Case 2842

Naucrates Rafinesque, 1810 and Xyrichtys Cuvier, 1814 (Osteichthyes, Perciformes): proposed conservation

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Abstract. The purpose of this application is to conserve the names Naucrates Rafinesque, 1810 and Xyrichtys Cuvier, 1814 which are both in use. The first refers to the monotypic pilotfish N. duxor (Linnaeus, 1758) (family carangidae), a pelagic species which occurs in all tropical and temperate seas and is common in the Mediterranean. The second relates to the genus of about 20 species of razorfishes (family labridae) which occur circumglobally in tropical, subtropical and temperate seas, also including the Mediterranean. Both names are threatened by the senior subjective synonym Hemipteronotus Lacepède, 1801, for which suppression is proposed. It is also proposed that Centronotus Lacepède, 1801, an unused senior objective synonym of Naucrates, be suppressed.

1. Linnaeus (1758, p. 261), following and expanding on Willughby (1686, pp. 213-216), included two species of razorfishes (family labridae) among the five species (hippurus, equiselis, pentadactyla, novacula and pompilus) of his genus Coryphaena (now family coryphaenidae, the dolphins; type species C. hippurus Linnaeus, 1758 by subsequent designation of Jordan & Gilbert, 1883, p. 454). The two razorfish species were Coryphaena novacula of the Atlantic and Mediterranean and C. pentadactyla, an Indo-Pacific razorfish, the males of which have five or six dark red spots in a row behind the eye.

2. The nominal species Coryphaena pentadactyla Linnaeus, 1758 (p. 261) was itself composite. Linnaeus based his description on three sources: (1) ‘Blennius maculis 5 utrincque versus caput nigris’, from Act. Stockh. (i.e. Memoirs of Stockholm), 1740, vol. 1, p. 460, pl. 3, fig. 2; (2) Valent. (for Valentijn, 1724), amb. (for Amboin), part 5, p. 435, pl. 292; (3) Will. icht. (for Willughby, 1686) appendix, p. 7, pl. 8, fig. 2. The first of these refers to the Indo-Pacific razorfish (mentioned in para. 1 above) and the third to the pilotfish, also listed elsewhere in Systema Naturae as Gasterosteus duxor Linnaeus, 1758 (p. 295; family carangidae). The inclusion of the reference to Willughby (1686, pl. 8, fig. 2) originated in the latter’s use of the Dutch name ‘Vii5 Vinger Visch’ for the pilotfish, figured from a drawing by Nieuhof, so that Linnaeus confused this with the Indo-Pacific razorfish with its five or six spots behind the eye. Gmelin ([1789], pp. 1191-1192) corrected the error by omitting the reference to Willughby under
Coryphaena pentadactyla, thereby restricting the name to the razorfish. Bloch (1787, p. 115), Cuvier (1815, p. 329) and Valenciennes (1840, pp. 64–69) commented that Linnaeus had mistakenly included two different taxa under the name, and accepted pentadactyla for the razorfish. With the exception of Lacepède (1801) (see para. 3 below), this interpretation of pentadactyla has been followed consistently by subsequent authors; the taxon is currently known as Xyrichtys pentadactyla (see paras. 7 and 8 below).

3. Lacepède (1801, p. 214) erected Hemipteronotus for two new nominal species, H. gmelini and H. quinquemaculatus. The former, for which Lacepède gave two fin-ray counts (dorsal rays 14 and pelvic rays 8), was regarded by Valenciennes (1840, pp. 35, 65) as unidentifiable; Valenciennes noted that it may have been a holocentrid. H. quinquemaculatus was proposed for ‘l’hémiptéronote cinq-taches’; Coryphaena pentadactyla was included (p. 215), attributed to Gmelin, [1789], among its synonyms. Lacepède cited Linnaeus’s synonyms for C. pentadactyla, including the Willughby reference to the pilotfish.

4. Lacepède’s (1801, p. 214) description of H. quinquemaculatus was based on Bonnaterre’s (1788, p. 59, pl. 33, fig. 126) reproduction of Nieuhof’s drawing of Gasterosteus ductor (used previously by Willughby, 1686, appendix, pl. 8, fig. 2; see para. 2 above), and described by Bonnaterre (p. 59) as Coryphaena pentadactyla. Lacepède (p. 215 and footnote) derived the name ‘hémiptéronote’ from the Greek words for ‘half’, ‘fin’ and ‘back’, and wrote that the name was intended to indicate the shortness of the dorsal fin and its similarity to that of the coryphaenids. This is an obvious reference to the short, posteriorly placed dorsal fin of Gasterosteus ductor. Cuvier (1815, p. 329) noted that, although Linnaeus had included two taxa under the name Coryphaena pentadactyla (see para. 2 above), Lacepède had considered only one of them (the pilotfish) when he founded Hemipteronotus. Valenciennes (1840, p. 68), in discussing Lacepède’s ill-founded Hemipteronotus, wrote: ‘J’ai été bien long-temps à concevoir comment, ayant sous les yeux toutes les figures qu’il cite dans sa synonymie, il avait pu attribuer à l’espèce un caractère de tout point opposé à la vérité; et j’ai été obligé de conclure, que de tant de figures il n’en avait qu’une, et précisément la fausse, celle de Nieuhof, copiée par Bonnaterre’. Bleeker (1862, p. 414) designated H. quinquemaculatus as the type species of Hemipteronotus. Subsequently Jordan (1917, p. 61) cited quinquemaculatus as a synonym of Coryphaena pentadactyla ‘Gmelin’.

5. Lacepède (1801, pp. 309, 311) established the name Centronotus for a genus of nine nominal species, including ‘Gasterosteus conductor Linnaeus’ (‘Le centronote pilote’; he intended G. ductor Linnaeus). Willughby’s (1686, pl. 8, fig. 2) reference to the pilotfish was included among the synonymies. Rafinesque (1810, p. 43) founded Naucrates for two nominal species, including Centronotus conductor Lacepède; Jordan & Gilbert (1883, p. 443) designated ‘Naucrates conductor Raf., = Gasterosteus ductor Linn.’ as the type species. Jordan (1917, p. 62) used the same notation in designating a type for Centronotus Lacepède, rendering the latter name a senior objective synonym of Naucrates. Until recently, vol. 3 of Lacepède’s work Histoire naturelle des poissons, in which the name Centronotus appeared, was thought to date from 1802. On this basis Jordan (1917, pp. 62, 80) considered the fish name Centronotus Bloch & Schneider, 1801 (p. 165; a junior objective synonym of Pholis
Scopoli, 1777 (see Eschmeyer, 1990, pp. 89, 312; family PHOLIDAE) to be a senior homonym of *Centronotus* Lacepède and noted that the latter was replaced by *Naucrates*; the name *Naucrates* has consistently been used for the pilotfish. Roux (1973, p. 34) demonstrated that Lacepède’s vol. 3 dates from 16 October 1801. To our knowledge, an exact date for Bloch’s (1801) work (published posthumously by Schneider) has not been ascertained, and publication must therefore be deemed to be 31 December 1801 (Article 21c(ii) of the Code). It is very desirable that the unused name *Centronotus* Lacepède be suppressed to allow continued usage of *Naucrates*, and this we now propose.

6. Cuvier (1814, p. 87; 1815, p. 324) noted that Linnaeus (1758) had included razorfishes with dolphins in *Coryphaena* (see para. 1 above) and erected the genus *Xyrichtys* Cuvier, 1814 for the razorfishes. Cuvier (1814, p. 87) noted the name as ‘*XYRICHTE Xyrichlys*’; this was corrected to *Xyrichtys* in Cuvier (1815, p. 329). The name has been spelt *Xyrichthys* by a number of subsequent authors. Cuvier (1814) included in *Xyrichtys* the species *Coryphaena novacula* and *C. pentadactyla*, both of Linnaeus (1758), and the American parrotfish *C. coerulea* Bloch, 1786 (p. 148, pl. 176), the last of which was mistakenly included by Bloch (1787, p. 120, pl. 186) among the dolphins. Jordan & Gilbert (1883, p. 605) designated *X. novacula* as the type species of *Xyrichtys*. A specimen in the Linnaean fish collection in London has been ascribed to this species (see Wheeler, 1985, p. 65).

7. *Hemipteronotus* Lacepède, 1801 was treated by some authors as the valid name for the razorfishes, based on the restriction by early authors of the name *pentadactyla* to this group (para. 2 above). However, Bauchot & Quignard (1973, p. 442) renewed attention to the identity of the Nieuhof drawing in Willughby (1686) and Bonnaterre (1788) as *Naucrates ducor*. The meaning of *H. quinquemaculatus*, the type species of *Hemipteronotus*, is composite and confused, relating by description to the pilotfish (now *N. ducor*) and by reference both to the latter and to the razorfish (*C. pentadactyla*) (see paras. 3 and 4 above). Bauchot & Quignard (1973) adopted *Xyrichtys* Cuvier, 1814 as the next available name for the razorfish, and this has been followed since. Eschmeyer (1990, p. 179) recorded *Hemipteronotus* as a synonym of *Xyrichtys*. It is also a senior subjective synonym of *Naucrates* Rafinesque, 1810.

8. Both names *Naucrates* Rafinesque and *Xyrichtys* Cuvier are used consistently for the monotypic carangid pilotfish *N. ducor* (Linnaeus) and for the 20 species of labrid razorfishes respectively. Recent works in which the names have appeared include Smith-Vaniz (1984, 1986; *Naucrates*); Gomon (1984) and Quignard & Pras (1986) (*Xyrichtys*); Dor (1984), Smith & Heemstra (1986), Masuda, Amaoka, Araga, Uyeno & Yoshino (1988) and Randall, Allen & Steene (1990) (both names). A representative list of a further five publications since 1980 demonstrating usage of the names is held by the Commission Secretariat. Fernholm & Wheeler (1983, p. 243) believed three specimens in the Linnaean collection in Stockholm to be part of the type series of *N. ducor*.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers to suppress the following generic names:

(a) *Hemipteronotus* Lacepède, 1801 for the purposes of the Principle of Priority

but not for those of the Principle of Homonymy.
(b) *Centronotus* Lacepède, 1801, and all uses of the name *Centronotus* prior to the publication of *Centronotus* Bloch & Schneider, 1801, for the purposes of both the Principle of Priority and the Principle of Homonymy;

(2) to place on the Official List of Generic Names in Zoology the following names:
(a) *Naucrates* Rafinesque, 1810 (gender: masculine), type species by subsequent designation by Jordan & Gilbert (1883) *Gasterosteus dactor* Linnaeus, 1758;
(b) *Xyrichtys* Cuvier, 1814 (gender: masculine), type species by subsequent designation by Jordan & Gilbert (1883) *Coryphaena novacula* Linnaeus, 1758;

(3) to place on the Official List of Specific Names in Zoology the following names:
(a) *dactor* Linnaeus, 1758, as published in the binomen *Gasterosteus dactor* (specific name of the type species of *Naucrates* Rafinesque, 1810);
(b) *novacula* Linnaeus, 1758, as published in the binomen *Coryphaena novacula* (specific name of the type species of *Xyrichtys* Cuvier, 1814);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
(a) *Hemipteronotus* Lacepède, 1801, as suppressed in (1)(a) above;
(b) *Centronotus* Lacepède, 1801, as suppressed in (1)(b) above.

References


Rafinesque (as Rafinesque Schmaltz), C.S. 1810. Caratteri di alcuni nuovi generi e nuove specie di animali e piante della Sicilia, con varie osservazioni sopra i medesimi. iv, 105 pp., 20 pls. Sanfilippo, Palermo.


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