

Review of the perciform fish genus *Symphysanodon* Bleeker (Symphysanodontidae), with descriptions of three new species, *S. mona*, *S. parini*, and *S. rhax*

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... of making many books there is no end; and much study is a weariness of the flesh.
Ecclesiastes 12:12

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Abstract

Symphysanodon mona, a new species of perciform fish, is described from a single specimen collected in Mona Passage off the west coast of Puerto Rico. It differs from all other species of *Symphysanodon* in having fewer gillrakers on the first gill arch (4 or 5 + 19–21 = 24 or 25 total vs. 8–14 + 20–29 = 28–42 total) and, additionally, from the other two Atlantic species of the genus (*S. berryi* and *S. octoactinus*) in two other features of gill-arch morphology, viz., in having a ventral branch of the obliquus dorsalis 3 muscle (vs. its absence in the other two species) and in having a posteriorly projecting extension of the cartilaginous lateral end of ceratobranchial 4 (vs. its absence in the other two species; *S. berryi* has a small accessory cartilage associated with the lateral end of ceratobranchial 4 which may also be present in *S. octoactinus*).

Symphysanodon parini, new species, known from 10 specimens collected over Sala y Gómez Ridge in the eastern South Pacific, can be distinguished from all other species of *Symphysanodon*, except *S. maunaloae* from the central and western Pacific, by the following combination of characters: segmented anal-fin rays 7, tubed lateral-line scales 45–50, total gillrakers on first gill arch 31–34 (9 or 10 + 22–24), sum of lateral-line scales and gillrakers on individual specimens 77–84, depth of body 22.5–24.7 % SL (4.0–4.4 times in SL), length of depressed anal fin 24.8–26.4 % SL, hypurals 1 & 2 autogenous, hypurals 3 & 4 represented by a single plate, and first caudal vertebra without parapophyses. It is distinguished from *S. maunaloae* by differences in mean numbers of tubed lateral-line scales (mean = 47.89 for *S. parini* vs. mean = 44.94 for *S. maunaloae*) and pectoral-fin rays (mean = 16.90 for *S. parini* vs. mean = 16.13 for *S. maunaloae*) and by differences in a few morphometric characters.

Symphysanodon rhax, new species, known from specimens collected off the Maldives Islands, northern Indian Ocean, is separable from all other species of *Symphysanodon*, except *S. berryi* from the Atlantic, by the following combination of characters: segmented rays in the anal fin 7, tubed lateral-line scales 50, gillrakers on the first gill arch 35–38 (10 or 11 + 25–27), sum of lateral-line scales and gillrakers on individual specimens 85–88, depth of body 20.6–24.8 % SL (4.0–4.9 times in SL), length of depressed anal fin 21.8–23.9 % SL, hypurals 1 & 2 autogenous, hypurals 3 & 4 represented by a single plate, and first caudal vertebra without parapophyses. It can be distinguished from *S. berryi* by its shorter second anal-fin spine and a suite of other morphometric characters. A key to *Symphysanodon* and a review of the other species of the genus are also presented.

Key words: Symphysanodontidae; *Symphysanodon mona*, new species; *Symphysanodon parini*, new species; *Symphysanodon rhax*, new species; key to *Symphysanodon*; review of *Symphysanodon*; Puerto Rico; Mona Passage; Sala y Gómez Ridge; Maldives

Introduction

The small to medium-sized perciform fishes of the genus *Symphysanodon* Bleeker inhabit waters over the continental shelf, upper continental slope, and submarine ridges and occur in similar depths in insular areas. The genus is known from 10 species—six previously described (*S. andersoni* Kotthaus, *S. berryi* Anderson, *S. katayamai* Anderson, *S. maunaloae* Anderson, *S. octoactinus* Anderson, and *S. typus* Bleeker), the three described herein, and a species known only from stomach contents of a specimen of *Latimeria cha-*