

Additional Specimens of *Minous longimanus* from the Western Indian Ocean, Distinct from *M. inermis*

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No records of *Minous longimanus* exist since the brief original description by Regan (1908) based on one specimen taken at a depth of 86 m on the Saya de Malha Bank, Indian Ocean. Recently, Eschmeyer et al. (1979) reviewed the genus *Minous* Cuvier and synonymized *M. longimanus* with *M. inermis*. However, these two species are clearly distinguishable by several characters as noted below.

The purpose of this paper is to give more information for this species and make clear the differences between them. These specimens are deposited in the ichthyological collection at the Laboratory of Marine Zoology, Hokkaido University (HUMZ), and comparative specimens are in the California Academy of Sciences (CAS). Most counts and measurements were made in accordance with Hubbs and Lagler (1958), except for the following: counts of anal and dorsal fin rays and vertebrae were made by using radiographs; the pelvic fin length was measured from the base of the pelvic fin spine to the posterior end of the pelvic fin rays.

Minous longimanus Regan, 1908
(Figs. 1, 2)

Material. Nineteen specimens all from Saya de Malha Bank, western Indian Ocean, by an otter trawl. HUMZ 73192~73193 (2 specimens, 76.6~82.0 mm in SL), 10°48'S, 60°55'E, depth 125 m, 4 Sept. 1977; HUMZ 73834~73837 (4, 62.6~85.0), 10°30'S, 61°32'E, 95 m, 3 Sept. 1977; HUMZ 73912 (1, 103.3), 11°25'S, 61°37'E, 122 m, 12 Sept. 1977; HUMZ 74155~74166 (12, 65.8~87.4), 10°54'S, 61°15'E, 120 m, 6 Sept. 1977.

Comparative material: *Minous inermis* Alcock, CAS 14496 (3, 42.2~61.5), 21°11'N, 69°16'E, 70 m, off West India, 17 Nov. 1963.

Description. Counts: Dorsal XI, 10~11; anal II, 8~9; pectoral 10~11+1; pelvic I, 5; branchiostegal rays 7; lateral line scales 15~18 (14 specimens); gill rakers 2~3+8~9(8); pyloric caeca 4(1); vertebrae 11~12+14~15=26.

Measurements: Standard length 62.6~103.3 mm. Head length in SL 2.3~2.7; body depth 2.4~3.4; depth of caudal peduncle 10.1~13.7. Snout length in head 2.4~2.7; orbit diameter 3.1~4.0; interorbital width 4.9~7.3; pectoral fin length 0.6~0.7; pelvic fin length 1.2~1.4. Length of first dorsal spine in second one 1.8~3.6.

Body compressed, moderate, without scales, except for lateral line scales. Head compressed, its exposed bony surface rough. Snout blunt, longer than orbit diameter. Eye of moderate size, with 4~5 cirri on dorsal margin. Lachrymal bone with 2 spines. Anterior spine small and short, pointing down and forward; posterior one longer, curved, pointing down and forward (Fig. 2). Preopercular spines 5, uppermost large and long, directed backward, reaching to or slightly beyond opercular margin, and other 4 small and denticulated. Opercle small. Maxillary reaches anterior margin of orbit. Lower jaw with 3~4 cirri. Villiform teeth in band present on jaws and vomer. Palatine teeth absent.

Dorsal fin originating slightly behind head. First dorsal spine much shorter than second. Pectoral fin elongate (Fig. 2A). One or two of its uppermost rays longest, and succeeding rays gradually decrease in length. Lowermost ray free and not extending beyond posterior end of pelvic fin. Caudal fin truncated. Gasbladder of moderate size, oval.

Color of defrosted specimens: Body and head reddish brown, both ventral sides paler. Body with brown oblique stripes posteriorly. Inside and outside of pectoral and pelvic fins reddish, with dark brown tips. Anal fin dark brown. Caudal fin reddish with its margin dark brown.

Distribution. *Minous longimanus* is known only from Saya de Malha Bank, western Indian Ocean, at depths of 86~125 m.

Remarks. Eschmeyer et al. (1979) recognized

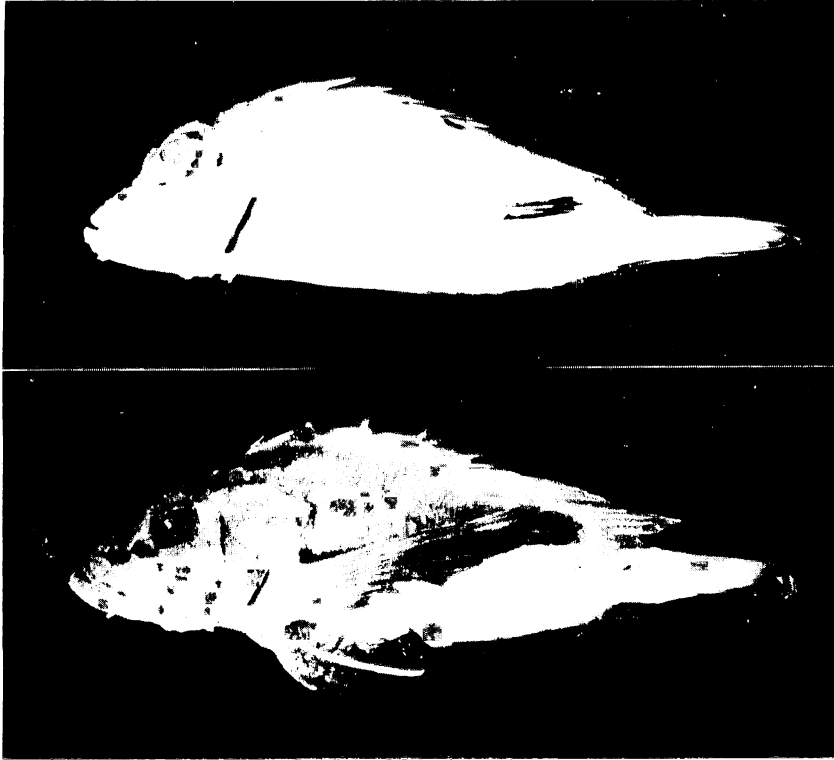


Fig. 1. Top: *Minous longimanus*, HUMZ 73834, 78.5 mm SL, from Saya de Malha Bank, western Indian Ocean. Bottom: *M. inermis*, CAS 14496, 61.5 mm SL, off West India.

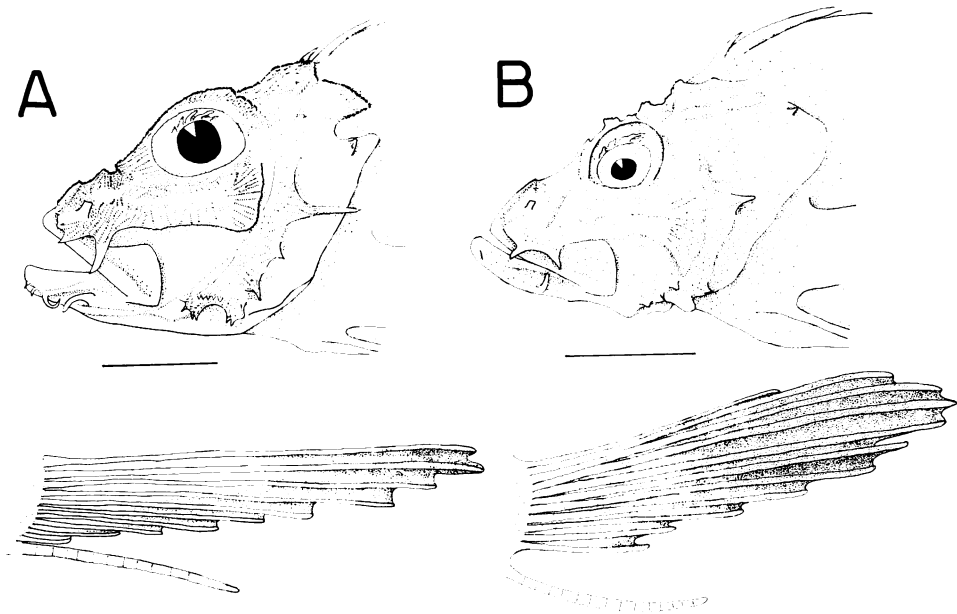


Fig. 2. Lateral aspects of head and pectoral fin of *Minous longimanus* (A) and *M. inermis* (B). Scale bars indicate 10 mm.

Table 1. Comparison of *Minous longimanus* with *M. inermis* (counts of Eschmeyer et al. (1979) in parentheses).

Character	<i>M. longimanus</i>	<i>M. inermis</i>
Anal fin rays	II, 8~9	II, 10 (II, 10~14)
Exposed bony surface of head	rough	smooth
Posterior lachrymal spine	down and forward	down and backward
Uppermost preopercular spine	beyond opercular margin	not beyond opercular margin
Opercle	small	large
Free pectoral fin ray	not beyond pelvic fin	beyond pelvic fin
Longest pectoral fin ray	first or second	third or fourth

9 species in the genus *Minous*: *M. quincarinatus*, *M. versicolor*, *M. monodactylus*, *M. pusillus*, *M. inermis*, *M. trachycephalus*, *M. coccineus*, *M. pictus* and *M. dempsterae*. They included *M. longimanus* in the synonymy of *M. inermis*. However, *M. longimanus* differs from *M. inermis* by several characters as shown in Figs. 1 and 2 and Table 1: a low number of anal fin rays, rough bony surface of head, posterior lachrymal spine pointing down and slightly forward, uppermost preopercular spine extending beyond the opercular margin, small opercle, lowermost free pectoral fin ray not extending beyond posterior end of the pelvic fin rays. Our material of *M. longimanus* agrees with the brief original description and the figure of Regan (1908), except for number of dorsal spines. Though Regan (1908) noted that *M. longimanus* has 10 dorsal spines, a count confirmed by a radiograph and reexamination of the holotype, all our specimens have 11 dorsal spines. Eschmeyer et al (1979: Table 1) showed that variation by one in dorsal spine count on either side of the modal value was common.

It was not observed that the present species has the sexual dimorphism, though Matsubara (1943) commented on the dimorphism in eye size in *M. pusillus*.

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Literature cited

- Eschmeyer, W. N., L. E. Hallacher and K. V. Rama-Rao. 1979. The scorpionfish genus *Minous* (Scorpaenidae, Minoinae) including a new species from the Indian Ocean. *Proc. Calif. Acad. Sci.*, 4th ser., 61(20): 453~473, figs. 1~9.
- Hubbs, C. L. and K. F. Lagler. 1958. Fishes of the Great Lakes region. *Bull. Cranbrook Inst. Sci.*, 26: 1~213, figs. 1~251.
- Matsubara, K. 1943. Studies on the scorpaenoid fishes of Japan. Anatomy, phylogeny and taxonomy. *Trans. Shigenkagaku Kenkyusho*, (1 and 2): 1~486, figs. 1~156, pls. 1~4.
- Regan, C. T. 1908. Report on the marine fishes collected by Mr. J. Stanley Gardiner in the Indian Ocean. *Trans. Linn. Soc. London, Zool.*, Ser. 2, 12: 217~255, pls. 23~32.

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西部インド洋から得られた *Minous longimanus* の記載および分類学的検討

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Minous longimanus は西部インド洋の Saya de Malha Bank から得られた 1 個体の標本に基づいて Regan (1908) により簡単に記載されたが、それ以来報告されていなかった。今回、同海域から 19 個体の本種が得られたので記載し、近縁種 *M. inermis* と比較検討した。*M. longimanus* は Eschmeyer et al. (1979) により西部インド洋から知られている *M. inermis* のシノニムとされたが、本種は 8~9 臀鰭軟条、粗雑な骨質の頭部表面、前下方に向かう眼前骨下縁の棘、主鰓蓋骨後縁をこえる前鰓蓋骨最上棘、小さな主鰓蓋骨および腹鰭後端に達しない胸鰭遊離軟条を持つことなどにより *M. inermis* から明瞭に区別され、別種であると判定された。*M. longimanus* は Saya de Malha Bank から知られているだけである。(041 函館市港町 3-1-1 北海道大学水産学部水産動物学講座)