

ON A COLLECTION OF BLENNIES FROM GUJARAT COAST
WITH SOME NEW RECORDS

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WHILE collecting the shore fishes from the Gujarat coast during 1961-63, a few interesting blennioid fishes were obtained, of which *Antennablennius bifilum* (Günther), *Rhabdoblennius cornifer* (Rüppell), *Ecsenius pulcher* (Murray) are new records for Indian waters. Along with them the known species, *Petroscirtes mitratus* (Rüppell), *Helcogramma ellioti* (Herre), *Salarius dussumieri* (C.V.), *Dasson cyprinoides* (C.V.), *Omobranchus punctatus* (C.V.) and *Pholioides thomaseni* Nielsen were also collected. *Pholioides thomaseni* Nielsen is described here as it is a recently, (Nielsen, 1960) discovered fish and the sole representative of the family Haliopphidae from India. The collection was restricted to the tidal ponds of Rupan, Okha, Pirotan Island and the Kiew Point of Gujarat Coast. The fishes were collected by draining off the water from the tidal pools. Often small quantities of formalin were poured to bring them out from crevices.

Family: BLENNIIDAE

1. *Antennablennius bifilum* (Günther) Fig. 1

Blennius bifilum Günther, *Cat. Fish. Bri. Mus*; III, p. 252, 1861.

Antennablennius bifilum Norman, *Ann. Mag. nat. Hist.*, (II) X, p. 808, 1943.

Antennablennius bifilum Smith, *Fishes of Southern Africa*; p. 348, 1949.

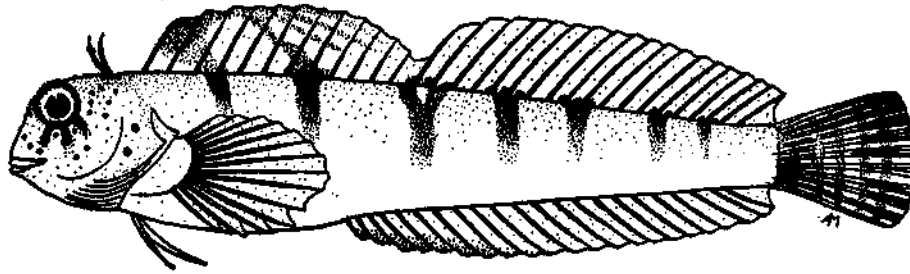


FIG. 1. *Antennablennius bifilum* (Günther), 44 mm.

D.XII, 19-21; A.II, 20-21; p. 14.

Body depth 4.5 to 5.4 in standard length and 5.3 to 6.0 in total length. Head length 4.3 to 4.6 in standard length and 5.0 to 5.4 in total length. Caudal peduncle depth 2.6 to 3.0, head depth 1.1 to 1.3, longest dorsal spine 2.0 to 2.5, longest dorsal ray 1.6 to 2.0, longest anal ray 2.5 to 3.0, longest caudal ray 1.2 to 1.6 and longest

pectoral ray 1.0 to 1.2 in head length. Eye diameter 0.8 in snout and least inter-orbital width 4.0 in eye diameter. A pair of closely placed nuchal cirri, equal to or slightly longer than the eye. Nasal cirri small, 0.25 in eye. No canines. Teeth strong and pointed, about forty in upper jaw and thirty in lower jaw. Dorsal fin originates above the upper edge of the gill opening. Last ray of dorsal and anal fins attached to caudal peduncle. Lateral line incomplete and terminates below the last dorsal spine. Head with five orbital, three commissural, two mandibular and three maxillary sensory pores. Seven brown vertical incomplete bands on body. Spinous dorsal with a black band on its upper extremity. Two oblique dark bands from tip of dorsal fin to base. Caudal fin with five indistinct dark cross bands. Three brown bands radiate from eye. Chin with two narrow dusky bands.

Material: CMFRI-F. 118/521, 4 specimens, 31 mm. to 50 (total length). Rupan (Gujarat Coast).

Distribution: East coast of Africa (Port Alfred to Beira, Kenya). A new record for Indian coast.

2. *Rhabdoblennius cornifer* (Rüppell) Fig. 2

Blennius cornifer Rüppell, *Atlas Reise Nordl. Afrika, Fische*; p. 112, 1828.

Blennius cornifer Günther, *Cat. Fish. Bri. Mus*; III, p. 214, 1861.

Blennius cornifer Klunzinger, *Synopsis der Fische des Rothen Meeres*; p. 493, 1870.

Rhabdoblennius cornifer Chapman, *Fishes Indo-Australian Archipelago*, IX, p. 348, 1951.

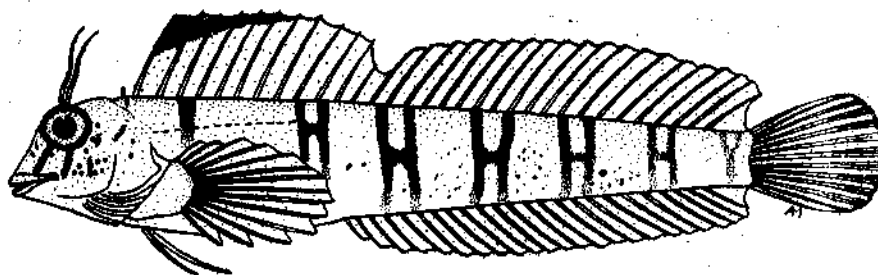


FIG. 2. *Rhabdoblennius cornifer* (Rüppell), 51 mm.

D.XII, 20-23; A.II, 23; P.14. Branchiostegals 6.

Body depth 5.4 to 5.7 in standard length and 6.4 to 7.1 in total length. Head length 3.9 to 4.2 in standard length and 4.6 to 4.9 in total length. Caudal peduncle depth 3.0 to 3.4, head depth 1.2 to 1.5, snout 4.6 to 5.2, eye diameter 3.4 to 3.6, longest dorsal spine 1.4 to 2.2, caudal ray 1.2 to 1.5, longest pectoral ray 1.1, anal ray 2.4 to 3.0 in length of head. Eye diameter 0.6 to 0.8 in snout. Inter-orbital space 8 to 10 in eye. Supraorbital cirri twice the eye diameter; nasal cirri simple; nuchal cirri small. Dorsal fin originates on nape midway between opercle and preopercle. Last rays of dorsal fin and anal fin attached to caudal peduncle. A notch between first and second dorsal fins. Middle nine rays of

caudal fin bifurcated. Teeth strong, upper jaw with about 40 and lower jaw with about 35 teeth. No canines. Lateral line incomplete and terminates below tenth dorsal spine. Head with four pairs of orbital, four pairs of mandibular and two hyomandibular sensory pores. A dark brown blotch on the membrane of first and second dorsal spines. Seven vertical double bands, more conspicuous on the middle. Tip of caudal fin tinged with black pigments. Other fins hyaline.

Material: 3 specimens, 37 to 51 mm. (total length) CMFRI-F.118/516. Rupan (Gujarat Coast).

Distribution: Waigeu, Red Sea, Zanzibar and Kenya. A new record for Indian coast.

3. *Ecsenius pulcher* (Murray), Fig. 3

Salarias pulcher Murray, *J. Bombay nat. Hist. Soc.*; II, p. 47, 1887.

Salarias phantasticus Boulenger, *Ann. Mag. nat. Hist*; ser. 6, XX, p. 422, 1897.

Salarias anomalus Regan, *J. Bombay nat. Soc*; XVI, pp. 327-331, 1897.

Ecsenius pulcher Chapman and Schultz, *Proc. U.S. Nat. Mus*; Vol. 102, p. 515, 1952.

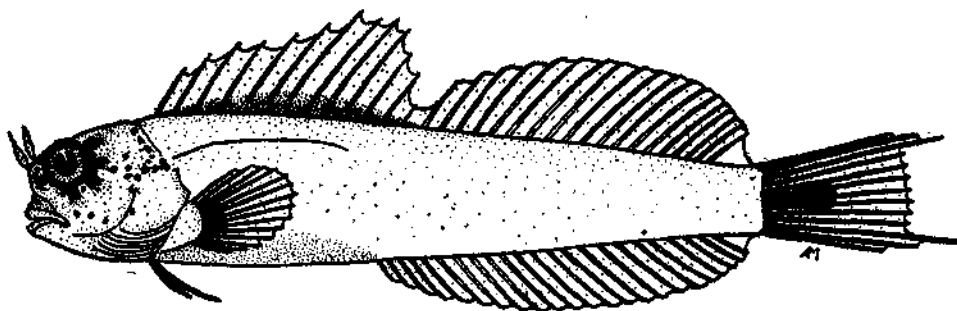


FIG. 3. *Ecsenius pulcher* (Murray), 45 mm.

D.XIII-XIV, 19-20; A.22-24; P.14; C.13.

Depth 3.9 to 5.1 in standard length and 4.8 to 6.7 in total length. Head 3.5 to 4.6 in standard length and 4.2 to 5.8 in total length. Caudal peduncle depth 2.1 to 2.8, snout length 8.0 to 10.0 eye diameter 2.8 to 3.5, upper jaw 3.0 to 4.0, longest dorsal spine 1.0 to 2.2, highest anal ray 2.2 to 3.4, longest caudal ray 0.7 to 1.5 and longest pectoral ray 1.2 to 1.7 in head length. Eye diameter 0.3 to 0.4 in snout length. Eye in interorbital length 0.5 to 0.8. Nasal cirri simple, lancelet shaped. Forehead prominent. Lateral line incomplete, originates above the gill opening and terminates below eleventh dorsal spine. Head with four orbital, two supra-orbital, five hyomandibular, three mandibular, four maxillary and four commissural sensory pores. Upper jaw with 100 to 110 small teeth in groups of 8 to 10 teeth. Teeth minute and movable. Lower jaw with 45 to 50 teeth. A small canine on the lower jaw may or may not be present. A notch between first and second dorsal fins. Last dorsal spine small and one-third of the first ray of

the second dorsal fin. None of the fin rays branched. Body uniformly brown. Seven light brown bands radiate from eye.

Material : 30 specimens, 18 to 51 mm. (total length) CMFRI-F.118/515. Rupan (Gujarat coast).

Distribution : Red Sea, Persian Gulf, Makran Coast (Karachi). A new record for Indian coast.

Habitat : On rocky shores, hiding in crevices. When disturbed becomes alert with curved tail.

4. *Petroscirtes mitratus* Rüppell Fig. 4

Petroscirtes mitratus Rüppell, *Atlas Reise nordl. Afrika. Fische des Rothen Meeres*, p. 111, 1828.

Petroscirtes mitratus Günther, *Cat. Brit. Mus* ; III, p. 237, 1861.

Petroscirtes barbatus Günther, *Ibid* ; p. 238, 1861.

Petroscirtes mitratus Klunzinger, *Synopsis der Fische des Rothern Meers*, p. 496, 1870.

Petroscirtes lienardi Day, *Fishes of India* ; p. 327-328, 1878.

Petroscirtes hypselopterus Weber, *Siboga Exp. Fische* ; p. 539, 1913.

Petroscirtes mitratus Barnard, *Ann. S. Africa Mus* ; XXI, p. 842, 1925-27.

Petroscirtes mitratus Herre, *Rec. Indian Mus* ; XLI, p. 355, 1939.

Petroscirtes mitratus Schultz, *U.S. Nat. Mus. Bull* ; 180, p. 273, 1943.

Petroscirtes mitratus Chapman, *Fishes Indo-Australian Archipelago* ; IX, p. 367, 1951.

Petroscirtes pienardi Munro, *The Marine and Fresh Water fishes of Ceylon*, Canberra : 201-202, 1955.

Petroscirtes mitratus Smith, *Ichthyol. Bull. Rhodes Univ.*, 13 : 231.

Petroscirtes mitratus Schultz, *U.S. Nat. Mus. Bull* ; 202, 1960.

D.XI, 15 ; A.II, 14 ; p. 15.

Body depth 3.5 in standard length and 4.4 in total length. Head length 4.1 in standard length and 5.2 in total length. Caudal peduncle depth 2.0, head depth 1.1, eye diameter 3.0, snout length 5.7, longest dorsal spine 1.4, longest dorsal ray 1.5, longest caudal ray 1.0, longest pectoral ray 1.4 in head length. Eye diameter 0.5 in snout length. Least interorbital space 2.0 in eye. Supraorbital cirri branched and one-third of eye ; nasal cirri simple and short ; nuchal cirrus short and pointed ; a row of seven minute cirri along preopercle, one of which extends to chin ; a pair of club-shaped cirri on chin, 0.25 to eye. Gill opening oblique above the pectoral base. Dorsal fin originates between orbit and preopercle. Forty small pointed teeth in upper jaw, canines small on each side of upper jaw.

Lower jaw with forty small pointed teeth ; canines of the lower jaw four times that of upper jaw. Last rays of dorsal and anal fins attached to caudal peduncle but

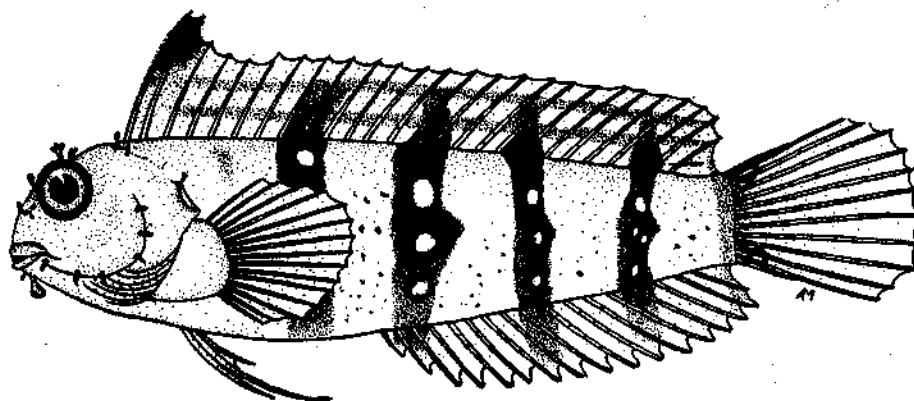


FIG. 4. *Petrosirtes mitratus* Rüppell, 48 mm.

free from caudal fin. After fourteenth ray, dorsal rays increase in height except for the last two. Anal fin originates below 13th dorsal ray. Pectoral fin extends upto 11th dorsal ray. Lateral line incomplete originates from upper angle of gill opening, ascends towards the dorsal fin, runs parallel to its base and terminates below 20th dorsal ray. Head with six mandibular, three commissural and one supraorbital sensory pores ; each pore with a cirrus posteriorly. Five dark vertical bands extend from dorsal fin to anal fin, each enclosing two or three yellow spots. A dark brown band between first and second dorsal ray. Two longitudinal pale dark bands on dorsal fin. Caudal with crescentic markings basally.

Material : One specimen, 48 mm. (total length) CMFRI-F.118/519. Okha (Gujarat coast).

Distribution : East coast of Africa, Madagascar, Zanzibar, Red Sea, Sind, Andaman Islands, Coast of Siam and Marshall Islands, Philippines.

Day (1878) in his description of *P. lienardi* Day (p. 372) gives 3/10/17 as the dorsal fin formula though in his figure (Pl. LXIX, 8) of the same, dorsal fin formula is 3/23 which is same for *P. mitratus* Rüppell as also pointed out by Smith (1959). Munro (1955, P. 201) has followed Day's description and figure.

Dr. S. Jones, Director, Central Marine Fisheries Research Institute, Mandapam Camp, has collected this species from Palk Bay and Gulf of Mannar and observed its breeding habits and early development (personal communication). This species appears to be common in Palk Bay and Gulf of Mannar.

Family : HALIOPHIDAE

5. *Pholioides thomaseni* Nielsen Fig. 5

Pholioides thomaseni Nielsen, *Vidensk. Meddt. fra dansk naturh. Foren* ; bd. 123, 1960.

Tentaculus waltairiensis Rao and Dutt, *Ann. Mag. nat. Hist* ; (13) VIII, p. 455, 1965.

Pholioides thomaseni Mohan, *Copeia*, 1967 (II), p. 458.

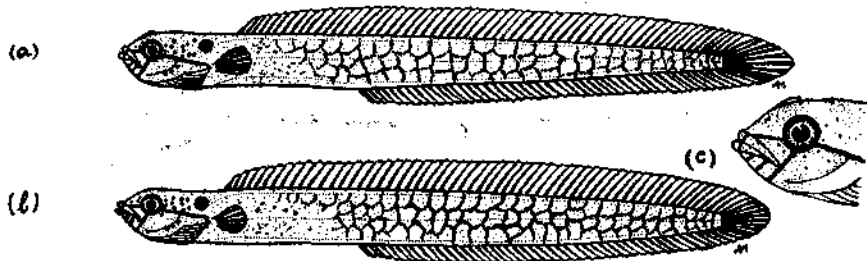


FIG. 5. *Pholioides thomaseni* Nielsen. (a) With interorbital cirrus, 43 mm. (b) Without interorbital cirrus, 41 mm. (c) Head enlarged ($\times 8$) to show the mucous pores.

D. I, 56-60 ; A. 45-47 ; P. 7-8, C. 10, Ll. 145-185 ; Ltr. 30 ; Branchiostegals 6.

Depth 9.0 to 12.7 in standard length and 10.0 to 13.7 in total length. Head 5.4 to 6.9 in standard length and 6.1 to 7.3 in total length. Caudal peduncle depth 4.1 to 6.5, head depth 1.3 to 2.0, snout length 3.4 to 5.6, eye diameter 3.1 to 4.7, upper jaw length 3.1 to 4.0, longest dorsal ray 1.8 to 2.7, longest anal ray 2.4 to 5.9, longest caudal ray 1.2 to 2.0, longest pectoral ray 2.3 to 3.5 in head length. Interorbital width 1.5 to 2.2 in eye. Body tapering, with minute cycloid scales, cheeks scaly. Opercular spine present. Interorbital cirrus may or may not be present. Gill membrane free from isthmus. Snout to vent less than twice in length between that of vent to caudal end. 20 canine-like teeth on each jaw. Teeth on premaxillary only. Two inner rows of small teeth in both jaws. Premaxillary of both sides connected by a membrane. Dorsal, caudal and anal fins confluent. Dorsal fin increases in height posteriorly. Middle five rays of pectoral and eight rays of caudal fins divided distally. Three lateral lines with simple pores. Upper lateral line incomplete with 145-178 pores and terminates below 46-49 rays of dorsal fin ; middle lateral line complete with 145-185 pores ; lower lateral line incomplete with 128-180 pores, originates from the isthmus and terminates above 38-40 anal rays. Head with seven orbital, four maxillary sensory pores (Fig. 5, c).

Colour highly variable from pale green to greenish brown. Three brown bands along lower jaw and another from lower side of the eye to corner of the jaw. A dark ocellus above opercle, fringed with yellow pigments. Body with brownish hexangular net work.

Material : 21 specimens, 37-60 mm. CMFRI-F.180/531. Rupan, Okha, Kiew point (Gujarat Coast), Pirotan island (Gulf of Kutch).

Distribution : Karachi and Waltair.

Habitat : Tidal pools, rocky beaches, hiding in coral rocks.

Biological note : Matured specimens were collected in August 1962.

This species is the sole member of the recently erected genus *Pholioides* (Nielsen, 1960). Though the specimen (paratype examined) of Nielsen has an interorbital cirrus some of my specimens do not have interorbital cirrus (Fig. 5, b). The length of cirrus also varies from a small knob to a well developed one. Hence the absence of interorbital cirrus does not seem to be a specific character.

Family : CLINIDAE

6. *Helcogramma ellioti* (Herre) Fig. 6a

Tripterygium trigloides Day, 1878, *Fishes of India*, p. 336.

Tripterygion ellioti Herre, 1944, *Proc. Biol. Soc. Washington* 57 : 49-50.

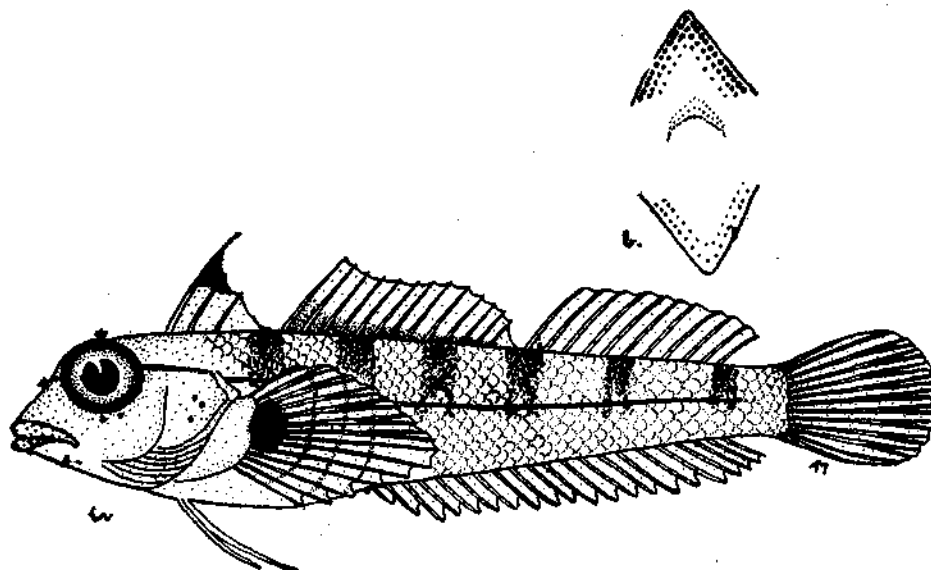


FIG. 6. (a) *Helcogramma ellioti* (Herre), 38 mm. (b) Dentition.

D. III, XIII, II ; A. I, 20 ; P. 15-16 ; C. 13 ; V. 2. Ll. 34 ; Ltr. 10+1+9.

Height 4.5 in standard length and 6.0 in total length. Head 3.2 in standard length and 4.0 in total length. In head, height of head 1.5, height of body 1.4, eye 2.8, snout 3.7, caudal peduncle 3.0, longest pectoral ray 1.3, first spine of first dorsal 1.9, last spine of first dorsal 3.4, first spine of second dorsal 2.5, last spine of second dorsal 5.6, first ray of third dorsal 2.8. In eye, snout 1.2, supraorbital cirri 8.0.

Mouth oblique, lips fleshy ; maxillary reaches middle of eye. Interorbital space concave. Nasal cirri, minute, trifid terminally, posterior nostril with a flap. Supra-

orbital cirri small, 8.0 in eye, trifold terminally. Head, nape, belly and pectoral peduncle devoid of scales. Scales strongly ctenoid, deciduous, not notched on hind border. Lateral line incomplete with 24 tubules, slightly arched in trunk and extend on caudal region as straight line terminating on caudal peduncle just after the last ray of anal fin. Head with two infraorbital and three hyomandibular sensory pores. Premaxillaries with three rows of teeth, outer row enlarged, inner ones minute; vomerine teeth minute in three conical rows. Mandibular teeth two rows, small, uniform (Fig. 6, b). Anal papillae small, tubular. Dorsal fin with deep notch, originates above preopercle; first dorsal higher than second dorsal, basally attached to second dorsal. Second dorsal with a shallow depression, free from third dorsal. Last rays of dorsal and anal free from caudal peduncle. Caudal fin round, middle nine rays bifurcated. Anal originates below fifth spine of second dorsal. First ray of anal not articulated, membrane incised. Pectoral fin reaches fourth ray of anal fin, upper seven rays bifurcated, membrane of lower seven rays incised. A dark blotch on tip of first dorsal between first and second dorsal spines, base of second dorsal sparingly speckled. Three light brown bands on pectoral fin, a deep blue blotch on pectoral base. Body brownish with six cross bands.

Material : One specimen, 38 mm. CMFRI F.119/524. Okha (Gujarat).

Distribution : Waltair, Vizag, Kovalum (Kerala).

Habitat : Rocky shore.

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