Hippocampus tyro, a new seahorse (Gasterosteiformes: Syngnathidae) from the Seychelles

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Abstract. Hippocampus tyro is described as a new species of seahorse from one specimen, 34 mm high and 61 mm in total length, dredged from 43–48 m off Poivre Atoll, Seychelles in 1992. It is unique for the genus in having 14 trunk rings and a single middorsal gill opening. It is compared with two other diminutive species, H. pusillus Fricke and H. jugumus Kuiter, sharing with them a slender body, confluent middorsal shoulder ridges, and similar spination.

Keywords: Syngnathidae, Hippocampus, new species, Seychelles

Introduction

The first author was fortunate to be a participant in a marine biological expedition to the Seychelles aboard the Dutch research vessel Tyro in 1992 (van der Land 1994). Fishes were collected in offshore stations by trawls and dredges, and inshore with the use of the ichthyocide rotenone, the anaesthetic quinaldine sulphate, and by spearing. The expedition resulted in the collection of 374 species of fishes, of which 108 were new records for the Seychelles (Randall & van Egmond 1994).

Station 766 was a haul by a rectangular dredge on the north side of Poivre Atoll in the Amirantes at a depth of 43–48 m. A single small specimen of a seahorse was among the fragments of the corals Stylophora pistillata, Montipora digitata and Dendrophyllia sp. taken in the haul. A colour photograph was taken (Fig. 1), and the specimen was deposited in the Bishop Museum in Honolulu (BPBM) as Hippocampus sp.

When the specimen could not be identified to species in the review of seahorses by Lourie et al. (1999), it was sent on loan to the second author. Although it keys to the genus Hippocampus in Dawson (1985) and Dawson in Smith and Heemstra (1986) by having a prehensile tail and the head angled ventrally by more than 70°, its slender body form and the high number of trunk and tail rings suggested a relationship to the pipehorse genus Acentronura. After initial attempts at DNA sequencing by the second author, the specimen was sent to a colleague who was willing to try using a different protocol, in spite of the initial preservation in formalin. The tissue yielded only a conclusion that the specimen is a syngnathid. Regrettably, the tissue samples taken from the specimen resulted in the loss of the viscera, the anal fin, and most of the muscle of the proximal half of the tail.

A large collection of fishes was made during a recent expedition to the Seychelles by the South African Institute for Aquatic Biodiversity. We have checked with this institution for possible additional material of this seahorse. Unfortunately, no specimens of Hippocampus were collected, so we describe the species here from the single specimen.

Proportional measurements, rounded to the nearest 0.05, are related to the head length (HL), measured from the tip of the snout to the most posterior edge of the shoulder ridge, or the total length (TL), determined by bending a slender wire to the shape of the specimen, straightening the wire, and measuring its length. Total length is equivalent to standard length as defined by Lourie et al. (1999). Trunk length was measured by bending a wire from the anterior edge of the first trunk ring along the lateral trunk ridge to the anterior edge of the first tail ring. The first trunk ring is the one bearing the pectoral-fin base, and the last trunk ring, much deeper than the first tail ring, contains the anus. The measurements of maximum depth of the trunk and tail were made from the outer edge of the superior median trunk or tail ridge to the median ventral or tail ridge.

Hippocampus tyro sp. nov.

Figs. 1–2

Holotype. BPBM 35555, female, 61 mm TL, Seychelles, Amirantes, north end of Poivre Atoll, 5°44’S, 53°20’E, coarse calcareous sand and coral, 43–48 m, rectangular
Hippocampus tyro

**Diplagnosis.** Dorsal rays 15; pectoral rays 14 (15 on right side); trunk rings 14; tail rings 38; subdorsal spines 4; forming a square, the dorsal 2 enlarged; spines of trunk and tail ridges blunt and moderate in size; third and seventh superior trunk spines, and fourth, eighth, and eleventh superior tail spines enlarged; with a slender, leaf-like filament; body slender, the maximum trunk depth (seventh trunk ring) 11.2 in TL; depth of tail at third tail ring 25.5 in TL, trunk length 3.2 in TL; head at right angle to trunk as photographed (80° in TL); head length 6.2 in HL; snout length 2.2 in HL; a large, truncate, rugose spine on shoulder ridge; a prominent, crest-like, median ridge; gill opening a narrow middorsal slit in neck ridge between median posterior ridge of coronet and collar of shoulder ridge; a large, truncate, rugose spine on shoulder ridge anterior to ventral third of pectoral-fin base; cheek spine on shoulder ridge ventrally on head nearly half way to large V-shaped midventral head spine; a prominent midventral spine on first trunk ring; ventral trunk keel nearly as deep as pupil diameter; longest dorsal ray 3.1 in HL; longest pectoral ray 4.2 in HL. Colour in alcohol uniform greyish white, only the very small filament on superior and tail ridges brown. Colour when fresh as in Fig. 1.

**Etymology.** This little seahorse is named for the Dutch R/V *Tyro*, in recognition of the vessel serving as the base for a very successful marine biological expedition to the Seychelles.

**Remarks.** *Hippocampus tyro* is unique among known species of seahorses in having 14 trunk rings (8–13 in other species) and a single, slit-like, middorsal gill opening. It is most similar to *H. pusillus* Fricke 2004, described from three specimens, 28.3–39.0 mm in height, collected from 35–228 m off New Caledonia and the Loyalty Islands; and to *H. jug admission* Kuiter 2001 known from one specimen, 44 mm in height, from Lord Howe Island. *H. tyro* shares with both a slender body, confluent shoulder ridges, and similar (though blunter) spination. It differs from *H. pusillus* in the much greater head depth, 38 vs. 34 tail rings, and 14 or 15 instead of 12 or 13 pectoral rays. *H. jug admission* differs in having 12 trunk rings, 37 tail rings, 20 dorsal rays, a prominent branching supraobtial spine, and a longer snout.

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**Literature Cited**


