

*SACCOGASTER MELANOMYCTER* (OPHIDIIFORMES:  
BYTHITIDAE), A NEW FISH SPECIES  
FROM THE CARIBBEAN

Daniel M. Cohen

*Abstract.*—The ophidiiform bythitid fish *Saccogaster melanomycter*, the seventh known species of the genus, is described from a single, egg-bearing female taken at 7.5 m from the Caribbean coast of Colombia near Santa Marta. Other species have been trawled from 100–820 m. Differences from its congeners include a black nasal chamber, fewer anal fin rays (37 versus 46–64), and fewer vertebral centra (45 versus 51–57). It is closest to *S. normae* from Peru in having a partly restricted gill opening and in lacking a elongate fleshy pectoral peduncle.

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A single small bythitid fish collected from shallow water on the Caribbean coast of Colombia and subsequently discovered in the Museum of Comparative Zoology is described well by the generic diagnosis for *Saccogaster*, a circumtropical genus of rarely encountered benthic fishes, presented by Cohen and Nielsen (1972). However, this specimen is so different from the six known species of *Saccogaster* that it cannot be identified with any of them and is named below. Terminology and methods follow Cohen and Nielsen (1972, 1978).

*Saccogaster melanomycter*, new species

Figs. 1, 2

*Holotype.*—The only known specimen, MCZ 47362, ♀, Colombia, Caribbean, Santa Marta, Gairaca Bay (Ensenada de Gayraca), 25 feet, coral reef environment; field no. RHCSM 77.

*Diagnosis.*—Nasal chambers sooty black, separated from the orbit by a white area; anal fin rays 37 (46 to 64 in other species); vertebrae 45 (51 to 57 in other species); no elongate, fleshy, pectoral peduncle; dorsal extent of gill opening at upper level of pectoral fin base; no scales on head or body.

*Description.*—Counts: dorsal 74; anal 37; pectoral 18; caudal 10; ventral 1-1; vertebrae 16 + 29 = 45; developed rakers on first arch 3. Measurements in mm: SL 66 (approximate, due to distorted nature of specimen), snout to dorsal fin origin 20.5, snout to anal fin origin 42.1, snout to ventral fin base 15.0, body depth at vent 10.6, head length 18.2, snout length 3.4, eye diameter 2.1, interorbital width 3.3, upper jaw length 9.5, maxilla depth

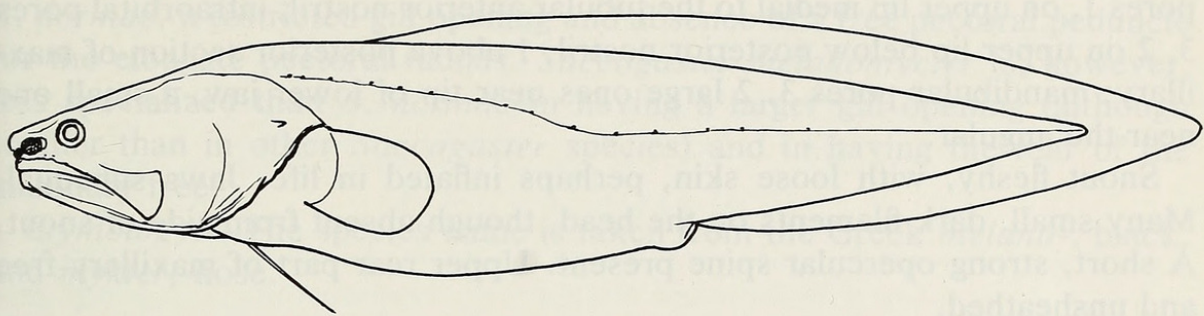


Fig. 1. *Saccogaster melanomycter*, holotype, MCZ 47362, 66 mm SL. Reconstructed view by Keiko Hiratsuka Moore.

3.3, symphysis of cleithra to ventral fin 3.6, ventral fin length 7.4, pectoral peduncle depth 4.8, pectoral fin length 7.1.

Body compressed, relatively short, greatest depth about 4.9 in SL. Pre-anal about 1.6 in SL. Head compressed, about 3.6 in SL. Skin relatively thick and opaque.

Lateral line continuous, originating above and anterior to upper angle of gill opening and descending to midline slightly beyond midpoint of body; its course marked by a narrow unpigmented line along which small papillae are widely spaced, about a dozen darkly pigmented ones to level of vent, beyond which they are pale and difficult to count.

Lateral canal head pores 1, well above angle of gill opening; supraorbital

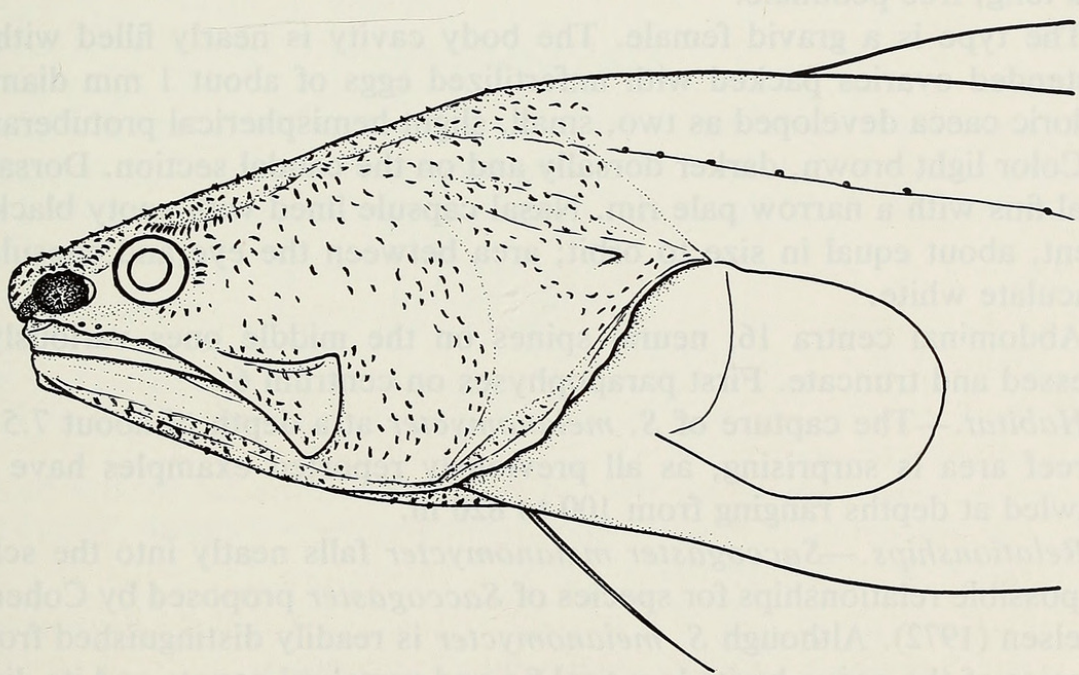


Fig. 2. *Saccogaster melanomycter*, holotype, MCZ 47362, 18.2 mm HL. Detailed view of head by Keiko Hiratsuka Moore.

pores 1, on upper lip medial to the tubular anterior nostril; infraorbital pores 3, 2 on upper lip below posterior nostril, 1 above posterior section of maxillary; mandibular pores 3, 2 large ones near tip of lower jaw, a small one near the angular.

Snout fleshy, with loose skin, perhaps inflated in life. Jaws subequal. Many small, dark filaments on the head, though absent from side of snout. A short, strong opercular spine present. Upper rear part of maxillary free and unsheathed.

Gill opening extending dorsally no farther than upper level of the pectoral fin base.

First gill arch with 3 spiny protuberances that are only slightly larger than the flat, spiny plates covering most of the arch. Gill filaments on first arch neither notably long nor short, closest to those of *S. maculata* (Cohen and Nielsen, 1972, fig. 1A). Pseudobranch of 2 filaments present.

Dentition on premaxillary a narrow, exterior band of granular teeth and an inner single row of enlarged, needle-like teeth. Vomer with a broadly U-shaped band of sharp-pointed teeth, the inner ones larger; a similar pattern continues on the palatine. Dentary with an irregular exterior row of small, slightly compressed teeth and an interior row of larger pointed teeth.

Dorsal fin originating over centrum 6, anal fin under 26 or 27. Adpressed pectoral fin extending about one-third of distance from insertion of pectoral fin rays to anus. Although the ossified pectoral radials are elongate as in other *Saccogaster* species, they lie in the body wall and are not enclosed in a long, free peduncle.

The type is a gravid female. The body cavity is nearly filled with two distended ovaries packed with unfertilized eggs of about 1 mm diameter. Pyloric caeca developed as two, small, slight hemispherical protuberances.

Color light brown, darker dorsally and on the caudal section. Dorsal and anal fins with a narrow pale rim. Nasal capsule lined with sooty black pigment, about equal in size to orbit; area between the eye and capsule immaculate white.

Abdominal centra 16; neural spines on the middle ones variously depressed and truncate. First parapophyses on centrum 6.

*Habitat*.—The capture of *S. melanomycter* at a depth of about 7.5 m in a reef area is surprising, as all previously reported examples have been trawled at depths ranging from 100 to 820 m.

*Relationships*.—*Saccogaster melanomycter* falls neatly into the scheme of possible relationships for species of *Saccogaster* proposed by Cohen and Nielsen (1972). Although *S. melanomycter* is readily distinguished from all species of the genus by its low anal fin and vertebral counts and its distinctive nasal pigmentation pattern, it fits in the *parva-tuberculata-normae* group of species because of its continuous lateral line and lack of scales. Within this group, *S. melanomycter* shares two specialized characters with

*S. normae*, a restricted gill opening and absence of a free pectoral peduncle for the elongate pectoral radials. *Saccogaster melanomycter* is, however, less specialized than *S. normae* in having a larger gill opening (although smaller than in other *Saccogaster* species) and in having the rear of the maxillary free.

*Etymology*.—The species name is taken from the Greek *melano*-, black, and *mykter*, nose.

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Systematics Laboratory, National Marine Fisheries Service—NOAA, National Museum of Natural History, Washington, D.C. 20560.



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