

OPINION 107

Echinocyamus pusillus vs. *Echinocyamus minutus*

SUMMARY.—The case of *Echinocyamus pusillus* vs. *Echinocyamus minutus* is subject to two diametrically opposed interpretations. On basis of the principle that a name in current use is not to be supplanted by an earlier but rarely adopted or an unadopted name unless the argument is unambiguous and unless the premises are not subject to difference of opinion, the Commission, because of the somewhat uncertain status of *minutus*, is of the Opinion that *pusillus* 1776 should not be suppressed by *minutus* 1774.

STATEMENT OF CASE.—The following case has been submitted by Dr. Th. Mortensen, Copenhagen, for Opinion:

The name *pusillus* dates from 1776, when O. Fr. Müller [1776a] in his "Zoologiae Danicae Prodrumus," p. 236, established the species *Spatagus pusillus*. The diagnosis "ovalis, ambulacris quinis, ano remoto," although short, is sufficient for distinguishing the species from the two other *Spatagus*-species there described, and the species was later on excellently figured on Plate 91 of the "Zoologia Danica," so that there is not the slightest doubt about which species is meant by the "*Spatagus pusillus*" of the "Prodrumus."

In 1778 the name *Echinocyamus angulosus* was given to the same species by N. G. Leske, in his "Additamenta ad Jac. Th. Kleinii Naturalem dispositionem Echinodermatum," p. 151. But, of course, the name *pusillus* has priority. As a matter of fact, this common European species has almost universally been designated as *Echinocyamus pusillus* (O. Fr. Müller)—until in 1914 H. L. Clark, in the work "Hawaiian and other Pacific Echini. The Clypeastridae, Arachnoididae, Laganidae, Fibulariidae and Scutellidae" (Mem. Mus. Comp. Zool., vol. 46 (1), p. 61), designated it as *Echinocyamus minutus*, reviving the name *Echinus minutus* from P. S. Pallas (1774) *Spicilegia Zoologica*, Fasc. 10, stating: "When Pallas' description of his *Echinus minutus* is carefully examined in connection with his fig. 25, pl. 1, and due consideration is given to his remarks about habitat and occurrence, it is almost impossible to doubt that his name was given to the fibulariid which O. F. Müller two years later called *Spatagus pusillus*. Although *Echinocyamus pusillus* is the name used in the Revision and other later publications, I am therefore obliged to replace it with *Echinocyamus minutus* (Pallas)."

In my paper "Notes on some Scandinavian Echinoderms, with Descriptions of Two New Ophiurids" (Vidensk. Medd. Dansk Naturhist. Foren., Bd. 72, 1920, p. 69) I objected to this: "On examining Pallas' description of this '*Echinus minutus*'" it is, however, easily seen that he does not name any *Echinus minutus* at all. He writes:¹ "In Tabula I hujus fasciculi sub figura 24 & 25 Echinus minutos adjeci, de quibus hic verbum,"² which means "I have added some small sea-urchins." Nowhere does he name a species "*Echinus minutus*"; if he had so named a species he would not have omitted a reference

¹ P. S. Pallas, *Spicilegia Zoologica*, Fasc. 10, 1774 (p. 34).

² In the quotation erroneously "verbiculus."

to it in the index at the end of the fascicle, where all the species described are very carefully cited; but the name is not found there. Thus the name *pusillus*, published in 1776, undoubtedly has priority, even under the strictest interpretation of the priority rule. The fact that Gmelin¹ in [1790] 1788 and Blainville² in 1834 made the same interpretation as Clark (1914) does not alter the fact that there is no "*Echinus minutus* Pallas."

Furthermore it is beyond doubt that, even if Pallas had really meant to give the scientific name *Echinus minutus* to these small sea-urchins, this name could not rightly have been used for *Echinocyamus pusillus*. There is no doubt that his figure 25 really represents this species, as becomes quite evident from his statement "Abundat hic autem inter minuta testacea arenae Belgicae"; there is no other echinoid occurring on the Belgian coasts with which it could be confounded, and I personally have collected a number of specimens on the sandy beach near Ostend. But Pallas refers to two different forms with his "Echinus minutos"; the first of them, fig. 24, "priori icone expressus subglobosus ex Orientali India crebro adfertur"; this species is beyond doubt a *Fibularia*, and if there had really been an "*Echinus minutus* Pallas" the name would then have to be applied to this East Indian form, not to the second form referred to by Pallas, that from the Belgian coast."

In his "Catalogue of the Recent Sea-Urchins (*Echinoidea*) in the Collection of the British Museum," 1925, p. 167, H. L. Clark again accepts "*minutus*" of Pallas [1774, 34] as the proper name of the species in question, stating: "I think that Pallas certainly named the small sea-urchins that he figured, *Echinus minutus*; this is clearly shown by the type in which the words are printed. That he used the accusative plural instead of the nominative singular is not important, for all through the fascicle he varied case and number of his scientific names to suit the sense. The omission of the name from the index is natural, as the index includes only the names used for headings of sections, paragraphs, etc., printed in big type, and *Echinus minutus* was not so used. Finally, if *Echinus minutus* is not the name of the objects shown in figs. 24 and 25 of Pallas's plate 1, then there is no name given at all, and this not only does violence to the context, but is unique in the fascicle.

"Mortensen goes on to say that even if Pallas did create the name *Echinus minutus*, it should be used for the *Fibularia* that Pallas also figures under his 'Echinus minutos.' But again Dr. Mortensen's reasoning seems to me erroneous. Pallas included at least two species in his *Echinus minutus*, but Gmelin (1788, Syst. Nat. Linn., Ed. 13, p. 3194) very clearly restricted the name to the form common on the coast of Belgium."

While it must be conceded that Gmelin did restrict the name *Echinus minutus* to the form common on the coast of Belgium (= the only European species of the genus *Echinocyamus*), it still seems clear to me that Pallas did not mean to name any species *Echinus minutus*. True he gives some names in the accusative singular—but these are definitely designated as names, viz., p. 33, "Buccinum quod Geuersianum appellabo" and "quod Helicem Lyonetianum . . . appellare liceat," and they are found in the Index. But he does not thus designate his "Echinus minutos" as a name, and it is not found in the Index as are all the true names in his work.

¹ Linnaeus, Systema Naturae, Ed. 13, cura Gmelin, 1788, p. 3194. [Definitely admits and cites "*Echinus minutus*" as a species.]

² H. de Blainville, Manuel d'Actinologie, 1834, p. 214. [Follows Gmelin.]

Other names with certainty referring to the same European species are: *Echinus pulvinulus* Pennant (British Zoology, 1812 [1, 140]) (not in the 1. Ed., 1777). *Fibularia tarantina* Lamarek, 1816 [b, 17], *Echinocyamus minimus* Girard, Proc. Bost. Soc. N. H., 1850, [367.] *Echinocyamus parthenopaeus* Costa and *Echinocyamus speciosus* Costa (Monogr. degli Echinociami viventi e fossili nelle Province Napolitane, Mem. Atti r. Accad. Sci. Fis. e Matem. Napoli III, [14.] 1869). None of these, of course, comes into consideration; neither can the name *angulosus* of Leske be used, as this is later than the name *pusillus*. The question reduces itself to this: Must the species be named *pusillus*, the name under which the species is first duly described and—excellently—figured, and under which the species has been universally known for more than half a century, or should we reject this name for *minutus* of Pallas, almost certainly not meant by this author as a name, very poorly described, exceedingly poorly figured, and only from the locality given recognizable as referring partly to the European species of *Echinocyamus*?

DISCUSSION.—The Secretary has verified the reference to Pallas, 1774, which is the most important reference involved in this case. He has also reverified certain of the other references which form important premises. The article by Pallas is written in Latin and, as frequently happens in such circumstances, a confusion can easily arise by interpreting as binomials a purely descriptive combination of words consisting of a noun and an adjective or by interpreting a binomial as descriptive rather than as a taxonomic name. A case in point is Pallas, 1772, fasc. 9, page 83; "Cancrum caninum" is obviously a translation of Hondskrabbe, but it might easily be erroneously interpreted as a specific binominal used possibly in some earlier publication.

The fact that "Echinos minutos" is printed in the plural does not seem to be decisive as respects the point at issue, for on page 35 *Botryllus stellatus* (in singular) is given also as "Botrylli stellati" (in plural).

ECHINOS is printed in small caps while *minutos* is given in italics. This does not appear to give a definite clue; on page 33 the same editorial method is used for BUCCINUM (small caps) and *monodon* (italics) which is apparently a specific name and is given in the Index.

In the interpretation by the Secretary the case at hand is one in which there can be a legitimate difference of opinion, and in regard to which either of the proposed interpretations appears reasonable. The omission of the name from the Index might easily be a purely editorial oversight. While inclining to the interpretation advanced by Mortensen, the Secretary would not be willing to argue very strongly against that advanced by Clark. Under the circumstances three courses appear to be open: (1) to decide the case by majority vote based upon rather fine distinctions and from the Secretary's point

of view interpretations which are debatable; (2) to follow historical method and to accept on the principle of priority the interpretation made by the first author who quotes this passage; (3) to decide the case on basis of a general principle that in case of doubt it is best to accept the interpretation which will upset as little as possible current nomenclature.

The Secretary recommends that the Commission give as its Opinion one in harmony with this third method as applied to this particular case. On basis of the premises presented to the Commission the Opinion would fall in favor of *pusillus*.

Accordingly, the Secretary recommends that the Commission adopt as its Opinion the following:

SUMMARY.—The case of *Echinocyamus pusillus* vs. *Echinocyamus minutus* is subject to two diametrically opposed interpretations. On basis of the principle that a name in current use is not to be supplanted by an earlier but rarely adopted or an unadopted name unless the argument is unambiguous and unless the premises are not subject to difference of opinion, the Commission, because of the somewhat uncertain status of *minutus*, is of the Opinion that *pusillus* 1776 should not be suppressed by *minutus* 1774.

The foregoing Opinion was submitted to Commissioner Bather for a special study and he has reported as follows:

The question put by Dr. Mortensen may be resolved into (A) a question of interpretation and (B) a question of expediency.

A. Interpretation of the phrase "ECHINOS *minutos*." Two interpretations are possible.

1. That Pallas intended to establish a specific name "*Echinus minutus*."
2. That Pallas was merely referring to some "small echini," which he did not name.

Interpretation 1. The arguments in favor of this are:

- a. That the words are printed in small capitals for ECHINOS and italics for *minutos*.
- b. That if this be not a name, then the objects depicted in Pallas, plate I, figs. 24, 25, are the only objects in the fascicle left without a name.
- c. That Gmelin, 1788, Syst. Nat. Linn., Ed. 13, p. 3194, definitely accepts *Echinus minutus* as a species, citing Pallas (loc. cit.) [N. B. The date of Gmelin tom. et pag. cit. is 1790].

- d. That de Blainville, 1834, Manuel d'Actinol., p. 214, follows Gmelin. [Referring to a wrong page (86): strictly speaking he merely quotes Gmelin as well as Müller, Zool. Dan.; the name de Blainville uses is *Echinocyame mignon*.]

Interpretation 2. The arguments in favor of this are:

- a. All species indubitably named are indexed at the end of the fascicle—*E. minutus* is not.
- b. When Pallas does name a species, he leaves no room for doubt, but introduces the name by some such phrase as "quod . . . appellabo."
- c. Gmelin may have made a mistake, and except for de Blainville (who does not give a correct page) the general opinion of zoologists has been that he did so.

Comments on the above arguments:

1. a. There is considerable variety of type used in this Chapter. Other names of genera under which new species are proposed are in full capitals. Italics are used frequently for emphasis or distinction, as in this very paragraph.
1. b. This argument seems to be cancelled by 2. a. But it does not seem to be a good argument in itself, for Pallas is clearly, as he states, throwing these two little specimens in at the last moment, squeezing them in at the bottom of a plate, out of order, and jotting down what he calls a "verbulo."
1. c. Gmelin takes *minutos*, but Sherborn (Index Anim.) who put in every name he could, and who had Gmelin's reference does not cite Pallas as the authority. Sherborn aside, this argument seems balanced by 2. c.

This leaves only argument 2. b. and that certainly is in itself more weighty than any of the others.

It may be added that the word *minutus* is used twice again on the same page merely to signify small: "Zoophyta quaedam minuta" is the very next sentence. Surely Pallas would not have taken so banal a word for a specific name.

Additional argument in favor of Interpretation 2: Both Mortensen and Clark point out that the specimens figured by Pallas represent two species, but they do not draw the obvious inference. The words of Pallas show that he was aware of this fact; and part of his "verbulo" is taken up with showing the difference of form, and by the word "autem" he emphasizes also the difference of locality. Had Pallas been going to give a name at all he would have named both.

On the question of interpretation, it seems that the arguments against "Echinos minutus" being a name, if not absolutely decisive, are more numerous and more weighty.

B. Expediency.

1. In favor of adopting *E. minutus*, the argument is:
 - a. That it has been used by Dr. H. L. Clark in his larger Memoir on Hawaiian Echini (Mem. Mus. Harvard) and in a British Museum Catalogue.
2. Against *E. minutus* the argument is:
 - a. The otherwise universal usage of zoologists since O. F. Müller, 1776.
 - b. The other historical data submitted are irrelevant.

COMMENT AND CONCLUSION

There is no room for doubt that, if the question is to be decided on grounds of expediency by Suspension of the Rules, the vote should go in favor of *pusillus*. I therefore beg to report in favor of the third course recommended by the Secretary.

Opinion prepared by Bather and Stiles.

Opinion concurred in by fifteen (15) Commissioners: Apstein, Bather, Chapman, Handlirsch, Hartert, Horvath, Ishikawa, Jordan (D. S.), Jordan (K.), Kolbe, Loennberg, Stejneger, Stiles, Stone, Warren.

Opinion dissented from by no Commissioner.

Not voting, two (2) Commissioners: Dabbene, Neveu-Lemaire.