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Nomenclature and types of *Ophicephalus marginatus* and *O. limbatus* (Teleostei: Channidae)

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Abstract

Ophicephalus marginatus is available from Cuvier (1829); its type locality is Vizagapattam, India and its holotype is lost. *Ophicephalus limbatus* is available from Cuvier (in Cuvier & Valenciennes, 1831). The holotype of *O. limbatus* has been identified and its type locality is Java. The problem of the systematic status of Javanese *Channa gachua* (Hamilton, 1822) (of which *O. marginatus* and *O. limbatus* are usually treated as synonyms) still needs clarification.

Ophicephalus marginatus Cuvier, in Cuvier & Valenciennes, 1831 and *O. limbatus* Cuvier, in Cuvier & Valenciennes, 1831 are usually listed as synonyms of *Channa gachua* (Hamilton, 1822). *Ophicephalus marginatus* is described on p. 411 of volume 7 of *Histoire naturelle des poissons*, while the name *O. limbatus* appears only on plate 201. For both, the vernacular name "ophicéphale bordé" is used, but the Index uses only *O. limbatus* and refers to plate 401 and page 411, where only *O. marginatus* is used, implying they refer to the same species. It seems likely that the plates were printed before the text and that for some unknown reason Cuvier later decided to change the name (there are other such instances in the early 19th century ichthyological literature; see, e.g., Kottelat, 1988).

Cuvier based his 1831 description of *Ophicephalus marginatus* on at least two specimens 5-6 inches [136–163 mm, apparently TL] long from Pondicherry, on two or more specimens 6-7 inches [163-190 mm] long from Java, on the figure of Kuhl and van Hasselt (a copy of which is reproduced in Roberts, 1993: fig. 43), and on the specimen on plate 201 whose origin is not stated. As Hamilton's (1822) *O. gachua* was only conditionally included, it is not part of the type series. Roberts (1993: 40) lists MNHN 2247, 4 specimens 86–125 mm SL [84, 91, 96, 122 mm SL, pers. obs.] as the Javanese syntypes. These 4 specimens are too small to be the Javanese specimens listed by Cuvier, except the smallest one which could be the specimen figured by Kuhl and van Hasselt, if it is figured natural size. Roberts did not mention a fifth Javanese specimen, MNHN A.396 [115 mm SL, 142 mm TL], listed as syntype by Blanc (1963: 76); this is, in fact, the figured specimen (see below). Additional Javanese specimens could be in RMNH. MNHN A.395 [110 mm SL, 134 mm TL] from "Coromandel" (where Pondicherry is located) is certainly one of the specimens listed by Cuvier. MNHN 2248, 73 mm SL, 90 mm TL, from "the Sea of Indies, bought in Amsterdam by Valenciennes", listed as syntype by Blanc, is not mentioned by Cuvier.

These are the specimens which would come into consideration as syntypes if the name *O. marginatus* were available from Cuvier & Valenciennes (1831). But Cuvier had already used the name *O. marginatus* in the second edition of the *Règne animal* (1829: 230). The name appears in a footnote: "*O. marginatus*, N., ou *O. gachua*, Buch. ? [Hamilton, 1822] pl. xxi, f. 21, ou Cora motta, Russel, II, pl. 164 [Russell, 1803]". This original use of *O. marginatus* makes the name available by indication to Russell (1803: pl. 164). The type series of *O. marginatus* includes only the specimen figured on Russell's plate as there is no

reference to the text in the original indication. This specimen is thus the holotype, and it is not known to have been preserved. The use of a question mark behind "*O. gachua*, Buch." excludes Hamilton's (1822) material of *O. gachua* from the type series (ICZN art. 72(b)(i) or art. 72.41 of the 2000 edition), and therefore *O. marginatus* cannot be considered as an unnecessary replacement name for *O. gachua*. The type locality of *O. marginatus* is thus Vizagapattam, India, where Russell's material had been collected.

Ophicephalus limbatus appears only on plate 201 of Cuvier & Valenciennes (1831). The vernacular name (ophicéphale bordé) is the same as appears in the heading of the account of *O. marginatus* (p. 411). In the table of contents (p. xxiii), plate 201 is clearly labelled as *O. marginatus* and referred to p. 411, as well as on p. 2 of the "avis au relieur" [notice for the binder]. *Ophicephalus limbatus* is a new name based on the single illustrated specimen. Its holotype is thus the illustrated specimen and the locality of this specimen is the type locality. Roberts (1993: 40) commented that *O. limbatus* would be an available name for the Javanese *Channa gachua* if considered specifically distinct, but he does not provide evidence that the figured specimen is from Java. He stated that the plate is based on a Kuhl and van Hasselt specimen (singular) but listed 4 specimens of this species collected in Java by Kuhl and van Hasselt. Plate 201 is definitively not based on the figure prepared by Kuhl and van Hasselt and reproduced by Roberts (1993: Fig. 43); it is an original figure, prepared on the basis of a specimen, for the *Histoire naturelle des poissons*. I have compared all the specimens of *O. marginatus* (sensu Cuvier, in Cuvier & Valenciennes, 1831) listed above with Plate 201 and conclude that MNHN A.396 [115 mm SL, 142 mm TL] is the model of this plate. Plate 201 represents the fish about natural size [120 mm SL, 144 mm TL]. The Pondicherry specimen MNHN A.395 has about the same size, but the scale pattern on the top of the head is not the one figured on Plate 201. The type locality of *O. limbatus* is thus Java.

Ophicephalus limbatus is usually listed as a synonym of *Channa gachua* (Hamilton, 1822) or *C. orientalis* Bloch, in Schneider, 1801. Although *C. gachua* and *C. orientalis* are still frequently listed as subjective synonyms, it is clear that they are distinct species (Kottelat, 1989; Ettrich & Schmidt, 1989; Ng & Lim, 1989, 1990; Pethiyagoda, 1991). In fact, it is more correct to state that the two species usually recognised under these two names are distinct. I make this reservation because there are no extant primary types for both, and in the case of *C. orientalis* there are uncertainties about the type locality. *Channa orientalis* as presently understood is restricted to Sri Lanka. *Channa gachua* is a wide ranging 'species' extending from the Indus basin to Vietnam and to Bali. There are indications that the specimens from the lower Ganges (type locality of *C. gachua*) are not conspecific with those from Java. If the Javanese population can be shown to be specifically distinct, then the earliest available name will be *C. limbata*. The specific limits of *C. gachua* must first be revised and its distribution range clarified.

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