

SORSOGONA MELANOPTERA, A NEW FLATHEAD FISH
FROM THE NORTHERN INDIAN OCEAN
(TELEOSTEI: PLATYCEPHALIDAE)

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Abstract.—A new platycephalid, *Sorsogona melanoptera*, is described from the Gulf of Oman, the Arabian Sea and the Bay of Bengal. This species is distinguished from other members of *Sorsogona* Herre by its distinctive color pattern, a series of ventral projections along the lower edge of the suborbital bone, and by a substantial part of each lateral line scale being covered by adjacent scales.

More than 700 specimens of an undescribed species of Platycephalidae were taken in bottom trawl collections by the R/V *Anton Bruun* during the International Indian Ocean Expedition in 1963 and by the R/V *Meteor* Expedition to the Indian Ocean in 1965. In 1974, Wongratana discovered two specimens of the new species that had come from the Andaman Sea, in the Bangkok wholesale fish market. Since then, additional collections have been made in the Gulf of Oman and at several localities along the coast of India.

Despite its wide distribution and common occurrence, this species has frequently been confused with several other flathead species that are found in the northern Indian Ocean. It is probable that the description of *Platycephalus tuberculatus* (Cuvier, in Cuvier and Valenciennes, 1829) in Blegvad (1944) and that for *Wakiyus serratus* (Cuvier, in Cuvier and Valenciennes, 1829) by Murty (1975) refer to *Sorsogona melanoptera*. A brief description of that species as *Sorsogona* sp. was given by Knapp (1979). We hope that this study will help to clarify the species that are tentatively assigned here to *Sorsogona* Herre, 1934.

Methods

Counts and measurements follow those in Knapp (1973) except that the standard

and snout lengths listed here were measured from the tip of the snout. Type material is deposited at the following institutions: Academy of Natural Sciences, Philadelphia (ANSP); Bernice P. Bishop Museum, Honolulu (BPBM); California Academy of Sciences, San Francisco (CAS); Chulalongkorn University Museum of Zoology, Bangkok (CUMZ); National Museum of Natural History, Smithsonian Institution, Washington D.C. (USNM); and Zoological Museum of Hamburg (ZMH).

Sorsogona melanoptera, new species
Figs. 1-4

Platycephalus tuberculatus (part): Day, 1876: 275-276.—Ahmed and Qureshi, 1970: 207.

Platycephalus tuberculatus: Blegvad, 1944: 196-197.

Platycephalus nigripinnis: Norman, 1939: 97.

Wakiyus serratus? Murty, 1975: 685.

Sorsogona sp. Knapp, 1979: 51, figs. 522, 523, 527.

Material examined.—Holotype, USNM 280331 (91 mm standard length), India, ca. 3.2 km off Cochin, trawl, 14-38 m, B. B. Collette, 2 Feb 1980.

Paratypes: Gulf of Oman: ANSP 158798, 1 (67.8), 23°46.3'N, 58°01.3'E, 15-17 m, 11 Mar 1977, sta 4, M/V *Darbat*.—USNM

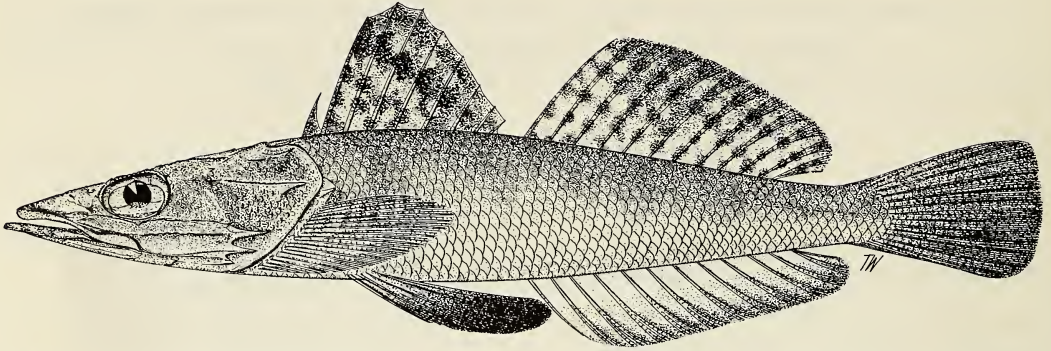


Fig. 1. *Sorsogona melanoptera*, USNM 280331, holotype, 91 mm SL, left side, lateral view, from off Cochin, India.

280332, 1 (78), 23°56'N, 57°33'E, 27–29 m, 12 Mar 1977, sta 7, M/V *Darbat*.—USNM 280333, 3 (85–101), 26°46'N, 56°47'E, 46–48 m, 1 Dec 1963, sta 257A, cruise 4B, R/V *Anton Bruun*.—USNM 280334, 1 (71), 26°10'N, 57°05'E, 55–64 m, 30 Nov 1963, sta 256A, cruise 4B, R/V *Anton Bruun*.—USNM 280335, 2 (87–104), 25°10'N, 60°27'E, 65–82 m, 29 Nov 1963, sta 248A, cruise 4B, R/V *Anton Bruun*. Arabian Sea: USNM 280336, 2 (84–85), 22°38'N, 67°11'E, 110 m, 19 Nov 1963, sta 227A, cruise 4B, R/V *Anton Bruun*.—USNM 280337, 1 (73), 22°32'N, 68°07'E, 57 m, 18 Nov 1963, sta 221A, cruise 4B, R/V *Anton Bruun*.—USNM 280338, 4 (92–119), 21°52'N, 68°06'E, 115–117 m, 18 Nov 1963, sta 219A, cruise 4B, R/V *Anton Bruun*.—USNM 280362, 31 (72–122), 17°41'N, 71°33'E, 90 m, 14 Nov 1963, sta 202B, cruise 4B R/V *Anton Bruun*.—USNM 280363, 35 (75–120), 17°25'N, 71°39'E, 96–106 m, 13 Nov 1963, sta 202A, cruise 4B, R/V *Anton Bruun*.—USNM 223751, 1 (112), 22°01'N, 68°10'E, 88–94 m, 7 Mar 1965, sta 229A, R/V *Meteor*.—ZMH 5302, 6 (86–108), same data as USNM 223751.—BPBM 27695, 3 (80–95), India, Kerala State, Vizhinjam, fishing harbor, 13 Feb 1980, purchased from fishermen, J. E. Randall. Bay of Bengal: CAS 58595, 1 (106), inshore trawling grounds off Madras, 15–22 m, Apr–Jun 1975, K. V.

Rama Rao.—USNM 280339, 8 (59–104), 21°00'N, 91°59'W, 23–25 m, 5 Apr 1963, sta 46, cruise 1, R/V *Anton Bruun*.—USNM 280340, 1 (97), 15°08'N, 94°04'E, 66 m, 1 Apr 1963, sta 43, cruise 1, R/V *Anton Bruun*.—USNM 280341, 3 (82–91), 14°07'N, 97°05'E, 69–73 m, 30 Mar 1963, sta 38, R/V *Anton Bruun*.—USNM 280342, 11 (74–94), 9°54'N, 97°42'E, 70 m, 24 Mar 1963, sta 21, cruise 1, R/V *Anton Bruun*.—USNM 280343, 8 (71–94), 9°13'N, 97°51'E, 58–60 m, 23 Mar 1963, sta 120, cruise 1, R/V *Anton Bruun*.—CUMZ 2528.2.9.7, 1 (90), Andaman Sea, Bangkok wholesale fish market, 6 Nov 1974, T. Wongratana.

Material of other species examined.—*Sorsogona nigripinna* (Regan, 1905): USNM 280344, 5 (114–126), 10°03'N, 51°15'E, 31–39 m, 16 Dec 1964, sta 449, cruise 9, R/V *Anton Bruun*.—USNM 280345, 2 (90–105), 9°35'N, 50°59'E, 70–80 m, 16 Dec 1964, sta 442, cruise 9, R/V *Anton Bruun*. *Sorsogona tuberculata* (Cuvier, 1829): USNM 280346, 4 (64–91), Thailand, 12°32'N, 100°46'E, 19 Jan 1960, sta 60-2, M/V *Stranger*. CAS 58592, 7 (71–106), India, inshore trawling grounds off Madras, 15–22 m, Apr–Jun 1975, K. V. Rama Rao. *Sorsogona prionota* (Sauvage, 1873): ZMH 5296, 1 (130), Red Sea, 28°20'N, 33°08'E, 61 m, 19 Nov 1964, sta 22, R/V *Meteor*.—ZMH 5295, 1 (189), east coast of Somalia, 06°06'N, 49°05'E, 55–

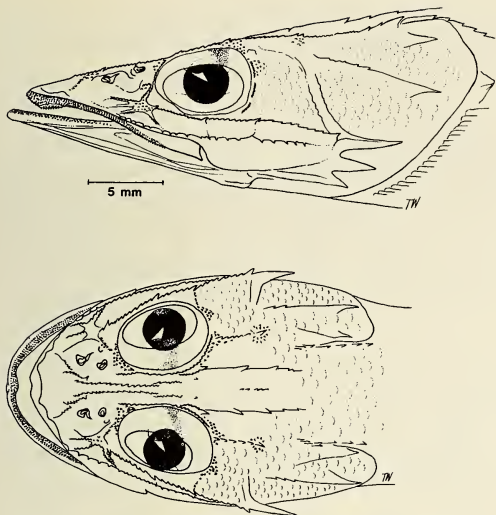


Fig. 2. Lateral and dorsal views of head of *Sorsogona melanopectera*, CUMZ 2528.2.9.7, 90 mm SL, showing cranial ridges and spines.

65 m, 28 Dec 1964, sta 123, R/V *Meteor*. — Hebrew University uncataloged, Red Sea, Eilat, sta E64/27, 11 Sept 1964, E. Lark.

Diagnosis. — A species of the genus *Sorsogona* Herre with a series of blunt projections and spines along the ventral edge of the suborbital bone, and with the anterior two-thirds of each lateral line scale covered by adjacent scales.

Description. — Values for the holotype are given in parentheses. Dorsal-fin rays I, VIII, 12–13 (12); anal-fin rays 12; pectoral-fin rays 20–22 (21), usually 2+11+8 or 2+12+7 (2+13+6); pelvic-fin rays I, 4+1; pored lateral line scales 52–55 (55), usually 53, the anterior 13–34 (31) scales bearing weak spines; diagonal scales 6–8 (7); interpelvic scales 7–11 (8), usually 8–9; gill rakers 2–3+8–10 (2+8), usually 2+8–9; branched caudal-fin rays usually 11. Least interorbital width into snout length 3–4.5 (4.2) times; first dorsal-fin spine length 2.3–3.3 (2.4) times in second. Head bearing small bony tubercles; nape, cheek, and opercle with embedded scales; preocular margin with modest spine and frequently 3–6 smaller

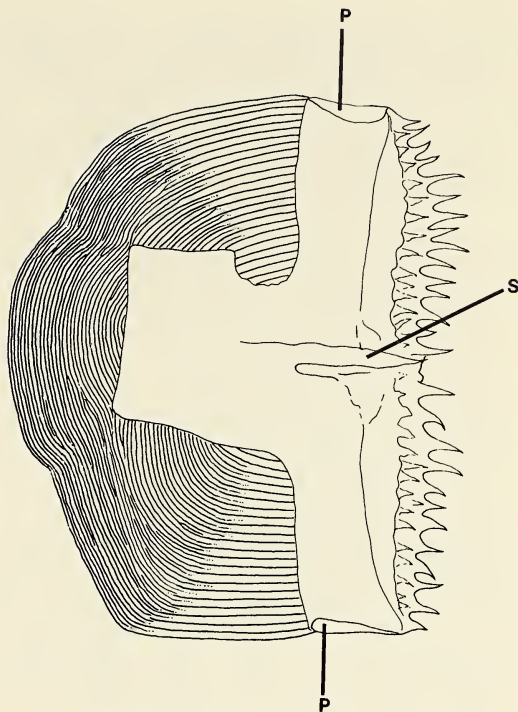


Fig. 3. Pored lateral line scale in *Sorsogona melanopectera*, CUMZ 2528.2.9.7, 90 mm SL, 15th scale behind head, right side. Abbreviations: P—pore opening to exterior; S—spine.

spines, usually with one or more rows of tubercles in front of marginal row; infraorbital and suborbital ridges finely serrate; lower margin of posterior suborbital bone with series of spines and blunt knobs (Fig. 2); usually three preopercular spines, uppermost longest. Lateral line pores "T"-shaped, with two openings to exterior (Fig. 3). Iris lappet bilobed. Vomer and palatines bearing small canine teeth; teeth of jaws mostly small and blunt, few small caniniform teeth near symphysis of upper jaws, inner row caniniform on mandible.

Characteristics of lateral line scales in species of *Sorsogona* as in Fig. 4A–D. In *S. prionota* (Sauvage, 1873) and in *S. tuberculata*, exposed portion of each lateral line scale relatively wide and posterior margin bearing ctenii moderately curved. Anterior

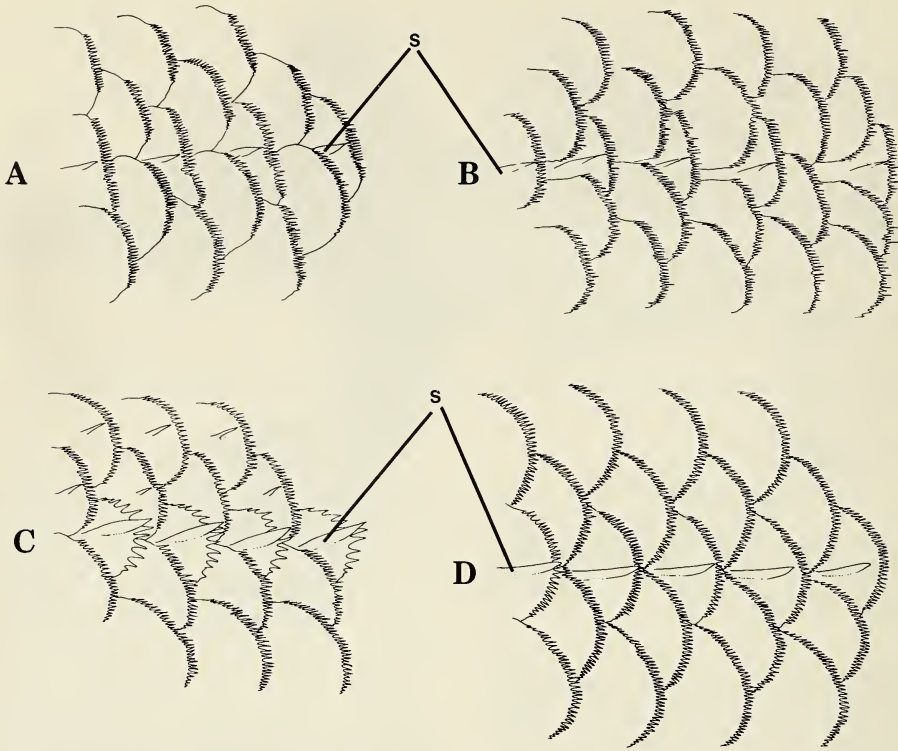


Fig. 4. Comparison of pored lateral line scales in four species of *Sorsogona* (S = spine): A, *S. melanoptera*, USNM 280331, 91 mm SL; B, *S. nigripinna*, USNM 280345, 103 mm SL; C, *S. tuberculata*, USNM 280346, 90 mm SL; D, *S. prionota*, Hebrew Univ. E64/27, 74 mm SL.

portions of lateral line scales more fully covered by adjacent scales in *S. nigripinna* (Regan, 1905) and in *S. melanoptera*; posterior margin bearing ctenii relatively straight. In *S. nigripinna*, central area of most scales exposed further anteriorly than in *S. mela-*

noptera. Of the four species, *S. tuberculata* has fewest and largest ctenii on posterior scale margin.

Coloration in alcohol.—Dorsum brownish, venter pale, indistinct bands crossing back in some specimens; first dorsal fin

Table 1.—Comparison of characters between *Sorsogona melanoptera*, *S. nigripinna*, *S. prionota* and *S. tuberculata*. Usual condition appears in parentheses.

Character	<i>S. melanoptera</i>	<i>S. nigripinna</i>	<i>S. prionota</i>	<i>S. tuberculata</i>
Anal rays	12	12	12	11
Branched caudal rays	10–12 (11)	12	11–12	10–11 (10)
Diagonal scales	6–8 (7)	8–9	4–6 (5)	5–6
Gill rakers	2–3+8–9	3–5+11–13	2–3+7–10	1+6–7
Approximate maximum size in mm SL	122	165	200	110
Humeral area beneath operculum	pale	pale	vermiculated pattern	dusky
Caudal fin	dusky	dusky	dark blotches	dusky
Soft dorsal fin	dark spots	dusky	dark spots	dark spots
Pelvic fin	dusky	dusky	dark spots	dark spots

dusky with dark spots along spines; pectoral and anal fins more or less clear; pelvic fins dusky; caudal fin with basal light area, posterior half dusky.

Distribution.—Gulf of Oman to the Andaman Sea off southern Thailand. Taken by trawling over sandy and muddy bottoms at depths of 15–117 m.

Etymology.—The specific name *melanoptera* refers to the dark pattern in the dorsal fins.

Remarks.—The species of *Sorsogona* are all relatively small in size, brownish in body color, and have various black patterns in the fins. Characters useful in distinguishing the four species are compared in Table 1.

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