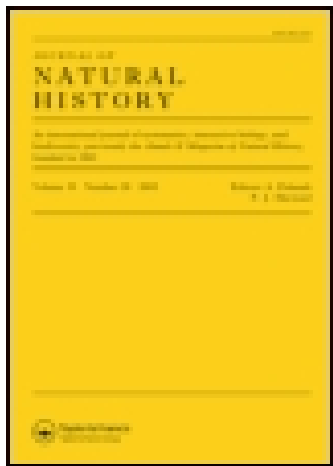


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### III.—On the terms Bryozoa and Polyzoa

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scribed by Grube (Archiv für Naturg. Band i. p. 201) under the name of *Colomastix*. It has stout, simple, subequal antennæ, with rudimentary flagella, like those of *Cratippus*; the anterior gnathopoda are long, filiform, and exunguiculate in both sexes, while those of the posterior pair are large and subchelate; the posterior pleopoda are biramous with unequal rami; and the telson is single and pointed. This peculiar form shows an approximation to *Cratippus* and *Siphonæcetus* in the structure of the antennæ, but differs from both these genera in the form of the anterior gnathopoda and of the posterior pleopoda; from the allied genera *Podocerus*, *Corophium*, *Dryope*, and *Unciola* it is separated by the character of the antennæ and of the anterior gnathopoda.

### III.—On the Terms Bryozoa and Polyzoa.

By ARTHUR WILLIAM WATERS, F.G.S.

I HAVE already\* given my reasons shortly for calling this group Bryozoa instead of Polyzoa; but it seems advisable to call attention to this point again more fully.

The argument upon which those who have adopted the name Polyzoa have relied has been that Thompson had priority over Ehrenberg. This does not appear to be disputed, and seems to have been a side wind which has prevented zoologists from examining Thompson's paper, thinking it was a question of dates; but I have pointed out that Thompson did not in his paper indicate any group of animals by his term, and that all he meant by Polyzoa was a single polypide. It is apparent he here made an etymological mistake, as also in using the plural Polyzœ; but with this we have nothing to do, and I do not urge this as any reason against his term, but confine myself to the meaning he applied.

We do not need to go further than the title, which is, "On Polyzoa, a new animal discovered as an inhabitant of some Zoophytes." I ask, does this in the least express our present ideas? Further on (p. 97) he says, "the other species of *Sertularia* in which the animals have been determined to be Polyzœ;" and this same idea of the inhabitants of the zoophytes being Polyzœ is expressed every few lines.

I feel the greatest confidence that as soon as zoologists generally know that this is no bibliographical question of dates, and themselves turn to Thompson's paper, they will see

\* "On Bryozoa," Manch. Lit. & Phil. Soc., Microsc. & Nat. Hist. Sect. 1878, vol. xvii.

they have been induced to use the name Polyzoa under a misapprehension.

There is another argument which has been brought forward very recently by Prof. T. Rupert Jones\*, who points out that Ehrenberg included animals under Bryozoa which are now known not to be correctly so placed. This requires us to turn and see what Ehrenberg says; but we may first remark that we suppose Prof. Rupert Jones found the general reason of priority so insufficient that he saw he must find the polyzoists a better reason than they had themselves discovered. I should like to know if they acknowledge this new argument or say it need not have been given. If they do not ignore Prof. Jones's 'Geology of Sussex' and thank him for his support, this is what, in polite diplomatic language, would be called a change of front, but which we prefer to consider a retreat.

Did Ehrenberg describe the Bryozoa as a group? In 'Symbolæ Physicæ' he has "circulus I. Anthozoa," and, divided from this, "circulus II. Bryozoa," which he separates thus:—"ore anoque distinctis, tubo cibario perfecto. (Vibratio aperta ciliorum ope; an omnibus? Ovipara et gemmipara, sponte nunquam dividua.)" And in 'Die Corallenthiere d. Rothen Meeres' he similarly divides them; and the "doppel-mündige Corallenthiere" or Bryozoa he defines "mit einem kammerigen, innen nicht strahligen Körperbaue, besonderem Mund und After, oft bewimperten wirbelnden Fangarmen." And his families are Cristatellina, Halcyonellea, Cornularina, Escharina, Celleporina, Auloporina, Antipathina, Myrizooina.

*Cornularia* is, I suppose, a Hydrozoon; and *Antipathes* and *Aulopora* are Actinozoa; but because he did not fully understand these three, this is no reason for saying he did not establish the Bryozoa as a group; for in how many groups animals have been placed in error! Anthozoa has had many strangers; or, forsooth, Millepora! what has it not included?

The type of Ehrenberg is *Alcyonella*; and he says, in 'Symbolæ Physicæ,' "*Alcyonellæ hujus Circuli typum referre videntur*," and, further on, "*Flustræ enim et Sertularina ex meis observationibus neque Ascidiis compostis nec Hydra similia videntur sed Alcyonellis*." He then describes *Zoobotryon pellucidus*, a clearly marked and easily studied species.

It is true he included in mistake *Antipathes*; but he does not seem to have been quite sure, and says (*loc. cit.*), "*Eidem Circulo Flustras et Sertularina nonnulla, forsân omnia, quin imo Antipathes genus subjungenda esse censeo*."

\* 'Geology of Sussex,' Dixon and Jones (Brighton, 1878).

Prof. Jones alludes to Polythalamia being included; but I cannot find any case or see any indication of this in 'Die Corallenth. d. R. Meeres;' but some of the larger Foraminifera, as *Polytrema*, have been taken for Bryozoa quite recently, as by Risso, Heller, and others. Such mistakes will be made until our faunas have been more fully investigated; and it is a matter of surprise that Ehrenberg included so few extraneous genera among his Bryozoa.

A friend, writing to remonstrate with me for using the term Bryozoa in a paper I recently wrote, says "group names are indications of advancing scientific knowledge; and not to use the best is to keep science back." In this I agree, but think that the comparison of Ehrenberg's exacter definitions and Thompson's imperfect conceptions must leave us fully convinced that in Ehrenberg we have the clearest proof of advancing knowledge.

If Thompson's name stood alone, of course, no one would question it; but as the two names are in use, we have to decide between them. D'Orbigny, Hagenow, Bronn, Van Beneden, Reichert, Reuss, Nitsche, Kirchenpauer, Smitt, Römer, Claparède, Manzoni, Ehlers, Barrois, Joliet, and many others have all used Ehrenberg's term, against which are a few polyzoists, all, except Sars, in England and America, some of whom certainly occupy most leading positions; but it should not be forgotten that even in England the use of the name Polyzoa is comparatively a recent innovation.

The points to be considered are :—(1) that the question is not one of dates; (2) that Thompson did not define any group of animals, and used Polyzoa to indicate only a polypide; (3) that Ehrenberg definitely separated the Bryozoa, and, considering how little attention they had then received, was very successful in the indications he gave as to which animals belonged to this group.

La Stazione Zoologica, Naples,  
Nov. 14, 1879.

#### IV.—On the Genera of Felidæ and Canidæ.

By E. D. COPE\*.

##### Felidæ.

THE discovery of extinct species from time to time renders it necessary to reexamine the definitions of the families and genera into which living forms naturally fall. We thus learn

\* From the 'Proceedings of the Academy of Natural Sciences of Philadelphia,' May 1879.