
The type species of the genus-group names *Coius* Hamilton, 1822 and *Datnia* Cuvier, 1829 and the type-genus of the family-group name Datnioididae Bleeker, 1858

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Abstract

The type species of *Coius* Hamilton, 1822 is *C. cobojius* Hamilton, 1822, by subsequent designation by Cuvier (in Cuvier & Valenciennes, 1829). *Coius* is thus a junior subjective synonym of *Anabas* Cloquet, 1816. The valid generic name for species placed in *Coius* in recent years is *Datnioides* Bleeker, 1853.

Datnia has been treated as a genus of Sparidae, Terapontidae or Labridae by previous authors. The type species of *Datnia* Cuvier, 1829 is found to have been misidentified and is here fixed as *D. argentea* Cuvier, 1829. *Mesopristes* Bleeker, 1873 is a junior objective synonym of *Datnia*. The type series of *Datnia argentea* includes 2 species, a terapontid and a sparid; a lectotype is designated and the name is now formally retained for the terapontid.

Datnioididae Fowler, 1931 is the valid family-group name for *Datnioides*. The type genus of both Datnioidei Bleeker, 1859 and Datniaeformes Bleeker, 1876 is *Datnia* and these names are synonyms of Terapontidae Richardson, 1846. Coidae Fowler, 1905 is a synonym of Anabantidae Richardson, 1846 (or possibly of earlier authors).

Introduction

The present note reviews the nomenclatural status of the fish generic names *Coius* and *Datnioides* and of the family-group names Coidae and Datnioididae. Because of the close similarity of the names, it is necessary to briefly discuss the family-group name Datniidae, and while doing so I discovered that the generic name *Datnia* on which Datniidae is based also presents some nomenclatural problems.

Hamilton (1822: 85, 369) established the genus-group name *Coius*, subsequently and correctly emended as *Coius* (ICZN [International Code of Zoological Nomenclature, Fourth Edition, 1999], art. 32.5.2, 32.5.2.1). Hamilton included 9 nominal species in *Coius*, which are now recognised as valid species or synonyms in the following genera:

- C. vacti* Hamilton, 1822, in *Lates*, family Centropomidae;
- C. datnia* Hamilton, 1822, in *Mesopristes*, family Terapontidae or *Acanthopagrus*, family Sparidae (see below);
- C. catus* Hamilton, 1822, in *Lutjanus*, family Lutjanidae;
- C. trivittatus* Hamilton, 1822, in *Terapon*, family Terapontidae;
- C. gudgutia* Hamilton, 1822, in *Pomadasis*, family Haemulidae;
- C. polota* Hamilton, 1822, in *Coius*, family Coidae or *Datnioides*, family Datnioididae (see below);
- C. nandus* Hamilton, 1822, in *Nandus*, family Nandidae;
- C. cobojius* Hamilton, 1822, in *Anabas*, family Anabantidae;
- C. chatareus* Hamilton, 1822, in *Toxotes*, family Toxotidae.

Type species of *Coius*

The composite nature of the genus *Coius* was obvious as early as 1829, when Cuvier (in Cuvier & Valenciennes, 1829: 443) commented on this. As Hamilton did not designate a type species for *Coius*, the type species is the first of the originally included species designated as type by a subsequent author. Eschmeyer (1990: 100) lists the type species as *C. polota* as designated by Fowler (1905: 504) and not *C. cobojus* [sic] as designated by Jordan (1917: 114). In fact, the situation is not that simple.

Jordan noted "equivalent to *Anabas* Cuvier" and quoted Hamilton (1822: 101) "The *Cobojius*, which by the natives is considered as the prototype of their genus *coi*, from whence the name *Coius* is derived ..." Under current practices, this is certainly not a type species designation, but it possibly was accepted as such by Jordan. At best, this 'designation' is "made in an ambiguous ... manner" (ICZN art. 67.5.3) and thus has no validity.

A type species was actually first validly designated by Cuvier (in Cuvier & Valenciennes, 1829: 144). Cuvier listed the species originally included in *Coius* by Hamilton and their generic allocation in his system. The list includes "un *anabas* (le *cobojus*)" [an *anabas* (the [*Coius*] *cobojus*)]. Ten lines further, after having commented on the composite nature of *Coius*, Cuvier stated: "Ce nom de *coius* ... est lui-même générique, mais dans une acception plus restreinte, l'*anabas* en étant considéré comme le type" [literally: this name *coius* is itself generic [here meaning 'genus-level'], but with a more restricted meaning, the *anabas* being considered as its type]. The French syntax of the last sentence cannot be rendered exactly by a literal translation in English; however, the syntax and the context make it unambiguous that Cuvier meant that "the *Anabas* mentioned above [that is *A. cobojus*], being considered as the type of *Coius*, which is a genus". This designation satisfies the conditions of ICZN art. 69.1.1 and is valid. *Coius cobojus* is clearly a species of *Anabas* Cloquet, 1816; it is usually treated as a junior subjective synonym of *A. testudineus* (Bloch, 1792), although that synonymy may be in question (pers. obs.). *Coius* Hamilton, 1822 is thus a junior subjective synonym of *Anabas* Cloquet, 1816 (type species: *Perca scandens* Daldorff, 1797, by monotypy).

On the basis of Fowler's type species designation, the genus-group name *Coius* has been used in recent years to replace *Datnioides* Bleeker, 1853 (e.g., Roberts & Kottelat, 1994; Kottelat, 1998). This was erroneous. *Datnioides* is now, again, the valid name to apply to tiger-perches.

Type species of *Datnia*

The genus-group name *Datnia* was established by Cuvier (1829: 148) and its type species is *Coius datnia* Hamilton, 1822 by absolute tautonymy. Hamilton (1822: 88, 369, pl. 9 fig. 29) described and figured *C. datnia* and it is clearly a member of the family Sparidae. Day (1875-78: 140) treated it as a valid species of *Chrysophrys*, but on p. 375 he comments that his *C. datnia* is figured as *C. hasta* (Bloch, in Schneider, 1801: 275) by Bleeker (1877: 9, pl. 3). *Coius datnia* is listed as a junior synonym of *Sparus latus* Houttuyn (1782: 322) by Dor (1984: 157). Whatever its specific identity, it appears now reasonable that *Coius datnia* is placed in the genus *Acanthopagrus* which thus seems to be a junior subjective synonym of *Datnia* (more on this below).

Datnia has usually been treated as a Terapontidae and this dates back to the original description in which Cuvier comments that *Datnia* is hardly distinguishable from *Terapon*. Cuvier (in Cuvier & Valenciennes, 1829: 139, pl. 54) also includes *Datnia* in an assemblage of genera all now placed in Terapontidae. Eschmeyer (1990: 119) listed it as a Labridae, but this seems to be a lapsus.

Datnia argentea Cuvier (in Cuvier & Valenciennes, 1829) has sometimes been treated as a replacement name for *C. datnia* but this is not correct. The original description is clearly composite as it includes material of two species. The description and the figure were based on a single specimen of Terapontidae sent from Java by Kuhl and van Hasselt. Cuvier also included Hamilton's *C. datnia* in his *D. argentea* and commented (p. 143) that "it appears to us absolutely the same species as [*D. argentea*]". Cuvier's description and plate show the fish now called *Mesopristes argenteus* (see Vari, 1978: 271). This means that the terapontid specimen from Java is a syntype and that the specimen(s) on which Hamilton based his account of the sparid is (are) syntype(s) as well. In order to preserve stability of the use of the name *D. argentea* for the species of Terapontidae, I designate the Javanese specimen as lectotype. This specimen is apparently lost (Bauchot & Desoutter, 1986: 106).

In the original description of *Datnia*, Cuvier (1829) included two species, *Coius datnia* and *Datnia cancellata*. At the same time he proposed *Datnia buchanani* as a replacement name for *C. datnia*. This was the common practice of the time, in order to avoid the tautonymic *Datnia datnia*. In the next use of *Datnia* (one month later), Cuvier (in Cuvier & Valenciennes, 1829) included again two species in *Datnia*, *D. cancellata* and *D. argentea*, the latter based

primarily on a Javanese specimen (designated as lectotype above) but also including the *C. datnia* of Hamilton which Cuvier thought conspecific. We now know that they in fact belong to two different families; the lectotype of *D. argentea* and the other species included in *Datnia* by Cuvier (*D. cancellata*) are still considered as belonging to the same genus (currently *Mesopristes*). Clearly, Cuvier (1829) misidentified *C. datnia* of Hamilton as a species of *Datnia*. We are thus in the situation of the validly fixed type species of *Datnia* later found to have been misidentified (ICZN, art. 67.9). Art. 70.3 gives the option to select (and thereby fix) as type species either *Datnia argentea* or *Coius datnia*.

The selection of *C. datnia* as type species of *Datnia* would make *Acanthopagrus* Peters, 1855: 242 (type species: *Chrysophrys vagus* Peters, 1852, by monotypy) a junior synonym of *Datnia*. *Acanthopagrus* is a small genus of coastal marine fishes known from throughout the Indo-West Pacific and regularly observed in fisheries catches. To my knowledge, species of *Acanthopagrus* have never been called *Datnia*.

The selection of *D. argentea* as type species of *Datnia* would make *Mesopristes* Bleeker, (1873: 372, 383) (first published as synonym, available by subsequent use by Fowler, 1918: 36; type species: *Datnia argentea* Cuvier, 1829, as first species directly associated with a genus-group name first published as a synonym; ICZN, art. 67.12) an objective junior synonym of *Datnia*. *Mesopristes* includes four species in freshwaters (mainly on oceanic islands) of Madagascar and between Fiji islands and Japan (Vari, 1978); all these species at times have been placed in the genus *Datnia* and they appear less frequently in the literature and are less well known than species of *Acanthopagrus*.

Therefore, the type species of *Datnia* is now fixed (under ICZN art. 70.3) as *Datnia argentea* Cuvier in Cuvier & Valenciennes, 1829, misidentified as *Coius datnia* Hamilton, 1822 in the original fixation by Cuvier (1829). *Mesopristes* becomes a junior synonym of *Datnia*.

The family-group name for *Datnioides*

Datnioides (then as *Coius*) had been placed in the family Coiidae Fowler (1905: 504) by Roberts & Kottelat (1994: 258) who commented that Datnioidinae Fowler (1931: 323) is a synonym. *Coius* being a synonym of *Anabas*, Datnioididae is no longer a synonym of Coiidae and is the valid family-group name for the genus *Datnioides*. However, there are two similar looking names whose status has to be clarified. The type genus of Datnioididae is

Datnioides Bleeker, 1853. The stem of the name is Datnioid- and the family group name formed by the addition of the termination -idae is correctly Datnioididae. (I use 'stem' because this is the word retained by ICZN, art. 29.3 and Glossary; but it seems that, linguistically speaking, the word 'radical' would have been more appropriate [this word is used in the French version of ICZN]; this difference is potentially misleading as the two words are not exactly equivalent; I also note that the definitions of 'stem' in the English Glossary of ICZN (p. 116) and 'radical' in the French Glossaire (p. 250) are not exactly equivalent).

Bleeker (1859: 352) used the family group name Datnioidae and it could be misunderstood as a senior homonym of Datnioididae, with an incorrect family-group suffix. In the same paper, he also used the family-group names Holocentroidei (based on *Holocentrus*), Cheilodipteroidei (on *Cheilodipterus*), Serranoidei (on *Serranus*) and 27 other names similarly formed on the stem of the generic name and the suffix -oidei. Thus we can conclude that Datnioidae was formed on the stem Datni-, thus on the genus *Datnia*. The family-group name Datnioidae is available by indication (ICZN art. 12.2.4) but should be correctly formed with the suffix -idae, as Datniidae. It is a junior synonym of Terapontidae which dates back at least to Richardson (1846: 235).

Datniaeformes Bleeker (1876: 266) is formed on the same stem datni- and is thus an emendation of Datniidae Bleeker (1859: 352).

Coiidae Fowler (1905: 504) is a junior synonym of Anabantidae which dates back at least to Richardson (1846: 250). I have not searched the literature for possible earlier uses.

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Literature cited

- Bauchot, M.-L. & M. Desoutter. 1986. Catalogue critique des types de poissons du Muséum national d'Histoire naturelle (suite). Sous-ordre des Percoidei (familles des Apogonidae, Centrarchidae, Centropomidae, Dinolestidae, Glaucosomatidae, Grammatidae, Kuhliidae, Percidae, Percichthyidae, Plesiopidae, Priacanthidae, Pseudochromidae, et Teraponidae). Bull. Mus. Natn. Hist. Nat., Ser. 4, Sect. A, 8 (4, suppl.): 51-130.
- Bleeker, P. 1859. Bijdrage tot de kennis der vischfauna van Bawean. Nat. Tijdschr. Ned. Ind., 18: 351-358.
- Bleeker, P. 1876. Systema percarum revisum. Pars Ia. Arch. Néerl. Sci. Nat., 11: 247-288.
- Bleeker, P. 1873. Révision des espèces insulindiennes du genre *Therapon*. Ned. Tijdschr. Dierk., 4: 372-393.

- Bleeker, P. 1877. Sur les espèces confondues sous les noms de *Chrysophrys hasta*, *berda*, *calamara* et *schlegeli*. Versl. Akad. Amsterdam, Ser. 2, 11: 1-12, 3 pls.
- Cuvier, G. 1829 [March]. Le règne animal distribué d'après son organisation, pour servir de base à l'histoire naturelle des animaux et d'introduction à l'anatomie comparée. Déterville, Paris, 2: xv + 406 pp.
- Cuvier, G. & A. Valenciennes. 1829 [April]. Histoire naturelle des poissons. Tome troisième. Levrault, Paris & Strasbourg, xxviii+500 pp., pls. 41-71.
- Day, F. 1875-78. The fishes of India; being a natural history of the fishes known to inhabit the seas and fresh waters of India, Burma, and Ceylon. London, xx+778 pp., 195 pls.
- Dor, M. 1984. CLOFRES. Checklist of the fishes of the Red Sea. Israel Academy of Sciences and Humanities, Jerusalem, 437 pp., 1 pl.
- Eschmeyer, W. N. 1990. Catalog of the genera of recent fishes. California Academy of Sciences, San Francisco, 697 pp.
- Fowler, H. W. 1905. Some fishes from Borneo. Proc. Acad. Nat. Sci. Philad., 57: 455-523.
- Fowler, H. W. 1918. New and little-known fishes from the Philippine islands. Proc. Acad. Nat. Sci. Philad., 70: 2-71.
- Fowler, H. W. 1931. The fishes of the families Pseudochromidae, Lobotidae, Pempheridae, Priacanthidae, Lutjanidae, Pomadasyidae and Teraponidae, collected by the United States Bureau of Fisheries steamer "Albatross", chiefly in Philippine seas and adjacent waters. Bull. U. S. Natn. Mus., 100 (11): i-x + 1-388.
- Hamilton, F. 1822. An account of the fishes found in the river Ganges and its branches. Constable, Edinburgh, 2 vols., 405 pp., 39 pls.
- Houttuyn, M. 1782. Beschryving van eenige Japanese visschen en andere Zee-Schnepzelen. Verh. Holland. Maatsch. Wet. 20 (2): 311-350 [not seem; from Dor, 1984: 317].
- International Commission on Zoological Nomenclature. 1999. International Code of Zoological Nomenclature. Fourth Edition. International Trust for Zoological Nomenclature, London, xxix+306 pp.
- Jordan, D. S. & B. W. Evermann. 1917. The genera of fishes, from Linnaeus to Cuvier, 1758-1833, seventy-five years, with the accepted type of each. A contribution to the stability of scientific nomenclature. Leland Stanford Jr. Univ. Publ., Univ. Ser., 27: 1-161.
- Kottelat, M. 1998. Fishes of the Nam Theun and Xe Bangfai basins, Laos, with diagnoses of twenty-two new species (Teleostei: Cyprinidae, Balitoridae, Cobitidae, Coiidae and Odontobutidae). Ichthyol. Explor. Freshwat., 9: 1-128.
- Peters, W. 1855. Übersicht der in Mozambique beobachteten Fische. Arch. Naturgesch., 21 (1): 234-282.
- Richardson, J. 1846. Report on the ichthyology of the seas of China and Japan. Rep. Brit. Assoc. Adv. Sci., 1845 [1846]: 187-320.
- Roberts, T. R. & M. Kottelat. 1994. The Indo-Pacific tigerperches, with a new species from the Mekong basin (Pisces: Coiidae). Ichthyol. Explor. Freshwat., 5: 257-266.
- Schneider, J. G. 1801. M. E. Blochii Systema Ichthyologiae iconibus cx illustratum, post obitum auctoris opus inchoatum absolutum, correxit, interpolavit Jo. Gottlob Schneider. Berlin, 584 pp., 110 pls.
- Vari, R. P. 1978. The terapon perches (Percoidei: Teraponidae). A cladistic analysis and taxonomic revision. Bull. Amer. Mus. Nat. Hist., 159: 175-340.