

ON THE RARE BATHYPELAGIC FISH, *PERISTEDION RIVERS-ANDERSONI* (ALCOCK, 1894)

ABSTRACT

The specific identity of the rare bathypelagic fish *Peristedion rivers-andersoni* (Alcock, 1894), (belonging to the family Peristediidae, and its relationship with allied species is discussed. Further, the occurrence of *Peristedion adeni* (Lloyd, 1907) in Indian waters is reported for the first time, the species hitherto being recorded from the Gulf of Aden and the Western Indian Ocean.

DURING a recent faunistic survey of the south-west coast of India, several sea-robins belonging to the family Peristediidae, were captured along with numerous other bathypelagic fishes by the otter trawl operated at 300 metres at a station about 85 km off Quilon on board the *Blue Fin* of the Central Institute of Fisheries Operatives, Cochin. These sea-robins are referable to the genus *Peristedion* Lacépède and three species : *P. rivers-andersoni* (Alcock, 1894), *P. adeni* (Lloyd, 1907) and *P. pothumaluva* (Deraniyagala, 1936). A study of the available material and the pertinent literature indicates that the systematics of the former species is in need of clarification and revision. The systematics of the latter two species, however, needs no special remarks

except for the fact that *Peristedion adeni* (Lloyd) is reported here for the first time from Indian waters, hitherto being reported only from the Gulf of Aden and the Natal coast (Barnard, 1927; Norman, 1939 and Smith, 1953).

Alcock (1894) described and figured *Peristethus rivers-andersoni* on a single specimen, 3.5 inches in length, collected by the R. I. M. S. *Investigator* with a dorsal fin formula VI. 22; the type was stated to have been collected from the sea off Colombo (Ceylon) and is still preserved in the Zoological Survey of India (*vide* Menon and Yazdani, 1968). Subsequent to the original report, the species has been recorded by Samuel (1963) who obtained a specimen from off the south-west coast of India at a depth of 150 fms but with a dorsal fin formula III.18. Silas (1969) has recorded *Peristediam* prox. *rivers-andersoni* (Alcock) from 180-450 in depths along the South-west coast of India. In the present paper, the specific identity of *Peristedion rivers-andersoni* (Alcock) and its relationship to allied species is discussed and it is shown, that the present record constitutes the first definite report of the species from Indian waters.

SYSTEMATIC ACCOUNT

Peristedion rivers-andersoni (Alcock)

- Peristethus rivers-andersoni* Alcock, 1894, *J. Asiatic Soc. Bengal*, 63 (2) : 121, pl. 6, figs. 2, 2a, 2b (type loc : Off Colombo, 142-400 fms).
- Peristethium rivers-andersoni*; Alcock, 1899, *Descriptive Catalogue Indian Deep-Sea Fishes Indian Museum* : 68 (after Alcock, 1894).
- Peristedion rivers-andersoni*; Munro, 1955, *Marine and Fresh Water Fishes Ceylon* : 254, pl. 51, fig. 737 (after Alcock).
- Peristedion rivers-andersoni*; Samuel, 1963, *Bull. Dept. mar. biol. Oceanogr. Univ. Kerala*, 1 : 112, fig. 7.
- Peristedion rivers-andersoni*; Menon and Yazdani, 1968, *Rec. zool. Surv. India*, 61 : 156 (type catalogued).

Material Examined

- (i) Holotype of *Peristethus rivers-andersoni* Alcock; ZSI Regd. No. 13469.
- (ii) One ex., 135 mm in standard length, off Quilon at station Lat. 9° N. Long. 76° E., otter trawl haul, 300 metres depth, 4th March 1972, coll. P. K. Talwar; ZSI Regd. No. F 6392/2.

Description

D VIII. I. 20-22; A 20-21; P₃, 12; V I. 5; C 10 Gill rakers on first arch 4+21 (Arabian Sea specimen), lanceolate.

Greatest height through eyes 14.4, head length 40.7; both in per cent of standard length. Eye diameter 17.2, equals inter-orbital width, snout length 55.4; in per cent of head length.

Mouth edentulous. Series of tentacles along lower jaw, two fleshy tentacles at some distance from symphysis of lower jaw, reaching to below front border of eye when laid back, beset with numerous small simple tentacles.

Pair of attenuated, long, flat, rostral (pre-orbital) horns, length 1.4 in distance of their base to eye; small distinct spine at base of each rostral horn. Preopercular ridge sharply truncated but not forming spine; opercular ridge with short bluntly rounded spine.

From above gill opening 32-34 lateral scutes, each with a spine and pore of the lateral line at their base; sublateral scutes beginning below 7th lateral scute, 28 in number, each with a spine. 32 dorsal scutes, the first scute of each side fused before dorsal fin origin.

Origin of dorsal fin above opercular spine. Free pectoral rays extend upto base of 2nd anal fin ray. Ventral fin reaches vent. Caudal emarginate, six mid-caudal rays branched.

Colour in alcohol—light brown, pale below; body and head covered with vermiculations of dark brown. Spinous dorsal fin with dusky margin above and soft dorsal fin with black marginal line. Pectoral fin whitish with two dusky transverse bars; pelvics hyaline. Caudal fin with incomplete transverse dusky bands.

Distribution: Off Colombo (Ceylon) and Quilon (India); bathypelagic.

Discussion

The specimen on hand collected from the Arabian Sea agrees with the holotype of *Peristedion rivers-andersoni* (Alcock), the original description and figure of the type is, however, faulty in the dorsal fin ray formula.

This species is closely allied to the Pacific species, *Peristedion nierstraszi* Weber, 1913 and *P. amblygenys* Fowler, 1938, in the meristic counts but differs from them in possessing a small spine on the dorsal surface of the base of each rostral horn. Beaufort and Briggs (1962) while discussing the relationship of *P. nierstraszi* Weber with *P. rivers-andersoni* Alcock surmised 'This species is near *P. rivers-andersoni* Alcock from off Colombo, Ceylon, but differs by the absence of spines at the base of the rostral process and by a greater number of spines in the dorsal fin. J. L. B. Smith (*Trans. Royal Soc. S. Africa* XXII, Part IV, 1934, p. 331) says that there is a small but distinct spine on the dorsal surface of the base of each rostral process in one of the typical specimens of *nierstraszi* he examined, but I am unable to find them in the three specimens which formed the base of Weber's description'. These two Pacific species of *Peristedion* are probably conspecific with *P. rivers-andersoni* and the small spine on the dorsal surface of each rostral horn in *P. rivers-andersoni* is probably a juvenile character.

The dorsal fin ray formula and the caudal fin ray count (6 vs. 10) of Samuel's (1963) specimen of *P. rivers-andersoni* (Alcock) from the Arabian Sea, seems to be erroneous. If, however, these meristic counts are confirmed then Samuel's example of *rivers-andersoni* would require a new specific name.

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