

THE CASES OF *PURPURA* AND *CERATOSTOMA*. Z.N.(S.) 1088.

By J. Chester Bradley and Katherine V. W. Palmer

Hall (*Bull. zool. Nomencl.* 18 : 336) has asked the Commission to reject the name *Purpura* (which he erroneously ascribes to Martyn, 1784) and to place *Ceratostoma* Herrmannsen, incorrectly believed by Hall to be an emendation of *Cerostoma* Conrad, on the Official List of Generic Names. By stating that the "genus in question" (by which he means the taxonomic genus implied by *Ceratostoma*) was first recognised by Martyn under the name *Purpura*, he implies that the nominal genus *Ceratostoma* Herrmannsen is a synonym of *Purpura* which is not the case even if the latter, as dated from Martyn, 1784, had any nomenclatural status.

The availability and type of *Purpura*

The generic name *Purpura*, a name used by ancient authors, appears to have been definitely introduced into zoological literature by Rondelet in 1555. Herrmannsen recorded six other authors who used it prior to 1758. It has been for so long a period so fully ensconced in the minds and on the tongues of those fond of the sea and its inhabitants that it would be a very serious matter to disturb it. It is just the sort of case in which use of the plenary power is most appropriate.

In 1777, F. H. W. Martini in the *Neues systematisches conchyliencabinet*, vol. 3, p. 287, referred to the rock-snails as the "Familie der Purpurschnecken" and used the generic name *Purpura* in connection with several species. Opinion 184 ruled that this work is not binominal, but binary, that its generic names are available until such time as such non-binominal names are ruled out, when their position would have to be re-examined. That time has now arrived and we ask the Commission to re-examine the position of *Purpura* and see whether it should be regarded as having been established by Martini in 1777 or by a later author. If by the former, ruled a non-binominal author by Opinion 184, then it was established as a genus without species, because by the same Opinion, Martini's species are ruled to be without nomenclatural status.

The nominal genus *Purpura* was used in 1783 by Johann Heinrich Linck in his *Index Mus. Link*, v. 1, p. 107 [not seen by us] a non-binominal work rejected by Sherborn, 1902, *Index animalium*, and by the *Nomenclator animalium generum et subgenerum* of the Prussian Academy of Sciences, 1935. It was again used by T. Martyn *Univ. Conch.* in 1784, also a non-binominal work. Opinion 456 ruled that this work possesses no status in zoological nomenclature.

Friedrich Christian Meuschen made a further contribution towards establishing a genus *Purpura** but we conclude that he was no more successful, from the standpoint of modern zoological nomenclature, than his predecessors had been.

Meuschen treated the snails in question on p. 308 in Latin, with the same translated into French on p. 309. We quote:

"Genus XVIII. *Purpuræ*

"621 *P. Histrix*, magnus, cauda corpore duplo longiore corpus ventricosum, spinae concavae, curvae ad apicem, longissimae trifariam posticae interjectis minoribus, *Linn.* 519 a. s. o. *Rumph.* 26.3. *Gualth.* 31. *A. a. Argenv.* 16. *A. Hollar Icon.* 22. long. 6 lat. 3 poll. (1. specim. 363.

"622 *P. Histrix*, praedecenti similis, sed minor, *Linn.* 519. a.s.o. *Seba III.* 78. 1-3. long. 4½. lat. 2¼ poll. (1 specim. 363. b.)"

* Gevers, Abrahamus. *Museum geversianum sive Index rerum naturalium continens instructissimam copiam pretiosissimorum omnis generis ex tribus regnis naturae (quam dum in vivis erat magna diligentia multaque cura comparavit) vir amplissimus Abrahamus Gevers . . . cura F. C. M. Rotterodami apud P. et L. Holsteyn, MDCCLXXXVII, p. 308, 309.*

Sherborn in his *Index animalium*, p. xxxix, under this entry, but imprint [à la Haye, 1787] wrote "[Contains Meuschen's *Schediasma syst. Testac.* This part has been accepted, Meuschen's trinominals are his binominals plus "forma" = "varietas", and precisely similar to the trinominals used by mammalogists in the present day.] We do not see that these remarks apply to "*Purpuræ*".

Since Meuschen did not use the singular form *Purpura*, his heading "Genus XVIII Purpurae" seems to have been applied not as a generic name but to an assemblage of species, but when one comes to regard these individually, probably he meant the "P" to stand for the singular *Purpura*.

Why he repeats the same specific name *histris* for two successive species is not clear. He did this repeatedly in *Buccina* on the same page, and doubtless in other genera (we do not have photocopies of other relevant pages of this rare work) sometimes repeating the same name for three consecutively numbered species. These numbers do not apply to museum specimens, because he adds the number of specimens and museum numbers at the end in each case. We are indebted to Dr. Myra Keen for locating a copy of Meuschen, 1787 and to Druid Wilson for providing the copy of the necessary pages.

Although Sherborn, *loc. cit.*, attributes *Purpura* to Meuschen, we conclude that that cannot be done under the current rules. Nevertheless it is a point upon which we ask the Commission to rule.

In 1789 Bruguière, *Ency. Method., Text, Vers. v. 1, fasc. 1, pt. 15, p. XV* made the name *Purpura* available by publishing it with a short description as his genus no. 41. Whether or not this description was taxonomically adequate for recognition is not a nomenclatural consideration. No species were mentioned.

The first binominal author to put a species in *Purpura* was Lamarck, 1799, *Prodrome d'une nouvelle classification des coquilles, Mem. Soc. d'hist. nat. de Paris*, 63-85. In his genus 13, *Purpura*, he listed a single species, *Buccinum persicum* L., which thereupon became type by monotypy.

Denys de Montfort, *Conchyl. syst.*, v. 2, 1810, p. 467 referred to Bruguière as the author of *Purpura*, redescribed the genus, and designated *Purpura persicus* as the "Espèce servant de type au genre". This is usually accepted as the first type fixation which is not the case.

This case has been fully discussed by Clench in *Johnsonia*, v. 2, No. 23.

Purpura Bruguière, 1789, is thus seen to be the valid, continuously and currently used name for any abundant genus of Muricidae of which the type is *Murex persica* L. It was a most happy choice of name because the animal exudes the royal purple which the ancients obtained from shells of that family.

We now ask the Commission :

- (1) To rule that the name *Purpura* Martini, *Neues systematisches conchylien-cabinet*, vol. 3, p. 287, ruled a non-binominal work, is without nomenclatural status.
- (2) To place *Purpura* Bruguière, 1789, type by monotypy : *Buccinum persicum* L., on the Official List of Generic Names in Zoology.
- (3) To place the following on the Official List of Family-Group Names in Zoology :
 - (a) *Purpuridae* Broderip, 1839, *Penny cyclop.*, v. 14 ;
 - (b) *Purpurinae* Swainson, 1840, *Malac.* p. 71.
- (4) To place the following names on the Official Index of Rejected and Invalid Family-Group Names in Zoology :
 - (a) *Purpuracea* Menke, 1828, *Syn. meth. molluscorum*, p. 34 unless used for a category for which the termination -acea is permissible ;
 - (b) *Purpurifera* Lamarck, 1812, *Extrait du cours de zoologie*, 1822. *Hist. nat. anim. sans vert.*, v. 7, p. 213 ;
 - (c) *Purpurites* Waller, 1778, *Syst. min.*, v. 2, p. 492.

There is no real relationship between the case of *Purpura* and of *Cerostoma*, which should have been presented separately.

The Status of *Cerastoma*

Hall states that Herrmannsen, 1846, (*Ind. gen. malac.*, v. 1, p. 206) emended *Cerostoma* Conrad to *Cerastoma*. We can not agree with that interpretation of what Herrmannsen actually did. On page 206 a paragraph is headed in blackface type, in its normal alphabetical sequence *Cerastoma* Conrad, 1837. That is clearly

the name that he adopted as nomenclaturally the available name. In a subparagraph he explains the etymology, giving the Greek words from which the name was derived, then adding "*Rectius Ceratostoma vel Cerostoma*" but it certainly can not be concluded that the mere mention of what the proper spelling should be on an etymological basis constitutes proposal of an emendation. If we look further down his alphabet, we find the blackfaced headings of entries, p. 207, "*Ceratostoma* vid. *Cerastoma*", so it is clear that neither of these spellings can be attributed to Herrmannsen, *Cerostoma* being Conrad's original spelling.

So far as we are aware, the first author purposely to adopt "*Ceratostoma*" as an emendation was Dr. Paul Fischer, 1887 (*Manuel de conchyliologie*, p. 642); he regarded it as a subgenus of *Ocenebra*, which Thiele, 1929 (*Handbuch der syst. Weichtierekunde*, p. 299) regarded as a junior synonym of *Tritonalia* Fleming, 1828. On this same page Thiele accepted Fischer as the author of the emendation *Ceratostoma*. Since *Cerastoma* Conrad, 1837, type by monotypy *C. nuttali* Conrad, is a preoccupied name, Thiele acted correctly in adopting Fischer's emendation *Ceratostoma*. Hall, as a taxonomist, has the privilege of giving the taxon generic status if he so desires.

Ocenebra was established by Gray in 1847 (*Ann. Mag. nat. Hist.*, Oct. 1847, p. 200) with the type-species *erinacea*, (i.e. *Murex erinaceus* L.)

Tritonalia was established by Fleming, 1828 (*History of British animals*, p. 356) under the name *Triton* which was corrected in the Corrigenda to *Tritonalia*. "*T. erinaceus*" was cited as the first and only extant species. Gray (*Proc. zool. Soc. London*, Nov. 1847, p. 143) listed it as a synonym of *Ocenebra*. Wenz (*Handb. der Paläozoologie*, Bd. 6, Teil 5, Gastropods, Lf. 7, 1941, p. 1126) indicated that *Murex erinacea* L. is the type. He attributed this selection to Gray, Nov., 1847, but it is not clear that Gray meant *erinacea* to be type of both *Ocenebra* and *Tritonalia*, yet he probably did so. It is highly improbable that anyone else has selected one of the originally included fossil species as type.

Mr. R. Winkworth (*Names of British Mollusca*, *Journ. conch.*, 1934-37, 20 : 14) discussed *Ocenebra* and *Tritonalia*, but we can not support his conclusion. He is quite correct in writing that Fleming, 1828, used *Triton* twice and in the corrigenda changed *Triton* (the shell) to *Tritonalia*. Since this change was published in the original volume it is a perfectly valid substitution. But Winkworth then assumed that Fleming was writing about *Triton* Montfort, which was not the case. *Triton* Fleming, i.e. *Tritonalia* was based on *Murex erinaceus* and some fossil species. As elsewhere indicated we believe that *erinaceus* is the type. It is a genus of Muricidae. Fleming made no reference to Montfort. The type and only original species of *Triton* Montfort is *Murex tritonis* L., which is a totally different shell of the family Cymatiidae. *Triton* Montfort, 1810, is therefore a different genus from *Triton*, i.e. *Tritonalia* Fleming, 1828. Therefore Winkworth erred when he maintained that *tritonis* is the type of *Tritonalia*.

Pterorytis Conrad, 1862 (*Proc. Acad. Nat. Sci., Phila.*, 1862, p. 560, monotype : *Murex umbrifer* Conrad, a Tertiary fossil) is listed by Wenz as a subjective synonym of *Ceratostoma*, and for any who accept this synonym it has priority over *Ceratostoma* Fischer, 1887.

All these are problems of ordinary routine, that raise no problems that the Commission need solve. However, since they have been worked out it seems worth while to ask the Commission :

- (1) To place the following names on the Official List of Generic Names in Zoology :
 - (a) *Ceratostoma* Fischer, 1887, a replacement name for *Cerostoma* Conrad, 1837, type by monotypy *C. nuttali* Conrad.
 - (b) *Tritonalia* Fleming, 1828, type by subsequent designation (Gray, 1847) *Murex erinaceus* L.
- (2) To place the following name on the Official Index of Rejected and Invalid Generic names in Zoology :
Cerostoma Conrad, 1837 nec Latreille, 1802.



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