stamens. Its relationship with the Pedaliaceae is indicated with *Pedalium*, in the bilocular ovary with two pendulous ovules. The appendaged fruit forms a strongly analogous character with the Pedaliaceae. In the form and arrangement of the seed it is near the Myoporaceae but it differs in the fruit and the opposite leaves. *Trapella* thus can be considered as representing the type of a distinct family somewhat linking the Pedaliaceae and Myoporaceae.

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TAXONOMY.—*For and against the doctrine of prescription as applied to taxonomy: A historical retrospect.* AUSTIN H. CLARK, U. S. National Museum.

In these days of renewed interest in taxonomy and in revisions of and emendations to the International Code of Nomenclature it is perhaps of interest to put on record the sentiment expressed by the leading zoologists and paleontologists of nearly 50 years ago.

In the early years of the present century systematic zoology, including paleontology, was in high favor. Previously unknown species were being discovered in large numbers by expeditions to various little-known parts of the world and through the intensive exploration of the deep sea, and material that had been collected earlier was being intensively studied. This work, especially the revisionary studies connected with it, naturally focused attention on taxonomy.

Many names in general use were found to be untenable according to the strict application of the Rule of Priority. In accordance with the rule of priority an International Code of Nomenclature had been drawn up, based chiefly on previous codes concerned mainly with terrestrial vertebrates. This code proved of great value in stabilizing zoological nomenclature, but its strict application in certain cases led to the suppression of many well-established names in general use (as for example *Holothuria*) and also to interminable controversies regarding species inadequately described by early authors of which the type specimens had disappeared. Furthermore, the fossils did not come under the binomial principle elaborated by Linnaeus; they were made exceptions through ignorance of their true nature.

The binomial system was slow in becoming established in purely fossil groups, and there was, and still is, much controversy in regard to the binomial status, or otherwise, of many of the works of the earlier authors.

Dissatisfaction with the inflexibility of the Code and with its arbitrary interpretation and application at that time was becoming marked, and so in 1909 the Hon. Frank Springer of the Territory of New Mexico, the well-known authority on the fossil crinoids, and leader of the New Mexican bar, and I decided to test the prevailing attitude toward it on the part of our colleagues.

The genera *Encrinus*, *Pentacrinus*, *Isocrinus*, and *Millericrinus*, among the best known and most firmly established of all the genera of the Crinoidea, are all either untenable or of doubtful availability according to the strict application of the current code of zoological nomenclature adopted by the International Zoological Congress. In a circular dated Burlington, Iowa, May 1, 1909, Mr. Springer gave a summary of the involved history of the genus *Encrinus* and showed that great confusion would result if the genotype were determined according to the strict application of the rules.

Encrinus liliiformis is the best known of all the stalked crinoids. It has been figured and described under that name in countless works, and specimens are found under that name in all the important cabinets and museums of the world. *Encrinus* Blumenbach, 1779, is generally accepted, with the

genotype *Encrinus liliiformis* Lamarck, 1801. But according to a strict application of the code *Encrinus* should date either from Andreaë, 1763, with the genotype *E. coralloides*, which is supposed to be the terminal stem branches or roots of a species of *Millericrinus*, one of which has been referred to *M. echinatus* by de Loriol; or from Blumenbach, 1779, with the genotype *Isis asteria* Linné (= the Recent West Indian *Cenocrinus asteria*); *liliiformis* was not included in *Encrinus* by Blumenbach (see A. H. Clark, Ann. Mag. Nat. Hist. (8) **3** (15): 308–310. March 1909). Mr. Springer wrote:

> The results of either of these applications of the name *Encrinus*, one or other of which would be rendered necessary by a strict adherence to the International Code, would be to throw the study of the fossil crinoids into intolerable confusion, not so much for the workers in the group, like myself, who can take immediate cognizance of any change, but for the much larger number of students interested in stratigraphy, paleontology, general geology, and allied subjects. The shifting of the names, commonly accepted and heretofore unquestioned, of the commonest genera—genera predominantly characteristic of certain horizons—would impose an intolerable burden upon every one who ever had any occasion to refer to the crinoids in any way. The change, even if it could finally be brought about, would take years to accomplish, and the burden would fall heaviest on those to whom crinoids were only of incidental interest, though of the greatest indirect importance, in the identification of strata, or in the instruction of students. The result would be hopeless confusion, would benefit nobody, and could not fail to bring ridicule upon the taxonomic methods now in vogue.
>
> Moreover, it must be borne in mind that the fossils did not come under the binomial principal as elaborated by Linnaeus; they were made exceptions through ignorance of their true nature. Thus we find that the binomial system was slow in becoming established in purely fossil groups, and there will always be controversy in regard to many of the works of the earlier authors.
>
> The underlying principle of the rule of priority is said, and properly said, to be *fixity*. Yet by insisting upon its absolute and unbending application in all cases, without regard to circumstances, we may destroy the very fixity for which we contend. There is no law more deeply rooted in the foundations of civil government, or more essential to the welfare and stability of society, than that of the fixity of the titles to real estate based on priority. But just as that law in actual administration is subject to exceptions founded upon principles of natural justice and the dictates of public policy, so I think we may find reasonable basis for an exception to the rule of priority in nomenclature which will meet such cases as this.
>
> This would be that such cases, irrespective of the actual state of the record as to their dates, should be protected under an exception to the rule, simply on the ground of long use, on the doctrine of prescription, which is a principle well known in law, recognized in continental Europe as coming down from the civil law of Rome, and now embodied in statutes in all English-speaking countries. It is that the right of property will be upheld by the courts in favor of one who can show a long, continuous, and undisputed possession of it, under a claim of right, however defective, notwithstanding he has no paper title, and even though the records may show the prior title to be in some one else. This rule of law rests upon the idea that it is for the public interest that there be an end of controversy, and that there shall be some reasonable time after which titles may be held safe from attack on any ground. And this end was attained in the beginning, not by denying or abrogating the law governing the conveyance of property by deeds, but by invoking a simple presumption, founded on the known as usual conduct of men with regard to their interests, that where such long and undisputed possession existed there must have been a good title, the evidence of which is lost.
>
> This principle of jurisprudence is now recognized throughout the civilized world as one of the most salutary and beneficial provisions for preventing injustice and insuring that repose of titles which the peace and order of society demand. By virtue of its operation a title by lapse of time merely, if properly proven under all the safeguards which are prescribed in practice to prevent the abuse of it, is as good in the actual possessor as a paper title showing priority by an unbroken chain of recorded deeds. If this be true with regard to matters of such vital importance as the titles to our landed property, why may not the same principle be invoked in favor of repose and stability of names in our scientific literature? It is not a question of "doing justice" to any particular ancient author. The proposition is one of far broader significance, and involves the paramount interest of the scientific public.
>
> In this way, by analogy to the practice which prevails in courts of justice touching the most solemn rights of property, a presumably just conclusion can be reached independent of the rule of priority, and without impairing its force in cases to which no such considerations of public policy apply.
>
> In view of the above, I am in favor of making an exception to the rigid application of the law of priority in regard to the exclusively fossil genus *Encrinus*, accepting it from Schulze, 1760,[1] by

[1] Mr. Springer wrote that Schulze's work "was mainly a compilation from former authors, as Linck, Lluyd, Seba, Capelier, and Ellis, and he uses their names in the same manner as they did, with but small pretense to binomial application.

which means all the above mentioned genera of crinoids [*Encrinus*, *Pentacrinus*, *Isocrinus*, and *Millericrinus*] would be retained in the same significance in which they are used today, and have been used for the better part of a century.

Mr. Springer concluded "I am asking you to indicate on the enclosed card whether, in view of the above considerations, you are in favor of making an exception to the International Code in favor of *Encrinus*, or whether, in your judgment, the best course would be to adhere strictly to it in this case, notwithstanding the deplorable confusion which would result."

The enclosed postal card, which was addressed to me, had two alternatives, each followed by a line for a signature. The alternatives were:

(1) I am in favor of accepting *Encrinus* from Schulze, 1760, and of retaining it and the other crinoid genera affected in the same sense as understood today.

(2) I am in favor of a strict adherence to the International Code, regardless of the effect on the present nomenclature.

This circular was sent to 1,000 zoologists and paleontologists.[2]

We received 376 replies to the circular, from Algeria, Brazil, Canada, Ceylon, Denmark, Egypt, Eire, England, Finland, France, Germany, Italy, Japan, Netherlands, New South Wales, New Zealand, Norway, Philippines, Portugal, Queensland, Russia, Scotland, South Australia, Sweden, Tasmania, Trinidad, B.W.I., United States, Victoria, and Western Australia.

Of these replies 297 (nearly 80 per cent) favored retaining *Encrinus*, and 62 (about 20 per cent) favored strict adherence to the Code, a number of them with reluctance.

To show the broad general interest taken in this matter at that time it may be mentioned that among those who replied were Alexander Agassiz, Count Arrigoni Degli Oddi, Lord Avebury, E. G. Conklin, Theodore Gill, Sir Sydney Harmer, Ernst Hartert, John B. Henderson, Jr., Edgard Hérouard, John C. Merriam, Edward S. Morse, Adam Sedgwick, Sir D'Arcy Thompson, A. E. Verrill, Charles D. Walcott, and Alfred Russel Wallace.

Following is an analysis of the replies.

FOR RETAINING ENCRINUS

Of those who returned the cards or wrote letters 243 favored the first alternative, the acceptance of *Encrinus* from Schulze, 1760, without comment. Among these were:

George Abbott, Charles C. Adams, Nicolai Adelung, Alexander Agassiz, M. J. Ahern, A. Alcock, Edward Phelps Allis, Jr., Richard John Anderson, A. W. Anthony, Prof. Dr. Appellöf, Count Arrigoni Delgi Oddi, E. A. N. Archer, Chr. Aurivillius, Lord Avebury [formerly Sir John Lubbock], G. E. H. Barrett-Hamilton, Walter B. Barrows, R. S. Bassler, F. E. L. Beal, Tarleton H. Bean, C. William Beebe, F. Jeffrey Bell, Charles P. Berkey, S. W. Berger, A. Bibbins, W. B. Benham, M. A. Bigelow, H. P. Blackmore, J. E. V. Boas, L. A. Borradaile, Adam Bøving, H. Bolton, Aug. Brinkmann, Hjalmar Brock, Arthur Erwin Brown, J. Büttikofer, W. T. Calman, Oskar Carlgren, J. W. Carr, W. D. Carr, Thomas L. Casey, George H. Chadwick, Robert E. Coker, Leon J. Cole, E. G. Conklin, H. Coutière, William A. Cunningham, Ulric Dahlgren, W. Boyd Dawkins, R. Etheridge, W. L. W. Field, G. H. French, John H. Gerould, O. C. Glaser, E. L. Goldsborough, Seitaro Goto, L. C. Graton, Laurence E. Griffin, R. J. Lechmere Guppy, Robert Gurney, H. J. Hansen, Chas. W. Hargitt, Clemens Hartlaub, Sir Sydney F. Harmer, John B. Henderson, Jr., Junius Henderson, P. P. C. Hoek, S. J. Holmes, A. D. Hopkins, Walter Howchin, I. Ijima, Hartley H. T. Jackson, Robert T. Jackson, Otto Jaekel, O. A. Johansen, Lynds Jones, Chauncey Juday, Hector F. E. Jungersen, W. C. Kendall, John T. Kemp, J. Graham Kerr, H. Kirkpatrick, K. Kishinouye, N. Knipowitsch, K. Kraepelin, B. W. Kunkel, H. H. Lane, Torsten Lagerberg, J. M. R. Levinsen, Edwin Linton, F. A. Lucas, William Lundbeck, Henry H. Lyman, Richard C. McGregor, A. Gibb Maitland, B. Pickman Mann, E. L. Mark, Geo. W. Martin, K. Martin, O. Maas, S. E. Meek, E. A. Minchin, John Mitchell, Henry Montgomery, Roy L. Moodie, Carlos Moreira, Edward S. Morse, Th. Mortensen, Henry F. Nachtrieb, John Treadwell Nichols, A. M. Norman, Hj. Östergren, Paul Pallary, Raymond Pearl, G. Pfeffer, A. L. Quaintance, Wilhelm Ramsey, Herbert W. Rand, Paul M. Rea, C. Tate Regan, Jacob Reighard, Robert

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He did not propose *Encrinus* to represent a genus, but only mentioned, by way of recital, the fact that certain petrifactions resembling a lily have been called the lily-stone, *Encrinus* ('Man findet eine gewisse Versteinerung, die, in Ansehung ihrer Gestalt, einige Gleichheit mit einer Lilie zu haben scheinet, daher man dieselbe enfänglich fur die Versteinerung dieser Blume gehalten, und sie den Lilienstein, ENCRINUM, genennen hat.'). On plate IV is a figure of a complete crown of the fossil to which he refers, and in the long description which follows he mentions it four times by the name 'Lilienstein,' but never again as '*Encrinus*.' The figured specimen is *E. liliiformis* Lamarck."

[2] See Austin H. Clark, The strict application of the law of priority to generic names, Science, n.s., **31** (787): 145–146. January 28, 1910.

Ridgway, Alice Robertson, Rudolf Ruedemann, G. O. Sars, R. S. Scharff, W. L. Sclater, E. A. Schwarz, H. H. Scott, Adam Sedgwick, H. W. Shimer, C. Ph. Sluiter, Frank Smith, Grant Smith, John B. Smith, Sanderson Smith, T. Southwell, J. W. Spengel, E. C. Stirling, F. B. Sumner, W. M. Tattersall, Hjalmar Théel, Sir D'Arcy W. Thompson, Charles D. Walcott, P. R. Uhler, E. O. Ulrich, A. E. Verrill, Gen. A. W. Vogdes, U.S.A., B. E. Walker, Henry B. Ward, Stuart Weller, W. M. Wheeler, R. P. Whitfield, C. O. Whitman, W. H. Wickes, S. R. Williams, S. W. Williston, Chas. B. Wilson, Herluf Winge, Lorande Loss Woodruff, H. Woods, Horace B. Woodward, J. B. Woodworth, and Dean C. Worcester.

In addition to these, 54 zoologists and paleontologists were in favor of retaining *Encrinus* as suggested, but added comments. These may be classified as follows.

1. Questions such as this should be presented to the International Commission to be adjudicated by the Commission itself or by a committee or committees appointed by the Commission. Among those taking this view were:

Glover M. Allen, E. P. Bailey, F. A. Bather, James E. Benedict, R. P. Bigelow, A. J. Jukes Browne, Charles B. Davenport, Hubert Lyman Clark, Walter L. Hahn, Reginald Heber Howe, Jr., Charles A. Kofoid, F. B. Loomis, Alfred G. Mayer, Herbert Osborn, Raymond C. Osburne, A. S. Pearse, Charles Schuchert, Hugh M. Smith, T. Wayland Vaughan, and L. B. Walton.

2. There were 15 replies that favored retaining old established names. These were from:

Robert Anderson, Prof. Apstein, J. W. Beede, Lyman Belding, Wesley R. Coe, L. Cuénot, W. R. Dudley, Charles L. Edwards, J. Stanley Gardner, Francis H. Herrick, J. S. Kingsley, Alfred C. Lane, John C. Merriam, Charles S. Prosser, and Alfred Russel Wallace. Of these, three suggested time limits of general use—20–25 years (Wallace), 30 years or more (Hoek), 75 or 100 years (Beede), and 100 or even 50 years (Belding).

3. Among the replies 11 regarded strict adherence to the Code as leading to confusion or to absurd results, as "perfectly idiotic," or as "rank nonsense." These were from:

T. B. Bonney, Charles A. Chilton, Ludwig Döderlein, J. H. Fleming, R. Fourtau, Robert H. Gordon, L. P. Gratacap, R. Koehler, W. P. Pycraft, Thomas Scott, and W. L. Tower.

There were also scattering comments. Oldfield Thomas supported *Encrinus* on the ground that it is technically valid. William Sörensen said, "(1) I cannot see that thereby the rules are broken, and (2) one must have a motive to do a thing, but not to do nothing." G. W. Kirkaldy wrote, "I would have to examine the various papers myself before giving an opinion, but I would point out that Sherborn considers Schulze binomial." David Starr Jordan said, "Under the Code is not *encrinus* L. necessarily the type of *Encrinus* Blumenbach? I am on the fence at present. The considerations are strong on both sides. I think that if I were a paleontologist I should wait before changing these names. I am not sure that under the Code *Encrinus* Schulze is not tenable. In any case, this is a very difficult problem. Did Andreaë have Schulze's work in mind? Is *Pentaceros* Schulze tenable?" W. L. McAtee wrote "Stability of nomenclature attained by means however arbitrary is preferable to the continual changing which our best intentioned rules seem powerless to prevent." Warren D. Smith favored the retention of *Encrinus*, but also favored a strict adherence to the Code in future work. Theodore D. A. Cockerell analyzed in detail the status of *Encrinus*.

In addition to returning the cards, the following wrote at length regarding their views:

Thomas L. Casey T. D. A. Cockerell, Leon J. Cole, H. Coutière, L. Döderlein, J. Graham Kerr, F. A. Lucas, Richard C. McGregor, Th. Mortensen, Rudolf Ruedemann, Henry B. Ward, and S. W. Williston.

FOR THE STRICT APPLICATION OF THE CODE

Of those who returned the cards, 42 favored the second alternative, the strict application of the Code, without comment. Among these were:

Paul Bartsch, Wilhelm Blasius, Sergius A. Buturlin, C. Callaway, Morton L. Church, Robert Collett, J. A. Cushman, A. A. Doolittle, C. H. Eigenmann, Barton W. Evermann, W. K. Fisher, C. H. Gilbert, Theodore Gill, O. P. Hay, W. P. Hay, Harold Heath, H. W. Henshaw, Charles W. Johnson, Frederick Knab, F. H. Knowlton, G. W. Lee, M. W. Lyon, Jr., Gerrit S. Miller, Jr., E. W. Nelson, Harry C. Oberholser, J. Douglas Ogilby, A. E. Ortmann, Henry A. Pilsbry, Franz Poche,

Julius Pohlman, Edward A. Preble, Mary J. Rathbun, James A. G. Rehn, Harriet Richardson, Charles W. Richmond, J. H. Riley, R. W. Sharpe, Witmer Stone, W. E. Clyde Todd, George Wagner, and W. M. Winton.

In addition to these, 20 zoologists and paleontologists added comments. J. J. Buckman said, "I am in favor of a strict adherence to the Law of Priority properly interpreted when I hope it will be proved that it will not have any effect on the present nomenclature. August Busck wrote that "similar cases just as tempting to make exceptions of occur in Lepidoptera, on which there is far more literature than on *Encrinus*. One exception justifies another and gives chance for differences of opinion." A. N. Caudell noted that "To do otherwise would set a bad example. Many genera in other lines have the same claim on exception." Frederic Chapman said, "It is a bad surgical case, but I fear there is no way out if we accept the rules." M. L. Fuller noted that "This doubtless leads to confusion at times, but on the whole it seems a good policy. The way to uphold and establish it so that in the end the greatest good will result is to *avoid making exceptions*." Ernst Hartert said, "I am in favour of a strict adherence to the International Code, regardless of the effect on the present nomenclature." Hermann von Ihering wrote, "We have already proceeded against our desires in applying the international rules in many cases and shall do so also in the present. . . ." F. A. Jentink remarked, "I am in favor of a strict adherence to the International Code regardless of the effect on present nomenclature." E. L. Morris said that "priority is the only stable basis for all time." R. I. Pocock was in favor of strict adherence to the International Code "because the anticipated ill effects are always greatly exaggerated, and because if *one* exception be made a *thousand* will have to follow, each worker having pet names he would like to preserve in *statu quo ante*."

However, 11 of those who voted for the strict adherence to the Code were not entirely satisfied with it. Louis B. Bishop said, "I was not in favor of any of the recent changes in ornithological names, believing it far better for all to agree to stick to what we had that were thoroughly accepted regardless of priority, but it is now too late." John M. Clarke wrote, "The principles of judicial procedure if applied to authors would ignore the element of equity which is essentially safeguarded by the International Code. The disturbance of conventional use is a temporary inconvenience to which science will eventually adjust itself. Jonathan Dwight, Jr., said, "At present there is no alternative except to play the game according to the rules. Nobody has a right to make exceptions because there is no court of appeal to them, and the whole discussion of *Encrinus* is a plea for preference instead of rule." William H. Dall was in favor of accepting *Encrinus* "if this can be authorized by the vote of the International Zoological Congress." George H. Girty thought that "dropping *Encrinus* from the literature as not recognizable [*Encrinus* of Andreaë] . . . might be thought a pity but would not lead, I would think, to much confusion." Edgard Hérouard upheld strict adherence to the Code, but believed it would be useful to modify the Code in this case. Wilfred H. Osgood favored strict adherence to the Code, but said, "I would favor modification of the Code, even very drastically, in order that such names might be retained." H. E. Summers said that any exceptions should be made by the International Congress. Henry L. Ward wrote, "Taken by itself it would seem advisable to retain *Encrinus*, but there are others, and some rule must be enforced, and as we have no courts of law the rules must be self-enforcing." David White was in favor of strict adherence to priority in the binomial usage, that is, for *Encrinus* Andreaë.

Letters giving their views in detail were received from J. J. Buckman, W. H. Dall, Jonathan Dwight, Jr., C. H. Gilbert, George H. Girty, G. Douglas Ogilby, and Franz Poche.

NO OPINION EXPRESSED

J. A. Allen, A. J. Bigney, Arthur M. Edwards, and Arthur H. E. Mattingley sent in cards signed without comment in both places. One correspondent said he was not competent to express an opinion, "But in general I deplore the discarding of old

and long accepted familiar names in any branch of natural history, resulting as it does in constant confusion and discouragement, especially to the uninitiated."

Letters without an expression of opinion were received from Henry B. Bigelow, A. J. Jukes Browne, William E. Hoyle, and Charles Wardell Stiles.

Finally, one card from Dorchester, England, read "I am in favor of accepting *Encrinus* Schulze, 1760 . . . but I should prefer a postal order for five shillings to be sent to Timothy Scroggins, Warwick Gaol, and to be given me when I have finished my time."

Since this poll was taken the principle of prescription has been adopted by the International Commission on Nomenclature, and a list of *nomina conservanda* has been established.

All the cards and the letters referred to above have been mounted in a scrapbook, which is filed in the Library of the Smithsonian Institution.

ZOOLOGY.—*On* Polyclinum indicum, *a new ascidian from the Madras coast of India.* V. O. Sebastian,[1] University Zoology Research Laboratory, Madras, India. (Communicated by Fenner A. Chace, Jr.)

While engaged in a study of the ascidian fauna of Madras coast, I was able to identify a new species of *Polyclinum*, the structure of the zooid, larva, and postlarval stages of which forms the substance of the present paper. Herdman (1891) has described *P. constellatum* and *P. isiacum* from the Indian Ocean, and a doubtful species (1906), *P. nigrum*, from the gulf of Manaar. Sebastian (1942) has published an account of the anatomy and larval organization of *Polyclinum* sp. obtained from a dredge collection off the coast of Madras and later (1952) described as *P. madrasensis* Sebastian. The present form, **Polyclinum indicum**, n. sp., is the commonest synascidian found along the rocky shores of the Madras coast. The colonies are found attached to the under surface of stones and boulders, at the level of the tides, on the Royapuram coast, north of Madras harbor. The places where they grow are always subjected to the action of violent waves.

External appearance.—The colonies vary in shape, younger ones being oval or pear-shaped with narrow bases of attachment and round upper exposed surfaces (Figs. 1, 2). The full-grown colony has an umbrella-shaped upper exposed surface, the base of attachment being broader, but narrower than the diameter of the upper region (Fig. 3). The mature colony has a diameter of 2 to 2½ inches, and a height of 1½ to 2 inches. The common cloacal openings are found scattered on the exposed surface, raised on conical projections of the outer test. The surface is encrusted with a thin layer of sand. The color is light brown or pale red in the majority of cases. Rarely the color is dull green, but except for this the anatomical features are the same. Several colonies, large and small, could be seen closely applied to one another, the different-colored colonies occurring in the same group.

The zooids are arranged in systems of about 20 to 40, three or more such systems found around one common cloacal opening forming a pattern (Fig. 4). The branchial openings have a whitish color on their margins. A cross section of the colony (Fig. 5) shows the disposition of the zooids inside the test. They are arranged toward the outer periphery, their long ampullae running throughout the length of the test in various directions. The test is transparent, having a tinge of either red or green according to the color of the colony.

Structure of zooids.—The length of the zooid (Fig. 6) from the branchial siphon to the tip of the postabdomen is about 2.3 to 3.2 mm. The abdomen is about one-half and the postabdomen three-fourths the size of the thoracic region. The shape and proportion of the various regions of the zooids may vary slightly according to the manner in which each zooid is pressed into the group forming a system. The *branchial siphon* is 6-lobed. The *atrial siphon* is a wide space exposing a part of the branchial sac, which is a characteristic feature. At the anterior edge of the atrial siphon there is an *atrial languet*, which is leaflike, but

[1] I wish to express my thanks to Dr. C. P. Gnanamuthu, director of the University Zoology Research Laboratory, for his helpful suggestions, and to the authorities of the Madras University for varied assistance rendered.