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First Description of the Adult Male of *Micrognathus brachyrhinus* (Pisces, Syngnathidae)[1]

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THE PIPEFISH *Micrognathus brachyrhinus* (Herald 1953) was described from two juveniles taken by the United States fisheries steamer *Albatross* at Hawaii and at the Philippine Islands, respectively. The recently collected adult male discussed herein is unusual in having more strongly developed snout spination than do the juveniles.

M. brachyrhinus and *M. myersi* constitute the subgenus *Minyichthys* (Herald and Randall 1972). They differ from all other Pacific species of *Micrognathus* by having 19–21 trunk rings (rather than 13–17) and a short snout and by attaining a small size at maturity (50 mm or less).

The holotype of *M. brachyrhinus* (USNM 118082, 31 mm) was collected in a plankton net in 75 fathoms (137 m) off Oahu, Hawaii, in 1902. The paratype (CAS 24763, formerly USNM 137269, 22 mm) was collected in San Miguel Harbor, Ticao Island, Philippine Islands, in 1908.

In 1968, some 60 years later, a 47 mm male (SIO68-484) was taken in a rock dredge during the Styx Expedition of Scripps Institution of Oceanography at a depth of 72–90 m at Nero Bank, Kure Island, some 1,500 miles northwest of the type locality. This fish is in general agreement with the types of *M. brachyrhinus* in appearance and counts. It has 26 dorsal rays, located on 1.3 trunk rings and 7 tail rings; 20 trunk rings; 39 tail rings; 9 pectoral rays; 8 caudal rays; 3 anal rays; and 17 rings covered by the empty brood pouch. The snout, supraorbital, and opercular ridges are fairly distinct. The opercular ridge extends over three-fourths of the length of the opercle. The supraorbital ridges converge at the first of the three spines on the snout anterior to the orbit. The body ridges are rounded, but distinct. Each body ring bears 5–7 teeth on each of the ridges (superior and inferior). The ridge pattern on the body is that described by Herald (1953: 256) as being typical of *Micrognathus*. Each dermal plate is provided with a strong dorsoventral ridge, thereby giving the body a ringed appearance which does not correspond precisely with the rings as normally counted. The scutellae are small and equal in width to about half the width of the surrounding plates. No lateral-line papillae are visible. The head length is 5.2 mm; snout length 1.9 mm; dorsal-fin base 5.8 mm; and the orbit diameter is 0.7 mm.

The color of the Nero Bank specimen in alcohol is uniform light tan with small brownish spots on the opercle that form a narrow ring around the snout immediately anterior to the orbit.

Although this fish has the same general appearance as the types, it differs in having three distinct spines on the snout (Figure 1). However, reexamination of the smaller paratype discloses two minute incipient spines that were not observed previously (Earl S. Herald, personal communication). In most fishes, including syngnathids, spination is generally reduced as the animal grows. However, *Doryrhamphus melanopleura* exhibits distinct sexual dimorphism in the strength of snout spination which is weakly developed in juveniles but which becomes more apparent in adult females and is much stronger in adult males. The strong spination on the snout of the male *M. brachyrhinus* from Nero Bank may represent sexual dimorphism or an ontogenetic increase in spine development in both sexes.

Distinct sexual dimorphism in snout length is apparently characteristic of *M. myersi*, for the snout of the adult male holotype is relatively longer than that of the adult female paratype

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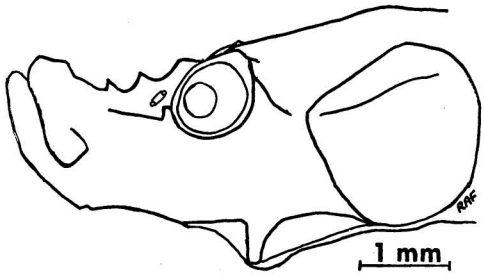

FIGURE 1. *Micrognathus brachyrhinus* Herald, adult male, 47 mm SL (s1068-484); Nero Bank, Kure Island.

Both sexes in that species have a large internasal spine. However, the reduced spination in young *M. brachyrhinus* indicates that the juveniles of *M. myersi* may also have this spine undeveloped. Distinct sexual dimorphism in the spination and/or length of the snout may be another character distinguishing the subgenus *Minyichthys*.

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