasteris**, 97; 298; 21  
**Dothidasteroma**, 97; 298  
**Dothidasteromella**, 298  
**Dothidea**, 90; 291; 19  
**Dothideaceae**, 89; 290; 19, 20  
**Dothideae**, 89  
**Dothideales**, 88; 290  
**Dothidella**, 292  
**Dothideodiplodia**, 365  
**Dothideopsella**, 90; 291  
**Dothideovalsa**, 89; 291  
**Dothidina**, 291  
**Dothidotthia**, 269  
**Dothiopsis**, 369  
**Dothiora**, 94, 109; 296, 309; 20, 24  
**Dothiorae**, 93  
**Dothiorellina**, 179; 358; 49  
**Dothiorina**, 187; 371  
**Dothisphaeropsis**, 362  
**Dothithyriella**, 298  
**Dothophaeis**, 91; 291  
**Drepanoconis**, 223, 402  
**Drepanopeziza**, 325  
**Drepanospora**, 216; 397  
**Dubiomyces**, 413  
**Ductifera**, 343  
**Dufourea**, 131; 322; 32  
**Duplicaria**, 309  
**Duportella**, 344  
**Durandia**, 115; 312  
**Durandiomyces**, 330  
**Durella**, 118; 314; 27  
**Dussiella**, 82; 285  
**Dyslachnum**, 136; 326
- Dyslecanis**, 128; 320  
**Dysrhynchis**, 56; 253  
**Dysticta**, 129; 322  
**Dystictina**, 131; 322
- E**
- Earlea**, 337  
**Ecchyna**, 341  
**Eccilia**, 166; 349  
**Echidnodella**, 100; 301  
**Echidnodes**, 100; 301  
**Echinobotryum**, 209; 393; 55  
**Echinodontium**, 163; 346  
**Echinodopsis**, 82; 285  
**Echinophallus**, 169; 352  
**Echinothecium**, 66; 265  
**Echusias**, 258  
**Ectinomyces**, 44; 244; 5  
**Ectosphaeria**, 257  
**Ectosticta**, 360  
**Ectostroma**, 232; 411  
**Ectotrichophytum**, 410  
**Ectrogella**, 31; 233  
**Eichleriella**, 342  
**Eidamella**, 49; 246  
**Elachopeltis**, 190; 374  
**Elaeodema**, 385, 392  
**Elaphomyces**, 145; 332; 38  
**Elaphomycetaceae**, 145; 332; 38  
**Elasmomyces**, 353  
**Elateromyces**, 339  
**Eleutheris**, 187; 371  
**Eleutheromycella**, 371  
**Eleutheromyces**, 361  
**Eleutherosphaera**, 282  
**Ellisiella**, 213; 393  
**Ellisiodopsis**, 299  
**Elmeria**, 347  
**Elmerina**, 164; 347  
**Elmerococcum**, 291  
**Elsinoae**, 92  
**Elsinoe**, 93; 296  
**Emericella**, 51; 248  
**Empusa**, 37; 239; 2  
**Empusaceae**, 37; 239; 2  
**Enantiothamnus**, 412  
**Enarthromyces**, 43; 243  
**Encephalographa**, 105; 307  
**Enchnoa**, 60; 257  
**Enchnosphaeria**, 71; 271  
**Encoelia**, 312  
**Encoeliella**, 114; 312  
**Endobasidium**, 343  
**Endoblastoderma**, 411  
**Endobotrya**, 199; 385  
**Endobotryella**, 199; 385  
**Endocalyx**, 181, 230; 362  
**Endocarpum**, 87; 290; 18  
**Endocena**, 131; 322  
**Endocladis**, 198; 384  
**Endococcus**, 68; 268  
**Endoconidiophora**, 259, 278  
**Endoconidium**, 220; 400  
**Endocoryneum**, 384  
**Endocycla**, 303  
**Endodermophytum**, 410  
**Endodesmia**, 222; 401  
**Endodothella**, 294  
**Endodothiora**, 94; 296  
**Endogloea**, 369  
**Endogonaceae**, 36; 238  
**Endogone**, 37; 238  
**Endogonella**, 238  
**Endomyces**, 47; 245; 6  
**Endomycetaceae**, 46; 245  
**Endophragmia**, 216; 397  
**Endophyllachora**, 294  
**Endophylloides**, 150; 334  
**Endophyllum**, 150; 334  
**Endoscypha**, 136; 326  
**Endospora**, 233  
**Endostigma**, 268  
**Endothia**, 63, 67; 265; 12  
**Endothiella**, 180; 358  
**Endoxyla**, 60, 61; 257  
**Endoxylina**, 70; 268  
**Endyllum**, 46; 245  
**Englerodopsis**, 292  
**Engleromyces**, 280  
**Englerula**, 55; 252  
**Englerulaceae**, 55; 252  
**Englerulaster**, 99; 301  
**Enterodictyum**, 107; 308  
**Enterostigma**, 107, 308  
**Enthallopycnidium**, 369  
**Entodesmium**, 277  
**Entoleuca**, 262  
**Entoloma**, 166; 349; 45  
**Entomopatella**, 195; 379  
**Entomophthora**, 239  
**Entomosporium**, 198; 384; 51  
**Entonaema**, 280  
**Entopeltis**, 95; 298  
**Entophlyctis**, 33; 235  
**Entorhiza**, 155; 339

**Entosordaria**, 63; 262  
**Entyloma**, 155; 339; 40  
**Eocronartium**, 341  
**Eolichen**, 85; 287  
**Fomycenella**, 349  
**Eosphaeria**, 52; 248  
**Eoterfezia**, 146; 332  
**Ephebae**, 122  
**Ephebe**, 122; 317; 29  
**Ephebeia**, 122; 317  
**Ephelidium**, 194; 379  
**Ephelina**, 312  
**Epheliopsis**, 180; 358  
**Epheliopsis**, 257  
**Epheleis**, 194; 379  
**Epibotrys**, 276  
**Epichloe**, 82; 285; 16  
**Epiclinium**, 225; 404  
**Epicoccum**, 224; 403; 58  
**Epicorticium**, 350  
**Epicymatia**, 264, 272  
**Epicyta**, 362  
**Epidermidophyton**, 410  
**Epidermophytum**, 231; 410  
**Epidochiopsis**, 405  
**Epidochium**, 405  
**Epigloea**, 85; 287; 18  
**Epilichen**, 118; 314  
**Epinectria**, 282  
**Epipeltis**, 304, 309  
**Epiphora**, 92; 293  
**Epiphyma**, 63; 259  
**Epipolaeum**, 68; 268  
**Episoma**, 53; 249  
**Episphaerella**, 266  
**Epistigme**, 181; 362  
**Epithele**, 161; 344  
**Epochnium**, 214; 396  
**Eremascus**, 46; 245  
**Eremotheca**, 101; 303  
**Eremothecella**, 101; 303  
**Eremothecium**, 47; 245  
**Erikssonia**, 64; 262  
**Erinella**, 137; 326  
**Erioderma**, 131; 323  
**Eriomene**, 213; 393  
**Eriomenella**, 216; 397  
**Eriomycopsis**, 391  
**Eriopeziza**, 135; 326; 33  
**Eriosphaeria**, 265, 354  
**Eriospora**, 79, 185; 282, 336  
**Eriosporangium**, 336  
**Eriosporella**, 196; 382  
**Eriospolina**, 184; 366

**Eriothyrium**, 190; 374  
**Erostella**, 258  
**Erothrotheca**, 281  
**Erysiphaceae**, 52; 249; 7  
**Erysiphe**, 52; 249; 7  
**Erysiphella**, 249  
**Erysiphopsis**, 225; 404  
**Erysiphopsis**, 249  
**Erythrocarpum**, 77; 280  
**Euacanth**, 60; 258  
**Euantennaria**, 251  
**Eubelonis**, 135; 326  
**Eucantharomyces**, 43; 243  
**Euchaetomella**, 377  
**Eucorethromyces**, 44; 244  
**Eucyphelis**, 119; 316  
**Eudarluca**, 70; 271  
**Eudimeriolum**, 255  
**Euhaplomyces**, 43; 243  
**Eumela**, 278  
**Eumollisiae**, 133  
**Eumonoecomyces**, 43; 243  
**Eupelte**, 302  
**Eupropolella**, 111; 310  
**Eupropolis**, 111; 310  
**Eurotiaceae**, 50; 247; 6, 8  
**Eurotiella**, 247  
**Eurotiopsis**, 247  
**Eurotium**, 51; 247; 8  
**Euryachora**, 91; 293; 20  
**Eurychasma**, 236  
**Eurytheca**, 93; 296  
**Eustictidae**, 109  
**Euthryptum**, 331  
**Eutorula**, 412  
**Eutorulopsis**, 412  
**Eutypa**, 61; 257; 9  
**Eutypella**, 61; 257; 9  
**Eutypopsis**, 268  
**Euzodiomyces**, 45; 245  
**Everhartia**, 227; 405  
**Evernia**, 131; 322; 32  
**Everniopsis**, 130; 322  
**Exarmidium**, 92; 293  
**Exascaceae**, 143; 332; 6, 37  
**Exascus**, 144; 332; 37  
**Excioconis**, 215; 397  
**Excipula**, 325  
**Excipulaceae**, 192  
**Excipularia**, 193, 194, 225;  
     378, 379, 404  
**Excipulella**, 378  
**Excipulina**, 193; 378  
**Exidia**, 158; 341; 41

**Exidiopsis**, 158; 342  
**Exilospora**, 76; 277  
**Exobasidiopsis**, 381  
**Exobasidium**, 160; 343; 42  
**Exogone**, 331  
**Exophoma**, 357  
**Exosporella**, 226; 405  
**Exosporina**, 224; 403  
**Exosporina**, 404  
**Exosporium**, 225; 404; 58  
**Exotrichum**, 381, 403

## F

**Fabraea**, 134; 324; 33  
**Fairmania**, 248  
**Fairmaniella**, 383  
**Falcispora**, 377  
**Farlowiella**, 103; 305  
**Farriola**, 119; 316  
**Farysia**, 155; 339  
**Favillea**, 354  
**Favulus**, 164; 347  
**Femsjonina**, 159; 342  
**Fenestella**, 74; 276; 14  
**Feracia**, 81; 284  
**Ferrarisia**, 302  
**Filoboletus**, 164; 347  
**Fimetaria**, 262  
**Fioriella**, 195; 380  
**Fischerula**, 333  
**Fistulina**, 164; 347; 43  
**Fistulinella**, 346  
**Flageoletia**, 259  
**Flaminia**, 109; 310  
**Flammula**, 167; 350; 45  
**Fleischeria**, 285  
**Fleischhakea**, 248, 330  
**Floccomutinus**, 352  
**Fomes**, 163; 347; 43  
**Fominia**, 198; 383  
**Forssellia**, 121; 317  
**Fourgea**, 106; 307  
**Fracchiaea**, 61; 258; 9  
**Fragosoa**, 306  
**Fragosella**, 380  
**Fragosphaeria**, 51; 247  
**Friesula**, 345  
**Frommea**, 152; 337  
**Fuckelia**, 188; 372  
**Fuckelina**, 213; 393  
**Fulminaria**, 235  
**Fumago**, 217; 398  
**Fumagopsis**, 226; 405  
**Fumagospora**, 185; 367

- Fusariella**, 215; 397; 56  
**Fusarium**, 222; 402; 58  
**Fusella**, 210; 393  
**Fusicladiella**, 396, 398  
**Fusicladium**, 215; 396  
**Fusicocum**, 179; 358  
**Fusicolla**, 220; 400  
**Fusidium**, 201; 387; 53  
**Fusisporella**, 222; 401  
**Fusoma**, 207; 390
- G**
- Gaillardiiella**, 69; 268  
**Galactinia**, 138; 328; 35  
**Galera**, 167; 350  
**Gallowaya**, 153; 338  
**Galzinia**, 344  
**Gambleola**, 152; 335  
**Gamonamella**, 367  
**Gamospora**, 186; 367  
**Gamosporella**, 180; 358  
**Ganoderma**, 347  
**Gastroboletus**, 354  
**Gautieria**, 173; 355; 48  
**Geaster**, 171; 353; 47  
**Geasteroides**, 353  
**Geasteropsis**, 353  
**Geisleria**, 85; 287  
**Gelatinosporis**, 186; 367  
**Gelatinosporium**, 367  
**Geminispora**, 62, 91; 259, 293  
**Genabea**, 146; 332  
**Genea**, 145; 332; 38  
**Geoglossae**, 140  
**Geoglossum**, 140; 329; 36  
**Geolegnia**, 38; 240  
**Geopora**, 145; 333  
**Geopyxis**, 138; 328; 34  
**Geotrichum**, 201; 387  
**Gerwasia**, 148; 334  
**Gibbera**, 66; 265  
**Gibberella**, 79; 282; 16  
**Gibberidea**, 72; 273  
**Gibellia**, 259  
**Gibellina**, 69; 268  
**Gibellula**, 228; 406; 57  
**Gibsonia**, 280  
**Gilletia**, 208  
**Gilletiella**, 98; 298  
**Gillotia**, 72; 273  
**Giulia**, 191; 376  
**Glaziella**, 36; 238  
**Glenospora**, 212; 393; 55  
**Gliobotrys**, 202; 387
- Gliocephalis**, 238  
**Gliocladium**, 202; 387  
**Gliocladochium**, 403  
**Gliomastix**, 210; 394  
**Glischröderma**, 356  
**Globaria**, 171; 353  
**Globulina**, 285  
**Gloeocalyx**, 314  
**Gloecephala**, 349  
**Gloeocystidium**, 345  
**Gloeodes**, 190; 374  
**Gloeoglossum**, 140; 329  
**Gloeopeniophora**, 345  
**Gloeopeziza**, 116, 142; 313, 331  
**Gloeoporus**, 163; 347  
**Gloeosoma**, 158, 342  
**Gloeosphaera**, 203; 387  
**Gloeosporidiella**, 382  
**Gloeosporidina**, 382  
**Gloeosporidium**, 382  
**Gloeosporiella**, 198; 383  
**Gloeosporina**, 382  
**Gloeosporiopsis**, 381  
**Gloeosporium**, 197; 382; 51  
**Gloeothele**, 163; 346  
**Glomerella**, 63; 259; 10  
**Glomerula**, 237  
**Glomerularia**, 201; 387; 53  
**Glomus**, 238  
**Gloniella**, 103; 305; 22  
**Gloniopsis**, 104; 305  
**Glonium**, 103; 305; 22  
**Glossodium**, 126; 320  
**Glutinium**, 176; 358  
**Glycophila**, 201; 387  
**Glyphis**, 107; 308  
**Glypholecia**, 131; 321  
**Gnomonia**, 66; 265; 11  
**Gnomoniella**, 62; 259; 9  
**Gnomonina**, 260  
**Gnomoniopsis**, 271  
**Godfrinia**, 348  
**Godronia**, 115; 312; 26  
**Godroniella**, 378  
**Godroniopsis**, 114; 312  
**Gomphidius**, 168; 350; 45  
**Gomphillus**, 126; 320  
**Gonapodya**, 41; 242; 4  
**Gonatobotrys**, 205; 387; 54  
**Gonatobotrytae**, 205  
**Gonatobotryum**, 211; 394; 55  
**Gonatorhodis**, 205; 387  
**Gonatorhodum**, 210; 394
- Gongromeriza**, 209; 394  
**Gongylia**, 85; 287  
**Gonisporium**, 212; 394  
**Gonisporium**, 403  
**Gonohymenia**, 121; 317  
**Gonolecania**, 123; 318  
**Gonothecis**, 124; 318  
**Gonothecium**, 133; 324  
**Gonyella**, 215; 396  
**Gonytrichum**, 214; 394; 56  
**Goplana**, 148; 334  
**Gorgoniceps**, 136; 326  
**Grallomyces**, 392  
**Grammothele**, 163; 346  
**Grandinia**, 162; 346  
**Grandiniella**, 346  
**Granularia**, 221; 400  
**Graphidaceae**, 104; 306; 23  
**Graphidae**, 105  
**Graphidium**, 203; 387  
**Graphina**, 106; 307  
**Graphinella**, 106; 307  
**Graphiola**, 156; 340  
**Graphiolaceae**, 156; 340  
**Graphiopsis**, 229; 408  
**Graphiothecium**, 229; 408  
**Graphis**, 106; 307; 23  
**Graphium**, 229; 408  
**Grapphyllum**, 104, 109; 305; 22
- Griggsia**, 101; 295, 303  
**Griphosphaerella**, 271  
**Griphosphaeria**, 275  
**Griphosphaerioma**, 270; 275  
**Groveola**, 335  
**Grubyella**, 410  
**Gueguenia**, 207; 390  
**Guelichia**, 219; 400  
**Guepinia**, 159; 342; 41  
**Guignardia**, 260  
**Guignardiella**, 261  
**Guillermondia**, 51; 248  
**Guillermondia**, 245  
**Guttularia**, 53; 249  
**Guttularia**, 281  
**Gyalecta**, 129; 321; 31  
**Gyalectae**, 128  
**Gymnascaceae**, 48; 246; 6  
**Gymnascales**, 46; 245  
**Gymnascus**, 49; 246; 6  
**Gymnoconia**, 151; 335  
**Gymnoderma**, 126; 320; 30  
**Gymnodochium**, 222; 401  
**Gymnoglossum**, 173; 355

*Gymnographa*, 105; 306  
*Gymnomyces*, 356  
*Gymnopeltis*, 303  
*Gymnosporangium*, 151,  
 152; 336; 39  
*Gymnotelium*, 336  
*Gyrocephalus*, 159; 342; 41  
*Gyroceras*, 209; 394  
*Gyrocallema*, 122; 317  
*Gyrocratera*, 333  
*Gyrodon*, 164; 347  
*Gyromitra*, 140; 329  
*Gyrophora*, 126; 319; 31  
*Gyrophorae*, 126  
*Gyrophragmium*, 170; 353;  
 47  
*Gyrostomum*, 129; 321; 31  
*Gyrostroma*, 195; 379

## H

*Habrostictis*, 110; 310  
*Hadotia*, 99, 104; 301, 305  
*Hadronema*, 214; 396  
*Hadrotrichum*, 224; 403; 55  
*Haematomma*, 127; 320  
*Haematomyces*, 116, 142;  
 313, 331  
*Haematomyxa*, 116, 143;  
 313, 331  
*Hainesia*, 195; 379  
*Halbania*, 98; 301  
*Halbaniella*, 99; 301  
*Halbanina*, 300  
*Halobysus*, 388  
*Halonia*, 259  
*Halstedia*, 295  
*Hamasporea*, 336  
*Hamasporella*, 336  
*Hansenia*, 246, 263  
*Hansenspora*, 246  
*Hansenula*, 48; 245  
*Hapalocystis*, 273  
*Hapalophragmium*, 338  
*Hapalosphaeria*, 178; 358  
*Haplaria*, 204; 387; 53  
*Haplariella*, 220; 400  
*Haplariopsis*, 206; 390  
*Haplariopsis*, 400  
*Haplobasidium*, 211; 394  
*Haplodothella*, 259  
*Haplodothis*, 267  
*Haplographium*, 393  
*Haplolepis*, 359  
*Haplomela*, 383  
*Haplomyces*, 43; 243; 5  
*Haplopeltineae*, 101  
*Haplopeltis*, 101; 303  
*Haplophyse*, 310  
*Haplopyrenula*, 87; 289  
*Haplopyxis*, 149; 334  
*Haploravenelia*, 337  
*Haplosporangium*, 36; 237  
*Haplosporella*, 182; 362; 49  
*Haplosporidium*, 357  
*Haplosporium*, 278  
*Haplostroma*, 278  
*Haplotheciella*, 264  
*Haplothecium*, 259  
*Haplothelium*, 335  
*Haplotrichum*, 202; 387; 53  
*Haplovalsaria*, 68; 268  
*Haraea*, 55; 251  
*Hariotia*, 94; 296  
*Hariotula*, 301  
*Harknessia*, 188; 372; 49  
*Harknessiella*, 313  
*Harpagomyces*, 399  
*Harpidium*, 127; 320  
*Harpocephalum*, 409  
*Harpochytrium*, 33; 235  
*Harpographium*, 229; 408  
*Harposporella*, 193; 378  
*Hartiella*, 407  
*Hartigiella*, 388  
*Harziella*, 386  
*Hassea*, 85; 287  
*Hebeloma*, 167; 350  
*Helicia*, 374  
*Helicobasidium*, 341  
*Helicobasis*, 157; 341  
*Helicocephalum*, 210; 394  
*Helicodendrum*, 209; 391  
*Helicodesmus*, 391  
*Helicogloea*, 341  
*Helicoma*, 218; 399  
*Helicomycetes*, 209; 391; 54  
*Helicopsis*, 399  
*Helicosporangium*, 232; 411  
*Helicosporium*, 218; 399; 57  
*Helicostilbe*, 228; 407  
*Helicostylum*, 238  
*Helicotrichum*, 213; 394  
*Helicoum*, 209; 391  
*Heliomyces*, 166; 348  
*Heliscus*, 222; 402  
*Helminthocarpum*, 106; 307  
*Helminthophana*, 244  
*Helminthosphaeria*, 64; 262  
*Helminthosporium*, 217;  
 397; 56  
*Helolachnum*, 135; 326  
*Helostroma*, 392  
*Helotiaceae*, 134; 325; 33  
*Helotiae*, 135  
*Helotiopsis*, 135; 326  
*Helotium*, 135; 326; 33  
*Helvella*, 140; 329; 36  
*Helvellaceae*, 139; 329; 36  
*Helvellae*, 139  
*Hemidothis*, 186; 367  
*Hemigaster*, 351  
*Hemiglossum*, 140; 329  
*Hemileia*, 148; 334  
*Hemileiopsis*, 334  
*Hemisphaeriaceae*, 100  
*Hemispora*, 212; 394  
*Hendersonia*, 184; 366; 50  
*Hendersoniella*, 184; 366  
*Hendersonina*, 369  
*Hendersoninula*, 366  
*Hendersoniopsis*, 366  
*Hendersonula*, 185; 366  
*Henningsia*, 348  
*Henningsiella*, 143; 331  
*Henningsina*, 65; 262  
*Henningsomyces*, 253  
*Henriquesia*, 112; 311  
*Heppia*, 124; 318; 29  
*Heppiiae*, 124  
*Heptameria*, 273  
*Heptasporium*, 392  
*Hercospora*, 265  
*Hericium*, 346  
*Hermatomyces*, 230; 409  
*Herpobasidium*, 341  
*Herpocliadiella*, 237  
*Herpocladium*, 36; 237  
*Herpomyces*, 44; 244  
*Herpothrix*, 273  
*Herpotrichia*, 271  
*Herpotrichiella*, 72; 273  
*Herpotrichiopsis*, 360  
*Heterobasidium*, 347  
*Heterobotrys*, 209; 394  
*Heterobotrys*, 331  
*Heterocarpum*, 88; 290  
*Heterocephalum*, 227; 407  
*Heteroceras*, 199; 384  
*Heterochaete*, 158; 342  
*Heterochaetella*, 342  
*Heterochlamys*, 298  
*Heterodea*, 130; 322



- Heterodothis, 289  
**Heteromyces**, 126; 320  
 Heteronectria, 271  
**Heteropatella**, 193; 377; 51  
 Heteropera, 260  
 Heterophracta, 276  
 Heteroplegma, 328  
**Heterosphaeria**, 112; 311; 25  
**Heterosporium**, 216; 397  
 Heterotextus, 343  
**Hexagonella**, 49; 246  
**Hexagonia**, 164; 347  
 Heydenia, 409  
 Heydeniopsis, 406  
**Hiatula**, 165; 348  
**Himantia**, 232; 411  
 Hippoperdum, 354  
**Hirneola**, 157; 341; 41  
**Hirneolina**, 158; 342; 41  
 Hirsutella, 346  
**Hirundinaria**, 218; 399  
 Histoplasma, 411  
**Hobsonia**, 223; 402  
**Hoehneliella**, 182, 230; 364, 408  
 Hoehnelogaster, 353  
 Hoehnelomyces, 341  
 Holcomyces, 365  
**Holocoenis**, 120; 316  
**Holocypis**, 120; 316  
**Holothelis**, 86; 288  
 Holstiella, 271  
**Holwaya**, 117; 313; 25  
 Holwayella, 335  
**Homopsella**, 85, 123; 287, 317  
**Homostegia**, 92; 293; 19  
**Hormiactella**, 211; 394  
**Hormiactina**, 205; 390  
**Hormiactis**, 206; 390  
 Hormisciopsis, 392  
**Hormiscium**, 209; 394  
 Hormococcus, 369, 385  
**Hormodendrum**, 211; 394; 55  
 Hormomyces, 343  
 Hormonema, 399  
 Hormopeltis, 304  
 Hormosperma, 271  
**Hormothecium**, 122; 317  
 Hormyllum, 385  
**Hueella**, 131; 323  
**Humaria**, 138; 328; 34  
 Humariella, 329  
 Humarina, 328  
 Husseya, 353  
 Hyalasterina, 304  
 Hyalinia, 314  
 Hyaloceras, 384  
**Hyalocrea**, 80; 283  
 Hyalocurreya, 275  
 Hyalodema, 391  
 Hyaloderma, 252  
 Hyalodermella, 252  
**Hyalodictyum**, 199; 384  
 Hyalodothis, 285, 295  
 Hyalomeliolina, 251  
 Hyalopeziza, 327  
**Hyalopsora**, 154; 338  
**Hyalopus**, 202; 387; 53  
**Hyaloria**, 159; 342  
 Hyaloscypha, 327  
 Hyalosphaera, 252, 284  
**Hyalotexis**, 56; 252  
 Hyalotheles, 255  
**Hyalothyris**, 185; 366  
**Hydnaceae**, 160, 162; 346; 43  
**Hydnangium**, 173; 355  
**Hydnobolites**, 146; 333  
**Hydnochaete**, 162; 346; 43  
 Hydnochaete, 346  
**Hydnocystis**, 145; 333; 38  
 Hydnodon, 346  
 Hydnofomes, 346  
**Hydnotrya**, 146; 333; 38  
**Hydnotryopsis**, 145; 333  
**Hydnum**, 163; 346; 43  
**Hydraemyces**, 43; 243  
 Hydrogera, 237  
 Hydronectria, 281  
**Hydrophilomyces**, 45; 245  
 Hydrophora, 237  
**Hydrothyria**, 131; 323  
**Hygrophorus**, 166; 348  
**Hymenella**, 220; 400  
**Hymenobactrum**, 224; 403  
 Hymenobolus, 309  
**Hymenochaete**, 161; 344  
**Hymenogaster**, 173; 355; 48  
**Hymenogastraceae**, 172; 355; 48  
**Hymenogramme**, 164; 347  
 Hymenopsis, 378  
**Hymenoscypha**, 135; 326; 33  
**Hymenula**, 221; 400  
**Hyperomyxa**, 197; 382  
**Hyperphyscia**, 132; 323  
**Hyperus**, 63; 259  
**Hypha**, 232; 411  
 Hyphaster, 374  
 Hyphochytrium, 236  
**Hyphoderma**, 205; 387  
**Hyphodiscus**, 133; 324  
**Hypholoma**, 168; 350; 45  
**Hyphoscypha**, 136; 326  
**Hyphosoma**, 216; 397  
**Hyphostereum**, 195; 379  
**Hypocapnodium**, 57; 253  
**Hypocelis**, 68; 268  
 Hypocenia, 369  
**Hypochnaceae**, 160; 343  
**Hypochnus**, 160; 343; 42  
**Hypocopra**, 65; 262; 10  
**Hypocrea**, 78; 281; 16  
**Hypocreaceae**, 76; 279; 15, 16  
**Hypocrella**, 82; 285  
 Hypocreodendrum, 286, 373  
 Hypocreophis, 285  
 Hypocreopsis, 280, 281  
**Hypoderma**, 103, 108; 305; 22  
**Hypodermella**, 103, 108; 305  
 Hypodermellina, 305  
**Hypodermina**, 180; 358  
 Hypodermina, 382  
**Hypodermium**, 197; 382  
**Hypodermopsis**, 104, 108; 306  
**Hypogloeum**, 197; 382  
**Hypolyssus**, 161; 344  
**Hypomyces**, 78; 281; 16  
 Hypomycopsis, 266  
**Hyponectria**, 76; 279  
**Hypoplegma**, 69; 268  
**Hypoplegma**, 250  
**Hypospila**, 70; 271  
**Hypospilina**, 66; 265  
 Hypostegium, 260  
 Hypostigme, 260  
 Hypoxylina, 280  
 Hypoxylopsis, 270  
**Hypoxylum**, 65; 262; 11  
**Hysterangium**, 173; 355; 48  
**Hysteriaceae**, 102; 305; 22  
 Hysteridium, 377  
**Hysterium**, 104; 306; 22  
**Hysteroglonium**, 103; 306  
**Hysterographium**, 104; 306; 22  
**Hysteromyxa**, 381  
 Hysteropatella, 313  
 Hysteropeltella, 305  
**Hysteropeziza**, 112; 311

Hysteropezizella, 312  
 Hysteropsis, 104, 108; 306  
 Hysteropsis, 306  
 Hysterostegiella, 311  
 Hysterostoma, 97; 298  
 Hysterostomella, 97; 298  
 Hysterostomina, 97; 298

## I

Icmadophila, 127; 320; 31  
 Idiomyces, 44; 244  
 Ijuhya, 286  
 Ileodictyum, 170; 352  
 Illosporium, 221; 400  
 Indiella, 410  
 Ingaderia, 106; 308  
 Inocybe, 167; 350  
 Inocyclus, 96; 298; 21  
 Inzengaea, 63; 259  
 Iotidea, 137; 328  
 Irene, 55; 251  
 Irenina, 55; 251  
 Irenopsis, 251  
 Iridionia, 110; 310  
 Irpex, 163; 346  
 Isaria, 228; 407; 57  
 Isariella, 409  
 Isariopsis, 230; 409  
 Ischnostroma, 192; 376  
 Isipinga, 298  
 Isoachlya, 239  
 Isomunkia, 299  
 Isomyces, 47; 245  
 Isothea, 278  
 Isthmospora, 399  
 Itajahya, 352  
 Ithyphallus, 352

## J

Jaapia, 344  
 Jackya, 336  
 Jaczewskia, 356  
 Jaczewskiella, 405  
 Jaffuela, 250  
 Jahniella, 368  
 Jainesia, 216; 397  
 Janospora, 370  
 Janseella, 310  
 Jansia, 352  
 Japonia, 193; 378  
 Jaraia, 240  
 Jattaea, 258  
 Jenmania, 121; 317; 28  
 Johansonia, 118; 314

Jola, 157; 341  
 Jonaspis, 128; 321  
 Julella, 73; 274

## K

Kabatia, 190; 375; 51  
 Kabatiella, 381  
 Kalchbrennera, 170; 352  
 Kalmusia, 73; 273  
 Karschia, 118; 314; 27  
 Karstenia, 311  
 Karstenula, 74; 276  
 Kawakamia, 241  
 Keissleria, 70, 72; 273  
 Keissleriella, 266  
 Keisslerina, 94, 109; 297, 309  
 Keithia, 108; 309; 24  
 Kellermannia, 182, 184;  
 364; 50  
 Kerminicola, 411  
 Khekia, 83; 286  
 Kickxella, 238, 247  
 Kirschsteinia, 67; 265  
 Kirschsteiniella, 267  
 Klastospora, 337  
 Klebahnna, 335  
 Kleidiomyces, 243  
 Kmetia, 222; 402  
 Kneiffia, 345  
 Koerberia, 122; 317  
 Konenia, 272  
 Konradia, 82; 285  
 Koordersiella, 272  
 Kordyana, 160; 343  
 Kordyanella, 346  
 Kretschmaria, 65; 263  
 Kriegeria, 327, 341, 402  
 Kriegeriella, 99; 302  
 Kuehneola, 149; 335  
 Kullhemia, 295  
 Kunkelia, 150; 335  
 Kuntzeomyces, 340  
 Kupsura, 356  
 Kusanoa, 93; 297; 20  
 Kusanobotrys, 253  
 Kusanoopsis, 296

## L

Laaseomyces, 248  
 Laboulbenia, 45; 244; 5  
 Laboulbeniaceae, 44; 243  
 Laboulbeniales, 42; 243; 5  
 Labrella, 189; 374  
 Labridium, 191; 376

Laccocephalum, 347  
 Lacellina, 210; 394  
 Lachnaster, 136; 327  
 Lachnea, 329  
 Lachnella, 137; 327; 33  
 Lachnellula, 136; 327; 33  
 Lachnocaulum, 127; 320  
 Lachnocladium, 162; 345  
 Lachnodochium, 221; 400  
 Lachnum, 136; 327; 33  
 Lactaria, 348  
 Lactariopsis, 349  
 Lactarius, 165; 348  
 Laestadia, 260  
 Laestadiella, 260  
 Lagena, 241  
 Lagenidiopsis, 241  
 Lagenidium, 39; 240; 3  
 Lageniformia, 257  
 Lagerheimia, 117; 314  
 Lagynodella, 187; 371  
 Lahmia, 119; 314  
 Lambertella, 135; 327  
 Lambottiella, 83; 286  
 Lambro, 78; 281  
 Lamia, 239  
 Lamprospora, 138; 328; 34  
 Lamyella, 277, 358  
 Langloisula, 204; 387  
 Lanomyces, 52; 249  
 Lanopila, 354  
 Lanzia, 135; 327  
 Laquearia, 111; 310  
 Laschia, 163; 347  
 Lasiella, 271  
 Lasiobelonis, 137; 327  
 Lasiobelonium, 327  
 Lasiobolus, 141; 330; 37  
 Lasiobotrys, 54; 250; 8  
 Lasiodiplodia, 370  
 Lasionectria, 78; 282  
 Lasiophoma, 179; 358  
 Lasiosordaria, 262  
 Lasiosphaera, 354  
 Lasiosphaeria, 71; 271; 12  
 Lasiosphaeris, 72; 273  
 Lasiostemma, 54, 67; 250,  
 265  
 Lasiostictis, 111; 310  
 Lasiostroma, 180; 358  
 Lasiothyrium, 377  
 Lasmenia, 190; 375  
 Lasmeniella, 182; 362  
 Latrostium, 236

- Latzelia*, 124; 318  
*Laurera*, 88; 290  
*Lauterbachiella*, 97; 299  
*Leandria*, 399  
*Lecanactidae*, 124  
*Lecanactis*, 125; 319; 30  
*Lecania*, 127; 320  
*Lecaniascus*, 412  
*Lecanidion*, 315  
*Lecaniopsis*, 128, 129; 321  
*Lecanora*, 127; 320; 31  
*Lecanorae*, 127  
*Lecanosticta*, 196; 380  
*Lecidea*, 125; 319; 30  
*Lecideaceae*, 124; 318; 30, 31  
*Lecideae*, 125  
*Lecideopsella*, 143; 331  
*Lecideopsis*, 105; 306  
*Lecidopyrenopsis*, 317  
*Lecioglyphis*, 314  
*Leciographa*, 118; 314  
*Leciophysma*, 121; 317  
*Lecithium*, 79; 283  
*Lecopyrenopsis*, 121; 317  
*Leeina*, 370  
*Leiosepium*, 389  
*Leiosphaerella*, 264  
*Lelum*, 343  
*Lemalis*, 324  
*Lembosia*, 100; 302  
*Lembosiella*, 99; 302  
*Lembosina*, 99; 302  
*Lembosiodothis*, 97; 299  
*Lembosiopsis*, 100; 302  
*Lemmopsis*, 122; 317  
*Lemonnieria*, 208; 391  
*Lempholemma*, 122; 317  
*Lentinus*, 166; 349  
*Lentodiopsis*, 349  
*Lentodium*, 349  
*Lentomita*, 66; 265  
*Lentomitella*, 265  
*Lenzites*, 164, 166; 347  
*Leotia*, 140; 329; 36  
*Leotiella*, 329  
*Lepidella*, 349  
*Lepidocollema*, 131; 323; 32  
*Lepidogium*, 131; 323  
*Lepidoleptogium*, 323  
*Leptota*, 165; 349; 44  
*Lepolichen*, 88; 290  
*Lepraria*, 231  
*Leprieurina*, 191; 375  
*Leprocollema*, 121; 317; 29  
*Leptascospora*, 55; 252  
*Lepteutypa*, 272  
*Leptinia*, 336  
*Leptobelonium*, 325  
*Leptochlamys*, 186; 368  
*Leptocoryneum*, 384  
*Leptocrea*, 280, 311  
*Leptodermella*, 187; 373  
*Leptodothiora*, 94; 297  
*Leptodothis*, 97; 299  
*Leptogidium*, 122; 317  
*Leptogiopsis*, 122; 317  
*Leptogium*, 122; 317; 29  
*Leptoglossum*, 329  
*Leptographium*, 211; 394  
*Leptolegnia*, 38; 240; 3  
*Leptomassaria*, 64; 263  
*Leptomelanconium*, 383  
*Leptomeliola*, 55; 251  
*Leptomitae*, 38  
*Leptomitus*, 38; 240; 3  
*Leptonia*, 166; 349  
*Leptopeltella*, 299  
*Leptopeltina*, 301  
*Leptopeltis*, 95; 299  
*Leptopeziza*, 314  
*Leptophaacidium*, 309  
*Leptophoma*, 359  
*Leptophyma*, 93; 297  
*Leptopuccinia*, 336  
*Leptorhaphis*, 87; 288  
*Leptosacca*, 278  
*Leptosillia*, 278  
*Leptosphaerella*, 274  
*Leptosphaeria*, 72; 273; 13  
*Leptosphaeropsis*, 273  
*Leptosphaerulina*, 74; 276  
*Leptospora*, 271, 277  
*Leptospora*, 75; 277  
*Leptosporium*, 400  
*Leptosporopsis*, 277  
*Leptostroma*, 189; 374; 51  
*Leptostromaceae*, 189; 373; 51  
*Leptostromella*, 191; 376; 51  
*Leptothyrella*, 190; 375  
*Leptothyrina*, 374  
*Leptothyrium*, 189; 374; 51  
*Leptotrema*, 129; 321  
*Leptotrichum*, 222; 401  
*Leptoxyphium*, 179; 358  
*Letendraea*, 79; 282; 16  
*Letharia*, 130; 322  
*Lethariopsis*, 132; 323  
*Leucangium*, 333  
*Leucobolites*, 346  
*Leucocanis*, 53; 249  
*Leucoconius*, 346  
*Leucocrea*, 81; 284  
*Leucocytospora*, 358  
*Leucodochium*, 221; 400  
*Leucogaster*, 173; 355  
*Leucopaxillus*, 348  
*Leucopezis*, 139; 328  
*Leucophleps*, 356  
*Leucophomopsis*, 359  
*Leucostoma*, 258  
*Leucostyridium*, 275  
*Leveillella*, 91; 292  
*Leveillina*, 91; 292  
*Leveillinopsis*, 91; 292  
*Leveillula*, 249  
*Levieuxia*, 370  
*Libertia*, 200; 385  
*Libertiella*, 194; 379  
*Libertina*, 200; 385  
*Lichenoconium*, 181; 362  
*Lichenopeltella*, 95; 299  
*Lichenophoma*, 177; 358  
*Lichenosticta*, 177; 358  
*Lichenyllum*, 85, 123; 287  
*Lichina*, 85, 123; 287  
*Lichinae*, 122  
*Lichinella*, 85, 123; 287  
*Lichinodium*, 123; 317  
*Lichtheimia*, 236  
*Licopolia*, 69; 268  
*Ligniella*, 178; 359  
*Ligniera*, 233  
*Lilliputia*, 49; 246  
*Limacinia*, 57; 254  
*Limacinia*, 275  
*Limaciniella*, 278  
*Limaciniopsis*, 254  
*Limnaeomyces*, 43; 243  
*Lindauella*, 109; 310  
*Lindauomyces*, 409  
*Lindauopsis*, 206; 390  
*Lindrothia*, 336  
*Linearistroma*, 285  
*Linhartia*, 133; 324  
*Linkiella*, 336  
*Linobolus*, 278  
*Linocarum*, 277  
*Linochora*, 186; 368  
*Linochorella*, 365  
*Linodochium*, 222; 402

- Linospora**, 74; 277; 15  
**Linostoma**, 259  
**Linostomella**, 259  
**Linostroma**, 259  
**Linotexis**, 55; 252  
**Lipospora**, 337  
**Lisea**, 78; 282  
**Lisiella**, 77; 280  
**Listeromyces**, 404  
**Lithoecea**, 86; 287  
**Lithographa**, 105; 307  
**Lithothelium**, 290  
**Litschaueria**, 71; 273  
**Lituaria**, 223; 403  
**Lizonia**, 69; 268  
**Lizoniella**, 295  
**Lloydiella**, 344  
**Lobaria**, 129; 322; 31  
**Lobarina**, 131; 322  
**Locellina**, 167; 350  
**Loculistroma**, 80; 284  
**Lojkania**, 69; 268  
**Lonchospermella**, 183; 364  
**Longia**, 337  
**Longoa**, 257  
**Lopadiopsis**, 123; 318  
**Lopadium**, 125; 319; 30  
**Lopadostoma**, 261  
**Lopharia**, 162; 346; 43  
**Lophidiopsis**, 83; 286  
**Lophidium**, 286  
**Lophiella**, 83; 286  
**Lophionema**, 83; 286; 17  
**Lophiosphaera**, 83; 286; 17  
**Lophiostoma**, 83; 286; 17  
**Lophiostomaceae**, 82; 286; 17  
**Lophiotrema**, 83; 286; 17  
**Lophiotricha**, 83; 286  
**Lophium**, 104; 306; 22  
**Lophodermella**, 306  
**Lophodermellina**, 306  
**Lophodermina**, 306  
**Lophodermium**, 104, 109;  
 306; 22  
**Lophodermopsis**, 192; 377  
**Lophophytum**, 410  
**Loramycetes**, 78; 282  
**Loranthomyces**, 58, 67;  
 256, 265; 8  
**Ludwigiella**, 360  
**Lulworthia**, 70, 75; 271, 277  
**Lycogalopsis**, 172; 353  
**Lycoperdaceae**, 170; 352; 47  
**Lycoperdales**, 168; 351  
**Lycoperdellon**, 355  
**Lycoperdopsis**, 355  
**Lycoperdum**, 171; 353; 47  
**Lyonella**, 258  
**Lysospora**, 336  
**Lysurus**, 170; 352; 46
- M**
- Macalpinia**, 335  
**Macbridella**, 79; 282  
**Macowaniella**, 97; 299  
**Macowanites**, 170; 353; 48  
**Macrobasis**, 273  
**Macrochytrium**, 236  
**Macroderma**, 310  
**Macrodiaporthe**, 265  
**Macrodiplis**, 184; 366  
**Macrodiplodia**, 183; 365  
**Macrodiplodiopsis**, 366  
**Macrophoma**, 363  
**Macrophomella**, 359  
**Macrophomina**, 359  
**Macrophomopsis**, 359  
**Macroplodiella**, 359  
**Macropodia**, 138, 139; 328; 34  
**Macroseptoria**, 368  
**Macrospora**, 275  
**Macrosporium**, 218; 398; 56  
**Macrostilbum**, 228; 407  
**Madurella**, 410  
**Magnusia**, 51; 248; 6  
**Magnusiella**, 332  
**Magnusiomyces**, 245  
**Maireella**, 269  
**Malacodermis**, 358  
**Malacosphaeria**, 266, 269  
**Malassezia**, 231; 410  
**Malbranchea**, 201; 387  
**Malmeomyces**, 283  
**Mamiana**, 62; 259  
**Mamianella**, 259  
**Manginia**, 370  
**Manginula**, 190; 375  
**Manilaea**, 324, 325  
**Mapea**, 224; 403  
**Marasmiopsis**, 351  
**Marasmius**, 166; 349; 44  
**Maravalia**, 149; 335  
**Marchalia**, 98; 299  
**Marchaliella**, 248  
**Marcosia**, 225; 404  
**Maronea**, 128; 321  
**Marsonia**, 198; 383  
**Marsoniella**, 383  
**Marsonina**, 383  
**Martellia**, 173; 355  
**Martensella**, 204; 238, 388  
**Martindalia**, 288; 407  
**Martinella**, 188; 372  
**Massalongia**, 131; 323  
**Massalongiella**, 60; 258  
**Massalongina**, 189; 374  
**Massaria**, 71; 273; 13  
**Massariella**, 269  
**Massariellops**, 268  
**Massarina**, 70; 271  
**Massarinula**, 66; 265  
**Massariopsis**, 267  
**Massariovalsa**, 69; 268  
**Massea**, 136; 327  
**Masseella**, 148; 335  
**Massospora**, 37; 239  
**Mastigocladium**, 286, 389  
**Mastigonema**, 196; 382  
**Mastigonetrum**, 188; 372  
**Mastigosporella**, 187; 371  
**Mastigosporium**, 207; 390  
**Mastodia**, 88; 290  
**Mastomyces**, 184; 365  
**Matruchotia**, 346  
**Mattirolia**, 81, 284  
**Matula**, 187; 371  
**Maublancia**, 301  
**Mauginiella**, 392  
**Maurodothella**, 302  
**Maurodothis**, 298  
**Mauroya**, 76; 277  
**Maxillospora**, 391  
**Mazosia**, 107; 308  
**Mazzantia**, 63; 259  
**Mazzantiella**, 358  
**Medeolaria**, 142; 331  
**Medusomyces**, 412  
**Medusulina**, 308  
**Megalonectria**, 80; 284  
**Megalopsora**, 130; 322  
**Megaloseptoria**, 368  
**Megalospora**, 125, 130;  
 276, 319  
**Melachroia**, 138; 328  
**Melampsora**, 154; 338; 39  
**Melampsoraceae**, 153; 338  
**Melampsorella**, 153; 338  
**Melampsoridium**, 153; 338  
**Melampsoropsis**, 338  
**Melanpydium**, 124; 319  
**Melanconiaceae**, 196; 381;  
 51, 52

- Melanconiales**, 196; 381  
**Melanconiella**, 70; 268  
**Melanconiopsis**, 181; 362  
**Melanconis**, 67; 265  
**Melanconium**, 197; 383; 52  
**Melanidium**, 67; 266  
**Melanobasidium**, 403  
**Melanobasis**, 224; 403  
**Melanobotrys**, 270  
**Melanochlamys**, 96; 299; 21  
**Melanodiscus**, 224; 403  
**Melanogaster**, 173; 355  
**Melanographium**, 230; 408  
**Melanomma**, 72; 274; 13  
**Melanomyces**, 255, 267  
**Melanoplaca**, 98; 299  
**Melanops**, 258  
**Melanopsamma**, 67; 266; 11  
**Melanopsammella**, 265  
**Melanopsammina**, 266  
**Melanopsammopsis**, 266, 292  
**Melanopsichium**, 155; 339  
**Melanosphaeria**, 363  
**Melanospora**, 77; 280; 15  
**Melanosporopsis**, 280  
**Melanostroma**, 385  
**Melanotaenium**, 155; 339  
**Melanotheca**, 88; 290  
**Melasmia**, 190; 374; 51  
**Melaspilea**, 106, 118; 307, 314  
**Melastiza**, 329  
**Melchiora**, 67; 266  
**Meliola**, 55; 251; 8  
**Meliolaster**, 99; 302  
**Meliolidium**, 53; 249  
**Meliolina**, 55; 251  
**Meliolinopsis**, 250, 251  
**Melioliphila**, 283  
**Meliolopsis**, 255  
**Melittosporiella**, 310  
**Melittosporiopsis**, 324  
**Melittosporis**, 324  
**Melittosporium**, 111; 310  
**Melogramma**, 73; 274; 13  
**Melomastia**, 70; 271  
**Melophia**, 191; 376  
**Memnoniella**, 394  
**Mendogia**, 96; 299  
**Menezesia**, 239  
**Menispora**, 214; 394  
**Menoidea**, 221; 400  
**Merarthonis**, 105; 306  
**Meria**, 204; 388  
**Meringosphaeria**, 277  
**Merismatium**, 74; 276  
**Merismella**, 190; 374  
**Merodontis**, 136; 327  
**Merophora**, 318  
**Meroplacis**, 132; 323  
**Merorinis**, 132; 323  
**Merostictina**, 131; 322  
**Merostictis**, 110; 310  
**Merrilliopectis**, 271  
**Merulius**, 163; 347; 44  
**Mesniera**, 64; 263  
**Mesobotrys**, 213; 394; 55  
**Mesonella**, 260  
**Mesophellia**, 145; 332  
**Mesopsora**, 153; 338  
**Metabotryum**, 363  
**Metacapnodium**, 254  
**Metachora**, 294  
**Metacoleroa**, 68; 268  
**Metadothella**, 79; 282  
**Metameris**, 90; 292  
**Metanectria**, 78; 282  
**Metasphaeria**, 70; 271; 12  
**Metathyriella**, 101; 303  
**Methysterostomella**, 376  
**Metraria**, 166; 349  
**Michenera**, 195; 380  
**Micranthomyces**, 47; 245  
**Micrascus**, 51. 64; 248, 263; 6  
**Microbasidium**, 403  
**Microcallis**, 253  
**Microcera**, 402  
**Microclava**, 212; 394  
**Microcycella**, 91; 292  
**Microcyclus**, 91; 292; 20  
**Microdiplodia**, 365  
**Microdiscula**, 187, 195; 371, 379  
**Microdiscus**, 143; 331  
**Microdochium**, 221; 400  
**Microdothella**, 97; 299  
**Microglæna**, 85; 287  
**Microgloeum**, 382  
**Microglossum**, 140; 329  
**Micrographa**, 106; 307  
**Micromastia**, 255  
**Micromyces**, 236  
**Micromycopsis**, 236  
**Micromyriangium**, 296  
**Micronectria**, 81; 285  
**Micronectriella**, 79; 283  
**Micronectriopsis**, 81; 285  
**Micronegeria**, 153; 338  
**Micropeltaceae**, 100; 303; 21  
**Micropeltella**, 101; 303  
**Micropeltis**, 101; 304; 17  
**Micropeltopsis**, 98; 302  
**Micropera**, 186; 368  
**Microperella**, 184; 365  
**Microphiale**, 129; 321  
**Microphiodothis**, 295  
**Micropodia**, 326  
**Micropsalliota**, 350  
**Micropuccinia**, 336  
**Micropyrenula**, 87; 289  
**Microscypha**, 326  
**Microspatha**, 227; 407  
**Microsphaera**, 53; 249; 7  
**Microsphaeropsis**, 362  
**Microsporella**, 362  
**Microsporium**, 231; 410  
**Microstelium**, 81; 285  
**Microsticta**, 310  
**Microstroma**, 160, 197; 343; 53  
**Microthecium**, 181; 286, 343  
**Microthelia**, 87; 288  
**Microtheliopsis**, 87; 289  
**Microthyriaceae**, 98; 300; 17, 21  
**Microthyriales**, 94; 298  
**Microthyriaceae**, 98  
**Microthyriella**, 101; 304  
**Microthyriolum**, 302  
**Microthyris**, 98; 302  
**Microthyrites**, 304  
**Microthyrium**, 98; 302; 17  
**Microtyle**, 263  
**Microtypha**, 212; 394  
**Microxyphium**, 370  
**Microxyphiella**, 183; 364  
**Micula**, 368  
**Midotiopsis**, 114; 312  
**Midotis**, 114; 312  
**Milesia**, 154; 338  
**Milesina**, 338  
**Milowia**, 207; 390  
**Mindeniella**, 39; 240  
**Minksia**, 107; 308  
**Mitochytridium**, 236  
**Mitochytrium**, 241  
**Mitopeltis**, 101; 304  
**Mitosporium**, 82; 285  
**Mitromyces**, 171; 353; 47  
**Mitrula**, 140; 329; 36  
**Mitruliopsis**, 330  
**Miyabella**, 234

- Miyagia**, 151; 336  
**Miyakeamyces**, 283  
**Miyoshia**, 259  
**Miyoshiella**, 63; 259  
**Moelleriella**, 77; 280  
**Moelleroclavus**, 263  
**Moellerodiscus**, 326  
**Moeszia**, 207; 390  
**Moesziella**, 101; 304  
**Mohortia**, 341  
**Molleriella**, 143; 331  
**Molliardia**, 233  
**Mollisia**, 133; 324; 33  
**Mollisiaceae**, 133; 324; 33  
**Mollisiella**, 133; 324  
**Mollisiopsis**, 133; 324  
**Monacrosporium**, 208; 390  
**Monascaceae**, 48; 246  
**Monascostroma**, 93; 297  
**Monascus**, 48; 246  
**Monilia**, 201; 388; 53  
**Moniliaceae**, 201; 386; 53, 54  
**Moniliales**, 200; 386  
**Moniliopsis**, 388  
**Monilochaetes**, 393  
**Monoblastia**, 87; 288  
**Monoblepharidaceae**, 41; 242  
**Monoblephariopsis**, 242  
**Monoblepharis**, 41; 242; 4  
**Monochaetia**, 199; 384  
**Monoecomyces**, 43; 243; 5  
**Monogrammia**, 391  
**Monographella**, 271  
**Monographus**, 295  
**Monopodium**, 204; 388  
**Monopus**, 67; 266  
**Monopycnis**, 370  
**Monorhiza**, 97; 299  
**Monorhizina**, 97; 299  
**Monospora**, 245  
**Monosporella**, 47; 245  
**Monosporidium**, 334  
**Monosporiella**, 388  
**Monosporium**, 204; 388; 54  
**Monostichella**, 382  
**Monotospora**, 212; 394  
**Monotrichum**, 198; 383  
**Montagnellina**, 62; 259  
**Montagnina**, 68; 266  
**Montagnites**, 168; 350  
**Montagnula**, 74; 276  
**Montemartinia**, 67; 266  
**Montoyella**, 231; 410  
**Morchella**, 139; 329; 36  
**Morenella**, 100; 302  
**Morenina**, 99; 302  
**Mořinia**, 199; 385  
**Moriola**, 85; 287  
**Moriolae**, 85  
**Mortierella**, 35; 237; 2  
**Mortierellae**, 35  
**Moschomyces**, 44; 244  
**Moutoniella**, 111; 310  
**Muchmoria**, 214; 396  
**Muciporus**, 348  
**Mucor**, 35; 237; 2  
**Mucoraceae**, 34; 236; 2  
**Mucorae**, 35  
**Mucronella**, 162; 346  
**Mucronoporus**, 347  
**Mucrosporium**, 207; 390  
**Muellerella**, 64; 263  
**Muiaria**, 399  
**Muiogone**, 399  
**Multipatina**, 411  
**Munkia**, 195; 379  
**Munkiella**, 96; 299  
**Munkiodothis**, 294  
**Murashkinskija**, 304  
**Mutinus**, 169; 352; 46  
**Mycaureola**, 76; 280  
**Myceliophthora**, 201; 388  
**Myceloderma**, 399  
**Mycelophagus**, 241  
**Mycena**, 166; 349  
**Mycenastrum**, 172; 353  
**Mycobacidia**, 119; 314; 27  
**Mycobacillaria**, 399  
**Mycobilimbia**, 118; 315  
**Mycoblastus**, 125; 319  
**Mycocalicium**, 119; 316  
**Mycocitrus**, 281  
**Mycocladus**, 236  
**Mycodendrum**, 348  
**Mycoderma**, 412  
**Mycogala**, 51; 247; 8  
**Mycogone**, 206; 390; 54  
**Mycolangloisia**, 256  
**Mycolecidea**, 118; 315  
**Mycolecis**, 315  
**Mycomalus**, 82; 285  
**Mycophaga**, 54; 251  
**Mycopharus**, 352  
**Mycoporaceae**, 94; 296; 23  
**Mycoporellum**, 94; 296  
**Mycoporis**, 94; 296  
**Mycoporum**, 94; 296; 23  
**Mycopyprenula**, 273  
**Mycorhynchella**, 372  
**Mycorhynchus**, 189; 373  
**Mycosphaerella**, 66; 266; 1  
**Mycosphaerellopsis**, 267  
**Mycosticta**, 177; 359  
**Mycosyrinx**, 155; 339  
**Mycotorula**, 412  
**Mycovellosiella**, 409  
**Myelosperma**, 62; 260  
**Myiocoprella**, 98; 302  
**Myiocoprum**, 98; 302  
**Mylittopsis**, 341  
**Myriadoporus**, 348  
**Myriangella**, 297  
**Myriangiaceae**, 92; 296; 29  
**Myriangiae**, 93  
**Myriangina**, 93; 297; 29  
**Myrianginella**, 297  
**Myriangiopsis**, 296  
**Myriangium**, 93; 297; 29  
**Myridium**, 116; 314  
**Myriellina**, 195; 380  
**Myrillium**, 49; 247  
**Myrioblepharis**, 242  
**Myriococcum**, 248  
**Myrioconium**, 177; 359  
**Myrioconium**, 401  
**Myriogenis**, 92; 293  
**Myriogenospora**, 293  
**Myriolecis**, 127; 320  
**Myriophysa**, 405  
**Myriophysella**, 226; 404  
**Myriopyxis**, 370  
**Myriostigma**, 300  
**Myrmaeciella**, 67; 266  
**Myrmaecium**, 270  
**Myrmecocystis**, 332  
**Myrotheciella**, 223; 403  
**Myrothecium**, 223; 403  
**Mystrosporium**, 398  
**Mytilidium**, 104; 306; 22  
**Myxasterina**, 300  
**Myxocyclus**, 185; 367  
**Myxodictyum**, 128; 320  
**Myxodiscus**, 374  
**Myxofusicoccum**, 370  
**Myxolibertella**, 359  
**Myxomycidium**, 343  
**Myxomyriangis**, 93; 297; 29  
**Myxomyriangium**, 297  
**Myxonema**, 400  
**Myxophaeciella**, 309  
**Myxophaecidium**, 309

*Myxormia*, 193; 378  
*Myxosporella*, 197; 382  
*Myxosporina*, 382  
*Myxosporium*, 197; 382  
*Myxotheca*, 297  
*Myxothecium*, 251  
*Myxothyrium*, 189; 374  
*Myxotrichella*, 213; 394  
*Myxotrichum*, 49; 247; 6  
*Myzocytiium*, 39; 240; 3

## N

*Nadsonia*, 47; 245  
*Naegelia*, 240  
*Naegeliella*, 240  
*Naemacyclus*, 111; 310  
*Naematelia*, 342  
*Naemosphaera*, 180; 362  
*Naemosphaerella*, 362  
*Naemospora*, 197; 382; 52  
*Naetrocymbe*, 57, 74; 254, 276  
*Naevia*, 110; 310  
*Naeviella*, 110; 311  
*Napicladium*, 396, 397  
*Napomyces*, 145; 333  
*Naucoria*, 167; 350; 45  
*Naumovia*, 75; 277  
*Necator*, 221; 400  
*Necium*, 338  
*Nectaromyces*, 412  
*Nectria*, 78; 282; 16  
*Nectriella*, 76; 280  
*Nectriella*, 281  
*Nectrioidaceae*, 186  
*Nectriopsis*, 281  
*Negeriella*, 231; 409  
*Nemastroma*, 368  
*Nematogonium*, 205; 388  
*Nematospora*, 47; 246  
*Nematosporangium*, 242  
*Nematostigma*, 71; 271  
*Nematostoma*, 273  
*Nematothecium*, 57; 255  
*Nemozythiella*, 373  
*Neoarcangelia*, 258  
*Neobarclaya*, 198; 383  
*Neobulgaria*, 314  
*Neocosmospora*, 77; 280  
*Neofabraea*, 134; 324  
*Neohendersonia*, 366  
*Neohenningsia*, 282  
*Neoheppia*, 318  
*Neohoehnelia*, 56; 253  
*Neokeissleria*, 67; 266

*Neolamyia*, 75; 279  
*Neolecta*, 140; 329  
*Neomichelia*, 390  
*Neonectria*, 282  
*Neopatella*, 192; 377  
*Neopeckia*, 69; 269  
*Neophoma*, 177; 359  
*Neoplacosphaeria*, 371  
*Neoravenelia*, 337  
*Neorchmia*, 265  
*Neosaccardia*, 356  
*Neoskofitzia*, 282  
*Neosphaeropsis*, 363  
*Neostomella*, 305  
*Neotrichophytum*, 410  
*Neotrotteria*, 60; 258  
*Neottiella*, 139; 328  
*Neottiopezis*, 328  
*Neottiospora*, 177; 359; 49  
*Neottiosporella*, 400  
*Neottiosporis*, 400  
*Neoventuria*, 273  
*Neovossia*, 156; 340  
*Neozimmermannia*, 258  
*Nephlyctis*, 336  
*Nephroma*, 124; 318  
*Nephromium*, 124; 318  
*Nephromopsis*, 130; 322  
*Nephrospora*, 63; 260  
*Nepotatus*, 355  
*Nesolechia*, 117, 142; 315, 331  
*Nidula*, 174; 356; 48  
*Nidularia*, 173; 356; 48  
*Nidulariaceae*, 173; 356; 48  
*Nielsenia*, 335  
*Niessella*, 302  
*Niesslia*, 264  
*Nigropogon*, 356  
*Nigrosphaeria*, 281  
*Nigrospora*, 393  
*Niorma*, 132; 323  
*Niptera*, 133; 324; 33  
*Nitschkea*, 61; 258; 9  
*Nodulisphaeria*, 273  
*Nolanea*, 166; 349  
*Nomuraea*, 203; 388  
*Normandina*, 88; 290  
*Norrlinia*, 73; 274  
*Nostotheca*, 331  
*Notarisiella*, 76; 280; 15  
*Nothodiscus*, 310  
*Nothoravenelia*, 153; 337  
*Nothospora*, 413  
*Nothostroma*, 94; 296

*Nowakowskia*, 33; 235  
*Nowakowskiella*, 34; 235  
*Nowellia*, 91; 292  
*Nozemia*, 241  
*Nummularia*, 65; 263; 11  
*Nyctalis*, 165; 349  
*Nylanderella*, 88; 290  
*Nymanomyces*, 309  
*Nyssopsora*, 337  
*Nyssopsorella*, 338

## O

*Obelidium*, 32; 235; 1  
*Ocellaria*, 110; 311  
*Ocellularia*, 128; 321  
*Ochrolechia*, 127; 320  
*Ochropsora*, 148; 335  
*Octaviana*, 173; 355  
*Odontia*, 162; 346; 43  
*Odontoschizum*, 315  
*Odontotrema*, 112; 311; 25  
*Odontotremella*, 311  
*Odontura*, 112; 311  
*Oedemium*, 212; 394  
*Oedocephalum*, 202; 388  
*Oedomyces*, 234  
*Ohleria*, 72; 274  
*Ohleriella*, 274  
*Oidiopsis*, 201; 388  
*Oidium*, 201; 388; 53  
*Oleina*, 47; 245  
*Oleinis*, 46; 245  
*Oligostroma*, 293  
*Olivea*, 148; 335  
*Ollula*, 195; 380  
*Olpidiaceae*, 30; 233  
*Olpidiae*, 31  
*Olpidiaster*, 234  
*Olp'diopsis*, 31; 233, 234  
*Olpidium*, 31; 234; 1  
*Olpitrichum*, 205; 388  
*Ombrophila*, 116; 314; 26  
*Omphalia*, 165; 349  
*Omphalospora*, 293  
*Oncopodium*, 217; 398  
*Oncospora*, 193; 379  
*Ontoteliium*, 335  
*Onygena*, 144; 332; 6  
*Onygenaceae*, 144; 332  
*Oomyces*, 81; 285  
*Oospora*, 201; 388  
*Oosporidea*, 387  
*Oothecium*, 181; 362  
*Oothecium*, 375

Opeasterina, 300  
 Opeasterinella, 301  
**Opegrapha**, 106; 307; 23  
 Opethyrium, 305  
**Ophiobolus**, 75; 277; 15  
**Ophiocapnis**, 57; 255  
 Ophiocapnodium, 255  
**Ophiocarpella**, 75; 277  
**Ophioceras**, 74; 277  
**Ophiochaeta**, 75; 277  
**Ophiocladium**, 201; 388  
**Ophiodictyum**, 73, 80; 274, 284  
**Ophiodothella**, 92; 293  
 Ophiodothis, 285  
**Ophiogloea**, 117; 314  
 Ophiognomonina, 277  
**Ophiomassaria**, 75; 278  
**Ophiomeliola**, 55; 252  
**Ophiomectria**, 81; 285; 16  
 Ophiopeltis, 304  
**Ophiosphaerella**, 75; 278  
**Ophiosphaeria**, 278  
 Ophiostoma, 259  
 Ophiostomella, 262  
 Ophiotexis, 252  
**Ophiotrichum**, 217; 397  
**Oplothecium**, 56; 253  
 Oraniella, 271  
 Orbicula, 255  
**Orbilia**, 116; 314  
 Orbiliopsis, 314  
**Orcadia**, 79; 283  
 Ordonia, 343  
 Ormathoidium, 397  
**Orphniospora**, 125; 319  
**Oropogon**, 131; 322  
**Orthoscypha**, 117; 314  
 Oscarbrefeldia, 239  
 Ostefeldiella, 233  
 Ostreionella, 305  
 Ostreium, 306  
**Ostropa**, 104, 111; 311; 25  
**Ostropae**, 111  
 Oswaldia, 281  
 Oswaldina, 367  
**Otidea**, 138; 328; 34  
 Otidella, 328  
**Otthia**, 69; 269; 12  
**Otthiella**, 66; 266  
 Oudemansiella, 251  
**Ovularia**, 205; 388  
 Oxydothis, 270  
**Ozonium**, 232; 411

## P

**Pachybasidiella**, 381  
**Pachybasium**, 203; 388  
 Pachydiscula, 373  
**Pachypatella**, 118; 315  
**Pachyphiale**, 129; 321  
**Pachyphloeus**, 146; 333  
 Pachyrhizma, 309  
**Pachyspora**, 69; 269  
**Pachytrichum**, 210; 394  
 Pactilia, 405  
 Paecilomyces, 388  
**Paepalopsis**, 201; 388  
**Paidania**, 61; 260  
**Palawania**, 98; 299  
 Palawaniella, 299  
**Pampolysporium**, 53; 250  
**Panaeolus**, 168; 350  
**Pannaria**, 131; 323; 32  
**Pannariae**, 131  
**Panus**, 166; 349  
**Papularia**, 224; 403  
**Papulospora**, 232; 411  
**Parabotryum**, 91; 292  
**Paracapnodium**, 57; 254  
 Paracesatiella, 279  
 Paracudonia, 330  
 Paracytospora, 370  
 Paradidymella, 264  
**Paradiplodia**, 183; 365  
**Paralaestadia**, 62; 260  
 Paramazzantia, 260  
**Paranectria**, 79; 283  
**Paranthostomella**, 64; 263  
 Parapeltella, 303  
 Parasclerophoma, 358  
 Parasitella, 237  
 Parasphaeria, 265; 271  
**Paraspora**, 207; 390  
**Parasterina**, 99; 302  
**Parastigmatea**, 95; 299  
**Parathalle**, 119; 315  
**Paratheliae**, 87  
**Parathelium**, 87; 289  
 Parendomyces, 412  
**Parenglerula**, 55; 252  
**Parmelia**, 130; 322; 32  
**Parmeliaceae**, 127; 320; 31, 32  
**Parmeliae**, 129  
**Parmeliella**, 131; 323  
**Parmeliopsis**, 130; 322  
**Parmentaria**, 88; 290

**Parmularia**, 300  
**Parmulariella**, 96; 299  
**Parmulina**, 96; 299  
**Parmulineae**, 96  
**Parodiella**, 54, 69; 250, 269; 8  
 Parodiellina, 279  
**Parodiopsis**, 54; 250  
**Paropsis**, 54; 251  
**Paryphedria**, 116; 314  
 Passalora, 396  
 Passeriniella, 273  
**Passerulina**, 79; 283  
**Patellaria**, 118; 315; 27  
**Patellariaceae**, 117; 314; 27  
**Patellea**, 118; 315; 27  
**Patellina**, 195; 380  
**Patellinae**, 194  
**Patellonectria**, 81; 284  
**Patinella**, 117; 315; 27  
 Patouillardia, 400  
**Patouilliardiella**, 222; 401  
**Patouillardina**, 158; 305, 341  
**Pauahia**, 91; 292  
**Paulia**, 121; 317  
 Paurocotylis, 355  
**Paxillus**, 167; 350  
 Paxina, 327  
**Pazschkea**, 133; 325  
**Pazschkella**, 183; 364  
**Peccania**, 121; 317  
**Peckia**, 177; 359  
**Peckiella**, 77; 280  
**Pedilospora**, 208; 391  
**Pellicularia**, 205; 388  
**Pellionella**, 183; 365  
**Pelodiscus**, 139; 328  
**Pelonectria**, 80; 284  
**Peltaster**, 190; 374  
**Peltella**, 98; 302  
**Peltidea**, 124; 318  
 Peltidium, 330  
**Peltigera**, 124; 318; 29  
**Peltigeraceae**, 123; 318; 29  
**Peltigerae**, 124  
 Peltigeromyces, 329  
 Peltistroma, 295  
**Peltosoma**, 191; 376  
**Peltosphaeria**, 73; 275; 14  
**Peltostroma**, 190; 375  
**Peltostromella**, 191; 375  
 Pemphidium, 260  
**Penicilliosis**, 49; 247  
**Penicillium**, 202; 247, 388; 53  
**Peniophora**, 161; 345



- Peniophorina*, 345  
*Penomyces*, 399  
**Pentagenella**, 107; 308  
*Penzigia*, 262, 279  
**Perforaria**, 128; 321  
**Periaster**, 66; 266  
*Peribotryum*, 409  
**Perichlamys**, 156; 340  
*Pericladium*, 338  
**Pericoccus**, 80; 283  
**Periconia**, 211; 294  
**Periconiella**, 211; 394  
*Pericystis*, 239, 392  
**Peridermium**, 150; 335  
**Peridoxylum**, 65, 78; 280  
*Periola*, 223; 403; 58  
**Periolopsis**, 219; 401  
**Perischizum**, 90; 292  
**Perisporiaceae**, 53; 249; 8  
**Perisporiales**, 49; 247  
*Perisporiella*, 256  
*Perisporina*, 251  
**Perisporiopsis**, 55; 251  
*Perisporiopsis*, 251  
**Perisporium**, 55; 251; 8  
*Peristemma*, 336  
*Peristomium*, 262  
*Perizomatium*, 312  
*Perizomella*, 370  
*Peroneutypa*, 257  
*Peroneutypella*, 257  
*Peronoplasmopara*, 241  
**Peronospora**, 40; 241; 4  
**Peronosporaceae**, 39; 241; 4  
**Peronosporae**, 40  
*Perrotia*, 327  
*Perrotiella*, 324  
*Persooniella*, 336  
**Pertusaria**, 128; 321; 31  
**Pertusariae**, 128  
**Pestalozzia**, 199; 384; 52  
*Pestalozziella*, 196; 382; 51  
*Pestalozzina*, 198; 384  
*Petasodes*, 191; 376  
*Petelotia*, 258  
**Petractis**, 122; 317  
*Petrakia*, 226; 404  
*Petrakiella*, 71; 272  
*Peyritschiiella*, 43; 243  
**Peyritschiiellaceae**, 42; 243  
*Peyronelia*, 216; 397  
**Peziotrichum**, 213; 394  
**Peziza**, 138; 328; 35  
**Pezizaceae**, 137; 327; 34, 35  
**Pezizae**, 137  
**Pezizales**, 112; 312  
**Pezizella**, 135; 327  
**Pezizellaster**, 135; 327  
**Pezolepis**, 114; 312  
**Pezoloma**, 135; 327  
*Pezomela*, 312  
*Phacellula*, 392  
**Phacidiaceae**, 107; 308; 22, 24  
**Phacidiales**, 102; 305  
*Phacidiella*, 309  
*Phacidina*, 309  
*Phacidrostroma*, 309  
**Phacidium**, 107; 309; 24  
**Phacopsis**, 105; 306  
**Phacopsora**, 154; 338  
**Phaeangella**, 115; 312  
**Phaeangium**, 114, 146; 312, 333  
*Phaeapiospora*, 268  
**Phaeaspis**, 100; 304  
*Phaeharziella*, 399  
**Phaeidium**, 51; 248  
*Phaeisaria*, 408  
*Phaeisariopsis*, 409  
*Phaeobotryosphaeria*, 261  
**Phaeobotryum**, 261  
*Phaeocapnodinula*, 253  
**Phaeochora**, 91; 293; 20  
*Phaeochorella*, 294  
**Phaeociboria**, 135; 327  
*Phaeoclavulina*, 345  
*Phaeoconis*, 393  
**Phaeocreopsis**, 79; 283  
*Phaeocryptopus*, 256  
*Phaeocyphella*, 344  
**Phaeocytostroma**, 182; 362  
**Phaeoderris**, 112; 312  
*Phaeodiaporthe*, 270  
*Phaeodimeriella*, 251  
*Phaeodimeris*, 54; 251  
**Phaeodiscula**, 193; 378  
**Phaeodomus**, 181; 362  
*Phaeodothiopsis*, 293  
**Phaeodothis**, 91; 293  
**Phaeofabraea**, 134; 325  
**Phaeoglossum**, 140; 329  
**Phaeographina**, 106; 307  
**Phaeographis**, 106; 307  
*Phaeohygrocybe*, 351  
**Phaeolabrella**, 190; 375  
*Phaeolimacium*, 351  
**Phaeomacropus**, 139; 328  
*Phaeomarasmius*, 350  
**Phaeomarsonia**, 198; 383  
*Phaeomarssonia*, 383  
**Phaeomeris**, 85; 287  
*Phaeomomostichella*, 382  
**Phaeopeltis**, 57, 73; 254, 275  
*Phaeopeltis*, 304  
**Phaeopeltium**, 73; 276  
*Phaeopeltosphaeria*, 276  
**Phaeopezia**, 138; 328  
**Phaeophacidium**, 108; 309  
**Phaeophleospora**, 186; 368  
*Phaeophomatospora*, 261  
*Phaeophomopsis*, 359, 361  
*Phaeopolynema*, 378  
*Phaeopterula*, 345  
*Phaeoradulum*, 346  
*Phaeorhytisma*, 309, 325  
*Phaeosaccardinula*, 254, 275  
*Phaeoschiffnerula*, 252  
*Phaeoscutella*, 305  
**Phaeoseptoria**, 186; 368  
*Phaeosperma*, 270  
**Phaeosphaerella**, 68; 269  
**Phaeosphaeria**, 72; 274  
**Phaeospora**, 72; 274  
**Phaeosporis**, 86; 287  
**Phaeostigme**, 54; 251  
*Phaeostigme*, 251  
*Phaeostilbella*, 408  
**Phaeothrombis**, 85; 287  
*Phaeotrabiella*, 293  
**Phaeotrema**, 128; 321  
**Phaeotremella**, 159; 342  
**Phaeotrype**, 61; 258  
**Phallaceae**, 169; 351; 46  
*Phallobata*, 356  
**Phallogaster**, 173; 355  
**Phallus**, 169; 352; 46  
**Phalodictyum**, 125; 319  
*Phalostauris*, 288  
**Phalothrix**, 136; 327  
**Phanerascus**, 52; 248  
**Phanerococcus**, 71; 272  
*Phanerocorynelia*, 397  
*Phanerocoryneum*, 384  
*Phaneroomyces*, 311  
**Phanosticta**, 129; 322  
*Phanotylum*, 129; 321  
**Pharcidia**, 67; 266  
*Pharcidiella*, 272  
**Pharcidiopsis**, 70; 272  
**Phellorina**, 172; 353  
**Phellostroma**, 180; 359  
**Phialea**, 135; 327

- Phialophora*, 211; 394  
*Phillipsia*, 329  
*Phillipsiella*, 142; 331  
*Philocopra*, 64; 263  
*Philonectria*, 72; 274  
*Phlebia*, 162; 346  
*Phlebophora*, 351  
*Phleboscypus*, 327  
*Phlegmophiale*, 123; 318  
*Phleogena*, 341  
*Phleospora*, 186; 368  
*Phloeconis*, 232; 411  
*Phloeopeccania*, 121; 317  
*Phloeophthora*, 241  
*Phlocozpora*, 385  
*Phlocozporina*, 385  
*Phlyctaena*, 194; 379; 50  
*Phlyctaeniella*, 188; 373  
*Phlyctella*, 128; 320  
*Phlyctidia*, 128; 321  
*Phlyctidium*, 33; 235  
*Phlyctis*, 128; 321  
*Phlyctocytrium*, 32; 235; 1  
*Phoenicostroma*, 295  
*Pholiota*, 167; 350  
*Pholiotella*, 350  
*Phoma*, 177; 359; 49  
*Phomaceae*, 176; 357; 49, 50  
*Phomachora*, 176, 180; 359  
*Phomales*, 175; 357  
*Phomatospora*, 62; 260  
*Phomatosporopsis*, 267  
*Phomopsina*, 359  
*Phomopsis*, 178; 359; 49  
*Phomyces*, 179; 359  
*Phorcys*, 68; 269  
*Phragmidiella*, 334  
*Phragmidium*, 152; 337; 39  
*Phragmocalosphaeria*, 270  
*Phragmocarpnias*, 57; 254  
*Phragmocarpeia*, 92; 293  
*Phragmocauma*, 294  
*Phragmodochium*, 402  
*Phragmodothella*, 90; 292  
*Phragmodothidea*, 292  
*Phragmodothis*, 90; 292  
*Phragmonaevia*, 110; 311  
*Phragmopeltis*, 191; 376  
*Phragmopyxine*, 132; 323  
*Phragmopyxis*, 152; 337  
*Phragmoscutella*, 100; 302  
*Phragmosperma*, 70; 272  
*Phragmotelum*, 337  
*Phragmothele*, 86; 287  
*Phragmothryiella*, 101; 304  
*Phragmothyrium*, 98; 302  
*Phragmotrichum*, 199; 385; 52  
*Phthora*, 279  
*Phycascus*, 328  
*Phycodiscis*, 131; 322  
*Phycomyces*, 35; 237; 2  
*Phycomycetes*, 30  
*Phycopsis*, 331  
*Phyllachora*, 91; 293; 19  
*Phyllachorae*, 91; 292  
*Phyllachorella*, 91; 294  
*Phyllactinia*, 53; 249; 7  
*Phylliscidium*, 121; 317  
*Phylliscum*, 121; 317; 28  
*Phyllobathelium*, 87; 289  
*Phylloblastia*, 87; 289  
*Phyllobrassia*, 129; 321  
*Phyllocarbon*, 392  
*Phyllocelis*, 80; 283  
*Phyllocelis*, 270  
*Phyllocrea*, 281  
*Phylloedia*, 370  
*Phyllumyces*, 413  
*Phyllonochaeta*, 370  
*Phyllophthalmaria*; 128; 321  
*Phylloporina*, 87; 289  
*Phylloporis*, 87; 289  
*Phylloporthe*, 265  
*Phylloporus*, 164; 347  
*Phyllopsora*, 126; 319  
*Phyllopsorae*, 126  
*Phyllosticta*, 177; 359; 49  
*Phyllostictina*, 178; 359  
*Phyllostremella*, 343  
*Phymatodiscus*, 297  
*Phymatosphaeria*, 297  
*Phymatotrichum*, 204; 388  
*Physalacria*, 162; 345; 42  
*Physalospora*, 62; 260; 9  
*Physalosporella*, 62; 260  
*Physalosporina*, 260, 280  
*Physcia*, 132; 323; 32  
*Physciaceae*, 132; 323; 32  
*Physcidia*, 130; 322  
*Physma*, 122; 317  
*Physmatomyces*, 115; 314  
*Physoderma*, 34; 235; 1  
*Physopella*, 334  
*Physospora*, 204; 389  
*Physosporella*, 260  
*Phytophthora*, 40; 241; 4  
*Pichia*, 48; 246  
*Picoa*, 146; 333  
*Piersonia*, 146; 333  
*Piggotia*, 189, 190; 374, 375  
*Pila*, 353  
*Pilacre*, 158; 341  
*Pilacrella*, 158; 341  
*Pilaira*, 35; 237  
*Pileolaria*, 149; 335  
*Pilgeriella*, 63; 260  
*Pilidiella*, 359  
*Pilidium*, 194; 379  
*Piline*, 54; 251  
*Pilobolae*, 35  
*Pilobolus*, 35; 237; 2  
*Pilocratera*, 328  
*Pilophorum*, 126; 320; 30  
*Pilosace*, 167; 350  
*Pilula*, 250  
*Pimina*, 213; 394  
*Pinoyella*, 231; 410  
*Pionnotes*, 402  
*Piptocephalis*, 36; 237; 2  
*Piptostoma*, 305  
*Piptostomum*, 363  
*Pirella*, 35; 237  
*Piricauda*, 385  
*Piricularia*, 208; 390  
*Piringa*, 185; 367  
*Pirobasidium*, 227; 407  
*Pirogaster*, 355  
*Pirostoma*, 190; 375  
*Pirostomella*, 212; 394  
*Pirostomella*, 375  
*Pirotaea*, 134; 325  
*Pisolithus*, 172; 353; 47  
*Pisomyxa*, 248  
*Pistillaria*, 162; 345; 42  
*Pithomyces*, 207; 390  
*Pitya*, 138; 328; 34  
*Pityella*, 328  
*Placasterella*, 97; 209  
*Placidiopsis*, 88; 290  
*Placodiplodia*, 182; 362  
*Placodothis*, 275; 295  
*Placographa*, 117; 315  
*Placonema*, 180; 359  
*Placonemina*, 370  
*Placopeziza*, 325  
*Placophomopsis*, 179; 359  
*Placosoma*, 299  
*Placosphaerella*, 183; 364  
*Placosphaeria*, 180; 359  
*Placostroma*, 91; 294; 20  
*Placothelium*, 85; 287

- Placothyrium**, 192; 376  
**Plactogene**, 67; 267  
**Placuntium**, 309  
**Placynthium**, 131; 323  
**Plagiorhabdus**, 361  
**Plagiostigme**, 66; 267  
**Plagiostoma**, 265  
**Plagiostomella**, 265  
**Plagiostromella**, 272  
**Plagiotrema**, 289  
**Plasmodiophora**, 30; 233; 1  
**Plasmodiophoraceae**, 30; 233  
**Plasmopara**, 40; 241; 4  
**Plasmophagus**, 31; 234  
**Platycarpium**, 374  
**Platychora**, 294  
**Platyglea**, 157; 341; 41  
**Platypeltella**, 301  
**Platysticta**, 310  
**Platystomum**, 83; 286; 17  
**Plearthonis**, 105; 306  
**Plectania**, 139; 328; 35  
**Plectodiscella**, 93; 297; 20  
**Plectonaemella**, 178; 360  
**Plectopeltis**, 190; 374  
**Plectophoma**, 177; 360  
**Plectophomella**, 370  
**Plectophomopsis**, 176; 360  
**Plectosira**, 176; 360  
**Plectosphaera**, 294  
**Plectosphaerella**, 266  
**Plectospira**, 38; 240  
**Plectothrix**, 204; 389  
**Plenodomus**, 178; 360  
**Plenophysa**, 239, 370  
**Plenotrichum**, 190; 374  
**Plenozythia**, 187; 371  
**Pleochaeta**, 249  
**Pleochroma**, 128; 321  
**Pleococcum**, 381  
**Pleoconis**, 121; 317  
**Pleocouturea**, 185; 367  
**Pleocyta**, 370  
**Pleodothis**, 296  
**Pleogibberella**, 80; 284  
**Pleoglonis**, 296  
**Pleolecis**, 125; 319  
**Pleolpidium**, 31; 234  
**Pleomassaria**, 74; 276  
**Pleomeliola**, 256  
**Pleomelogramma**, 73; 275  
**Pleomeris**, 336  
**Pleomerium**, 55; 252  
**Pleonectria**, 80; 284; 16  
**Pleopatella**, 119; 315  
**Pleophalis**, 85; 287  
**Pleophragmia**, 276  
**Pleopyrenis**, 121; 317  
**Pleoravenelia**, 337  
**Pleorinis**, 132; 323  
**Pleoscutula**, 118; 315  
**Pleosphaeria**, 74; 276  
**Pleosphaeropsis**, 181; 362  
**Pleosphaeropsis**, 274  
**Pleosphaerulina**, 275  
**Pleospilis**, 118; 315  
**Pleospora**, 74; 276; 14  
**Pleosporopsis**, 263  
**Pleostictis**, 111; 311  
**Pleostomella**, 98; 299  
**Pleotrachelus**, 31; 234  
**Pleurage**, 263  
**Pleurascus**, 51; 248  
**Pleuroceras**, 271  
**Pleurocolla**, 220; 401  
**Pleurocybe**, 120; 316  
**Pleurocytospora**, 370  
**Pleurodiscula**, 370  
**Pleuronaema**, 176; 360  
**Pleurophoma**, 177; 360  
**Pleurophomella**, 176; 360  
**Pleurophomopsis**, 177; 360  
**Pleuroplaconema**, 178; 360  
**Pleuroplacosphaeria**, 370  
**Pleurostoma**, 60; 258  
**Pleurostomella**, 180; 360  
**Pleurothecium**, 396  
**Pleurotheliopsis**, 87; 289  
**Pleurothyriella**, 189; 374  
**Pleurothyrium**, 191; 376  
**Pleurotrema**, 87; 289  
**Pleurotus**, 165; 349  
**Plicaria**, 328  
**Plicariella**, 137; 328; 34  
**Plochmopeltidella**, 303  
**Plochmopeltineae**, 101  
**Plochmopeltis**, 101; 304  
**Ploettnera**, 310  
**Plowrightia**, 90; 292; 19  
**Plowrightiella**, 297  
**Pluriporus**, 298  
**Pluteolus**, 167; 350  
**Pluteus**, 166; 349; 45  
**Pocillum**, 136; 327; 33  
**Pocosphaeria**, 71; 274  
**Podaleuris**, 138; 328  
**Podaxon**, 170; 353; 47  
**Podocapsa**, 47; 245  
**Podocapsium**, 47; 245  
**Podochytrium**, 32; 235; 1  
**Podocrea**, 78; 282  
**Podonectria**, 283  
**Podophacidium**, 313  
**Podoplaconema**, 180; 360  
**Podosordaria**, 263  
**Podosphaera**, 52; 249; 7  
**Podospora**, 64; 263  
**Podosporiella**, 230; 409  
**Podosporium**, 230; 409  
**Podostictina**, 131; 322  
**Podostroma**, 77; 280  
**Podostroma**, 282  
**Podoxyphium**, 179; 360  
**Poecilosporium**, 339  
**Polysterium**, 306  
**Polioma**, 336  
**Poliomella**, 336  
**Poliotellium**, 334  
**Polyascomyces**, 43; 243  
**Polyblastia**, 86; 287  
**Polyblastiopsis**, 87; 288  
**Polycarpella**, 66; 267  
**Polychaetella**, 185; 366  
**Polychaetum**, 184; 365  
**Polychaetum**, 254  
**Polychidium**, 122; 317  
**Polyclypeolum**, 101; 304  
**Polycoccum**, 268  
**Polycyclina**, 96; 299  
**Polycyclus**, 96; 299  
**Polydesmus**, 215; 397  
**Polygaster**, 355  
**Polylagenochromatia**, 373  
**Polymorphomyces**, 392  
**Polynema**, 192; 377  
**Polyopeus**, 362  
**Polyphagus**, 33; 235; 1  
**Polyplocium**, 170; 353  
**Polyporaceae**, 160, 163; 346; 43, 44  
**Polyporus**, 163; 347; 43  
**Polyrhina**, 236  
**Polyrhizum**, 97; 300  
**Polysaccopsis**, 156; 340; 20  
**Polysaccum**, 353  
**Polyscytalum**, 201; 389  
**Polyspora**, 381  
**Polysporidium**, 250  
**Polystictus**, 163; 347  
**Polystigma**, 77; 280; 15  
**Polystigmata**, 189; 373; 50

- Polystomella**, 97; 300  
**Polystomellaceae**, 95; 298;  
 21  
**Polystomelleae**, 97  
**Polystroma**, 128; 321  
**Polythelis**, 87; 288  
 Polythelis, 337  
**Polythrincium**, 215; 396; 56  
 Polythyrium, 301  
**Polytrichia**, 62; 260  
 Pompholyx, 353  
**Poria**, 163; 347  
**Porina**, 86; 288  
 Porinopsis, 285, 288  
**Porocyphus**, 122; 317  
**Poronia**, 65; 263; 11  
**Poropeltis**, 190; 375  
 Poroptycha, 348  
**Porostigme**, 69; 269  
**Porothelium**, 163; 347  
 Porphyrosoma, 281  
 Portenula, 374  
**Pragmopara**, 119; 315  
**Preussia**, 52; 248  
 Prillieuxia, 344  
 Prillieuxina, 300  
**Pringsheimia**, 73; 275; 14  
**Prismaria**, 208; 391  
 Pritzeliella, 406  
 Proabsidia, 236  
**Prolisea**, 78; 282  
**Promycetes**, 147  
**Pronectria**, 78; 282  
**Prophytroma**, 211; 394  
**Propolidium**, 110; 311  
**Propolina**, 110; 311  
 Propoliopsis, 310  
**Propolis**, 110; 311; 24  
**Prosopodium**, 151; 336  
 Prosthecium, 272  
**Prosthemiella**, 198; 384  
**Prosthemium**, 184; 366; 50  
 Protascus, 236, 241  
 Protasia, 332  
 Proteomyces, 410  
 Protoachlya, 240  
**Protoblastenia**, 132; 323  
 Protocalicium, 316  
**Protococcales**, 30, 32; 233  
**Protocoronis**, 197; 344, 382  
 Protocoronospora, 344, 382  
 Protodontia, 342  
**Protoglossum**, 173; 355  
**Protohydnum**, 158; 342  
**Protomerulius**, 158; 342  
**Protomyces**, 31; 234  
**Protomycetaceae**, 31; 234  
**Protomycopsis**, 32; 234  
**Protopeltis**, 101; 304  
**Protoscypha**, 134; 325  
 Protoscypha, 296  
**Protostegia**, 194; 379; 51  
 Protothyrium, 300  
**Protoventuria**, 68; 269  
**Protuberia**, 173; 355  
 Psalidosperma, 379  
 Psalliota, 350  
**Psamma**, 207; 385, 391  
**Psathyra**, 168; 350  
**Psathyrella**, 168; 350  
**Pseudacolum**, 120; 316  
**Pseuderiespora**, 199; 385  
 Pseudoabsidia, 236  
**Pseudobalsamia**, 146; 333  
**Pseudobeltrania**, 215; 396  
 Pseudocamptoum, 393  
**Pseudocenangium**, 194; 379  
 Pseudocercospora, 397  
 Pseudocytospora, 370  
**Pseudodiaporthe**, 66; 267  
**Pseudodichomera**, 185; 367  
**Pseudodictya**, 191; 376  
**Pseudodimerium**, 69; 269  
 Pseudodimerium, 251  
**Pseudodiplodia**, 188; 372  
**Pseudodiscosia**, 198; 384  
 Pseudodiscula, 370, 381  
 Pseudofumago, 399  
 Pseudogaster, 409  
**Pseudogenea**, 145; 333  
**Pseudographis**, 103, 108;  
 309; 22  
 Pseudographium, 367  
 Pseudoguignardia, 260  
**Pseudohaplis**, 181; 363  
 Pseudohaplosporella, 363  
 Pseudohelotium, 325  
**Pseudoheppia**, 124; 318  
**Pseudohydnotrya**, 145;  
 333; 38  
**Pseudolachnea**, 193; 378  
**Pseudolecanactis**, 125; 319  
**Pseudolembosia**, 96; 300  
 Pseudolizonia, 256  
**Pseudolpidiopsis**, 31; 234  
 Pseudolpidium, 234  
 Pseudomassaria, 279  
 Pseudombrophila, 328  
 Pseudomelasma, 294  
 Pseudomeliola, 279  
 Pseudomicrocera, 402  
 Pseudomonilia, 412  
 Pseudomycoderma, 412  
 Pseudonectria, 280  
**Pseudoparmelia**, 130; 322  
 Pseudoparodia, 268  
 Pseudoparodiella, 250  
 Pseudopatella, 380  
**Pseudopatellina**, 195; 380  
**Pseudoperis**, 71; 272  
 Pseudoperisporium, 272  
 Pseudoperonospora, 241  
**Pseudopeziza**, 134; 325  
**Pseudophaacidium**, 107; 309  
**Pseudophoma**, 176; 360  
 Pseudophomopsis, 359  
 Pseudophyllachora, 279  
 Pseudophysalospora, 260  
 Pseudopityella, 328  
 Pseudoplasmodium, 241  
**Pseudoplea**, 73; 275  
 Pseudoplea, 272  
**Pseudoplectania**, 138; 328;  
 35  
 Pseudopleospora, 279  
 Pseudopolystigmina, 406  
 Pseudopuccinia, 336  
 Pseudopyrenula, 288  
 Pseudorhynchia, 261  
 Pseudorhynisma, 325  
 Pseudosaccharomyces,  
 246, 412  
 Pseudosclerophoma, 370,  
 371  
**Pseudoseptoria**, 186; 368  
**Pseudosphaerella**, 66; 267  
**Pseudosphaeria**, 70, 93; 272,  
 297  
**Pseudostegia**, 200; 385  
 Pseudostictis, 381  
**Pseudothiopsella**, 182; 363  
**Pseudothis**, 69; 269  
 Pseudothyridaria, 270  
 Pseudotrochila, 309  
**Pseudotryblium**, 118; 315  
 Pseudotrype, 257  
 Pseudotthia, 269  
**Pseudotthiella**, 264  
 Pseudovalsa, 272  
 Pseudovularia, 388  
**Pseudozythia**, 195; 380  
**Psilocybe**, 168; 350

- Psiloglonium, 305  
 Psilonia, 219; 401  
 Psilopezia, 139; 330  
 Psilospora, 192; 377; 51  
 Psilosporina, 379  
 Psilothecium, 117; 315; 27  
 Psora, 126; 319  
 Psorella, 126; 319  
 Psoroglaena, 88; 290  
 Psorographis, 106; 307  
 Psoroma, 127; 321; 31  
 Psoromaria, 126; 319  
 Psorotheciella, 325  
 Psorotheciopsis, 133; 325  
 Psorotichia, 121; 317  
 Psyllidomyces, 412  
 Pteridiospora, 265  
 Pteromyces, 314  
 Pterophyllus, 351  
 Pterula, 162; 345  
 Pterygiopsis, 122; 317  
 Pterygium, 122; 317  
 Ptychographa, 105; 307  
 Ptychopeltis, 301  
 Puccinia, 151; 336; 39  
 Pucciniaceae, 147; 334  
 Pucciniales, 147; 334; 39, 40  
 Pucciniastrum, 154; 339  
 Pucciniopsis, 225; 404  
 Puccinosira, 152; 336; 39  
 Puccinospora, 183; 364  
 Pucciniostele, 152; 337  
 Puiggariella, 286  
 Puiggarina, 279  
 Pullularia, 412  
 Pulparia, 115; 314  
 Pulveraria, 231  
 Punctillum, 268  
 Pustularia, 328  
 Puttemansia, 80; 283  
 Puttemanssiella, 279  
 Pycnidiella, 372  
 Pycnidiostroma, 370  
 Pycnis, 177; 360  
 Pycnocarpum, 100; 302; 21  
 Pycnochytrium, 234  
 Pycnoderma, 99, 100; 302  
 Pycnodothis, 182; 363  
 Pycnographa, 107; 308  
 Pycnomma, 370  
 Pycnopeltis, 99; 302  
 Pycnosporium, 370  
 Pycnostemma, 375  
 Pycnostroma, 379  
 Pycnostysanus, 229; 408  
 Pycnothyrium, 375  
 Pyrenastrum, 88; 290  
 Pyrenidiaceae, 84  
 Pyrenidium, 85; 287; 18  
 Pyreniella, 259  
 Pyrenobotrys, 68; 269  
 Pyrenochaeta, 177; 360  
 Pyrenochaetina, 178; 360  
 Pyrenocollema, 85; 287; 18  
 Pyrenodiscus, 279  
 Pyrenomyxa, 279  
 Pyrenopezis, 134; 325  
 Pyrenopeziza, 134; 325; 33  
 Pyrenopezizae, 134  
 Pyrenopezizopsis, 325  
 Pyrenophora, 73; 276; 14  
 Pyrenopolyporus, 262  
 Pyrenopsidae, 121  
 Pyrenopsidium, 121; 317  
 Pyrenopsis, 121; 317  
 Pyrenostigme, 291  
 Pyrenothamnia, 88; 290  
 Pyrenotheca, 297  
 Pyrenothrix, 85; 288  
 Pyrenotrichum, 196; 380  
 Pyrenotrochila, 311  
 Pyrenula, 86; 288; 18  
 Pyrenulae, 86  
 Pyrenyllum, 87; 288  
 Pyrgidium, 120; 316  
 Pyrgillus, 120; 316; 28  
 Pyrhosorus, 236  
 Pyronema, 138, 142; 328,  
 331; 34  
 Pyronemella, 138, 142; 328,  
 331  
 Pythiae, 40  
 Pythiocystis, 241  
 Pythiogeton, 40; 241  
 Pythiomorpha, 241  
 Pythiopsis, 38; 240; 3  
 Pythium, 40; 242; 3  
 Pyxidiophora, 282  
 Pyxine, 132; 323
- Q**
- Quaternaria, 61; 258  
 Queletia, 171; 353  
 Questiera, 252
- R**
- Rabenhorstia, 179; 360; 49  
 Rachisia, 402  
 Raciborskiella, 87; 289  
 Raciborskiomyces, 253  
 Racodium, 120; 316  
 Radaisella, 386  
 Radulum, 162; 346; 43  
 Ramalina, 131; 322; 32  
 Ramalodium, 122; 317  
 Ramonia, 129; 321  
 Ramosiella, 143; 331  
 Ramsbottomia, 330  
 Ramularia, 208; 391; 54  
 Ramulariopsis, 206; 390  
 Ramulariospora, 378  
 Ramularisphaerella, 266  
 Ramulaspera, 205; 389  
 Ramulispora, 384  
 Ranojevicia, 220; 401  
 Ravenelia, 153; 337; 40  
 Ravenelula, 118; 315  
 Readerella, 181; 363  
 Rebentischia, 72; 274  
 Reessia, 231  
 Rehmiella, 66; 267  
 Rehmiellopsis, 266  
 Rehmiodothis, 294  
 Rehmioomyces, 313  
 Reinkella, 106; 308  
 Reticularia, 241  
 Reyesiella, 337  
 Rhabdium, 235  
 Rhabdocline, 309  
 Rhabdogloeopsis, 197; 382  
 Rhabdogloeum, 197; 382  
 Rhabdopsora, 84; 287  
 Rhabdospora, 186; 368; 50  
 Rhabdostroma, 294; 279  
 Rhabdostromella, 370  
 Rhabdostromellina, 370  
 Rhabdostromina, 365, 368  
 Rhabdothyrella, 374  
 Rhabdothyrium, 374  
 Rhachomyces, 45; 244; 5  
 Rhacodiella, 210; 394  
 Rhacodium, 232; 411  
 Rhacophyllus, 351  
 Rhadinomyces, 44; 244  
 Rhagadolobium, 97; 300  
 Rhagadostoma, 67; 267  
 Rhamphoria, 73; 275  
 Rhamphospora, 339  
 Rhaphidisegestria, 289  
 Rhaphidocytis, 100; 302  
 Rhaphidophora, 75; 278

- Rhaphidopyris**, 86; 289  
**Rhaphidospora**, 278  
**Rhaphidiyllis**, 86; 289  
**Rheumatopeltis**, 305  
**Rhinocladium**, 212; 394  
**Rhinotrichum**, 205; 389; 53  
**Rhipidium**, 39; 240; 3  
**Rhipidocarpum**, 96; 300  
**Rhizalia**, 53; 250  
**Rhizidiocystis**, 236  
**Rhizidiomyces**, 32; 235  
**Rhizidium**, 33; 235; 1  
**Rhizina**, 139; 330; 36  
**Rhizinae**, 139  
**Rhizocalyx**, 326  
**Rhizocarpum**, 125; 319; 30  
**Rhizoclosmatium**, 33; 235  
**Rhizoctonia**, 231; 411  
**Rhizogene**, 256  
**Rhizohypha**, 411  
**Rhizomorpha**, 232; 411  
**Rhizomyces**, 44; 244  
**Rhizomyxa**, 233  
**Rhizophidium**, 33; 235; 1  
**Rhizophlyctis**, 33; 235  
**Rhizophoma**, 178; 360  
**Rhizopogon**, 173; 355; 48  
**Rhizopus**, 35; 237  
**Rhizosphaera**, 178; 360  
**Rhizosphaerella**, 360  
**Rhizotexis**, 252  
**Rhizothyrium**, 191; 375  
**Rhodobolites**, 347  
**Rhodochytrium**, 236  
**Rhodocybe**, 351  
**Rhodomycetes**, 412  
**Rhodopaxillus**, 351  
**Rhodoseptoria**, 373  
**Rhodosticta**, 187; 371  
**Rhodothrix**, 84; 289  
**Rhodotorula**, 412  
**Rhodotus**, 351  
**Rhombostilbella**, 228; 407  
**Rhopalidium**, 397  
**Rhopalocystis**, 210; 395  
**Rhopalomyces**, 202; 238, 389; 53  
**Rhopographella**, 270  
**Rhopographina**, 92; 294  
**Rhopographus**, 92; 294; 30  
**Rhymbocarpus**, 117; 315  
**Rhynchodiplodia**, 183; 365  
**Rhynchomelas**, 77; 280  
**Rhynchomeliola**, 69; 269  
**Rhynchomyces**, 216; 397  
**Rhynchomyces**, 373  
**Rhynchonectria**, 78; 282  
**Rhynchophoma**, 182; 364  
**Rhyncophoromyces**, 45; 245  
**Rhynchophorus**, 366  
**Rhynchosphaeria**, 71; 274  
**Rhynchosporium**, 206; 390  
**Rhynchostoma**, 68; 269  
**Rhynchostomopsis**, 269  
**Rhyparobius**, 141; 330; 37  
**Rhysotheca**, 241  
**Rhytidenglerula**, 252  
**Rhytidhysterium**, 313  
**Rhytidopeziza**, 313  
**Rhytisma**, 109; 309; 24  
**Rhytismella**, 369  
**Riccoa**, 409  
**Richonia**, 32; 248  
**Rickia**, 45; 244; 5  
**Rickiella**, 286  
**Riessia**, 231; 409; 57  
**Rimbachia**, 348  
**Rinia**, 61; 260  
**Rinodina**, 132; 323; 32  
**Robergea**, 75, 111; 278  
**Robertomyces**, 296, 315  
**Robillardia**, 182; 364  
**Robledia**, 293  
**Roccella**, 107; 308; 23  
**Roccellae**, 106  
**Roccellaria**, 106; 308  
**Roccellina**, 107; 308  
**Roccellographa**, 106; 308; 23  
**Rodwaya**, 348  
**Roesleria**, 119; 316  
**Roestelia**, 336  
**Rollandina**, 48; 247  
**Romellia**, 60; 258  
**Rosellinia**, 64; 263; 10  
**Rosenscheldia**, 90; 292; 19  
**Rosenscheldiella**, 266  
**Rostkovites**, 347  
**Rostrella**, 62; 260  
**Rostronitschkea**, 61; 258  
**Rostrosphaeria**, 61; 260  
**Rostrupia**, 336  
**Rotaea**, 207; 391  
**Rotularia**, 107; 308  
**Roumegueria**, 295  
**Roumegueriella**, 373  
**Roussoella**, 268  
**Rozella**, 31; 234  
**Rozites**, 350  
**Ruhlandiella**, 330  
**Russula**, 165; 349  
**Rutstroemia**, 136; 327
- ## S
- Sabouraudites**, 410  
**Saccardaea**, 229; 408  
**Saccardia**, 93; 297  
**Saccardiae**, 93  
**Saccardinula**, 101; 304  
**Saccardoella**, 70; 272  
**Saccardomyces**, 279  
**Saccaromyces**, 48; 246; 6  
**Saccharomycetaceae**, 47; 245  
**Saccharomycodes**, 48; 246  
**Saccharomycopsis**, 47; 246  
**Saccoblastia**, 157; 341; 41  
**Saccobolus**, 141; 330; 37  
**Saccomyces**, 33; 235  
**Sacothecium**, 273  
**Sachsia**, 392, 412  
**Sacidium**, 377  
**Sagediopsis**, 272  
**Sagiolechia**, 128; 321  
**Saitomyces**, 238  
**Samarospora**, 51, 62; 247, 260  
**Sampaioa**, 83; 286  
**Santiella**, 366  
**Saprolegnia**, 38; 240; 3  
**Saprolegniaceae**, 38; 239; 3  
**Saprolegniae**, 38  
**Sapromyces**, 39; 240  
**Sarcinella**, 217; 398; 57  
**Sarcinodochium**, 222; 402  
**Sarcinomyces**, 392  
**Sarcographa**, 107; 308  
**Sarcographina**, 107; 308  
**Sarcomyces**, 116; 314  
**Sarcophoma**, 187; 371  
**Sarcopodium**, 213; 395; 55  
**Sarcopyrenia**, 86; 287  
**Sarcoscypha**, 139; 328; 35  
**Sarcosphaera**, 138; 328; 35  
**Sarcosoma**, 116; 314  
**Sarcotrochila**, 311  
**Sarcoxyllum**, 78; 280  
**Sarporum**, 229; 408  
**Sartorya**, 247  
**Scaphidium**, 193; 378  
**Scelobelonium**, 136; 327  
**Scenomyces**, 411

- Sceptromyces**, 203; 389  
**Schenckiaella**, 332  
**Schiffnerula**, 55; 252  
**Schinzia**, 339  
**Schinzinia**, 349  
**Schismatomma**, 124; 319; 30  
**Schistodes**, 53; 249  
**Schistophorum**, 120; 316  
**Schizachora**, 91; 294  
**SchizacrospERMUM**, 277  
**Schizocapnodium**, 57; 254  
**Schizonella**, 155; 339  
**Schizoparme**, 62; 261  
**Schizopelte**, 107; 308  
**Schizophyllum**, 165; 349; 44  
**Schizosaccharis**, 47; 246  
**Schizosaccharomyces**, 246  
**Schizospora**, 336  
**Schizostege**, 275  
**Schizostoma**, 83; 286; 17  
**Schizothyrella**, 195; 380  
**Schizothyrioma**, 310  
**Schizothyrium**, 101, 103, 108; 304, 309; 24  
**Schizotrichum**, 226; 405  
**Schizoxylum**, 111; 311; 25  
**Schneepia**, 96; 300; 21  
**Schoenbornia**, 378  
**Schroeterella**, 336  
**Schroeteria**, 340  
**Schroeteriaster**, 388  
**Schulzeria**, 165; 349  
**Schwanniomyces**, 246  
**Schweinitziella**, 91; 292  
**Sciodothis**, 94; 296  
**Scirrhia**, 91; 294; 19  
**Scirrhiachora**, 291  
**Scirrhiaella**, 63; 261  
**Scirrhiosis**, 295; 370  
**Scirrhodothis**, 294  
**Scirrhophragma**, 293  
**Sclerangium**, 172; 353  
**Sclerochaeta**, 177; 360  
**Sclerochaetella**, 364  
**Sclerococcum**, 225; 404  
**Sclerocystis**, 37; 238  
**Sclerodepsis**, 347  
**Scleroderma**, 172; 353; 47  
**Scleroderris**, 112; 312; 25  
**Sclerodiscus**, 225; 404  
**Sclerodothiorella**, 357  
**Sclerodothis**, 271, 292  
**Sclerographis**, 106; 307  
**Sclerographium**, 231; 409  
**Scleromeris**, 176; 180; 360  
**Sclerophoma**, 358  
**Sclerophomella**, 360  
**Sclerophomina**, 178; 360  
**Sclerophytum**, 107; 308  
**Scleroplea**, 74; 276  
**Scleroplella**, 72; 274  
**Scleropycnium**, 195; 380  
**Sclerosphaeropsis**, 362  
**Sclerospora**, 40; 242; 4  
**Sclerostagonospora**, 365  
**Sclerotelium**, 336  
**Scleroteca**, 185; 367  
**Sclerothyrium**, 362  
**Sclerotinia**, 135; 327; 33  
**Sclerotiumyces**, 256  
**Sclerotiopsis**, 178; 360  
**Sclerotium**, 231; 411  
**Scodellina**, 328  
**Scoleactis**, 125; 319  
**Scoleciocarpus**, 355  
**Scolecobasis**, 396  
**Scolecochoidea**, 292  
**Scolecodothis**, 92; 294; 19  
**Scolecodothopsis**, 293  
**Scoleconectria**, 285  
**Scolecopeltidella**, 304  
**Scolecopeltidium**, 304  
**Scolecopeltis**, 101; 304; 21  
**Scolecopeltium**, 101; 304  
**Scolecopeltopsis**, 304  
**Scolecosporiella**, 366; 384  
**Scolecotrichum**, 215; 396  
**Scolecozythia**, 188; 373  
**Scoliciosporium**, 125; 319  
**Scolionema**, 97; 300  
**Scopinella**, 77; 281  
**Scopophoma**, 185; 368  
**Scoptria**, 258  
**Scopularia**, 213; 395  
**Scopulariopsis**, 388  
**Scorias**, 57; 254  
**Scoriomyces**, 406  
**Scortechinia**, 63; 261  
**Scutellinia**, 329  
**Scutellum**, 301  
**Scutula**, 118; 315  
**Scutularia**, 315  
**Scutellinia**, 139; 329; 35  
**Scutelliniae**, 138  
**Scyphospora**, 198; 383  
**Scyphostroma**, 256  
**Scytopezis**, 114; 312  
**Sebacina**, 158; 342; 41  
**Secotium**, 170; 353; 47  
**Seismosarca**, 158; 342  
**Selenophoma**, 177; 360  
**Selenophomopsis**, 195; 380  
**Selenotila**, 201; 389  
**Selinia**, 77; 280  
**Semigyalecta**, 129; 321  
**Sepedonium**, 205; 389  
**Septobasidium**, 158; 341  
**Septochora**, 295  
**Septocladia**, 242  
**Septocylindrium**, 206; 391  
**Septocyta**, 367  
**Septocytella**, 370  
**Septodothideopsis**, 370  
**Septogloeum**, 198; 383; 52  
**Septoideum**, 397  
**Septomazzantia**, 279  
**Septomyxa**, 198; 383  
**Septonema**, 215; 397; 56  
**Septopatella**, 194; 379  
**Septorella**, 371, 402  
**Septoria**, 186; 368; 50  
**Septoriella**, 184; 365  
**Septoriopsis**, 368, 399  
**Septorisphaerella**, 266  
**Septosporium**, 218; 398  
**Septothyrella**, 191; 375  
**Septotrullula**, 384  
**Septularia**, 139; 329; 35  
**Setchellia**, 339  
**Setella**, 57; 254  
**Seuratia**, 331  
**Seynesia**, 68, 98; 269, 302; 17  
**Seynesiola**, 302  
**Seynesiopsis**, 191; 375  
**Shearia**, 185; 367  
**Shiraia**, 81; 284  
**Shropshiria**, 371  
**Sigmatomyces**, 220; 401  
**Sigmoidomyces**, 202; 389  
**Sillia**, 75; 278; 15  
**Simblum**, 169; 352; 45  
**Simonyella**, 107; 308  
**Siphonaria**, 33; 235  
**Siphula**, 130; 322  
**Sirentyloma**, 295  
**Sirexipula**, 192; 377  
**Sirexipulina**, 194; 364, 380  
**Siridiella**, 199; 384  
**Siridina**, 198; 384

- Siridium*, 198; 384  
*Sirobasidium*, 158; 342  
*Sirococcus*, 177; 360  
*Sirocypis*, 195; 380; 50  
*Sirodesmium*, 217; 398; 56  
*Sirodiplospora*, 182; 364  
*Sirodochiella*, 220; 401  
*Sirodothis*, 180; 360  
*Sirogloea*, 187; 372  
*Sirolegniella*, 178; 361  
*Sirolpidium*, 236  
*Siropatella*, 193, 195; 378  
*Sirophoma*, 177; 361  
*Siroplaconema*, 187; 357, 372  
*Siroplaconema*, 357  
*Siroscypbella*, 195; 380  
*Siroscypbellina*, 380  
*Sirosperma*, 179; 361  
*Sirospira*, 179; 361  
*Sirospora*, 396  
*Sirosporium*, 398  
*Sirostromella*, 178; 361  
*Sirothecium*, 181, 194; 363, 379  
*Sirothyriella*, 189; 374  
*Sirothyrium*, 189; 374  
*Sirozythia*, 187; 372  
*Sirozythiella*, 188; 372  
*Sistotrema*, 163; 346  
*Skepperia*, 161; 345  
*Skepperiella*, 345  
*Skierkia*, 148; 335  
*Skottsbergiella*, 264  
*Smeringomyces*, 44; 244  
*Solanella*, 142; 331  
*Solenia*, 161; 345; 42  
*Solenodonta*, 336  
*Solenoplea*, 262  
*Solenopsora*, 127; 321  
*Solorina*, 124; 318; 29  
*Solorinella*, 124; 318  
*Sommerstorffia*, 240  
*Sordaria*, 64; 263; 10  
*Sorica*, 58; 256  
*Sorodiscus*, 30; 233  
*Sorokinia*, 116; 314  
*Sorolpidium*, 233  
*Sorosphaera*, 30; 233  
*Sorosporium*, 155; 339; 40  
*Sorotheia*, 69; 269  
*Sparassis*, 162; 345; 42  
*Spathularia*, 140; 330; 36  
*Spegazzina*, 226; 405  
*Spegazzinula*, 79; 283  
*Spermatoloncha*, 202; 389  
*Spermodermia*, 406  
*Spermophthora*, 413  
*Sphacelia*, 221; 401  
*Sphaceliopsis*, 385  
*Sphacelotheca*, 155; 339; 40  
*Sphaerella*, 266  
*Sphaerellothecium*, 68; 269  
*Sphaeriaceae*, 59; 256; 9-15  
*Sphaeriales*, 58; 257  
*Sphaericeps*, 171; 354  
*Sphaeridium*, 220; 401  
*Sphaeriestromella*, 376  
*Sphaeriothyrium*, 371  
*Sphaerita*, 31; 234; 1  
*Sphaerobolus*, 174; 356; 48  
*Sphaerocista*, 373  
*Sphaerocola*, 220; 401  
*Sphaeroceas*, 36; 239  
*Sphaeroderma*, 77; 281  
*Sphaerodermella*, 77; 281  
*Sphaerodes*, 77; 281  
*Sphaerodothis*, 91; 294  
*Sphaerognomonina*, 62; 261; 10  
*Sphaerographium*, 185; 368  
*Sphaeromyces*, 224; 404  
*Sphaeronema*, 176; 361; 49  
*Sphaeronemella*, 373  
*Sphaeronemina*, 187; 372  
*Sphaeronemopsis*, 257  
*Sphaeropezia*, 108; 310; 24  
*Sphaerophoma*, 180; 361  
*Sphaerophoropsis*, 126; 319; 30  
*Sphaerophorus*, 120; 316; 28  
*Sphaerophragmium*, 152; 337  
*Sphaeropsis*, 181; 363; 49  
*Sphaerosoma*, 139; 330; 36  
*Sphaerospora*, 138; 328; 35  
*Sphaerosporium*, 400  
*Sphaerostilbe*, 78; 282; 16  
*Sphaerostilbella*, 77; 280  
*Sphaerotherca*, 52; 249; 7  
*Sphaerothyrium*, 377  
*Sphaerulina*, 70; 272  
*Sphaleromyces*, 44; 244  
*Speconisca*, 85; 287  
*Sphenospora*, 151; 337  
*Sphinctrina*, 119; 316; 23  
*Sphinctrinopsis*, 119; 316  
*Spicaria*, 203; 389  
*Spicularia*, 202; 389  
*Spilodochium*, 224; 404  
*Spilodium*, 224; 404  
*Spilomyces*, 181; 363  
*Spilonema*, 122, 318  
*Spilopezis*, 134; 325  
*Spilopodia*, 325  
*Spilosticta*, 269  
*Spinalia*, 238  
*Spinellus*, 35; 237  
*Spira*, 217; 398  
*Spiralia*, 410  
*Spirechina*, 149; 335  
*Spirogramma*, 263  
*Spirographa*, 106; 307  
*Spirogyrales*, 34; 236  
*Spirospora*, 399  
*Spolverina*, 62; 261  
*Spondylocidium*, 216; 397  
*Spongospora*, 30; 233  
*Sporendonema*, 210; 395  
*Sporhelminthium*, 399  
*Sporobolomyces*, 411  
*Sporoclema*, 392  
*Sporocotomorpha*, 71; 272  
*Sporocybe*, 229; 408; 57  
*Sporocystis*, 222; 402  
*Sporoderma*, 389  
*Sporodesmium*, 217; 398; 56  
*Sporodictyum*, 86; 288  
*Sporodinia*, 35; 237  
*Sporodiniopsis*, 387  
*Sporomega*, 308  
*Sporomyxa*, 233  
*Sporonema*, 192; 377  
*Sporophlyctis*, 33; 235  
*Sporophysa*, 62; 261  
*Sporopodium*, 124; 318  
*Sporormia*, 71, 72; 274; 13  
*Sporormiella*, 72; 274  
*Sporoschisma*, 215; 397; 56  
*Sporostachys*, 230; 408  
*Sporotrichella*, 204; 389  
*Sporotrichum*, 204; 389; 54  
*Spragueola*, 329  
*Spumatoria*, 66; 267  
*Squamotubera*, 263  
*Stachybotryella*, 211; 395  
*Stachybotrys*, 211; 395; 55  
*Stachylidium*, 213; 395; 56  
*Stagonotapella*, 193, 196; 379, 380



- Stagonopsis**, 188; 372  
**Stagonospora**, 184; 365; 50  
**Stagonosporopsis**, 363  
**Stagonostroma**, 188; 372  
**Stagonostromella**, 184; 365  
**Staheliomyces**, 352  
**Stalagmites**, 90; 292; 20  
**Stannaria**, 314  
**Starbaeckia**, 117; 315  
**Starbaeckia**, 273  
**Staurochaeta**, 176; 361  
**Stauronema**, 192; 377  
**Staurophoma**, 179; 361  
**Staurothele**, 86; 288  
**Steganopycnis**, 269  
**Steganosporium**, 199; 385  
**Stegasphaeria**, 269  
**Stegastroma**, 68; 269  
**Stegia**, 110; 311; 24  
**Stegopeziza**, 311  
**Stegopezizella**, 311  
**Stegophora**, 66; 267  
**Stegothyrium**, 99; 303  
**Steinera**, 122; 318  
**Stella**, 353  
**Stemmaria**, 229; 408  
**Stemphyliomma**, 216; 397  
**Stemphyliopsis**, 208; 391  
**Stemphyliopsis**, 397  
**Stemphylium**, 218; 398  
**Stenocarpella**, 365  
**Stenocybe**, 119; 316; 28  
**Stephanoma**, 209; 391  
**Stephanospora**, 356  
**Stephanotheca**, 99; 303  
**Stephensia**, 146; 333; 38  
**Stereocaulum**, 127; 320; 30  
**Stereochlamys**, 86; 289  
**Stereocrea**, 80; 283  
**Stereolachnea**, 329  
**Stereostratum**, 151; 337  
**Stereum**, 161; 345; 42  
**Sterigmatocystis**, 386  
**Sterile Mycelia**, 231; 410  
**Stevensia**, 251  
**Stevensiella**, 62; 261  
**Stevensula**, 251  
**Stichodothis**, 298  
**Stichomyces**, 43; 243  
**Stichopsora**, 338  
**Stichospora**, 371, 381  
**Sticta**, 129; 322  
**Stictiae**, 129  
**Stictidaceae**, 109; 310; 24, 25  
**Stictina**, 131; 322  
**Stictinae**, 131  
**Stictis**, 111; 311; 25  
**Stictochorella**, 357  
**Stictochorellina**, 359  
**Stictoclypeolum**, 133; 325  
**Stictopatella**, 192; 377  
**Stictophacidium**, 110; 311  
**Stictostroma**, 311  
**Stigeosporium**, 242  
**Stigmatea**, 96; 300; 21  
**Stigmataeae**, 95  
**Stigmatella**, 239, 406  
**Stigmatodothis**, 96; 300  
**Stigmatomyces**, 44; 244  
**Stigmatopeltis**, 298  
**Stigmatophragma**, 101; 304  
**Stigmatopsis**, 264  
**Stigme**, 54; 250  
**Stigmella**, 217; 398  
**Stigmia**, 215; 397  
**Stigmochora**, 294  
**Stigmopeltella**, 376  
**Stigmopeltis**, 192; 376  
**Stigmopsis**, 199; 385  
**Stilbaceae**, 227; 406; 57  
**Stilbella**, 407  
**Stilbochalara**, 229; 408  
**Stilbocrea**, 78; 282  
**Stilbodendrum**, 229; 408  
**Stilbohypoxylon**, 279  
**Stilbomyces**, 228; 407  
**Stilbonectria**, 79; 283  
**Stilbopeziza**, 115; 313  
**Stilbospora**, 199; 384  
**Stilbothamnium**, 230; 408  
**Stilbum**, 227; 407  
**Stirochaete**, 213; 395  
**Stomatogene**, 54; 251  
**Stomiopeltella**, 101; 304  
**Stomiopeltis**, 101; 304  
**Strasseria**, 177; 361  
**Streptothecha**, 141; 330  
**Streptothrix**, 212; 395; 55  
**Strickeria**, 276  
**Strigula**, 87; 289; 18  
**Strigulae**, 87  
**Strobilomyces**, 164; 347; 43  
**Stromatinia**, 327  
**Stromatographium**, 229; 408  
**Stromatostysanus**, 408  
**Stromme**, 281  
**Stropharia**, 167; 350  
**Strossmayera**, 133; 325  
**Strumella**, 225; 404; 58  
**Strumellopsis**, 225; 404  
**Stuartella**, 271  
**Stylinia**, 156; 340  
**Stylobates**, 351  
**Stylonectria**, 188; 372  
**Stypella**, 158; 342  
**Stypinella**, 341  
**Stysanopsis**, 408  
**Stysanus**, 229; 408; 57  
**Subulariella**, 367  
**Subulicola**, 80; 283  
**Succinaria**, 77; 280  
**Suillus**, 347  
**Sydowia**, 71, 94; 272, 297  
**Sydowiella**, 267  
**Sydowina**, 69; 269  
**Sydowinula**, 61; 258  
**Symphaeophyma**, 292  
**Symphaster**, 100; 303; 21  
**Symphyosira**, 228; 407  
**Symplectomyces**, 45; 244  
**Synalissa**, 121; 318  
**Synarthonia**, 105; 306  
**Syncarpella**, 273  
**Syncephalastrum**, 36; 237; 2  
**Syncephalidae**, 36  
**Syncephalis**, 36; 238·2  
**Synchaetophagus**, 242  
**Synchytriaceae**, 31; 234  
**Synchytrium**, 31; 234; 1  
**Synesiella**, 305  
**Synesiopeltis**, 305  
**Synglonium**, 309  
**Synnematium**, 230; 408  
**Synomyces**, 338  
**Synostomella**, 299  
**Synpeltis**, 97; 300  
**Synsporium**, 211; 395  
**Syntexis**, 252  
**Synthetospira**, 391  
**Systemma**, 291  
**Systemmopsis**, 371  
**Syzygites**, 237  
  
**T**  
**Taeniophora**, 194; 379  
**Tangiella**, 326  
**Tapellaria**, 123; 318

- Tapesia**, 133; 325; 33  
**Taphridium**, 32, 144; 234, 332  
**Taphrina**, 144; 332; 37  
**Tarichium**, 239  
**Tarzetta**, 137; 329; 35  
**Tassia**, 191; 376  
**Teichospora**, 74; 276; 14  
**Teichosporella**, 73; 275; 14  
**Teleutospora**, 335  
**Telimena**, 92; 294  
**Teloconia**, 337  
**Telospora**, 335  
**Tephrosticta**, 254, 275  
**Teratomyces**, 45; 244  
**Teratonema**, 53; 250  
**Teratosperma**, 218; 399  
**Teratosphaeria**, 68; 269  
**Terfezia**, 146; 333; 38  
**Terfeziopsis**, 146; 333  
**Termitaria**, 377  
**Testicularia**, 155; 339  
**Testudina**, 52; 248  
**Tetrachia**, 226; 405  
**Tetrachytrium**, 236  
**Tetracium**, 223; 402  
**Tetracladium**, 208; 391  
**Tetracoccusporis**, 218; 398  
**Tetracoccusporium**, 398  
**Tetramyxa**, 30; 233  
**Tetraploa**, 217; 398  
**Thalassoascus**, 279  
**Thalassomyces**, 413  
**Thallochaete**, 99; 303  
**Thalloedema**, 125; 319  
**Thamnidium**, 35; 238; 2  
**Thamnocephalis**, 238  
**Thamnolia**, 130; 322  
**Thamnomycetes**, 263  
**Thaxteria**, 67; 267  
**Thaxteriella**, 71; 272  
**Thecaphora**, 155; 339  
**Theciopeltis**, 304  
**Thecopsora**, 339  
**Thecostroma**, 381  
**Thecotheus**, 330  
**Theissenia**, 263  
**Theissenula**, 252  
**Thelebolus**, 141; 330  
**Thelenidia**, 85; 288  
**Thelephora**, 161; 345; 42  
**Thelephoraceae**, 160; 344; 42  
**Thelidiopsis**, 85; 288  
**Thelidium**, 86; 288  
**Thelis**, 47; 246  
**Thelocarpum**, 76, 88; 280  
**Theloporus**, 348  
**Thelopsis**, 86; 289  
**Theloschistes**, 132; 323; 32  
**Thelospora**, 406  
**Thelotrema**, 129; 321; 31  
**Thermoidium**, 387  
**Thermomyces**, 386  
**Thermutis**, 122; 318; 29  
**Therrya**, 309  
**Thielavia**, 51; 248; 8  
**Thielaviopsis**, 210; 395  
**Tholurna**, 120; 316; 28  
**Thoracella**, 183; 364  
**Thozetia**, 220; 401  
**Thrauste**, 55; 252  
**Thraustotheca**, 38; 240  
**Thrombium**, 85; 288  
**Thuemenella**, 281  
**Thwaitesiella**, 346  
**Thyrea**, 121; 318  
**Thyriascus**, 305  
**Thyridaria**, 272  
**Thyridella**, 73; 275  
**Thyridium**, 74; 276  
**Thyrinula**, 192; 376  
**Thyriopsis**, 295  
**Thyriostoma**, 374  
**Thyriostroma**, 371, 385  
**Thyrococcum**, 367  
**Thyrodochium**, 226; 405  
**Thyronectria**, 81; 284  
**Thyronectroidea**, 284  
**Thyrosoma**, 99; 303  
**Thyrosopora**, 398  
**Thyrostroma**, 226; 405  
**Thyrostromella**, 384, 404  
**Thyrsidiella**, 197; 382  
**Thyrsidina**, 199; 384  
**Thyrsidium**, 197; 383  
**Thysanopyxis**, 219; 401  
**Thysanothecium**, 126; 320  
**Tiarospora**, 182; 364  
**Tiarosporella**, 177; 361  
**Tichospora**, 74; 276; 14  
**Tichosporella**, 73; 275; 14  
**Tichothecium**, 68; 269  
**Tiegthemella**, 236  
**Tilachliidiopsis**, 230; 408  
**Tilachlidium**, 227; 407  
**Tilletia**, 155; 340; 40  
**Tilletiaceae**, 155; 339  
**Tilotus**, 166; 349  
**Tirmania**, 146; 333  
**Titaea**, 208; 391; 54  
**Titaeospora**, 198; 384  
**Titaeosporina**, 377  
**Titanelia**, 276  
**Titania**, 72; 274  
**Tjibodasia**, 341  
**Togninia**, 60; 258  
**Tolypomyria**, 204; 389  
**Tolyposporella**, 155; 339  
**Tolyposporium**, 155; 339; 40  
**Tomasiella**, 88; 290  
**Tomentellina**, 160; 343  
**Tonduzia**, 55; 252  
**Toninia**, 125; 320  
**Topospora**, 365  
**Toroa**, 251  
**Torrendia**, 172; 355  
**Torrendiella**, 326  
**Torrubiella**, 81; 285  
**Torsellia**, 371  
**Torula**, 209; 395; 55  
**Torula**, 412  
**Torulina**, 209; 395  
**Toruloidca**, 383  
**Torulopsis**, 395, 412  
**Torulospora**, 48; 246  
**Toxosporium**, 199; 384  
**Trabutiella**, 261, 278, 294  
**Trachysphaera**, 40; 242  
**Trachyspora**, 149; 335  
**Trachysporella**, 335  
**Trachythyrilolum**, 192; 376  
**Trachyxyllaria**, 270  
**Tracya**, 156; 340  
**Tracyella**, 189; 374  
**Trailia**, 79; 283  
**Trailia**, 336  
**Trametes**, 163; 347; 43  
**Tranzschelia**, 151; 337  
**Traversoa**, 192; 377  
**Treleasia**, 78; 282  
**Trelesiella**, 187; 372  
**Trematophoma**, 359  
**Trematosphaerella**, 274  
**Trematosphaeria**, 72; 274; 13  
**Trematosphaeriopsis**, 274  
**Trematosphaeris**, 72; 274

- Trematovales, 272  
**Tremella**, 159; 342; 41  
**Tremellaceae**, 158; 341; 41, 42  
**Tremellales**, 157; 341  
**Tremellidium**, 187, 221; 372  
 Tremellogaster, 342  
**Tremellogdon**, 158; 342; 42  
 Tremellogaster, 355  
 Tremellopsis, 343  
**Tremotylum**, 129; 321  
 Treubiomyces, 254, 284  
 Triactella, 338  
 Tricella, 337  
**Trichaeum**, 218; 398  
 Trichaleurina, 329  
**Trichaleuris**, 139; 329  
**Tricharia**, 123; 318  
 Tricharia, 329  
 Trichaster, 355  
 Trichasterina, 300  
**Trichobacidia**, 122; 318  
**Trichobelonium**, 133; 325  
**Trichobotrys**, 211; 395  
**Trichochora**, 91; 292  
**Trichococcinus**, 178; 361  
**Trichocladium**, 214; 396  
 Trichocollonema, 272  
**Trichocoma**, 145; 332; 6  
**Trichocanis**, 208; 391  
**Trichocrea**, 196; 380  
**Trichoderma**, 203; 389  
 Trichodiscula, 413  
**Trichodochium**, 225; 404  
**Trichodothis**, 90; 292  
**Trichodytes**, 199; 385  
**Trichofusarium**, 219; 401  
**Trichoglossum**, 140; 330  
 Trichohleria, 273  
**Tricholoma**, 165; 349; 44  
**Trichomerium**, 57; 254  
**Trichonectria**, 79; 283  
**Trichopelteae**, 100  
**Trichopeltella**, 100; 303  
**Trichopeltina**, 100; 303  
**Trichopeltis**, 100; 303; 21  
 Trichopeltium, 374  
 Trichopeltopsis, 256, 303  
 Trichopeltula, 303  
**Trichopeltulum**, 190; 374  
**Trichophila**, 180; 361  
**Trichophyma**, 105; 306  
**Trichophytum**, 231; 410  
**Trichopsora**, 149; 335  
 Trichoscypha, 328  
**Trichoseptoria**, 185; 368  
**Trichosperma**, 196; 380  
**Trichospermella**, 75; 278  
**Trichosphaerella**, 63; 261  
**Trichosphaeria**, 63; 261; 10  
 Trichosporina, 391  
**Trichosporium**, 212; 395  
**Trichostigma**, 228; 407  
 Trichostroma, 406  
 Trichothallus, 305  
 Trichotheca, 406  
**Trichothecium**, 206; 390  
**Trichothelium**, 87; 289  
**Trichothyriaceae**, 58; 256; 8  
**Trichothyriella**, 58; 256; 8  
**Trichothyriopsis**, 58; 256  
**Trichothyrium**, 58; 256  
**Trichotrema**, 87; 289  
**Trichurus**, 229; 408  
**Tridens**, 108; 310  
**Triglyphium**, 223; 402  
**Trigonosporium**, 178; 361  
**Trimmatostroma**, 225; 404  
**Trimmatothele**, 86; 288  
**Trinacrium**, 209; 391  
**Triphragmiopsis**, 152; 338  
**Triphragmium**, 152; 338; 40  
**Triplalaria**, 224; 404  
 Tripospermum, 399  
**Tripospora**, 58; 256  
**Triposporina**, 207; 395  
**Triposporium**, 218; 399; 57  
**Trochila**, 110; 311  
**Trochodium**, 150; 335  
**Troglia**, 166; 349; 44  
 Tromera, 314  
**Troposporella**, 227; 405  
**Troposporium**, 223; 403  
 Trotteria, 365  
**Trotterula**, 81; 284  
**Trullula**, 195, 197; 380, 383; 52  
**Tryblidaria**, 119; 315  
**Trybliaceae**, 111; 311; 25  
**Trybliella**, 104, 115; 313; 26  
**Trybliopsis**, 112; 312; 25  
 Tryblidiopycnis, 381  
 Tryblidis, 312  
**Tryblidium**, 112; 312; 25  
**Tryblis**, 112; 312  
**Trypetheliae**, 88  
**Trypethelium**, 88; 290; 18  
**Tubaria**, 167; 350  
**Tuber**, 146; 333; 38  
**Tuberaceae**, 145; 332; 38  
**Tuberales**, 144; 332  
**Tubercularia**, 221; 401; 53  
**Tuberculariaceae**, 219; 399; 58  
 Tuberculariella, 381, 401  
 Tuberculariopsis, 401  
**Tubercularis**, 221; 401  
**Tuberculina**, 221; 401; 53  
**Tuberculis**, 221; 401  
**Tubeufia**, 81; 285, 340  
**Tuburcinia**, 156; 340  
**Tulasnella**, 158; 342  
 Tylophilus, 347  
**Tylophorella**, 120; 316  
**Tylophorum**, 120; 316  
**Tylostoma**, 171; 354; 47  
**Tympanis**, 114; 313; 26  
**Tympanopsis**, 64; 263  
**Typhula**, 162; 345  
 Typhulochaeta, 249  
 Tyridiomyces, 412  

**U**

**Uleodothella**, 291  
 Uleodothis, 291  
 Uleomyces, 297  
 Uleopeltis, 296, 299  
 Uleothyrium, 302  
 Ulocolla, 342  
**Umbilicaria**, 126; 320; 31  
**Uncigera**, 203; 389  
**Uncinula**, 53; 249; 7  
**Underwoodia**, 140; 330  
 Unguicularia, 327  
 Unguiculariopsis, 324  
**Uredinopsis**, 154; 339  
**Uredo**, 150; 335  
**Urnula**, 114, 138; 313, 329; 35  
**Urobasidium**, 160; 343  
**Uroconis**, 184; 366  
**Urocystis**, 156; 340  
 Urohendersonia, 366  
**Uromyces**, 150; 335; 39  
**Uromycladium**, 149; 335  
 Uromycopsis, 335  
 Urophiala, 395.

Urophlyctis, 235  
 Uropolystigma, 77; 280  
 Uropyxis, 151; 337; 39  
 Urospora, 62; 261  
 Urosporella, 261  
 Urosporium, 215; 397  
 Usnea, 130; 322; 32  
 Usneae, 130  
 Ustilaginaceae, 154; 339  
 Ustilaginales, 154; 339; 40  
 Ustilaginodes, 212; 395  
 Ustilago, 155; 339; 40  
 Ustilagopsis, 340  
 Ustulina, 65; 263; 11

**V**

Valdensia, 413  
 Valetoniella, 264  
 Valsa, 61; 258; 9  
 Valsaria, 70; 269; 12  
 Valsella, 61; 258  
 Valseutypella, 257  
 Valsonectria, 265  
 Vanderystiella, 198; 383  
 Varicellaria, 128; 321  
 Varicosporium, 208; 391  
 Vasculomyces, 392  
 Vaucheriales, 37; 239  
 Velloziella, 409  
 Velutaria, 134; 325  
 Venturia, 66; 267; 11  
 Venturiella, 273  
 Vermicularia, 196; 382; 49  
 Vermiculariella, 364  
 Verpa, 140; 330; 36  
 Verrucaria, 86; 288; 18  
 Verrucariaceae, 84; 287; 18  
 Verrucariae, 85  
 Verrucaster, 187; 372; 50  
 Verticicladium, 213, 395  
 Verticilliae, 203  
 Verticillidochium, 401  
 Verticillioopsis, 203; 389  
 Verticillis, 220; 401  
 Verticillium, 203; 389; 54  
 Vestergrenia, 63; 261  
 Vialaea, 75; 278  
 Vibrissea, 140; 330; 36  
 Virgaria, 212; 395  
 Vittadinula, 281  
 Vivianella, 83; 286  
 Vizella, 96; 300; 21  
 Voeltzkowiella, 313  
 Volkartia, 234, 332

Volutella, 219; 401; 58  
 Volutellaria, 219; 401  
 Volutellis, 205; 389  
 Volutellopsis, 222; 402  
 Volutellopsis, 389  
 Volutina, 219; 401  
 Volvaria, 166; 349  
 Volvariella, 349  
 Volvoboletus, 348  
 Vouauxiella, 193; 378

**W**

Wageria, 54; 251  
 Wallrothiella, 63; 261  
 Wardina, 300  
 Wardomyces, 399  
 Wawelia, 78; 281  
 Weesea, 80; 284  
 Wegelina, 60; 258  
 Weinmannodora, 371  
 Wentiomyces, 250  
 Wettsteinina, 66, 93; 267,  
 297; 20  
 Wiesnerina, 345  
 Wiesneriomyces, 403  
 Willeya, 86; 288  
 Williopsis, 47; 246  
 Winterella, 267, 277  
 Winterina, 67; 267  
 Winteromyces, 265  
 Wojnowicia, 184; 366  
 Wolkia, 236  
 Woodiella, 118; 315  
 Woronina, 31; 234  
 Woroninae, 31  
 Woroninella, 234  
 Wynnea, 312  
 Wynnella, 312

**X**

Xanthocarpia, 132; 323  
 Xanthopsora, 373  
 Xanthopyrenia, 85; 289  
 Xanthoria, 132; 323; 32  
 Xenodochus, 152; 337  
 Xenodomus, 371  
 Xenogloea, 222; 402  
 Xenolphium, 286  
 Xenomeris, 296  
 Xenomyces, 239  
 Xenonectria, 79; 283  
 Xenopeltis, 192; 377  
 Xenopus, 205; 389  
 Xenosphaeria, 72; 274

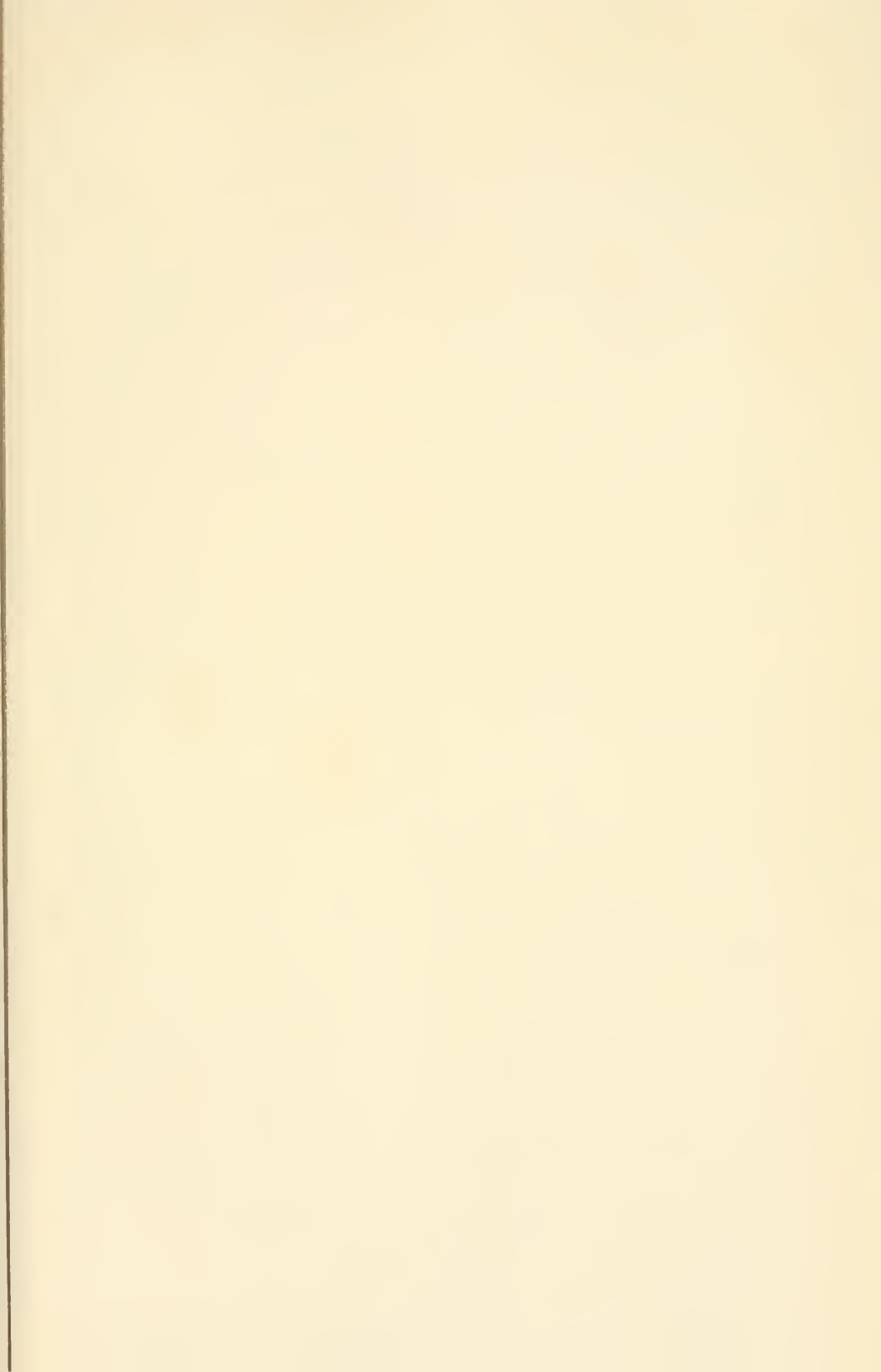
Xenosporella, 218; 398  
 Xenosporium, 218; 398  
 Xenosteles, 151; 337  
 Xenostroma, 187; 372  
 Xenothecium, 279  
 Xerotus, 166; 349  
 Xiphomyces, 225; 404  
 Xylaria, 65; 263; 11  
 Xylariodiscus, 263  
 Xylobotryum, 70; 270  
 Xyloceras, 270  
 Xylocladium, 371, 386, 409  
 Xylocrea, 78; 281  
 Xyloglyphis, 110; 311  
 Xylogramma, 110; 311; 25  
 Xylographa, 105, 110; 307,  
 311; 24  
 Xylocaria, 309  
 Xylopodium, 353  
 Xyloschistes, 105; 307  
 Xyloschizum, 306  
 Xylostroma, 232; 411  
 Xystozukalia, 254

**Y**

Yatesula, 99; 303  
 Yoshinagaia, 94; 297; 20  
 Yoshinagamycetes, 378  
 Yoshinagella, 90; 292  
 Ypsilonia, 193; 379

**Z**

Zaghouania, 148; 335  
 Zahlbrucknerella, 122; 318  
 Zignoella, 71; 272; 12  
 Zimmermanniella, 89; 292  
 Zodiomyces, 45; 245  
 Zonosporis, 47; 246  
 Zoophagus, 242  
 Zopfia, 52; 248  
 Zopfiella, 52; 248  
 Zukalia, 254  
 Zukalina, 142; 331; 37  
 Zukaliopsis, 143; 331  
 Zukaliopsis, 297  
 Zygochytrium, 236  
 Zygodesmella, 212; 395  
 Zygodemus, 212; 395; 55  
 Zygorrhizidium, 32; 235  
 Zygosaccharis, 48; 246  
 Zygosaccharomyces, 246  
 Zygosporium, 214; 395  
 Zythia, 187; 372; 50  
 Zythiaceae, 186; 371; 50





# List of Plates

1. Chytridiales
2. Mucoraceae-Entomophthoraceae
3. Saprolegniaceae-Ancylistaceae
4. Peronosporaceae
5. Laboulbeniales
6. Exascaceae-Gymnascaceae-Eurotiaceae
7. Erysiphaceae
8. Eurotiaceae-Perisporiaceae-Trichothyriaceae
9. Sphaeriaceae
10. Sphaeriaceae
11. Sphaeriaceae
12. Sphaeriaceae
13. Sphaeriaceae
14. Sphaeriaceae
15. Sphaeriaceae-Hypocreaceae
16. Hypocreaceae
17. Microthyriaceae-Lophiostomaceae-Coryneliaceae
18. Verrucariaceae
19. Dothideaceae
20. Dothideaceae-Myriangiaceae
21. Polystomellaceae-Microthyriaceae-Micropeltaceae
22. Hysteriaceae-Phacidiaceae
23. Mycoporaceae-Graphidaceae-Caliciaceae
24. Phacidiaceae-Stictidaceae
25. Stictidaceae-Tryblidiaceae
26. Dermateaceae-Bulgariaceae
27. Patellariaceae
28. Caliciaceae-Collemaceae
29. Collemaceae-Peltigeraceae
30. Cladoniaceae-Lecideaceae
31. Lecideaceae-Parmeliaceae
32. Parmeliaceae-Physciaceae
33. Mollisiaceae-Helotiaceae
34. Pezizaceae
35. Pezizaceae
36. Helvellaceae
37. Ascobolaceae-Exascaceae
38. Cyttariaceae-Elaphomycetaceae-Tuberaceae
39. Pucciniales
40. Pucciniales-Ustilaginales
41. Tremellaceae
42. Tremellaceae-Clavariaceae-Thelephoraceae
43. Hydnaceae-Polyporaceae
44. Polyporaceae-Agaricaceae
45. Agaricaceae
46. Phallaceae
47. Lycoperdaceae
48. Hymenogastraceae-Nidulariaceae
49. Phomaceae
50. Phomaceae-Zythiaceae
51. Leptostromaceae-Discellaceae-Melanconiaceae
52. Melanconiaceae
53. Moniliaceae
54. Moniliaceae
55. Dematiaceae
56. Dematiaceae
57. Dematiaceae-Stilbaceae
58. Tuberculariaceae

PLATE 1  
CHYTRIDIALES

1. *Plasmodiophora brassicae* Woron.  
(Fitzpatrick The Lower Fungi, p. 57, after Chupp)
  - a. Multinucleate myxamoeba in base of root hair of cabbage
  - b. Spores and zoospores
2. *Sphaerita endogena* Dangeard  
(Id., p. 72, after Dangeard)
  - a. Spiny resting sporangium
  - b. Young zoosporangium
3. *Olpidium endogenum* A. Br.  
(Schroet. Nat. Pfl. p. 68, after A. Braun)
  - a. Emptied zoosporangia x400
4. *Phlyctochytrium hydrodictyi* (A. Br.) Schroet.  
(Id. p. 78, after A. Braun)
  - a. Zoosporangium x800
5. *Synchytrium decipiens* Farl.  
(Fl. Nebr. pl. 15, after Farlow)
  - a. Section of a gall
  - b. Zoosporangium and zoospores
6. *Diplophysa saprolegniae* (Cornu) Schroet.  
(Schroet., Ib. p. 84, after Cornu)
  - a. Oosporangium
7. *Rhizidium mycophilum* A. Br.  
(Id. p. 79, after Nowakowski)
  - a. Zoosporangium with zoospores
  - b. Resting sporangium with zoospore formation x400
8. *Rhizophidium ampullaceum* A. Br.  
(Id. p. 76, after A. Braun)
  - a. Zoosporangia on an algal cell x300
  - b. Zoosporangia x500
9. *Chytridium olla* A. Br.  
(Id. p. 80)
  - a. Zoosporangia in host x200, after A. Braun
  - b. Zoosporangia and oosporangia, after DeBary
10. *Obelidium mucronatum* Now.  
(Fitzpatrick Ib. p. 92, after Nowakowski)
  - a. Sporangium with zoospores escaping through a lateral pore
11. *Podochytrium clavatum* Pftz.  
(Id. p. 93, after Zopf)
  - a. Mature plant
12. *Polyphagus euglenae* (Bail.) Now.  
(Schroet. Ib. p. 85, after Nowakowski)
  - a. Zoosporangium with escaping zoospores x400
  - b. Zoospore x550
  - c. Oosporangia
13. *Catenaria anguillulae* Sorok.  
(Fitzpatrick Ib. p. 103, after Dangeard)
  - a. Young thallus developed from zoospore
  - b. Mature thallus with zoosporangia
  - c. Zoosporangium with escaping zoospores
14. *Physoderma menyanthis* DeBary  
(Schroet. Ib. p. 81, after DeBary)
  - a. Mycelium and young sporangia x390
  - b. Mature sporangia x190



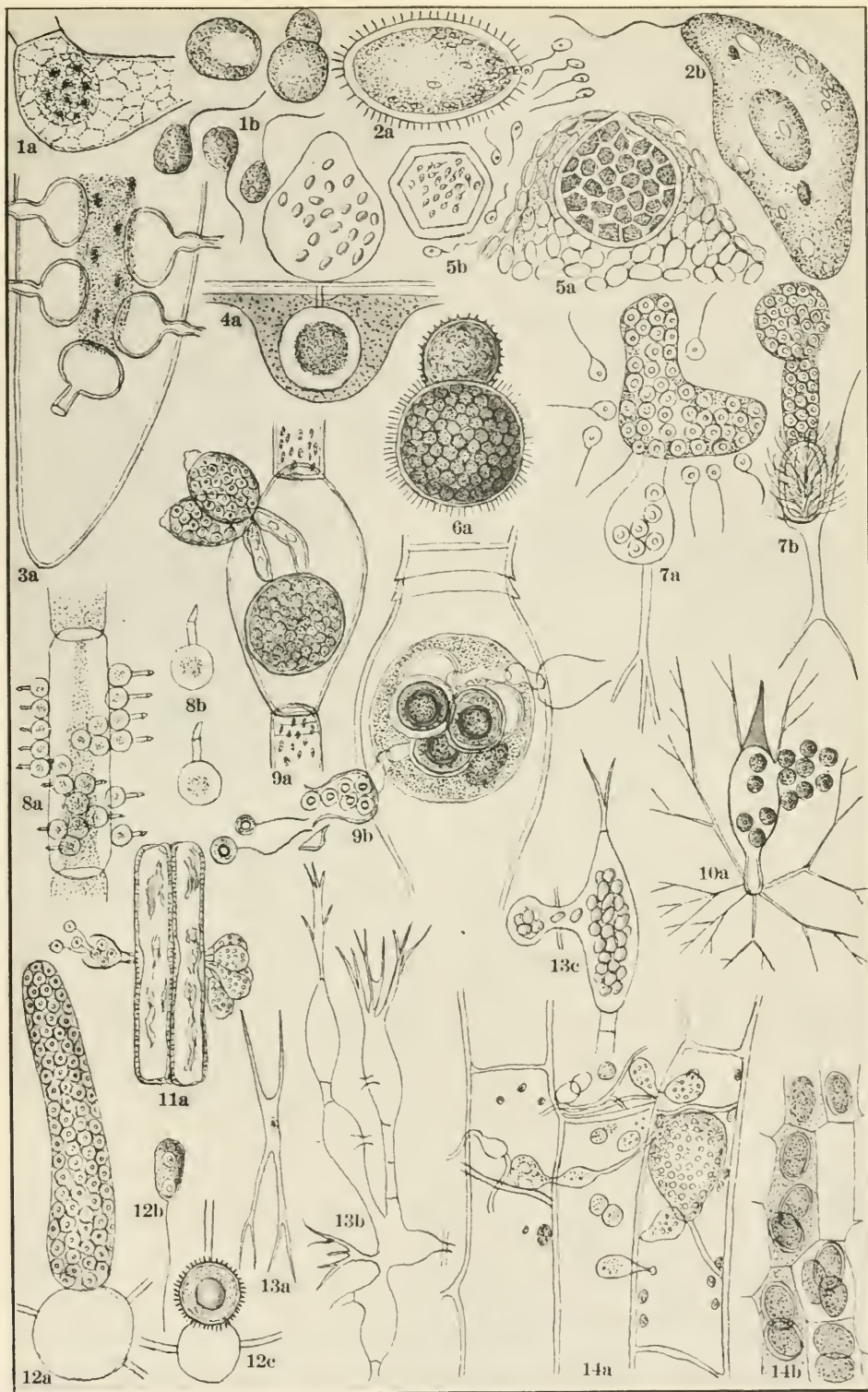


PLATE 1

## PLATE 2

### MUCORACEAE—EMPUSACEAE

1. *Mucor mucedo* L.  
(Schroet. Nat. Pfl. p. 124, after Sachs)
  - a. Sporangium with columella
  - b. Zygospore
2. *Thamnidium elegans* Link  
(Id. p. 128)
  - a. Main and accessory sporangia x120, after Brefeld
  - b. Zygospore x120, after Bainier
3. *Pilobolus kleini* van Tiegh.  
(Id. p. 129)
  - a. Sporangia x200, after Brefeld
  - b. Zygospore of *P. crystallinus* x80, after Zopf
4. *Phycomyces nitens* Kze. & Schm.  
(Id. p. 126, after van Tieghem & le Monnier)
  - a. Zygospore x50
5. *Mortierella polycephala* Coem.  
(Id. p. 130)
  - a. Conidia x50
6. *Chaetocladium brefeldi* van Tiegh. & le Mon.  
(Id. p. 132, after Brefeld)
  - a. Conidiophores and zygospore x450
7. *Choanophora infundibula* (Curr.) Sacc.  
(Id. p. 131, after Cunningham)
  - a. Conidiophores with heads of conidia x76
  - b. Sporangia x180
8. *Piptocephalis freseniana* DeBary  
(Id. p. 133, after Brefeld)
  - a. Conidiophores and conidia x300
  - b. Zygospore x630
9. *Syncephalastrum racemosum* F. Cohn  
(Id., after Schroeter)
  - a. Conidiophores and conidia x60
10. *Syncephalis cordata* van Tiegh. & le Mon.  
(Id.)
  - a. Conidiophores and conidia x80
  - b. Chains of conidia
11. *Empusa muscae* F. Cohn  
(Id. p. 138, after Brefeld)
  - a. Host fly and detached conidia x1
  - b. Conidiophores and conidia x80
  - c. Conidiophore x300
12. *Empusa sphaerosperma* Fres.  
(Id. p. 139, after Brefeld)
  - a. Caterpillar killed by fungus x1
  - b. Branched basidiophores x300
  - c. Mature resting spore x350, after Nowakowski
13. *Conidiobolus utriculosus* Bref.  
(Id. p. 140, after Brefeld)
  - a. Layer of conidiophores x80
14. *Basidiobolus ranarum* Eidam  
(Id. p. 141, after Eidam)
  - a. Layer of conidiophores x60
  - b. Basidium with conidium x500
  - c. Mycelium with resting spores x200

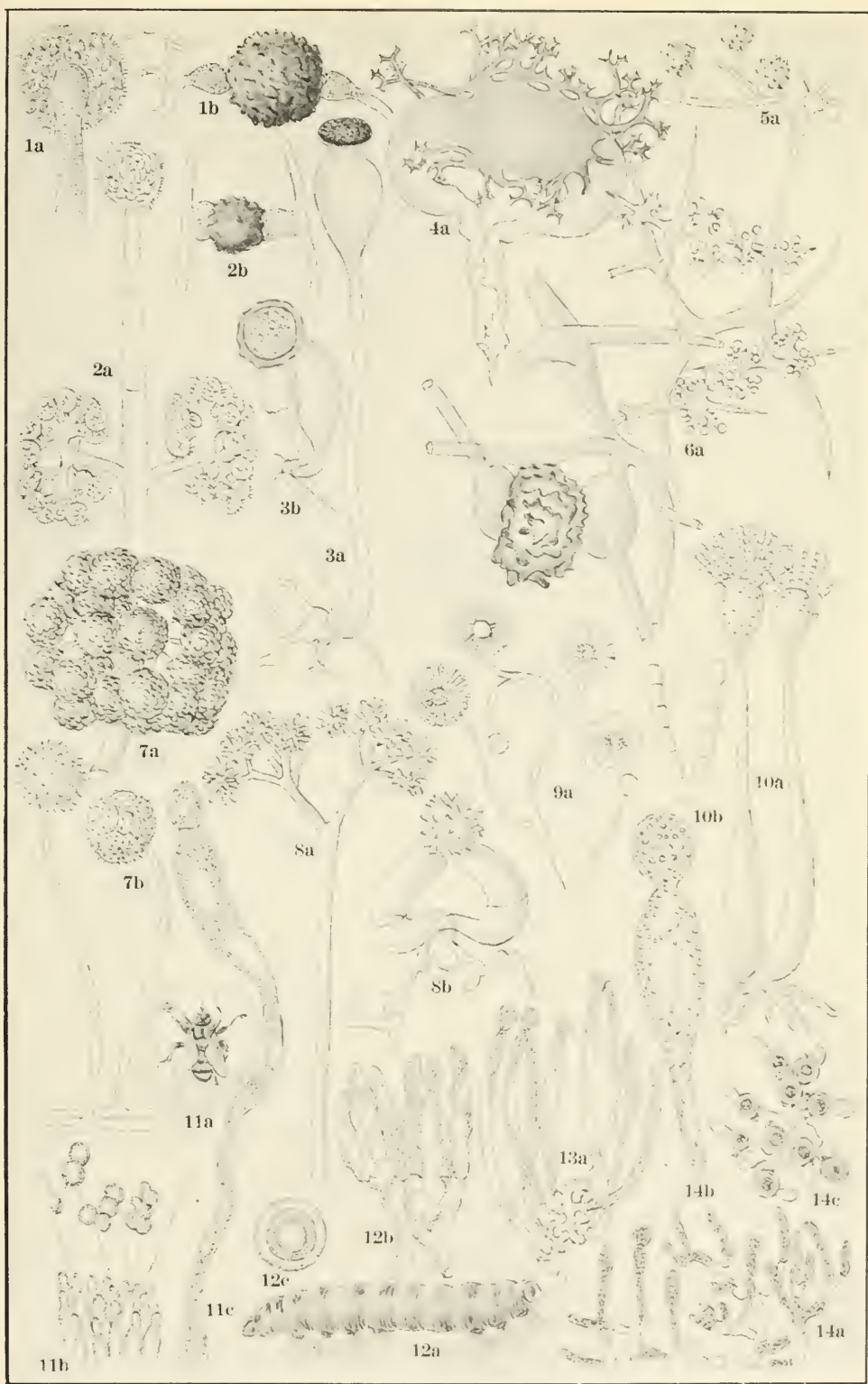
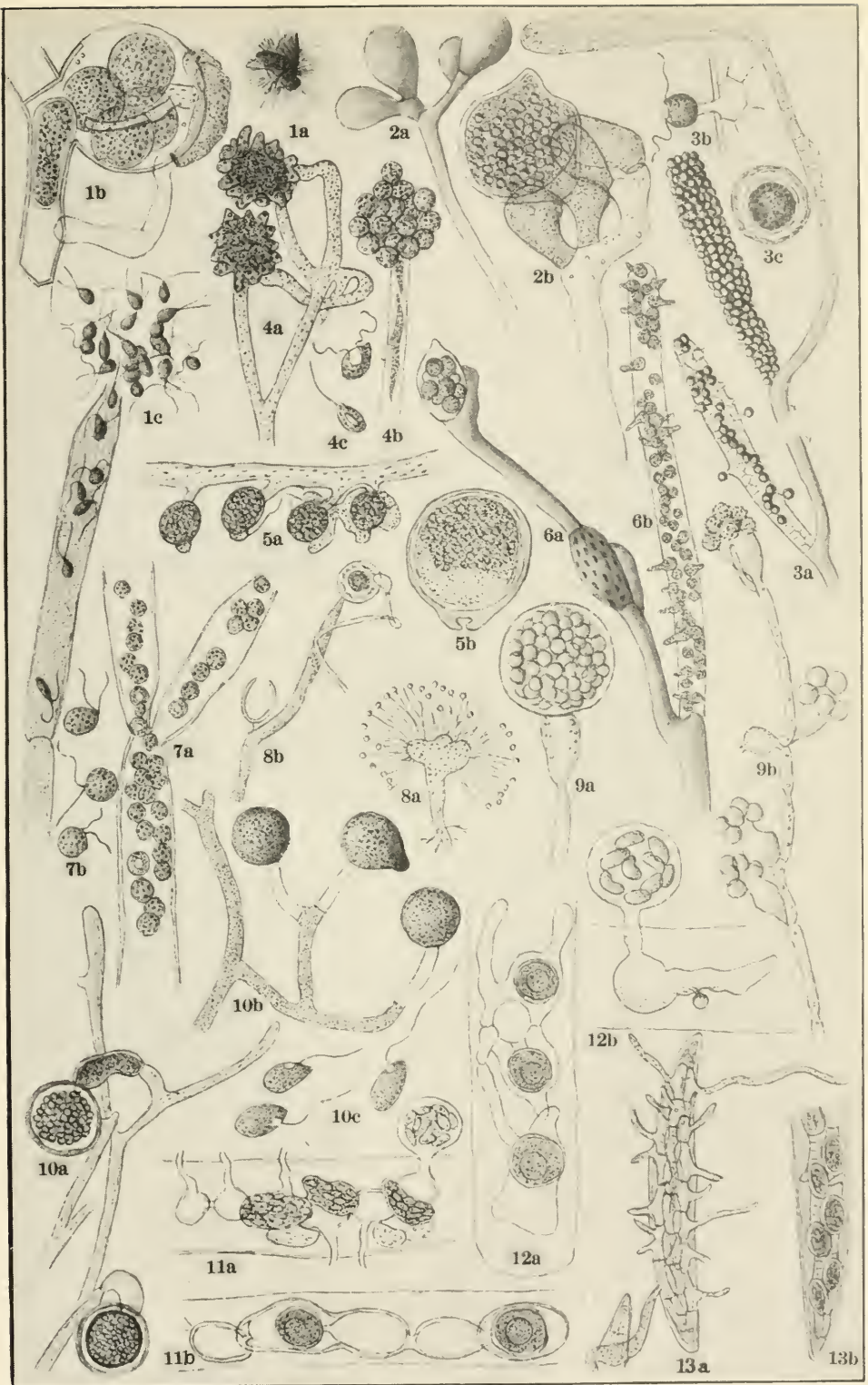


PLATE 2

## PLATE 3

### SAPROLEGNIACEAE—ANCYLISTACEAE

1. *Saprolegnia ferax* (Fr.) Nees  
(Schroet. Nat. Pfl. p. 97, after Thuret)
  - a. Fly with mycelium x1
  - b. Oogonia and antheridia x400, after DeBary
  - c. Zoosporangium and zoospores x200
2. *Pythiopsis cymosa* DeBary  
(Id. p. 97, after DeBary)
  - a. Zoosporangia x160
  - b. Oogone with antheridia x750
3. *Dictyuchus monosporus* Leitg.  
(Id. p. 99, after Leitgeb)
  - a. Zoosporangia x180
  - b. Zoospore x400
  - c. Mature oospore x400
4. *Aphanomyces stellatus* DeBary  
(Id. p. 100, after DeBary)
  - a. Oogones with antheridia
  - b. Cluster of zoosporangia
  - c. Zoospores
5. *Leptolegnia caudata* DeBary  
(Id. p. 100, after DeBary)
  - a. Hyphae bearing oogones x160
  - b. Oospore x500
6. *Aplanes brauni* DeBary  
(Id. p. 101, after DeBary)
  - a. Oogones x30
  - b. Sporangia and germinating spores x30
7. *Leptomitus lacteus* Ag.  
(Id. p. 102, after Pringsheim)
  - a. Mature zoosporangia x300
  - b. Zoospores x430
8. *Rhipidium interruptum* Cornu  
(Id. p. 103, after Cornu)
  - a. Whole plant
  - b. Disk filament with zoosporangium and oosporangium x500
9. *Apodachyla pirifera* (Zopf) Pring.  
(Id. p. 102, after Zopf)
  - a. Terminal conidium x500
  - b. Zoosporangia x250
10. *Pythium debaryanum* Hesse  
(Id. p. 105, after Hesse)
  - a. Oogones and antherids x375, after DeBary
  - b. Mycelium with young zoosporangia x200
  - c. Zoospores x300 (typically 2-ciliate)
11. *Myzocythium proliferum* Schenck  
(Id. p. 90, after Zopf)
  - a. Chain of sporangia x250
  - b. Oospores and emptied antheridia, x250
12. *Lagenidium rabenhorsti* Zopf  
(Id. p. 90, after Zopf)
  - a. Oospores x720
  - b. One-celled plant forming zoospores x720
13. *Ancylistes closteri* Pfitz.  
(Id. p. 92, after Pfitzer)
  - a. Closterium with several hyphae x500
  - b. Oospores x500



## PLATE 4

### PERONOSPORACEAE

(a. Conidiophore and conidia x200; b. Mature conidia x500;  
c. Oospore x500; except as otherwise indicated)

1. **Albugo candida (Pers.) Gray**  
(Schroet. Nat. Pfl. p. 111, after DeBary)
  - a. Conidiophores and conidia
  - b. Formation of zoospores
  - c. Oospore
2. **Bremia lactucae Regel**
  - a. (Fl. Nebr. pl. 16, after F. E. Clements)
  - b. (Schroet. Ib. p. 117)
  - c. (Fl. Nebr. Id.)
  - d. Tip of conidiophore (Schroet. Ib.)
3. **Plasmopara halstedii (Earle) Berl. & De Toni**  
(Fl. Nebr. Id.)
4. **Sclerospora graminicola (Sacc.) Schroet.**  
(Id.)
5. **Peronospora parasitica (Pers.) Fr.**  
(Id.)
6. **Phytophthora infestans (Mont.) DeBary**  
(Schroet. Ib. p. 113, after DeBary)
  - b. Exit of zoospores x390
  - c. Zoospores x390
7. **Basidiophora entospora Roze & Cornu**  
(Id. p. 114, after Cornu)
  - b. Zoospore formation x300
  - c. x300
8. **Monoblepharis sphaerica Cornu**  
(Id. p. 107, after Cornu)
  - a. b., c., Stages in the development of oogone and antheridium x800
9. **Gonapodya prolifera (Cornu) A. Fisch.**  
(Id., after Reinsch)
  - a. Cluster of empty and proliferating zoosporangia
  - b. Zoospores in sporangium x240

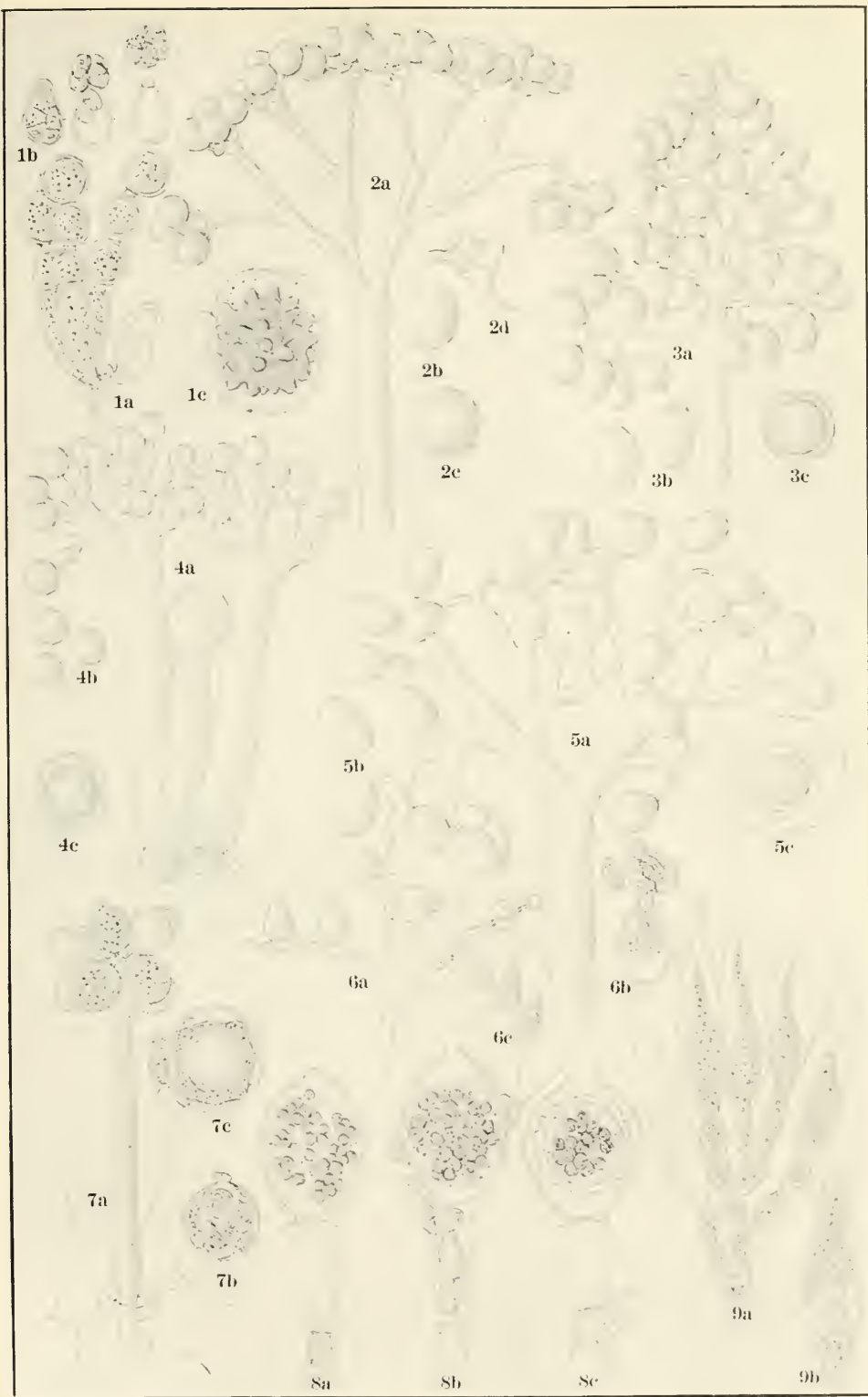


PLATE 5  
LABOULBENIALES

(a. Mature individual; b. Spore; except as otherwise indicated)

1. *Dimeromyces africanus* Thaxt.  
(Thaxter: Laboulbeniaceae pl. 14)
  - a. Female individual
  - b. Male individual
2. *Haplomyces californicus* Thaxt.  
(Id. pl. 7)
3. *Chitonomyces melanurus* Peyritsch  
(Id. pl. 26)
4. *Chaetomyces pinophili* Thaxt.  
(Id. pl. 11)
5. *Compsomyces verticillatus* Thaxt.  
(Id.)
6. *Cantharomyces bleidi* Thaxt.  
(Id. pl. 7)
7. *Monoecomyces homalotae* Thaxt.  
(Id. pl. 35)
8. *Corethromyces cryptobi* Thaxt.  
(Id. pl. 9)
9. *Arthrorhynchus nycteribiae* (Peyr.) Thaxt.  
(Id. pl. 8, after Peyritsch)
10. *Rhachomyces lathrobi* Thaxt.  
(Id. pl. 10)
11. *Rickia wasmanni* Cav.  
(Id. pl. 34)
12. *Dichomyces furciferus* Thaxt.  
(Id. pl. 6)
13. *Ectinomyces trichopterophilus* Thaxt.  
(Id. pl. 51)
14. *Camptomyces melanopus* Thaxt.  
(Id. pl. 6)
15. *Diplomyces actobianus* Thaxt.  
(Id. pl. 10)
16. *Dioecomyces anthici* Thaxt.  
(Id. pl. 42)
  - a. Male individual x290
  - b. Male spore x1100
  - c. Female individual x290
  - d. Female spore x1100
17. *Ceratomyces mirabilis* Thaxt.  
(Id. pl. 24)
18. *Laboulbenia europaea* Thaxt.  
(Id. pl. 16)



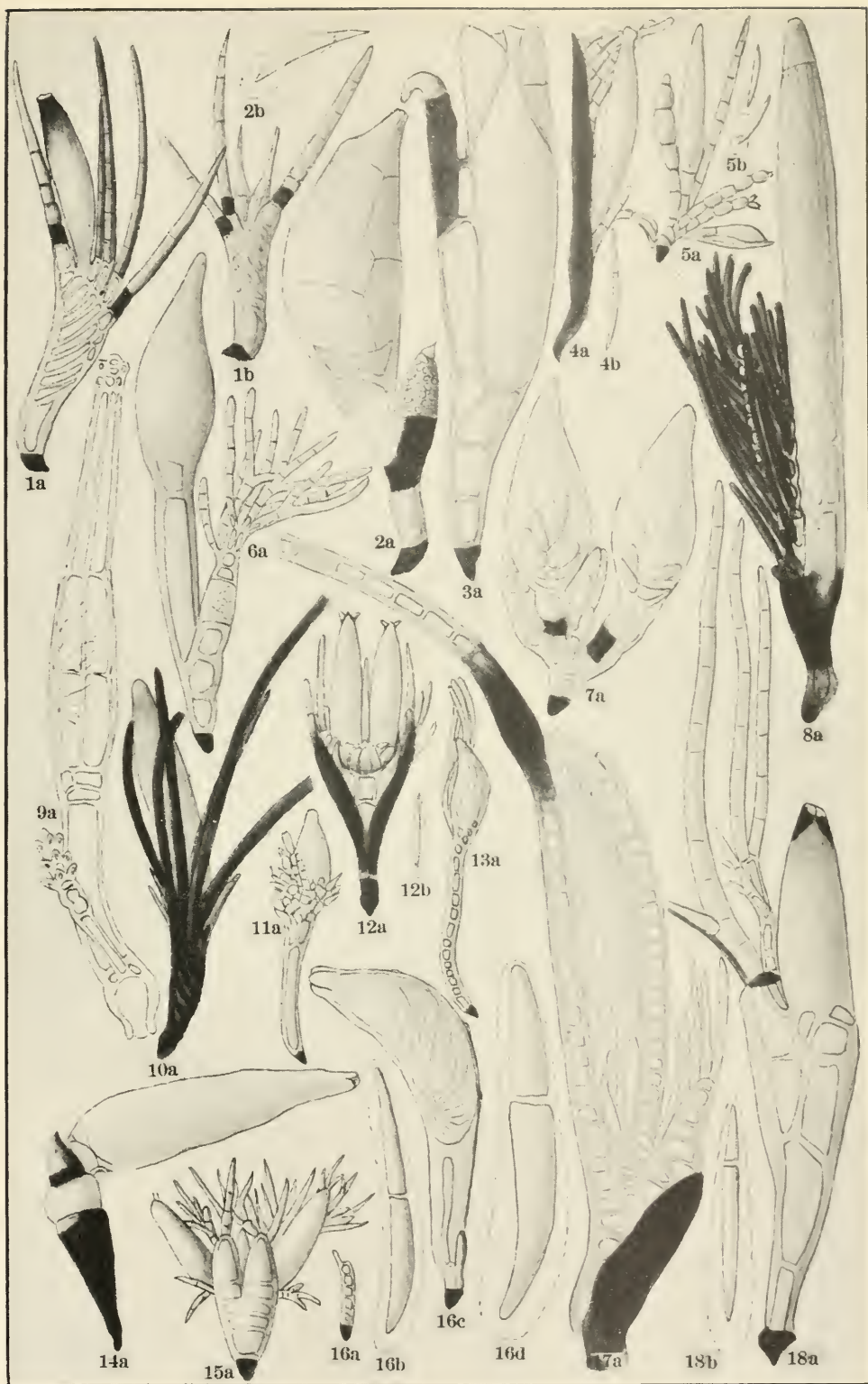


PLATE 5

## PLATE 6

### EXASCACEAE—GYMNASCACEAE—EUROTIACEAE

(a. Ascoma; b. Ascus and spores; except as otherwise indicated)

1. *Endomyces decipiens* (Tul.) Reess  
(Schroet. Nat. Pfl. p. 155, after Brefeld)
  - a. Mycelium with conidia x240
  - b. Mycelium with asci and spores x320
2. *Saccharomyces cervisiae* Meyen  
(Id. p. 153, after Reess)
  - a. Vegetative cells x750
  - b. Spore formation x750
3. *Trichocoma paradoxa* Jungh.  
(Fischer Nat. Pfl. p. 310)
  - a. Ascoma x2; section x4
  - b. Young and mature spores x1300
4. *Gymnascus reessi* Baran.  
(Id. p. 295, after Brefeld)
  - a. Mature ascoma showing asci x200
  - b. x540
  - c. Hyphae bearing asci x600 (after Baranetsky)
5. *Myxotrichum uncinatum* Eidam  
(Id. p. 296, after Eidam)
  - a. Conidiophores x400
  - b. Outer hyphae of peridium x400
6. *Myxotrichum chartarum* Kze.  
(Id. p. 296, after Preuss)
7. *Micrascus sordidus* Zukal  
(Id. p. 298, after Zukal)
  - a. Ascoma and section of same x100
  - b. Young and mature spores x600
8. *Onygena equina* (Willd.) Pers.  
(Id. p. 309, after Tulasne)
  - a. Habit x1; group of ascomata and section enlarged
  - b. x1300 (after Fischer)
9. *Cephalotheca sulfurea* Fkl.  
(Id. p. 298)
10. *Magnusia nitida* Sacc.  
(Id., after Rabenhorst)

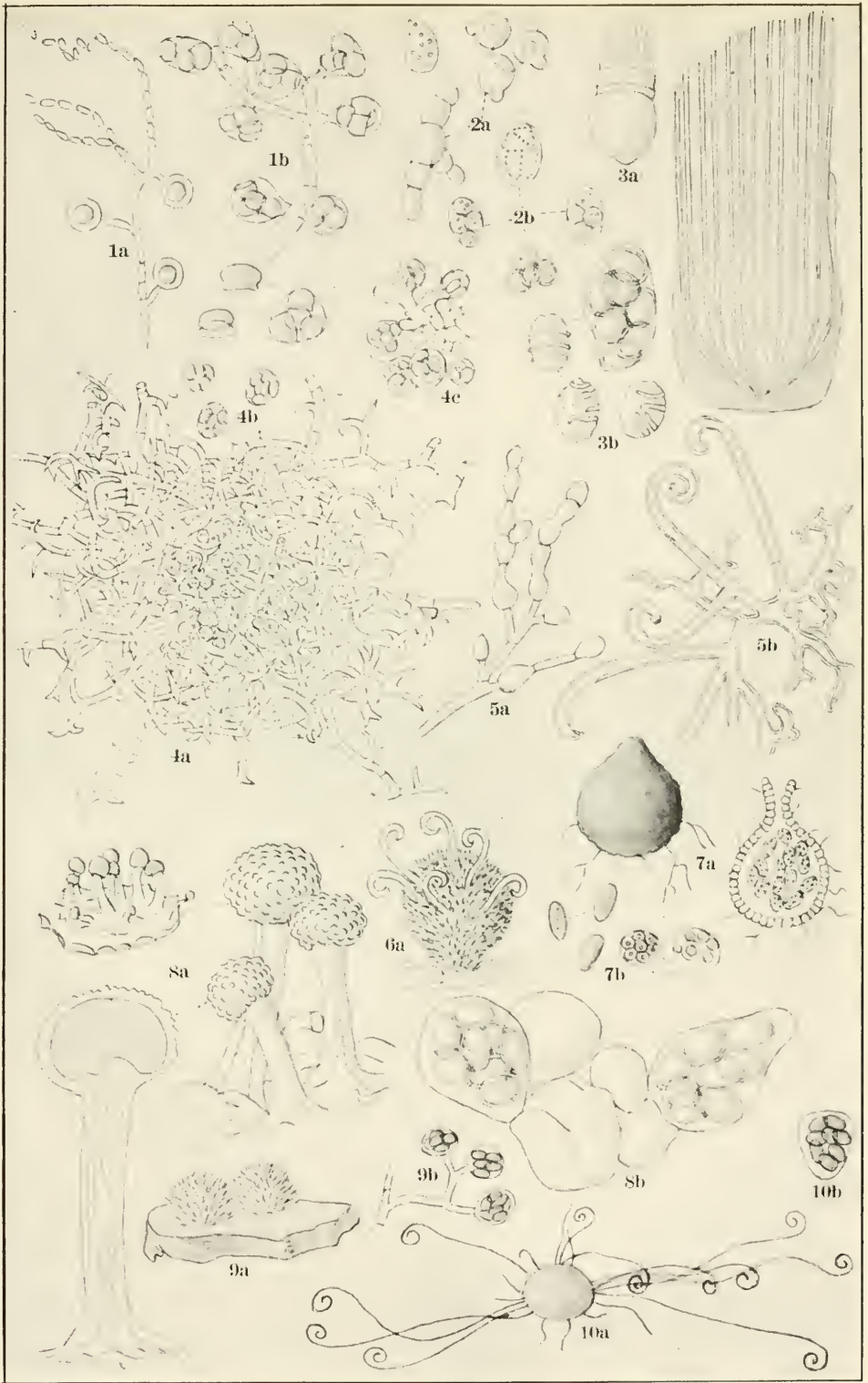


PLATE 6

PLATE 7  
ERYSIPHACEAE

(a. Perithecium x200; b. Ascus x200; c. Separate spores x400)

1. *Uncinula salicis* (DC.) Wint.
2. *Erysiphe cichoracearum* DC.
3. *Phyllactinia suffulta* (Reb.) Nees
4. *Sphaerotheca humilis* (DC.) Burrill
5. *Microsphaera alni* (DC.) Wint.
6. *Podosphaera oxyacanthae* (DC.) DeBary

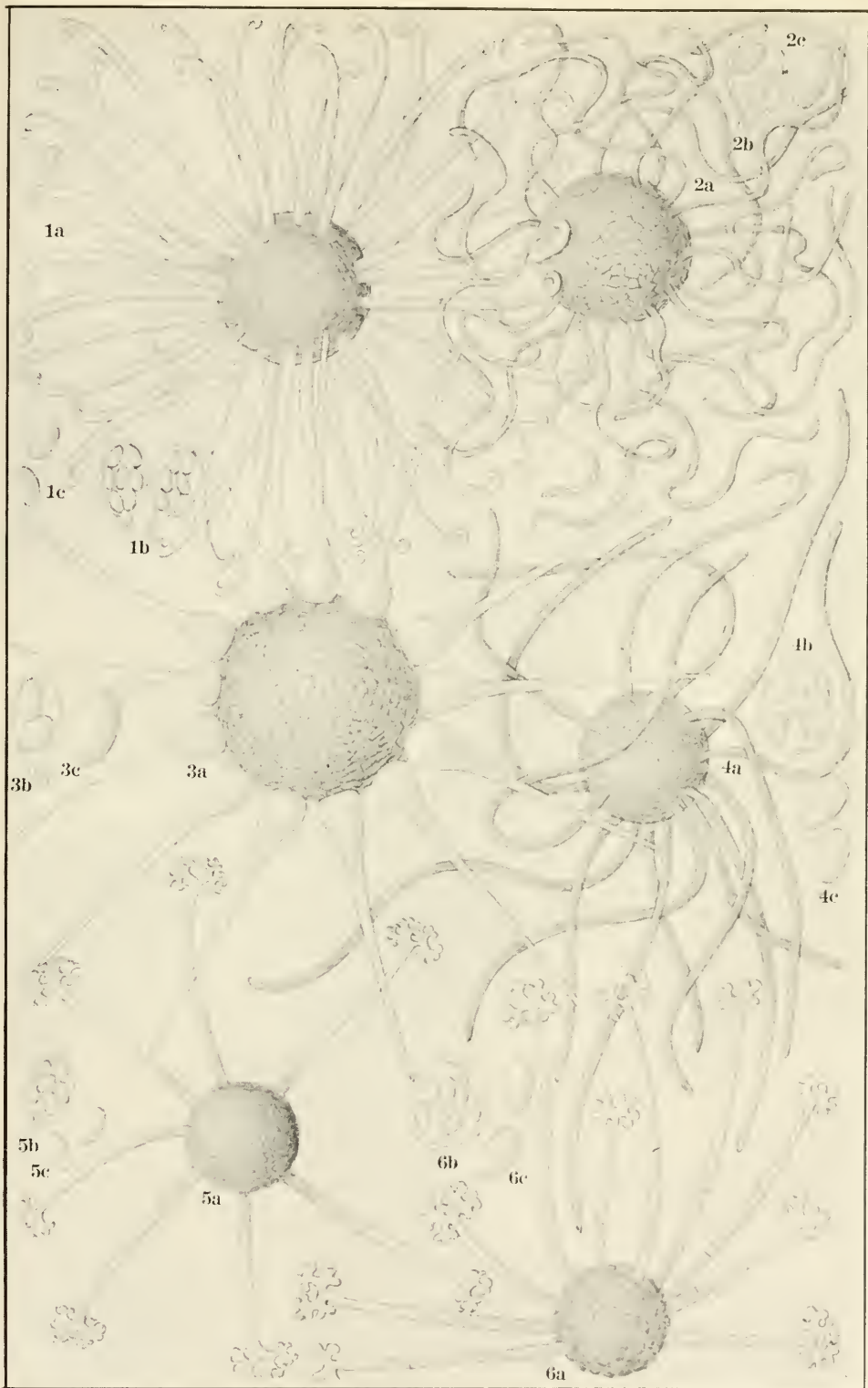


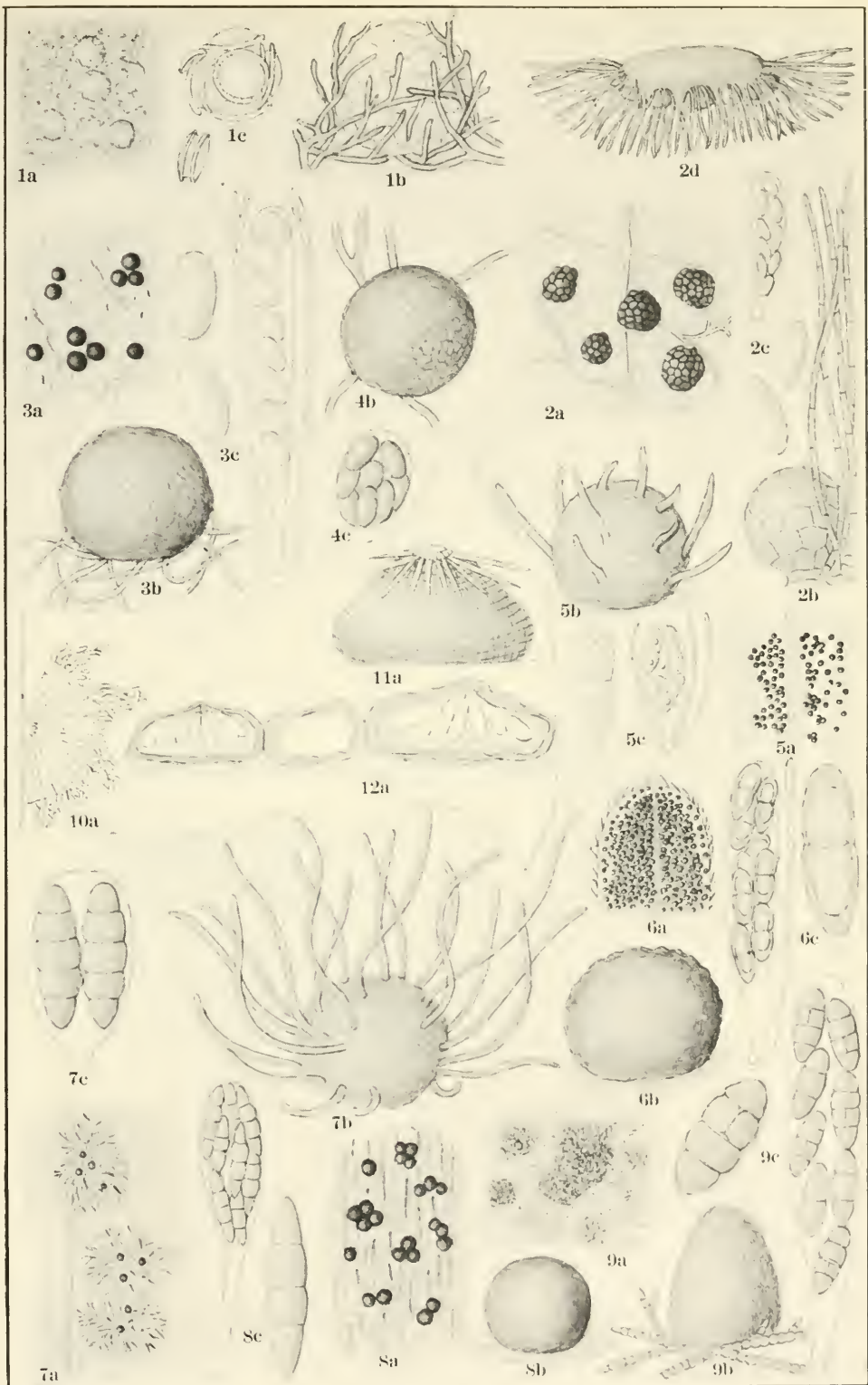
PLATE 7

## PLATE 8

### EUROTIACEAE—PERISPORIACEAE— TRICHOthyRIACEAE

(a. Habit x5; b. Perithecium; c. Ascus and paraphyses x500;  
separate spores x1000; except as otherwise indicated)

1. *Eurotium herbariorum* (Wigg.) Link  
(Sacc. Myc. Ven. no. 634)
  - a. x50
  - b. x200
  - c. Group of spores in ascus and single spore  
x1000 (E. & E. N. A. Pyr. pl. 8)
2. *Lasiobotrys lonicerae* Kze. & Schm.  
(E. & E. N. A. Fung. no. 3107)
  - b. x200
  - d. Stroma x50
3. *Mycogala parietina* (Schrad.) Rost.  
(Krieg. Fung. Sax. no. 1567)
  - b. x100
4. *Thielavia basicola* Zopf  
(Conn. Exp. Sta. Bull. 269, pl. 38)
  - b. x200
  - c. x1000
5. *Chaetostigme horridula* Syd.  
(U. S. D. A., Langlois)
  - b. x200
6. *Parodiella grammodes* (Kze.) Cke.  
(Clem. Colo.)
  - b. x100
7. *Meliola amphitricha* Fr.  
(Id.)
  - b. x100
8. *Perisporium vulgare* Cda.  
(Griffith West Am. Fung. no. 178)
  - b. x50
9. *Capnodium salicinum* (A. & S.) Mont.  
(Krieg. Ib. no. 1959)
  - b. x100
10. *Trichothyriella quercigena* (Berk.) Theiss.  
(Theiss. & Syd. Ann. Myc. 13:486)
  - b. Perithecium with mycelia
11. *Actinopeltis peristomalis* Hoehn.  
(Id. p. 487, after Hoehnel)
  - a. Side view of perithecium
12. *Loranthomyces sordidulus* (Lev.) Hoehn.  
(Id. p. 484)
  - a. Section of a stroma



**PLATE 9**  
**SPHAERIACEAE**

(a. Habit x10; b. Ascus and paraphyses x500; separate spores x1000; c. Perithecium, or section of stroma; except as otherwise indicated)

1. *Nitschkea cupularis* (Pers.) Karst.  
(Theum. Myc. Univ. no. 1947)  
a. x5  
c. x100
2. *Calosphaeria princeps* Tul.  
(E. Barthol. Fung. Colum. no. 2208)  
a. x5  
c. x20  
d. Ascus and paraphyses x1000
3. *Fracchiæa subcongregata* (B. & C.) Karst.  
(U. S. D. A., Langlois)
4. *Valsa ceratophora* Tul.  
(E. & E. N. A. Fung. no. 864d)  
c. x40
5. *Eutypa lata* (Pers.) Tul.  
c. x50
6. *Eutypella cerviculata* (Fr.) Sacc.  
(Petr. Fung. Pol. Exs. no. 406)  
a. x5  
c. x15  
d. Ostiole x10
7. *Diatrype disciformis* (Hoffm.) Fr.  
(U. S. D. A., Saxony, 1889)  
c. x40
8. *Ceratostomella barbirostris* (Duf.) Sacc.  
(Ellis N. A. Fung. no. 186)  
c. x50
9. *Gnomoniella tubaeformis* (Tode) Sacc.  
(Petr. Fl. Bohem. no. 154)  
c. x50
10. *Physalospora gregaria* Sacc.  
(Sacc. Myc. Ital. no. 83)  
c. x100





PLATE 10  
SPHAERIACEAE

(a. Habit or perithecium; b. Ascus and paraphyses x500; Separate spores x1000; except as otherwise indicated)

1. *Sphaerognomonium carpinea* (Fr.) Poteb.  
(Krieg. Fung. Sax. no. 1467)  
a. x200
2. *Trichosphaeria pulchriseta* (Pk.) E. & E.  
(E. & E. N. A. Fung. no. 3218)  
a. x200
3. *Botryosphaeria berengeriana* DeN.  
(Sacc. Myc. Ital. no. 85)  
a. x10  
d. Section of stroma x50
4. *Glomerella cingulata* (Atk.) S. & S.  
(U. S. D. A., Shear)  
a. x200
5. *Anthostomella phaeosticta* (Berk.) Sacc.  
(Rehm Ascom. no. 2106)  
a. x100
6. *Ceratostoma avocetta* (C. & E.) Sacc.  
(U. S. D. A., Langlois)  
a. x50
7. *Sordaria coprophila* Ces. & DeN.  
(Speg. Dec. Myc. Ital. no. 43)  
a. x50
8. *Hypocopa fimicola* (Rob.) Sacc.  
(E. & E. Ib. no. 2749)  
a. x50
9. *Chaetomium comatum* (Tode) Fr.  
(Jaap Fung. Sel. Exs. no. 372)  
a. x25
10. *Rosellinia aquila* (Fr.) DeN.  
(E. & E. Fung. Colum. no. 1979)  
a. Habit x5; section of perithecium x25
11. *Anthostoma gastrinum* (Fr.) Sacc.  
(E. & E. N. A. Fung. no. 2513)  
a. x3  
d. Section of stroma x10
12. *Bombardia fasciculata* Fr.  
(Petr. Fung. Pol. Exs. no. 304)  
a. Habit x5; section of perithecium x25  
b. Ascus with immature spores, and paraphyses  
c. Stages in development of spore x500

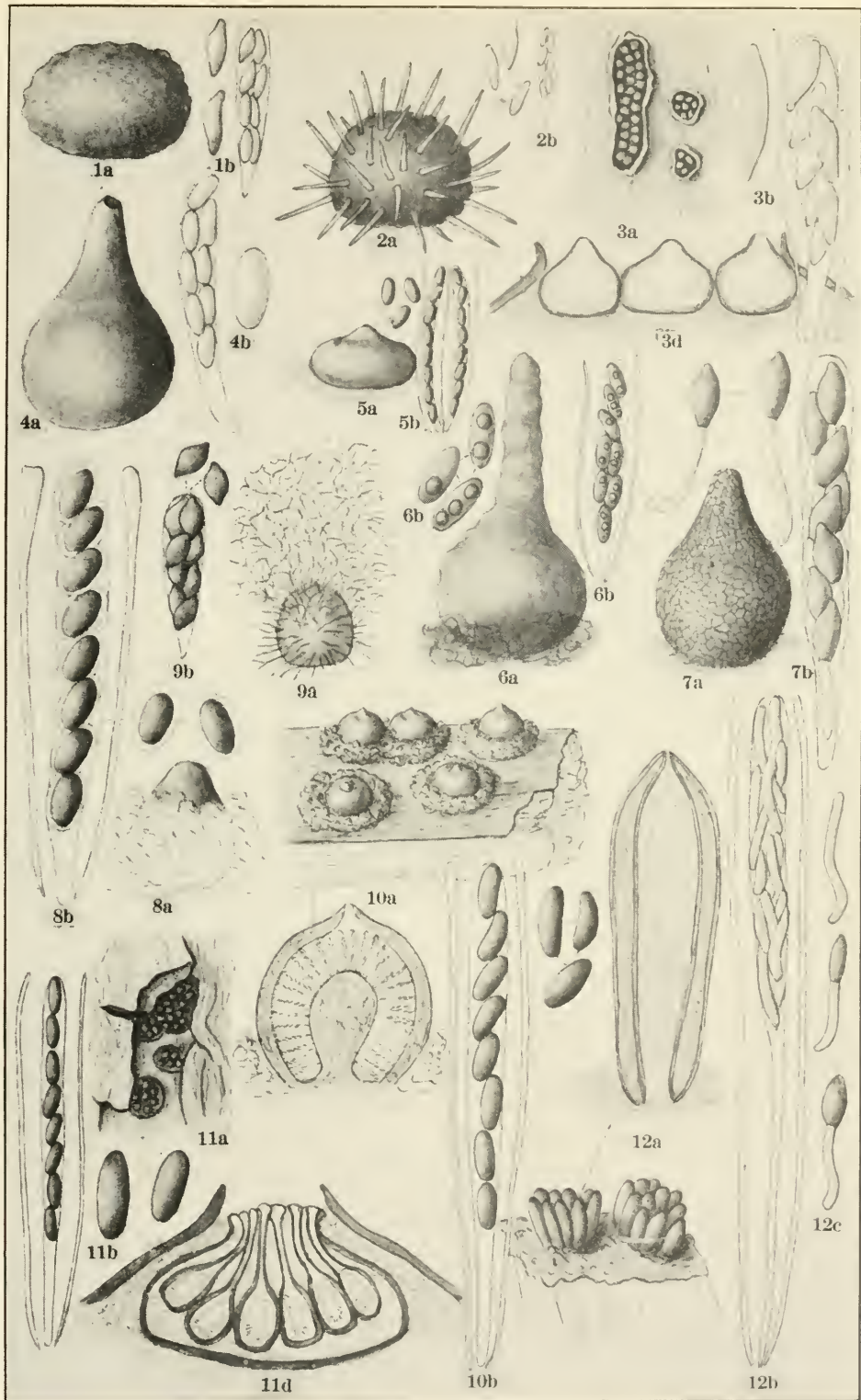


PLATE 11  
SPHAERIACEAE

(a. Habit (1-6); single perithecium (7-11); b. Ascus and paraphyses x500; separate spores x1000; c. Section of stroma; except as otherwise indicated)

1. *Xylaria hypoxyla* (L.) Grev.  
(U. S. D. A., Langlois, 1901)  
a. x1  
c. x10; detail x50
2. *Daldinia concentrica* (Bolt.) Ces. & DeN.  
(Ib. Holway, 1885)  
a. Stroma x1  
c. x1; detail x10
3. *Ustulina vulgaris* Tul.  
(Ib. West Va., 1907)  
c. x1
4. *Hypoxyllum coccineum* Bull.  
(Syd. Myc. Germ. no. 79)  
a. x1  
c. x10
5. *Nummularia discreta* Tul.  
(U. S. D. A., Mass., 1902)  
c. x5
6. *Poronia punctata* (L.) Lk.  
(Linhart Fung. Hun. no. 183)  
c. x5
7. *Gnomonia setacea* (Pers.) DeN.  
(Krieg. Fung. Sax. no. 1234)  
a. x50  
b. x1000
8. *Didymella lophospora* Sacc. & Speg.  
(Ellis N. A. Fung. no. 588)  
a. x100
9. *Mycosphaerella oenotherae* (E. & E.) Shear  
(E. & E. N. A. Fung. no. 1681)  
a. x100
10. *Melanopsamma pomiformis* (Pers.) Sacc.  
(Cav. Fung. Long. Exs. no. 170)  
a. Habit x10; perithecium x50
11. *Venturia chlorospora* (Ces.) Karst.  
(Sacc. Myc. Ital. no. 486)  
a. x200

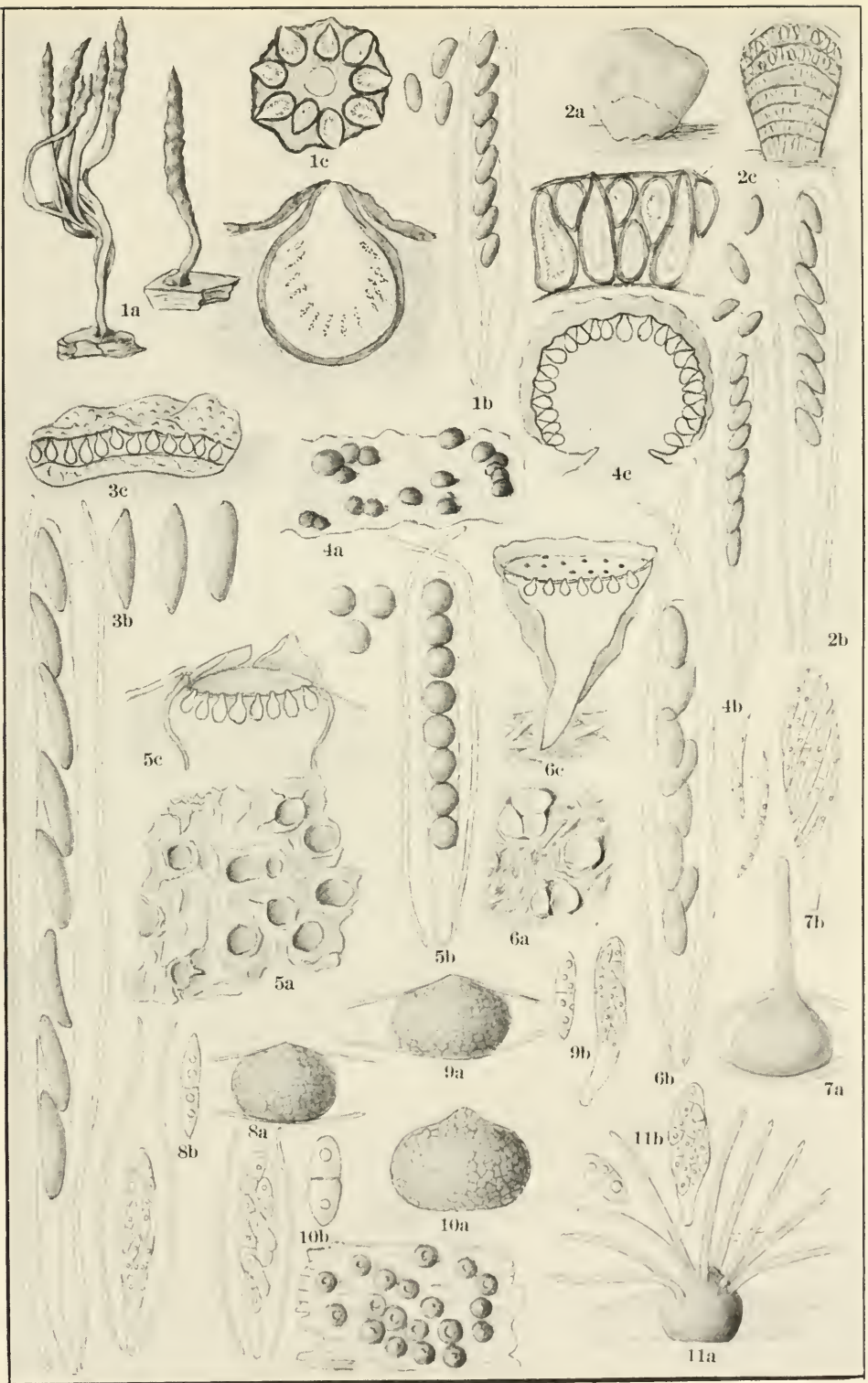


PLATE 12  
SPHAERIACEAE

(a. Habit, or perithecium; b. Ascus and paraphyses x500; separate spores x1000; c. Section of stroma; except as otherwise indicated)

1. *Endothia tropicalis* Shear & Stevens  
(U. S. D. A., Ceylon, 1913)  
a. x5  
c. x20
2. *Chorostate strumella* (Fr.) Trav.  
(Petr. Fung. Pol. Exs. no. 357)  
a. x5  
c. x20
3. *Didymosphaeria conoidea* Niessl  
(Kze. Fung. Sel. Exs. no. 326)  
a. x50
4. *Amphisphaeria umbrina* (Fr.) DeN.  
(Vest. Mic. Rar. Sel. no. 38)  
a. x15
5. *Otthia distegiae* T. & E.  
(Clem. Crypt. Form. Colo. no. 431)  
a. x4  
c. Section of perithecia x25
6. *Valsaria insitiva* (Fr.) Ces. & DeN.  
(Mycoth. Ross. no. 29)  
a. x5  
c. x10
7. *Ceratosphaeria castillensis* C. L. Smith  
(Smith Cent. Am. Fung. no. 13)  
a. x25
8. *Metasphaeria gaurina* E. & E.  
(E. & E. N. A. Fung. no. 3021)  
a. x20; perithecium x100
9. *Zignoella pulviuscula* (Curr.) Sacc.  
(Sacc. Myc. Ven. no. 87)  
a. x20
10. *Lasiosphaeria hirsuta* (Fr.) Ces. & DeN.  
(U. S. D. A., Langlois)  
a. x25
11. *Calospora platanoides* (Pers.) Niessl  
(Sacc. Myc. Ital. no. 650)  
a. x5  
c. x20

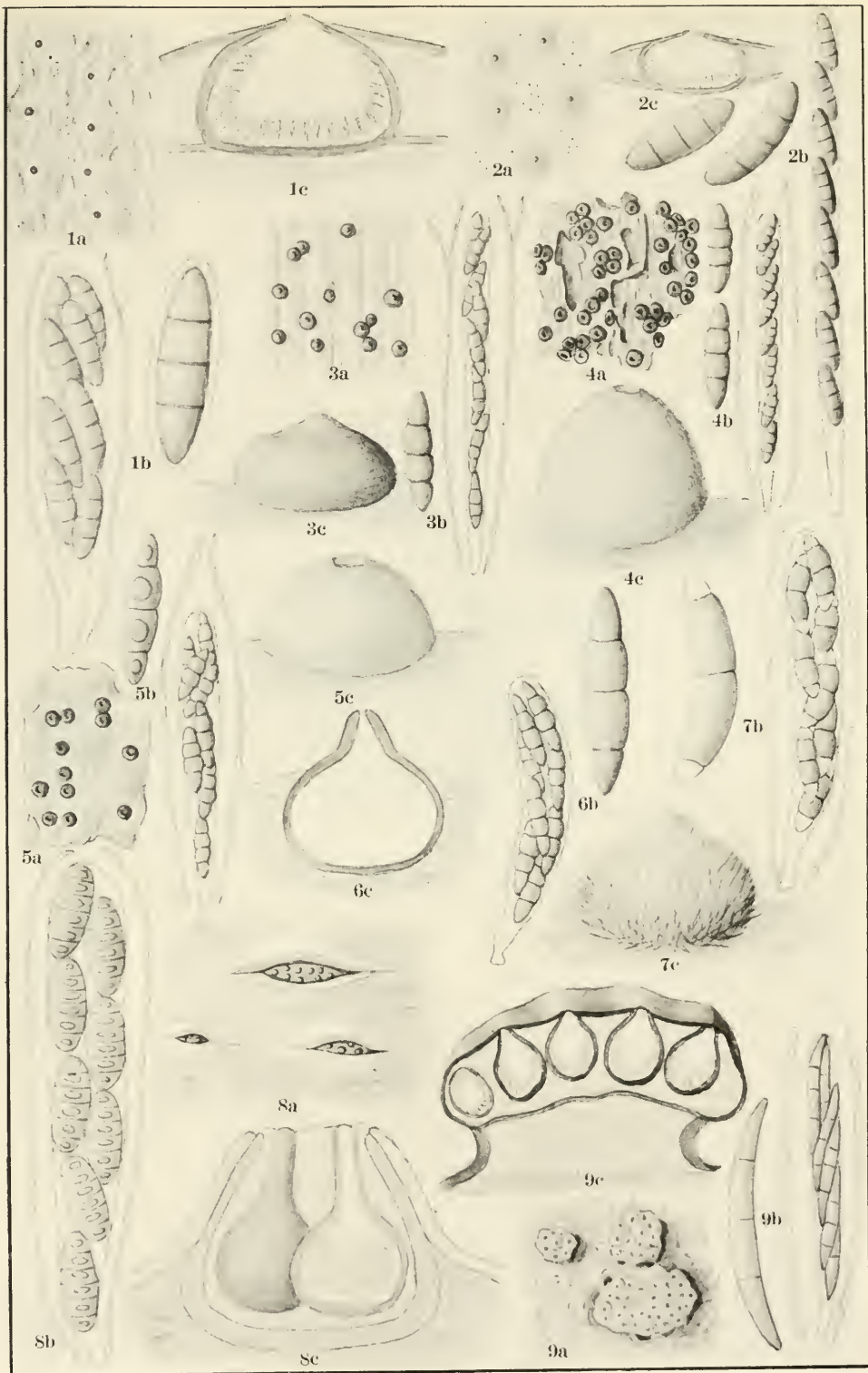


**PLATE 13**  
**SPHAERIACEAE**

(a. Habit x5; b. Ascus and paraphyses x500; separate spores x1000; c. Perithecium or section of same; except as otherwise indicated)

1. *Massaria inquinans* (Tode) Fr.  
(Krieg. Fung. Sax. no. 1071)  
b. Ascus x200; spore x500  
c. x20
2. *Clypeosphaeria notarisi* Fkl.  
(Id. no. 1615)  
c. x20
3. *Leptosphaeria doliolum* (Pers.) DeN.  
(Kze. Fung. Sel. Exs. no. 335)  
c. x50
4. *Melanomma pulvis-pyrius* (Pers.) Fkl.  
(Cav. Fung. Long. Exs. no. 175)  
c. x50
5. *Trematosphaeria pertusa* (Pers.) Fkl.  
(Fkl. Fung. Rhen. Exs. no. 537)
6. *Sporormia minima* Auersw.  
(Berl. Icon. 1: pl. 28, f. 5)  
c. x200
7. *Chaetosphaeria phaeostroma* Fkl.  
(Id. pl. 17, f. 5)  
c. x100
8. *Aglaospora profusa* (Fr.) DeN.  
(Krieg. Ib. no. 435)  
c. Section of stroma x30
9. *Melogramma vagans* DeN.  
(Petr. Myc. Carp. no. 246)  
c. Section of stroma x20

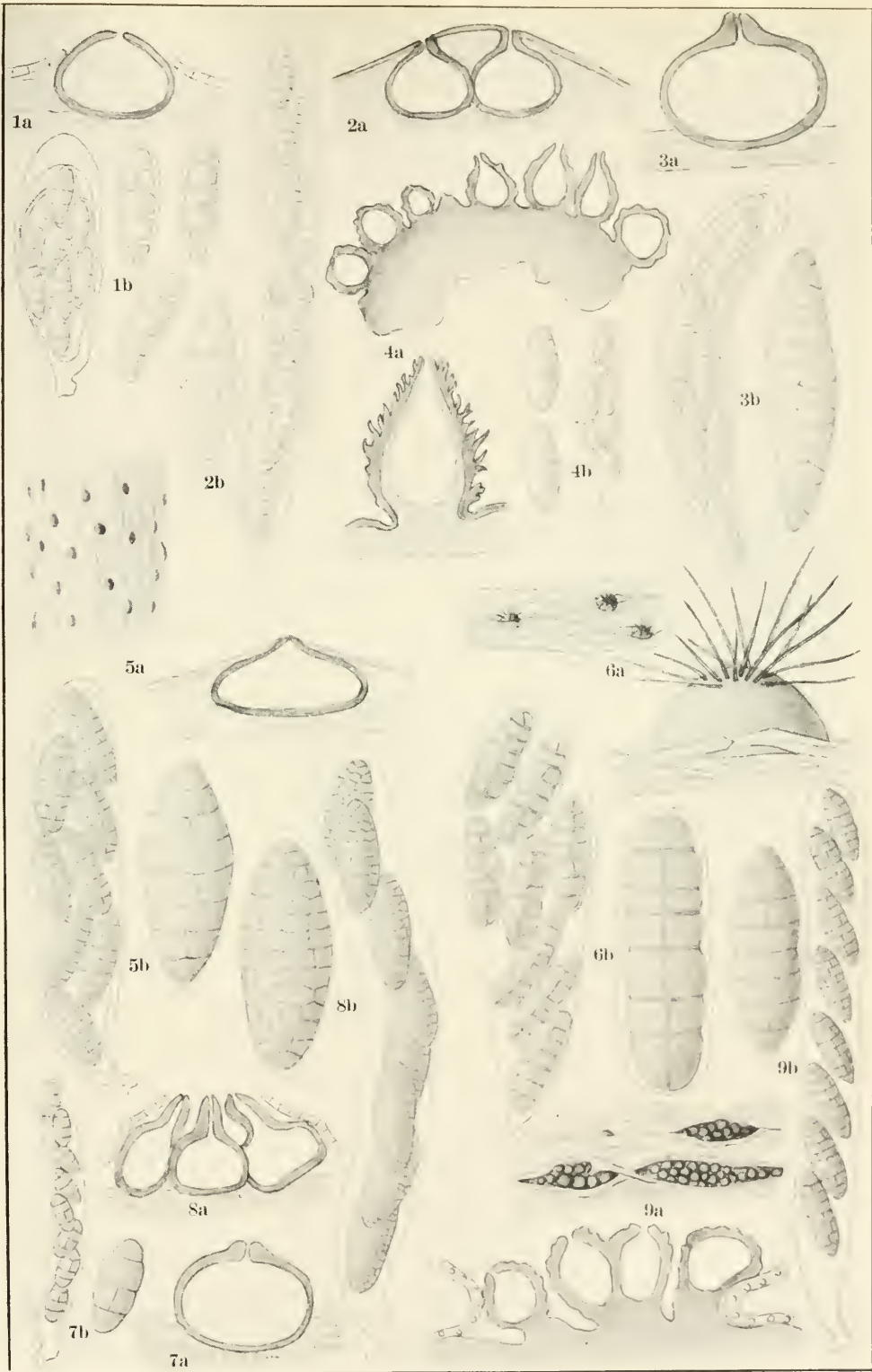




**PLATE 14**  
**SPHAERIACEAE**

(a. Section of perithecium; b. Ascus x500; separate spores x1000;  
except as otherwise indicated)

1. *Pringsheimia rosarum* Schulz.  
(Berl. Icon. 1: pl. 131, f. 1)  
a. x200
2. *Peltosphaeria vitriospora* (Cke. & Hark.) Berl.  
(Id. 2: pl. 141, f. 1)  
a. x50
3. *Tichosporella cervariensis* Sacc. & Berl.  
(Id. pl. 137, f. 3)  
a. x100
4. *Berlesiella hirtella* (Bacc. & Av.) Sacc.  
(Id. pl. 143, f. 1)  
a. Section of stroma; detail of perithecium
5. *Pleospora herbarum* (Pers.) Rabh.  
(Jaap Fung. Sel. Exs. no. 772)  
a. Habit x5; section of perithecium x100
6. *Pyrenophora phaeocomes* (Reb.) Fr.  
(Rehm Ascom. no. 1664)  
a. Habit x5; perithecium x50  
b. Ascus x200; separate spore x500
7. *Tichospora trubicola* Fkl.  
(Berl. Ib. 2: pl. 63, f. 2)  
a. x100
8. *Fenestella princeps* Tul.  
(Id. pl. 110)  
a. Section of stroma x25
9. *Cucurbitaria berberidis* (Pers.) Gray  
(U. S. D. A., Bresadola, Europe, 1922)  
a. Habit x4; section of stroma (Berl. Ib. pl. 133)

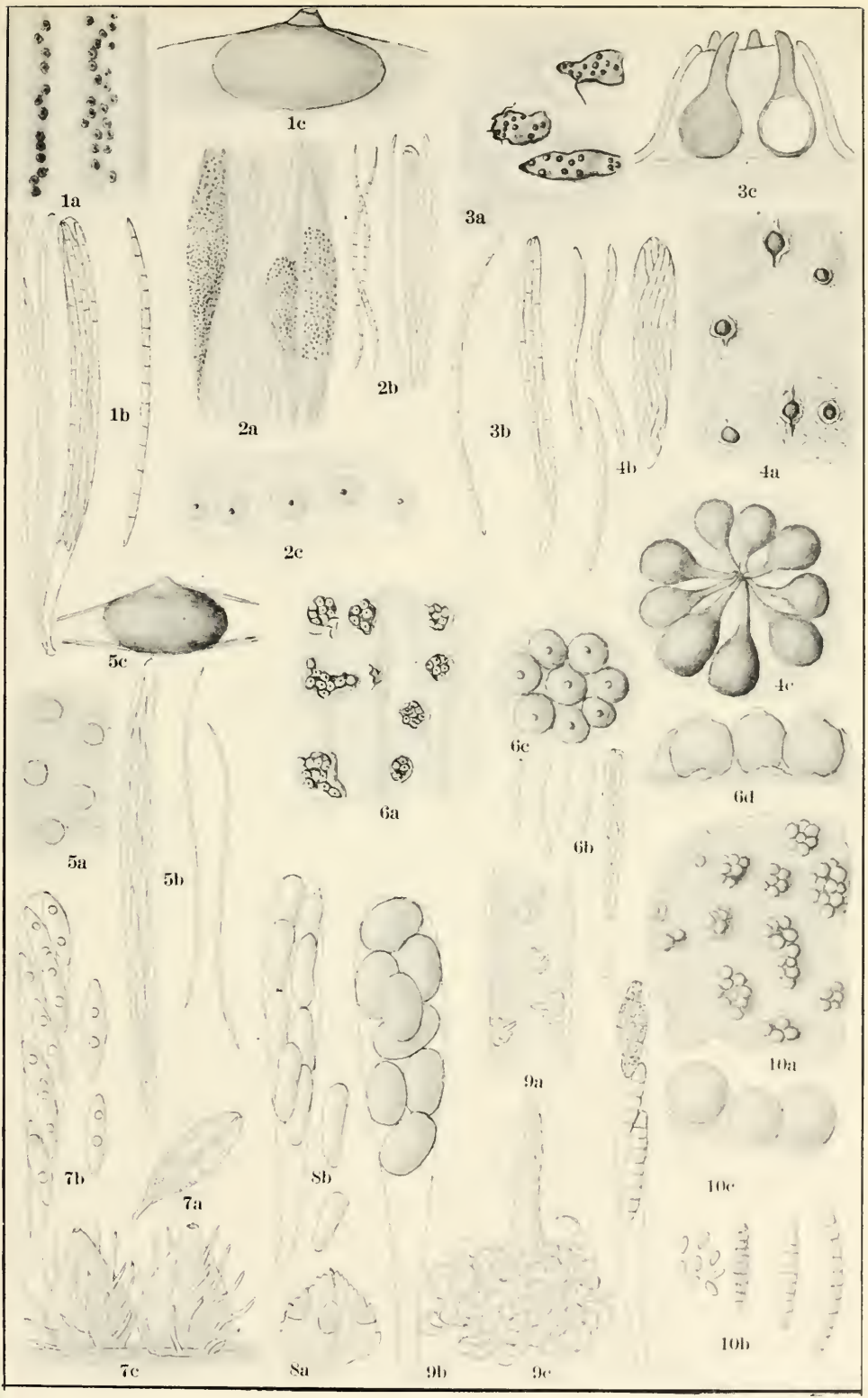


## PLATE 15

### SPHAERIACEAE—HYPOCREACEAE

(a. Habit x5; b. Ascus, paraphyses and spores x500; c. Perithecia; except as otherwise indicated)

1. *Ophiobolus acuminatus* (Sow.) Duby  
(Krieg. Fung. Sax. no. 1257)  
c. x50
2. *Dilophia graminis* (Fkl.) Sacc.  
(Jaap Fung. Sel. Exs. no. 515)  
b. Separate spores (Berl. Icon. 2: pl. 172, f. 3)  
c. x25
3. *Sillia ferruginea* (Pers.) Karst.  
(Krieg. Ib. no. 2224)  
b. Separate spore x750  
c. Section of stroma x20
4. *Cryptospora suffusa* (Fr.) Tul.  
(Krieg. Schäd. Pilz. Exs., 1908)  
c. x15
5. *Linospora capreae* (DC.) Fkl.  
(All. & Schn. Fung. Bav. no. 545)  
c. x25
6. *Allantonectria miltina* (Mont.) Weese  
(Fung. Colo. no. 3204)  
a. x10  
b. Ascus x1000; spores x2000  
c. x50  
d. Section of stroma x75
7. *Notarisiella rousseliana* (Mont.) Sacc.  
(Tranz. & Sereb. Myc. Ross. no. 170)  
a. x1  
b. x1000  
c. x100
8. *Polystigma rubrum* (Pers.) DC.  
(Eriks. Fung. Scand. no. 345)  
a. x1  
b. x1000
9. *Melanospora chionea* (Fr.) Cda.  
(Vesterg., Micr. Rar. Sel. no. 602)  
a. x10  
b. x1000  
c. x50
10. *Chilonectria cucurbitula* (Curr.) Sacc.  
(Shear N. Y. Fung. no. 362)  
b. Ascus, spores and sporidia x1000  
c. x25



# PLATE 16

## HYPOCREACEAE

(a. Habit x5; b. Ascus x500; separate spores x1000; c. Perithecium or section of stroma; except as otherwise indicated)

1. *Nectria cinnabarina* (Tode) Fr.  
(All. & Schn. Fung. Bav. no. 153)  
c. x100
2. *Sphaerostilbe gracilipes* Tul.  
(U. S. D. A., Langlois, 1886)  
c. x25
3. *Hypomyces lactifluorum* (Schw.) Tul.  
(Schrad. Rav. Fung. no. 54)  
a. x10  
c. x30
4. *Hypocrea rufa* (Pers.) Tul.  
(Krieg. Fung. Sax. no. 1015)  
c. x30
5. *Letendraea eurotioides* Sacc.  
(Lind. Nat. Pfl. p. 352, after Winter)  
a. x1
6. *Gibberella pulicaris* (Fr.) Sacc.  
(Petr. Fl. Bohem. no. 964)  
c. x50
7. *Broomella vitalbae* (B. & Br.) Sacc.  
(Linn. Soc. Jour. Bot. 14: pl. 9)  
a. x1
8. *Pleonectria berolinensis* Sacc.  
(U. S. D. A., Bres., Italy)  
c. x50
9. *Ophionectria trichospora* (B. & Br.) Sacc.  
(Linn. Soc. Jour. Bot. pl. 6)
10. *Claviceps purpurea* (Fr.) Tul.  
(Krieg. Ib. no. 2059)  
c. x50
11. *Cordyceps militaris* (Linn.) Lk.  
(U. S. D. A., Shear, Va., 1926)  
a. x2  
b. Ascus x200; separate spore x250  
c. x50
12. *Epichloe typhina* (Pers.) Tul.  
(Krieg. Schäd. Pilz. no. 178)  
a. x2  
b. x200  
c. x50

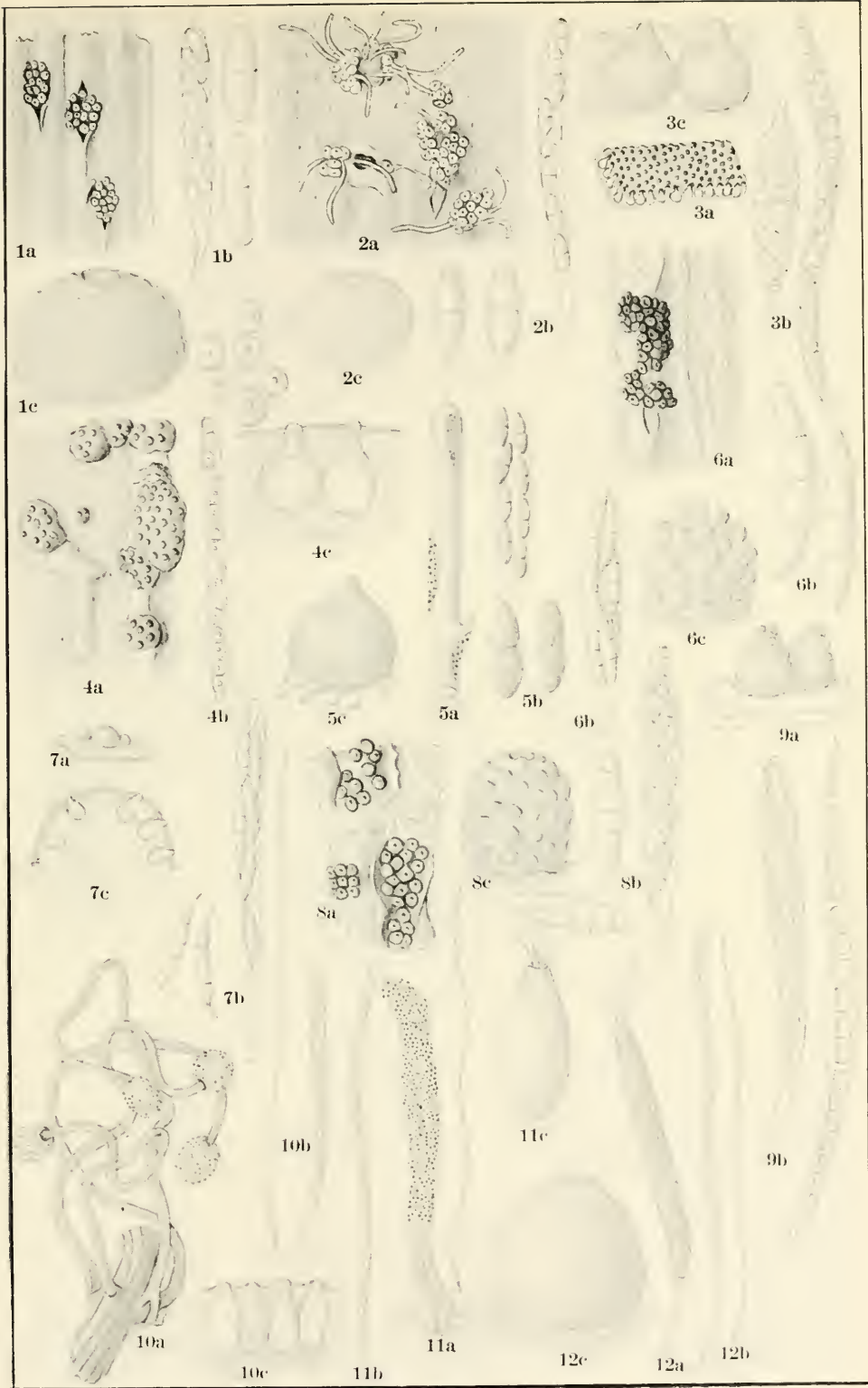


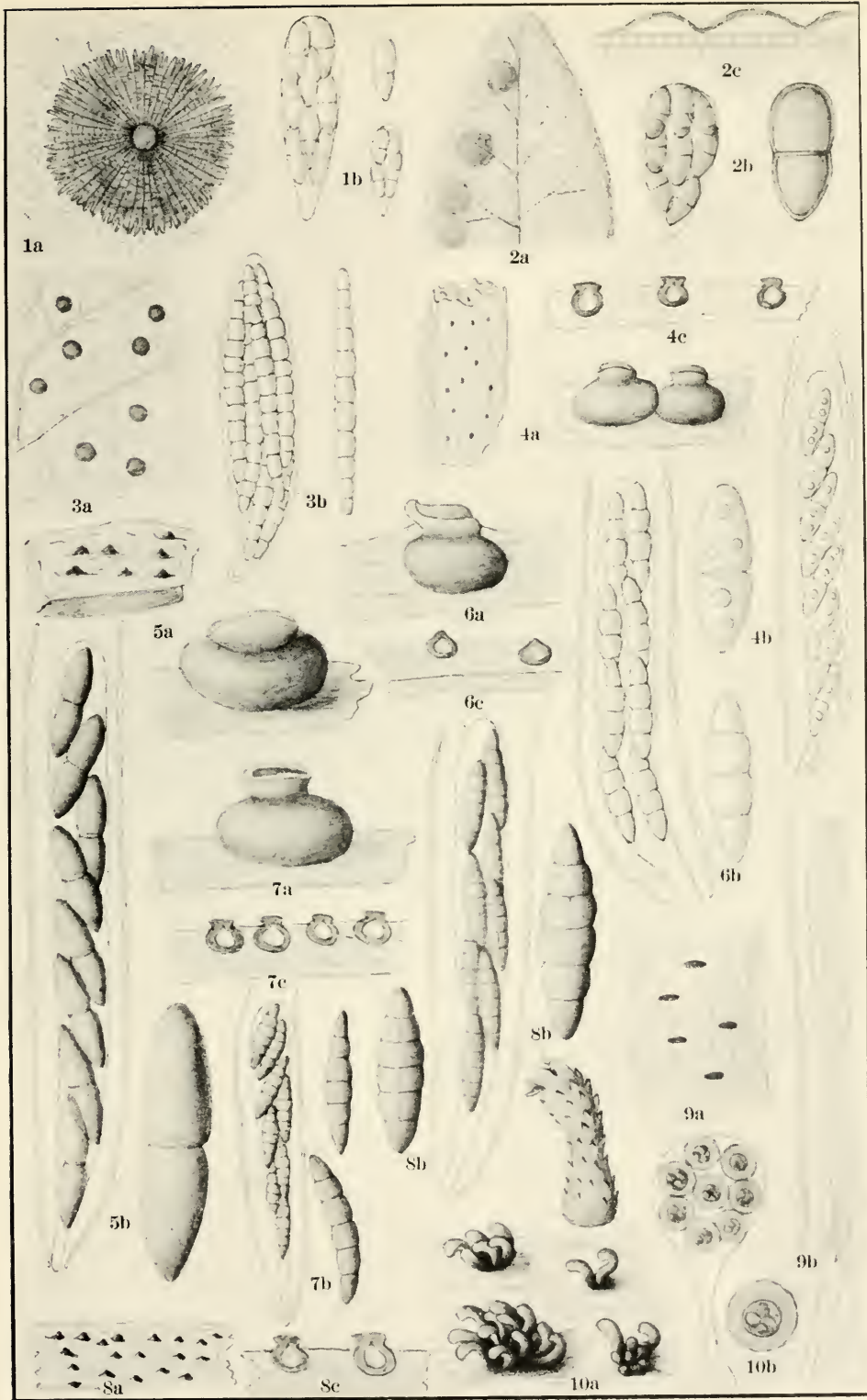
PLATE 16

**PLATE 17**  
**MICROTHYRIACEAE—LOPHIOSTOMACEAE—**  
**CORYNELIACEAE**

(a. Habit or perithecium; b. Ascus and paraphyses x500; separate spores x1000; c. Section of perithecia; except as otherwise indicated; illustrations copied are adapted to the same scale)

1. *Microthyrium microscopicum* Desm.  
(Sacc. Myc. Ven. no. 1481)  
a. x100  
b. 8-spored ascus x1000
2. *Seynesia orbiculata* Syd.  
(U. S. D. A., no. 11384)  
a. x1  
c. x100
3. *Micropeltis applanata* Mont.  
(Ib., San Salvador, 1925)  
a. x5
4. *Lophiosphaera schizostoma* (Mont.) Trev.  
(Sacc. Fung. Ital. f. 358)  
a. x1; perithecia (Lind. Nat. Pfl. p. 418, after Berlese)
5. *Schizostoma montelicum* Sacc.  
(Lind. Ib.)  
a. Habit x1 (Sacc. Ib. f. 146)
6. *Lophiotrema nucula* (Fr.) Sacc.  
(Sacc. Ib. f. 249)  
a. (Lind. Ib.)
7. *Lophiostoma caulium* (Fr.) Ces. & DeN.  
(E. & E. Fung. Colum. no. 1538)  
a. x100  
c. x25
8. *Platystomum compressum* (Pers.) Trev.  
(Sacc. Ib. f. 233)
9. *Lophionema bambusae* Hoehn.  
(Port. Ric. Fung. no. 72597)  
a. x5
10. *Corynelia clavata* (L.) Sacc.  
(U. S. D. A., Fitzp. no. 1575)  
a. x5; perithecium x20





**PLATE 18**  
**VERRUCARIACEAE**

(a. Habit; b. Section of perithecium; c. Spores; except as otherwise indicated)

1. *Epigloea bactrospora* Zuk.  
(Zahlbr. Nat. Pfl. p. 64, after Zukal)
2. *Aspidothelium cinerascens* Wain.  
(Id. p. 70)  
a. Perithecium from above and the side
3. *Pyrenidium actinellum* Nyl.  
(Id. p. 91, after Crombie)  
a. Lobes of thallus
4. *Pyrenula nitida* (Weig.) Ach.  
(Lind. Flecht. 19:30)  
a. x5 (Merrill Lich. Exs. no. 12)
5. *Strigula elegans* (Fee) Muell. Arg.  
(Zahlbr. Ib. p. 89)
6. *Campylothelium puiggari* Muell. Arg.  
(Id. p. 85)
7. *Dermatocarpum minutum* (L.) Mann  
(Fink Lich. Minn. p. 243, after Reinke)  
a. x1  
b. x75
8. *Endocarpum pusillum* Hedw.  
(Lind. Ib. 19:19)
9. *Trypethelium eluteriae* Spreng.  
(Zahlbr. Ib. p. 83)  
b. Section of stroma
10. *Pyrenocollema tremelloides* Reinke  
(Id. p. 165, after Reinke)  
a. x1  
b. x130
11. *Verrucaria muralis* Ach.  
(Fink Lich. Minn. no. 125)  
a. x1
12. *Verrucaria dolomitica* (Mass.) Koerb.  
(Zahlbr. Ib. p. 66)  
c. x1000
13. *Verrucaria rupestris* Schrad.  
(Id.)

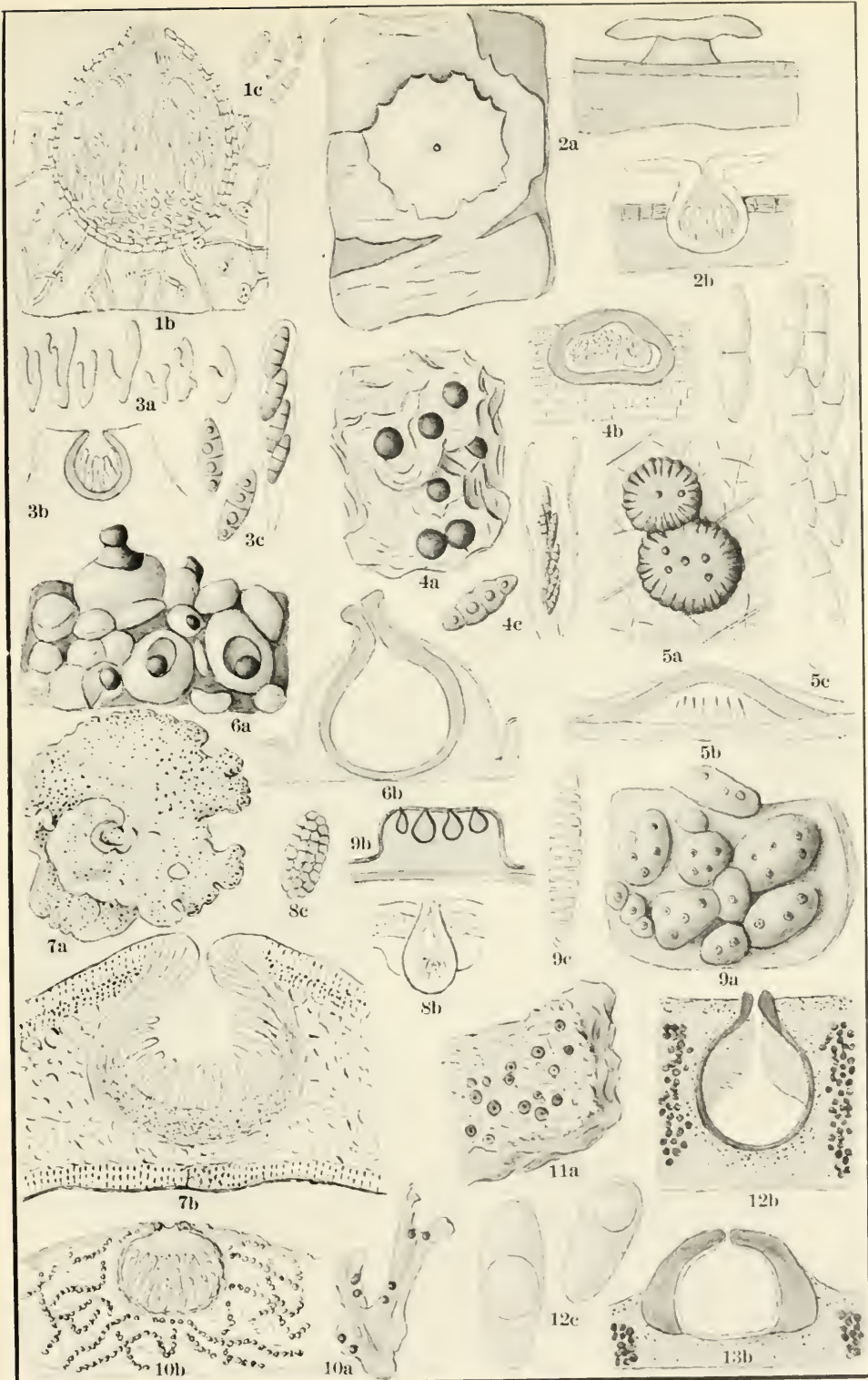
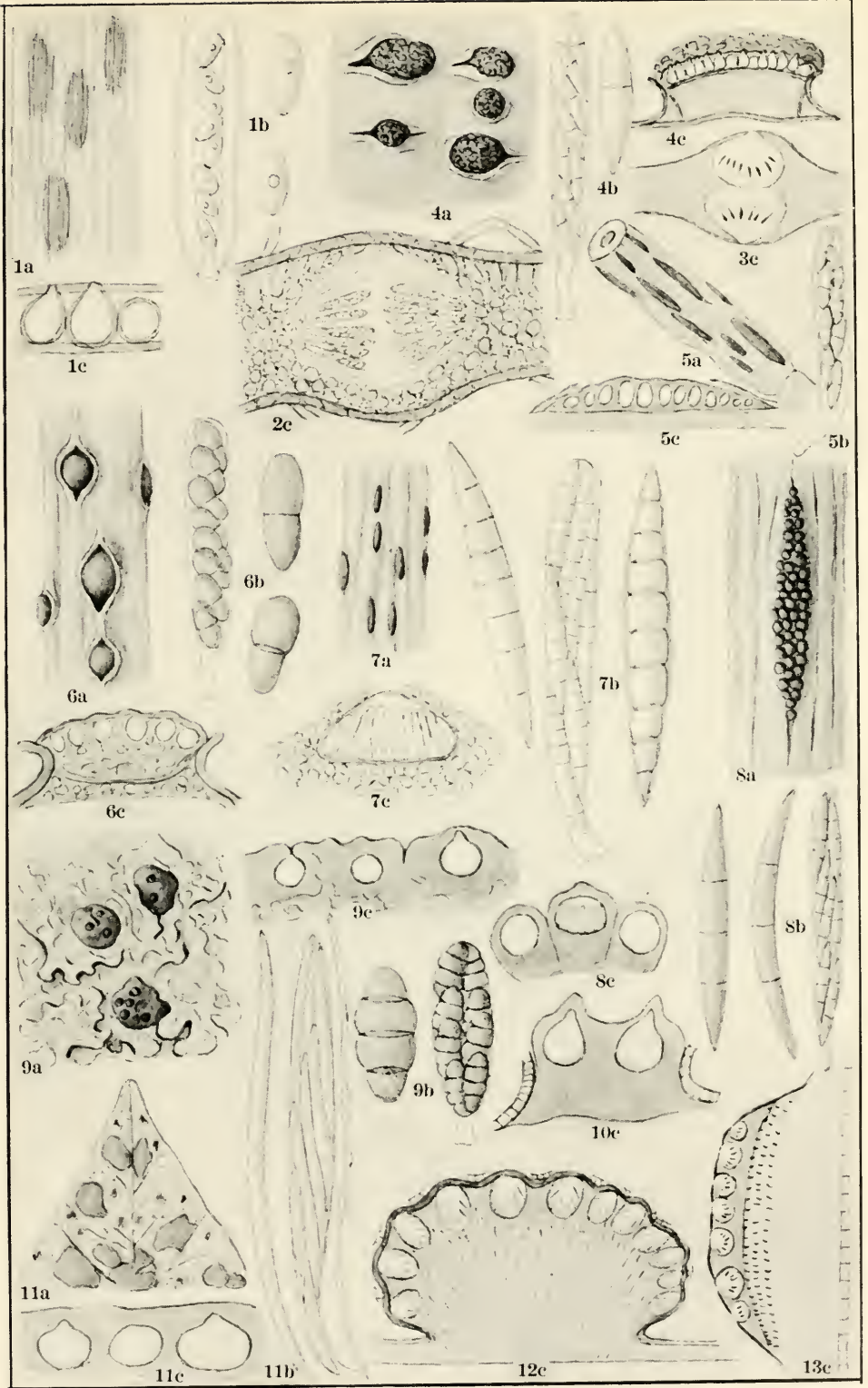


PLATE 19  
DOTHIDEACEAE

(a. Habit x5; b. Ascus x500; separate spores x1000; c. Section of stroma or perithecium; except as otherwise indicated)

1. *Phyllachora graminis* (Pers.) Fkl.  
(Krieg. Fung. Sax. no. 242)  
a. x20
2. *Phyllachora lathyri* (Lev.) T. & S.  
(Lind. Nat. Pfl. p. 377 (Diachora), after Mueller)
3. *Phyllachora inclusa* (B. & C.) Sacc.  
(T. & S. Dothideales pl. 3, f. 14)
4. *Plowrightia ribesia* (Pers.) Sacc.  
(Krieg. Ib. no. 583)  
a. x20
5. *Scirrhia rimosa* (A. & S.) Zuck.  
(Lind. Ib. p. 380)  
a. x1
6. *Dothidea sambuci* (Pers.) Fr.  
(Kunze Fung. Sel. Exs. no. 158)
7. *Dangeardiella macrospora* (Schroet.) Sacc. & Syd.  
(Petr. Myc. Carp. Exs. no. 217)  
c. x50
8. *Rosenscheldia heliopsidis* (Schw.) T. & S.  
(Rehm Ascom. no. 2028)  
a. x4  
c. x35
9. *Homostegia piggoti* (B. & Br.) Karst.  
(U. S. D. A., FucKel, no. 755)  
c. x25
10. *Bagnisiopsis praestans* (Lev.) T. & S.  
(T. & S. Ib. pl 2, f. 6)
11. *Scolecodothis fici* (Bessey)  
(U. S. D. A., Bessey, Florida, 1907)  
a. x1  
c. x25
12. *Diplochorella pseudohypoxyla* (Rehm) T. & S.  
(T. & S. Ib. pl. 2, f. 14)
13. *Crotone emmoti* (P. Henn.) T. & S.  
(Id. f. 13)



## PLATE 20

### DOTHIDEACEAE—MYRIANGIACEAE

(a. Stroma or ascoma; b. Ascus or spores; c. Habit; except as otherwise indicated)

1. *Stalagmites tumefaciens* (Syd.) T. & S.  
(T. & S. Ann. Myc. 13: pl. 4, f. 15)
2. *Euryachora thoracella* (Rostr.) Schroet.  
(Id. pl. 3, f. 7)
3. *Microcyclus angolensis* Sacc. & Syd.  
(Id. pl. 5, f. 4, after Theissen)
4. *Catabotrys palmarum* (Pat.) T. & S.  
(Id. pl. 2, f. 5)
5. *Placostroma litseae* (Rac.)  
(Id. pl. 4, f. 10)
6. *Rhopographus filicinus* (Fr.) Nke.  
(Id. pl. 3, f. 9)
7. *Coccostroma puttemansi* (P. Henn.) T. & S.  
(Id. pl. 2, f. 12)
8. *Phaeochora washingtoniae* (Shear) T. & S.  
(Id. pl. 4, f. 6)
9. *Myriangium duriaei* Mont.  
(Fischer Nat. Pfl. p. 320, after Millardet)  
a. x30  
b. x250  
c. x5
10. *Plectodiscella piri* Woron.  
(T. & S. 15: p. 434, after Woronichin)
11. *Kusanoa japonica* P. Henn.  
(Id. p. 440, after Hoehnel)
12. *Myxomyriangis ricki* (Rehm) Theiss.  
(Id. p. 434, after Theissen)
13. *Yoshinagaia quercus* P. Henn.  
(Id. p. 445)  
a. Section of ascoma and detail
14. *Dothiora sorbi* (Wahl.) Fkl.  
(Id., after Theissen)
15. *Myriangina mirabilis* (Henn.) Hoehn.  
(Id. p. 436, after Theissen)
16. *Bagnisiella mirabilis* (Starb.) Theiss.  
(Id. p. 445, after Starbaeck)
17. *Wettsteinina gigaspora* Hoehn.  
(Id. p. 447, after Hoehn.)
18. *Dictyonella erysiphoides* (Rehm) Hoehn.  
(Id. p. 441, after Hoehnel)

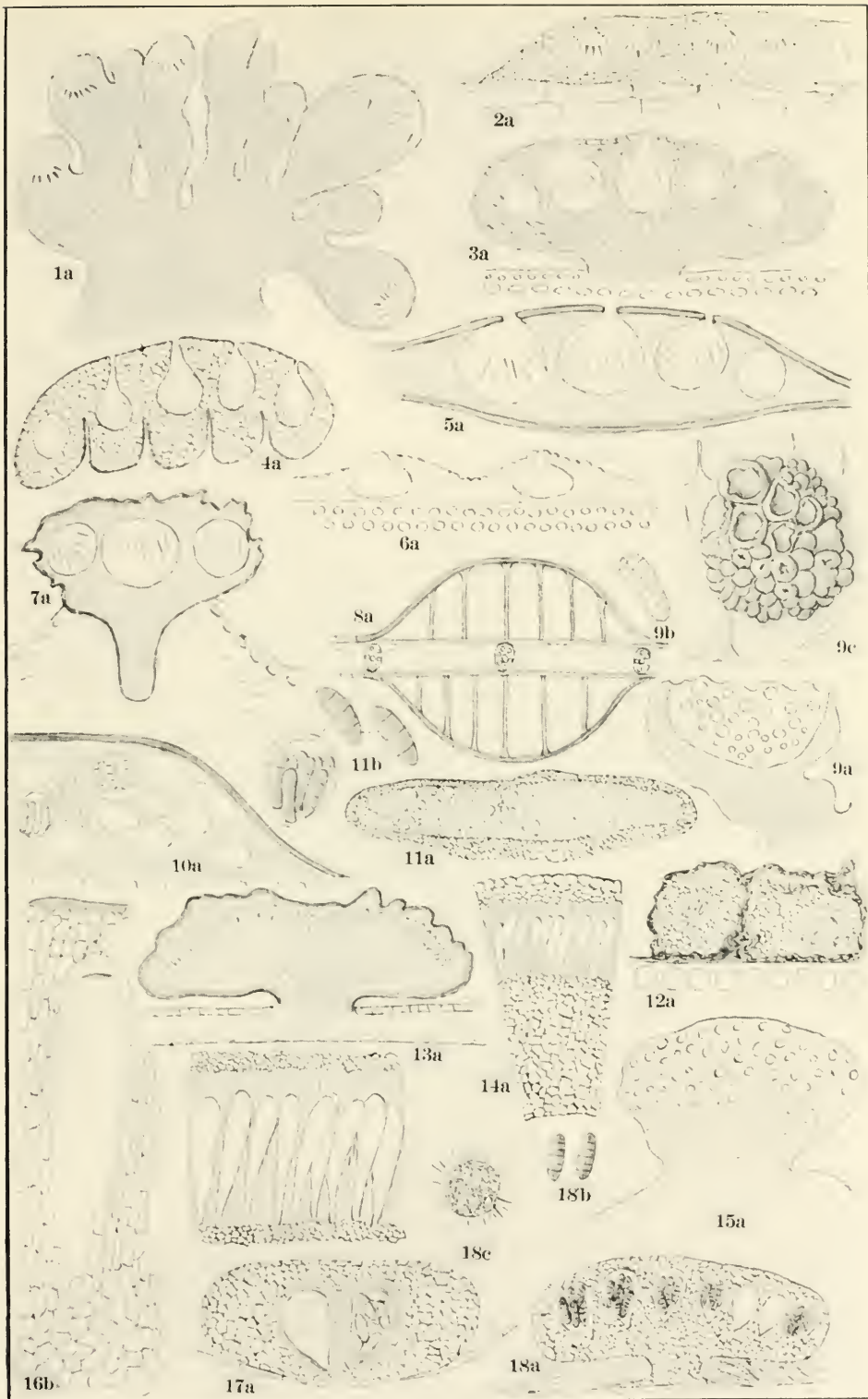


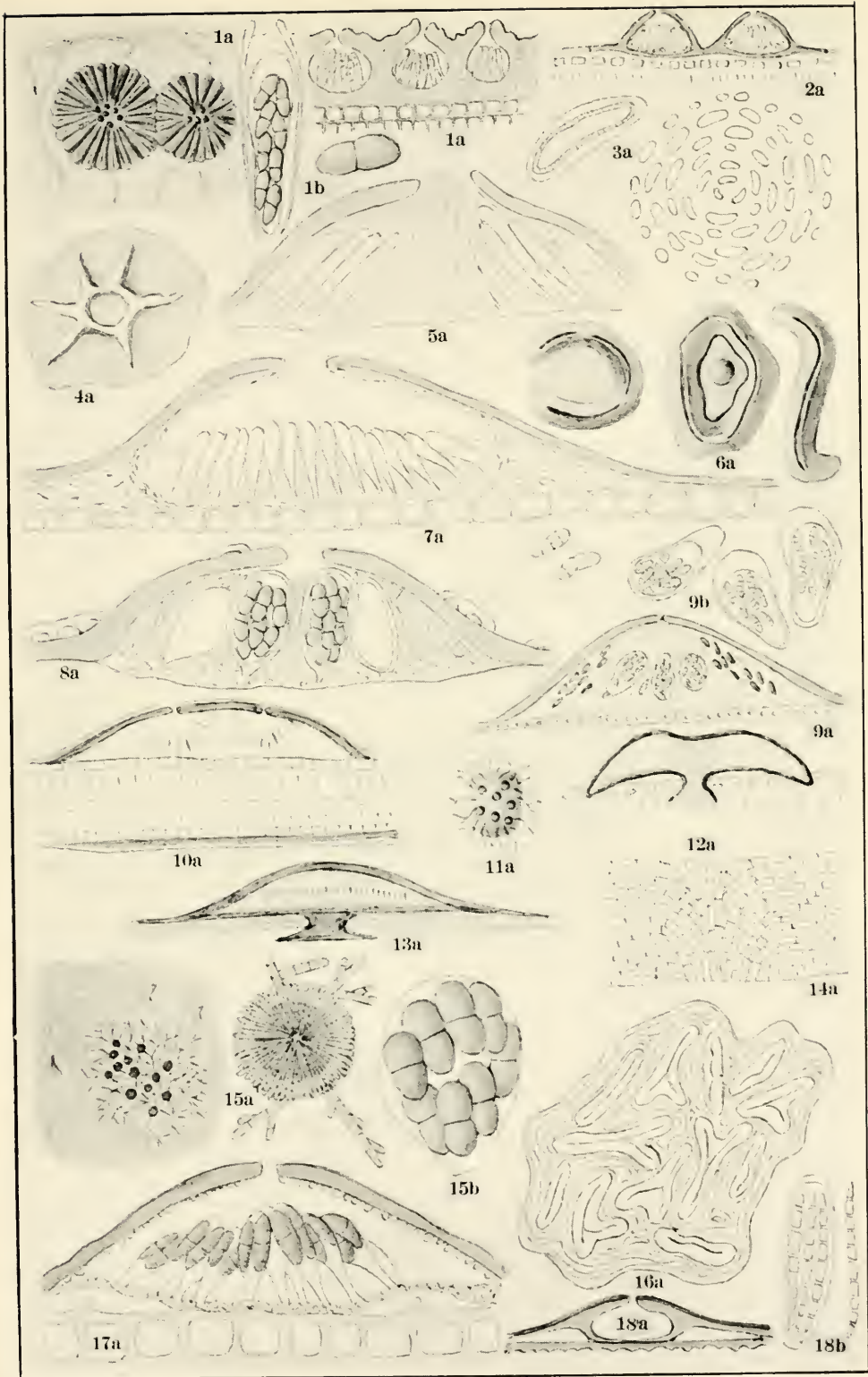
PLATE 21

POLYSTOMELLACEAE—MICROTHYRIACEAE—  
MICROPELTACEAE

(a. Ascoma or section of same; b. Ascus and spores; except as otherwise indicated)

1. *Schneeepia guaranitica* Speg.  
(Rehm Ascom. no. 1687)
  - a. Habit x5; section of ascomata x20
  - b. Ascus x500; spore x1000
2. *Stigmathea robertiani* Fr.  
(T. & S. Ann. Myc. 15: p. 400)
3. *Cocconia concentrica* Syd.  
(Ib. 13: pl. 1, f. 5)
  - a. Single ascoma and diagrammatic arrangement
4. *Inocyclus myrtacearum* (Rehm) T. & S.  
(Id. pl. 1, f. 7)
5. *Cyclotheca miconiae* (Syd.) Theiss.  
(Id. pl. 6, f. 7)
6. *Blasdalea disciformis* (Rehm) Sacc. & Syd.  
(Id. pl. 5, f. 9)
7. *Melanochlamys leucoptera* Syd.  
(Id. pl. 6, f. 9a)
8. *Aulacostroma palawanense* Syd.  
(Id. f. 13)
9. *Vizella conferta* (Cke.) Sacc.  
(Id. f. 5)
10. *Coscinopeltis argentinensis* Speg.  
(Id. pl. 1, f. 9)
11. *Symphaster gesneraceae* Henn.  
(Id. pl. 6, f. 8)
  - a. Habit
12. *Dielsiella pritzeli* Henn.  
(Id. pl. 1, f. 3)
13. *Dothidasteris sepulta* (B. & C.) Hoehn.  
(Id. pl. 2, f. 1)
14. *Trichopeltis pulchella* Speg.  
(Ib. 15: p. 426)
  - a. Portion of thallus
15. *Asterina melastomatis* Lev.  
(Rehm Ascom. no. 1749)
  - a. Habit x5; ascoma x50
  - b. x500
16. *Pycnocarpum magnificum* (Syd. & Butl.) Theiss.  
(T. & S. Ib. 15: p. 426)
  - a. Thallus with pycnidia
17. *Amazonia psychotriae* (Henn.) Theiss.  
(Id. p. 420, after Theissen)
18. *Scolecopeltis aeruginea* (Zimm.) Hoehn.  
(Id. p. 428, after Hoehnel)



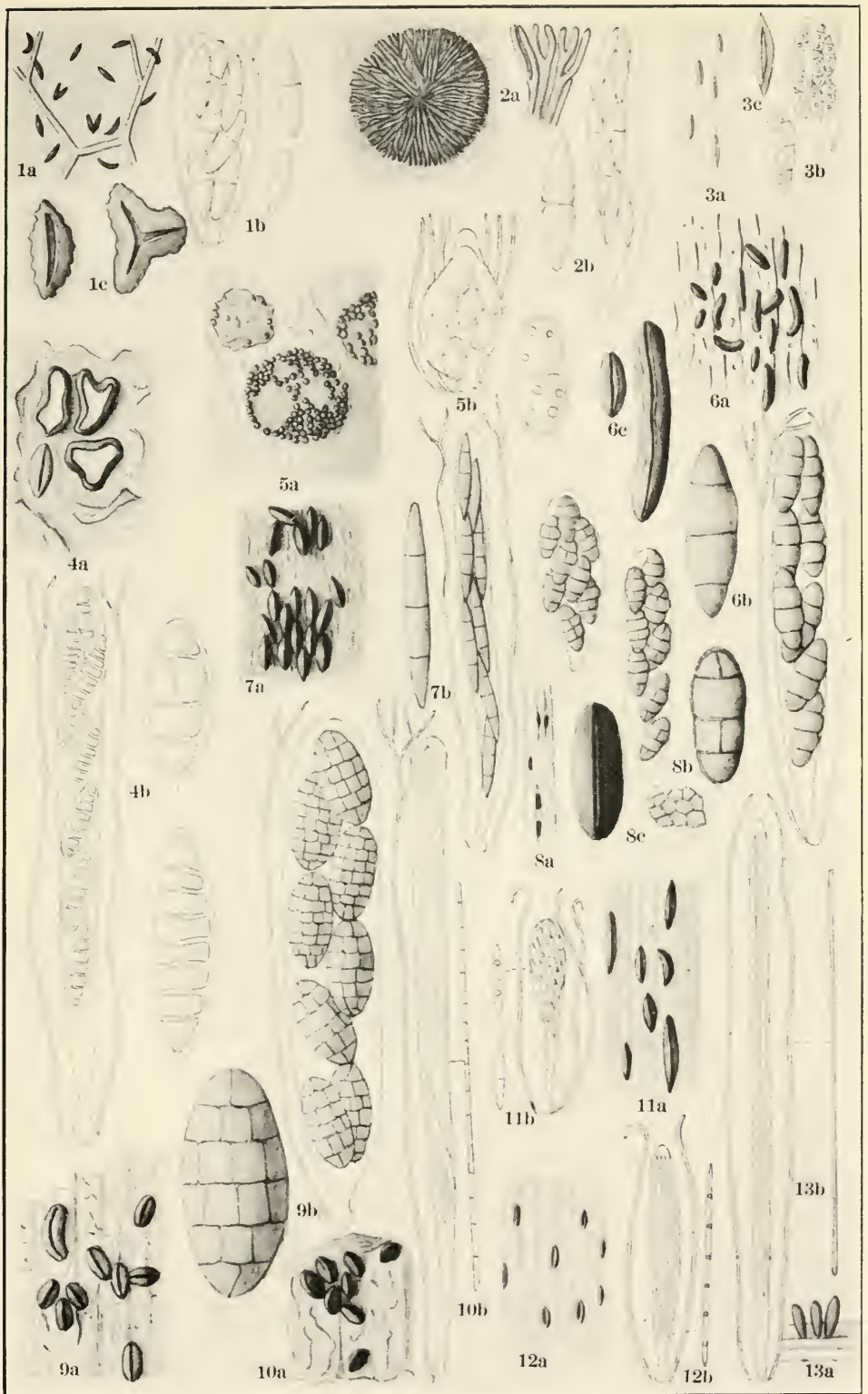


## PLATE 22

### HYSTERIACEAE—PHACIDIACEAE

(a. Habit x5; b. Ascus and paraphyses x500; separate spores x1000;  
c. Perithecium; except as otherwise indicated)

1. *Aulographum vagum* Desm.  
(Petr. Fl. Bohem. no. 1207)  
b. x1000  
c. x50
2. *Glonium stellatum* Muhl.  
(Ellis N. A. Fung. no. 462)  
a. x2; detail x5
3. *Gloniella typhae* Fkl.  
(Herb. Barb. Bois. no. 971)  
c. x10
4. *Pseudographis pinicola* (Nyl.) Rehm  
(U. S. D. A., Bres., 1897)
5. *Dichaena quercina* (Pers.) Fr.  
(Ellis Ib. no. 793)  
b. (Rehm Discom. p. 49)
6. *Hysterium pulicare* Pers.  
(U. S. D. A., Clinton, N. Y.)  
c. x10
7. *Mytilidium rhenanum* Fkl.  
(Fkl. Fung. Rhen. no. 761)
8. *Graphyllum chloes* Clem.  
(U. S. D. A., no 1668)  
c. x50; detail of wall x500
9. *Hysterographium fraxini* (Pers.) DeN.  
(Wilson & Seaver Ascom. no. 36)
10. *Lophium mytilinum* (Pers.) Fr.  
(Krieg. Fung. Sax. no. 1832)
11. *Hypoderma virgultorum* DC.  
(E. & E. N. A. Fung. no. 2378)
12. *Lophodermium arundinaceum* (Schrad.) Chev.  
(Alask. Fung. no. 287)
13. *Acrospermum compressum* Tode  
(Ellis Ib. no. 1318)

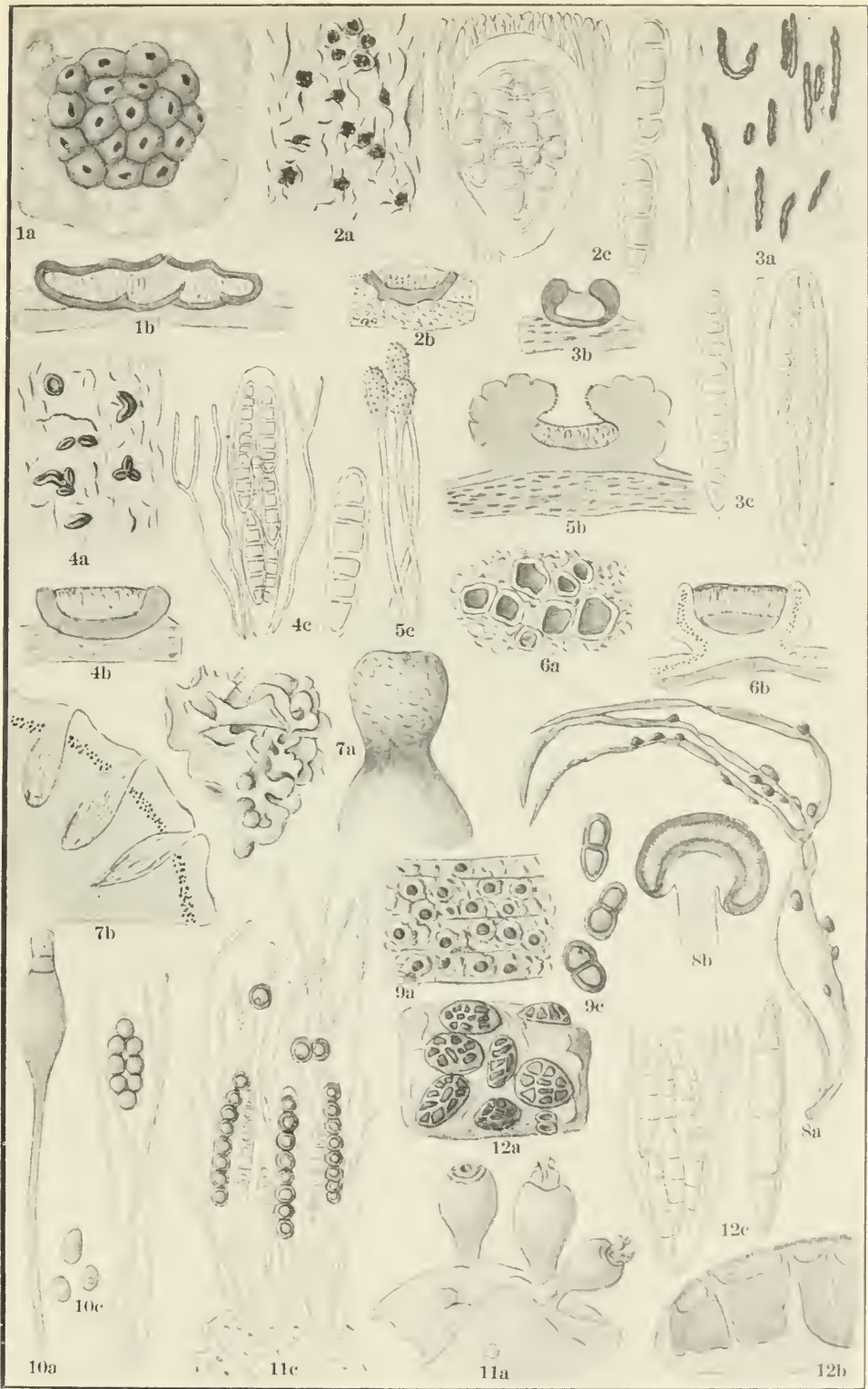


## PLATE 23

### MYCOPORACEAE—GRAPHIDACEAE—CALICIACEAE

(a. Habit; b. Section of apothecium or stroma; c. Ascus and paraphyses; separate spores x1000; except as otherwise indicated)

1. *Mycoporum elabens* Fw.  
(Zahlbr. Nat. Pfl. p. 93)
2. *Arthonia radiata* (Pers.) Th. Fr.  
a. x5 (Dec. N. A. Lich. no. 178)  
b. (Lind. Flecht 41:43)  
c. (Zahlbr. Ib. p. 105)
3. *Graphis scripta* (L.) Ach.  
(Zahlbr. Ib. p. 111)  
a. x5 (Dec. N. A. Lich. no. 40)  
b. x50
4. *Opegrapha varia* Pers.  
(Zahlbr. Id.)  
a. x5 (Dec. N. A. Lich. no. 173)  
b. x50
5. *Acanthothesis pachygraphoides* Wain.  
(Zahlbr. Ib. p. 117)
6. *Dirina ceratonia* (Ach.) DeN.  
(Id. p. 123, after Reinke)
7. *Roccellographa cretacea* Stur.  
(Id. p. 125)  
a. Habit x1; lobe of thallus enlarged  
b. x50
8. *Roccella fuciformis* DC.  
(Id. p. 124, after Reinke & Tulasne)
9. *Cyphelium tigillare* (Pers.) Th. Fr.  
(Merrill Lich. Exs. no. 123)  
a. x5  
c. x500
10. *Caliciopsis stenocyboides* (Nyl.) Rehm  
(Rehm Ascom. p. 383)
11. *Sphinctrina turbinata* (Pers.) Fr.  
(Id. p. 384, after Tulasne)
12. *Chiodectum myrticola* Fee  
(Id. p. 121)

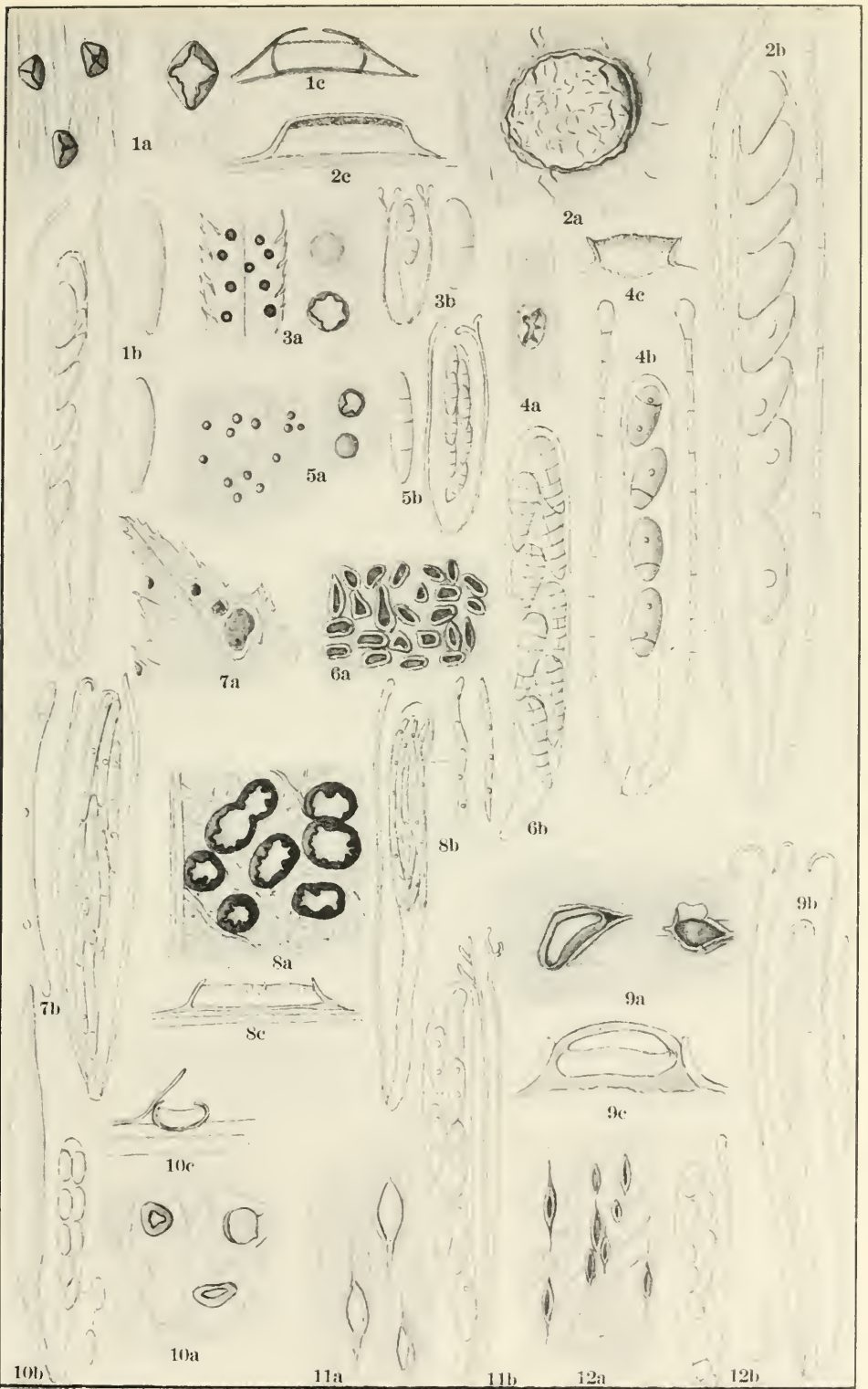


## PLATE 24

### PHACIDIACEAE—STICTIDACEAE

(a. Habit; b. Ascus and paraphyses x500; separate spores x1000;  
c. Section of apothecium x20; except as otherwise indicated)

1. *Phacidium vaccini* Fr.  
(Grant Fl. West Wash., 1923)  
a. x5; detail x10
2. *Cryptomyces maximus* (Fr.) Rehm  
(Jaap Fung. Sel. Exs. no. 766)  
a. and c. x5
3. *Schizothyrium ptarmicae* Desm.  
(Krieg. Fung. Sax. no. 384)  
a. x5; detail x20
4. *Keithia tetraspora* (Phill.) Sacc.  
(Jaap Ib. no. 706)  
a. x5
5. *Sphaeropezia vaccini* (Rehm) Sacc.  
(Krieg. Ib. no. 1786)  
a. x5; detail x20
6. *Dothiora sphaeroides* (Pers.) Fr.  
(Id. no. 969)
7. *Rhytisma acerinum* (Pers.) Fr.  
(U. S. D. A., Arkansas)  
a. x1
8. *Coccomyces coronatus* (Schum.) Rehm  
(Migula Krypt. Germ. no. 55)
9. *Clithris quercina* (Pers.) Fr.  
(Martin Fung. Iowa no. 727)  
c. x10
10. *Stegia lauri* (Cald.) Sacc.  
(Sacc. Myc. Ven. no. 111)  
a. x10
11. *Propolis faginea* (Schrad.) Karst.  
(All. & Schn. Fung. Bav. no. 349)
12. *Xylographa parallela* (Ach.) Fr.  
(Sacc. Myc. Ital. no. 679)  
a. x10



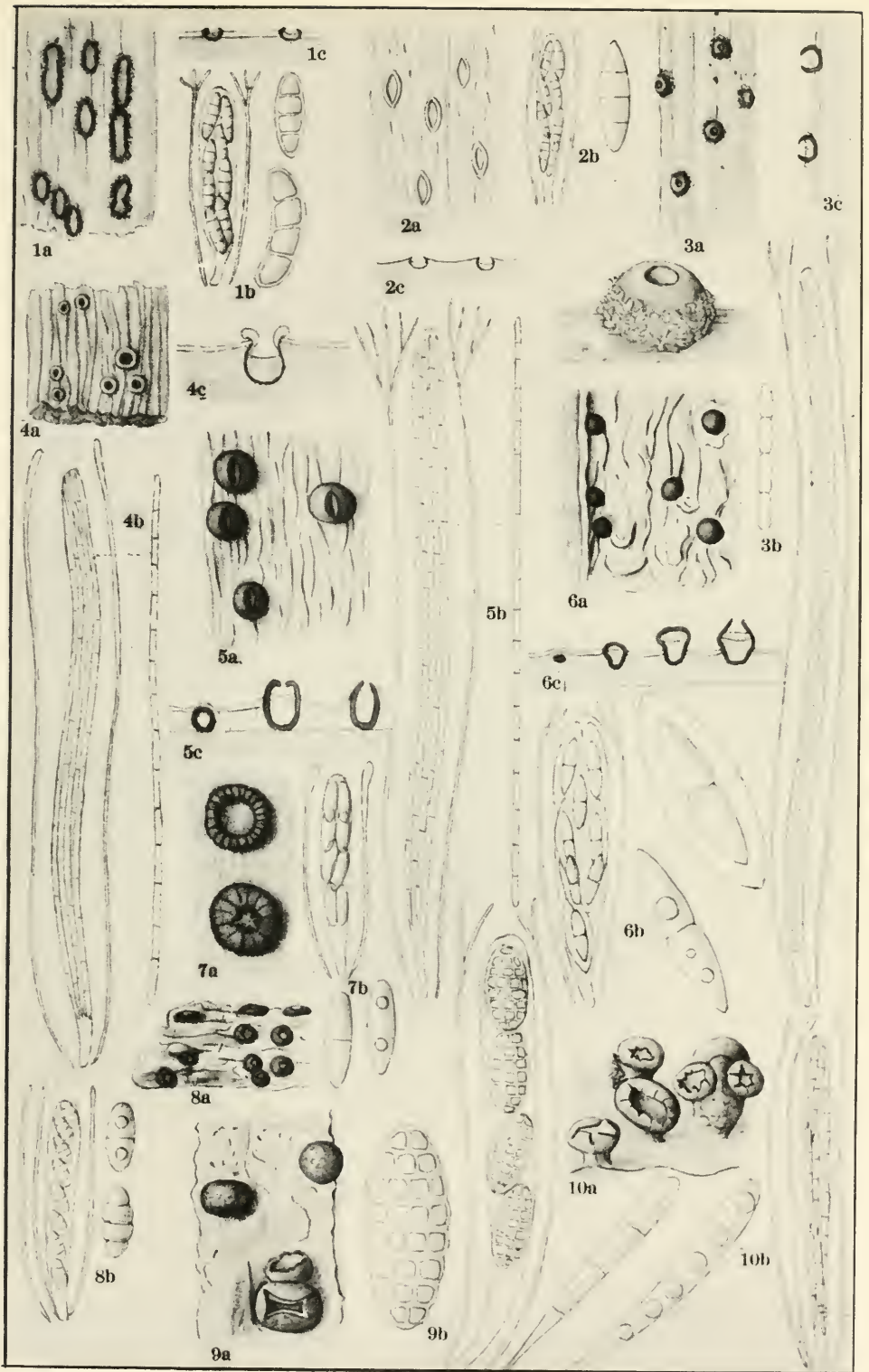
## PLATE 25

### STICTIDACEAE—TRYBLIDIACEAE

(a. Habit x5; b. Ascus and paraphyses x500; separate spores x1000;  
c. Section of apothecia; except as otherwise indicated)

1. *Xylogramma sticticum* (Fr.) Wallr.  
(Rehm Ascom. p. 124)  
a. x10
2. *Cryptodiscus pallidus* (Pers.) Cda.  
(Speg. Myc. Ital. no. 102)  
a. x5
3. *Schizoxylum berkleyanum* (Dur. & Lev.) Fkl.  
(Petr. Fl. Bohem. no. 281)  
a. x5; detail x25  
b. Spore fragments x1000  
c. (Rehm Ib. p. 126)
4. *Stictis radiata* (L.) Pers.  
(U. S. D. A., Clinton, N. Y.)  
c. (Rehm Ib.)
5. *Ostropa cinerea* (Pers.) Fr.  
(U. S. D. A., Schnabl. Munich, 1895)  
c. (Rehm Ib. p. 186)
6. *Trybliopsis pinastri* (Pers.) Karst.  
(Rehm Ib. p. 192)  
a. (Clem. Crypt. Form. Colo. no. 73)
7. *Heterosphaeria patella* (Tode) Grev.  
(Syd. Myc. Germ. no. 1103)  
a. Apothecia x10; wet and dry conditions
8. *Odontotrema hemisphaericum* (Fr.) Rehm  
a. (Fkl. Barb. Bois. Herb. no. 1099)  
b. (Rehm Ib. p. 200)
9. *Tryblidium calyciforme* Reb.  
(Petr. Ib. no. 34)
10. *Scleroderris ribesia* (Pers.) Karst.  
(Migula Crypt. Germ. no. 216)





## PLATE 26

### DERMATEACEAE—BULGARIACEAE

(a. Habit x5; b. Ascus and paraphyses x500; separate spores x1000;  
c. Section of apothecia, except as otherwise indicated)

1. *Dermatea cerasi* (Pers.) DeN.  
(U. S. D. A., Barthol., 1912)  
a. x3  
c. (Rehm Ascom. p. 242)
2. *Cenangium populneum* (Pers.) Rehm  
(Rehm Ib. p. 215)
3. *Tympanis pinastris* Tul.  
(Id. p. 245)  
a. Ascus filled with spermatoids
4. *Crumenula pinicola* (Reb.) Karst.  
(Rehm Ib. p. 217)  
a. (Jaap Fung. Sel. Exs. no. 184)
5. *Trybliidiella rufula* (Spreng.) Sacc.  
(U. S. D. A., Weir, 1925)
6. *Godronia urceolus* (A. & S.) Karst.  
(Rehm Ib. p. 217)  
a. x10
7. *Agyrium rufum* (Pers.) Fr.  
(Ellis N. A. Fung. no. 450)  
c. (Rehm Ib. p. 447)
8. *Ombrophila violacea* (Hedw.) Fr.  
(Ellis Ib. no. 392)
9. *Bulgaria inquinans* Fr.  
(Ex. Herb. Rorer, Conn., 1901)  
a. x1  
c. (Rehm Ib. p. 472)
10. *Calloria fusarioides* (Berk.) Fr.  
(Rehm Ib. p. 448)  
a. x10 (Krieg. Fung. Sax. no. 387)
11. *Coryne sarcodes* (Jacq.) Tul.  
(U. S. D. A., Bres.)  
a. x2  
c. (Rehm Ib. p. 471)
12. *Holwaya ophiobola* (L.) Sacc.  
b. (Ellis Ib. no. 996)  
c. x3 (Bull. Torr. Club 28: pl. 26, after  
Durand)

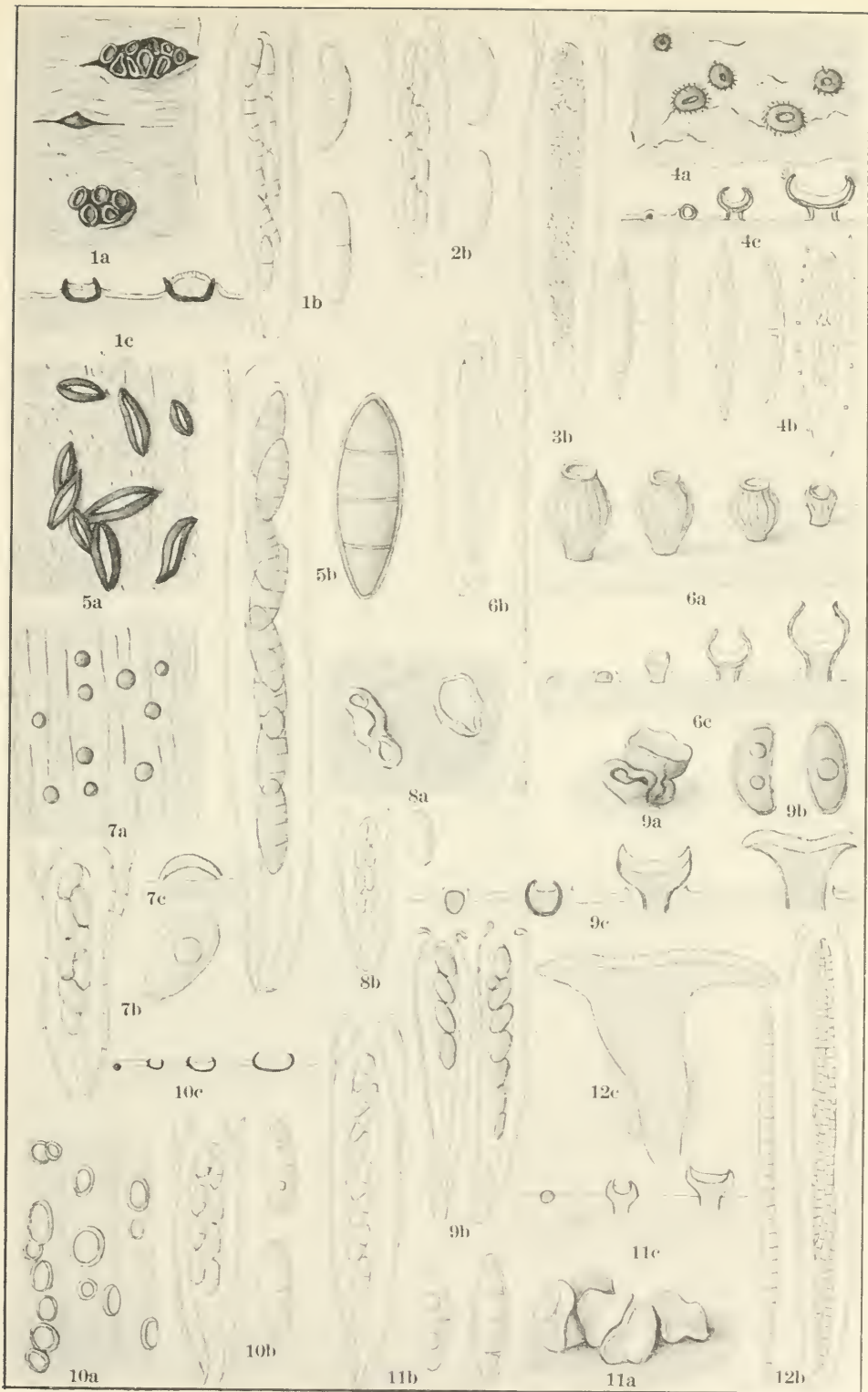
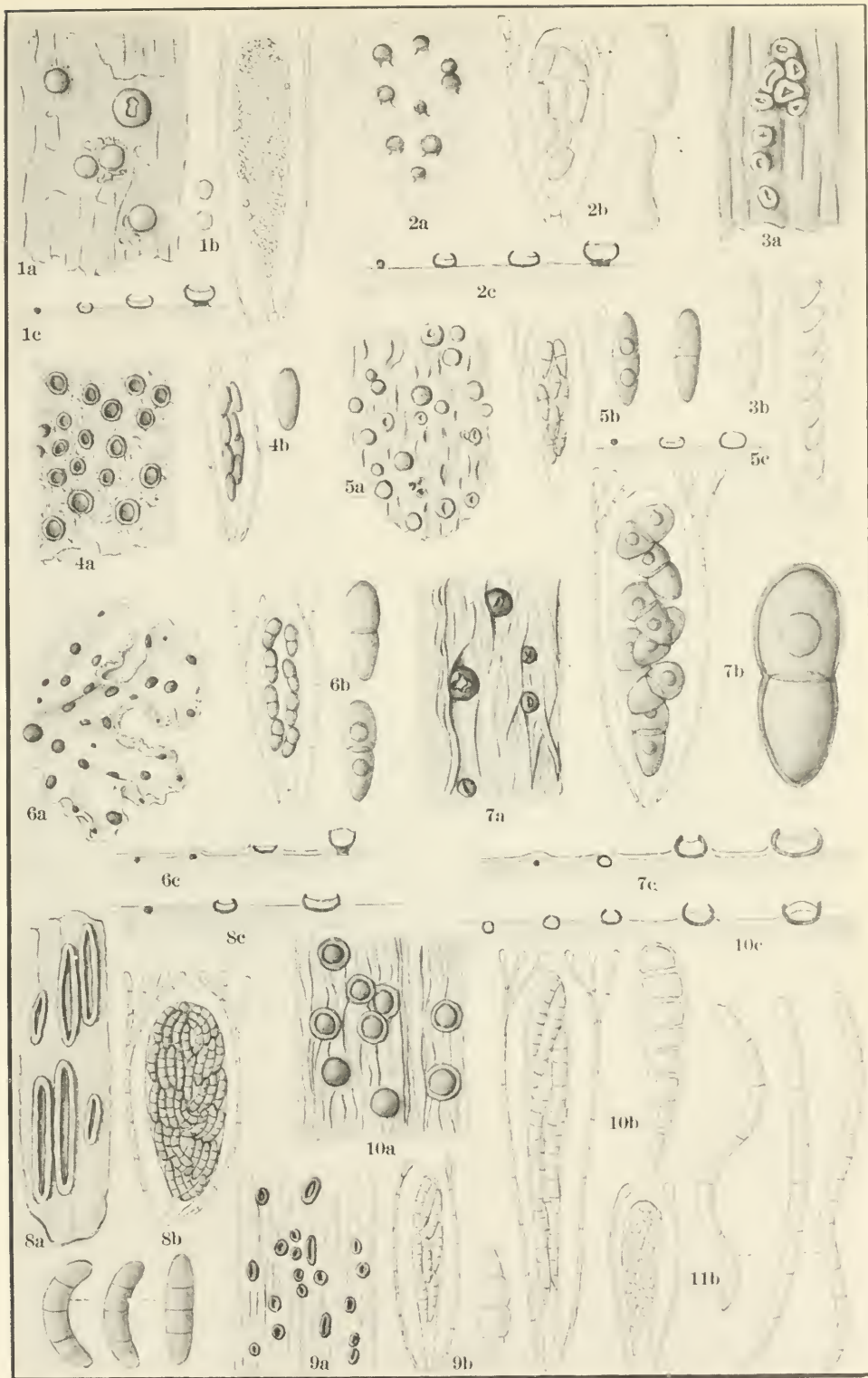


PLATE 27  
PATELLARIACEAE

(a. Habit x5; b. Ascus and paraphyses x500; separate spores x1000;  
c. Section of apothecia; except as otherwise indicated)

1. *Biatorella resinae* (Fr.) Mudd  
(Rehm Ascom. p. 292)  
a. (Herb. Haglund, 1892)
2. *Patinella punctiformis* Rehm  
(Rehm Ib. p. 293)  
a. x10
3. *Psilothecium incurvum* Clem.  
(Clem. Colo., 1896)  
a. x10
4. *Patellea sanguinea* (Pers.) Rehm  
(Vest. Mic. Rar. Sci. no. 1763)  
a. x10
5. *Karschia lignyota* (Fr.) Sacc.  
(Fink Ascom. Ohio)  
c. (Rehm Ib. p. 299)
6. *Abrothallus parmeliarum* (Sommerf.) Nyl.  
(Simmer Krypt. Kreuz. no. 2001)  
c. (Rehm Ib.)
7. *Caldesia sabina* (DeN.) Rehm  
(Clem. Ib.)  
c. (Rehm Ib. p. 283)
8. *Baggea pachyasca* Auersw.  
(Rehm Ib. p. 301)  
a. x10
9. *Durella compressa* (Pers.) Tul.  
(Ellis N. A. Fung. no. 145)  
a. x10
10. *Patellaria atrata* (Hedw.) Fr.  
(U. S. D. A., Ellis, New Jersey)  
c. (Rehm Ib. p. 295)
11. *Mycobacidia herbarum* (Hepp) Rehm  
(Id. p. 296)

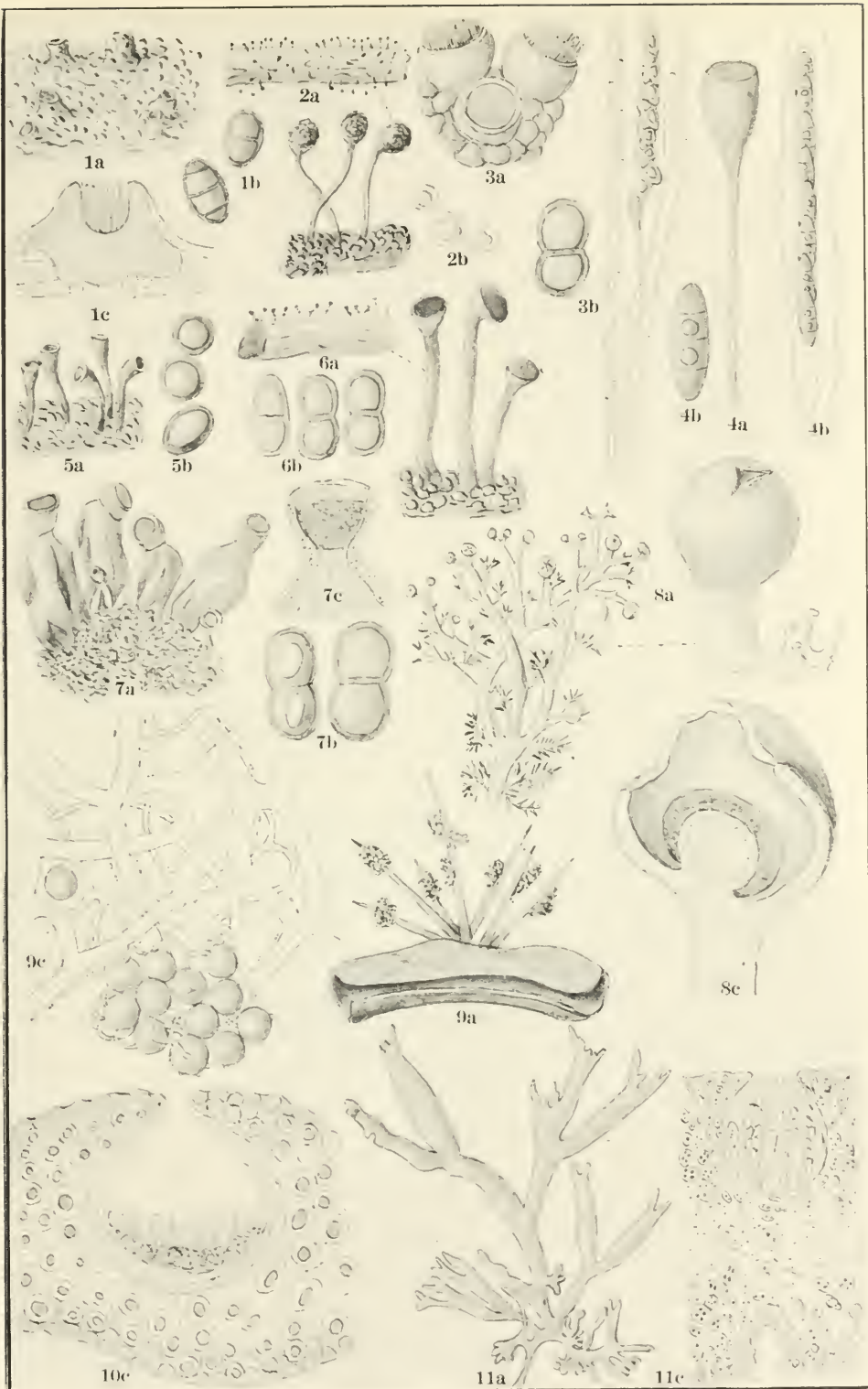


## PLATE 28

### CALICIACEAE—COLLEMACEAE

(a. Habit or apothecium; b. Separate spores x1000; c. Section of apothecium or thallus; except as otherwise indicated)

1. *Pyrgillus javanicus* Nyl.  
(Merrill Lich. Exs. no. 120)  
a. x5  
c. (Zahlbr. Nat. Pfl. p. 90, after Reinke)
2. *Coniocybe furfuracea* Ach.  
(Id., p. 96)
3. *Acolium sessile* (Pers.) Rehm  
(Rehm Ascom. p. 386)
4. *Stenocybe major* Nyl.  
(Id. p. 387)  
b. x500
5. *Chaenotheca chrysocephala* (Turn.) Th. Fr.  
(Zahlbr. Ib. p. 96)
6. *Calicium hyperellum* (Ach.) Pers.  
(Id.)
7. *Tholurna dissimilis* Norm.  
(Id. p. 101)
8. *Sphaerophorus coralloides* Pers.  
(Id.)
9. *Chrysothrix noli-tangere* Mont.  
(Id. p. 135)
10. *Phylliscum demangeoni* (Mont. & Moug.) Nyl.  
(Id. p. 156, after Reinke)
11. *Jenmania goebeli* Waecht.  
(Id. p. 159, after Waechter)



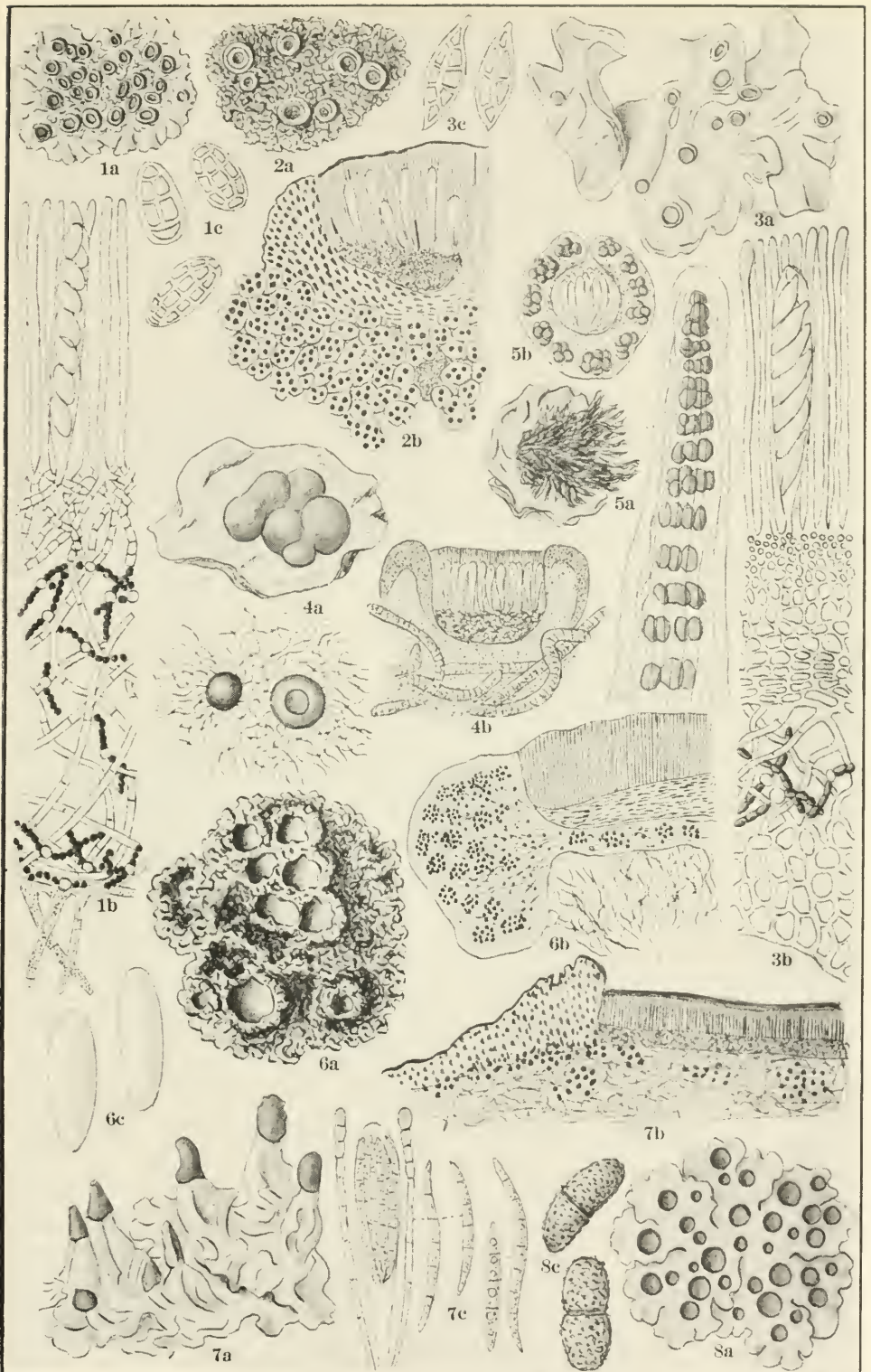
## PLATE 29

### COLLEMACEAE—PELTIGERACEAE

(a. Habit  $\times 1$ ; b. Section of apothecium; c. Spores; except as otherwise indicated)

1. *Collema pulposum* (Bernh.) Ach.  
(Fink Lich. Minn. pl. 21, after Schneider)  
b.  $\times 400$   
c.  $\times 650$
2. *Leprocollema americanum* Wain.  
(Zahlbr. Nat. Pfl. p. 166, after Reinke)  
a.  $\times 6$   
b.  $\times 120$
3. *Leptogium tremelloides* (L.) S. F. Gray  
(Fink Ib. pl. 22, after Schneider)  
b.  $\times 400$   
c.  $\times 650$
4. *Thermutis velutina* (Ach.) Th. Fr.  
(Zahlbr. Ib. p. 150, after Reinke)  
a. Habit  $\times 1$ ; apothecia and hyphae  $\times 15$   
b.  $\times 50$
5. *Ephebe lanata* (L.) Wain.  
(Id. p. 151)  
a. Habit  $\times 1$ ; tip of thallus  $\times 350$
6. *Heppia virescens* (Despr.) Nyl.  
(Id. p. 174, after Reinke)  
a.  $\times 3$   
b.  $\times 50$   
c.  $\times 1000$
7. *Peltigera canina* (L.) Hoffm.  
(Clem. Colo., 1929)  
b.  $\times 45$  (Fink Ib. p. 163, after Reinke)  
c.  $\times 500$
8. *Solorina saccata* (L.) Ach.  
(Lind. Flecht. 153:90)



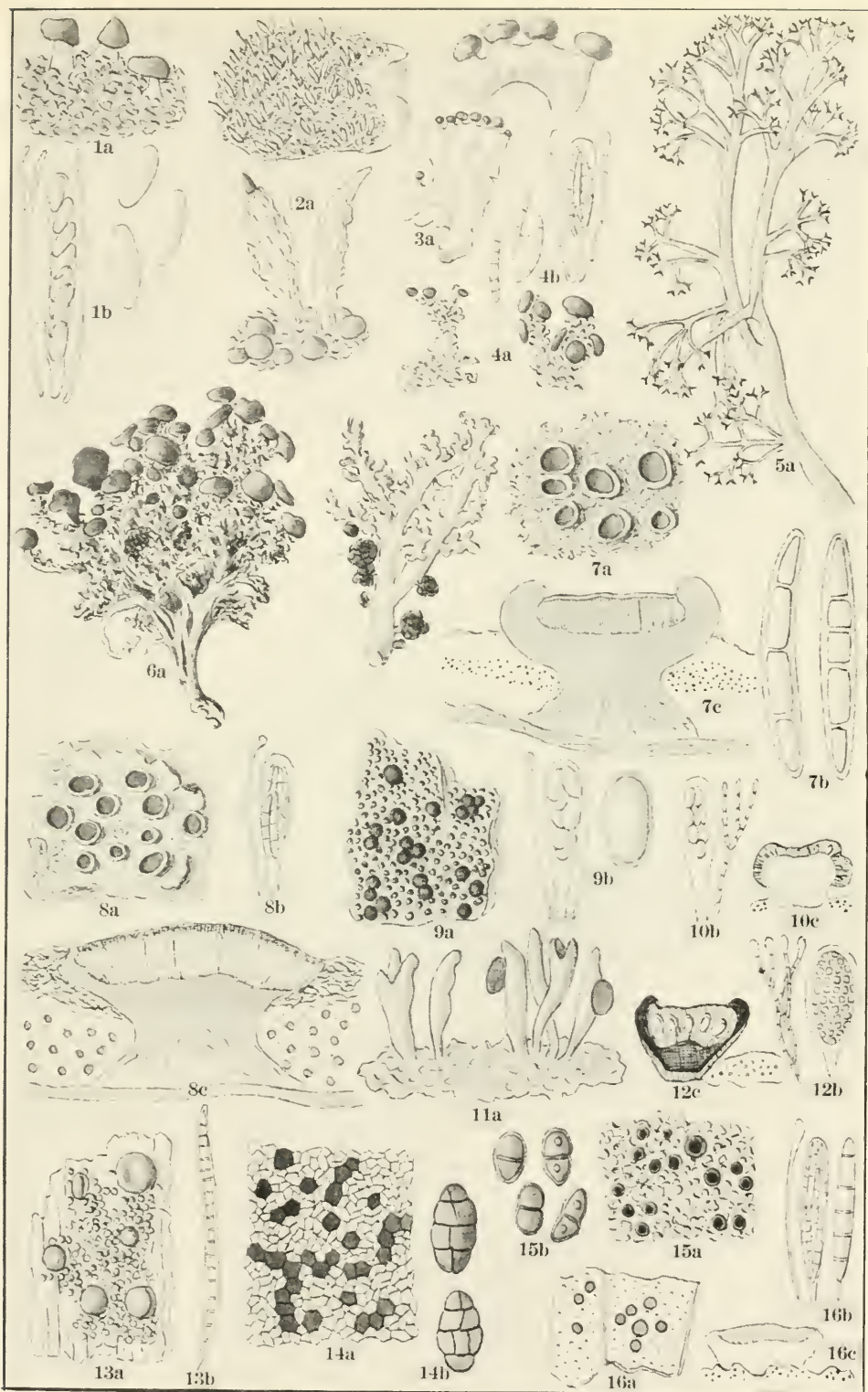


## PLATE 30

### CLADONIACEAE—LECIDEACEAE

(a. Habit; b. Ascus, paraphyses and spores x500; separate spores x1000; c. Section of apothecium; except as otherwise indicated)

1. *Baeomyces byssoides* (L.) Ach.  
(Willey Coll. U. S. Nat. Herb.)  
a. x2½ (Fink Lich. Minn. pl. 10)
2. *Pilophorum cereolus* Th. Fr.  
(Lind. Flecht. 103:105)  
a. x1; detail enlarged
3. *Gymnoderma coccocarpum* Nyl.  
(Zahlbr. Nat. Pfl. p. 204, after Reinke)  
a. x1; detail enlarged
4. *Stereocaulum paschale* (L.) Hoffm.  
(Dec. N. A. Lich. no. 25)  
a. x1; detail x5
5. *Cladonia rangeriferina* (L.) Web.  
(Zahlbr. Ib. p. 206, after Reinke)  
a. x1
6. *Argopsis megalospora* Th. Fr.  
(Id. p. 209, after Reinke)  
a. x1: cephalodia and phyllocladia
7. *Lecanactis abietina* (Ach.) Koerb.  
(Id. p. 132, after Reinke)  
b. (After Zahlbr.)
8. *Schismatomma abietinum* (Ehrb.) Koerb.  
(Id.)  
b. (Lind. Ib. 55:59)
9. *Lecidea enteroleuca* Ach.  
(Herb. Hasse, no. 225)  
a. x5
10. *Biatora vernalis* (L.) Th. Fr.  
(Lind. Ib. 67:80)
11. *Sphaerophoropsis stereocauloides* Wain.  
(Zahlbr. Ib. p. 195, after Reinke)
12. *Lopadium pezizoideum* (Ach.) Koerb.  
(Lind. Ib. 103:98)
13. *Bacidia rosella* (Pers.) DeN.  
a. x5 (Merrill Lich. Exs. no. 30)  
b. (Lind. Ib. 89:92)
14. *Rhizocarpum geographicum* (L.) DC.  
(Dec. N. A. Lich. no. 218)  
a. x5  
b. x500
15. *Buellia parasema* (Ach.) Th. Fr.  
(Clem. Colo.)  
a. x5  
b. x500
16. *Bacidia rubella* (Ehrb.) Massal.  
(Lind. Ib. 89:93)

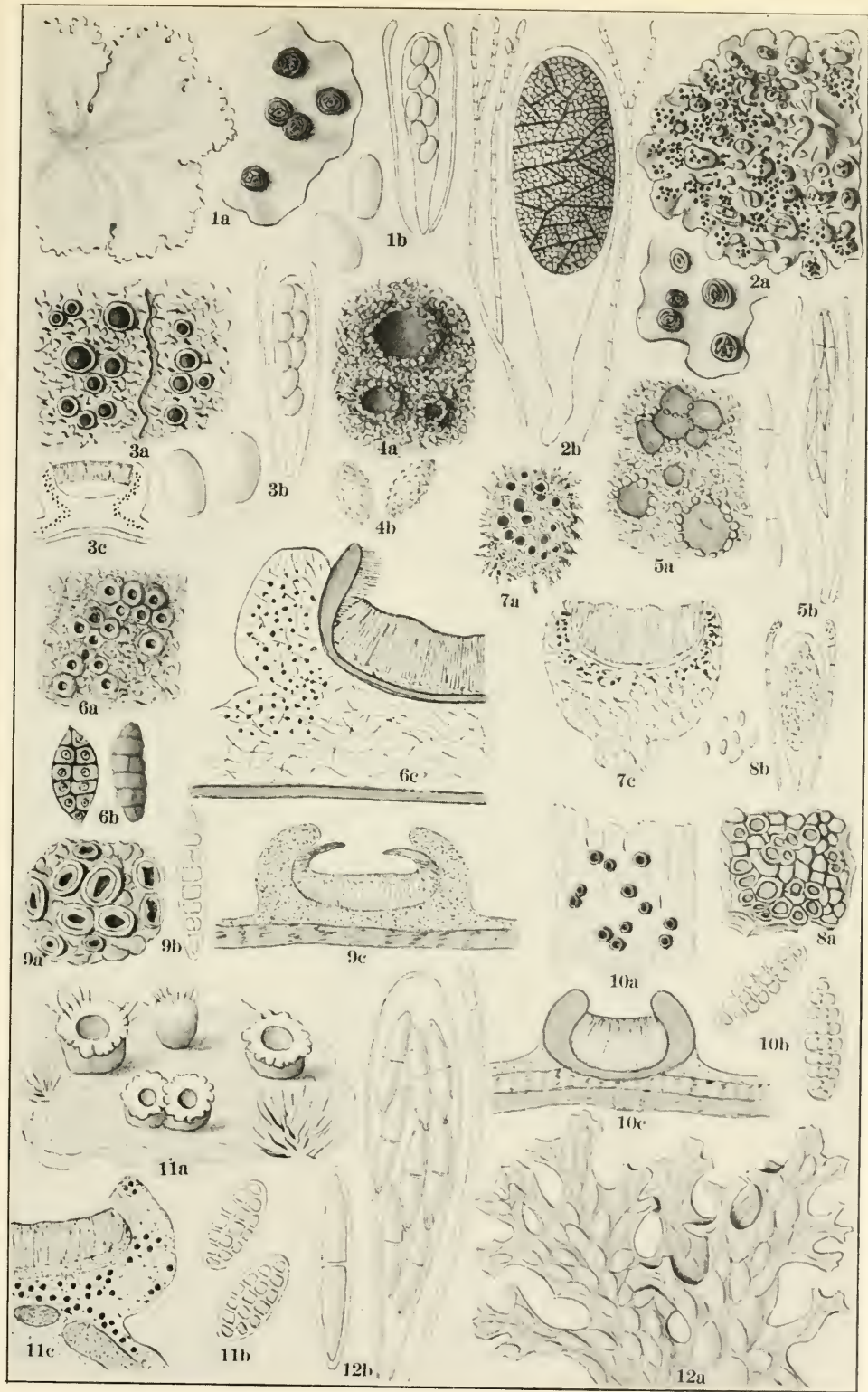


## PLATE 31

### LECIDEACEAE—PARMELIACEAE

(a. Habit; b. Ascus and paraphyses x500; separate spores x1000;  
c. Section of apothecium)

1. *Gyrophora vellea* (L.) Ach.  
(Merrill Lich. Exs. no. 45)  
a. x1 (Lind. Flecht. 130:148); detail of lobe  
of thallus x5
2. *Umbilicaria pustulata* (L.) Hoffm.  
(Dec. N. A. Lich. no. 15)  
a. x1; detail of lobe of thallus x5
3. *Lecanora subfusca* (L.) Ach.  
(Id. no. 22)  
a. x5  
c. (Lind. Ib. 166:209)
4. *Psoroma hypnorum* (Dicks.) Hoffm.  
(Clem. Colo.)  
a. x5  
b. x500
5. *Icmadophila ericetorum* (L.) Zahlbr.  
(Merrill Lich. Exs. no. 9)  
a. x5
6. *Diploschistes scruposus* (L.) Norm.  
(Zahlbr. Nat. Pfl. p. 141, after Reinke)  
a. x5 (Merrill Lich. Exs. no. 102)  
b. x500
7. *Pertusaria bryontha* (Ach.) Nyl.  
a. x1 (Lind. Ib. 166:200)  
c. x30 (Zahlbr. Ib. p. 218, after Reinke)
8. *Acarospora chlorophana* (Wahlb.) Mass.  
(Clem., Colo.)  
a. x5
9. *Thelotrema lepadinum* Ach.  
(Zahlbr. Ib. p. 138)  
a. (After Reinke)
10. *Gyrostomum scyphuliferum* (Ach.) Fr.  
(Merrill Lich. Exs. no. 33)  
a. x10  
b. x500  
c. (Zahlbr. Ib. p. 140)
11. *Gyalecta cupularis* (Ehrh.) Fr.  
(Zahlbr. Ib. p. 146, after Reinke)  
b. (Lind. Ib. 55:66)
12. *Lobaria pulmonaria* (L.) Hoffm.  
a. x1 (Dec. N. A. Lich. no. 16)  
b. (Zahlbr. Ib. p. 184)



## PLATE 32

### PARMELIACEAE—PHYSICIACEAE

(a. Habit x1; b. Ascus, paraphyses and spores x500; c. Section of apothecium; except as otherwise indicated)

1. *Parmelia conspersa* (Ehrh.) Ach.  
(Zahlbr. Nat. Pfl. p. 232, after Reinke)
2. *Cetraria islandica* (L.) Ach.  
(Merrill Lich. Exs. no. 116)
3. *Alectoria ochroleuca* (Ehrh.) Nyl.  
(Lind. Flecht. 199:255)
4. *Dufourea madreporiformis* (Wulf.) Ach.  
(Id. 199:253)
5. *Evernia prunastri* (L.) Ach.  
(Id. 199:250)
6. *Usnea florida* (L.) Hoffm.  
(Zahlbr. Ib. p. 246)  
a. (After Reinke)
7. *Pannaria pezizoides* (Web.) Lightf.  
(Lind. Ib. 142:183)
8. *Ramalina calicaris* (L.) Fr.  
(Fink Lich. Minn. pl. 40, after Schneider)  
b. x650
9. *Lepidocollema carassense* Wain.  
(Zahlbr. Ib. p. 178, after Reinke)  
a. x3  
c. x160
10. *Caloplaca aurantiaca* (Lightf.) Th. Fr.  
(Lich. Bor. Am. no. 46)  
a. x5
11. *Xanthoria parietina* (L.) Th. Fr.  
(Merrill Lich. Exs. no. 133)
12. *Theloschistes chrysophthalmus* (L.) Norm.  
a. Group of apothecia enlarged (Zahlbr. Ib. p. 252)  
b. (Lich. Bor. Am. no. 84)
13. *Rinodina sophodes* (Ach.) Th. Fr.  
(Dec. N. A. Lich. no. 169)  
a. x5  
c. (Lind. Ib. 231:283)
14. *Physcia stellaris* (L.) Nyl.  
(Dec. N. A. Lich. no. 12)  
c. x35
15. *Anaptychia leucomelaena* (L.) Wain.  
(Zahlbr. Ib. p. 258)



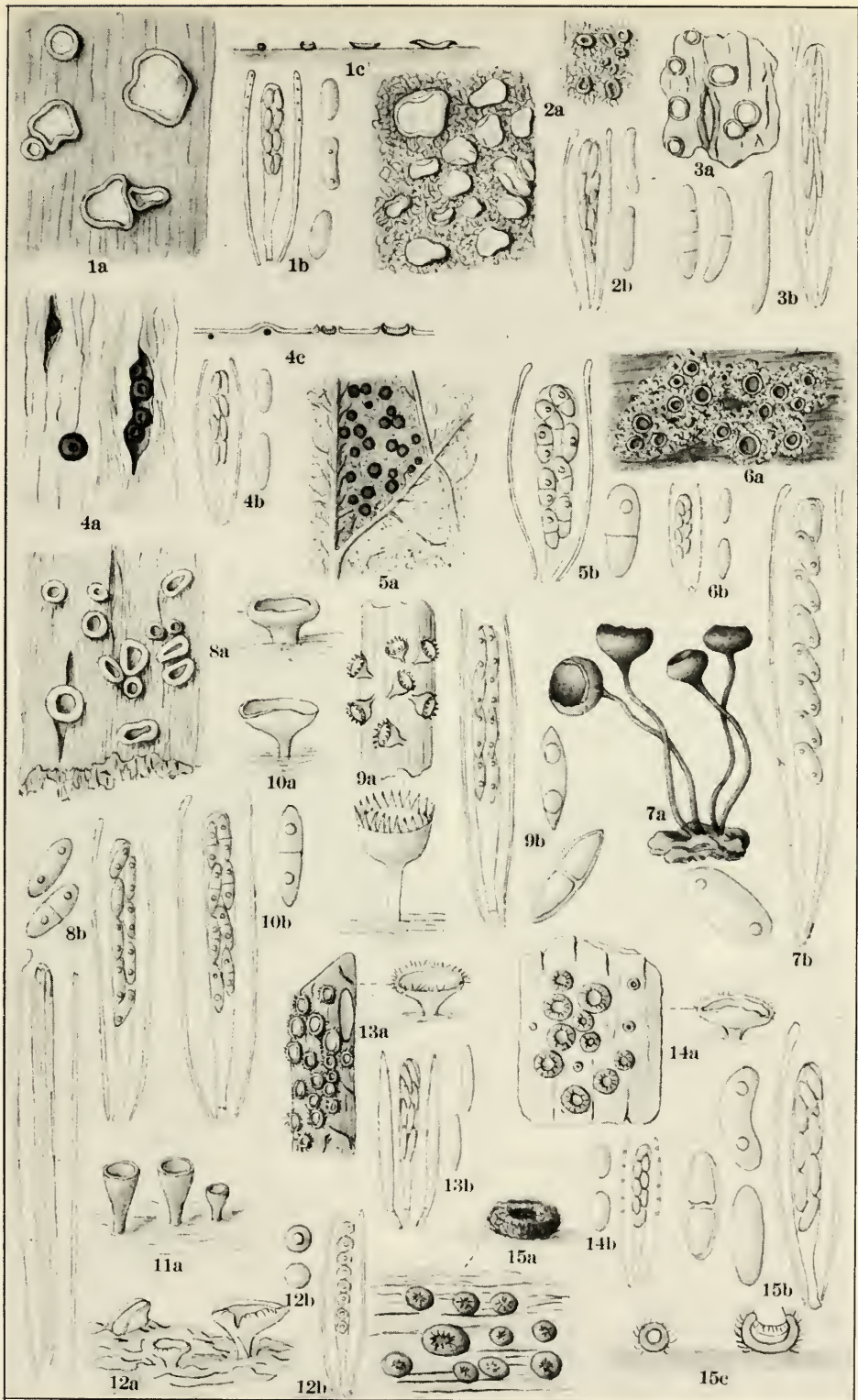
## PLATE 33

### MOLLISIACEAE—HELOTIACEAE

(a. Habit x5, represented in moist condition; b. Ascus and paraphyses x500; separate spores x1000; c. Section of apothecia; except as otherwise indicated)

1. *Mollisia cinerea* (Batsch) Karst.  
(Rehm Ascom. p. 505)
  - a. (Petr. Fl. Bohem. no. 269)
  - c. (*M. benesuada*)
2. *Tapesia fusca* (Pers.) Fkl.  
(Krypt. Exs. Vienna Mus. no. 1926)
  - a. Habit, both wet and dry
3. *Niptera ramealis* Karst.  
(Id. no. 956)
4. *Pyrenopeziza rubi* (Fr.) Rehm  
(Krieg. Fung. Sax. no. 879)
  - c. (Rehm Ib. p. 604)
5. *Fabraea ranunculi* (Fr.) Karst.  
(Petr. Myc. Carp. no. 16)
6. *Eriopeziza caesia* (Pers.) Rehm  
(Phillips Elvel. Brit. no. 76)
  - a. x10
7. *Sclerotinia tuberosa* (Hedw.) Fr.
  - a. x1 (Hone Minn. Bot. Stud. June 1909, pl. 14)
  - b. (Rehm Ib. p. 802)
8. *Helotium citrinum* (Hedw.) Fr.  
(Krypt. Exs. Vienna Mus. no. 205b)
  - a. Habit x5; apothecium x10
9. *Cyathicula coronata* (Bull.) DeN.  
(Rehm Ib. p. 705)
  - a. Habit x1; apothecium enlarged
10. *Hymenoscypha virgultorum* (Vahl) Phill.  
(Vest. Mic. Rar. Sel. no. 1759)
11. *Pocillum cesati* (Mont.) DeN.  
(Sacc. Myc. Ven. no. 952)
  - a. x20
12. *Lachnellula chrysophthalma* (Pers.) Karst.  
(Id. no. 919)
13. *Lachnum bicolor* (Bull.) Karst.  
(Rehm Ib. p. 865)
  - a. Habit x1; apothecium enlarged
14. *Dasyscypha cerina* (Pers.) Fkl.  
(Clem. Crypt. Form. Colo. no. 81)
  - a. Habit x1; apothecium x5
15. *Lachnella flammea* (A. & S.) Fr.  
(Rehm Ib. p. 828)
  - a. Habit x5; apothecium x10 (E. & E. N. A. Fung. no. 3534)





## PLATE 34

### PEZIZACEAE

(a. Habit x1; b. Ascus and paraphyses x500; separate spores x100 except as otherwise indicated)

1. *Otidea leporina* (Batsch) Fkl.
  - a. (Cooke Mycographia f. 211)
  - b. (Rehm Ascom. p. 1022)
2. *Pitya vulgaris* Fkl.

(Krypt. Exs. Vienna Mus. no. 1731)

  - b. x200; separate spore x500
3. *Lamprospora miniata* (Crouan) DeN.

(Cooke Ib. f. 17)

  - b. x200; separate spore x800
4. *Aleuria aurantia* (Muell.) Fkl.

(Petr. Fl. Bohem. no. 253)
5. *Humaria leucoloma* (Hedw.) Boud.

(Cooke Ib. f. 28)

  - a. x5
6. *Macropodia macropus* (Pers.) Fkl.

(Clem. Colo.)

  - b. x200; separate spore x500
7. *Pyronema omphalodes* (Bull.) Fkl.

(Rehm Ib. p. 919)

  - a. x5
8. *Geopyxis cupularis* (L.) Sacc.

(Clem. Colo.)

  - b. x200
9. *Acetabula vulgaris* Fkl.

(Krypt. Exs. Mus. Pal. Vind. no. 1730)

  - b. x200; separate spore x500
10. *Discina venosa* (Pers.) Sacc.

(U. S. D. A., Bres.)

  - a. (Rehm Ib. p. 922, after Winter)
  - b. x200; separate spore x500
11. *Plicariella leiocarpa* (Curr.) Rehm  
(Id. p. 989)

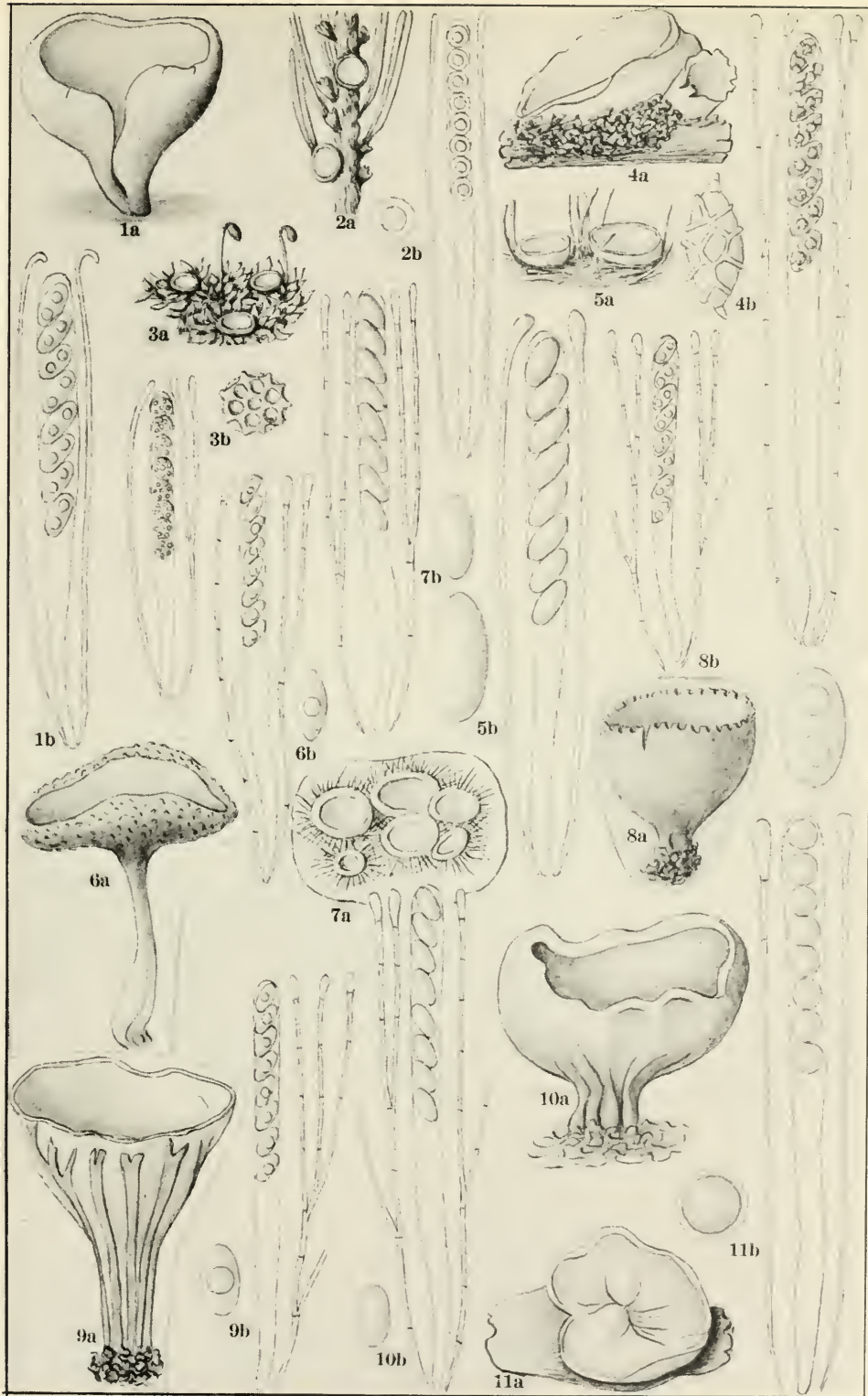
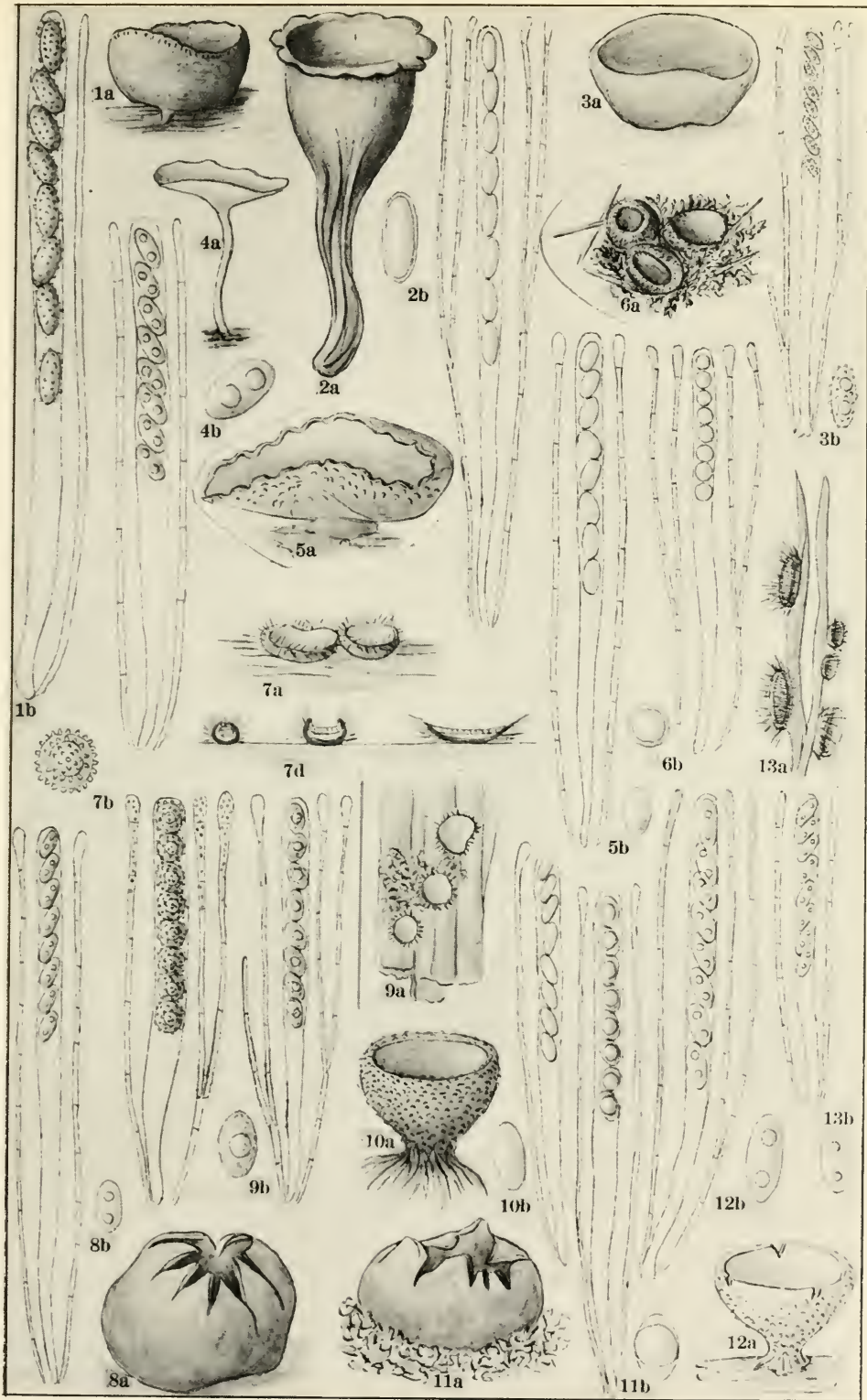


PLATE 35  
PEZIZACEAE

(a. Habit or single apothecium x1; b. Ascus and paraphyses x200;  
Separate spores x500; except as otherwise indicated)

1. *Galactinia coerulea* Clem.  
(Clem., Colo., 1902)  
b. x500
2. *Urnula craterium* (Schw.) Fr.  
(U. S. D. A., James, Ohio)
3. *Peziza badia* (Pers.) Fkl.  
(Jaczewski, Russia, 1895)  
a. (Cooke Mycographia f. 226)
4. *Tarzetta rapulum* (Bull.) Cke.  
(Rehm Ascom. p. 993)  
a. (Cooke Ib. f. 197)  
b. x500; separate spore x1000
5. *Peziza vesiculosa* Bull.  
(Clem. Ib., 1927)
6. *Pseudoplectania nigrella* (Pers.) Fkl.  
(Id.)
7. *Sphaerospora trechispora* (B. & Br.) Sacc.  
(Phillips Elvel. Brit. no. 160)  
d. Section of apothecia (Rehm Ib. p. 1029)
8. *Sarcosphaera coronaria* (Jacq.) Schroet.  
(Cooke Ib. f. 238)  
a. x $\frac{1}{3}$
9. *Scutellinia scutellata* (L.) Lamb.  
(Clem. Ib.)
10. *Plectania melastoma* (Sow.) Fkl.  
(Cooke Ib. f. 103)
11. *Sepultaria sepulta* (Fr.) Cke.  
(Clem., Ariz., 1924)
12. *Sarcoscypha coccinea* (Jacq.) Cke.  
(Ellis N. A. Fung. no. 434)  
a. (Cooke Ib. f. 95)
13. *Desmazierella acicola* Lib.  
(Rehm Ib. p. 1031)

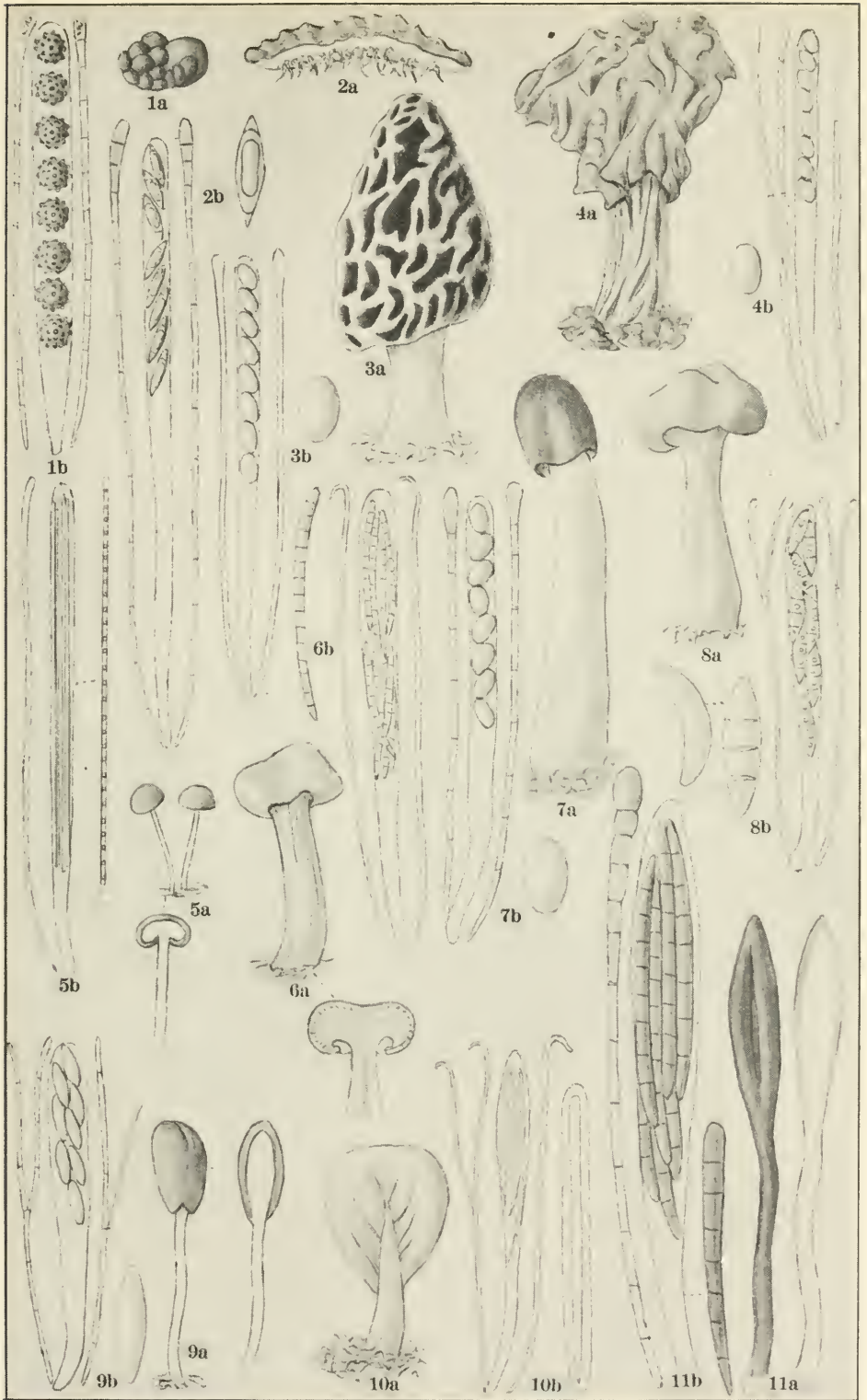


## PLATE 36

### HELVELLACEAE

(a. Ascoma and section x1; b. Ascus and paraphyses x500; separate spores x1000; except as otherwise indicated)

1. *Sphaerosoma fuscescens* Klotsch  
a. (Lind. Nat. Pfl. p. 172, after Tulasne)  
b. (Corda Icon. 11, f. 100)
2. *Rhizina inflata* (Schaeff.) Quel.  
(Syd. Myc. Germ. no. 1935)  
a. (Rehm Ascom. p. 1136, after Haenssiger)  
b. x200; separate spore x500
3. *Morchella esculenta* (L.) Pers.  
(U. S. D. A., Seaman)  
a. (Minn. Mushrooms f. 102)  
b. x200; separate spore x500
4. *Helvella lacunosa* Afz.  
(Clem. Colo., 1927)  
b. x200; separate spore x500
5. *Vibrissea truncorum* (A. & S.) Fr.  
(Id.)
6. *Cudonia circinans* (Pers.) Fr.  
(Id.)  
a. (Cooke Mycographia f. 172)
7. *Verpa conica* (Muell.) Schwartz  
(Clem. Ib.)  
b. x200; separate spore x500
8. *Leotia lubrica* (Scop.) Pers.  
(U. S. D. A., Morgan)  
a. (Cooke Ib. f. 171)
9. *Mitrula phalloides* (Bull.) Chev.  
(Rehm Ib. p. 1143, after Sturm)  
a. (Cooke Ib. f. 175)
10. *Spathularia clavata* (Schaeff.) Sacc.  
(Clem. Ib.)
11. *Geoglossum glabrum* Pers.  
(E. & E. N. A. Fung. no. 2031)



## PLATE 37

### ASCOBOLACEAE—EXASCACEAE

(a. Habit; b. Ascus and paraphyses; separate spores; c. Section of apothecium; except as otherwise indicated)

1. *Ascophanus carneus* (Pers.) Boud.  
(Rehm Ascom. p. 1080)
  - a. Habit x1; group of apothecia (after Boudier)
  - b. Separate spore of *A. holmsjoldi* (p. 1079, after Zukai)
2. *Lasiobolus equinus* (Muell.) Karst.  
(Petr. Fl. Bohem. no 768)
  - a. Habit x5; apothecium x20
  - b. x500
  - c. (Rehm Ib. p. 1081)
3. *Rhyarobius crustaceus* (Fkl.) Rehm  
(Rehm Ib. p. 1083, after Boudier)
  - b. Separate spores x1000
4. *Zukalina neglecta* O. Kze.  
(Id. p. 1084, after Zukai)
5. *Boudiera areolata* Cke. & Phill.  
(Id. p. 1110, after Phillips)
6. *Ascobolus stercorarius* (Bull.) Schroet.  
(Id. p. 1112, after Boudier)
  - b. (Krieg. Fung. Sax. no. 1179); separate spore x1000
7. *Saccobolus kerverni* (Crouan) Boud.  
(Rehm Ib. p. 1111, after Boudier)
  - b. Separate spores x1000
8. *Ascocorticium albidum* Brefeld  
(Schroet. Nat. Pfl. p. 161, after Brefeld)
  - a. Hymenium
  - b. Separate spores x1000
9. *Taphrina aurea* (Pers.) Fkl.  
(Id. p. 159, after Sadebeck)
  - b. Mature and immature asci
10. *Exascus pruni* Fkl.  
(Id.)
  - a. x1
  - b. Mature and immature asci



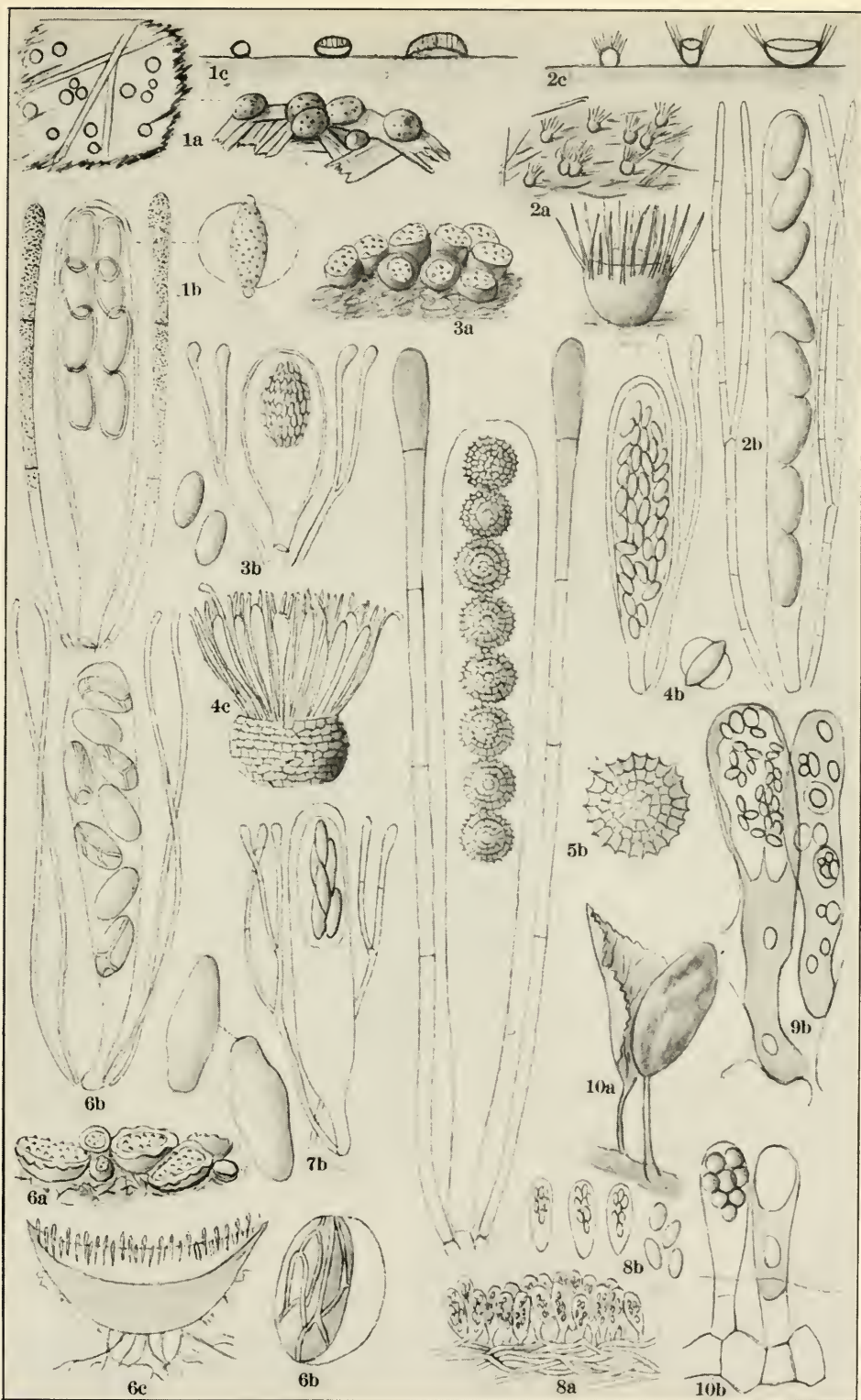


PLATE 38

CYTTARIACEAE—ELAPHOMYCETACEAE—  
TUBERACEAE

(a. Ascoma or section of same x1; b. Ascus and spores)

1. *Cyttaria*

(Lind. Nat. Pfl. p. 241, after Fischer)

a. Stroma of *C. gunni*; section of *C. harioti*

b. Ascus and spores of *C. harioti* x720

2. *Pseudohydnotrya harknessi* Fisch.

(Fisch. Nat. Pfl. p. 283)

a. x4

3. *Genea verrucosa* Vitt.

(Id. p. 282)

c. Section of hymenium

4. *Balsamia vulgaris* Vitt.

(Id. p. 289, after Tulasne)

b. x360

5. *Tuber aestivum* Vitt.

(Id. p. 287, after Tulasne)

6. *Delastria rosea* Tul.

(Id. p. 317)

a. Section of gleba

7. *Hydnocystis arenaria* Tul.

(Id. p. 289, after Tulasne)

a. Somewhat enlarged

b. x360

8. *Stephensia bombycina* (Vitt.) Tul.

(Id. p. 284, after Vittadini)

a. Section enlarged

b. (After Tulasne)

9. *Hydnotrya tulasnei* Berk. & Br.

(Id. p. 283)

a. x190

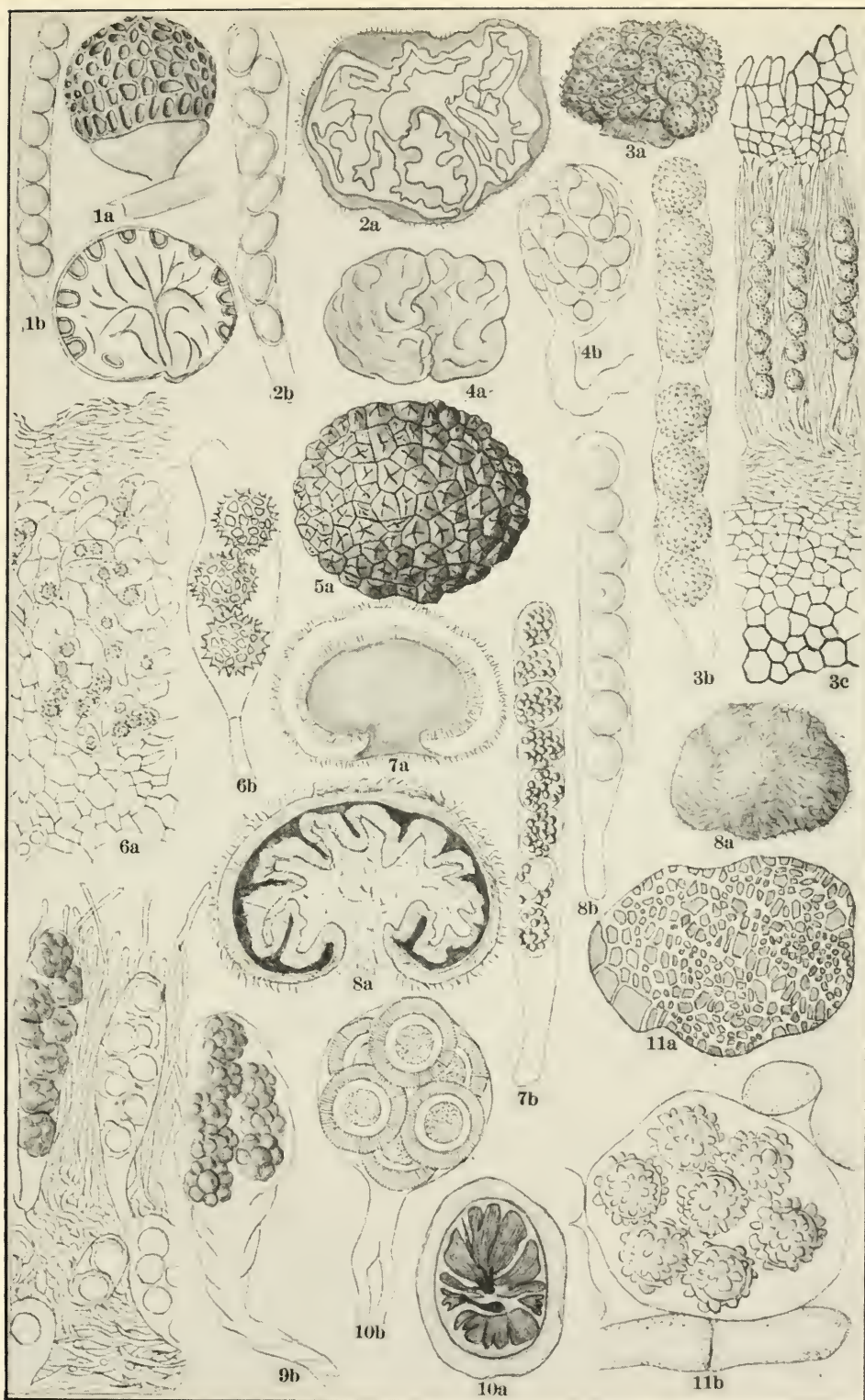
10. *Elaphomyces cervinus* (Pers.) Schroet.

(Id. p. 311)

11. *Terfezia leonis* Tul.

(Lind. Ib. p. 224)

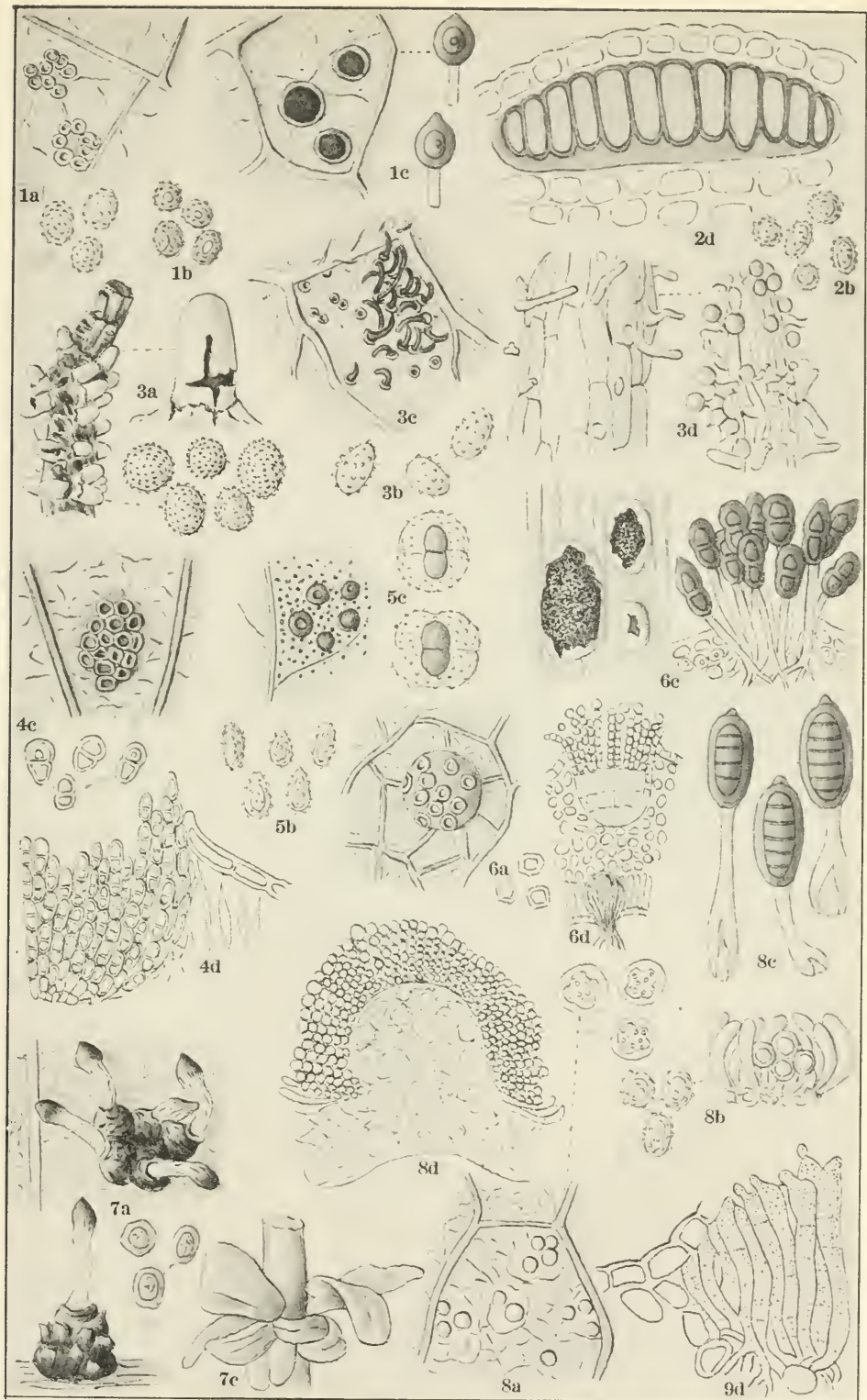
b. x500



**PLATE 39**  
**PUCINIALES**

(a. Aecia x10; aeciospores x200; b. Urediospores x200; c. Telia x10; teliospores x200; d. Microscopic details)

1. **Uromyces appendiculatus (Pers.) Lk.**  
(U. S. D. A., Path. Myc. Coll. no. 863)  
a. (Syd. Ured no. 1359)
2. **Melampsora euphorbiae (Schub.) Cast.**  
(Krieg. Fung. Sax. no. 220)  
d. Section of telium x200
3. **Cronartium flaccidum (A. & S.) Wint.**  
(Dietel Nat. Pfl. p. 42-43)  
a. Aecia x1; detail enlarged  
Aeciospores (Migula Krypt. Germ. no. 230)  
b. (After Tulasne)  
c. (Krieg. Ib. no. 614)  
d. Portions of telium with teliospores x400  
(after Tulasne)
4. **Puccinosira pallidula (Speg.) Lagerh.**  
(U. S. D. A., Ib. no. 64772)  
d. Partial section of a telium (Dietel Ib. p. 96)
5. **Uropyxis amorphae (Curt.) Schroet.**  
(Barth. N. A. Ured. no. 1399)  
b. (Fung. Dak. no. 248)
6. **Puccinia graminis Pers.**  
(Fung. Colum. no. 3461)  
d. Section of leaf with aecia and spermagonia  
(Linhart Fung. Hung. no. 5)
7. **Gymnosporangium sabinae (Dicks) Wint.**  
(Krieg. Schäd. Pilze no. 15)  
a. Group of aecia x3; single aecium x5  
c. Telia x1 (Dietel Ib. p. 73)
8. **Phragmidium subcorticium (Schroet.) Wint.**  
(Krieg. Ib. nos. 11, 12)  
b. Urediospores and paraphyses  
d. Section of aecium (U. S. D. A. Rep. Veg. Path., 1887, pl. 10)
9. **Chrysomyxa abietis (Wallr.) Ung.**  
(Dietel Ib. p. 44, after DeBary)  
d. Section of telium

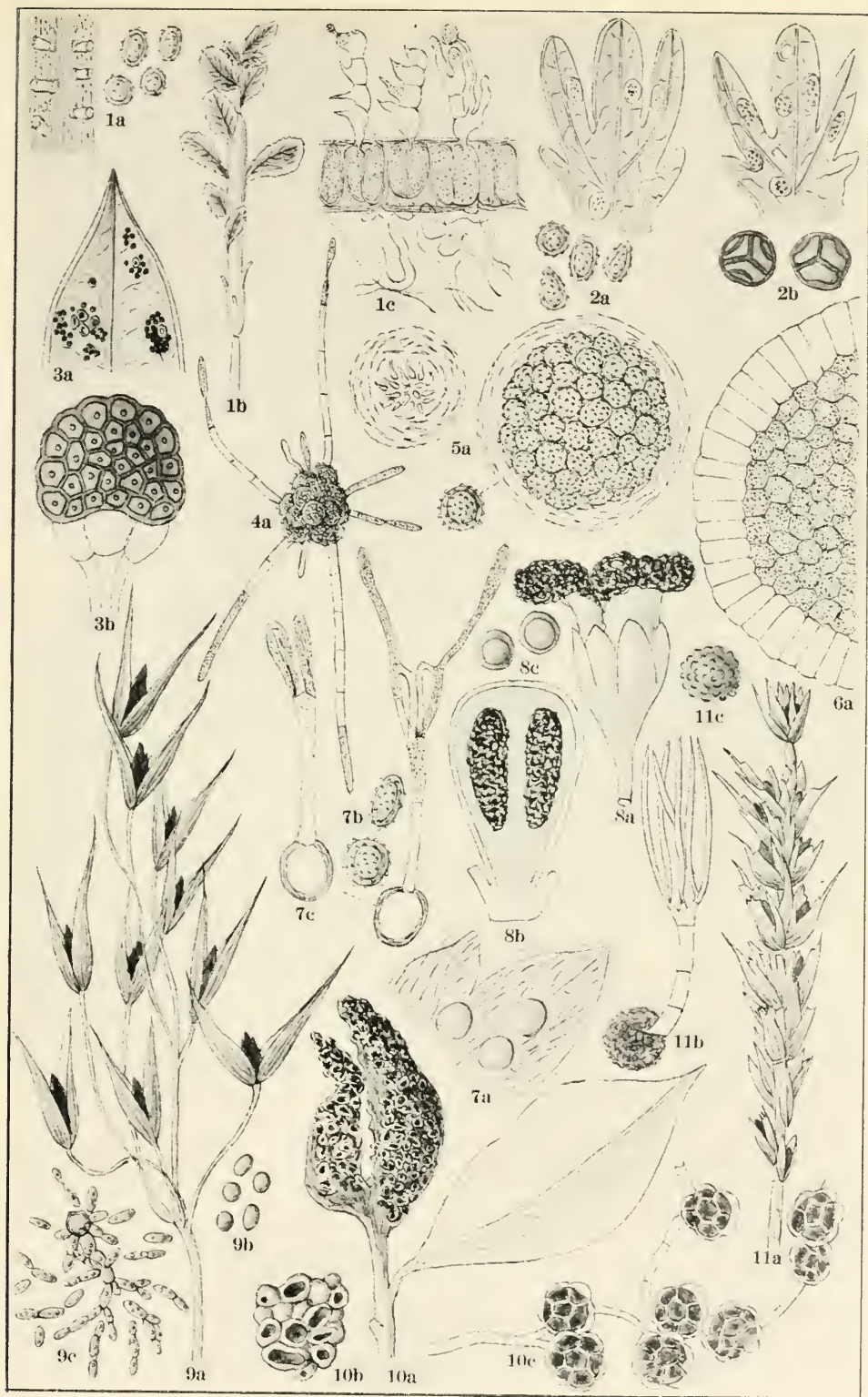


# PLATE 40

## PUCCINIALES—USTILAGINALES

(Nos. 1-3: acacia, uredia and telia x5; spores x200; Nos. 4-11: spores x500)

1. ***Calyptospora goeppertiana* Kuehn**  
(Dietel Nat. Pfl. p. 38)
  - a. Acacia and aeciospores (Vest. Mic. Rar. Sel. no. 754)
  - b. Twig deformed by fungus
  - c. Section of bark with germinating teliospores
2. ***Triphragmium ulmariae* (Schum.) Lk.**  
(Syd. Ured. no. 2636)
  - a. Uredia and urediospores
  - b. Telia and teliospores
3. ***Ravenelia epiphylla* (Schw.) Diet.**  
(Barthol. N. A. Ured. no. 2783)
  - a. Teliospores x5
  - b. Teliospore x200
4. ***Tolyposporium junci* (Schroet.) Woron.**  
(Dietel Ib. p. 15, after Brefeld)
  - a. Germinating spore ball x250
5. ***Sorosporium saponariae* Rudolphi**  
(Id.)
  - a. Stages in development of spore ball, x400, and single spore
6. ***Doassansia alismatis* (Nees) Cornu**  
(Id. p. 23)
  - a. Partial section of spore ball x500
7. ***Entyloma microsporium* (Ung.) Schroet.**  
(Petr. Fung. Eich. no. 78)
  - a. Infected leaf of *Ranunculus* x5
  - b. Spores
  - c. Stages in germination of spore x600 (Dietel Ib. p. 18, after De Bary)
8. ***Sphacelotheca hydropiperis* (Schum.) DeBary**  
(Dietel Ib. p. 12, after DeBary)
  - a. Mass of spores emerging from fruiting body
  - b. Section of mature fruiting body
  - c. Spores (Syd. Ustilag. no. 332)
9. ***Ustilago avenae* (Pers.) Jen.**  
(Id. p. 8)
  - a. Habit x1
  - b. Spores (Myc. Herb. Rau, no. 82)
  - c. Germinating spores (after Brefeld)
10. ***Polysaccopsis hieronymi* (Schroet.) Henn.**  
(Id. p. 22)
  - a. Section of fungus-gall x1
  - b. Spore sacks from interior of gall
  - c. Hyphae with mature spore balls.
11. ***Tilletia tritici* (Bjerk.) Wint.**  
(Id. p. 17, after Swingle)
  - a. Spike of infected wheat x1
  - b. Germinating spore (Camb. Bot. Handb. p. 193)
  - c. Spore (Eriks. Fung. Par. Scan. no. 256)



**PLATE 41**  
**TREMELLALES**

(a. Habit x1; b. Basidia and spores)

1. *Platygløea nigricans* (Fr.) Schroet.  
(Killermann Nat. Pfl. p. 107, after Brefeld)  
b. x300
2. *Auricularia mesenterica* (Dicks) Fr.  
(Rick Fung. Aus. Amer. no. 122)
3. *Hirneola auricula-judae* (L.) Berk.  
a. (Clem. Minn. Mushrooms, f. 83)  
b. x300 (Killermann Ib.)
4. *Gyrocephalus rufus* (Jacq.) Bref.  
(Killermann Ib. p. 117, after Bresadola)
5. *Hirneolina incarnata* (Bres.) Sacc.  
(Id. p. 114, after Bresadola)  
c. Hymenium x300
6. *Saccoblastia ovispora* A. Moell.  
(Id. p. 107, after Moeller)  
a. Hyphae with basidia and sack-like cells x220  
b. x500  
c. Germinated spore with conidia x220
7. *Exidia glandulosa* (Bull.) Fr.  
(Id. p. 112, after Brefeld)  
b. x350
8. *Sebacina incrustans* (Pers.) Tul.  
(Id.)  
b. x400
9. *Tremella frondosa* Fr.  
(U. S. D. A., Shear)  
b. x500
10. *Dacryomyces stillatus* Nees  
(Killermann Ib. p. 121, after Brefeld)  
b. Germinating spore x350
11. *Guepinia spathularia* (Schw.) Fr.  
(Id.)
12. *Dacryomitra glossoides* (Pers.) Bref.  
(Id.)  
b. Germinating spore x300



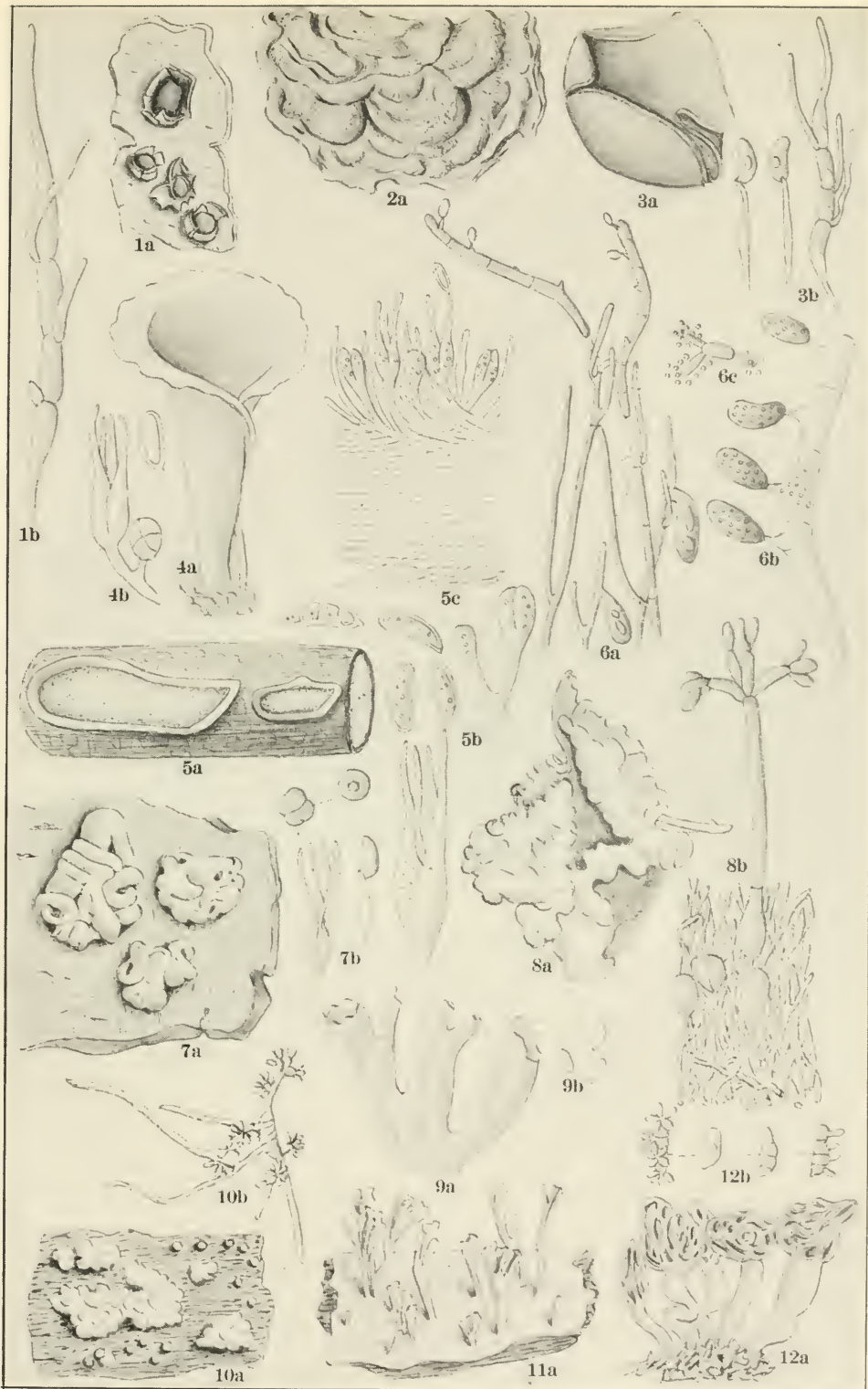
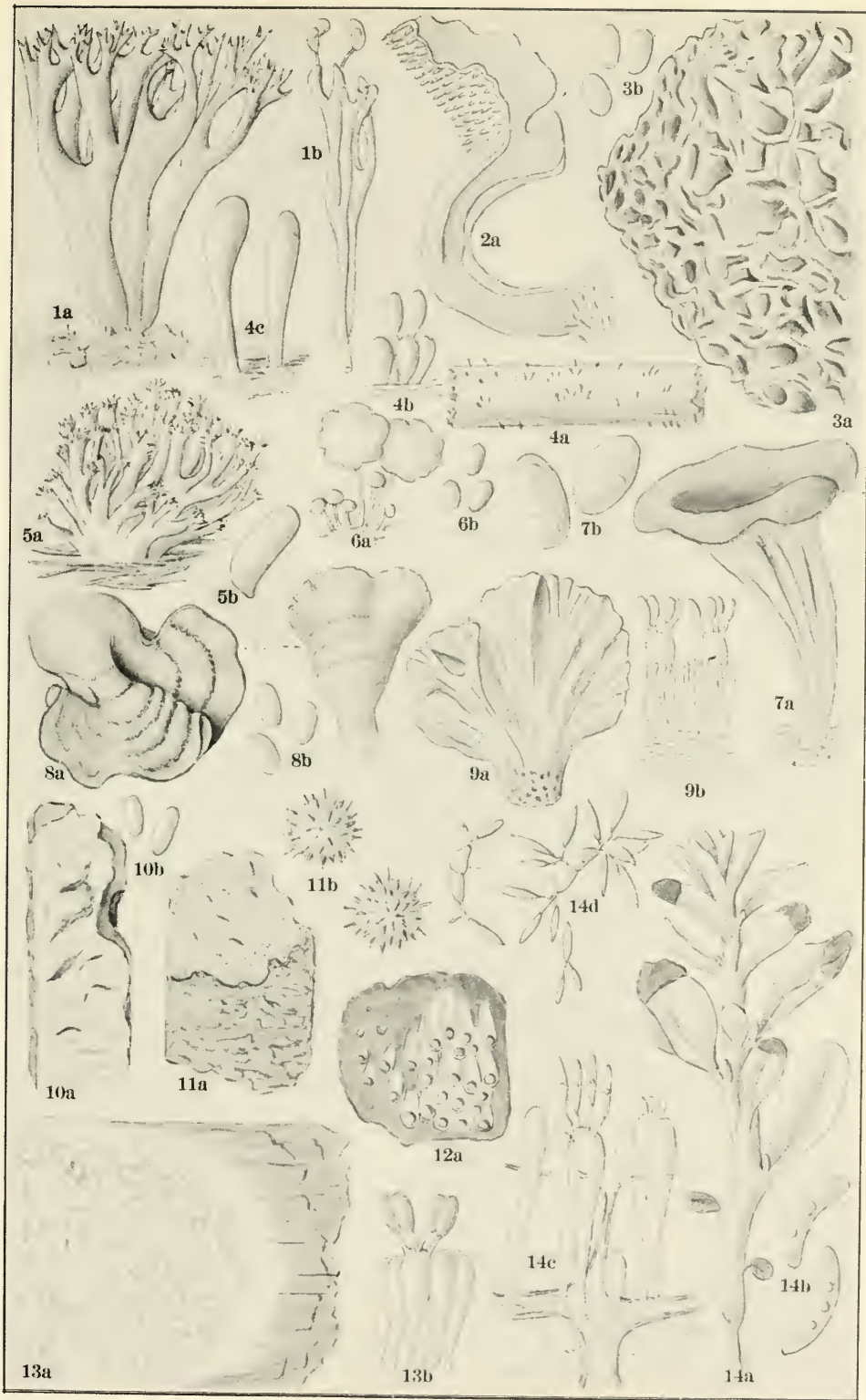


PLATE 42

TREMELLACEAE—CLAVARIACEAE—  
THELEPHORACEAE

(a. Pileus x1; b. Spores, with or without basidia x1000;  
except as otherwise indicated)

1. *Calocera viscosa* (Pers.) Fr.  
(Killermann Nat. Pfl. p. 122)  
b. x300 (after Brefeld)
2. *Tremellodon gelatinosum* (Scop.) Pers.  
(Id. p. 118, after Moeller)
3. *Sparassis crispa* (Wulf.) Fr.  
a. (Clem. Minn. Mushrooms. f. 73)  
b. (Krieg. Fung. Sax. no. 858)
4. *Pistillaria micans* (Pers.) Fr.  
(Killermann Ib. p. 153)  
b. x500  
c. Sporophores x25
5. *Clavaria botrytis* Pers.  
(Id. p. 155)
6. *Physalacria inflata* Pk.  
(Id. p. 153)  
b. (U. S. D. A., Martin no. 498)
7. *Craterellus cornucopiodes* (L.) Pers.  
(U. S. D. A., James)
8. *Stereum hirsutum* (Willd.) Pers.  
(U. S. D. A. Ex. Herb. Kew no. 10683)
9. *Thelephora terrestris* Ehrh.  
(Killermann Ib. p. 147)  
b. x300
10. *Corticium roseum* Pers.  
(Krypt. Exs. Vienna Mus. no. 715)
11. *Hypochnus ferrugineus* (Pers.) Fr.  
(Rel. Farl. no. 330)
12. *Solenia candida* Pers.  
(Killermann Ib. p. 149)
13. *Coniophora cerebella* (Pers.) Schroet.  
(Id. p. 137)  
b. x300
14. *Exobasidium vaccini* (Fkl.) Wor.  
(Id. p. 132, after Woronin)  
a. Habit x1  
b. x712  
c. Section of hymenium x620  
d. Germinating spores x620

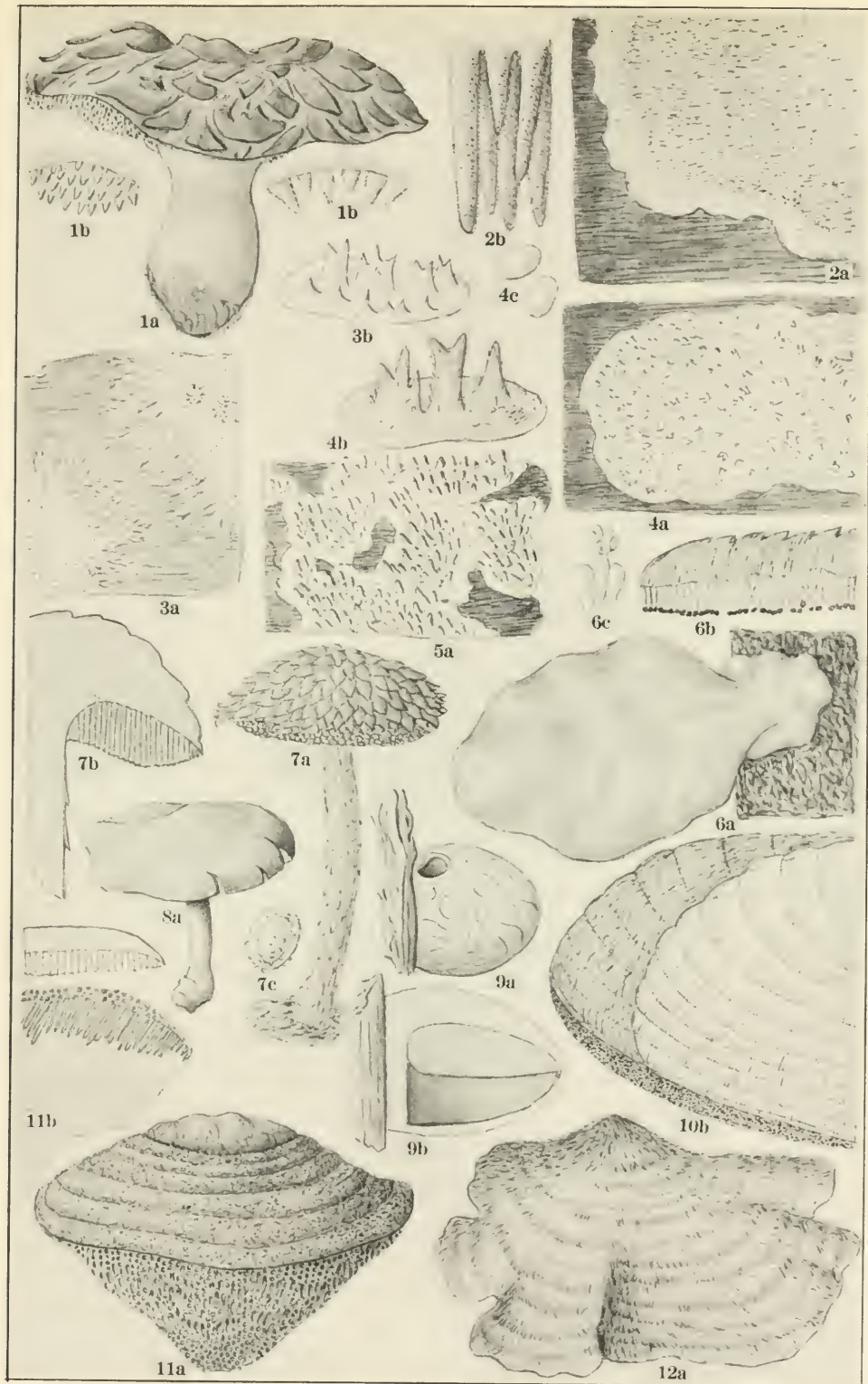


## PLATE 43

### HYDNACEAE—POLYPORACEAE

(a. Pileus x1; b. Section of pileus x1; c. Spores; except as otherwise indicated)

1. *Hydnum imbricatum* L.  
(U. S. D. A., Bres., 1902)
  - a.  $\times\frac{1}{2}$  (Clem. Minn. Mushrooms p. 105)
  - b. Detail of teeth  $\times 10$ ; also  $\times 25$
2. *Hydnochaete badia* Bres.  
(Killermann Nat. Pfl. p. 163)
  - b. Detail of teeth  $\times 20$
3. *Odontia fimbriata* Pers.  
(Id. p. 161)
  - b. Detail of teeth  $\times 25$
4. *Lopharia lirellosa* K. & M.  
(Id. p. 163)
  - b. Detail of teeth  $\times 10$
  - c. Spores  $\times 500$
5. *Radulum orbiculare* Fr.  
(Id.)
6. *Fistulina hepatica* (Schaeff.) Fr.  
(Id. p. 204)
  - a.  $\times\frac{1}{6}$
  - c. Basidia and spores  $\times 380$  (after Brefeld)
7. *Strobilomyces strobilaceus* (Scop.) Berk.  
(Id. p. 205)
  - a.  $\times\frac{1}{2}$
  - c.  $\times 1000$
8. *Polyporus brumalis* (Pers.) Fr.  
(Krieg. Fung. Sax. no. 1458)
9. *Cryptoporus volvatus* (Pk.) Shear  
(U. S. D. A., Flowers no. 13138)
10. *Fomes officinalis* (Fr.) Bres.  
(Killermann Ib. p. 189)
  - b.  $\times\frac{1}{6}$
11. *Trametes pini* (Brot.) Fr.  
(Id. p. 195)
  - a.  $\times\frac{1}{6}$
12. *Daedalea unicolor* (Bull.) Fr.  
(Id. p. 197)

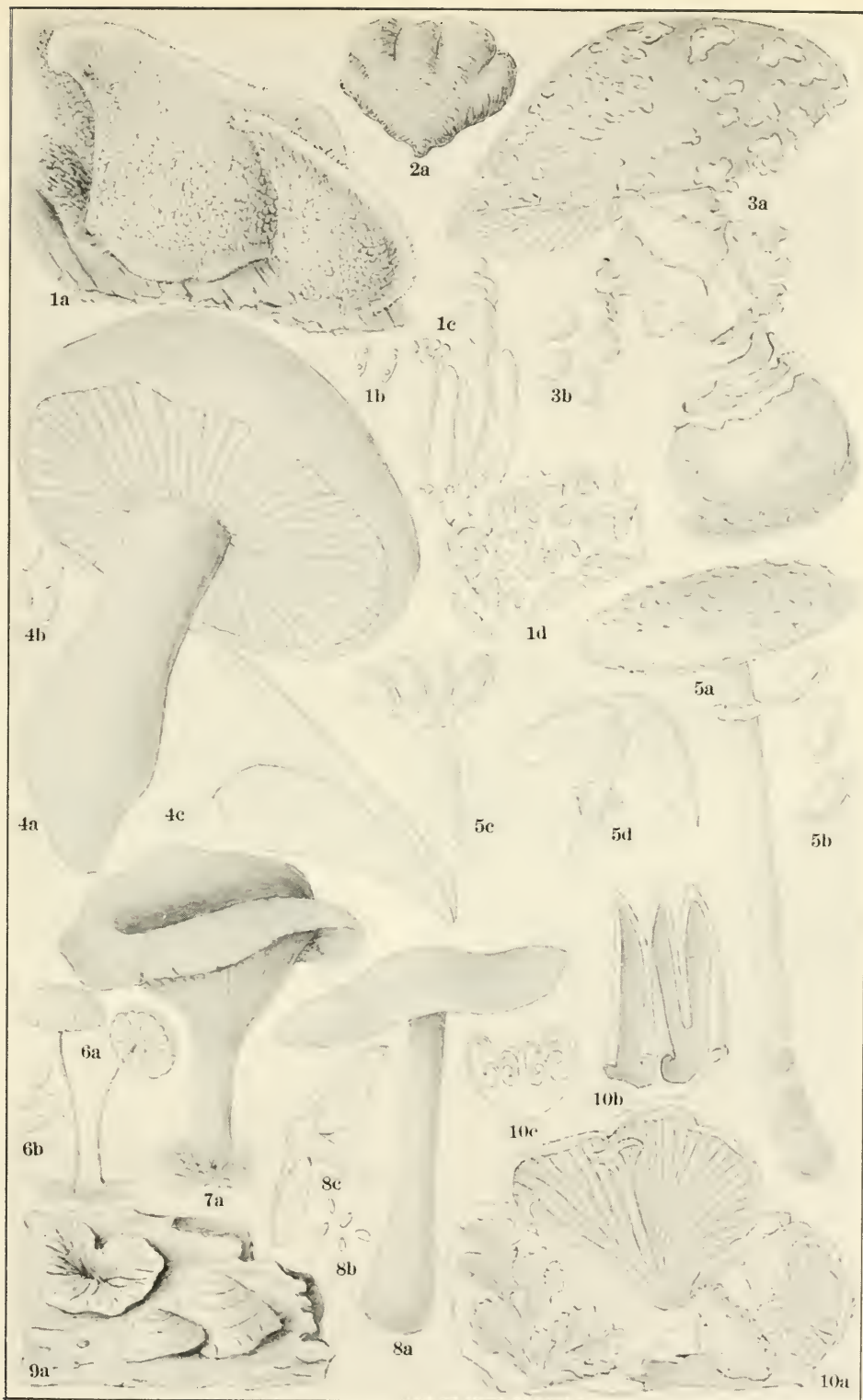


## PLATE 44

### POLYPORACEAE—AGARICACEAE

(a. Pileus x1; b. Spores)

1. *Merulius tremellosus* Schrad.  
(Killermann Nat. Pfl. p. 171)  
c. Basidia and cystidia  
d. Hymenium x35
2. *Cyclomyces fuscus* Kze.  
(Id. p. 201)
3. *Amanita muscaria* (L.) Pers.  
a. (Clem., Colo.)  
b. (Ricken Blätterpilze pl. 79)
4. *Tricholoma personatum* Fr.  
(Ricken Ib. pl. 95)  
c. Gill attachment of *T. flavobrunneum*  
(Pl. 88)
5. *Lepiota procera* (Scop.) Fr.  
(Id. pl. 83)  
a. (Clem. Minn. Mushrooms p. 12)  
c. Basidium of *L. excoriata*  
d. Gill attachment of *L. cristata* (Pl. 84)
6. *Marasmius rotula* (Scop.) Fr.  
(Id. pl. 25)
7. *Cantharellus aurantiacus* (Wulf.) Fr.  
(Killermann Ib. p. 249)
8. *Collybia dryophila* (Bull.) Fr.  
(Ricken Ib. pl. 108)  
a. (Clem. Minn. Mushrooms pl. 1)  
c. Gill attachment of *C. rancida*
9. *Trogia crispa* (Pers.) Fr.  
(Killermann Ib. p. 249)
10. *Schizophyllum commune* Fr.  
(Id. p. 255)  
b. Lamellae  
c. Cross-section of same



## PLATE 45

### AGARICACEAE

(a. Pileus x1; b. Spores)

1. *Flammula flavida* (Schaeff.) Fr.  
(Ricken Blätterpilze pl. 58)  
c. Gill attachment x1
2. *Clitopilus prunulus* (Scop.) Fr.  
(Killermann Nat. Pfl. p. 243)
3. *Pluteus cervinus* (Schaeff.) Fr.  
(Ricken Ib. pl. 71)  
a. (Clem. Minn. Mushrooms p. 54)  
c. Cystidium
4. *Claudopus variabilis* (Pers.) W. G. Smith  
(Killermann Ib. p. 243)
5. *Naucoria pediades* Fr.  
(Clem. Minn. Mushrooms p. 67)
6. *Agaricus campestris* L.  
(Killermann Ib. p. 239)  
b. Basidium and spores
7. *Entoloma rhodopolium* Fr.  
(Ricken Ib. pl. 73)
8. *Coprinus comatus* Fr.  
(Killermann Ib. p. 232)
9. *Hypholoma appendiculatum* (Bull.) Fr.  
(Ricken Ib. pl. 64)  
a. (Clem. Minn. Mushrooms p. 78)  
c. Cystidium
10. *Crepidotus mollis* (Schaeff.) Fr.  
(Killermann Ib. p. 219)
11. *Gomphidius viscidus* (L.) Fr.  
(Id. p. 231)  
a. x $\frac{1}{2}$



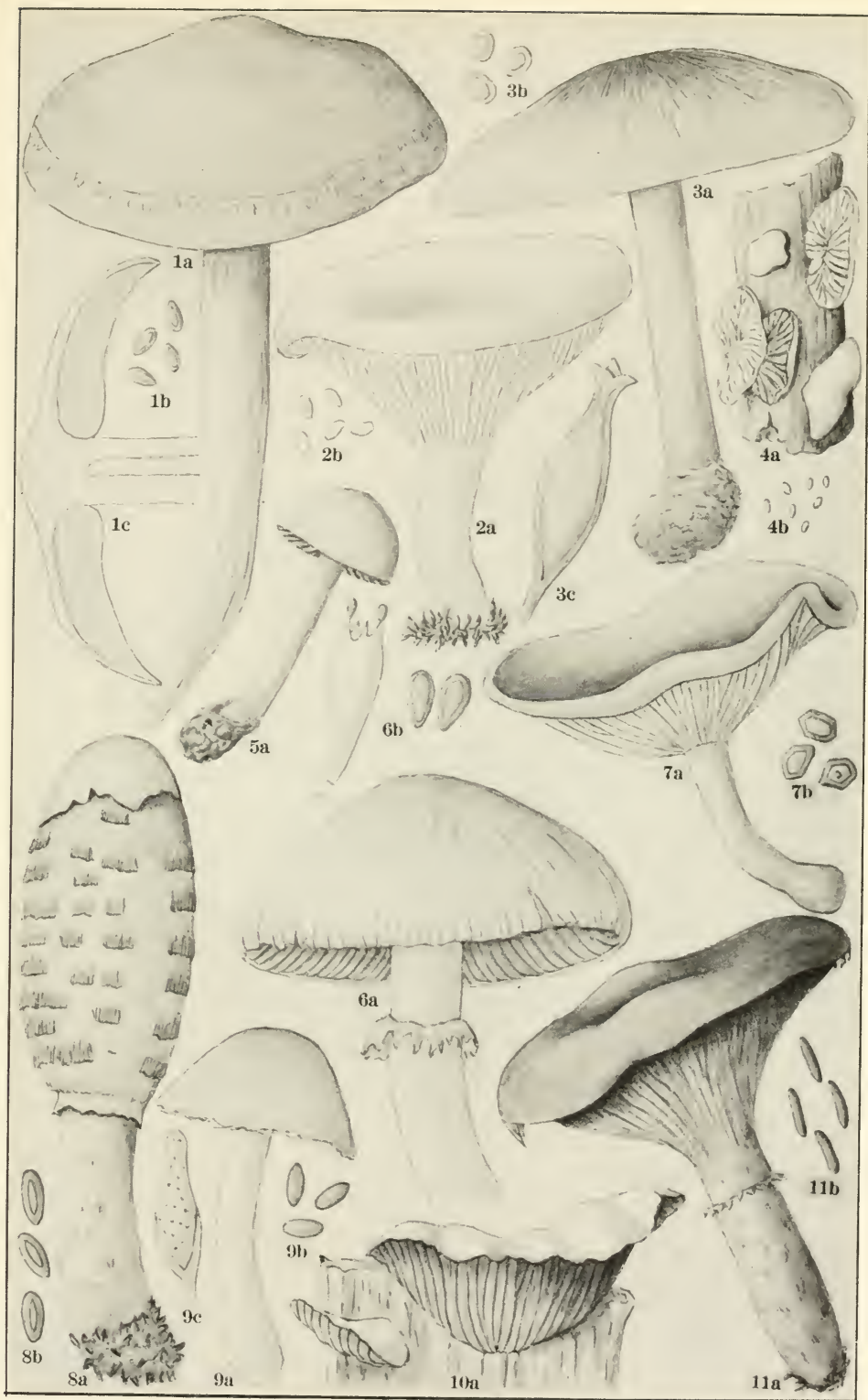
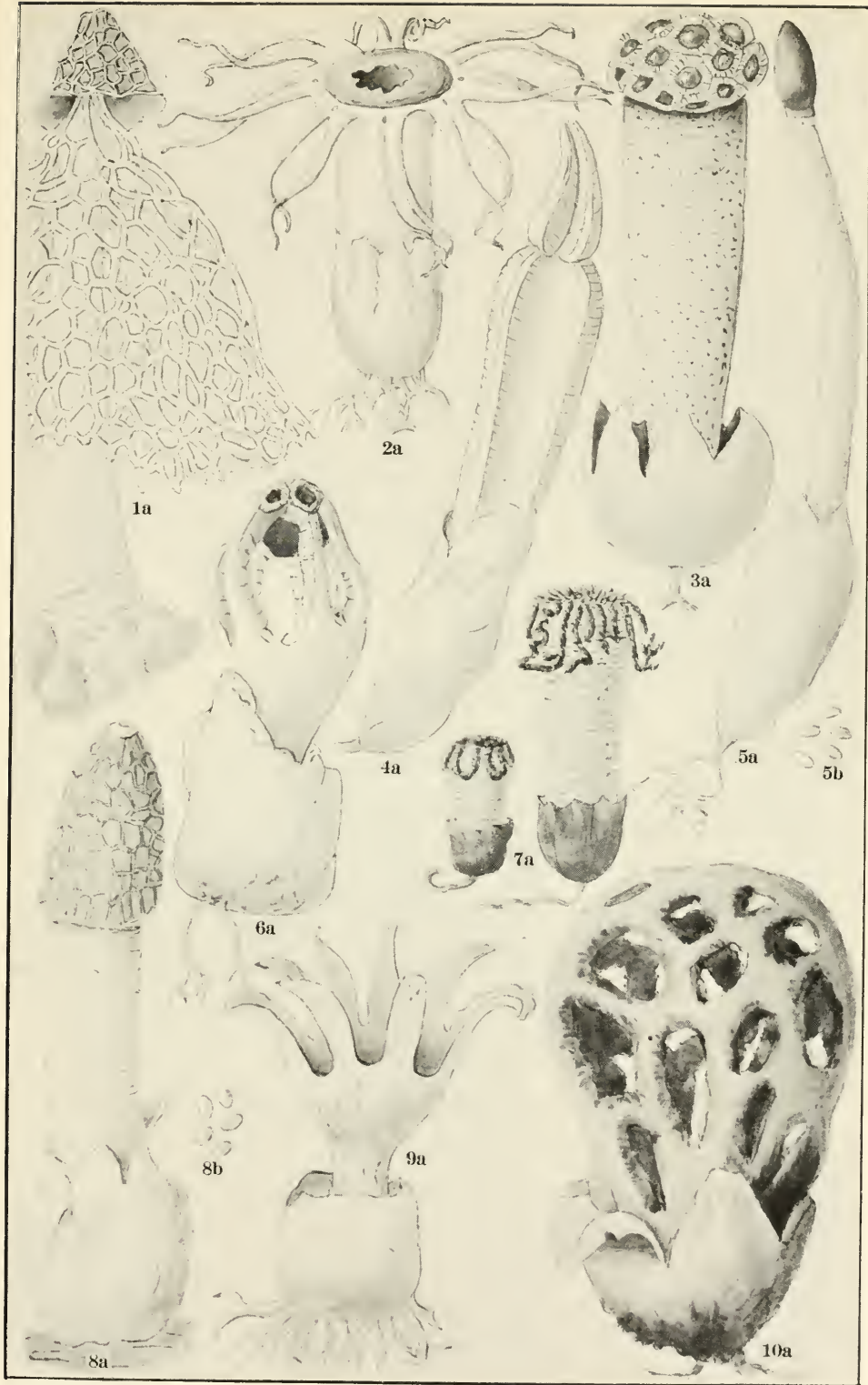


PLATE 45

**PLATE 46**  
**PHALLACEAE**

(a. Receptacle; b. Spores  $\times 750$ )

1. **Dictyophora phalloidea** Desv.  
(Fischer Nat. Pfl. p. 294, after A. Moeller)  
a.  $\times \frac{2}{3}$
2. **Aseroe rubra** La Bill., forma **actinobola**  
(Id. p. 287, after Berkeley)  
a.  $\times \frac{2}{3}$
3. **Simblum sphaerocephalum** Schlecht.  
(Id. p. 284, after Gerard)  
a.  $\times \frac{2}{3}$
4. **Lysurus mokusin** (Cib.) Fr.  
(Id. p. 285, after Cibot)
5. **Mutinus caninus** (Huds.) Fr.  
(Hollos Gast. Hung. pl. 1)
6. **Colus hirundinosus** Cav. & Sech.  
(Fischer Ib. p. 285, after Tulasne)  
a.  $\times 1$
7. **Dictyobole texensis** (Atk. & Long.)  
(Atkinson Bot. Gaz. 34:43, f. 3)
8. **Phallus impudicus** L.  
a.  $\times \frac{1}{2}$  (Fischer Ib., p. 293)  
b. (Hollos Ib.)
9. **Anthurus muellerianus** Kalch.  
(Lloyd Syn. Phall. p. 42)
10. **Clathrus cancellatus** L.  
(Fischer Ib. p. 282)



## PLATE 47

### LYCOPERDACEAE

(a. Peridium x1; b. Section of same x1)

1. *Gyrophragmium delilei* Mont.  
(Fischer Nat. Pfl. p. 303, after Montagne)  
b. (From young specimen)
2. *Secotium erythrocephalum* Tul.  
(Id. p. 300, after Tulasne)  
c. Basidium and spores
3. *Cauloglossum transversarium* (Bosc.) Fr.  
(Lloyd Myc. Notes pl. 40)
4. *Podaxon carcinomalis* (L.) Fr.  
(Fischer Ib. p. 332, after Schweinfurth)  
a. x $\frac{1}{2}$
5. *Geaster pectinatus* Pers.  
(Hollos Gast. Hung. pl. 8, f. 1)
6. *Lycoperdum gemmatum* Batsch.  
(Fischer Ib. p. 317)
7. *Bovista nigrescens* Pers.  
(Hollos Ib. pl. 22, f. 42)
8. *Broomeia congregata* Berk. & Curt.  
(Fischer Ib. p. 323)  
b. Section of stroma x1 (after Murray)  
c. Spores (after Berkeley)
9. *Tylostoma mammosum* Fr.  
(Dried specimen)
10. *Pisolithus crassipes* DC.  
(Fischer Ib. p. 337)  
a. x $\frac{2}{3}$
11. *Scleroderma vulgare* Hornem.  
(Id. p. 336, after Tulasne)
12. *Catastoma circumscissum* (B. & C.) Morg.  
(Id. p. 318, after Morgan)  
a. Peridium; upper half reversed
13. *Mitromyces lutescens* Schw.  
(Lloyd Gen. Gast. pl. 5, f. 30)

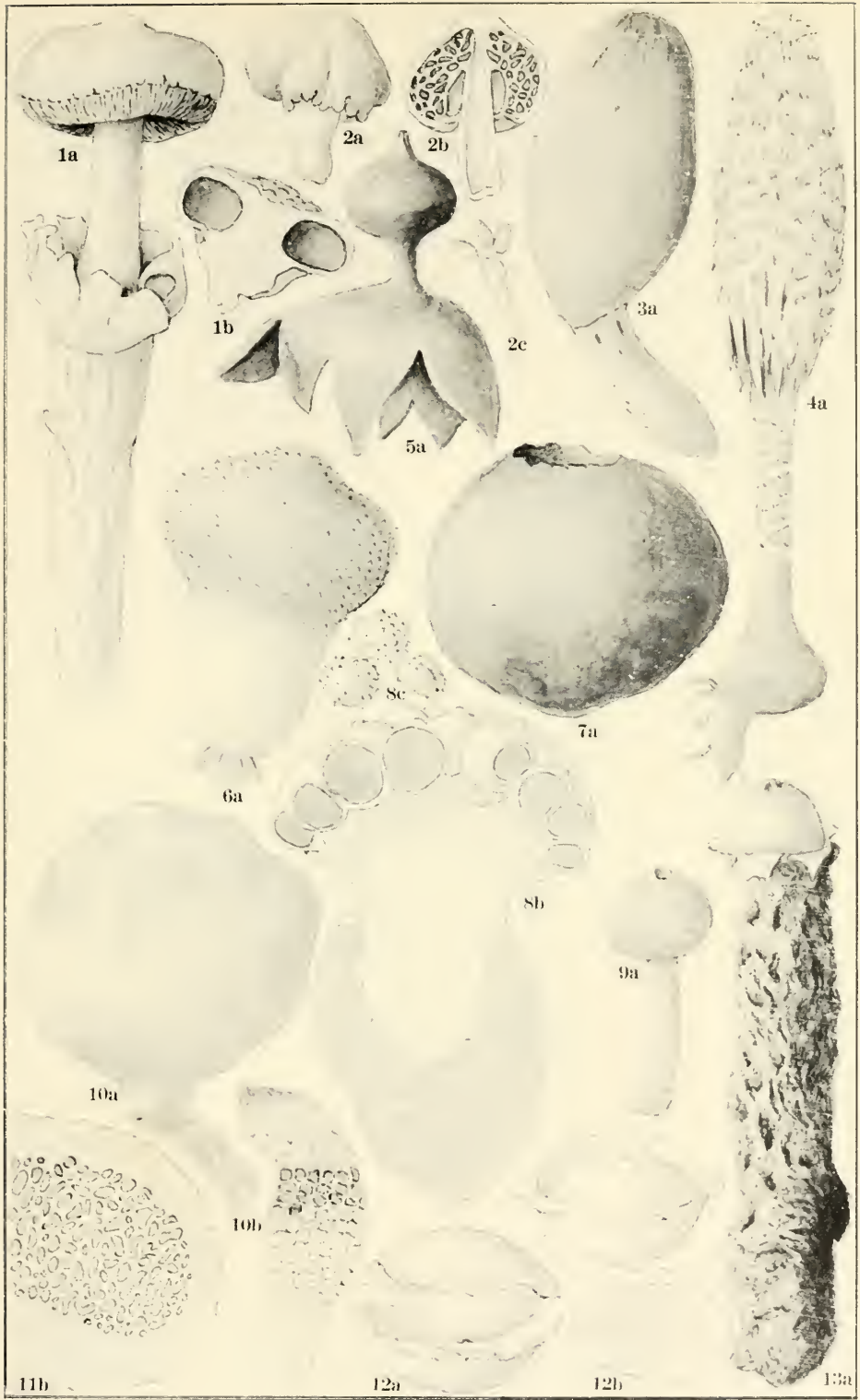


PLATE 47

## PLATE 48

### HYMENOGASTRACEAE—NIDULARIACEAE

(a. Peridium x1; b. Section of peridium; c. Basidia and spores)

1. *Macowanites agaricinus* Kalchbr.  
(Fischer Nat. Pfl. p. 300)  
a. (After Kalchbrenner)
2. *Hymenogaster tener* Berk.  
(Id. p. 309, after Tulasne)  
b. x3½  
c. x450
3. *Gautieria morchellaeformis* Vitt.  
(Id. p. 304, after Vittadini)
4. *Rhizopogon luteolus* Fr.  
(Id. p. 311, after Tulasne)  
b. x14
5. *Hysterangium clathroides* Vitt.  
(Id. p. 305)  
b. x2  
c. (After Tulasne)
6. *Nidularia australis* Tul.  
(Id. p. 326)
7. *Cyathus striatus* (Huds.) Hoffm.  
(Id. p. 328)  
a. (Holloš Fung. Hung. pl. 28, f. 7);  
detail (after Tulasne)
8. *Crucibulum vulgare* Tul.  
(Id. p. 327)
9. *Nidula candida* (Pk.) White  
(Lloyd Myc. Notes pl. 103)
10. *Sphaerobolus stellatus* Tode  
(Fischer Ib. p. 345)  
a. x4  
b. x60  
c. x1200

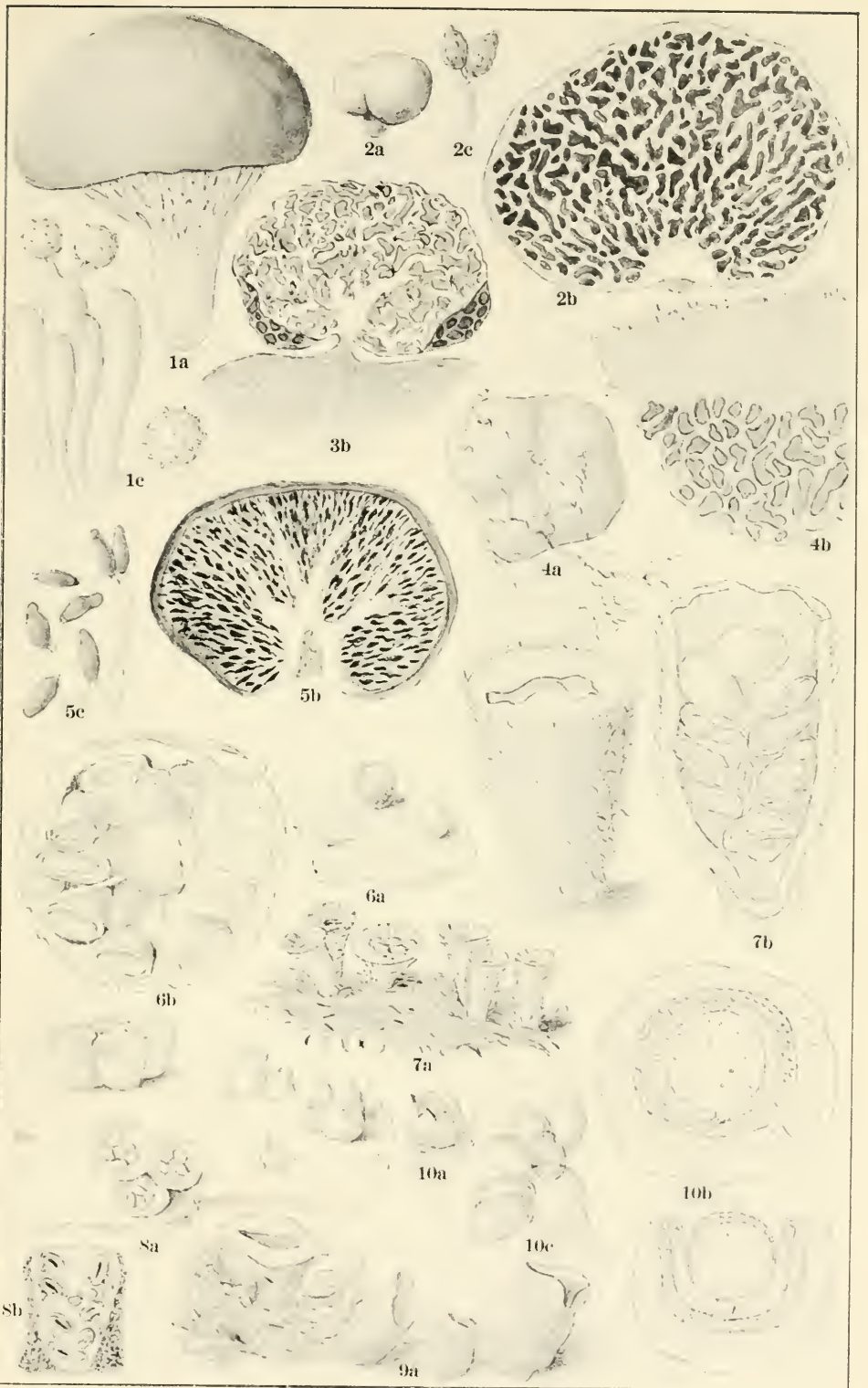
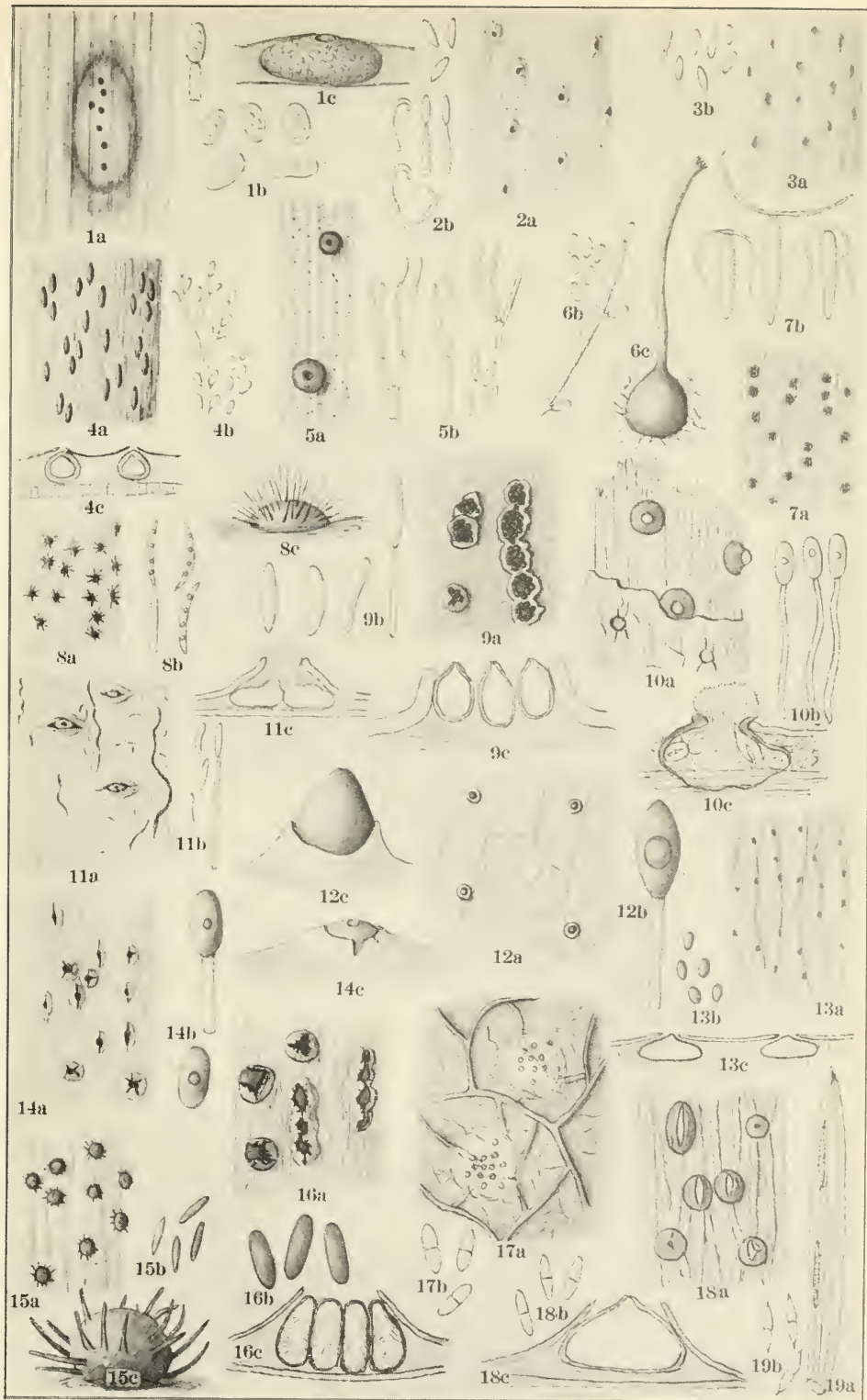


PLATE 49  
PHOMACEAE

(a. Habit x5, represented in moist condition; b. Basidia and conidia x500; c. Pycnidium or section of pycnidia; except as otherwise indicated)

1. *Phyllosticta convallariae* Pers.  
(Tranz. & Sereb. Myc. Ross. no. 280)  
c. x100
2. *Phomopsis oncostoma* (Thuem.) Hoehn.  
(U. S. D. A., Herb. Bres., 1889)
3. *Phoma herbarum* West  
(Krieg. Fung. Sax. no. 1841)
4. *Dendrophoma pleurospora* Sacc.  
a. (Syd. Myc. Germ. no. 265)  
b. (Sacc. Fung. Ital. no. 1451)  
c. x25 (Id.)
5. *Crocicreas gramineum* Fr.  
(Fkl. Fung. Rhen. no. 548)
6. *Sphaeronema aquaticum* Jacz.  
b. x1000 (U. S. D. A., Bates no. 2663)  
c. (Lind. Nat. Pfl. p. 356, after Jaczewski)
7. *Neottiospora arenaria* Syd.  
(Syd. Ib. no. 1124)
8. *Vermicularia dematium* (Pers.) Fr.  
(Krieg. Fung. Sax. no. 2286)  
a. x10  
c. x100
9. *Dothiorella gregaria* Sacc.  
(Cav. Fung. Long. Exs. no. 138)  
c. x25
10. *Rabenhorstia tiliae* Fr.  
(E. & E. N. A. Fung. no. 2522)  
c. x15 (Tulasne Sel. Fung. Carp. pl. 19, f. 13)
11. *Cytospora leucostoma* (Pers.) Sacc.  
(Syd. Ib. no. 1126)  
b. x1000  
c. x10
12. *Harknessia eucalypti* Cke.  
(Ellis N. A. Fung. no. 633)  
a. x10  
c. x50
13. *Coniothyrium fuckeli* Sacc.  
(Petr. Fl. Bohem. no. 1913)  
b. x1000  
c. (Sacc. Ib. no. 1179)
14. *Sphaeropsis malorum* Pk.  
(Cornell Exp. Sta. no. 2536)  
c. x30
15. *Chaetomella atra* Fkl.  
(Fkl. Ib. no. 1572)  
c. x50
16. *Haplosporella chlorostroma* Speg.  
(U. S. D. A., Barth. no. 1276)  
c. x50
17. *Ascochyta pisi* Lib.  
(Lib. Pl. Crypt. Ard. no. 59)
18. *Diplodina salicis* West  
(U. S. D. A., Pammel, 1886)  
c. x30
19. *Darluca filum* (Biv.) Cast.  
(Tranz. & Sereb. Ib. no. 233)



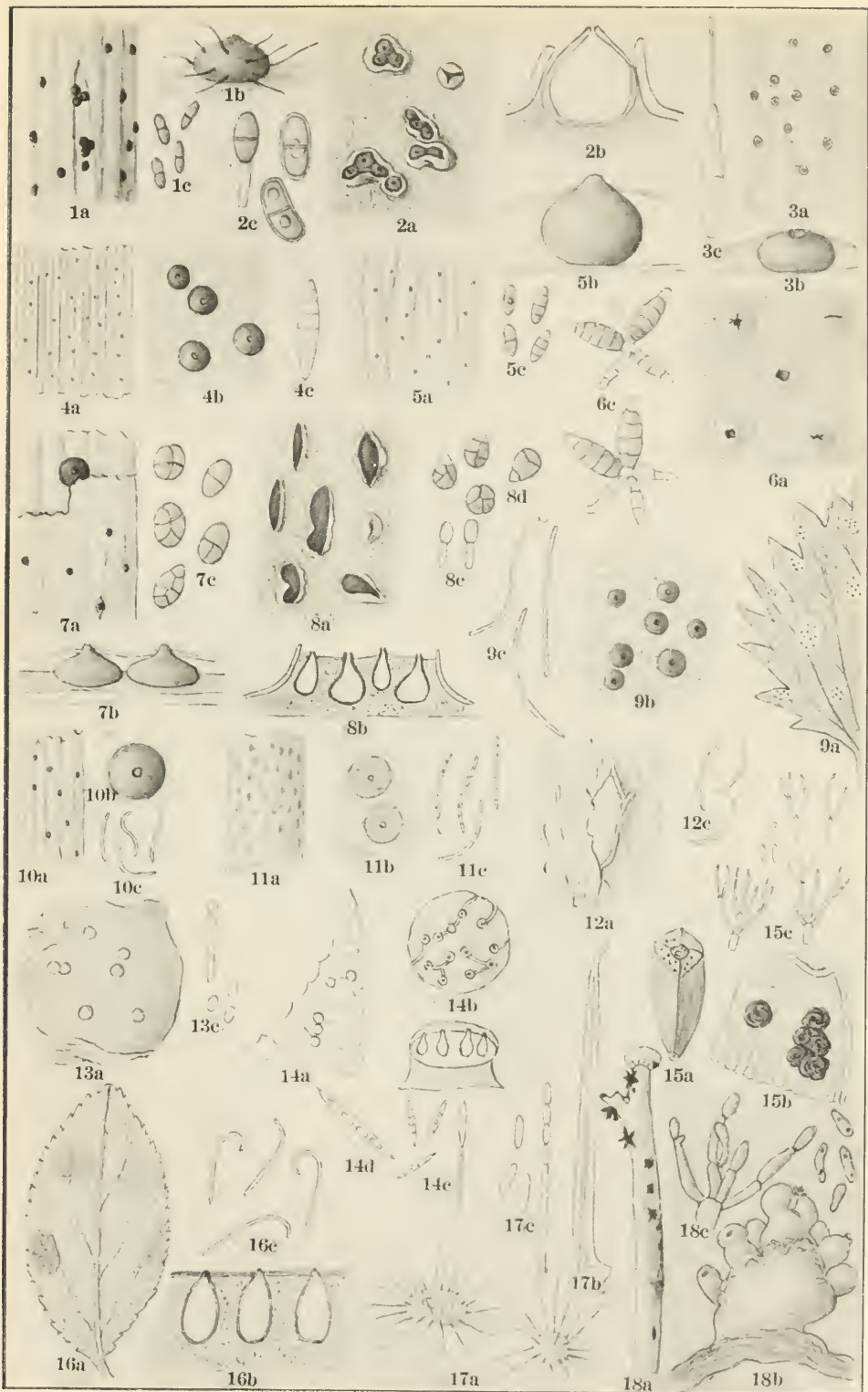


# PLATE 50

## PHOMACEAE—ZYTHIACEAE

(a. Habit x5, represented in moist condition; b. Pycnidia or section of same; c. Basidia and conidia x500; except as otherwise indicated)

1. *Chaetodiplodia caulina* Karst.  
(All. & Schn. Fung. Bav. no. 365)  
b. x50
2. *Diplodia mutila* Fr. & Mont.  
(Sacc. Myc. Ven. no. 339)  
b. x30
3. *Kellermannia yuccaegena* E. & E.  
(U. S. D. A., Cockerell, Colo. 1889)  
b. x10
4. *Stagonospora subseriata* (Desm.) Sacc.  
(Krieg. Fung. Sax. no. 1797)  
b. x50
5. *Hendersonia sarmentorum* Fr.  
(Kab. & Bub. Fung. Imp. Exs. no. 817)  
b. x50
6. *Prosthemium betulinum* Kze.  
(Petr. Fung. Pol. Exs. no. 506)  
c. x200
7. *Camarosporium quaternatum* (Hazsl.) Sacc.  
(Kab. & Bub. Ib. no. 16)  
b. x15
8. *Dichomera saubineti* (Mont.) Cke.  
(Petr. Ib. no. 370)  
b. Section of stroma x25
9. *Septoria urticae* Desm. & Rob.  
(Krieg. Ib. no. 1648)  
a. x1  
b. x100
10. *Rhabdospora herbarum* (Fr.) Sacc.  
(U. S. D. A., Diehl, no. 6410)  
b. x50
11. *Phlyctaena vagabunda* Desm.  
(Krieg. Ib. no. 1795)  
b. x25
12. *Cytosporina ludibunda* Sacc.  
(Sacc. Ib. no. 940)
13. *Zythia resinae* (Ehreb.) Karst.  
(Krieg. Ib. no. 2151)  
c. x1000
14. *Aschersonia tahitensis* Mont.  
(Lind. Nat. Pfl. p. 384, after Montagne)  
a. Habit x1  
b. Stroma from above and section of same x16  
d. Conidium x1000
15. *Diplozythia scolecospora* Bub.  
(Kab. & Bub. Fung. Imp. Exs. no. 278)  
a. x1  
b. x5
16. *Polystigmia rubra* (Desm.) Sacc.  
(All. & Schn. Ib. no. 378)  
a. x1  
b. x25
17. *Sirocyphis nivea* Clem.  
(Clem. Minn. Bot. Stud. 4:188)  
a. x20  
b. Hair x500  
c. Chain of conidia x500; separate conidia x1000
18. *Verrucaster lichenicola* Tobler  
(Abh. Nat. Ver. Bremen 21:364)  
a. x2  
b. Stroma and pycnidia x12  
c. x1000

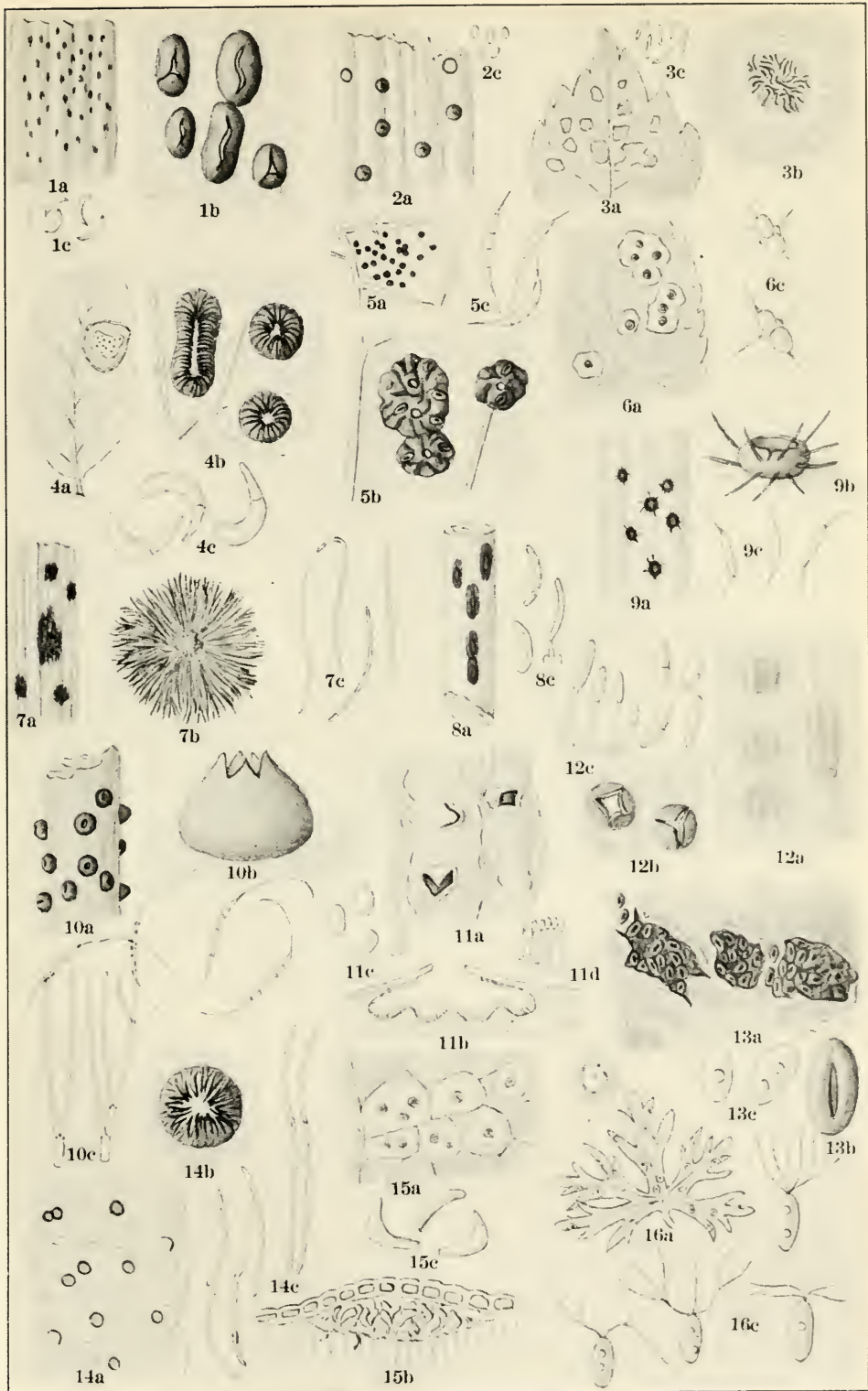


## PLATE 51

### LEPTOSTROMACEAE—DISCELLACEAE— MELANCONIACEAE

(a. Habit x5; b. Pycnidia x50, in wet condition; c. Conidia x500;  
except as otherwise indicated)

1. *Leptostroma scirpinum* Fr.  
(U. S. D. A.)
2. *Leptothyrium lunariae* Kze. & Schm.  
(Krieg. Fung. Sax. no. 948)
3. *Melasmia acerina* Lev.  
(All. & Schn. Fung. Bav. no. 379)  
a. x1  
b. x5
4. *Kabatia latemarensis* Bub.  
(Kab. & Bub. Fung. Imp. Exs. no. 180)  
a. x1
5. *Discosia artocreas* (Tode) Fr.  
(Petr. Fung. Pol. Exs. no. 41)  
a. x1
6. *Entomosporium maculatum* Lev.  
(U. S. D. A., New Jersey, 1924)
7. *Actinothyrium graminis* Kze.  
(Syd. Myc. Germ. no. 1719)
8. *Leptostromella hysteroidea* (Fr.) Sacc.  
(Krieg. Ib. no. 1892)
9. *Dinemasporium gramineum* Lev.  
(E. & E. N. A. Fung. no. 3465)
10. *Heteropatella lacera* Fkl.  
(Fkl. Herb. Barb. Bois. no. 2441)
11. *Dothichiza populea* Sacc. & Br.  
(Krieg. Ib. no. 1100)  
b. Section of pycnidium (Br. & Cav. Fung.  
Par. no. 445)  
d. Basidia and conidia (Id.)
12. *Discella carbonacea* (Fr.) Berk. & Br.  
(Kab. & Bub. Ib. no. 476)  
b. x5
13. *Psilospora faginea* Rav.  
(U. S. D. A.)
14. *Protostegia magnoliae* Rav.  
(Rav. Fung. Am. Exs. no. 696)
15. *Gloeosporium ribis* (Lib.) Mont.  
(Br. & Cav. Ib. no. 222)  
b. Section of acervulus
16. *Pestalozziella subsessilis* S. & E.  
(Ellis N. A. Fung. no. 1223)  
a. x1; detail of spot x5



## PLATE 52

### MELANCONIACEAE

(a. Habit; b. Conidia x500; c. Section of acervulus; except as otherwise indicated)

1. *Blennoria buxi* Fr.  
(Herb. Barb. Bois no. 1854)  
a. Habit x1; detail x5  
b. (Sacc. Fung. Ital. f. 1092)
2. *Melanconium juglandinum* Kze.  
(Krieg. Fung. Sax. no. 348)  
a. Habit x1; detail x5
3. *Trullula olivascens* Sacc.  
(Cav. Fung. Long. Exs. no. 192)  
a. x5
4. *Didymosporium striola* Sacc.  
(Sacc. Ib. f. 1098)  
b. Separate conidia x500; with basidia x1000
5. *Septogloeum acerinum* (Pers.) Sacc.  
(Id. f. 1071)  
b. Separate conidia x500; with basidia x1000
6. *Scolecosporium fagi* Lib.  
(Kab. & Pub. Fung. Imp. Exs. no. 531)  
a. x3  
b. x200 (Lind. Nat. Pfl. p. 411)
7. *Coryneum umbonatum* Nees  
(Sacc. Myc. Ital. no. 1568)  
a. x3
8. *Asterosporium hofmanni* Kze.  
(Krieg. Ib. no. 349)  
a. x3  
b. Separate conidia x500; with basidia x200  
c. (U. S. D. A. Taylor)
9. *Pestalozzia funerea* Desm.  
(Br. & Cav. Fung. Par. no. 200)  
a. Habit x1; detail x3
10. *Phragmotrichum chailletti* Kze.  
(J. K. T. Fung. Ross. Exs. no. 347)  
a. x5
11. *Naemospora croceola* Sacc.  
(Krypt. Exs. Mus. Pal. Vind. no. 1937)  
a. x5  
b. Separate conidia x500; with basidia x1000  
(Lind. Nat. Pfl. p. 402, after Saccardo)
12. *Cylindrosporium padi* Karst.  
(E. & E. Fung. Colum. no. 1527)  
a. x5
13. *Cylindrosporium neesi* (Cda.)  
(Lind. Ib. p. 414, after Saccardo)  
a. x1

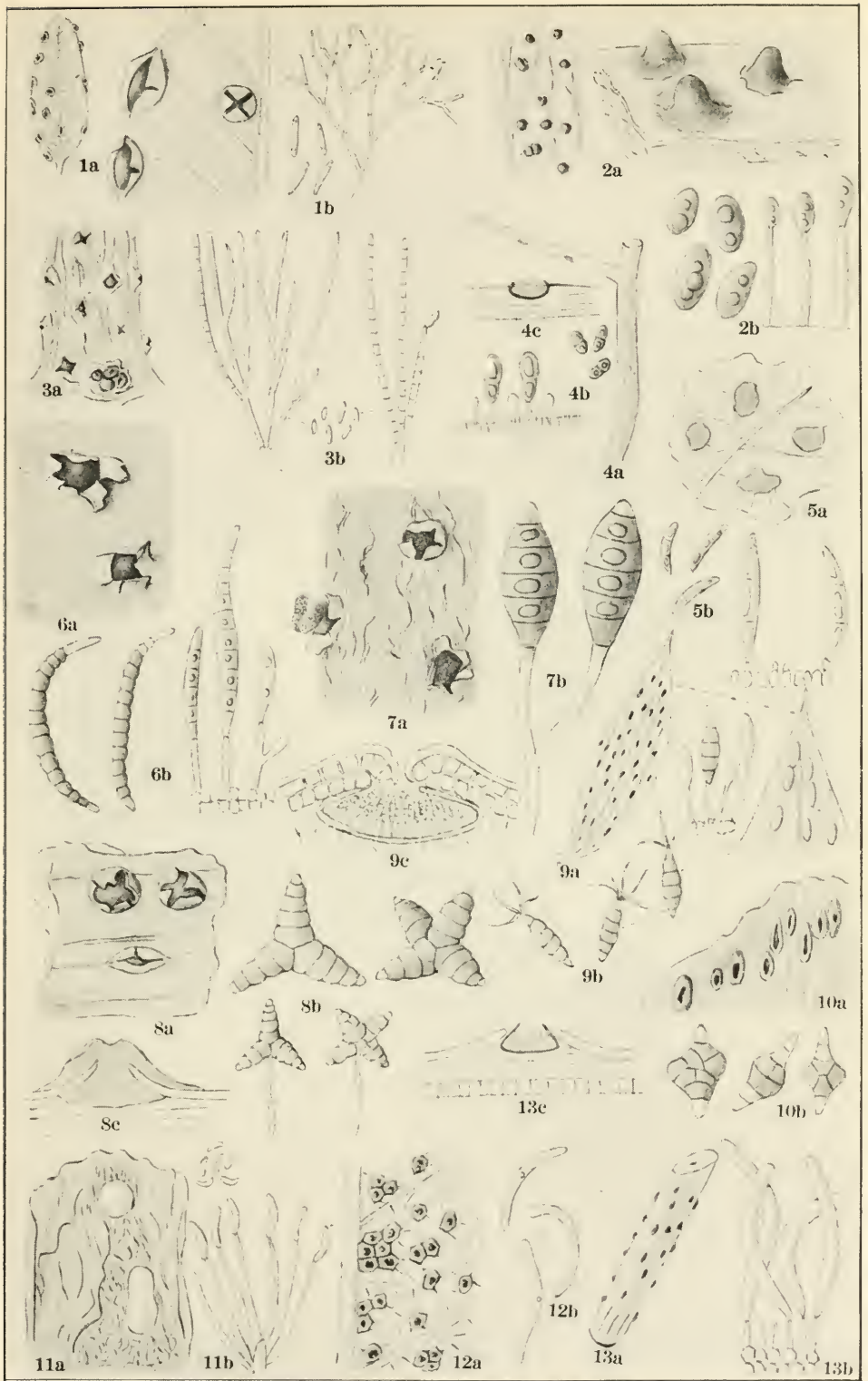


PLATE 53  
MONILIACEAE

(a. Conidiophores and conidia; b. Details of same more highly magnified; except as otherwise indicated)

1. *Chromosporium viride* Cda.  
(Sacc. Myc. Ven. no. 5166)  
a. x500
2. *Microstroma juglandis* (Bereng.) Sacc.  
(U. S. D. A.)  
a. Conidia from the side and top x500  
b. Conidiophores and conidia x1000
3. *Glomerularia corni* Pk.  
(U. S. D. A., Langlois)  
a. x400
4. *Fusidium carneolum* Sacc.  
(Sacc. Fung. Ital. f. 37)
5. *Monilia fructigena* Pers.  
(Br. & Cav. Fung. Par. no. 182)  
a. x200  
b. x500
6. *Oidium erysiphoides* Fr.  
(Id. no. 41)  
a. x200  
b. x500
7. *Rhopalomyces elegans* Cda.  
(Corda Prachtfl. pl. 2)
8. *Hyalopus mycophilus* Cda.  
(Corda Icon. Fung. 1:267)
9. *Haplotrichum capitatum* Lk.  
(Id. 1:265)
10. *Botryosporium pulchrum* Cda.  
(U. S. D. A., Herb. Ill. Taylor)  
a. x120  
c. Clusters of conidia  
d. Conidia x500
11. *Haplaria grisea* Lk.  
(Lind. Nat. Pfl. p. 433, after Saccardo)
12. *Amblyosporium botrytis* Fres.  
(Sacc. Fung. Ital. f. 708)
13. *Penicillium expansum* Lk.  
(Thom. U. S. D. A. Bull. 118, f. 1)
14. *Rhinotrichum repens* Preuss  
(Lind. Ib., after Preuss)



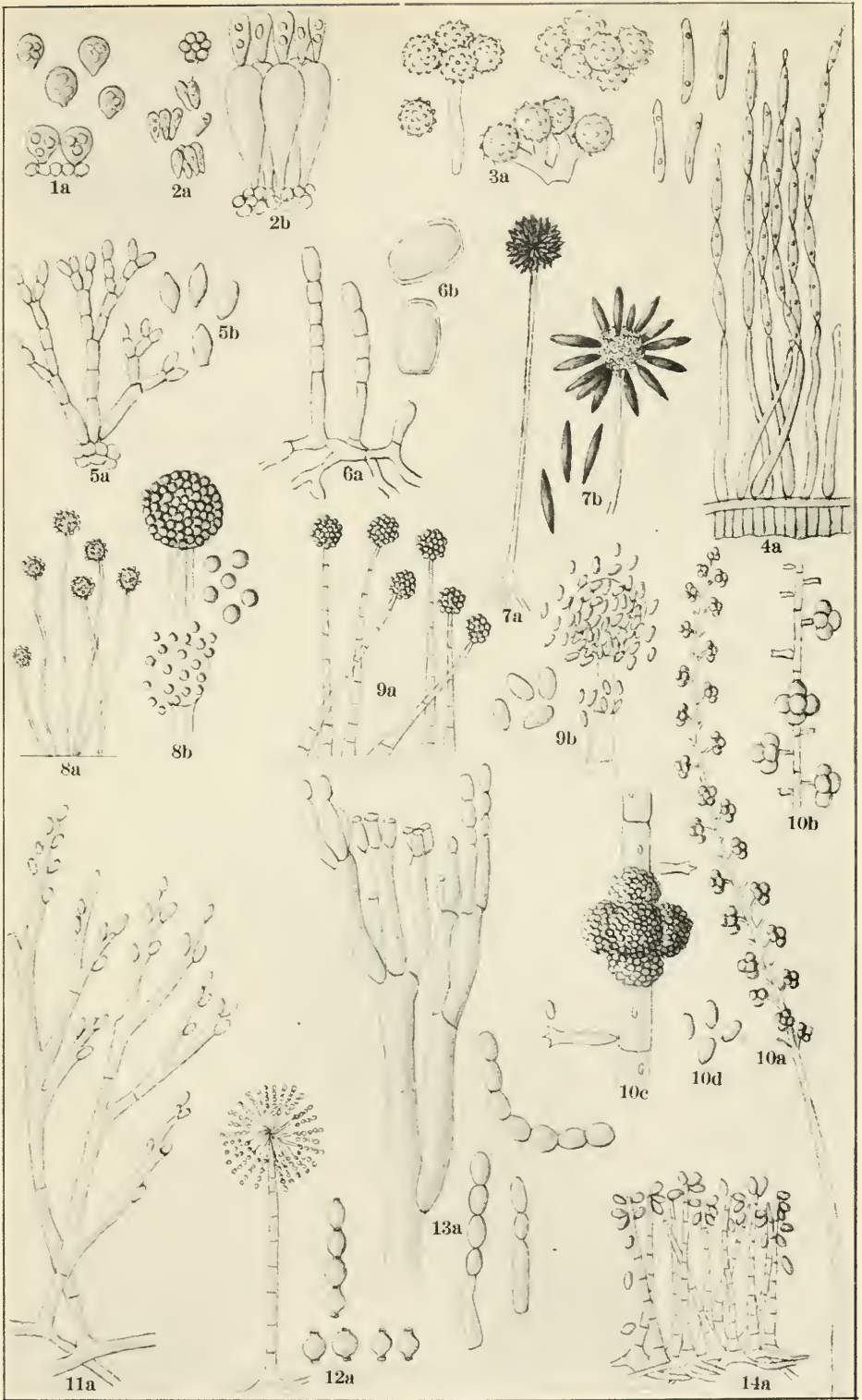


PLATE 54  
MONILIACEAE

(a. Conidiophores and conidia)

1. *Acremonium alternatum* Lk.  
(Lind. Nat. Pfl. p. 433, after Saccardo)
2. *Monosporium spinosum* Bon.  
(Sacc. Fung. Ital. f. 869)
3. *Sporotrichum roseum* Lk.  
(Id. f. 747)
4. *Botrytis cinerea* Pers.  
(Id. f. 699)
5. *Acrostalagmus cinnabarinus* Cda.  
(Corda Icon. 2:66)  
b. Tip of branch with conidium  
c. Branch with drop of mucilage and conidia
6. *Asterophora agaricicola* Cda.  
(Id. 4:24)
7. *Mycogone rosea* Lk.  
(Sacc. Ib. f. 867)
8. *Verticillium agaricinum* (Lk.) Cda.  
(Corda Ib. 2:68)
9. *Helicomycetes roseus* Lk.  
(Sacc. Ib. f. 813)
10. *Titaea callispora* Sacc.  
(Id. f. 1)
11. *Ramularia urticae* Ces.  
(Id. f. 992)
12. *Blastotrichum confervoides* Cda.  
(Corda Ib. 2:50)
13. *Cephalothecium roseum* Cda.  
(Id. 2:62)
14. *Arthrobotrys superba* Cda.  
(Corda Prachtfl. pl. 21)
15. *Gonatobotrys simplex* Cda.  
(Id. pl. 5)

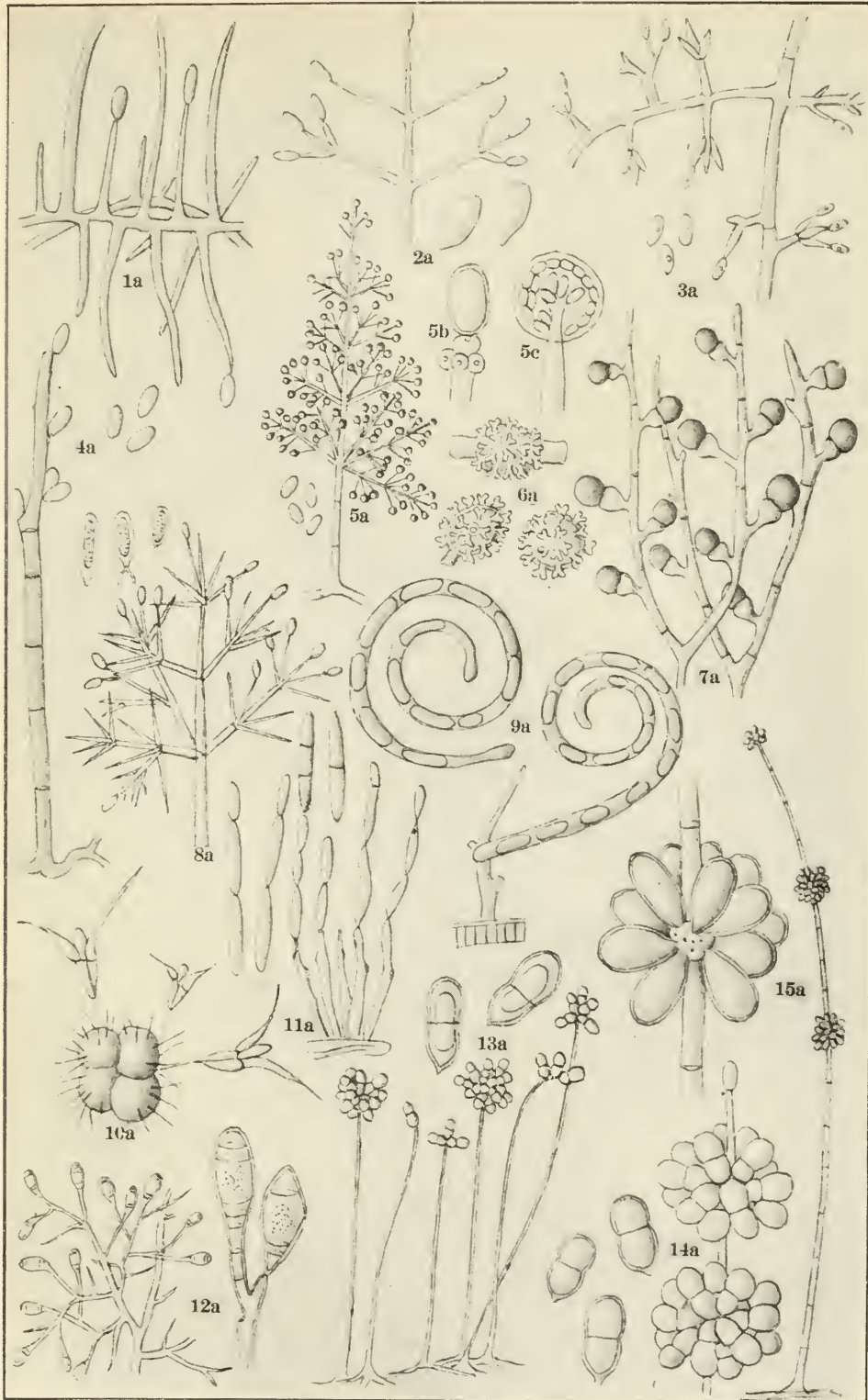
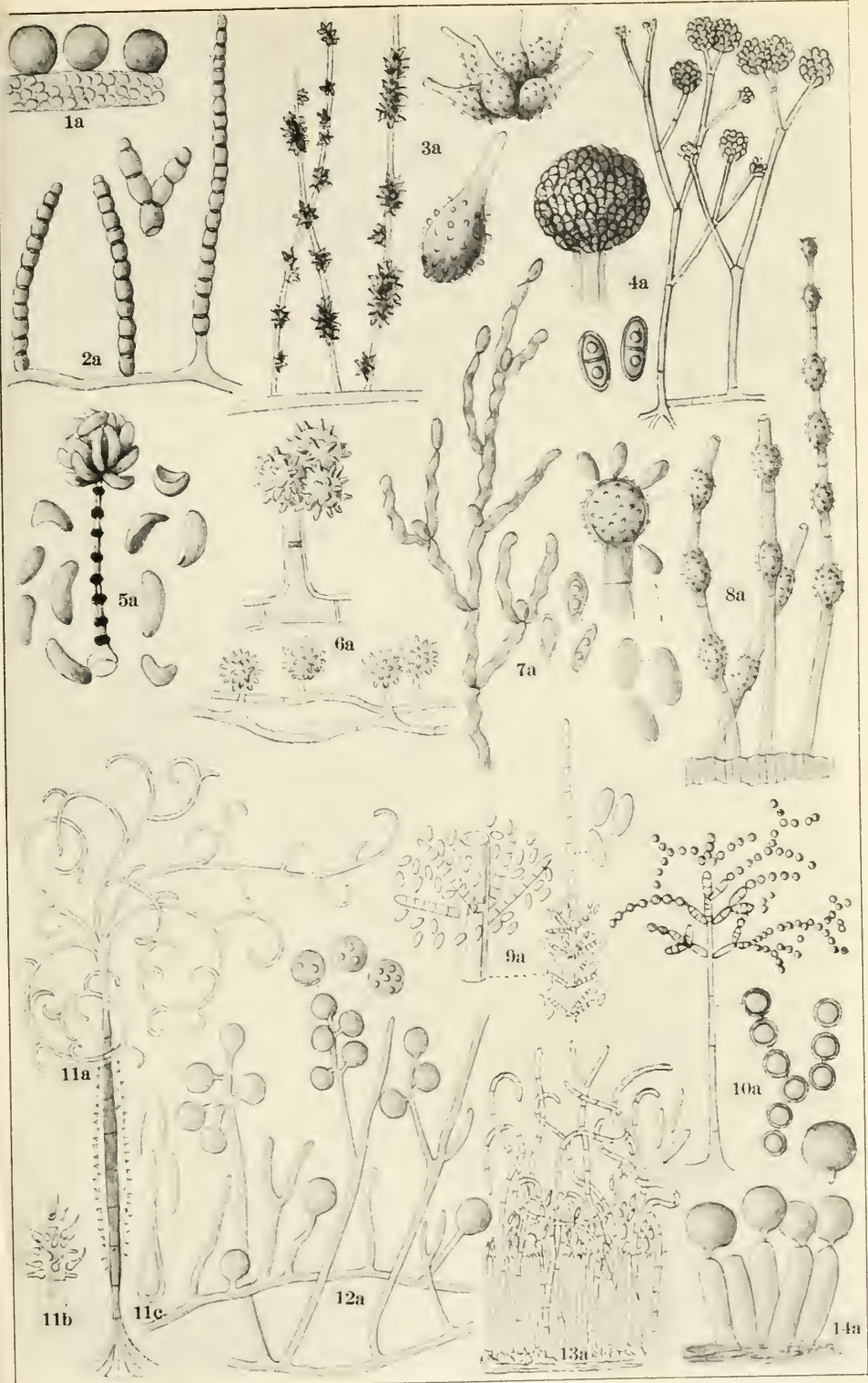


PLATE 54

PLATE 55  
DEMATIACEAE

(a. Conidiophores and conidia)

1. *Coniosporium apiosporiodes* Sacc.  
(Sacc. Fung. Ital. no. 732)
2. *Torula herbarum* Lk.  
(Id. f. 950)
3. *Echinobotryum atrum* Cda.  
(Corda Icon. 3:6)
4. *Stachobotrys atra* Cda.  
(Id. 1:278)
5. *Arthrinium curvatum* (K. & S.) Hoehn.  
(Id. 3:17)
6. *Zygodesmus fuscus* Cda.  
(Id. 4:81)
7. *Streptothrix fusca* Cda.  
(Corda Prachtfl. pl. 13)
8. *Gonatobotryum fuscum* Sacc.  
(Sacc. Ib. f. 48)
9. *Mesobotrys fusca* (Cda.) Sacc.  
(Corda Icon. 1:243)
10. *Hormodendrum olivaceum* (Cda.) Bon.  
(Id. 3:35)
11. *Ceratocladium microspermum* Cda.  
(Corda Prachtfl. pl. 20)  
a. Conidiophore with terminal appendages  
b. Portion of conidiophore showing basidia  
c. Basidium and conidia
12. *Glenospora curtisi* B. & Desm.  
(Sacc. Ib. f. 792)
13. *Sarcopodium fuscum* (Cda.) Sacc.  
(Corda Icon. 5:20)
14. *Hadrotrichum phragmites* Fkl.  
(Sacc. Ib. f. 796)

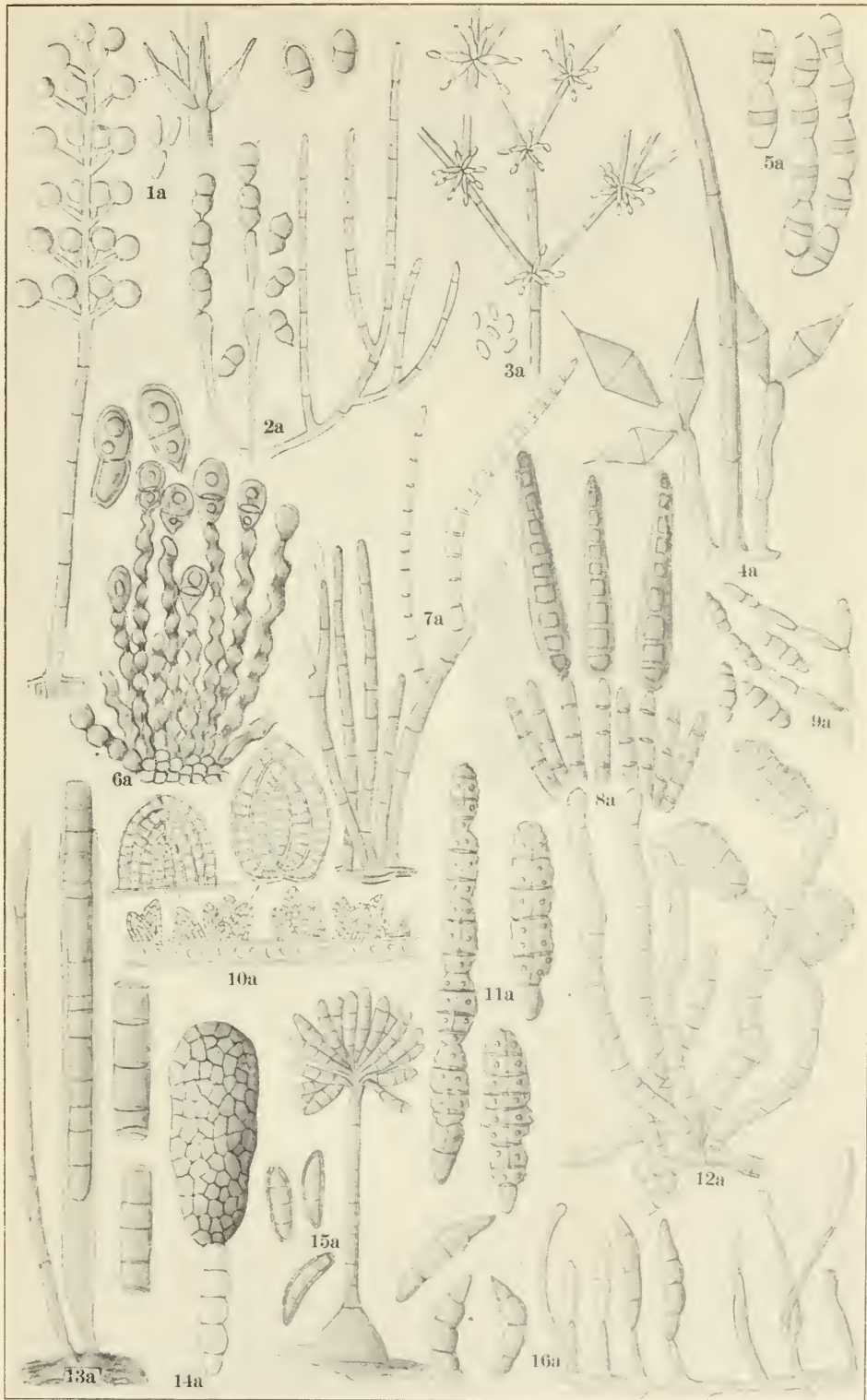


## PLATE 56

### DEMATIACEAE

(a. Conidiophores and conidia)

1. *Stachylidium bicolor* Lk.  
(Sacc. Fung. Ital. f. 50)
2. *Cladotrichum polysporum* Cda.  
(Corda Icon. 4:83)
3. *Gonytrichum caesium* Nees  
(Sacc. Ib. f. 791)
4. *Beltrania rhombica* Penz.  
(Id. f. 1204)
5. *Bispora monilioides* Cda.  
(Corda Ib. 1:143)
6. *Polythrincium trifolii* Kze.  
(Id. 3:25)
7. *Cercospora apii* Fres.  
(Sacc. Ib. f. 667)
8. *Helminthosporium tiliae* Fr.  
(Id. f. 823)
9. *Septonema secedens* Cda.  
(Corda 1:147)
10. *Dictyosporium elegans* Cda.  
(Id. 2:29)
11. *Sirodesmium granulatum* DeN.  
(Sacc. Ib. f. 916)
12. *Macrosporium commune* Rab.  
(Id. f. 1207)
13. *Sporoschisma mirabile* B. & Br.  
(Id. f. 928)
14. *Sporodesmium cellulatum* Sacc.  
(Id. f. 907)
15. *Acrothecium bulbosum* Sacc.  
(Id. f. 6B)
16. *Fusariella viridatratra* Sacc.  
(Id. f. 45)



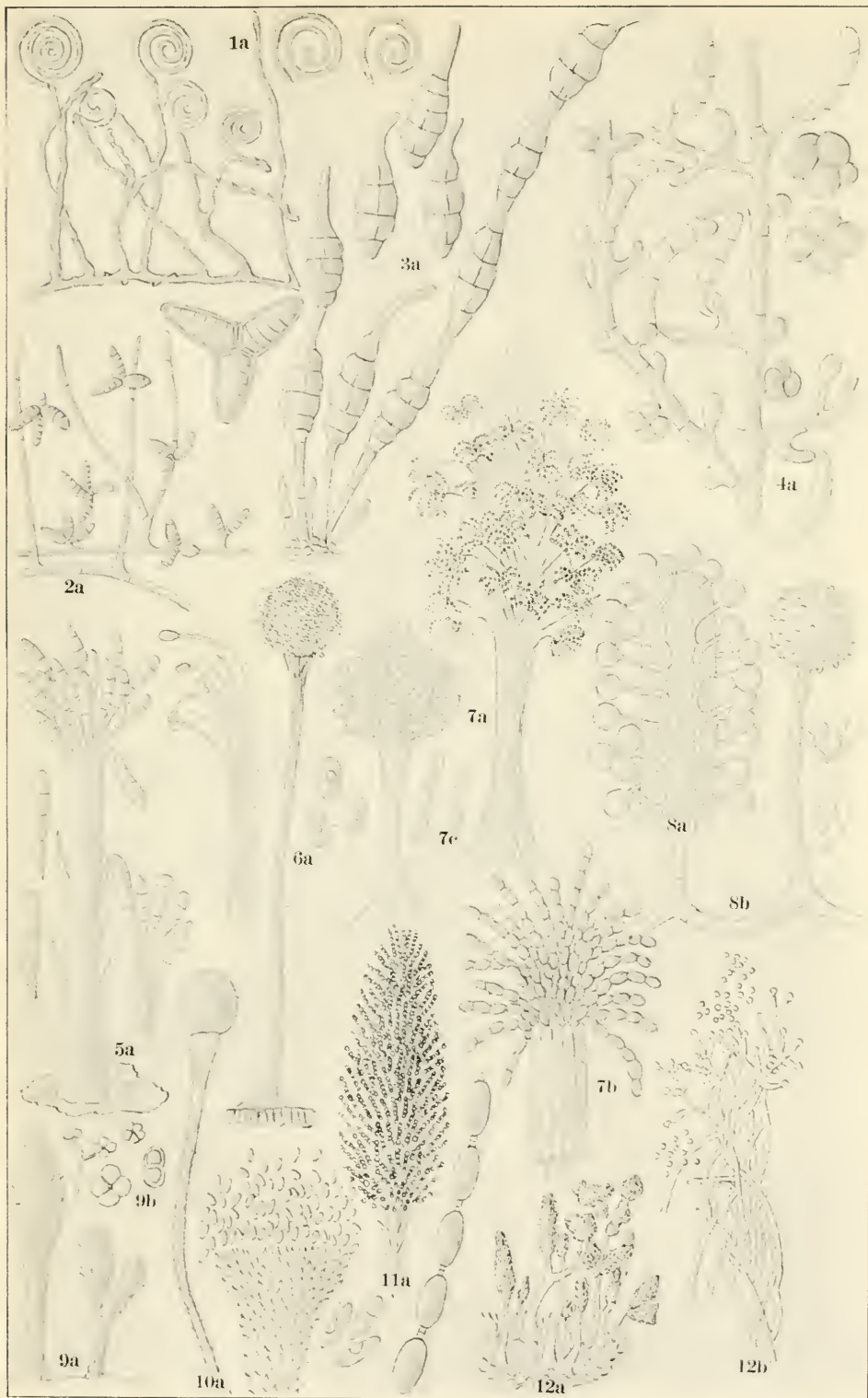
## PLATE 57

### DEMATIACEAE—STILBACEAE

(a. Conidiophore and conidia: nos. 1-4; synnema in addition:  
nos. 5-12)

1. *Helicosporium pulvinatum* (Nees) Fr.  
(Sacc. Fung. Ital. f. 811)
2. *Triposporium elegans* Cda.  
(Corda Icon. 1:220)
3. *Alternaria tenuis* Nees  
(Sacc. Ib. f. 737)
4. *Sarcinella heterospora* Sacc.  
(Id. f. 126)  
a. Conidiophore with both falcate and sarciniform conidia
5. *Atractium albicans* (Sacc.) Hoehn.  
(Id. f. 10)
6. *Sporocybe byssoides* (Pers.) Bon.  
(Id. f. 941)
7. *Coremium glaucum* Fr.  
(Corda Prachtfl. pl. 25)  
a. Different forms of the synnema  
b. Group of conidiophores with chains of conidia  
c. Conidia
8. *Gibellula pulchra* Cav.  
(Sacc. Ib. f. 46)  
b. Details
9. *Riessia semiophora* Fres.  
(Fres. Beitr. Myk. pl. 9)  
b. Top and side views of conidia
10. *Ciliciopus sanguineus* Cda.  
(Corda Icon. 4:91)
11. *Stysanus stemonites* (Pers.) Cda.  
(Id. 1:283)
12. *Isaria farinosa* (Dicks.) Fr.  
(Tulasne Sel. Fung. Carp. pl. 1)  
a. x1  
b. Detail x380





## PLATE 58

### TUBERCULARIACEAE

(a. Sporodochium; b. Conidiophores and conidia; except as otherwise indicated)

1. *Tubercularia vulgaris* Tode  
(Petr. Fl. Bohem. no. 592)  
a. x5  
b. x500
2. *Tuberculina persicina* Sacc.  
(Sacc. Fung. Ital. f. 964)
3. *Dendrodochium aurantiacum* Bon.  
(Id. f. 771)
4. *Cylindrocolla urticae* (Pers.) Bon.  
(Corda Icon. 2:113)
5. *Periola hirsuta* (Schum.) Fr.  
(Id. 2:106)  
a. Portion of sporodochium  
b. Chains of conidia
6. *Volutella ciliata* (A. & S.) Fr.  
(Sacc. Ib. f. 729)  
a. Side and top views
7. *Fusarium roseum* Lk.  
(Corda Ib. 1:55)
8. *Cosmariospora bizzozeriana* Sacc.  
(Sacc. Ib. f. 769)
9. *Chaetostroma atrum* Sacc.  
(Id. f. 752)
10. *Strumella olivatra* Sacc.  
(Id. f. 79)  
a. Hyphae
11. *Bactridium flavum* Kze.  
(Id. f. 767)
12. *Epicoccum nigrum* Lk.  
(Id. f. 1218)
13. *Exosporium melampsoroides* Sacc.  
(Sacc. Ib. f. 777)  
a. Section of sporodochium

