

A NEW DISTRIBUTIONAL RECORD
OF *GERRES MACRACANTHUS* BLEEKER FROM INDIAN WATERS

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ABSTRACT

The occurrence of *Gerres macracanthus* Bleeker is recorded for the first time from Indian waters. A description of the species is given and the differences between this and the allied species, *G. filamentosus*, are pointed out.

During the course of studies on silverbiddies, the occurrence of *Gerres macracanthus* Bleeker was observed in the trawl, shoreseine and gill-net catches from Palk Bay and Gulf of Mannar. Day (1878) has recorded 8 species of *Gerres* Cuvier from the Indian seas. Of the two species of *Gerres* in which the second dorsal spine is produced into a thread-like filament viz. *G. filamentosus* Cuv. and Val. and *G. macracanthus* Bleeker, Day (1878) and Munro (1955) have recorded only the former species along the coasts of India and Ceylon respectively. The present studies have shown that *G. macracanthus* is caught abundantly in the trawl catches especially from areas around *Kacha Thivu* and *Nedun Thivu* in Palk Bay. Its known distribution extends from

Formosa in the north to the Islands of the Indonesian Archipelago in the south and also along the coast of Portuguese East Africa. As this species is reported for the first time in Indian Seas, a brief description of the same is given.

GERRES MACRACANTHUS BLEEKER, 1854, p. 195; Gunther, 1862, p. 261; 1880, p. 56; Macleay, 1882, p. 240; Weber and Beaufort, 1931, p. 351-352; Munro, 1967, p. 332.

Material: 30 specimens, 114-156 mm in total length, collected from trawl catches from Palk Bay landed at Rameswaram in January 1973. 4 specimens are deposited in the Reference Collection Museum of Central Marine Fisheries Research Institute. Reg. No. CMFRI-F.99/647.

Description: D. IX, 10; A. III, 7; L. I. 42-44; L. tr. 1-

Depth 2.34 to 2.71; head 2.91 to 3.44 in standard length (2.94 to 3.29 and 3.64 to 4.28 respectively in total length). Snout 2.91 to 4.00; eye 2.64 to 3.55 in head length. Second dorsal spine 0.86 to 1.18 in depth; 2.21 to 3.10 in standard length and 2.70 to 3.80 in total length. Second anal spine 3.23 to 4.60 in depth. Pectoral 2.69 to 3.54 in standard length, 3.28 to 4.38 in total length and 0.82 to 1.08 in head. Ventral 4.52 to 5.42 in standard length, 5.60 to 6.68 in total length and 0.94 to 1.18 in head without snout.

Body oblong, compressed, post-cranio dorsal profile convex with a slight concavity above anterior part of eye (Fig. 1). Diameter of eye equal to or slightly more than interorbital space and extent of snout. Mouth small, protractile when

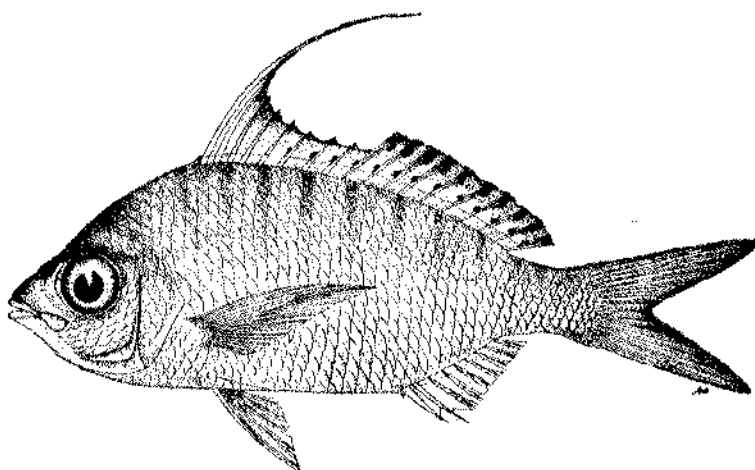


FIG. 1. *Gerres macracanthus* Bleeker. 135 mm in total length.

protracted descends downwards. Maxillary reaches to below front border of eye. Small teeth in jaws. Preoperculum entire, its angle nearly straight. The pre-dorsal length more than body depth and shorter than dorsal base. Gill-rakers

4 to 6 + 7. Second, third, fourth and fifth dorsal spines longer than the sequent spines. The second dorsal spine produced into a thread-like filament which is less, equal or more than depth of body. Third dorsal spine 1.54 to 2.24 in body depth. Second anal spine stronger but shorter than third, about equal to eye. Lateral line follows the same course as the dorsal profile.

Colour: Back bluish brown, abdomen silvery. 5 to 10 brownish diffuse bars across back. Fins transparent with yellowish tinge. Edge of spines and soft dorsals and also that of caudal darkish. Rows of dark spots on the spinous and soft dorsals situated in the middle of the membranous portion.

Distribution: Formosa, Philippines (Luzon, Leyte, Mindanao, Mindoro); New Guinea — Admiralty Islands; Banka; Nias; Java (Batavia); Sumatra (Padang); south east coast of India (Palk Bay and Gulf of Mannar); Portuguese East Africa (Delagoa Bay).

Remarks: Fowler (1928 and 1933) has synonymised *G. macracanthus* under *G. filamentosus* stating that "*Gerres macracanthus* Bleeker was evidently based on immature examples (of *G. filamentosus* Cuv.) more slender and with dark vertical bands". Weber and Beaufort (1931) have treated *G. filamentosus* as a synonym of *G. punctatus* Cuv. and Val. and have considered them and *G. macracanthus* as distinct species based on scale counts, body depth in length, predorsal in body depth and mandibular profile. Munro (1967) also has placed the two as two different species. Day (1878) has described only *G. filamentosus* as occurring along the coasts of India and it is probable that he has included *G. macracanthus* under the former as the two species closely resemble each other.

Though *G. filamentosus* and *G. macracanthus* have one main character in common *viz.*, the extension of second dorsal spine into a thread-like filament, they differ from one another in the following main characters:

	<i>G. macracanthus</i>	<i>G. filamentosus</i>
Post-crânio dorsal profile	Convex with a slight concavity in the inter-orbital region.	Ascends more or less in a straight line with a deep concavity in the interorbital region.
Predorsal distance	More than body depth	Equal to or less than body depth
Lateral-line scales	42-44	46-48
Lateral transverse scales	5 1	5-6 1
	9-10	12
Colour	5 to 10 brownish diffuse bars across the back	6-11 regular series of greyish black spots above and below lateral line

The striking differences mentioned above show that these two are separate species and not synonyms as mentioned by Fowler (1928 and 1933).

Some differences have been noted in certain characters of *G. macracanthus* observed here and those of the same species described by Weber and Beaufort (1931). They mentioned that the rostradorsal line is straight, whereas in the specimens examined by us the post-cranio dorsal profile is convex. Further they state that "Dorsal originates at a distance from end of snout shorter than height of body", in other words the predorsal length is less than height of body. But actually the predorsal distance is more than height of body in the specimens observed by us. Another difference noted was that, whereas as per Weber and Beaufort (1931) eye is slightly shorter than interorbital space and extent of snout, according to our findings, it is either equal to or slightly more than interorbital space and extent of snout. In this character our observation agrees with Gunther's (1862) description of the same species. Both Weber and Beaufort (1931) and Munro (1967) have given the anal fin count as A.III, 9 instead of A.III, 7. Obviously, it is a mistake. Except for the differences mentioned above, in other characters the description of *G. macracanthus* given by us broadly agrees with that of Weber and Beaufort (1931).

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- BLÉEKER, P. 1854. *Nat. wrk. Tijdschr. Ned. Ind.* 6: 195.
- DAY, F. 1878. *The fishes of India*. William Dawson and Sons Ltd., London, (reprinted in 1958) I: 72-76.
- FOWLER, H. W. 1928. *Mem. B.P. Bishop Mus.*, 10: 226.
- FOWLER, H. W. 1933. *Bull. U.S. nation. Mus.*, 12 (100): 248-253.
- GUNTHER, A. 1862. *Cat. Brit. Mus. London*, 4: 261.
- GUNTHER, A. 1880. *Challenger Exp. Zool. London*, 6: 56.
- MACLEAY, W. 1882. *Proc. Linn. Soc. N.S. Wales*, 1: 240.
- MUNRO, I. S. R. 1955. *The marine and fresh water fishes of Ceylon*; Department of External Affairs, Govt. of Australia; Canberra: 142-144.
- MUNRO, I. S. R. 1967. *The fishes of New Guinea*; Department of Agriculture, stock and fisheries, Port Moresby, New Guinea: 332.
- WEBER AND BEAUFORT. 1931. *The fishes of the Indo-Australian Archipelago* E.1. Brill, Leiden, 6: 351-352.