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**NATURAL DISTRIBUTION AND ECOLOGY OF DARK-BLOTCHED
MUDSKIPPER, *PERIOPHTHALMUS WALTONI* KOUMANS
(PISCES : GOBIIDAE)**

ABSTRACT

This report is the first record on the occurrence of *Periophthalmus waltoni* Koumans from Indian waters. Detail description of the species and its ecology are attempted here under.

WHILE studying the marine ichthyofauna of Gujarat State, five specimens of *Periophthalmus waltoni* Koumans belonging to the family Gobiidae were collected in a small collection of fishes from Jamnagar, collected by a Zoological Survey of India party. Hitherto reported from the Persian Gulf and Karachi, Pakistan (Koumans, 1941), the present record extends its distribution to Indian waters.

***Periophthalmus waltoni* Koumans**

Periophthalmus waltoni Koumans, 1941. *Mem. Indian Mus.*, 13 (3) : 288 (Type loc. : Fao estuary of the Shatt-el-Arab, Mesopotamia and Karachi) ; Koumans, 1944, in Biegrad and Lopenthin, *Fish. of the Iran Gulf* : 171 ; Kouronuma and Abe, 1972. *Fish. of Kuwait* : 99, pl. 16.

Material : 5 specimens (4♂, 1♀) ; standard length 64-68 mm ; Bedi port, Jamnagar (Lat. 22° 25'N ; Long. 70°E) Gujarat ; 13.2.75 ; Coll. V. D. Srivastava ; Z.S.I. Regd. no. F 7281/2.

Description : D. 1. XIII ; D. 2.I, 13 ; A. 11-12 ; P. 14-15. L.1. 90-94 ; L.tr. 20-23 ; Predorsal scales 30-33.

Body elongate, cylindrical anteriorly, compressed posteriorly ; depth of body 16.61 per cent in standard length ; head blunt, nearly cylindrical, 30.80 per cent in S.L. ; eyes large, positioned in close proximity in the anterior third of head, elevated above dorsal profile, with moveable lower lid, 25.51 per cent in head length ; anterior

nostrils in a tube in a triangular lobule above the upper lip ; mouth horizontal, jaw equal ; tongue, totally adnate to the floor of mouth, with round tip ; gill opening narrow, isthmus broad ; teeth uniserial in both jaws, anterior ones caninoid, those in front large and prominent ; in upper jaw on each side 5-6 caninoid teeth of which 2-3 large and prominent, followed laterally by about 10 or more small closely arranged teeth ; in lower jaw on each side 6-7 caninoid teeth, of which 3-4 large and prominent, followed laterally by 8 small teeth.

Spinous dorsal fin convex, higher than body, more so in males, separated from the soft dorsal fin by a narrow space ; second dorsal fin much lower than first ; ventral fins united by a distinct common basal membrane giving a funnel shape ; pectorals with a prominent muscular base ; caudal obliquely pointed, upper rays longer than lower ones ; scales cycloid.

Colour (in alcohol) : Head and body grayish with numerous dark brown blotches of varying shapes ; those on side below soft dorsal fin arranged in nearly vertical direction. Top and posterior part of head with small dark brown blotches and many small whitish spots on sides. First dorsal fin dark brown, darkened marginally. Soft dorsal fin brownish with whitish longitudinal line in the middle and a blackish band immediately above it. Pectoral and caudal dusky. Anal fin darkened marginally. Pelvic fins blackish with whitish periphery.

Ecology : Five specimens of *P. waltoni* were collected from wet mucky beach at Bedi port, Jamnagar (Gujarat). Found in plenty around this locality and adjoining areas during low tide, they wriggle about freely on muddy flats. At the slightest sign of danger or disturbance they swiftly retreat to the safety of water or burrow themselves in soft muddy nests.

P. waltoni shows slow halting movements on land, the pectoral fins acting like crutches that help carry the body forward. At the end of the stroke the weight of the body shifts to ventral fins that functions like legs. Frequently, they also exhibit skipping movements. Basically, skipping appears to be an escape reaction. Occasionally, the skip is also used for catching prey. The large bulging eyes are adapted for vision in air. The thick moist skin helps conserve water. Respiratory organs also exhibit adaptations for breathing on land. By virtue of their peculiarly adapted eyes and fins they efficiently seek food and escape from enemies.

P. waltoni is carnivorous and hunts food in the mucky beach. Gut contents revealed mostly small shelled molluscs. Other contents as also intestinal parasites, if any, could not be determined for want of proper preservation. These gobies are consumed by the local inhabitants.

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