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## Note

# A new record of the stromateoid fish *Psenopsis intermedia* (Piontrovskiy, 1987) from Indian waters

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## ABSTRACT

The occurrence of *Psenopsis intermedia* off Malpe, in the Arabian sea, which is not recorded so far from the Indian waters is reported. The comparison of the mersitic and morphometric characters of the specimens with the holotype and paratype of the species is presented.

The stromateoid fishes, generally referred to as butter fishes and their relatives, are a diverse group occurring world-wide in coastal and oceanic waters of tropical and temperate regio ns (Smith and Heemstra, 1986). The perciform suborder Stromateoidei is characterized internally by toothed pharyngeal sacs behind the last gill arch, and externally by small pores on the body and head, deciduous scales, small anal spine not distinct from the rays, an enlarged lachrymal bone covering much of the upper jaw and small uniserial jaw teeth (Haedrich, 1967). At least 34 species of stromateoid fishes (including seven endemic species) have been found in the Indian Ocean. These fishes represent all six families of the suborder and the majority of the species inhabit the open part of the ocean: several are found over submarine rises of the ocean floor (Parin and Piotrovsky, 2004). In this article, the species *Psenopsis intermedia* (Fig .1) which has not been recorded from the Indian waters so far is described.

Fifteen specimens of *P.intermedia* were collected from the bottom trawl operating from Malpe fish landing centre of Udupi district of Karnataka, India. The species was caught from a depth of 85 to 120 m off Mangalore and Malpe (13°14' N and 73°33' E, 14°20' N and 73°38' E). Measurements were made point to point with digital calipers. All

Fig. 1. Photograph of *Psenopsis intermedia* caught by trawler off Mangalore-Malpe

meristic and morphometric measurements were recorded using the methodology suggested by Haedrich, 1967. The measurements used for showing allometry were length of head, length of pectoral fin, length of pelvic fin, predorsal distance, preanal distance and maximum depth. These are expressed as percentage of standard length (SL). The measurements of snout length, eye diameter, length of upper jaw and interorbital width are expressed as percentage of head length (HL) (Haedrich, 1967).

The combination of dorsal and anal fin rays in almost equal numbers, spines graduating to the rays, toothless palate, pelvic insertion directly under the pectoral insertion, broad forward scoop in the opercle below the second opercular spine and no supramaxillary distinguishes *Psenopsis* from all other stromateoid genera (Haedrich, 1967).

The genus *Psenopsis* (Centrolophidae), according to Haedrich (1967) contains 4 species forming 2 groups. The deep bodied *P. anomala,* which inhabits the East China Sea, and *P. humerosa,* from the region of the Dampir Archipelago along northwestern Australia belong to the first group. In the second group are the narrow bodied *P.cyanea* (Alcock), from the continental slope of the Arabian Peninsula and India, and the mesopelagic *P. obscura* recorded from Indonesia in the Andaman Sea, and along the coast of Mozambique (Haedrich, 1967).

Holotype and paratype of *P. intermedia,* described by Piontrovskiy in 1987, are housed in the Zoological Museum, Moscow University and the Zoological Institute, Academy of Sciences, St. Petersburg respectively. Details of the same are as following:

Two specimens- Holotype 133 mm SL and paratype 133 mm SL (ZMMGU 17054 and ZIN 48004), NIS Professor Mesyatsev, 11°40'S, 61°59' E, 27 March 1983, depth 230 m, bottom trawl, collector Yu. P. Pavlov.

Description of the holotype: The diagnostic characters of the fish are the body laterally compressed, caudal peduncle short and deep. Origin of dorsal fin somewhat posterior to the base of the pectoral fin and the origin of the anal fin at midpoint of the body. The pelvic fin is connected to the body by a membrane which may be folded into a long groove in the abdomen, which extends to the anus. The caudal fin is moderately forked. The scales easily deciduous (on the body of the specimens collected it was completely absent). The lateral line extends along the body closer to the midline than to the dorsal edge. The skin is delicate (thin; fine) and covers the bases of the unpaired fins.

Head length is nearly one third the standard length, its upper surface is without scale pockets, with small pores. The snout is rounded, protruding over the mouth; the eye is large. The nostrils are quite large; the anterior nostril is round, the posterior, in shape of a slit. The opercle and preopercle are delicate, without scales. There are processes present on the outer edge of the operculam in the form of rather large, flat spines. The body is olive with pale blue mottling, head darker. The unpaired fins, pectoral and pelvic fins have yellow tinges. Caudal fin light yellow with white edges (Piontrovskiy, 1987).

*P. intermedia,* belongs to the group of "narrow-bodied" *Psenopsis,* but differs from the two known species of this group in having more rays in the pectoral fin (23, versus 16-18) and in the shape of the head. In many features this species is similar to *P.obscura,* from which it is differentiated by fewer soft rays in the anal

fin (22-23, versus 25-28), by large anteanal distance (56-59% SL, versus 45-54% SL) and also the colouration. From *P.cyanea*, this species differs in the larger eye- diameter (28-30% head length versus 18-21%). The intermediacy of characters between *P .obscura* and *P. cyanea* is reflected in the specific name "intermedia" (Piontrovskiy, 1987).

The specimens collected from bottom trawler operating off Malpe were compared with those of the holotype and paratype of the species (Table 1). The meristic counts and morphometric measurements are in confirmation with those of the holotype and paratype of the species (Piontrovskiy, 1987). The holotype and the paratype were recorded from a depth of 230m, while our specimens were caught at a depth of 85-120 m in Indian waters.

*Psenopsis intermedia* was known only from catches in the western part of the Indian ocean, on the slope of the bank of Saya-de-Mal'ya (11o40' S, 61o 59'E) at a depth of 230 m. (Piontrovskiy, 1987).

TABLE 1: *Comparison of the morphometric measurements and meristic counts of* Psenopsis intermedia *with the holotype and paratype of the species*

| Morphometric measurements | Holotype mm | Paratype mm | Present Specimen Range mm | Average mm | Std Dev. | Std Error |
|---|---|---|---|---|---|---|
| Standard length | 133 | 133 | 107 - 160 | 132.3 | | |
| Head length | 34.4 | 33.2 | 27.2 - 35.3 | 31.9 | 2.3 | 0.6 |
| Greatest body depth | 35.3 | 30.5 | 24.5 - 29.5 | 27.8 | 1.2 | 0.3 |
| Ante dorsal distance | 38.3 | 33.6 | 31.1 - 47.9 | 35.9 | 4.6 | 1.2 |
| Ante anal distance | 58.6 | 56.3 | 53.5 - 59.9 | 56.5 | 2.6 | 0.7 |
| Ante ventral distance | 35.7 | 34.4 | 27.3 - 35.8 | 31.5 | 2.7 | 0.7 |
| Length of caudal peduncle | 11.3 | 10.3 | 10.8 - 15.5 | 13.6 | 1.6 | 0.4 |
| Depth of caudal peduncle | 5.3 | 7.6 | 5.2 - 8.0 | 6.9 | 0.9 | 0.2 |
| Length of base of dorsal fin | 60.9 | 51.9 | 34.2 - 55.7 | 47.8 | 7.1 | 1.8 |
| Length of base of anal fin | 37.6 | 38.2 | 28.2 - 37.1 | 33.5 | 2.9 | 0.8 |
| Length of pectoral fin | 20.3 | 22.1 | 16.2 - 24.6 | 21.1 | 3.0 | 0.8 |
| Length of base of pectoral fin | 6.0 | 5.3 | 4.2 - 6.6 | 5.5 | 1.1 | 0.3 |
| Pectro- anal distance | 20.3 | 21.8 | 19.7 - 26.3 | 21.6 | 2.2 | 0.6 |
| Length of pelvic fin | 12.0 | 16.0 | 7.9 - 12.8 | 10.5 | 1.7 | 0.4 |
| Ventro anal distance | 17.1 | 21.4 | 21.8 - 26.6 | 23.7 | 1.6 | 0.4 |
| Snout length | 21.8 | 26.4 | 21.6 - 25.4 | 23.5 | 1.4 | 0.4 |
| Eye diameter | 29.9 | 28.3 | 27.5 - 29.5 | 28.2 | 0.9 | 0.2 |
| Post orbital head length | 43.7 | 43.7 | 52.1 – 64. | 56.2 | 3.8 | 1.0 |
| Inter orbital distance | 34.9 | 34.5 | 22.4 - 31.6 | 27.9 | 3.6 | 0.9 |
| Head depth | 80.8 | 80.5 | 62.9 - 82.6 | 79.9 | 19.6 | 5.1 |
| Upper jaw length | 26.2 | 27.6 | 27.1 - 49.3 | 32.9 | 5.9 | 1.5 |
| Dorsal spines | VI | V | VI | | | |
| Dorsal rays | 27 | 27 | 27 | | | |
| Anal spines | III | III | III | | | |
| Anal rays | 22 | 23 | 22 | | | |
| Pectoral fin rays | 23 | 23 | 23 | | | |
| Gill rakers upper | 7 | 7 | 7 | | | |
| Gill rakers lower | 15 | 15 | 15 | | | |

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