

**A REDESCRIPTION OF *SAMARIS CRISTATUS* GRAY (PISCES :
PLEURONECTIDAE) FROM PORTONOVO, SOUTH INDIA**

ABSTRACT

The redescription of the little known flatfish *Samaris cristatus* Gray, based on fresh material from PortoNovo, South India is given here.

SAMARIS CRISTATUS was originally described by Gray (1831). Norman (1927) in his monograph on flat fishes recognised five species of *Samaris* namely, *S. cristatus* Gray, *S. ornatus* Von Bonde, *S. delagoensis* Von Bonde, *S. cacatuae* (Ogilby) and *S. macrolepis* Norman. Smith (1961) has suggested that out of the five species from the Indo-Pacific, probably only two are valid and has synonymised *S. delagoensis* and *S. ornatus* with *S. cristatus*. He obviously considers *S. cristatus* and *S. macrolepis* as valid species.

Recently we obtained 50 specimens of *S. cristatus* Gray (110 mm to 156 mm in total length) along with other flat fishes from fish collections made by a trawl net operated at a depth of 50 to 60 m in the Bay of Bengal off PortoNovo Coast (11° 29' N-79° 49' E).

The original description by Norman and the variations observed by Smith and in the present study on *S. cristatus* are given in Table I.

The differences between *S. cristatus* and the other 3 species namely *S. ornatus*, *S. delagoensis* and *S. cacatuae* chiefly relate to the number of scales along the lateral line, the occurrence of a large number of dorsal and anal rays and in the colouration (Norman, 1927) The larger number of lateral line scales as well as the increased number of dorsal and anal rays and also the difference in the colouration have, however, been found to be only due to intraspecific variation within the species. The description of *S. cristatus* by Norman (1927) was based only on 6 specimens. The availability of a large collection has enabled us to draw up a more detailed description of *S. cristatus*.

Samaris cristatus Gray (Fig. 1)

Dorsal 75-85; first 13 to 15 rays greatly prolonged, longest 4.5 to 5 times length of head, anal 49-58; scales of ocular side ctenoid, those of blind side cycloid or rather weakly ctenoid; 70-80 scales in a longitudinal series, right pectoral with

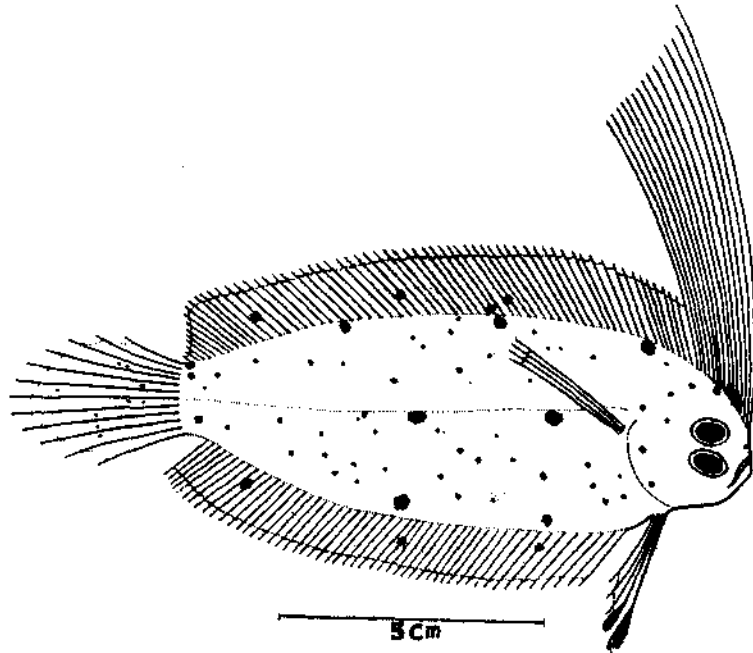


Fig. 1. *Samaris cristatus* Gray.

TABLE I

	Norman (1934) (6 specimens)	Smith (1961)	Present study		
			With 15 elongated dorsal rays (23 specimens)	With 14 elongated dorsal rays (22 specimens)	With 13 elongated dorsal rays (5 specimens)
Dorsal	77-79	73-86	76-85	77-85	75-78
Anal	50-53	50-57	52-57	52-58	49-55
Lateral line					
Scales	67-72	70-80	70-80	70-80	70-80
Pelvic rays	Not mentioned	Not mentioned	The first two rays of the pelvic fin have paddle-like ends; the first pelvic ray free and not united with the rest.		
Depth	2.5-3.0	2.5-3.0	2.61-2.65 in S. L.	2.61-2.65 in S. L.	2.61-2.65 in S. L.
Colour	Brownish, mottled and with spots. Snout white, anterior dorsal rays white, some of them blackish at their bases; rest of the dorsal and anal fins brownish, with darker edges, and with a series of small white spots; right pectoral dark brown.	Mottled and with paler and darker spots.	Ocular side is dull brownish black and mottled everywhere. The base of the 4th to 7th anterior dorsal rays are tinged with black.		

four rays, length 1.25 to 1.5 times that of head, first two rays of pelvic fin with paddle-like ends; first pelvic ray free; caudal with 16 simple rays, depth is 2.61–2.65 in standard length; eyes separated by a narrow ridge, their anterior margins level, maxillary extending to below anterior edge of eye or a little beyond, and diameter of eye from 4.7 to 5.0 in head length; snout shorter than eye.

Colour: Ocular side is dull brownish black and mottled everywhere. Snout white, the base of the 4th to 7th anterior dorsal rays are tinged with black; rest of the dorsal and anal fins brownish with darker edges; and with a series of small white spots; right pectoral dark brown (Fig. 1).

The present observations on the variations in *S. cristatus* go further to strengthen the opinion of Smith (1961) and seem to justify the synonymising of the five species. As expressed by him, it seems probable that there are only 2 valid species in the Indo-Pacific.

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REFERENCES

- GRAY, J. E. 1831. *Zoological Miscellany*.
- MAX WEBER AND L. F. DEBEAUFORT 1929. *The fishes of the Indo-Australian archipelago*. 5 : 1–458.
- MUNRO, J. S. R. 1955. *The marine and fresh water fishes of Ceylon*. Pub. Dept. of External Affairs Canberra: 1–351.
- NORMAN, J. R. 1927. *Rec. Ind. Mus.*, 29 : 7–48.
- SMITH, J. L. B. 1961. *The Sea fishes of Southern Africa*. Published by Central News Agency, Ltd., South Africa.