

PROCEEDINGS
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TWO NEW SPECIES OF OPHICHTHID EELS
FROM THE WESTERN ATLANTIC

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The following two new species of eels of the family Ophichthidae were received by the U. S. National Museum in collections taken in 1957 by the Fish and Wildlife Service exploratory fishing vessels *Oregon* and *Combat*. The specimens were trawled from the continental shelf off the coast of French Guiana and in the Bahama Islands.

The methods used in measuring and counting follow Kanazawa (1958: 220).

Genus *Mystriophis* Kaup

Mystriophis Kaup, 1856: 10; type species, *Ophisurus rostellatus* Richardson, by monotypy.

The characters of the specimen from off the coast of French Guiana agree with Kaup's description of the genus *Mystriophis*, which he defined as an eel with two rows of palatine and mandibular teeth, one row of vomerine teeth; end of snout dilated to a spoon shape; anterior nasal tube rudimentary and in middle of rostral dilation; eyes over middle of front half of gape, directed somewhat upward rather than laterally; gill openings large and near one another. Only two species of *Mystriophis* having the spoon-shaped snout are known, *M. rostellatus* and the species described below.

Jordan and Snyder (1901: 874) referred *Ophisurus porphyreus* Temminck and Schlegel to the genus *Mystriophis*. I disagree with them and tentatively place *porphyreus* in the genus *Brachysomophis* Kaup because it agrees in the following respects: vomerine canines large, two rows of teeth in upper and one row in lower jaw, head depressed and tapered to tip of snout, posterior nostrils opening to the ventral edge of upper lip instead of on the lateral side, and a row of small papillae on the edge of the lower jaw.

Jordan and Snyder (1901: 874, footnote) also wrote that the American species hitherto referred to *Mystriophis* have small vomerine teeth, a narrow snout and black spotting. They referred the American species to the genus *Crotalopsis* Kaup (a junior synonym of *Echiopsis* Kaup). I agree that the species they treated do not belong in *Mystriophis*.

Ginsburg (1951: 469) doubted that the western Atlantic species *intinctus* Richardson, *mordax* Poey, and *punctifer* Kaup were congeneric with *Mystriophis rostellatus*, from the eastern Atlantic. He stated that if these species were generically distinct from *rostellatus*, they should be placed in the genus *Echiopsis* Kaup. I agree with Ginsburg.

***Mystriophis blastorhinos*, new species**
(Fig. 1, 2A, Pl. I, left)

Holotype: USNM 158960, 418 mm total length, collected off the coast of French Guiana, 07° 18' N, 53° 32' W, 100 fathoms, 40-foot shrimp trawl, 8 Nov. 1957, M/V *Oregon*, Sta. 2021.

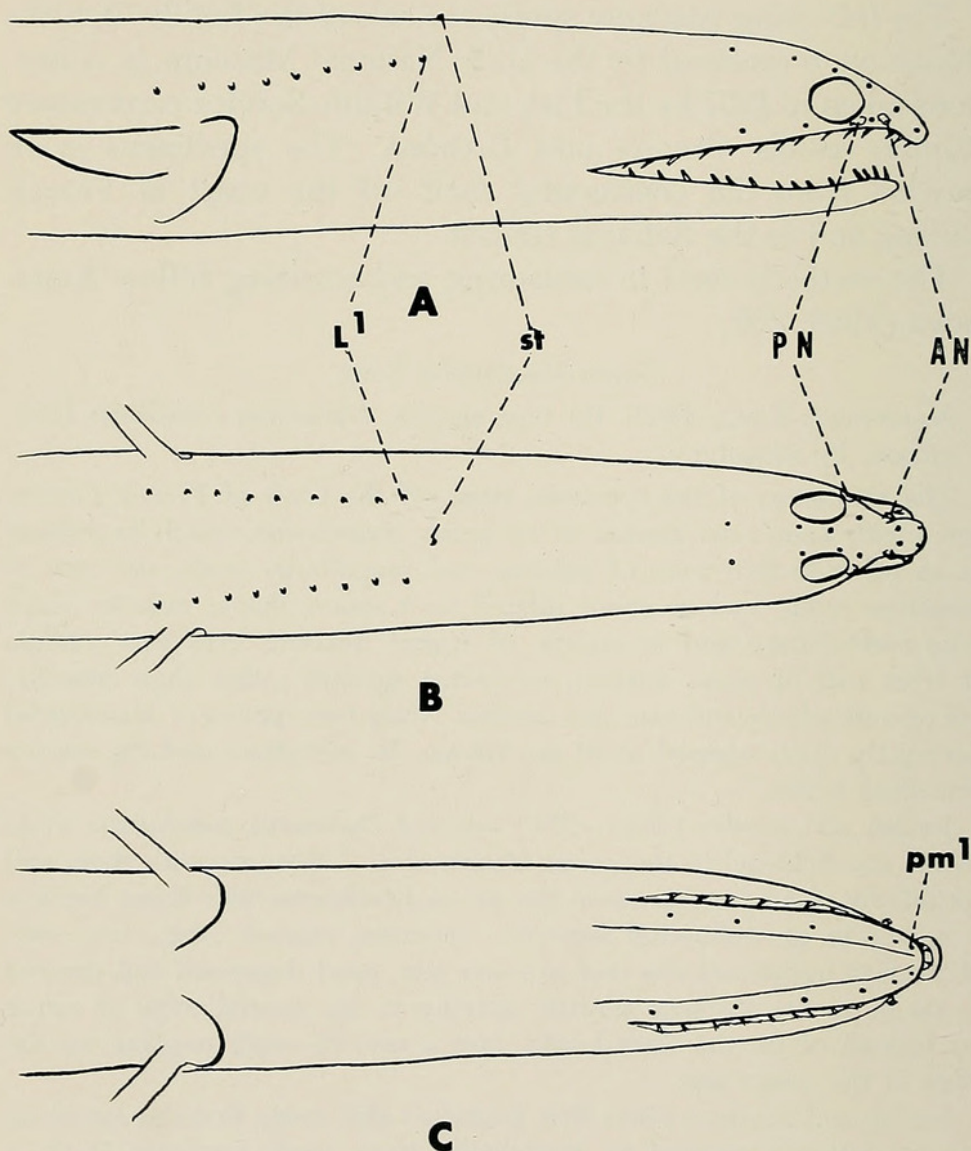


FIG. 1. Views of the head of *Mystriophis blastorhinos*: A, lateral; B, dorsal; C, ventral; showing position of surface sensory pores. Symbols: AN, anterior nostrils; PN, posterior nostrils; st, supratemporal pore; L¹, first lateral line pore; pm¹, first preoperculo-mandibular pore. (Terminology after Allis, 1903.)

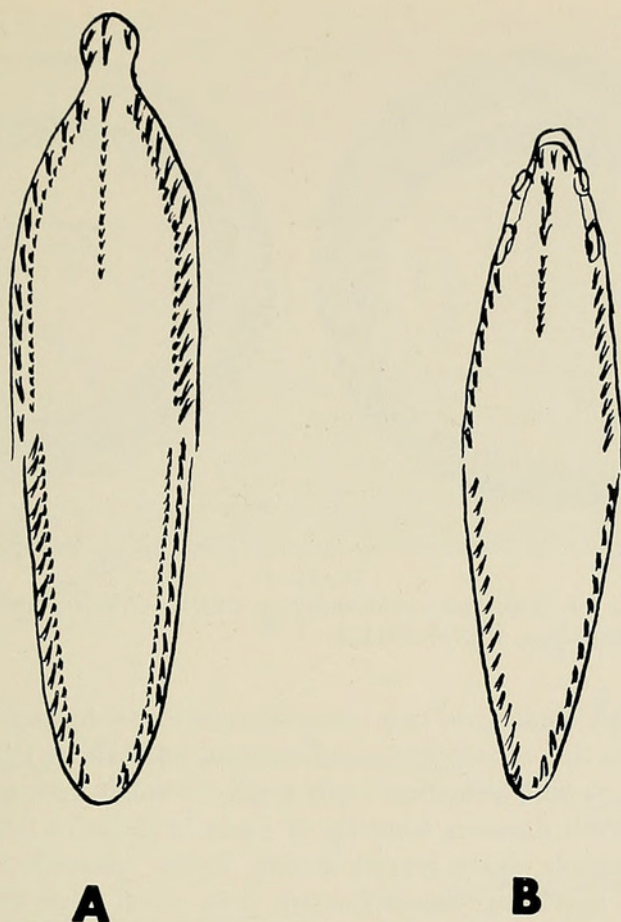


FIG. 2. Dental patterns of upper and lower jaws: A, *Mystriophis blastorhinos*; B, *Ophichthus melanoporus*.

Diagnosis: Snout spoon-shaped, overhanging tip of lower jaw; origin of dorsal fin on a vertical about one and one-half pectoral fin lengths behind posterior tip of pectoral fin; body grayish brown, lighter ventrally.

Description: The following numbers are expressed in thousandths of total length. Tip of snout to anus 436; tip of snout to origin of dorsal fin 187; length of head 125; depth of head 34; tip of snout to rictus of jaw 55; snout length 11; diameter of eye 8; tip of lower jaw to tip of snout 3; interorbital width 6; pectoral fin length 28.

Upper edge of gill opening on level with upper edge of pectoral fin base (upper edge of gill opening designated as that point where free edge joins the body); anus in anterior half of body; rictus of jaws below middle of head; eye small, its diameter two-thirds snout length; interorbital width about one-half eye diameter; eye over anterior one-third of gape; snout produced, overhanging tip of lower jaw, constricted near middle, its anterior end budlike; anterior nostrils tubular, midway between anterior edge of eye and tip of snout; posterior nostrils with flap, just below anterior edge of eye; tongue adnate to floor of mouth; jugostegalia present; vertebrae 142.

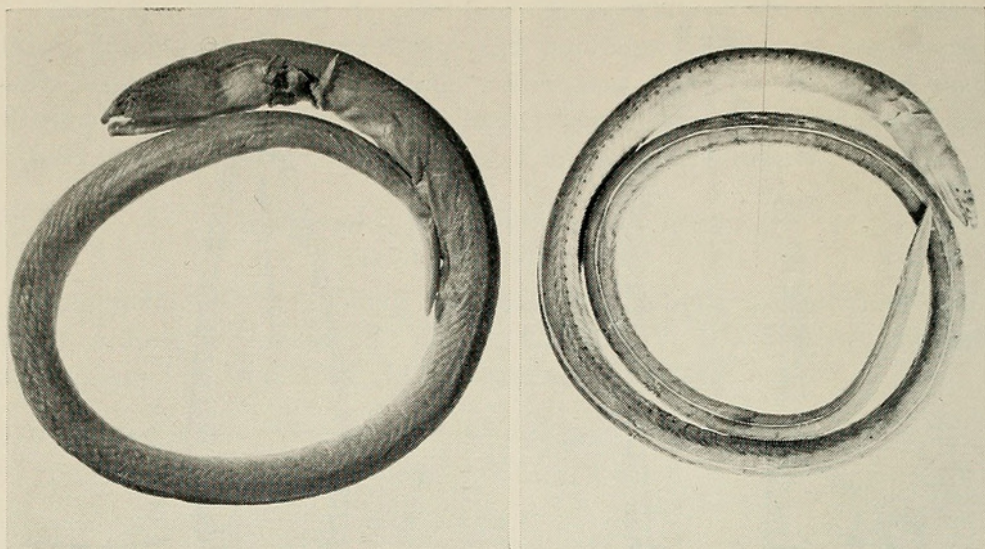


PLATE I

Left, holotype of *Mystriophis blastorhinos*, USNM 158960; right, holotype of *Ophichthus melanoporus*, USNM 191118.

Teeth in jaws conical, in two rows; the inner row in each jaw of small teeth; the outer row of widely spaced canines, with about 10 in upper and 9 to 14 in lower jaw; vomerine teeth small, in single row extending posteriorly two-thirds distance from tip of snout to rictus of jaws (Fig. 2A).

Color in alcohol: Body grayish brown, lighter ventrally, covered with fine brownish speckling; dorsal fin pale with distal edge dusky; anal fin whitish; pectoral fins pale with speckling on basal half; lower jaw speckled with brown.

Remarks: This species is closely related to *rostellatus* Richardson, but differs in the more posterior insertion of the dorsal fin and in the absence of a black longitudinal stripe. It differs from *Mystriophis creutzbergi* Cadenat from the coast of Sierre Leone and from all other western Atlantic members of the genus by the presence of the spoon-shaped snout and by the absence of large spots on the body.

Genus *Ophichthus* Ahl

Ophichthus Ahl, 1789: 9; species, *Ophichthus ophis* Linnaeus, 1758 by subsequent designation of Bleeker, 1865.

Because the generic limits of this group are not well defined, I follow the broader definition of the genus *Ophichthus* by Bleeker (1865). If the genera proposed by Kaup were to be recognized the species described below would be best assigned to *Centrurophis*.

***Ophichthus melanoporus*, new species** (Fig. 2B, 3, Pl. I, right)

Holotype: USNM 191118, a female, 691 mm total length, collected in the Straits of Florida, west of Andros Island, Bahamas, 24° 04' N,

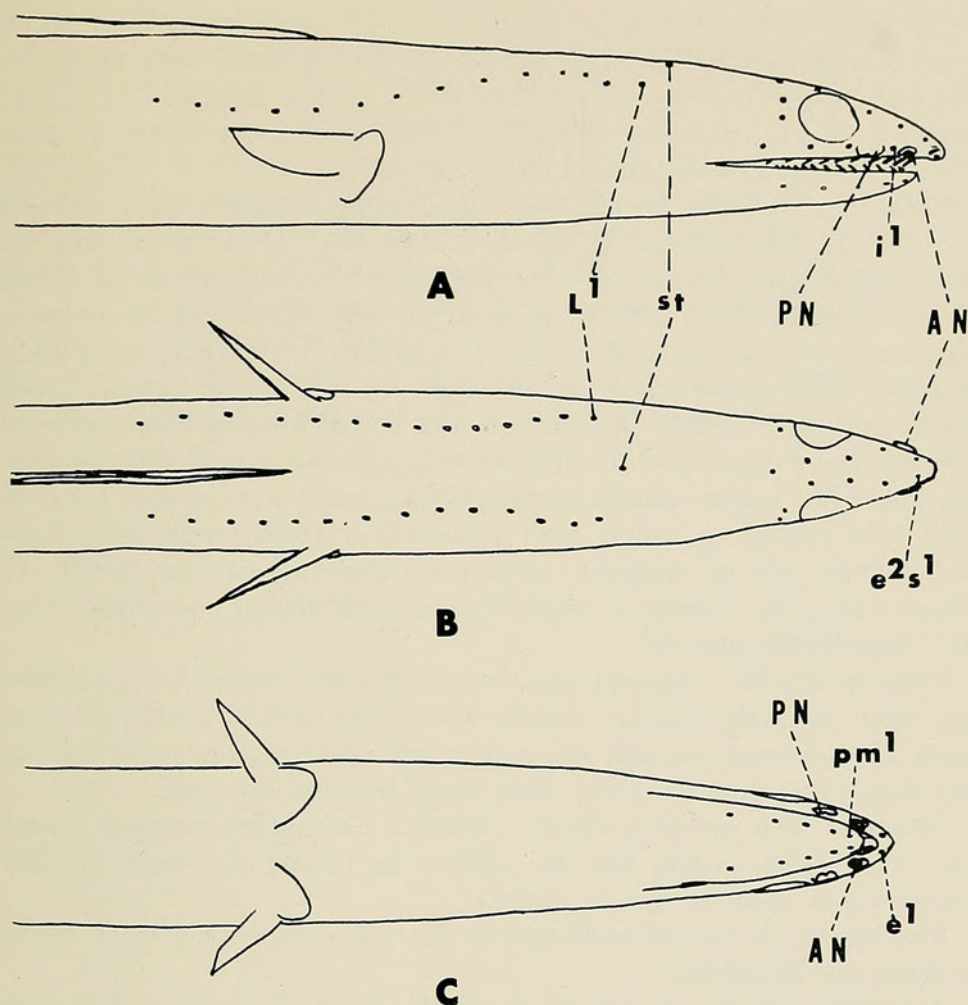


FIG. 3. Views of the head of *Ophichthus melanoporus*: A, lateral; B, dorsal; C, ventral; showing the position of the surface sensory pores. Symbols: AN, anterior nostrils; PN, posterior nostrils; st, supratemporal pore; L¹, first lateral line pore; i¹, first infraorbital pore; e¹, first ethmoidal pore; e^{2s1}, compound pore, i.e., second ethmoidal and first supraorbital pores; pm¹, first preoperculo-mandibular pore. (Terminology after Allis, 1903.)

79° 15' W, 250 fathoms, 40-foot flat net, 24 July 1957, M/V *Combat*, Sta. 448.

Paratypes: USNM 191119, 3 specimens, all males, collected with the holotype, 542 to 672 mm total length. One specimen, 599 mm total length with the same data as above, in the collection of the U. S. Bureau of Commercial Fisheries, Biological Laboratory, Brunswick, Georgia.

Diagnosis: Teeth in both jaws and on vomer in single row, vomerine teeth extending posteriorly to opposite middle of gape length, pores on head and lateral line with conspicuous black spotting.

Description: The counts and measurements are recorded first for the holotype, followed by those for the four paratypes in parentheses, all in thousandths of total length. Tip of snout to anus 311 (287-312);

tip of snout to origin of dorsal fin 84 (82-94); head length from tip of snout to upper edge of gill opening 65 (64-70); greatest body depth 20 (17-26); gape from tip of snout to rictus of jaw 29 (28-31); snout length 9 (9-11); diameter of eye 7 (6-9); tip of snout to tip of lower jaw 2 (2-3); length of pectoral fin 12 (13-17).

Pores in lateral line 56 (52-54); supratemporal pore 1 (1); pectoral rays 16 (15-17); number of vertebrae 186 (177-186); upper edge of gill opening just below upper edge of pectoral fin base; origin of dorsal fin on a vertical from 63% of pectoral fin length posterior to insertion of pectoral fin (3% anterior to insertion to 46% posterior to insertion); posterior edge of eye about midway from tip of snout to rictus of jaw; mouth in front of middle of head; anterior nostril tubular, about midway between tip of snout and posterior nostril; posterior nostril with flap, on the upper lip, below vertical line through anterior edge of eye; teeth in both jaws conical, in single row; premaxillary tooth patch with three teeth; single row of vomerine teeth extending backward to middle of distance from tip of snout to rictus of jaws, teeth smaller posteriorly (Fig. 2B); jugostegalia present.

Color in alcohol: General color brownish; fine, darker brown specks over head and body, sparser ventrally where they form fine, wavy, oblique lines; edge of lower jaw and area around gill opening pale; pores of head and lateral line in black spots; vertical and pectoral fins pale.

Remarks: This species is closely related to *Ophichthus hispanus* Belotti from the Mediterranean Sea but differs by having the teeth in jaws uniserial and those on vomer, biserial.

The species is named *melanoporus* for the conspicuous black pores on head and lateral line.

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