

REPORT OF THE BOTANIST.

To the Honorable the Board of Regents of the University of the State of New York:

GENTLEMEN — I have the honor of communicating to you the following statement of the work of the Botanist for 1885 ;

In the prosecution of the work on the State Herbarium, specimens of plants have been collected in the counties of Albany, Essex, Genesee, Herkimer, Orange, Rensselaer, Saratoga, Schoharie, and Ulster. Of the collected specimens, those representing one hundred and ninety-eight species have been prepared, mounted and added to the Herbarium. Of these, one hundred and fourteen species were not before represented therein. The remaining eighty-four species are illustrated more completely and satisfactorily by the added specimens.

Specimens have been received from nineteen contributors. A large number of these represent extra-limital species of fungi, but among those from this State are six species new to the Herbarium, and not among my collections of the past season. The whole number of added species, both collected and contributed, is two hundred and ten ; the whole number new to the Herbarium is one hundred and twenty. A list of the names of the added species is marked (A). A list of the names of the contributors and their respective contributions is marked (B).

Descriptions of forty-two species of fungi, which are deemed new or hitherto unpublished, have been prepared. A part of these have been illustrated by two plates of drawings. The descriptions of new species, together with a record of the occurrence and locality of others new to our flora, are in a part of the report marked (C).

A record of observations on common or well-known species not new to our flora is marked (D). It has reference to any thing peculiar, interesting, or instructive in the variation, distribution, behavior or habitat of the plant. Sometimes useful hints may be obtained by such observations. For example, a variety of the common blueberry, *Vaccinium Pennsylvanicum*, was noticed on the summit of one of the mountains in the northern part of Saratoga county. Its fruit was black and shining, destitute of bloom, very large, sweet, juicy and pleasant flavored. It grew in compact clusters at the ends of the branches, and could be easily and rapidly picked. Such a susceptibility to variation and improvement in the fruit of this plant, in its natural and wild condition, indicates for it a peculiar value and a possibility of usefulness under cultivation and domestication.

An interesting point in the behavior of some of our pulpy-fruited trees and shrubs the past season, and one that seems worthy of record, is their great productiveness. In this part of the State wild-cherry trees, cornel bushes, viburnums, wild gooseberry bushes, various blueberry bushes and the shadbush were all observed heavily laden with fruit. In the Adirondack region the crop of Canadian blueberries (*Vaccinium Canadense*) was remarkable both for its abundance and for the large size and fine quality of the berries. In the Albany market the fruit of the shadbush (*Amelanchier Canadensis*) was offered for sale under the name "blueberries," its very abundance, apparently, having prompted the attempt to introduce it. The name given it, however, was scarcely appropriate, since there is nothing in its botanical relations or in its color suggestive of it. This unusual fruitfulness extended in some instances to cultivated fruit trees. For example, pears were never more plentiful nor cheaper in our markets than in the season just passed. The cause of this exceptional productiveness is apparently, to a great extent, climatic, yet it is interesting to trace effects to causes, even when the latter are beyond our control. In the eastern and northern part of the State, at the time when these fruit trees and shrubs were in flower, there was almost continuous fair weather with little or no rain. This was favorable to the extensive pollenization of the flowers. Insects could ply their vocation and carry pollen from flower to flower, day after day, without interruption or hindrance. The consequence was the young fruit set in abundance. This was followed later in the season by frequent showers and generous rains, which afforded the necessary moisture for the proper and full development of the fruit. Possibly the late and severe frosts of the spring of 1884 may have contributed something toward this result, by diminishing the fruitfulness of that year, and thus leaving the trees and shrubs in a more vigorous condition this year, and, therefore, more capable of perfecting an abundant crop.

In pursuance of the plan of giving, from time to time, monographs of certain groups or genera of our Agaricini, descriptions have been written of the New York species of the genera *Pleurotus*, *Clandopus* and *Crepidotus*. To these genera belong such Agarics, mostly wood-inhabiting, as are either wholly destitute of a stem or have it lateral or eccentric. The spore characters have been given in all cases. The great importance of this in the descriptions of Agarics will readily be seen in some of the species now described. Thus *Pleurotus spathulatus*, the Spathulate Agaric, and *Pleurotus petaloides*, the Petal-like Agaric, have generally been considered one and the same species, probably through neglect of the spore characters. But it seems to me that any one examining the spores of the two forms will at once pronounce them distinct. The general neglect of the spore characters of Agarics by European authors is much to be regretted and is often the source of much perplexity in the identification of our species. The descriptions of the species of the three genera mentioned are marked (E).

The Herbarium has been removed from Geological Hall to State Hall. It now occupies a room on the second floor of the building and is in more commodious quarters than before.

Thanks are due to the correspondents and botanists who have aided me in the prosecution of my botanical work, both by the contribution of specimens and of information.

Very respectfully submitted,

CHAS. H. PECK.

ALBANY, *December* 31, 1885.

(A.)

PLANTS MOUNTED.

New to the Herbarium.

- Solidago speciosa* Nutt.
Betula nigra L.
Cypripedium candidum Muhl.
Eragrostis Frankii Meyer.
Agaricus lascivus Fr.
 A. *rubescensifolius* Pk.
 A. *cerussatus* Fr.
 A. *amplus* Pers.
 A. *esculentoides* Pk.
 A. *fuscolilacinus* Pk.
 A. *amabilissimus* Pk.
 A. *spathulatus* Pers.
 A. *atropellitus* Pk.
 A. *pascuensis* Pk.
 A. *fuscogriseellus* Pk.
 A. *formosus* Fr.
 A. *depluens* Fr.
 A. *marginatus* Batsch.
 A. *unicolor* Fr.
 A. *blattarius* Fr.
 A. *calamistratus* Fr.
 A. *eutheles* B. & Br.
 A. *alnicola* Fr.
 A. *elator* Pk.
 A. *croceitinctus* Pk.
Cortinarius arenatus Fr.
Hygrophorus pudorinus Fr.
Russula crustosa Pk.
Boletus subaureus Pk.
 B. *flavipes* Pk.
Polyporus confluens Fr.
Hydnum geogenium Fr.
 H. *farinaceum* Pers.
Grandinia granulosa Fr.
Corticium puteanum Fr.
 C. *radiosum* Fr.
 C. *cinerascens* Berk.
Clavaria circinans Pk.
 C. *gracilis* Pers.
 C. *byssisida* Pers.
Tremella pinicola Pk.
Siphoptychium Caspari Rostf.
Phyllosticta Mitellæ Pk.
 P. *Hamamelidis* Pk.
Dendrophoma Tiliæ Pk.
 D. *Cephalanthi* Pk.
Cytispora intermedia Sacc.
Phoma aquilina S. & P.
 P. *strobiligena* Desm.
 P. *sordida* Sacc.
 P. *Phillipsiana* S. & R.
 P. *Clintonii* Pk.
 P. *Majanthemi* Pk.
Sphæropsis tiliacea Pk.
 S. *Lindæræ* Pk.
 S. *Juniperi* Pk.
- Sphæropsis pallida* Pk.
 S. *sphaerospora* Pk.
 S. *maculans* Pk.
Coniothyrium Staphyleæ Pk.
Vermiculari uncinata B. & C.
Septoria oleandrina Sacc.
 S. *Osmorrhizæ* Pk.
 S. *lineolata* S. & S.
 S. *graminum* Desm.
Rhabdospora Xanthii Pk.
 R. *pleosporoides* Sacc.
Phlyctæna septorioides Sacc.
 P. *complanata* Sacc.
Diplodina Ellisii Sacc.
Zythia ovata Pk.
Thyrsidium Micheneri Sacc.
Marsonia Martini S. & E.
Coryneum compactum B. & Br.
Pestalozzia Saccardoi Speg.
 P. *consocia* Pk.
 P. *camposperma* Pk.
Uredo Ledi A. & S.
Puccinia hastata Cke.
Gymnosporangium clavariæforme D. C.
Periconia pycnospora Fres.
Sporodinia grandis Lk.
Illosporium humigenum P. & S.
Monilia Peckiana S. & V.
Ramulari Geranii Fekl.
Saprolegnia ferax Kutz.
Geoglossum viscosum Pers.
Leotia marcida Pers.
Godronia Cassandræ Pk.
Tympanis saligna Tode.
Stictis Saccardoi Rehm.
Lichenopsis sphæroboloidea Schw.
Ascomyces extensus Pk.
Microsphaeria Ceanothi Pk.
Valsa rhoophila C. & E.
 V. *glandulosa* Cke.
 V. *cenisia* DeN.
Læstadia Æsculi Pk.
Rosellinia ambigua Sacc.
 R. *mastoidea* Sacc.
Hypoxylon semiimmersum Nits.
Sphærella maculosa Sacc.
 S. *macularis* Auersw.
 S. *Lycopodii* Pk.
Diaporthe Carpini Fekl.
 D. *Robergeana* Niessl.
 D. *galericulata* Sacc.
 D. *Neillæ* Pk.
 D. *marginalis* Pk.
 D. *sparsa* Pk.
Didymosphaeria bacchans Pass.
Leptosphaeria Typharum Karst.
 L. *Kalmiæ* Pk.
Zignoella diaphana Sacc.

Pyrenophora relicina Sacc.
Cryptospora Tiliæ Tul.
Hypocrea fungicola Karst.
Pleonectria Berolinensis Sacc.
Not new to the Herbarium.
Ranunculus acris L.
R. multifidus Ph.
Actæa alba Bigel.
A. rubra Mx.
Arabis lyrata L.
Barbarea vulgaris R. Br.
Camelina sativa Crantz.
Amelanchier Canadensis T. & G.
Potentilla Canadensis L.
Pryus arbutifolia L.
Ribes rubrum L.
R. rotundifolium Mx.
R. hirtellum Mx.
Thaspium aureum Nutt.
Cornus paniculata L'Her.
Lonicera oblongifolia, Muhl.
Petasites palmata Gr.
Senecio aureus L.
Vaccinium Pennsylvanicum Lam.
Castilleja coccinea Spreng.
Gratiola aurea Muhl.
Echium vulgare L.
Hydrophyllum Virginicum L.
Menyanthes trifoliata L.
Apocynum androsæmifolium L.
Asclepias obtusifolius Mx.
A. tuberosa L.
Chenopodium album L.
Atriplex patula L.
Amarantus blitoides Wats
A. hypochondriacus L.
Euphorbia Peplus L.
Celtis occidentalis L.
Morus alba L.
Alnus viridis D.C.
Salix longifolia Muhl.
Populus monilifera Ait.
P. balsamifera L.
Abies nigra Poir.
A. balsamea Marsh.
Juniperus sabina L.
Arisæma triphyllum Torr.

Orontium aquaticum L.
Triglochin maritimum L.
Cypripedium acaule Ait.
C. pubescens Willd.
C. parviflorum Salisb.
Liparis Lœselii Rich.
Uvularia grandiflora Sm.
U. sessilifolia L.
Streptopus roseus Mx.
Fimbristylis capillaris Gr.
Cyperus cylindricus Britton.
Carex gynocrates Wormsk.
C. sterilis Willd.
C. canescens L.
C. pedunculata Muhl.
C. Emmonsii Dec.
C. gynandra Schw.
C. pseudocyperus L.
Festuca elatior L.
Osmunda regalis L.
Agaricus Austinii Pk.
A. sapidus Kalchb.
Lentinus strigosus Schw.
Marasmius androsaceus Fr.
Trogia crispa Fr.
Polporus Vaillantii Fr.
P. biformis Fr.
P. adustus Fr.
P. applanatus Fr.
P. fomentarius Fr.
P. pinicola Fr.
P. betulinus Fr.
P. albellus Pk.
P. chioneus Fr.
Irpex cinnamomeus Fr.
Hydnum mucidum Pers.
Stereum versiforme B. & C.
S. spadiceum Fr.
S. versicolor Fr.
Clavaria pyxidata Pers.
Sphæronema pruinatum Pk.
Puccinia Calthæ Lk.
Ustilago Junci Schw.
Fusicladium dendriticum Wallr.
Macrosporium Cheiranthi Fr.
Glomerularia Corni Pk.
Ucinula spiralis B. & C.
Metasphæria Peckii Sacc.

(B.)

CONTRIBUTORS AND THEIR CONTRIBUTIONS.

Mrs. L. L. Goodrich, Syracuse, N. Y.

Trillium grandiflorum Salisb. var. *variegatum* Pk.

Miss E. G. Knight, New York, N. Y.

Fruit of *Salisburia adiantifolia* Sm.

Mrs. L. A. Millington, New Russia, N. Y.

Festuca elatior L.

Mrs. M. M. Patten, Albany, N. Y.

Pyxidantha barbulate *Me.*

Rev. W. M. Beauchamp, Baldwinsville, N. Y.

Hydrocotyle umbellata *L.* | Cypripedium acaule *Ait.*

Prof. F. Lamson Scribner, Washington, D. C.

Bromus sterilis <i>L.</i>	Chloris verticillata <i>Nutt.</i>
B. tectorum <i>L.</i>	Deschampsia atropurpurea <i>Wahl.</i>
Elymus Virginicus <i>L.</i>	Melica mutica <i>Walt.</i>
Buchloe dactyloides <i>Engl.</i>	M. diffusa v. nitens <i>Scrib.</i>
Arundinaria tecta <i>Muhl.</i>	Setaria verticillata <i>Bv.</i>
Poa arachnifera <i>Torr.</i>	

F. E. Wood, Clifton, Mich.

Amelanchier Can. v. oligocarpa <i>Gr.</i>	Betula glandulosa <i>Mr.</i>
Artemisia frigida <i>Willd.</i>	Calypso borealis <i>Salisb.</i>
Mertensia paniculat <i>Don.</i>	Corallorhiza Macraei <i>Gr.</i>
Vaccinium myrtilloides <i>Hook.</i>	Comandra livida <i>Rich.</i>
Castilleja pallida <i>Kunth.</i>	Aspidium Lonchitis <i>Sw.</i>
Physalis grandiflora <i>Hook.</i>	

W. C. Stevenson, Jr., Philadelphia, Pa.

Puccinia Cryptotæniæ *Pk.*

E. S. Miller, Wading River, N. Y.

Crantzia lineata *Nutt.*

Geo. A. Rex, M. D., Philadelphia, Pa.

Siphoptychium Casparya *Rostf.*

E. A. Rau, Bethlehem, Pa.

Æcidium Dicentræ <i>Trelease.</i>	Fusarium scolecoides <i>S. & E.</i>
Æ. tenue <i>Schw.</i>	Gonatobotrys maculicola <i>Wint.</i>
Glæosporium betularum <i>E. & M.</i>	

E. C. Howe, M. D., Lansingburgh, N. Y.

Solidago speciosa <i>Nutt.</i>	Carex siccata <i>Desv.</i>
Rumex Brittanica <i>L.</i>	C. alopecoidea <i>Tuckerm.</i>
Trifolium hybridum <i>L.</i>	C. scabrata <i>Schw.</i>
Aster Tradescanti <i>L.</i>	C. monile <i>Tuckerm.</i>
Eragrostis Frankii <i>Pursh.</i>	

H. C. Gordinier, Troy, N. Y.

Negundo aceroides <i>Mœnch.</i>	Hieracium pilosella <i>L.</i>
Fedia radiata <i>Me.</i>	H. aurantiacum <i>L.</i>
Patasites palmata <i>Gr.</i>	Statice Limonium <i>L.</i>
Solidago uliginosa <i>Nutt.</i>	Pogonia verticillata <i>Nutt.</i>
S. Virg. v. alpina <i>Bigel.</i>	Salix longifolia <i>Muhl.</i>
Nabalus nanus <i>D. C.</i>	Carex Buxbaumii <i>Wahl.</i>
Juncus pelocarpus <i>Meyer.</i>	Trisetum subspicatum <i>Bv.</i>
Aster ptarmicoides <i>T. & G.</i>	

W. H. Kellerman, Manhattan, Kansas.

Polyporus picipes <i>Fr.</i>	Hirneola auricula-Judæ <i>Berk.</i>
P. adustus <i>Fr.</i>	Phyllosticta Podophylli <i>Wint.</i>
P. fraxinophilus <i>Pk.</i>	P. Labruscæ <i>Thum.</i>
Merulius tremellosus <i>Schrad.</i>	P. Chenopodii <i>West.</i>
Craterellus cornucopioides <i>Fr.</i>	P. Ampelopsidis <i>E. & M.</i>
Stereum frustulosum <i>Fr.</i>	P. smilacina <i>E. & M.</i>

- Septoria Verbenæ *R. & D.*
 S. Cerastii *R. & D.*
 S. Verbascicola *B. & C.*
 Leptostroma vulgare *Fr.*
 L. Actææ *Schw.*
 Sphæronema Persicæ *Schw.*
 Vermicularia Dematium *Fr.*
 Darluca filum *Cast.*
 Phragmidium Potentillæ *Pers.*
 Puccinia nigrescens *Pk.*
 P. solida *Schw.*
 P. Menthæ *Pers.*
 P. Silphii *Schw.*
 P. Sorghi *Schw.*
 P. Artemisiarum *Duby.*
 P. Polygonorum *Lk.*
 P. Mariæ-Wilsoni *Clinton*
 P. Myrrhis *Schw.*
 P. Chærophylli *Purt.*
 P. Xanthii *Schw.*
 P. aculeata *Schw.*
 Uromyces Lespedezæ (*Schw.*)
 U. Hyperici *Schw.*
 U. appendiculata *Lev.*
 Ustilago segetum *Lk.*
 Roestelia lacerata *Tal.*
 Æcidium Caladii *Schw.*
 Æ. Dicentræ *Tuel.*
 Æ. Cœnotheræ *Pk.*
 Æ. leucospermum *D. C.*
 Æ. Ficiariæ *Pers.*
 Uredo Smilacis *Schw.*
 U. Agrimonis *D. C.*
 U. Alchemillæ *Pers.*
 Trichobasis Crotonis *Cke.*
 Coleosporium Sonchi *Pers.*

- Chrysomyxa pyrolatum *Kœnig.*
 Synchytrium decipiens *Farl.*
 S. Taraxaci *De By.*
 S. Anemones *Woron.*
 Sporocybe byssoides *Fr.*
 Macrosporium Maydis *C. & E.*
 M. Solani *E. & M.*
 Helminthosporium gracile *Wallr.*
 Pyricularia grisea *Sacc.*
 Cercospora Gymnocladi *E. & M.*
 C. Ampelopsidis *Pk.*
 Ramularia rufomaculans *Pk.*
 Cylindrosporium Fraxini *E. & M.*
 Peronospora gangliiformis *De By.*
 Cystopus cubicus *Lev.*
 Botrytis vulgaris *Berk.*
 Peziza nivea *Fr.*
 Phacidium Medicaginis *Lasch.*
 Exoascus deformans *Fckl.*
 Podosphæria tridactyla *De By.*
 Uncinula macrospora *Pk.*
 U. adunca *Lev.*
 Microsphæria Euphorbiæ *B. & C.*
 Eysiphe Martii *Lev.*
 E. lamprocarpa *Lev.*
 Sphæria Arthuriana *Sacc.*
 Diatrype hypophlœa *B. & C.*
 Rosellinia millegrana *Schw.*
 Hypoxylon atropunctatum *Schw.*
 H. Sassafras *Schw.*
 Guomonia setacea *C. & D.*
 Melanomma pulvis-pyrius *Fckl.*
 Ophiobolus porphyrogonus *Sacc.*
 Sphærella maculæformis *Pers.*
 Phyllachora Trifolii *Fckl.*
 Pleonectria denigrata *Wint.*

Hon. G. W. Clinton, Albany, N. Y.

- *Rhabdospora pleosporoides *Sacc.*
 Phoma Clintonii *Pk.*
 Illosporium humigenum *P. & S.*

- Læstadia Æsculi *Pk.*
 Morus alba *L.*

Arthur Peck, Sandlake, N. Y.

Populus balsamifera *L.*

H. W. Harkness, M. D., San Francisco, Cal.

- Montagnites Candollei *Fr.*
 Polyporus leucospongia *C. & H.*
 Thelephora Harknessii *Ph.*
 Corticium carneum *B. & Cke.*
 C. pactolinum *C. & H.*
 Hymenula aciculosa *E. & H.*
 Octaviana rosea *Hk.*
 Polyplocium Californicum *Hk.*
 P. inquinans *Berk.*
 Arcyria vitellina *Ph.*
 Cryptosporium Lupini *Cke.*
 Chromosporium lateritium *C. & H.*
 Chætophoma atriella *C. & H.*
 C. quercifolia *Cke.*
 Septoria Aceris *B. & Br.*
 Morthiera Mespili *Fckl.*

- Marsouia Populi *Desm.*
 M. Potentillæ *S. & E.*
 M. Neillii *Hk.*
 Glæosporium Pteridis *Hk.*
 G. nervisequum *Fckl.*
 Septoglœnm defolians *Hk.*
 S. Fraxini *Hk.*
 S. maculans *Hk.*
 S. Nuttallii *Hk.*
 Diplodia lata *C. & H.*
 D. Eucalypti *C. & H.*
 D. Pittospori *C. & H.*
 D. millegrana *C. & H.*
 D. Symphoricarpa *C. & H.*
 D. Sarothamni *C. & H.*
 D. extensa *C. & H.*

- Diplodia Lupini *C. & H.*
 D. Amygdali *C. & H.*
 D. maculata *C. & H.*
 D. Phoradendri *Cke.*
 D. decorticata *C. & E.*
 Macrodiplodia Sambuci *Cke.*
 M. Arctostaphyli *Vize.*
 Hendersonia Lupini *C. & H.*
 Harknessia Eucalypti *Cke.*
 Pestalozzia Moorei *Hk.*
 P. anomala *Hk.*
 Dichomera Compositarum *C. & H.*
 Phragmidium Fragariæ *D. C.*
 Uromyces intricata *Cke.*
 U. Terebinthi *D. C.*
 U. Nevadensis *Hk.*
 U. Spragueæ *Hk.*
 U. Chorizanthus *E. & H.*
 Puccinia variolans *Hk.*
 P. evadens *Hk.*
 P. Symphoricarpi *Hk.*
 P. Harknessii *Vize.*
 P. Cœnothæ *Vize.*
 P. striata *Cke.*
 P. Solani *Cke.*
 P. Asari *Lk.*
 Sorosporium Californicum *Hk.*
 Synchronium papillatum *Farl.*
 S. pluriannulatum *Farl.*
 Graphiola phœnicis *Poir.*
 Torula glutinosa *C. & H.*
 Camptoum cuspidatum *C. & H.*
 Triposporium elegans *Cd.*
 Thecospora bifida *Hk.*
 Stigmina Platani *Sacc.*
 S. Thermopsi *Hk.*
 Chætopsis fusca *Cd.*
 Zygosporium oscheoides *Mont.*
 Helicosporium vegetum *N.*
 Chalaza setosa *Hk.*
 C. fusidioides *Cd.*
 C. montellica *Sacc.*
 C. brachyptera *Sacc.*
 Beltrania quærnea *Hk.*
 Hemileia vastatrix *B. & Br.*
 Cercospora glomerata *Hk.*
 Didymaria spissa *Hk.*
 Dicranidion fragile *Hk.*
 Volutella Buxi *Berk.*
 Helvella Californica *Ph.*
 Peziza tautilla *Ph. & H.*
 P. Escholtziæ *Ph. & H.*
 P. labrosa *Ph. & H.*
 P. sphaerophoroides *Ph. & H.*
 Phillipsiella purpurea *Ph. & H.*
 Belonidium fuscum *Ph. & H.*
 Cenangium ferruginosum *Fr.*
 Phacidium Arbuti *C. & H.*
 P. albidum *Ph. & H.*
 P. internum *Ph.*
 Rhytisma Arbuti *Ph.*
 R. punctatum *Fr.*
 Stictis Lupini *Ph. & H.*
 S. Megarrhizæ *Ph. & H.*
 S. monilifera *Ph. & H.*
 S. pelvicula *Ph.*
 Triblidium rufulum *Spr.*
 T. turgidulum *Ph. & H.*
 Hysterium connivens *C. & H.*
 H. Eucalypti *Ph. & H.*
 H. prominens *Ph. & H.*
 H. formosum *Cke.*
 H. Mulleri *Duby.*
 Ailographum aciculorum *Hk.*
 A. reticulatum *Ph. & H.*
 Geopora Cooperi *Hk.*
 Sphærotheca lanestris *Hk.*
 Asterina anomala *C. & H.*
 Capnodium heteromeles *C. & H.*
 Lasiobotrys affinis *Hk.*
 Valsa Lupini *C. & H.*
 V. agnostica *C. & H.*
 Diatrype prominens *C. & H.*
 D. disciformis *Fr.*
 Hypoxylon stigmatum *Cke.*
 Gnomonia Coryli *Batsch.*
 G. Alni *Plow.*
 Phomatospora Datiscæ *Hk.*
 Trabutia quercina *S. & R.*
 Botryosphæria ambigua *Sacc.*
 Sphærella Umbellulariæ *C. & H.*
 S. Dendromeconis *C. & H.*
 Eriosphæria investans *Cke.*
 Diaporthe Lupini *Hk.*
 D. gorgonoidea *C. & H.*
 Amphisphæria decorticata *C. & E.*
 A. dothideospora *C. & H.*
 Valsaria Eucalypti *K. & C.*
 Leptosphæria Ceanothi *C. & H.*
 L. Ogilviensis *B. & Br.*
 L. consessa *C. & E.*
 L. Californica *C. & H.*
 Heptameria mesedema *Sacc.*
 Massaria pulchra *Hk.*
 Pleospora vitrispora *C. & H.*
 P. compressa *Hk.*
 Thyridium Garryæ *C. & H.*
 Sphæria tumulata *Cke.*
 S. conflicta *Cke.*
 S. confertissima *Plow.*
 S. epipteridis *C. & H.*
 S. anisometra *C. & H.*
 Dialonectria filicina *C. & H.*
 D. depallens *C. & H.*
 D. Eucalypti *C. & H.*
 Thyronectria virens *Hk.*
 Acrospermum corrugatum *Ell.*
 Dothidea Sequoiæ *C. & H.*
 Ophiodothis tarda *Hk.*
 Plowrightia phyllogonia *Hk.*
 P. Calyculi *C. & H.*
 P. tuberculiformis *Ell.*
 Lophiostoma congregatum *Hk.*

C. Vanderloo, Albany, N. Y.

Specimen of root with enlargement.

J. J. Brown, M. D., Sheboygan, Wis.

Cylindrosporium Rubi E. & M.

George L. English, Philadelphia, Pa.

Schizea pusilla Pursh.

(C.)

PLANTS NOT BEFORE REPORTED.

Solidago speciosa, Nutt.

Brunswick, Rensselaer county. E. C. Howe.

Eragrostis Frankii, Meyer.

Center island near the railroad bridge at Troy. Howe.

Agaricus (Tricholoma) rubescentifolius, n. sp.

Pileus thin, convex or nearly plane, subumbilicate, at first brownish, then smoky-yellow, sometimes obscurely squamulose; lamellæ narrow, close, adnexed, creamy-white or pale yellow, becoming smoky-red in drying; stem glabrous or slightly fibrillose, hollow, pruinose at the top, colored like the pileus; spores minute, subglobose, .00016 to .0002 in. long.

Plant subcæspitose, 1 to 1.5 in. high, pileus 6 to 12 lines broad, stem 1 to 2 lines thick.

Pine stumps. North Greenbush. Aug.

Agaricus lascivus, Fr.

Woods. Delmar. Sept. The plant is apparently a variety, being odorless and having the pileus almost white.

Agaricus cerussatus, Fr.

Thin woods. Karner. Sept.

Agaricus amplus, Pers.

Sandy soil. Karner. Sept.

Agaricus (Collybia) fuscolilacinus, n. sp.

Pileus thin, convex, glabrous, hygrophanous, even and watery-brown when moist, lilac-brown and rugose when dry; lamellæ close, ventricose, adnexed, brownish; stem slender, flexuous, hollow, colored like the pileus, mealy or pruinose at the top, with a whitish

villosity at the base; spores subglobose or broadly elliptical, .00016 to .0002 in. long.

Pileus 4 to 8 lines broad, stem 1.5 to 3 in. long, about 1 line thick.

Among moss and fallen leaves in open places in woods. Adirondack mountains. Aug.

The species should be referred to the section *Tephrophanae*.

Agaricus (Collybia) esculentoides, n. sp.

Pileus hemispherical or convex, umbilicate, glabrous, pale yellowish-brown; lamellæ moderately close, broad, thick, whitish; stem slender, hollow, somewhat tenacious, colored like the pileus; spores elliptical, .00025 to .0003 in. long, .0002 in. broad.

Pileus 8 to 12 lines broad, stem 1.5 to 2 in. long, 1 to 1.5 lines thick.

Sandy soil. West Albany. Karner and Delmar. Sept.

This species resembles *A. esculentus* in size and color, but it differs in its stem which is not radicated, and in its pileus which soon becomes umbilicate or more or less centrally depressed. It has a bitter taste, a character attributed to *A. esculentus* also. Our plant occurred in autumn, but *A. esculentus* is said to grow in early spring.

Agaricus (Mycena) amabilissimus, n. sp.

Pileus submembranous, campanulate, obtuse or acute, glabrous, obscurely striatulate when moist, bright-red or scarlet; lamellæ ascending, whitish or tinged with red; stem slender, pallid, subpellucid, with a white villosity at the base.

Pileus 3 to 6 lines broad and high; stem about 1 in. long.

Among mosses and ferns in marshes. Karner. Sept.

This species is closely related to *A. acicula* of which it may possibly be a large form, but inasmuch as it differs not only in size but also in its longer and more conical or campanulate pileus and in its differently colored lamellæ it seems best to keep it distinct.

Agaricus spathulatus, Pers.

Ground. Sandlake. June.

Agaricus (Pleurotus) atropellitus.

Decaying wood and bark both of frondose and acerose trees. Maryland. Helderberg and Adirondack mountains. June to Oct.

Agaricus (Clitopilus) pascuensis, n. sp.

Pileus fleshy, compact, centrally depressed, glabrous, pale-alutaceous, the cuticle of the disk cracking into minute areas; lamellæ rather narrow, close, decurrent, whitish, becoming flesh-colored; stem short, equal or tapering downward, solid, glabrous, colored like the pileus; spores subelliptical, pale-incarnate, .0003 to .0004 in. long, .0002 to .00025 broad.

Pileus 2 to 3 in. broad, stem 8 to 18 lines long, 4 to 6 lines thick. Pastures. Day, Saratoga county. July.

The species is closely related to *A. prunulus*. It has a farinaceous taste but no odor. Its shorter spores, its pileus without any pruinosity and appearing slightly scaly on the disk and tinged with tan color will readily distinguish it from that species. *A. prunulus* grows in woods in autumn, this species in pastures in midsummer. It is solitary or gregarious.

Agaricus (Noianea) fuscogriseellus, n. sp.

Pileus submembranous, convex, conic or campanulate, either with or without a central papilla, hygrophonous, grayish-brown, and striatulate when moist, paler and shining when dry, but the disk or papilla often remaining dark-colored; lamellæ moderately close, subventricose, whitish, then flesh-colored; stem slender, brittle, glabrous, hollow, slightly pruinose, or mealy at the top, pallid or livid, with a white mycelium at the base; spores irregular, .0004 in. long, .0003 broad.

Pileus 6 to 12 lines broad, stem 1.5 to 3 in. long, 1 to 2 lines thick.

Mossy ground in open places. Adirondack mountains. Aug. This is more slender than *A. pascuus* to which it is related, and its stem is not fibrous and silky.

Agaricus formosus, Fr.

Woods and open places, especially under brakes, *Pteris aquilina*. Adirondack mountains. Aug.

It closely resembles the very common *A. asprellus*, from which it may be distinguished by the yellowish hue of the pileus.

Agaricus depluens, Fr.

Decaying wood. Catskill mountains. Gansevoort and Sterling. July and August.

Agaricus marginatus, Batsch.

Decaying wood. Guilderland. Sept.

Agaricus unicolor, Fr.

Decaying wood. Adirondack mountains. Aug. In color and size this species bears a striking resemblance to *A. laccatus*, but its habitat and the character of the spores readily distinguish it.

Agaricus blattarius, Fr.

Woods. Adirondack mountains. Aug.

Agaricus calamistratus, Fr.

Damp ground. Delmar. Sept. Our specimens had no decided odor, but the essential characters of the species, including the peculiar bluish color toward the base of the stem, were present.

Agaricus eutheles, B. & Br.

Under pine trees. West Albany. Sept. In these specimens the farinaceous odor attributed to the species was not observed, but the other characters were present.

Agaricus alnicola, Fr.

At the base of alders and on birch stumps. Delmar. Sept.

The American specimens have the bitter taste ascribed to the European plant. The form found on birch stumps has the lamellæ rounded behind, while that found at the base of alders has them adnate. The young plant has a noticeable annulus but it nearly or quite disappears with age.

Agaricus (Naucoria) elatior, n. sp.

Pileus thin, at first conical or subcampanulate, then convex or nearly plane, glabrous, slightly viscid and striatulate on the margin when moist, livid or grayish-brown; lamellæ broad, ventricose, distant, whitish or livid, then dark-ferruginous, white on the edge; stem elongated, slender, hollow, flexuous, slightly fibrillose, pallid; spores brownish-ferruginous, oblong-elliptical, .0007 to .0008 in. long, .0003 to .0004 broad.

Pileus 5 to 10 lines broad, stem 3 to 5 in. long, about 1 line thick.

In sphagnum. Karner. Sept. Related to *A. scorpioides*.

Cortinarius arenatus, Fr.

Sandy soil under pine trees. Delmar. Sept.

A form with longer stem and subconical pileus sometimes occurs in marshes among sphagnum.

Hygrophorus pudorinus, Fr.

Pine woods. Delmar. Sept.

Our plant does not strictly agree with the description of the species to which we have referred it. The color of the pileus is darker in the center, where it is a brownish-red, but it fades toward the margin, where it is nearly white. The stem is not conspicuously contracted at the apex, but in other respects it agrees so well with the description of *H. pudorinus* that it seems to us to belong to that species.

Russula crustosa, n. sp.

Pileus at first convex, then nearly plane or centrally depressed, slightly viscid when moist, striate on the margin, brownish-yellow, greenish or subolivaceous, the cuticle cracking and forming small spot-like areolæ or pseudo-verrucae; lamellæ nearly entire, some of them forked at the base, narrowed behind and nearly free, white; stem cylindrical, stuffed or hollow, white; spores white, subglobose, .0003 to .00035 in. broad; flesh white, taste mild.

Pileus 3 to 5 in. broad, stem 1 to 2.5 in. long, 6 to 12 lines thick.

Rocky ground in thin woods. Day. July and Aug.

This plant approaches *R. ceruginea* so closely, that it may be a question whether it is a distinct species or a mere variety. It differs in the breaking up of the cuticle and in having the disk generally paler instead of darker than the rest of the pileus. The cuticle usually remains entire on the disk, which is of a dingy yellowish hue, while toward the margin the color is greenish or smoky-green, though in some instances it also is yellowish or dirty straw-color. The greenish specimens so closely resemble *R. virescens*, that in a dry time they might easily be confused with that species. The viscid pileus and its striate margin will distinguish it. The lamellæ are rather narrow anteriorly.

Boletus subaureus, n. sp.

Pileus convex, becoming nearly plane, soft, viscose, pale-yellow or golden-yellow, sometimes mottled with darker spots or tufts of hairs, the young margin adorned with a slight grayish tomentum, flesh pale-yellow; tubes subdecurrent, small, angular or subrotund, at first yellow then ochraceous-yellow; stem cylindrical, solid, glandular-punctate, yellow without and within; spores oblong-elliptical, .00035 to .0004 in. long; .00016 broad.

Pileus 2 to 4 in. broad, stem 1.5 to 2.5 in. long, 5 to 6 lines thick. Woods. Day. July.

This species is intermediate between *B. flavidus* and *B. granulatus*. It has the stout stem, thick pileus and general aspect of the latter, but the yellow color of the stem and young tubes connect it more closely with the former.

Boletus flavipes, n. sp.

Pileus convex or nearly plane, glabrous, dull-red, inclining to chestnut color; tubes nearly plane or convex, small, subrotund, pale-yellow, becoming a little darker with age; stem cylindrical, solid, furfuraceous, pale-yellow; spores oblong-fusiform, olivaceous, .0005 to .0006 in. long, .00016 to .0002 in. broad.

Pileus 1.5 to 2.5 in. broad, stem 2 to 3 in. long; 4 to 6 lines thick.

Woods. Caroga and South Ballston. July and Aug.

Polyporus confluens, Fr.

Pine woods. New Scotland. Sept.

Our specimens are not at all squamulose, and this character is not attributed to the species by all authors. It is probable that it is not uniform in this respect.

Polyporus Schweinitzii, Fr.

Pine woods, generally at or near the base of stumps and trees. West Albany. Sept.

P. hispidoides is a dimidiated form of this species, and not a variety of *P. hispidus*.

Hydnum geogenium, Fr.

Woods. South Ballston. Aug.

I am not aware that this rare and interesting species has before been noticed in this country. According to Fries, the species is very variable, so much so that some specimens might be referred to the section *Pleuropoda*, others to *Mesopoda*, and others still to *Apoda*, to which the typical form belongs.

Hydnum farinaceum, Pers.

Decaying wood of hemlock. Osceola. Aug.

Grandinia granulosa, Fr.

Dead bark of alders. Karner. Sept.

A variable species, referred to *Thelephora* by Albertina and Schweinitz, to *Hydnum* by Persoon, and to *Grandinia* by Fries. Our specimens were whitish when fresh, but they become ochraceous or subalutaceous when old and dry. They are also rimose, thus answering to variety *rimosa* Pers.

Corticium puteanum, Fr.

Decaying wood in swamps. Guilderland. Sept.

Corticium radiosum, Fr.

Decaying wood. Osceola. Aug.

Corticium cinerascens, Berk.

Dead branches of oak. Albany. Aug.

Our specimens are resupinate. The hymenium when moist was tuberculose and of a dingy hue; in the dry state it is cinereous and rimose. The spores are elliptical.

Clavaria circinans, n. sp.

Stem short, solid, dichotomously or subverticillately branched; branches slightly diverging or nearly parallel, nearly equal in length, the ultimate ones terminating in two or more short acute concolorous ramuli; spores ochraceous.

Plant 1 to 2 in. high, obconic in outline, flat topped, appearing almost as if truncated, pallid or almost whitish in color, generally growing in imperfect circles or curved lines.

Under spruce and balsam trees. Adirondack mountains. Aug.

Clavaria gracilis, Pers.

Ground in open places, especially under brakes, *Pteris aquilina*. Adirondack mountains.

The typical form has the branches numerous, nearly straight and slender, but forms occur in which they are thicker, more loose and flexuous. Such forms approach *C. Kunzei* in appearance, but they

may be distinguished by their pallid stem, more tenacious substance and yellowish spores. The plant is slightly fragrant.

Clavaria byssiseda, Pers.

Decaying wood twigs and bark in woods. Adirondack mountains. Aug.

Easily known by its small size, pallid color, and abundant white creeping fibrillose mycelium.

Tremella pinicola, n. sp.

Pulvinate, gyrose-plicate, somewhat lobed and lacunose, raisin-colored when moist, blackish when dry, filaments slender, branched; spores oblong, curved, colorless, .0005 in. long, .0002 broad.

Dead branches of pine. Day. July. It belongs to the section Cerebrina.

Siphoptychium Casparyi, Rost.

Decaying wood. Lake Placid. Adirondack mountains. G. A. Rex.

Phyllosticta Mitellæ, n. sp.

Spots suborbicular, brown; perithecia minute, .0025 to .003 in. broad, amphigenous, black; spores subglobose, colorless, .0002 to .00025 in. long.

Living leaves of mitre-wort, *Mitella diphylla*. Newburgh. Sept.

Phyllosticta Hamamelidis, n. sp.

Spots very large, sometimes occupying nearly half the leaf, irregular, angular, reddish-brown above, paler beneath; perithecia small, .004 in. broad, amphigenous, black; spores broadly elliptical, colorless, .0005 to .0006 in. long, .00035 to .0004 broad, often containing a single large nucleus.

Living leaves of witch-hazel, *Hamamelis Virginiana*. Day. July.

Phoma aquilina, S. & P.

Dead stems of ferns. West Albany. May.

Phoma Strobiligena, Desm.

Scales of pine cones. Albany. G. W. Clinton. Elizabethtown. May.

Phoma sordida, Sacc.

Dead branches of water beech, *Carpinus Americana*. Saugerties. May.

Phoma Phillipsiana, S. & R.

Dead branches of alders, *Alnus viridis*. Elizabethtown. May.

The spores in our specimens do not fully agree with the description of the species. They are elliptical or oblong and somewhat variable and irregular, but the differences scarcely seem worthy of specific distinction.

Phoma Majanthemi, n. sp.

Perithecia minute, .007 to .010 in. broad, amphigenous, subglobose, prominent, black; spores oblong, subtruncate at each end, colorless,

00025 to .0003 in. long, .00012 broad. Dead leaves of two-leaved Solomon's seal, *Majanthemum bifolium*. Elizabethtown. May.

Phoma Clintonii, n. sp.

Perithecia numerous, sunk in the wood, oblong or subhysteriiform, black; spores oblong-ovate, colorless, .0004 to .00045 in. long, .00016 broad, supported on slender basidia.

Decorticated wood of horse-chestnut, *Æsculus Hippocastanum*. Albany. May. *Clinton*.

This is quite distinct from *P. diplodioides*, both in habit, form of perithecia and character of the spores.

Dendrophoma Cephalanthi, n. sp.

Perithecia small, .02 to .025 in. broad, erumpent, depressed, with a papillate ostiolum, black; spores abundant, straight or slightly curved, colorless, .00016 to .0002 in. long; basidia very slender, branched above, .001 to .0015 in. long.

Dead branches of button bush, *Cephalanthus occidentalis*. Karner. Oct.

Dendrophoma Tiliæ, n. sp.

Perithecia minute, scattered, erumpent, black, white within; spores oblong or subcylindrical, obtuse, colorless, .0006 to .001 in. long, .0003 to .00035 broad; basidia filiform, branched.

Dead branches of bass wood, *Tilia Americana*. Quaker Street. June.

Vermicularia uncinata, B. & C.

Dead stems of *Desmodium nudiflorum*. Sandlake. June.

Cytispora intermedia, Sacc.

Dead branches of oak, *Quercus rubra*. Albany. Apr.

Sphæropsis tiliacea, n. sp.

Perithecia at first covered, then erumpent, subglobose or depressed, numerous, minute, .007 to .010 in. broad, opening by a minute pore, black; spores oblong or subelliptical, at first pale, then colored, .0007 to .0009 in. long, .0005 to .0006 broad; sporophores scarcely as long as the spores.

Dead bark of basswood, *Tilia Americana*. Albany. Apr.

Sphæropsis Linderæ, n. sp.

Perithecia numerous, minute, .005 to .010 in. broad, erumpent, black, white within; spores obovate or elliptical, at first pale, then colored, .0008 to .0011 in. long, .0005 to .0006 broad supported on sporophores shorter than themselves.

Dead branches of spice bush, *Lindera benzoin*. Albany. May.

Very near the preceding species.

Sphæropsis Juniperi, n. sp.

Perithecia gregarious, numerous, small, .008 to .011 in. broad, erumpent, black; spores oblong or elliptical, .0008 to .00095 in. long, .00045 to .0005 broad.

Dead bark of red cedar, *Juniperus Virginiana*. West Albany May.

Sphæropsis pallida, *n. sp.*

Perithecia cæspitose, erumpent, .011 to .013 in. broad, black; spores subglobose, slightly colored, .0007 to .0008 in. long, .00065 to .00075 broad, containing one to three nuclei; sporophores very short.

Dead branches of sumac, *Rhus typhina*. Saugerties. May.

This fungus has the general appearance of *S. Sumachi*, but the perithecia are usually smaller than in that species, and the spores paler and of a different shape, being nearly globose.

Sphæropsis Sphærospora, *n. sp.*

Perithecia numerous, minute, .006 to .007 in. broad, subglobose or depressed, at first covered by the epidermis, black, opening by a minute pore; spores globose or subovate, slightly colored, .0004 to .0005 in. long, usually containing a single large nucleus.

Dead stems of silk weed, *Asclepias cornuti*. Sandlake. June.

Sphæropsis maculans, *n. sp.*

Perithecia immersed in the matrix, .016 to .02 in. broad, black, with a papillate ostiolum; spores elliptical, colored, .0004 to .0005 in. long, .0002 to .00025 broad.

Dead decorticated branches. Adirondack mountains. May.

This is a peculiar and well-marked species. The perithecia are immersed in the wood which is stained black just about each perithecium. The black ostiolum projects slightly above the surface of the wood.

Coniothyrium Staphyleæ, *n. sp.*

Perithecia minute, .007 to .011 in. broad, subglobose, slightly prominent, at first covered by the epidermis then erumpent, black; spores very minute, elliptical, slightly colored, .00016 in. long, .00012 broad.

Dead whitened twigs of *Staphylea trifolia*. Saugerties. May.

Septoria Osmorrhizæ, *n. sp.*

Spots small, subangular or irregular, brown; perithecia epiphyllous, .004 to .005 in. broad, slightly prominent, centrally depressed, reddish-brown or amber-colored; spores filiform, more or less curved or flexuous, colorless, .002 to .0028 in. long, .00016 broad, oozing out and forming a whitish tendril. Living leaves of sweet cicely, *Osmorrhiza longistylis*. Schoharie. July.

Septoria oleandrina, *Sacc.*

Living or languishing leaves of oleander, *Verium Oleander*. Sandlake. June.

Septoria lineolata, *S. & S.*

Dead leaves of sedges, *Carex varia*. Elizabethtown. May.

Septoria graminum, *Desm.*

Living leaves of black-fruited mountain rice, *Oryzopsis melanocarpa*. Day. July.

Rhabdospora pleosporoides, Sacc.

Dead stems of Scotch thistle, *Onopordon acanthium*. Albany-May. Clinton.

Rhabdospora Xanthii, n. sp.

Perithecia numerous, small, .011 to .014 in. broad, depressed, covered by the thin browned or blackened epidermis which is pierced by the ostiola; spores filiform, curved, colorless, .0008 to .0012 in. long, .00006 broad.

Dead stems of cocklebur, *Xanthium strumarium*. Albany and North Greenbush. Apr.

The tissues surrounding the perithecia are often colored in such a way as to impart a smoky-brown hue to the affected patches.

Phlyctæna septorioides, Sacc.

Dead stems of poke weed, *Phytolacca decandra*. Albany. Nov.

Phlyctæna complanata Sacc.

Dead stems of Polygonum. North Greenbush. May.

Zythia ovata, n. sp.

Perithecia ovate, reddish or flesh colored when fresh and moist, black when dry, single or two to three in a cluster, nearly superficial, .025 to .030 in. long, .017 to .018 broad; spores oblong, colorless, .0003 in. long, .00012 broad; basidia densely and fasciculately branched.

Dead bark of poplar. South Ballston. Sept.

Diplodina Ellisii, Sacc.

Dead stems of goose foot, *Cheopodium album*. North Greenbush-Apr.

This was originally *Diplodia hyalospora*, C. & E. The perithecia are .008 to .01 broad. The spores are at first simple, then uniseptate. They are .0007 to .001 long, .00035 to .0004 broad.

Thyrsidium Micheneri, Sacc.

Dead branches of water beech, *Carpinus Americana*. West Troy-May.

This is *Cheirospora Micheneri*, B. & C.

Marsonia Martini, S. & E.

Living leaves of *Quercus prinoides*. Karner. Sept.

Coryneum compactum, B. & Br.

Dead branches of red birch, *Betula nigra*. Saugerties. May.

Pestalozzia Saccardoi, Speg.

Dead leaves of oak, *Quercus alba*. Day. July. The spots on the leaves are less black and the colored cells of the spores are more numerous in this species than in *P. monochæte*, which also inhabits oak leaves.

***Pestalozzia consocia*, n. sp.**

Spots very large, sometimes occupying nearly half the leaf, irregular or angular, reddish-brown above, paler beneath; acervuli amphigenous, minute, punctiform, black; spores oblong-fusiform, .0012 to .0014 in. long, .0003 broad, five septate, with four colored cells, .0009 to .0011 in. long and a single bristle at the apex.

Living leaves of witch-hazel, *Hamamelis Virginiana*. Day. July.

The species is associated with and occupies the same spots as *Phyllosticta Hamamelidis*. It may be a question as to which species causes the spots, though they are probably due to the *Phyllosticta*.

***Pestalozzia?* *camposperma*, n. sp.**

Acervuli hypophyllous, minutely tufted; spores fusiform, curved, triseptate, .0008 to .0012 in. long, .00028 to .00032 in. broad, with two colored cells .0005 in. long, the apical cell hyaline, conical, ending in an acuminate point, the lower cell tapering into the short pedicel.

Dead leaves of balsam fir, *Abies balsamea*. Adirondack mountains. June.

This is a singular species. I have seen no terminal cilia and am not able to say whether they are entirely wanting or whether they are early deciduous. The characters otherwise are so exactly like those of *Pestalozzia* that I have, with some doubt, referred our plant to that genus. The curved spores are very characteristic of the species.

***Uredo Ledi*, A. & S.**

Living leaves of Labrador tea, *Ledum latifolium*. Bergen swamp, Genesee county, and Sandlake, Rensselaer county. June.

The authors of this species remark that the leaves attacked by the fungus appear broader than usual. This peculiarity was very perceptible in the Bergen swamp specimens, the usually involute margins of the leaves being almost wholly expanded or unrolled. The spores, which occur on the lower surface of the leaf and are partly concealed by its tomentum, are .0008 to .0009 in. broad. Their smaller size, different place of occurrence, and the different color of the spots readily distinguish this species from *Uredo ledicola*.

***Puccinia hastata*, Cke.**

Living leaves of *Viola primulæfolia*. Riverhead. Sept. The typical form was discovered in Maine on leaves of *Viola hastata*. In our specimens teleutospores and stylospores occur on the same leaf and sometimes in the same sorus.

***Gymnosporangium clavariæforme*, D. C.**

Branches of Juniper, *Juniperus communis*. Elizabethtown. May.

This was in some instances associated with *Gymnosporangium clavipes*, the two occurring near each other on the same branch. The species is a rare one in this country, and has hitherto been reported from Maine only.

***Periconia pycnospora*, Fres.**

Dead stems of melilot. Bethlehem. Apr.

Sporodinia grandis, Lk.

Decaying *Agaricus abortivus*. Osceola. Aug.

Illosporium humigenum, Pk. & Sacc.

Tufts subglobose or pulvinate, rather compact, often botryoidal by confluence, sordid red, grayish or subcinereous; spores globose, at first three or more aggregated, then free, colorless, .0002 to .00028 in. broad; basidia none or obsolete.

Damp ground, horse dung, etc. Lebanon Springs. Clinton. Copake. Aug. and Sept.

Monilia Peckiana, Sacc.

Petioles of dwarf blueberry, *Vaccinium Pennsylvanicum*. Cobble Hill, near Elizabethtown. May.

This is a very destructive fungus. The leaves, of which the petioles are attacked, soon wither, turn brown and die. The destruction of the leaf tissues progresses from the base toward the apex as if destroyed by the advancing mycelium. But the strings of spores, so far as I have observed, are produced on the petioles only. The spores vary very much in size, ranging from .0005 to .0012 in. long, and from .0005 to .0009 broad. They are globose or subelliptical and usually have a slight prominence or apiculus at one or both ends.

Variety *angustior* Sacc. Young fruit of choke cherry, *Prunus Virginiana*. Schoharie. July. This differs from the typical form not only in its host plant and place of development, but also in the size of the spores. These are subglobose and .0004 to .0005 in. long. These differences seem to me to indicate a difference of species, but Prof. Saccardo regards this fungus as a mere variety of the former. It is very destructive to the young cherries. In some instances nearly all the cherries in a raceme were affected by it. Those attacked were smaller than the healthy ones. They were of a brownish or grayish-brown hue, and more or less frosted by the fungus. Should this parasite ever escape from its native host plant and attack our cultivated cherries, it might become a very annoying and destructive pest.

Ramularia Geranii, Fekl.

Living or languishing leaves of wild geranium, *Geranium maculatum*. Schoharie. July.

Saprolegnia ferax, Kutz.

On fishes in an aquarium. Albany. Also in an artificial fish pond. Sandlake. It is sometimes very destructive to fish.

Geoglossum viscosum, Pers.

Ground under brakes, *Pteris aquilina*. Adirondack mountains. Aug. This may be distinguished by its triseptate spores from *G. Peckianum*, which it much resembles.

Leotia mercida, Pers.

Swampy places. Delmar and Karner. Sept.

Godronia Cassandræ, n. sp.

Receptacle small, .02 to .03 in. broad, sessile or nearly so, depressed, urceolate, tawny-brown, the hymenium whitish or livid when moist, darker when dry, the narrow mouth entire or slightly dentate-lacerate, almost closed when dry; asci cylindrical, .0045 to .005 in. long, .0003 to .0004 broad; spores filiform, nearly straight, .002 to .003 in. long; paraphyses filiform, numerous.

Dead branches of leather leaf, *Cassandra calyculata*. Karner. Aug.

Tympanis saligna, Tode.

Dead branches of willow, *Salix purpurea*. West Albany. Apr. The specimens are without fruit and to this extent doubtful.

Stictis Saccardoi, Rehm.

Dead stems of scouring rush, *Equisetum hyemale*. Delmar. Sept.

Lichenopsis sphæroboloidea, Schw.

Dead stems of Cornus. Elizabethtown. May.

Asoomyces extensus, Pk.

Spots large, irregular, brown, usually somewhat convex above and concave below, most frequently occurring at the apical end of the leaf or of its lobes; asci hypophyllous, cylindrical, obtuse or subtruncate, .002 to .0025 in. long, .0009 to .0011 broad; spores globose or broadly elliptical, variable in size, .00016 to .0003 in. long, .00016 to .00025 broad.

Living leaves of the over-cup oak, *Quercus macrocarpa*. Plattsburgh. July. Gen. J. M. Robertson.

The specimens were first sent by Gen. Robertson to the editors of the *Country Gentleman*, with the information that nearly every leaf on the tree was affected in a manner similar to those sent. In these the dead spots occupied one-fourth to one-half the entire leaf. They number from one to three spots on a leaf. It is very evident that the vital functions of leaves so extensively affected must be much impaired, and that the health and vigor of the tree must be correspondingly weakened. It was also stated that many other oaks in that region were similarly affected. The species is distinct from *A. Quercus* Cke., in the character of the spots and also of the spores.

Microsphæria Cæanothi, (Schw.).

Living leaves of New Jersey tea, *Ceanothus Americanus*. New Scotland. Oct.

This appears to be the fungus described by Schweinitz as *Erysiphe Ceanothi*, although the perithecia in our specimens can scarcely be described as "immersed" and the species is a *Microsphæria*, not an *Erysiphe*. It is closely related to *M. penicillata*, having about four eight-spored asci in a perithecium, but it differs from that fungus in occurring only on the upper surface of the leaves. It sometimes attacks the immature fruit which it covers with a more dense white mycelium.

Valsa rhoophila, C. & E.

Dead branches of poison sumach, *Rhus venenata*. Guilderland. May.

Valsa glandulosa, Cke.

Dead branches of *Ailanthus glandulosus*. Cold Spring. June.

Valsa cenisia, De Not.

Dead branches of red cedar, *Juniperus Virginiana*. West Albany. May.

Rosellinia ambigua, Sacc.

Decorticated stems of red-berried elder, *Sambucus pubens*. Adirondack mountains and Sandlake. June.

The species belongs to the section *Coniochaeta*. The perithecia in some of our specimens are so densely crowded that they form a continuous black stratum.

Rosellinia mastoidea, Sacc.

Fallen decorticated branches of willow, *Salix purpurea*. West Albany. Apr.

Hypoxyton semiimmersum, Nits.

Decaying wood. Adirondack mountains. June.

Læstadia Æsculi, n. sp.

Perithecia small, .007 in. broad, lenticular, covered by the epidermis, erumpent, opening by a minute pore, black; asci subclavate; spores crowded, subelliptical, colorless, .0003 to .0004 in. long, .0002 to .00025 in. broad.

Fallen petioles of horse chestnut, *Æsculus Hippocastanum*. Albany. May. *Clinton*.

Sphærella maculosa, Sacc.

Fallen leaves of poplar, *Populus tremuloides*. Adirondack mountains. June.

This species resembles *S. orbicularis*, but the perithecia are smaller and hypophyllous, and the spores are larger and distinctly colored.

Sphærella macularis, Auersw.

Fallen leaves of poplar. Adirondack mountains. June.

In this species the spots are small and angular, the perithecia are amphigenous and the spores are smaller than in *S. maculosa*.

Sphærella Lycopodii, n. sp.

Perithecia minute, .004 in. broad, blackish; asci oblong or subcylindrical, often slightly narrowed toward the apex, .0012 to .0016 in. long, .0004 broad; spores oblong, .00045 to .0005 in. long, .00016 to .0002 broad.

Scales of dead spikes of club moss, *Lycopodium clavatum*. Adirondack mountains. June.

This differs from *S. lycopodina*, in its place of growth and in its smaller asci and spores.

Diaporthe Carpini, Fckl.

Dead branches of water beech, *Curpinus Americana*. Albany. Apr.

Diaporthe Robergeana, Niessl.

Dead branches of bladder-nut, *Staphylea trifolia*. Albany. Apr.

Diaporthe galericulata, Sacc.

Dead branches of beech, *Fagus sylvatica*. Sandiake. June.

Diaporthe Neilliae, n. sp.

Perithecia numerous, .02 to .024 in. broad, loosely and irregularly aggregated in extensive patches, immersed in the interior bark and often forming a slight depression in the wood, covered by the epidermis which is pierced by the black conical or rostellate ostiolum, the base often concave beneath; asci subcylindrical, the sporiferous part about .0025 in. long, .0003 to .0004 broad; spores crowded or biseriata, oblong or subfusiform, slightly constricted at the septum, two or four nucleate, .00055 to .00065 in. long, .0002 to .00025 broad.

Dead branches of nine bark, *Neillia opulifolia*. Albany. Apr.

The surface of the affected branch is rough to the touch by reason of the projecting ostiola. The perithecia are sometimes valsoidly clustered.

Diaporthe marginalis, n. sp.

Pustules numerous, covered by the epidermis which is somewhat elevated; perithecia valsoid, 8 to 15 in a pustule, nestling in the inner bark with no circumscribing line, the ostiola slightly emergent, black, usually surrounding the margin of the whitish pulveraceous erumpent disk; asci subcylindrical, .0025 to .003 in. long, .0004 to .0005 broad; spores crowded or biseriata, uniseptate, obscurely apiculate at each end, .0008 to .0009 in long, .0002 to .00025 broad.

Dead branches of *Alnus viridis*. Elizabethtown. May.

In its external appearance this fungus resembles *Valsa ambiens*. In the larger pustules the ostiola form a marginal circle about the disk as in that species, but in the smaller ones they sometimes emerge centrally and obliterate the disk.

Diaporthe sparsa, n. sp.

Perithecia few, minute, scattered, immersed in the wood whose surface is blackened; asci clavate or subcylindrical, .003 to .0035 in. long, .0003 to .0004 broad; spores crowded, oblong or subfusiform, colorless, constricted at the septum, four-nucleate, .0008 to .0012 in. long, .0002 to .00028 broad. Dead branches of *Rhus Toxicodendron*. Saugerties. May.

Didymosphæria bacchans, Pass.

Dead branches of grapevines. Saugerties. May.

Leptosphæria Typharum, Karst.

Dead leaves of *Typha latifolia*. Adirondack mountains. June.

Leptosphæria Kalmiæ, n. sp.

Perithecia subæspitose, erumpent, .014 to .018 in. broad, sub-hemispherical, thick, black, the ostiola pertuse or slightly papillate; asci cylindrical, .004 to .005 in. long, .0003 to .00035 broad; spores uniseriate, oblong or subfusiform, triseptate, sometimes slightly constricted at the middle septum, colored, .00065 to .0008 in. long, .00025 to .0003 broad; paraphyses filiform.

Dead stems of sheep laurel, *Kalmia angustifolia*. Adirondack mountains. June.

Generally there are two to four perithecia in a cluster, but sometimes they are single and occasionally laterally compressed. The epidermis usually ruptures longitudinally. The species is related to *Leptosphæria vagabunda*.

Zignoella diaphana, Sacc.

Decaying wood. Adirondack mountains. June.

Our specimens have the perithecia depressed and smaller than in the type.

Pyrenophora relicina, Sacc.

Dead leaves of quack grass, *Triticum repens*. West Albany and Helderberg mountains. May.

Cryptospora Tiliæ, Tul.

Dead branches of basswood, *Tilia Americana*. Helderberg mountains. May.

Hypocrea fungicola, Karst.

Decaying Polyporus. Caroga. July. The species was formerly confused with *H. citrina*, which it very closely resembles.

Pleonectria Berolinensis, Sacc.

Dead stems of currant, *Ribes rubrum*. Albany. April.

(D.)

REMARKS AND OBSERVATIONS.

Ranunculus repens, L.

A beautiful double flowered *Ranunculus* was found growing in a wet place by the road side in the village of Bergen. Its creeping stems and other characters connect it with *R. repens*, and especially with that form of it which was described by Dr. Beck as *R. Clintonii*. Whether the plant with its double flowers was a spontaneous development or whether it had escaped from cultivation in some garden is not known.

Actæa alba, Bigel.

A form with long slender pedicels was found at Karner growing with *A. rubra*. The latter sometimes has thick pedicels, so that the color of the fruit remains as the most reliable character for distinguishing these species.

Barbarea vulgaris, R. Br.

This plant is very abundant on the low lands between Utica and Rome. It takes possession of pastures and cleared lands and rivals the common yellow buttercups in profusion. Its vigorous and abundant growth give it the appearance of an introduced plant and make it worthy of classification among our noxious weeds. Variety *arcuata* occurs along shaded streams in Sandlake.

Arabis lyrata, L.

The usual habitat of this plant is on rocks and precipices, but fine specimens were found growing in a sandy field near Albany.

Camelina sativa, L.

Abundant in wheat fields near Bergen. June. An introduced and troublesome weed.

Viola cucullata, Ait.

A peculiar form of this very variable species grows in Bergen swamp. The leaves are very small, about half an inch broad, the peduncles are elongated and the lateral petals are whitish at the base.

Prunus serotina, Ehrh.

The black cherry is very abundant about Southfield, Orange county, where it blossoms profusely even when a mere shrub in size. The choke cherry is also common here. It blossoms two or three weeks earlier than the black cherry.

Cephalanthus occidentalis, L.

The leaves are usually opposite or ternate, but sometimes there are four in a whorl.

Crantzia lineata, Nutt.

Specimens of this rare plant were sent from Wading River by *E. S. Miller*.

Epilobium hirsutum, L.

This introduced plant is gradually spreading. It is in North Greenbush, *G. W. Clinton*, and at Dunsback Ferry, near Cohoes. *H. C. Gordinier*.

Petasites palmata, Gray.

This rare species has been found in a sphagnous marsh in Sandlake. *Gordinier*. It also occurs sparingly in a marsh near Guilderland Station, in Albany county, but here it is in danger of extermination as the marsh will probably be soon cleared for cultivation.

Senecio aureus, L.

Variety *Balsamitæ* was found in dry rocky places at Southfield.

Vaccinium Pennsylvanicum, Lam.

The black-fruited form, variety *nigrum*, is not rare in the town of Day, Saratoga county. In one locality on the top of a mountain it

was found producing berries of unusual size. Many of them were found by actual measurement to be fully a half inch in diameter. They were sweet and agreeable to the taste and grew in close clusters of three to six berries. This form would be a most desirable one to introduce into cultivation if it can be made to thrive as well in other localities as it does in its native one. The same variety, bearing more abundant though smaller fruit, was found growing in a marsh in the same town. This would indicate its adaptability to a variety of soils.

Clethra alnifolia, L.

The sweet pepper bush or white alder is abundant about Spruce pond near Southfield; also on Skunnemunk mountain. In the former locality, a plant of *Leucothoë racemosa* was also observed.

Menyanthes trifoliata, L.

Spruce pond near Southfield. The flowers are dimorphous. On some plants the stamens are longer than the pistils, on others shorter.

Apocynum androsæmifolium, L.

There are two forms of our common dogbane, in one of which the flowers are nearly twice as large as in the other.

Celtis occidentalis, L.

Near Saugerties. The hackberry is not rare in the lower part of the Hudson river valley, but northward and westward it is seldom found. I am informed that a tree of this species growing in the Mohawk valley, near Sprakers, is such a novelty that it has received from the inhabitants the name of "the unknown tree."

Nyssa multiflora, Wang.

Abundant on Skunnemunk mountain where it forms a tall tree and has a trunk twelve inches or more in diameter at the base.

Betula nigra, L.

The red birch was admitted into the New York Flora by Dr. Torrey, on the authority of Dr. J. Carey, who gave Saugerties as its locality. No specimens were placed in the Herbarium. Desiring New York specimens, I visited Saugerties and found several trees growing along the banks of the *Æsopus* river south of Saugerties. The species is easily known by its rough bark, curved branches and long drooping branchlets. The bark of young trees is smooth and whitish or reddish-white and such trees might easily be mistaken for the paper birch or poplar leaved white birch.

Alnus viridis, D. C.

Plentiful on Cobble hill, also along the road between Elizabethtown and Keene.

Arisæma triphyllum, Torr.

The apex of the spadix of the Indian turnip is generally obtuse. A specimen was found near Albany, in which the spadix was abruptly

contracted near the top and prolonged into a slender subulate point, thus showing a tendency to approach, in form, the spadix of *A. Dracontium*.

Symplocarpus foetidus, *Salisb.*

A specimen occurred near West Albany of which the spathe was double, or rather there were two spathes one smaller, partly within the other and facing it. The smaller interior one contained the spadix.

Orontium aquaticum, *L.*

Abundant at Spruce pond, Orange county. The spadix or club is at first greenish, then bright yellow, finally green again. In the yellow or flowering state it is erect and the scape for a short distance below the spadix is a pure white. After flowering the spadix is thrust beneath the surface of the water by the bending of the scape and both it and the upper part of the scape gradually assume their final green color. The flowers are protogynous and their odor is similar to that of chestnut blossoms. The plants sometimes grow among the sphagnum and sedges of the low quaking shores, and then their leaves are erect. The root is so deeply and firmly fixed in its place, that it is exceedingly difficult to obtain an entire plant.

Cypripedium candidum, *Muhl.*

In Bergen swamp the white lady slipper is associated with the larger and smaller yellow lady slippers. This is its only New York locality known to me, and it grieves me to know that it is here sometimes collected unsparingly merely for hand bouquets. By such treatment it is in danger of extermination. Such a rare and beautiful plant should be gathered sparingly and preserved in its native locality as long as possible.

Trillium grandiflorum, *Salisb.*

The variety *variegatum* has again been collected in the Jamesville locality where it presented the same characteristics as last year. Mrs. Goodrich writes that no specimen with sessile leaves had variegated petals. The petioled leaves and petals striped with green are thus far constantly associated. Of some plants transferred to her garden all reproduced the petioled leaves, and the single one which blossomed had its petals marked with green. One plant occurred in which the flower was borne on one stem and the leaves on another, both rising from the same rootstock. Miss Overacker found a monstrosity in which the flower had nine petals and twelve stamens; also another in which all the parts of the flower were in fours, even the ovary being four-celled. Rev. Mr. Beauchamp also found near Baldwinsville a specimen whose flower had six long sepals and eighteen shorter petals. Under proper cultivation this plant would probably produce double flowers and numerous varieties very readily.

Carex sterilis, *Willd.*

The typical form in which the spikes are often all or nearly all staminate is abundant in Bergen swamp. In the eastern part of the State the plants almost uniformly bear pistillate spikes, and an abun-

dance of fruit. *C. sterilis* and *C. flava* are the prevailing species in Bergen swamp. Among the interesting and rare species are *C. gynocrates*, the typical form, and *C. vaginata*.

Agaricus melleus, Vahl.

An abortive form of this Agaric sometimes occurs. It resembles the abortive form of *A. abortivus*.

Agaricus serrulatus, Pers.

This species is quite variable. An Agaric was found in the Adirondack wilderness which I was at first inclined to regard as an undescribed species, but have concluded that it is a variety of *A. serrulatus*. The pileus is grayish or whitish-gray and the stem is destitute of the blackish points which belong to the typical form. It may be distinguished as variety *pallida*.

Lactarius resimus, Fr.

The plant which we have referred to this species as variety *regalis* was observed in Day. Its glabrous margin and glabrous stem remain constant. The pileus was obscurely zonate and the stem spotted. It might, at first sight, be mistaken for *L. insulsus*, but the change in the color of the milk would correct such a mistake.

Russula foetens, Fr.

Variety *granulata* has the cuticle of the pileus rough with small granular scales.

Gymnosporangium macropus, Schw.

Plentiful on red cedar trees about Highland Mills, Orange county, and also about Schoharie.

Septoria mirabilis, Pk.

This should be referred to the genus *Glœosporium*.

Septoria corylina, Pk.

Variety *permaculata* differs from the typical form in having the spots large, brown or reddish-brown with an arid paler center. Living leaves of *Corylus rostrata*. Day.

Cenangium deformatum, Pk.

If the genus *Cenangium* be limited to such species as have simple colorless spores, this species must be transferred to the genus *Karschia*.

Hypoderma Desmazieri, Duby.

Specimens were found on leaves of pitch pine, *Pinus rigida*, while they were yet on the tree and green at the base. This would indicate that the fungus sometimes attacks and kills the leaves.

Spathularia flavida, Pers.

Variety *rugosa* has the club rugose. It was found in the Adirondack region growing in a circle about fifteen feet in diameter. All the plants in the circle had the club or receptacle rugose. Some of the plants were affected by *Hypocrea alutacea*. The stems were quite as velvety as in the form described as *Spathularia velutipes*, C. & F.

Sphærotheca pannosa, Lev.

Variety *Ribis* occurs on the stems, fruit and leaves of wild gooseberry, *Ribes cynosbati*. Bergen. June. It forms a dense felty stratum of mycelium, which is white at first but soon becomes brown. In the form on roses the mycelium, so far as I have observed, remains white. I have received from Prof. Scribner specimens of the same variety which were found on gooseberry in Colorado.

Hypoxyylon Morsei, B. & C.

Dead branches of poison sumach, *Rhus venenata*. Guilderland station. May. If *H. Blakei* be united to this species, which union some advocate, then *H. Morsei* is an inhabitant of alders, willows, poplars and sumach.

Sordaria coprophila, C. & D.

In the early and immature condition of this fungus, the perithecia are thinly clothed with a minute cinereous flocculent villosity or tomentum, and the spores are cylindrical flexuous and colorless and very unlike the elliptical colored appendaged spore of the mature state.

Sphæria taxicola, Pk.

The spores in this are .0008 to .0009 in. long, .00016 to .0002 broad, triseptate and colorless. Therefore the species should be referred to the genus *Metasphæria* of the Saccardoian system.

(E.)

NEW YORK SPECIES OF PLEUROTUS, CLAUDOPUS AND CREPIDOTUS.

PLEUROTUS, F):

Stem eccentric, lateral or none. Spores white.

The species of this genus grow chiefly on decaying wood. A few grow on the ground or are attached to mosses. They are very diverse in size and general appearance. For instance, there is little resemblance between *P. ulmarius* and *P. striatulus*, the one a large species with a stout stem and thick fleshy pileus, the other a very small one with no stem and a thin membranous pileus. Yet both are included by the generic description. By reason of the lateral or eccentric stem and of the tufted mode of growth of some species, the pileus is often very irregular and unsymmetrical. Some of the species are also very variable in color, and among the small, at first resupinate forms, the young plant is often, in appearance, very unlike the reflexed mature

plant. These variations make it difficult to accurately describe the species and to satisfactorily identify them from the published descriptions. Some of them, by reviving under the influence of moisture and by the tenacity of their substance, indicate an affinity with the genus *Pannus* and its allies. Some of the larger stout-stemmed species occasionally have the stem nearly or quite central in which case they might be taken for species of *Tricholoma*, though their lignatile instead of terrestrial habitat would be an indication of their real affinity, but not a wholly reliable one, since some species of *Tricholoma* grow on wood. By their white spores they are separated from the otherwise similar *Claudopodes* and *Crepidoti*. Two species, *P. sapidus* and *P. euosmus* have pale lilac-tinted spores, but these can scarcely justify the removal of these plants to any genus having colored spores, since they would harmonize no better there than here. Indeed there is room for doubt if either of these supposed species is more than a variety of *P. ostreatus*. Several species have valuable esculent qualities. Fries has divided the genus into three sections, which for convenience we have adopted in the arrangement of our New York Pleuroti. He names them respectively, **EXCENTRICI**, **DIMIDIATI** and **RESUPINATI**.

Synopsis of the Species.

Stem eccentric pileus entire or marginate behind.....	1
Stem none or short, pileus sessile or not marginate behind.....	7
1. Lamellæ adnate or emarginate, not decurrent.....	2
1. Lamellæ distinctly decurrent.....	4
2. Lamellæ white.....	3
2. Lamellæ yellow.....	<i>P. sulphureoides.</i>
3. Odor farinaceous, spores elliptical.....	<i>P. lignatilis.</i>
3. Odor not farinaceous, spores globose.....	<i>P. ulmarius.</i>
4. Pileus slightly areolate.....	<i>P. subareolatus.</i>
4. Pileus not areolate.....	5
5. Spores dull lilac.....	<i>P. sapidus.</i>
5. Spores white.....	6
6. Lamellæ anastomosing at the base.....	<i>P. ostreatus.</i>
6. Lamellæ distinct at the base.....	<i>P. salignus.</i>
7. Pileus never resupinate, generally with a short lateral stem or stem-like base.....	8
7. Pileus at first resupinate, generally sessile.....	11
8. Pileus viscid when young or moist.....	<i>P. serotinus.</i>
8. Pileus not viscid.....	9
9. Lamellæ gray, subdistant, stem not compressed.....	<i>P. tremulus.</i>
9. Lamellæ white, crowded, stem compressed.....	10
10. Plant growing on the ground.....	<i>P. spathulatus.</i>
10. Plant growing on decaying wood.....	<i>P. petaloides.</i>
11. Pileus white.....	12
11. Pileus not white.....	13
12. Pileus one inch or more long.....	<i>P. porrigens.</i>
12. Pileus small, less than one inch long or broad.....	<i>P. septicus.</i>
13. Lamellæ white or yellowish.....	<i>P. atrocærulcus.</i>
13. Lamellæ cinereous, livid-brown or blackish.....	14
14. Pileus even or slightly striate on the margin.....	<i>P. atropellitus.</i>
14. Pileus plicate-striate, black.....	<i>P. niger.</i>
14. Pileus striate, cinereous or livid-brown.....	<i>P. striatulus.</i>

Pileus entire or with a thin margin on one side, stem distinct, eccentric or lateral.

Pleurotus ulmarius, Fr.

Elm Agaric.

Agaricus ulmarius, Bull.

Pileus fleshy, compact, convex or nearly plane, glabrous, moist, sometimes tinged with reddish, yellowish or brownish hues and marbled with livid spots, becoming darker and shining when old, flesh pure white; lamellæ broad, emarginate or rounded behind, *adnexed*, moderately close, *white or whitish*; stem stout, *solid*, straight or curved, glabrous or partly or wholly tomentose, whitish; spores *globose*, .0002 to .00025 in. broad.

Pileus 3 to 6 in. broad, stem 1 to 3 in. long, 6 to 10 lines thick.

Trunks of elm trees. Albany and Trenton Falls. September to December. Edible.

Variety *acericola*. Plant smaller, cæspitose.

Trunks and roots of maple trees. Adirondack mountains. September.

Variety *populicola*. Plant subcæspitose, stem wholly tomentose. West Albany.

This is one of our largest Pleuroti. It is variable in size and appearance. The stem is often thickened either above or below, and it may be glabrous or entirely tomentose, or only at the base or apex. Sometimes it is longitudinally rimose. On the elms of Albany it usually grows from places where branches have been cut away. It persists as a conspicuous object for many days. In very wet weather the disk is apt to crack either in a radiate or reticulate manner.

Pleurotus sulphureoides, Pk.

Pale-yellow Agaric.

Pileus fleshy, rather thin, convex, umbonate, glabrous or slightly squamulose, *pale-yellow*; lamellæ moderately close, *rather broad*, slightly emarginate or rounded behind, *pale-yellow*; stem firm, equal, slightly fibrillose, *stuffed or hollow*, generally curved and eccentric, rarely central, slightly mealy or tomentose at the top, yellowish or pallid; spores elliptical, .0003 to .00035 in. long .0002 to .00025 broad.

Pileus 1 to 2 in. broad, stem 1 to 1.5 in. high, 2 to 3 lines thick.

Decaying prostrate trunks. Catskill mountains. October. Rare. This species has not been detected since its discovery. It becomes paler in drying. The minute scales are brown, but sometimes are wanting. I have separated this Agaric from *A. sulphureus* because of its eccentric stem, woody habitat and squamulose pileus.

Pleurotus lignatilis, Fr.

Wood-inhabiting Agaric.

Agaricus abscondens, Pk.

Pileus compact, convex, sometimes slightly depressed or umbilicate, flocculose-pruinose or glabrous, *white*; lamellæ thin, *narrow, crowded*, emarginate or adnate, *white*; stem unequal, rather slender, curved, stuffed or hollow, whitish, sometimes tomentose at the base; spores *minute, elliptical*, .00016 to .0002 in. long, usually with a shining nucleus; odor distinct, farinaceous.

Pileus 2 to 3 in. broad, stem 1 to 2 in. long, 2 to 4 lines thick.

Decaying wood. Griffins, Delaware county, September.

Our specimens, by their pure white color, emarginate adnexed lamellæ and glabrous stem, did not well agree with the published description of *P. lignatilis*, and they were, therefore, described in the Thirty-first Report as a distinct species. But *P. lignatilis* is very variable according to Fries, and as our plant is scarcely more than a variety of it we have united it thereto.

Pleurotus subareolatus, *Pk.*

Slightly-areolate Agaric.

Pileus compact, convex, *whitish tinged with brownish pink*, usually *cracking in small maculiform areas*; lamellæ rather broad, loose, decurrent, whitish becoming tinged with yellow in drying; stem eccentric, subvertical, short, curved, firm, solid, sometimes compressed, white; spores oblong, .0005 to .0006 in. long, about .0002 broad.

Pileus 3 to 4 in. broad, stem 6 to 12 lines long, 4 to 6 lines thick.

Trunks of elm trees. Bethlehem. October.

This plant has occurred with us but once. It differs from *P. tessulatus* by its strongly decurrent lamellæ which form slightly elevated lines far down on the stem.

Pleurotus sapidus, *Kalchb.*

Sapid Agaric.

Plant generally cæspitose; pileus eccentric or lateral, rarely sessile, irregular, convex or depressed on the disk, glabrous, variable in color, whitish, yellowish, grayish-brown, lilac-brown or smoky-brown, flesh white; lamellæ rather broad, subdistant, decurrent, distinct or anastomosing at the base, whitish; stem firm, solid, straight or curved, white or whitish, often united at the base; spores oblong, *pale lilac*, .00035 to .00045 in. long, .00016 to .0002 broad.

Pileus 2 to 5 in. broad, stem 1 to 2 in. long, 3 to 8 lines thick.

Decaying wood of elm, beech, birch, horse-chestnut, etc., sometimes on buried sticks. Common. June to November. Edible.

This is a very variable species, closely allied to *P. ostreatus*, with which it is sometimes confused, and from which its short-stemmed subsessile forms with anastomosing lamellæ can scarcely be distinguished except by the peculiar color of the spores. These, when caught on white paper, have a dull, pale-lilac hue, inclining to lavender color. If they fall on a dark or brown surface they appear whitish. By reason of the colored spores of this fungus and of *P. euosmus*, W. G. Smith proposed the transfer of these plants to *Claudopus*, but this arrangement was not adopted by Fries, because their real affinities were evidently with the *Pleuroti*. He says that the species is so variable that its characters are indicated with difficulty, and that on the same trunk specimens sometimes occur that are white, tawny-brown and umber. In the typical form, the lamellæ are not described as anastomosing, but a form is mentioned in which the stem is reticulated by anastomosing veins. In our plant the lamellæ frequently anastomose at the base, just as in *P. ostreatus*. Its stem, also, is sometimes as short or obsolete as in that species. It occurs both in woods and in open

places. It is more abundant in autumn, but occasionally appears as early as June. It is no less valuable than the next species for its edible qualities. A stew made of it is a very good substitute for an oyster stew.

In Hungary, according to Dr. Kalchbrenner, it is not only eagerly sought for food in the woods but is also cultivated in gardens by frequently moistening the elm trunks on which it grows.

In drying, the specimens roll up in an annoying manner, unless kept under pressure. The dried specimens are very liable to the attacks of insects.

Pleurotus ostreatus, Fr.

Oyster Agaric. Oyster Mushroom.

Agaricus ostreatus, Jacq. *Agaricus dimidiatus*, Bull.

Pileus fleshy, two to four inches broad, soft, convex or slightly depressed behind, subdimidiate, often cæspitously imbricated, moist, glabrous, whitish cinereous or brownish, flesh white; lamellæ broad, decurrent, subdistant, *anastomosing at the base*, white or whitish; stem, when present, very short, firm, lateral, sometimes strigose-hairy at the base; spores oblong, *white*, .0003 to .0004 in. long, .00016 broad.

Decaying wood and trunks of trees. June to November. Edible.

With us this species is much less frequent than the preceding one. Specimens, nearly white when fresh, but yellowish when dried, were collected on oak trunks in Orange county. The spores were clearly white on white paper, but in other respects the plants might readily be taken for a whitish sessile form of the preceding species.

Pleurotus salignus, Fr.

Willow Agaric.

Agaricus salignus, Abb. d. Schw. *Agaricus brumalis*, Scop.

Pileus fleshy, two to six inches broad, firm, spongy, convex or nearly plane, sometimes depressed and slightly hairy toward the base, nearly dimidiate, horizontal, whitish, dark-cinereous or ochraceous; lamellæ decurrent, some of them branched, eroded on the edge, *distinct at the base*, whitish; stem, when present, very short, lateral, tomentose; spores oblong, .00036 in. long, .00015 broad.

Decaying wood, especially of willows. Sandlake.

I have admitted this species with some hesitation, for our specimens, though apparently belonging to it, are not in good condition and hence doubtful. Fries says it is distinguished from *Panus conchatus* by its soft, not coriaceous, substance, but Gillet characterizes its substance as coriaceous when old.

Pileus definitely lateral, neither margined behind nor at first resupinate, sessile or attached to a very short lateral stem or stem-like base.

Pleurotus serotinus, Fr.

Late Agaric.

Agaricus serotinus Schrad. *Agaricus serotinoides*, Pk.

Pileus fleshy, one to three inches broad, compact, convex or nearly plane, *viscid when young and moist*, dimidiate reniform or suborbic-

ular, solitary or cæspitose and imbricated, variously colored, dingy-yellow, reddish-brown, greenish-brown or olivaceous, the margin at first involute; lamellæ close, determinate, whitish or yellowish; stem very short, lateral, thick, yellowish beneath and minutely tomentose or squamulose with blackish points; spores *minute, elliptical*, .0002 in. long, .0001 broad.

Dead trunks of deciduous trees. Catskill and Adirondack mountains. Buffalo. *G. W. Clinton*. Autumn.

The late Agaric occurs especially in the hilly and mountainous districts of the State. It rarely makes its appearance before September and is sometimes found as late as December. It varies considerably in color but is easily recognized by its peculiar stem and determinate lamellæ. When viewed from above it appears to be stemless or attached by a mere basal prolongation of the pileus, but the lower surface of this prolongation, being differently colored and definitely limited by the basal termination of the lamellæ, has the appearance of a very short but distinct stem. In our plant the surface of the pileus is sometimes adorned with a minute brown or blackish fibrillose tomentum, which gives it a somewhat punctate or scabrous appearance. I find no notice of this character in the descriptions of the European plant. Such specimens with the lower surface of the stem, merely tomentose, were published in the Twenty-third Report as *Agaricus scrotinoides*, but they do not appear to me to be any thing more than a mere form of the species. Sometimes the pileus is distinctly tomentose toward the base.

Pleurotus tremulus, Fr.

Tremulous Agaric. Gray Pleurotus.

Agaricus tremulus, Schæff.

Pileus thin, eight to twelve lines broad, obovate or reniform, plane or depressed on the disk, tenacious, glabrous, *livid-gray or grayish-brown* when moist, pale-gray when dry; lamellæ determinate, linear, subdistant, *gray or grayish*; stem marginal, short, distinct, nearly terete, ascending, villose at the base; spores *globose*, .0003 in. broad.

Ground among or attached to mosses. Poughkeepsie. October. *W. R. Gerard*.

The stem in our specimens is lateral, as required by the description and the place assigned to the species in the Friesian arrangement, but in *Mycological Illustrations*, Pl. 242, it is represented as eccentric.

The stem is sometimes wanting, and then the pileus is attached by fibrils. The species is easily known by its gray color and place of growth. It is apparently very rare with us, having been found in our State but once.

Pleurotus spathulatus.

Spathulate Agaric.

Agaricus spathulatus, Pers. *P. petaloides* v. *spathulatus*, Fr.

Pileus rather thin, one to two inches broad, ascending, *spathulate*, tapering behind into the stem, glabrous, convex or depressed on the disk and there sometimes pubescent, *alutaceous* or *brownish tinged with gray, red or yellow*; lamellæ crowded, linear, decurrent, whitish or

yellowish; stem compressed, sometimes channeled above, grayish-tomentose; spores *elliptical*, .0003 in. long, .00016 to .0002 broad; *odor and taste farinaceous*.

Ground. Sandlake. June. Edible.

It grows singly or in tufts and is an inch or more in height. The margin is thin and sometimes striatulate and reflexed. Toward the base the flesh is thicker than the breadth of the lamellæ. The cuticle is tough and separable. The flesh is said by Gillet to be tender and delicate. Persoon describes the disk as spongy-squamulose, but in our specimens it is merely pubescent or tomentose.

The species was united as a variety to *P. petaloides* by Fries, and is described by Gillet under that name, but it seems to me to be sufficiently distinct in its habit, habitat, color and spores to be regarded as a species.

Pleurotus petaloides, Fr.

Petal-like Agaric. Petaloid Pleurotus.

Agaricus petaloides, Bull.

Pileus rather thin, eight to twenty lines broad, *cuneate or spathulate*, tapering behind into the short compressed generally villose-tomentose stem, convex or nearly plane, glabrous or with a minute grayish pubescence or tomentum toward the base, sometimes striatulate on the margin when moist, *whitish pale-alutaceous or brownish*; lamellæ crowded, linear, decurrent, whitish or yellowish; spores *minute, globose*, .00012 to .00016 in. broad.

Decaying wood. Buffalo. G. W. Clinton. East Worcester, Karner, Catskill and Adirondack mountains. July and August.

This is closely allied to the preceding species, with which it is united by most writers, but the striking difference in the size and shape of the spores indicates that they should be kept as distinct species. With us the petal-like Agaric is much more frequent in its occurrence than the spathulate Agaric.

In shape and general appearance it closely resembles *Crepidotus appplanatus*, from which it may be distinguished by its paler lamellæ, smaller white spores and more colored pileus.

Pileus at first resupinate, then reflexed, sessile; lamellæ radiating from an eccentric point.

Pleurotus porrigens, Fr.

Prolonged Agaric. Pine Pleurotus.

Agaricus porrigens, Pers.

Pileus rather thin, at first resupinate and suborbicular, then reflexed and prolonged, obovate subelliptical or ear-shaped, often longer than broad, one to three inches long, sessile, *glabrous or villose-tomentose toward the base, pure white*, the margin involute when young, sometimes lobed in large specimens; lamellæ *narrow, linear, thin, crowded*, sometimes slightly forked or anastomosing at the base, white; spores subglobose, .00025 to .0003 in. broad.

Much decayed wood of pine and hemlock. Buffalo. G. W. Clinton. Karner, Catskill and Adirondack mountains. Autumn.

The prolonged Agaric is a fine species, easily known by its pure

white color, sessile pileus, and its lamellæ forking or even anastomosing near the base in large specimens.

I find no good characters by which to distinguish *Agaricus nephretus*, Ellis, from this fungus. The spores in this, as well as in *P. striatulus*, *P. niger* and some others, have a slight depression on one side, which makes them broader in one diameter than in the other, and gives them a slightly curved appearance when viewed edgewise.

Pleurotus septicus, Fr.

Wood-rotting Agaric. Thin Pleurotus.

Agaricus pubescens, Sow.

Pileus *small*, thin, three to six lines broad, nearly plane, *pubescent or subpulverulent*, sessile or with a short white pubescent stem or stem-like base, *pure white*; lamellæ *rather broad, subdistant*, white; spores subglobose, .00016 to .0002 in. broad.

Decaying wood. Ballston and Adirondack mountains. August.

The clear white color of *P. porrigens* is seen also in this species, which may be easily distinguished by its smaller size, nearly pubescent pileus, subdistant lamellæ and smaller spores.

Pleurotus atrocæruleus, Fr.

Dark-blue Agaric. Blue-black Pleurotus.

Agaricus alneus, Schæff.

Pileus *fleshy* with an *upper brownish gelatinous stratum*, one to two inches broad, convex or nearly plane, reniform dimidiate or obovate, rather tough and flexible, sometimes cæspitously imbricated, sessile, *villose-tomentose*, dark-blue, blackish, grayish or tawny-brown, flesh soft, whitish; lamellæ *rather broad, close, whitish or yellowish*; spores *elliptical*, .00025 to .0003 in. long, .00016 to .0002 broad.

Decaying trunks and branches of beech, alders and poplars. Karner. September. Buffalo. G. W. Clinton.

I have seen no American specimens with the dark-blue or indigo color shown in the published figures of the European plant, but Fries himself says that the pileus is sometimes brown, so that we have no doubt of the specific identity of our plant. The pileus is covered with a grayish or cinereous villosity, which in small specimens forms a thin uniform velvety pubescence, but in large specimens it is more dense and somewhat tufted. Sometimes it is much thinner on the margin than toward the base of the pileus, and in such specimens the real color of the pileus is best seen on the margin. This, in large specimens, is often wavy or somewhat lobed. Small, blackish forms frequently resemble large forms of the next species, but are distinguishable by the paler color of the lamellæ. The plant readily revives on the application of moisture.

Pleurotus atropellitus, *n. sp.*

Black-skinned Agaric.

Pileus *very thin*, three to eight lines broad, rather tough, flaccid, resupinate or reflexed and lateral, convex or nearly plane, suborbicular obovate or reniform, *villose-tomentose except on the margin*, sessile or

prolonged at the base into a short grayish-tomentose stem, *blackish-brown or black*, the tomentum grayish or cinereous, the thin margin slightly striate when moist; lamellæ rather broad, *close, blackish-brown or black*, whitish on the edge; spores *subelliptical*; .0003 to .00035 in. long, .00016 to .0002 broad.

Decaying wood and bark, both of frondose and acerose trees. Fort Edward, *E. C. Howe*. Buffalo. *G. W. Clinton*. Maryland, Helderberg and Adirondack mountains. June to October.

Our plant is closely related to *Pleurotus applicatus*, and it is with some hesitation that I have described it as distinct. But unless the figures and descriptions of that species are erroneous, our fungus is easily distinguished from it by its larger size, darker color and closer blackish lamellæ. *P. applicatus* is described as dark cinereous, cupular, two to three lines broad, villose at the base, sessile or attached by a prolongation on the back and with the lamellæ distant and paler than the pileus. In the American plant these characters do not hold good. The pileus is often clearly attached by a lateral stem or stem-like base and the villosity is found everywhere except on the margin, and the lamellæ are always, so far as I have seen, as dark as or even blacker than the pileus. The plant is flexible and revives on the application of moisture, thus indicating an affinity with the genus *Panus*. I have seen no description of the spores of *P. applicatus*.

Pleurotus niger, Schw

Black Agaric.

Pileus submembranous, two to four lines broad, subresupinate, pulveraceous, *black, plicate on the margin*; lamellæ broad, radiating, *black*, cinereous on the edge; spores subglobose, .0002 to .00025 in. broad.

Decaying wood. Helderberg mountains, June. This apparently rare fungus has been found in our State but once. The pileus is attached by a tuft of black hairs, and in the largest specimens these extend to the disk and there have a pulverulent appearance. The black color, black villosity and more coarsely striate or plicate margin distinguish this species from the next, which it otherwise closely resembles.

Pleurotus striatulus, Fr.

Slightly-striate Agaric.

Agaricus membranaceus, Scop. *Agaricus striato-pellucidus*, Pers.

Pileus membranous, very delicate, two to four lines broad, resupinate or subcupular, then reflexed, sometimes obconic and pendulous, sessile, slightly *striate* when moist, strongly striate or corrugated when dry, flaccid, *glabrous*, scattered or gregarious, persistent, *cinereous or brown*; lamellæ few, distant, *whitish or cinereous*; spores subglobose, .0002 to .00025 in. broad.

Much decayed wood of pine and hemlock. Fort Edward. *E. C. Howe*. Buffalo. *G. W. Clinton*. Greenbush and Adirondack mountains. July and October.

This is the smallest of our *Pleuroti*. Like the three preceding species, it revives on the application of moisture, and with them it forms a peculiar group worthy of distinction and separation from the

others. The pileus is attached by a grayish villosity. In drying it sometimes becomes nearly black. It is then so small and shriveled that it is easily overlooked.

CLAUDOPUS, *Smith.*

Pileus eccentric, lateral or resupinate. Spores pinkish.

The species of this genus were formerly distributed among the Pleuroti and Crepidoti, which they resemble in all respects except in the color of the spores. The genus at first was made to include species with lilac-colored as well as pink spores, but Professor Fries limited it to species with pink spores. In this sense we have taken it. The spores in some species are even, in others rough or angulated. The stem is either entirely wanting or is very short and inconspicuous, a character indicated by the generic name. The pileus is often resupinate and attached by a dorsal point when young, but it becomes reflexed with age. The species are few and infrequent. All inhabit decaying wood.

Synopsis of the Species.

Pileus yellow.....	<i>C. nidulans.</i>	
Pileus white or whitish		1
1 Spores even	<i>C. variabilis.</i>	
1 Spores angulated.....	<i>C. depuens.</i>	
Pileus gray or brown.....		2
2 Pileus striatulate when moist.....	<i>C. Greigensis.</i>	
2 Pileus not striatulate	<i>C. byssisedus.</i>	

Claudopus nidulans.

Nestling Agaric.

Agaricus nidulans, Pers.

Pileus one to three inches broad, sessile or rarely narrowed behind into a short stem-like base, often imbricated, suborbicular dimidiate or reniform, *tomentose*, somewhat strigose-hairy or squamulose-hairy toward the margin, *yellow or buff color*, the margin at first involute; lamellæ rather broad, moderately close or subdistant, *orange-yellow*; spores even, slightly curved, .00025 to .0003 in. long, about half as broad, delicate pink.

Decaying wood. Sandlake, Catskill and Adirondack mountains. Autumn.

This fungus was placed by Fries among the Pleuroti, and in this he has been followed by most authors. But the spores have a delicate pink color closely resembling that of the young lamellæ of the common mushroom, *Agaricus campestris*. We have, therefore, placed it among the Claudopodes, where Fries himself has suggested it should be placed if removed at all from Pleurotus. Our plant has sometimes been referred to *Panus dorsalis*, Bosc., but with the description of that species it does not well agree. The tawny color, spathulate pileus, paler floccose scales, short lateral stem and decurrent lamellæ ascribed to that species are not well shown by our plant. The substance of the pileus, though rather tenacious and persistent, can scarcely be called coriaceous. The flesh is white or pale yellow. The tomentum of the pileus is often matted in small tufts and intermingled with coarse hairs, especially toward the margin. This gives a squa-

mose or strigose-hairy appearance. The color of the pileus is often paler toward the base than it is on the margin.

Claudopus variabilis, Fr.

Variable Agaric.

Agaricus variabilis, Pers. *Agaricus sessilis*, Bull. *Agaricus niveus*, Sow.

Pileus thin, one-half to one inch broad, at first resupinate, then reflexed, sessile or with a very short stem, tomentose, white; lamellæ rather broad, thin, radiating from a lateral or an eccentric point, distant, white becoming pink; spores *even*, elliptical, .00025 to .0003 in. long, about half as broad.

Decaying wood and dead branches. Adirondack mountains. July to October. Buffalo. G. W. Clinton.

A small and not common species. The thin pileus is often attached to its place of growth by white tomentose filaments, and the point to which the lamellæ converge is also sometimes tomentose.

Claudopus depluens, Fr.

Rainy Agaric.

Agaricus depluens, Batsch.

Pileus thin, one-half to one inch broad, at first resupinate, then reflexed, variable in form, sessile or with a short stem, slightly silky-tomentose especially toward the base, white or whitish, sometimes slightly tinged with pink; lamellæ broad, subdistant, whitish, becoming pink; spores *angulated*, .0004 to .00045 in. long, .0003 broad, usually containing a single large nucleus.

Decaying wood. Catskill mountains, Gansevoort and Sterling. July and August.

This species, like the preceding one, which it closely resembles and from which it is separated by the character of the spores, is very variable. In our specimens the pileus is white, but it is sometimes described as tinged with red or gray. It is also said to grow upon the ground and on mosses, but our specimens grew upon decaying wood. In both these particulars they agree with the figure of the species in Mycological Illustrations.

Claudopus Greigensis, Pk.

Greig Agaric.

Pileus very thin, convex, five to ten lines broad, hygrophamous, grayish-cinnamon color and *striatulate* when moist, silky-fibrillose when dry; lamellæ subdistant, *scarcely reaching the stem*, grayish becoming dingy-pink; stem short, about one line long, solid, curved, fibrillose below, with an abundant white radiating mycelium at the base; spores *angulated*, .00035 to .00045 in. long, .0003 broad, usually containing a single large nucleus.

Much decayed wood. Greig. September.

This species is intermediate between the preceding and the following one, but it is more closely related to the latter, from which it is distinguished by the *striatulate* pileus and free lamellæ.

Claudopus byssisedus, Fr.

Fibril-attached Agaric. Little Claudopus.

Agaricus byssisedus, Pers.

Pileus very thin, four to ten lines broad, at first resupinate, then reflexed, nearly plane, glabrous or merely pruinose with a slight grayish villosity, gray, grayish-brown or brown; lamellæ rather broad, *subdecurrent*, grayish, then tinged with pink; stem short, lateral or eccentric, generally curved, with white radiating byssoid fibrils at the base; spores angulated, .0004 to .00045 in. long, .0003 broad.

Decaying wood. Sterling and Adirondaek mountains. August and September.

CREPIDOTUS, Fr.

Veil wanting or not manifest. Pileus eccentric, lateral or resupinate. Spores ferruginous.

The Crepidoti correspond in shape and habit to the smaller Pleuroti and the Claudopodes, but they are distinguished from both by the ferruginous color of their spores. These are globose in several species, in others they are elliptical. In some there is a depression on one side which gives them a naviculoid character and causes the spore to appear slightly curved when viewed in a certain position. In consequence of the similarity of several of our species, the character of the spores is of much importance in their identification, and it is unfortunate that European mycologists have so generally neglected to give the spore characters in their descriptions of these fungi. In most of the species the pileus is at first resupinate, but it generally becomes reflexed as it enlarges. It is generally sessile or attached by a mass of white fibrils or tomentum. For this reason it is usually somewhat tomentose or villose about the point of attachment, even in species that are otherwise glabrous. In several species the pileus is moist or hygrophamous and then the thin margin is commonly striatulate. This character is attributed to but one of the dozen or more European species. The large number of New York species is noticeable, and future investigation may show that mere varieties have in some instances been taken for species. Their mode of growth is usually gregarious or somewhat loosely imbricated, in consequence of which the pileus, which in most species is white or yellowish, is often stained by the spores, and then it has a rusty, stained or squalid appearance. The species occur especially on old stumps, prostrate trunks and soft much-decayed wood in damp, shaded places. The name Crepidotus is derived from two Greek words *κρηπις*, a shoe or slipper, and *ους*, an ear.

Synopsis of the Species.

Pileus viscid when moist.....	<i>C. hærens</i> .
Pileus not viscid.....	1
1. Pileus with a distinct stem.....	2
1. Pileus sessile or with an indistinct stem.....	3
2. Stem thickened at the base.....	<i>C. haustellaris</i> .
2. Stem not thickened at the base.....	<i>C. tiliophilus</i> .
3. Pileus glabrous or only slightly villose at the base.....	4
3. Pileus not glabrous.....	6
4. Lamellæ narrow and decurrent.....	<i>C. applanatus</i> .
4. Lamellæ broad, not decurrent.....	5

5. Pileus white, spores globose.....*C. malachius.*
 5. Pileus yellowish, spores not globose.....*C. crocitrinctus.*
 6. Pileus white, with a white villosity or tomentum 7
 6. Pileus with a colored villosity or tomentum 9
 7. Spores elliptical..... 8
 7. Spores globose.....*C. putrigena.*
 8. Spores less than .0003 in. long*C. herbarum.*
 8. Spores more than .0003 in. long*C. versutus.*
 9. Pileus squamose with a tawny tomentum, spores elliptical..*C. fulvotomentosus.*
 9. Pileus with a yellowish tomentum, spores globose.....*C. dorsalis.*

Crepidotus hærens, Pk.

Sticky Agaric.

Pileus thin, four to twelve lines broad, convex, sessile, cuneiform or dimidiate, glabrous, or slightly squamulose, hygrophamous, *viscid* and striatulate on the margin when moist, white or whitish when dry; lamellæ moderately close, narrow, tapering toward each end, subcinereous, then brownish; spores *elliptical*, pale-ferruginous, .0003 in. long, .0002 broad.

Decaying wood. Albany. September.

The elliptical spores and viscid pileus are the distinguishing characters of the species. I know of no other viscid *Crepidotus*. The pileus is watery white or gray when moist, and white when dry, unless stained by the spores. The margin is very thin and the pileus is attached to the matrix by white filaments. The species is rare, having been observed but once.

Crepidotus haustellaris, Fr.

Kidney-shaped Agaric.

Pileus thin, four to ten lines broad, lateral or eccentric, reniform or suborbicular, plane, moist, slightly tomentose when dry, alutaceous or pale-ochraceous; lamellæ broad, subdistant, rounded behind, slightly adnexed or nearly free, pallid, then brownish-cinnamon; stem short, distinct, solid, *bulbous thickened at the base*, whitened with a slight tomentose villosity; spores elliptical, .00035 to .0004 in. long, .0003 broad.

Dead bark of poplars. Thurman, Warren county. October. Rare.

Our specimens differ from the European plant in being smaller and of a paler color. The pileus is also sometimes eccentric, though Fries describes it as "exactly lateral" in the European plant. The dimensions of the spores are taken from our specimens, no spore characters being given in any description of the species to which we have had access. Fries remarks that the species is "small, regular, not caespitose, especially marked by the subconic stem and almost free lamellæ."

Crepidotus tiliophilus, Pk.

Linden-loving Agaric.

Pileus moderately thin, six to twelve lines broad, convex, minutely pulverulent, hygrophamous, watery-brown and striatulate on the margin when moist, dingy-buff when dry; lamellæ rather broad, subdistant, rounded behind, adnexed, colored like the pileus, becoming ferruginous-cinnamon; stem two to four lines long, about one line thick, solid, often curved, pruinose, with a white pubescence at

the base; spores subelliptical, brownish-ferruginous, .00025 to .0003 in. long, .00016 to .0002 broad.

Dead trunks and branches of basswood, *Tilia Americana*. East Berne, Albany county. August.

This plant is closely related to the preceding one from which I have separated it because of its larger size, smaller spores and stem not thickened at the base. The individual plants are also sometimes so closely crowded that they appear cæspitose. It is possible that intermediate forms may yet be found that will connect these.

Crepidotus applanatus, Fr.

Flattened Agaric.

Pileus very thin, six to twelve lines long, four to ten broad, variable in shape, suborbicular, reniform, cuneiform or spatulate, plane or convex, sometimes slightly depressed behind, sessile or prolonged behind into a short compressed white-tomentose stem-like base, glabrous, hygrophanous, watery-white and striatulate on the margin when moist, white when dry; lamellæ *very narrow, linear, crowded, decurrent*, white, becoming cinnamon; spores globose, .0002 to .00025 in. broad.

Old stumps and much decayed wood. Common. July to September.

It is very variable in the shape of the pileus, but it is commonly either cuneate or spatulate. It closely resembles *Pleurotus petaloides* in this respect as well as in the narrow crowded lamellæ and flattened stem-like base. As in that species and others of this genus, the pileus quickly becomes convolute in drying, unless it is placed under pressure. The striations of the thin margin are often retained in the dried plant. In the 26th Report, our specimens were erroneously referred to *C. nephrodes*, B. & C., from which they differ in the glabrous pileus and crowded linear lamellæ. This last character distinguishes it from all our other *Crepidoti*. It is gregarious and the pileus is often stained by the spores.

Crepidotus malachus, B. & C.

Soft-skinned Agaric.

Pileus thin on the margin, thicker behind, eight to twenty-four lines broad, varying from reniform or suborbicular to cuneate or flabellate, nearly plane, sometimes depressed behind, sessile or prolonged behind into a short white tomentose rudimentary stem or tubercle, glabrous, hygrophanous, *watery-white or grayish-white* and striatulate on the margin when moist, *white* when dry; lamellæ close, *sub-ventricose, rounded behind, white or whitish*, becoming brownish-ferruginous; spores *globose*, .00025 to .0003 in. broad.

Variety *plicatilis*. Pileus coarsely plicate on the margin.

Decaying wood in damp shaded places. Common. June to September.

This resembles the preceding species in color and habit, but it is easily distinguished by its broader pileus and much broader lamellæ rounded behind. In drying, the moisture is retained longer by the thin margin than it is by the thicker disk. The striations are some-

times retained in the dried specimens. By neglecting the spore characters, squalid spore-stained specimens of this species were erroneously referred, in the 24th Report, to *C. mollis*, a species not yet found in our State, though it has been reported from North Carolina, Ohio and Massachusetts.

Crepidotus croceitinctus, *n. sp.*

Saffron-tinted Agaric.

Pileus eight to twelve lines broad, convex or nearly plane, sessile, *glabrous*, sometimes with a white villosity at the base, moist, *yellowish*; lamellæ moderately broad, rounded behind, whitish, becoming *dull saffron-yellow*, then ferruginous; spores ferruginous, *subglobose* or *broadly elliptical*, .0002 to .00025 in. long.

Decaying wood of poplar and beech. Adirondack mountains and Day, Saratoga county. July.

This species is separated from *C. dorsalis* by its glabrous pileus and its less globose spores, and from *C. crocophyllus* by its larger size, yellow color and the absence of squamules from the pileus. Its spores are of a brighter ferruginous color than in most of our other species.

Crepidotus putrigena, *B. & C.*

Rotten-wood Agaric.

Pileus thin, convex, subreniform, often imbricated, sessile, *slightly tomentose with a more dense white villosity at the base*, moist, striatulate on the margin, whitish or yellowish-white; lamellæ rather close, broad, rounded behind, whitish, becoming ferruginous; spores *globose*, .00025 to .0003 in. broad.

Decaying wood. Brewerton. September.

This species is perhaps too closely allied to *C. malachus*, from which it scarcely differs, except in the villose-tomentose pileus. The lamellæ are three or four times broader than the thickness of the flesh of the pileus.

Crepidotus herbarum, *Pk.*

Herb-inhabiting Agaric.

Pileus thin, two to five lines broad, resupinate, suborbicular, clothed with a white, downy villosity, incurved on the margin when young, sometimes becoming reflexed, sessile, dimidiate and less downy; lamellæ rather narrow, subdistant, radiating from a naked lateral or eccentric point, white, then subferruginous; spores elliptical, .00025 to .0003 in. long, .00014 to .00016 broad.

Dead stems of herbs and dead bark of maple. North Greenbush and Adirondack mountains. August and September.

Crepidotus versutus, *Pk.*

Evasive Agaric.

Pileus four to ten lines broad, at first resupinate, then reflexed, reniform or dimidiate, sessile, white, clothed with a soft, downy or tomentose-vilosity, incurved on the margin; lamellæ rather broad,

subdistant, rounded behind, radiating from a lateral or eccentric point, whitish, then ferruginous; spores subelliptical, .00035 to .0004 in. long, .00025 to .0003 broad.

Decaying wood, bark, etc., in damp, shaded places. Common. June to October.

This species, and *C. herbarum* appear to run together, and but for the marked difference in the size of their spores I should have united them. The latter is not limited in its habitat to the stems of herbs, and the former sometimes, though rarely, occurs on them. *C. herbarum* is a smaller species with a thinner pileus, nearly always resupinate, and when reflexed, less densely tomentose. Its smaller spores especially distinguish it. Both appear to be closely allied to the European *C. chimonophilus*, which seems to be distinguished by its "oblong elliptical" spores, and its few distant lamellæ attenuated behind.

Crepidotus fulvotomentosus, *Pk.*

Tawny-tomentose Agaric.

Pileus eight to twenty-four lines broad, scattered or gregarious, suborbicular, reniform or dimidiate, sessile or attached by a short, white-villose tubercle or rudimentary stem, hygrophorous, watery-brown and sometimes striatulate on the margin when moist, whitish, yellowish or pale ochraceous when dry, adorned with small, tawny, hairy or tomentose scales; lamellæ broad, subventricose, moderately close, rounded behind, radiating from a lateral or eccentric white villose spot, whitish becoming brownish-ferruginous; spores elliptical often uninucleate, .0003 to .0004 in. long, .0002 to .00025 broad.

Decaying wood of poplar, maple, etc. Common. June to October.

A pretty species, corresponding in some respects to the European *C. calolepis*, but much larger and with tawny, instead of rufescent scales. The cuticle is separable and is tenacious though it has a hyaline gelatinous appearance. The pileus is subsistent, and specimens dried in their place of growth are not rare.

Crepidotus dorsalis, *Pk.*

Dorsal Agaric.

Pileus eight to fifteen lines broad, sessile, dimidiate or subreniform, plane or slightly depressed behind, with a decurved substriate margin, slightly fibrillose-tomentose, reddish-yellow; lamellæ close, ventricose, rounded behind, radiating from a lateral white villose spot, yellowish, then brownish-ochraceous or subferruginous; spores globose, .00025 in. broad.

Decaying wood. Sprakers and Adirondack mountains. June and September. Buffalo. *G. W. Clinton.*

The tomentum of the pileus is more dense and conspicuous about the point of attachment, where it sometimes forms minute tufts or scales.

EXPLANATION OF PLATE 1.

ASCOMYCES EXTENSUS *Peck.*

- FIG. 1. A leaf partly killed and discolored by the fungus.
FIG. 2. An ascus containing spores $\times 400$.
FIG. 3. Four spores $\times 400$.

AGARICUS (NOLANEA) BABINGTONII *Blox.*

- FIG. 4. One young plant and two mature plants, the two at the left having the pileus moist and striatulate.
FIG. 5. Vertical section of a pileus and the upper part of its stem.
FIG. 6. Transverse section of the stem.
FIG. 7. Three spores $\times 400$.

PESTALOZZIA CONSOCIA *Peck.*

- FIG. 8. Part of a leaf with a discolored spot dotted by the fungus.
FIG. 9. Four spores, the one at the left immature $\times 400$.

PESTALOZZIA CAMPSOSPERMA *Peck.*

- FIG. 10. A leaf bearing the fungus.
FIG. 11. Four spores $\times 400$.

SPIRÆRELLA LYCOPODII *Peck.*

- FIG. 12. Two spikes of the host plant bearing the fungus.
FIG. 13. A slightly magnified scale dotted by the fungus.
FIG. 14. An ascus containing spores $\times 400$.
FIG. 15. Four spores $\times 400$.

GODRONIA CASSANDRÆ *Peck.*

- FIG. 16. Part of a branch bearing the fungus.
FIG. 17. A receptacle magnified.
FIG. 18. Vertical section of the same.
FIG. 19. A paraphysis and two asci containing spores $\times 400$.
FIG. 20. Three spores $\times 400$.

CLAVARIA CIRCINANS *Peck.*

- FIG. 21. Two plants.
FIG. 22. Five spores $\times 400$.

EXPLANATION OF PLATE 2.

DIAPORTHE MARGINALIS *Peck.*

- FIG. 1. Part of a branch bearing the fungus.
- FIG. 2. A pustule magnified.
- FIG. 3. Vertical section of a magnified pustule, showing three perithecia.
- FIG. 4. Two asci containing spores x 400.
- FIG. 5. Four spores x 400.

DIAPORTHE NEILLIÆ *Peck.*

- FIG. 6. Part of a branch bearing the fungus.
- FIG. 7. A perithecium magnified, its rostrum piercing the epidermis.
- FIG. 8. Two asci containing spores x 400.
- FIG. 9. Four spores x 400.

LEPTOSPHERIA KALMIÆ *Peck.*

- FIG. 10. Part of a branch bearing the fungus.
- FIG. 11. A piece of the bark with two perithecia magnified.
- FIG. 12. A perithecium more highly magnified.
- FIG. 13. A paraphysis and an ascus containing spores x 400.
- FIG. 14. Four spores x 400.

LÆSTADIA ÆSCULI *Peck.*

- FIG. 15. Part of a petiole bearing the fungus.
- FIG. 16. A perithecium magnified.
- FIG. 17. Two asci containing spores x 400.
- FIG. 18. Four spores x 400.

MONILIA PECKIANA *S. & V.*

- FIG. 19. A leaf partly discolored and its petiole frosted by the fungus.
- FIG. 20. Two chains of spores x 400.
- FIG. 21. A single spore x 400.

M. PECKIANA var. ANGUSTIOR *S.*

- FIG. 22. Part of a raceme with four of its young fruits frosted by the fungus.
- FIG. 23. Two chains of spores x 400.
- FIG. 24. Two spores x 400.



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ASCOMYCES EXTENSUS *Peck.*

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FIG. 2. An ascus containing spores x 400.
FIG. 3. Four spores x 400.

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FIG. 5. Vertical section of a pileus and the upper part of its stem.
FIG. 6. Transverse section of the stem.
FIG. 7. Three spores x 400.

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PESTALOZZIA CAMPSOSPERMA *Peck.*

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SPHÆRELLA LYCOPODII *Peck.*

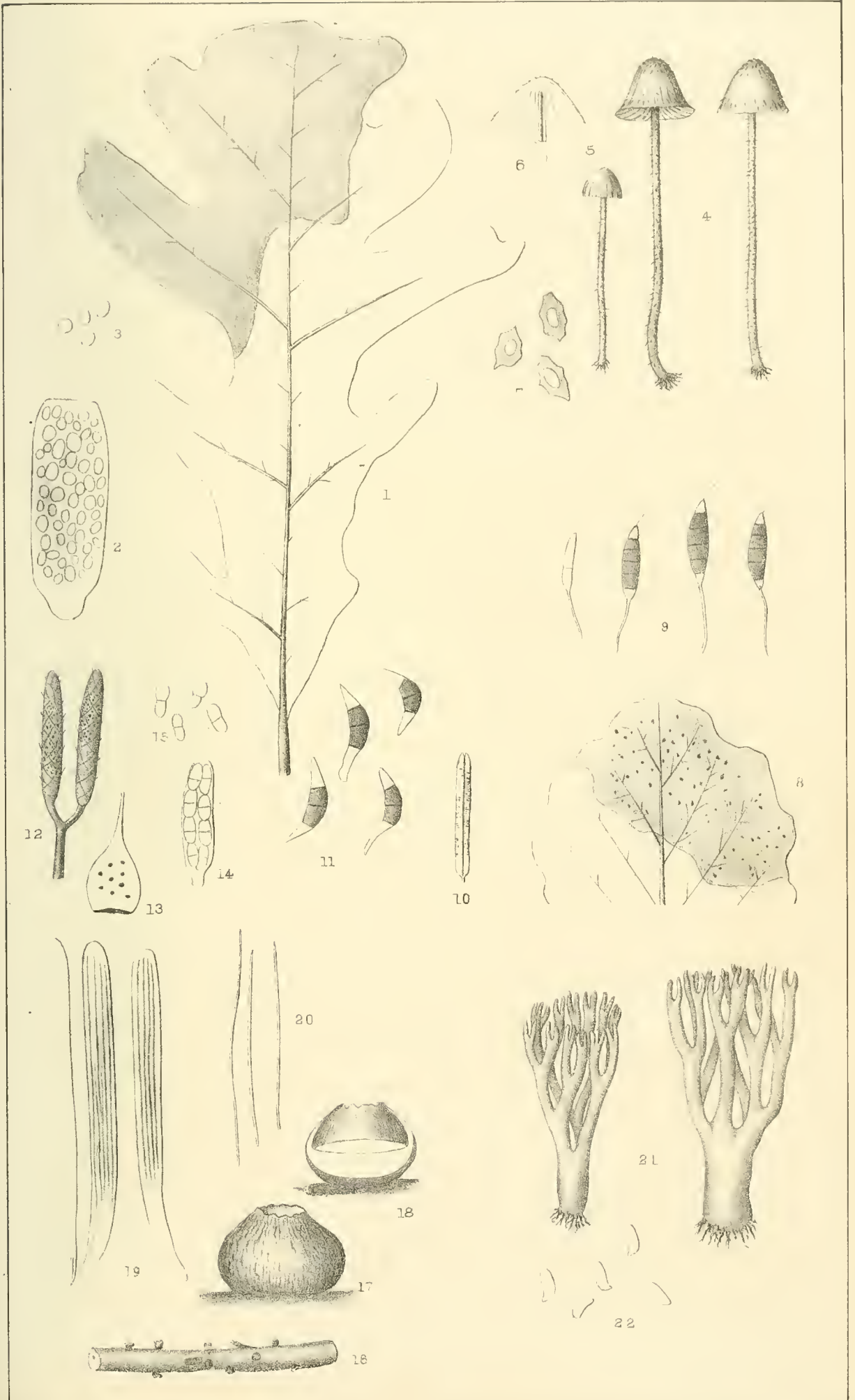
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M. PECKIANA var. *ANGUSTIOR* *S.*

- FIG. 22. Part of a raceme with four of its young fruits frosted by the fungus.
FIG. 23. Two chains of spores x 400.
FIG. 24. Two spores x 400.

