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Revision of the aphyonid genus *Aphyonus* (Teleostei, Ophidiiformes) with a new genus and two new species

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Abstract

The cosmopolitan, deep sea, aphyonid genus *Aphyonus* is known from less than 100 specimens. The type species *A. gelatinosus* Günther, 1878 and three additional valid species, *A. brevidorsalis* Nielsen, 1969, *A. bolini* Nielsen, 1974, and *A. rassi* Nielsen, 1975 were all based on single specimens. Since then several specimens have been caught of which 52 are examined for the present revision. Most of the specimens are referred to *A. gelatinosus* but also to *A. bolini* and *A. rassi*. A result of the enlarged material is that the type species, *A. gelatinosus*, is found to differ so much from the remaining species that a new genus, *Paraphyonus*, is established for these species. Furthermore two new species of *Paraphyonus* are here described, *P. iselini* based on six specimens from the tropical northwestern Atlantic Ocean and *P. merretti* based on three specimens from the northeastern Atlantic Ocean. The present knowledge of the variation of the *Paraphyonus* species makes it relevant to transfer *Barathronus solomonensis* Nielsen & Møller, 2008 to this genus.

Key words: Teleostei, Aphyonidae, *Aphyonus*, *Paraphyonus* n. gen.

Introduction

Specimens of the viviparous, deep sea, aphyonid genus *Aphyonus* are known from almost 100 specimens. They are reported from the Atlantic, Indian and western Pacific Oceans from depths between 914 and 5011 meters. Except for a few specimens all were caught in bottom fishing gear none of which, however, were provided with a closing device so the gear could have caught deep pelagic-living specimens during hauling.

The description of the type species *Aphyonus gelatinosus* Günther, 1878 and the additional three valid species, *A. brevidorsalis* Nielsen, 1969, *A. bolini* Nielsen, 1974 and *A. rassi* Nielsen, 1975 were all based on single specimens. Since then several specimens have been caught of which the major part (52) were examined for the present revision. Most of the specimens are referred to *A. gelatinosus* but also to *A. bolini* and *A. rassi* enhancing the knowledge of their intraspecific variation. A result of the larger material is that the type species, *A. gelatinosus*, is found to differ in so many characters from the remaining species that as a consequence a new genus, *Paraphyonus*, is here established for these species. Furthermore two new species are here described, *P. iselini* based on six specimens from the tropical northwestern Atlantic Ocean and *P. merretti* based on three specimens from the northeastern Atlantic Ocean. The present knowledge of the variation of the *Paraphyonus* species makes it relevant to transfer *Barathronus solomonensis* Nielsen & Møller, 2008 to this genus.

Material and methods

A total of 52 specimens were studied for this review, 29 of the genus *Aphyonus* and 23 of the genus *Paraphyonus*. The head of quite a few of the specimens show net damage making some head measurements uncertain. For some species both a line-drawing and a photo is shown. In most cases the drawing was made rather soon after capture while the photos show the specimens after many years of preservation. Only important references are included in the specific sections. Ichthyological terminology and counts follow Nielsen *et al.* (1999). Institutional abbreviations follow Eschmeyer (2015). Other abbreviations: SL = standard length, HT = holotype, PT = paratype.