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**NOTES ON MARINE FISHES FROM THE NETHERLANDS  
ANTILLES, WITH THE DESCRIPTION OF A NEW SPECIES,  
EUTYX TUMIDIFRONS (BROTULIDAE)**

by

**M. BOESEMAN**

(Rijksmuseum van Natuurlijke Historie, Leiden)

(With plate II)

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A small number of fishes from the Netherlands Antilles has been collected and recently presented to the Leiden Museum by Dr. J. S. Zaneveld, Head of the Biology Department, College of William and Mary, Norfolk, Va., formerly Director of the Caraïbisch Marien Biologisch Instituut, Curaçao; and Dr. L. B. Holthuis, Curator of Carcinology at the Leiden Museum. While most specimens proved to belong to known Caribbean Syngnathidae, one very remarkable specimen appeared to belong to an undescribed species.

Syngnathidae

**Syngnathus dunckeri** Metzelaar

*Syngnathus dunckeri* Metzelaar, 1919, p. 28, fig. 9 (Plaja Grandi, Curaçao; lake of Bonaire; harbour of St. Eustatius; St. Martin); —, Longley & Hildebrand, 1941, pp. 56, 59 (Long Key; inside Bird Key reef); —, Herald, 1942, p. 132 (Bermuda; Bahamas; Cuba; Haiti; Santa Lucia; St. Kitts; Antigua; Virgin Islands; Grenadines; Puerto Rico; Curaçao; Dry Tortugas; off Cape Hatteras).

1 ex., in Piscadera Baai, Curaçao, 5 January 1957, coll. Dr. L. B. Holthuis, reg. no. RMNH 23228.

According to the information provided by Dr. Holthuis, this specimen was caught at a depth of about two meters, between *Zostera*. It has 16 + 33 rings; D about 24; on 0 + 7 rings.

Of the present species we hitherto possessed in our collections only a

single specimen from Klein Bonaire, coll. Dr. P. Wagenaar Hummelinck, 13 September 1948, reg. no. RMNH 18740, not previously recorded.

### **Syngnathus rousseau** Kaup

*Syngnathus rousseau* Kaup, 1856, p. 40 (Martinique); —, Longley & Hildebrand, 1941, pp. 56, 62 (Tortugas, in floating *Sargassum*); —, Herald 1942, p. 133 (Venezuela; Panama; Jamaica; Santa Lucia; Columbia; Puerto Rico).

*Syngnathus rousseawi*, Metzelaar, 1919, p. 27 (Rakito (Reefwater) of Curaçao).

2 ex., near southern shore of St. Joris Baai, Choloma, Curaçao, 3 January 1957, coll. Dr. L. B. Holthuis, reg. no. RMNH 23225.

1 ex., Oyster Pond, east coast of St. Martin, 22 February 1957, coll. Dr. L. B. Holthuis, reg. no. RMNH 23224.

About the two specimens from Curaçao Dr. Holthuis reports that he found them between seaweed. The specimen from St. Martin has the head badly damaged, which makes the present identification slightly less reliable. The numbers of the rings are respectively 16 + 33, 16 + 32, 18 + 34; D 28, about 28, 26; on 2 + 4½, 2 + 4, 2 + 4½ rings. This species was not yet represented in the collections of the Leiden Museum.

### **Corythoichthys brachycephalus** (Poey)

*Syngnathus brachycephalus* Poey, 1868, p. 444 (Havana, Cuba).

*Syngnathus (Corythoichthys) cayorum*, Metzelaar, 1919, p. 27 (reef-water, Curaçao).

*Hippichthys brachycephalus*, Longley & Hildebrand, 1941, pp. 56-58 (grassy flats about Long Key and Bird Key reef).

*Corythoichthys brachycephalus*, Herald, 1942, p. 132 (Dry Tortugas; Key West; Cuba; Puerto Rico; Curaçao).

1 ex., in sand before Piscadera Baai, Curaçao, 23 November 1956, coll. Dr. L. B. Holthuis, reg. no. RMNH 23226.

1 ex., Oyster Pond, east coast of St. Martin, 22 February 1957, coll. Dr. L. B. Holthuis, reg. no. RMNH 23227.

Of these specimens, the observed numerical characters are as follows:

17 + 26, 17 + 28 rings; D 21, 22; on 2 + 3, 1½ + 4 rings. These are the first specimens of the present species in our collections.

Brotulidae

**Eutyx tumidirostris** nov. spec. (plate II)

1 ex., northern part of (St.) Michiel Baai, Curaçao, June 1959, coll. Dr. J. S. Zaneveld, reg. no. RMNH 12560. — Holotype.

Diagnostic characters:

Body and major part of head covered with small cycloid scales, hidden beneath the layer of slime which covers the whole specimen, including the fins; snout tumid, very bluntly rounded, slightly projecting before mouth; eye large, horizontally elliptic in shape; no spines on opercles; no canine teeth; no palatine teeth; gill-rakers few, 4 excluding rudiments; two indistinct lateral lines; caudal fin united with dorsal and anal fins; pelvic fins consisting of two wholly united rays; finformula and squamation numbers as given below.

Description of the holotype:

D about 85, A about 65, P 23, V 2; scales in longitudinal series behind upper gill aperture about 160, transverse about 15.1.10.1.30 between origins of dorsal and anal fins; indistinct pores in upper lateral line about 18(?), in lower lateral line about 46. The numbers given are the average of several counts.

Body compressed, elliptical in cross section; the caudal portion, behind the vent, very strongly compressed and laterally flattened; dorsal and ventral outlines subequal, the caudal portion tapering to a point posteriorly; depth near vent (= maximum) 4.2 in standard length.

Head large, 4.4 in standard length, maximum height almost equal to head length, width about twice in head length; dorsal parts rounded transversely, dorsal outline only slightly curved downward to bluntly rounded tumid snout. Eye large, horizontally elliptical, maximum diameter 4.3, minimum diameter 5.0 in head length, wholly situated in anterior half of head. Snout somewhat projecting before mouth, 5.0 in head length; anterior nostril slightly above upper lip, posterior nostril immediately before eye, at same level as pupil, both with raised margins, their maximum diameters about 3.5 in horizontal eye diameter. Interorbital convex, 4.2 in head length. Mouth oblique, both jaws curved downward towards angles; maxillaries reaching ½ eye diameter beyond eyes, their length approximately 2 in head

length. Teeth small, villiform, in broad bands on both jaws, the posterior maxillary teeth and the inner mandibular teeth distinctly enlarged, but without canines. Vomer with a patch of villiform teeth, rounded subtriangular in shape; palatines with very small tooth-like papillae. Opercular bones without spines; branchiostegal membrane free from isthmus; no pseudo-branchiae; gill-rakers few, 4 (first small) + 6-7 rudiments. No barbels on snout, lips, or chin.

Cleithra not greatly produced, symphysis reaching to below posterior end of maxillaries. Pelvic fins situated hardly behind tip of symphysis, consisting of only two wholly united rays, reaching beyond pectoral base, somewhat shorter than postorbital head length. Dorsal origin situated behind pectoral base, distance from tip of snout 3.3 in standard length. Vent situated immediately before origin of anal fin, its distance from tip of snout 2.3 in standard length. Dorsal and anal fins confluent with caudal fin; maximum length of dorsal and anal finrays about equal to postorbital head length. Pectoral fin with a wide fleshy base, 2 in postorbital head length; broad, with the tip slightly pointed, its total length surpassing postorbital head length with almost half eye diameter. Caudal fin mutilated, probably pointed, present length almost 3 in head length.

The whole body and the postorbital head are covered with small cycloid scales, the squamation extending forward to the interorbital region. The scales apparently are lacking on subopercles, around eyes, on anterior cheeks, on the snout, jaws, and chin, but the unevenly pitted naked parts give an impression of being scaled. The whole specimen, including the fins, is covered with a slimy layer, removed in the accompanying plate.

Colour in spirits dark brown, the head and anterior body slightly darker, the fins almost black; when dried, a light punctuation of very small dots appears, especially on body, tail, and proximal parts of dorsal and anal fins; with the slime removed, as in plate II, the colour of body and tail becomes much lighter brown. Colour in life, according to information provided by Dr. Zaneveld, deep dark brown, so dark that it appears to be black.

Measurements of *Eutyx tumidirostris*:

Total length	71.0 mm
Standard length	66.5 mm
Depth of body	15.9 mm
Width of body at pectoral origins	6.0 mm
Width of body above vent	3.6 mm
Length of head	15.0 mm

Maximal width of head	7.5 mm
Horizontal diameter of eye	3.4 mm
Vertical diameter of eye	3.0 mm
Interorbital width	3.6 mm
Length of snout	3.0 mm
Length of maxillary	7.6 mm
Maximal length of dorsal and anal rays	9.0 mm
Length of pectoral fins	10.0 mm
Length of ventral fins	8.7 mm
Length of caudal fin (mutilated!)	5.0 mm
Distance from tip of snout to dorsal origin	20.0 mm
Distance from tip of snout to vent	29.0 mm

Additional data provided by Dr. Zaneveld:

Two specimens were caught in a hole in the rocks along the northern shore of Michiel Baai, Curaçao, and transported to the aquarium of the CARMABI (Caraïbisch Marien Biologisch Instituut). At a later date, one specimen strangely disappeared during the absence of Dr. Zaneveld.

There was nothing remarkable in the behaviour of both specimens. They remained at some distance from the surface of the water, generally above the flat horizontal parts of the bottom. While remaining at exactly the same spot, undulating movements were made with dorsal and anal fins, beginning at dorsal origin and continuing along dorsal, caudal, and anal fin to anal origin. The pectoral fins were used for movements forwards or backwards. The specimens searched for food along the bottom by extending both rather stiff ventral fins slightly obliquely forward, touching the mud. They preferred to eat shrimps and other small Crustacea, and seldom ate dead food. They always kept close company, thus seem to be inclined to social life.

Relationship:

The present species seems most closely related to *Eutyx diagrammus* Heller & Snodgrass (1903, p. 224, pl. 19), but is easily distinguished by its large tumid snout, larger eye, slender maxillary, and by its numerical characters.

#### PRINCIPAL CONSULTED LITERATURE

- BRIGGS, J. C., 1958. A list of Florida fishes and their distribution. Bull. Fla. St. Mus., Gainesville, vol. 2, no. 8, pp. 223-318, 3 figs.  
 GREY, M., 1956. The distribution of fishes found below a depth of 2000 meters. Fieldiana Zool., Chicago, vol. 36, no. 2, pp. 75-337, 1 fig.

- , 1958. Descriptions of abyssal benthic fishes from the Gulf of Mexico. *Fieldiana Zool.*, Chicago, vol. 39, no. 16, pp. 149-183, 28 figs.
- HELLER, E., & R. E. SNODGRASS, 1903. New fishes, in: *Papers from the Hopkins Stanford Galapagos Expedition, 1898-1899*, (no. 15). *Proc. Washington Acad. Sci.*, vol. 5, pp. 189-229, 1 fig., pls. 2-20.
- HERALD, E. S., 1942. Three new pipefishes from the Atlantic coast of North and South America, with a key to the Atlantic American species. *Stanford Ichthyol. Bull.*, vol. 2, no. 4, pp. 125-134.
- GOODE, G. B., & T. H. BEAN, 1895. *Oceanic ichthyology, a treatise on the deep-sea and pelagic fishes of the world*. U.S. Nat. Mus., Special Bull., Washington, xxxv + 26 + 553 pp., 28 figs., 1 + 123 pls.
- JORDAN, D. S., & B. W. EVERMANN, 1898. The fishes of North and Middle America: a descriptive catalogue of the species of fish-like vertebrates found in the waters of North America, north of the isthmus of Panama. *Bull. U.S. Nat. Mus.*, Washington, no. 47, part 3, pp. i-xxiv + 2183a-3136.
- , 1900. *Idem*, part 4, pp. i-ci + 3137-3313, 342 pls.
- JORDAN, D. S., B. W. EVERMANN, & H. W. CLARK, 1930 (Reissue 1955). Check list of the fishes and fishlike vertebrates of North and Middle America north of the northern boundary of Venezuela and Colombia. *Rep. U.S. Comm. Fish.*, Washington, (1928), 670 pp.
- KAUP, J. J., 1856. *Catalogue of Lophobranchiate Fish in the collection of the British Museum*. London, iv + 80 pp., 4 pls.
- LONGLEY, W. H., & S. F. HILDEBRAND, 1941. Systematic catalogue of the fishes of Tortugas, Florida. With observations on color, habits, and local distribution. *Pap. Tortugas Lab. Carn. Inst.*, vol. 34, xiii + 331 pp., 34 pls.
- MEEK, S. E., & S. F. HILDEBRAND, 1928. The marine fishes of Panama. Part 3. *Field Mus. Nat. Hist. Publ.*, Chicago, *Zool. Ser.*, vol. 15, pp. xxv-xxxii + 709-1045, pls. 72-102.
- METZELAAR, J., 1919. *Over tropisch Atlantische visschen*. Thesis, Amsterdam, 314 pp., 64 figs.
- , 1919. Report on the fishes, collected by Dr. J. Boeke in the Dutch West Indies 1904-1905. With comparative notes on marine fishes of Tropical West Africa. The Hague; identical with previous publication.
- NORMAN, J. R., 1939. *Fishes*. *Sci. Rep. John Murray Exped.*, London, vol. 7, no. 1, 116 pp., 41 figs.
- POEY, F., 1868. *Synopsis piscium cubensium*. In: *Repertorio fisico-natural de la isla de Cuba*, vol. 2. Habana, pp. 279-484.
- RADCLIFFE, L., 1913. Descriptions of seven new genera and thirty-one new species of fishes of the families Brotulidae and Carapidae from the Philippine Islands and the Dutch East Indies. *Proc. U.S. Nat. Mus.*, vol. 44, pp. 135-176, pls. 7-17.

## EXPLANATION OF PLATE II

Holotype of *Eutyx tumidirostris* nov. spec. Habitus in lateral view, with the slimy layer removed,  $\times 3.2$ . Phot. H. F. Roman

