

**ON SOME INTERESTING FISHES FROM
THE SOUTHWEST COAST OF INDIA**

ABSTRACT

The marine fish fauna occurring at Vizhinjam usually consists of a variety of interesting species and this note deals with the diagnostic characters of nine species of fishes which were collected during field trips. These are: *Velifer africanus*, *Samaris cristatus*, *Aspidonotus tractus*, *Uraspis helvola*, *Thyrsoidea macrura*, *Chilomycterus orbicularis*, *Diodon hystrix*, *D. holacanthus* and *D. maculifer*. Of these *Velifer africanus* is a new record to the Indian Seas. *Thyrsoidea macrura* described herein is the longest specimen of giant moray eel hitherto recorded.

FAMILY : VELIFERIDAE

Velifer africanus Smith

Velifer africanus Smith, 1951. *Ann. Mag. Nat. Hist.*, 12 6 (iv) 25; 1961. *The Sea Fishes of Southern Africa*, 515.

D. XXIII, 9; A. XIV, 9; P. I, 16; V. I, 5; L. 1. 70-72; Ltr. 14+1+9; G. R. 4+12. Head 30-28-31.03; eye 8.77 to 9.15; snout 9.86; post orbital 13.10 - 13.79; suborbital 2.11 - 2.76; inter-orbital 8.97 - 9.15; maxillary 7.75; dorsal base 71.72-73.24; anal base 47.59 - 47.89; pectoral 20.42 - 22.07; pelvic 29.66 - 30.28; caudal 30.38 - 30.34; height at posterior orbit 34.48 - 35.92; depth at dorsal origin 44.14-45.77; least depth of caudal peduncle 8.97 - 9.86; depth at anal origin 48.27 - 50.00 and maximum height of gill raker 1.38 - 1.41 per cent of standard length. Head higher than long, completely scaled except snout; eye smaller than snout; pre-maxillary and maxillary peculiarly protruded; jaws edentulous; opercular bones smooth, scales moderate, cycloid; pectoral falcate; a spiny projection at base of ventral fin; ventral spine well developed but shorter than rays; dorsal and anal with well developed scaly sheath; spiny portion of both dorsal and anal well developed; in both dorsal and anal, third spine is longest; gill rakers short and stout; colour—silvery white with seven dark vertical bands; spinous part of dorsal and anal black, and soft portion white, ventral black.

Material: Two specimens, 142 mm and 145 mm S. L. (188 mm and 192 mm T. L.) from boat seine at Vizhinjam.

Distribution: East coast of Africa and Arabian Sea.

FAMILY: PLEURONECTIDAE

Samaris cristatus Gray

Samaris cristatus Gray, 1831. *Zoological Miscellany*, 4; Smith, 1961. *The Sea Fishes of Southern Africa*, 156.

Since a redescription of this species on a good series of specimens is being published in this Journal (Venkataramanujam and Ramamoorthi, 1973), the single specimen obtained from Vizhinjam Bay is not described here. However, the fin ray and scale counts of this specimen are as follows:

D. 80; A. 55; P. dext. 4; P. sin. 0; V. 5; L. 1 .76

Material: One specimen, 91 mm S. L. (126 mm T. L.) from boat seine at Vizhinjam.

Distribution: East coast of Africa, Arabian Sea, Bay of Bengal, Andaman Sea, Malay Archipelago, Philippines and China.

FAMILY: BLENNIDAE

Aspidontus tractus Fowler

Aspidontus tractus Fowler, 1903 *Fish Zanzibar*; 170; Jones and Kumaran, 1965. *J. mar. biol. Ass. India*, 7 (1): 115.

D. XI, 27; A. II, 26; P. 14; V. I, 4; C. 13. Head 25.60; snout 8.54; eye 6.10; inter-orbital 13.41; maxillary 8.54; pectoral 14.63; pelvic 10.98; caudal 15.85; dorsal base 86.59; anal base 48.78; height of dorsal 9.76; height of anal 9.76; depth

at dorsal origin 12.20; depth at ventral origin 15.85; depth of caudal peduncle 9.76 and length of canine 3.66 per cent in standard length. Head pointed, eye smaller than snout. Well developed teeth in both jaws. A strongly curved canine at the hind end of the lower jaw. Gill opening small, extends down before pectoral base. Small barbels three in number on each side of lower jaw. Spines of both dorsal and anal weak. Pectoral broad. Ventral short. Body bluish violet behind the pectoral and brownish yellow anteriorly. Dorsal and anal black except the pale distal ends. A black band from snout to caudal where it spreads completely leaving a white border. Pectoral and ventral pale. A black strip over the lower region of the pectoral origin.

Material: One specimen, 82 mm standard length (93 mm T. L.) from shore seine at Vizhinjam.

Distribution: Zanzibar, east coast of Africa, Minicoy and now southwest coast of India.

FAMILY : CARANGIDAE

Uraspis helvola (Forster)

Uraspis helvola Reuben, 1968. *J. mar. biol. Ass. India*, 10 (1): 133-151.

D. I (P) . VIII, I, 27-28; A. II. I, 20-21; P. II, 20; G. R. 6+14 - 16. In per cent of standard length, head 30.73 - 33.32; eye 9.71 - 11.59; snout 9.74 - 11.01; inter-orbital 9.63 - 12.28; sub-orbital 3.21-5.07; postorbital 12.39-15.22; maxillary 13.59-15.94; height of first dorsal 5.50-10.87; height of second dorsal 17.43 - 23.91; height of anal 16.05 - 23.19; base of second dorsal 44.66-48.21; base of anal 36.23-38.46; pectoral 33.94-37.44; pelvic 13.67 - 18.84; curved part of lateral line 40.77-44.50; straight part of lateral line 32.52-36.23; depth at first dorsal 39.45 - 42.23; depth at second dorsal 42.20-46.12; least depth of caudal peduncle 5.05 to 5.34; largest gill raker 4.59-5.07 and broadest scute 1.94-2.75. Head higher than long; eye with feeble eyelids; both the jaws with acute curved teeth in single series; tongue, floor of mouth and palate covered by white membrane, rest of the mouth dark; head naked, except cheek and part of operculum; breast naked; lateral line anteriorly feebly arched becoming straight below 14-15th dorsal ray; first dorsal low, fourth spine the longest; second dorsal and anal not produced; pre-anal spines embedded in skin; pectoral falcate; body dark with seven black vertical bands; first dorsal black; tips of second dorsal, anal and caudal dusky; pectoral and ventral pale.

Material: Four specimens, 138, 195, 218 and 206 mm in S. L. (183, 255, 292 and 274 mm T. L.) from boat seine, drift net and shore seines from Vizhinjam and from drift net at Punthura.

Distribution: Red Sea, Gulf of Oman, Somalian Waters, Agulhas waters, Mozambique Channel, Arabian Sea, Bay of Bengal, Jawa and Flores Sea, Celebes, Indian Ocean Equatorial Counter Current, South China Sea, Philippines and Atlantic.

FAMILY: MURAENIDAE

Thyrsoidea macrura (Bleeker), 1864

Thyrsoidea macrura James, 1965. *J. mar. biol. Ass. India*, 7 (2) : 401-405. (Synonym).

Head 8.00 ; eye 0.26; snout 0.57; interorbital 0.43; pre-dorsal distance 4.63; snout to vent 33.86; snout to anal 34.66; length of dorsal 94.03; length of anal 64.23; height at orbit 0.74; height at gill opening 2.60; height at anus 1.69; height half metre in front of tip of tail 1.14; width of body at gill opening 0.97; width of body at midway between gill opening and anus 1.23; width of body at anus 1.20; width of body half metre in front of tip of tail 0.43; maxillary length 2.43; mandibular length 3.14; length of stomach 14.69; length of intestine 14.42; and length of testes 8.00 per cent of total length.

Head pointed; eye small; anterior nostril tubular, situated on top of snout, posterior nostril on top of head above front border of eye; teeth pointed; maxillaries with 24 teeth in outer row and 12 in inner row; medially 4 long depressible fang-like teeth; dorsal and anal confluent with caudal and densely enveloped in skin; lateral line distinct with single row of whitish horizontal streaks; dark brown above and whitish below; fins tinged with black.

Material: 1 specimen 3,500 mm in T. L. from boat seine at Vizhinjam.

Distribution: Arabian Sea, Indo - Australian Archipelago, Pacific.

Note: The specimen recorded now is the longest of the moray eels recorded so far in India.

FAMILY: DIODONTIDAE

Chilomycterus orbicularis (Bloch)

Diodon orbicularis Bloch, 1785. *Naturges. Ausland Fische*, 1: 73.

D. 11; A. 10; C. 9; P. 20. Head 30.47; eye 7.81; snout 5.47; inter-orbital 16.41; pectoral 20.31; height of body 39.06; height of dorsal 19.53; height of anal 17.97; and least depth of caudal peduncle 5.47 in standard length.

Three spines above eye forming a supra-orbital ridge; a small spine directed outwards between eye and corner of mouth; nasal organ as compressed tube on inter-orbital space, closed above and with an anterior and a posterior opening; nine series of spines between snout and dorsal, row of spines above eye is followed by a row of six spines, second above gill opening, first midway between last supra-orbital spine and second post-orbital; sixth spine below origin of dorsal; chin without spines; spines with three pronged base; dorsal rounded; origin of anal below end of dorsal and fin rounded; caudal peduncle without spines.

Material: Three specimens from shore-seine at Vizhinjam and Punthura.

Distribution: Indian Ocean - Molucca Island, Cape of Good hope, Persian Gulf, Arabian Sea and Pacific Ocean.

Diodon hystrix (Linnaeus) 1758

Diodon hystrix Day, 1878. *Fishes of India*, pp. 708 (Synonyms).

D. 12; A. 12; P. 20; C. 12. Tip of snout to dorsal origin 72.2; tip of snout to anal origin 48.8; tip of snout to gill opening 32.6; tip of snout to nostril 7.0; tip of snout to eye 16.3; tip of snout to vent 62.8; diameter of eye 7.0; cleft of mouth 16.3; maximum height 30.2; height of caudal peduncle 11.6; lateral depth 34.9; interorbital space 30.2; length of dorsal fin 9.3; anal 9.3; pectoral 19.8; caudal 15.1; per cent of standard length. Number of rows of spines from snout to dorsal 19;

transverse rows of spines on interorbital 7; transverse rows of spines above pectoral bases 12. *Colour*: Light brown above, pale below; dark spot at base of most spines; body spotted all over independent of spines; fins dark spotted.

Material: One specimen 430 mm S. L. (515 mm T. L.) from shore-seine at Vizhinjam

Distribution: Red sea through seas of India, Malay Archipelago and Pacific.

***Diodon holacanthus* Linnaeus**

Diodon holacanthus Linnaeus, 1758. *Syst. Nat.* e 10 pp. 335.

D. 12; A. 12; P. 22; C. 7. Tip of snout to dorsal origin 80.0; tip of snout to anal origin 78.5; tip of snout to gill opening 43.7; tip of snout to nostril 10.4; tip of snout to eye 17.4; tip of snout to vent 69.4; diameter of eye 10.4; cleft of mouth 13.9; maximum height 34.7; height of caudal peduncle 7.0; lateral depth 41.7; inter orbital space 31.2; length of dorsal fin 20.8; anal 20.8; pectoral 20.1; caudal 20.8 per cent of standard length. Number of rows of spines from snout to dorsal 14; transverse rows of spines above pectoral bases 12; transverse rows of spines on interorbital 7. *Colour*: Body light grey; pale yellowish white blotches immediately behind dorsal base; fins without spot; dark blotches on the inter orbital space, post orbital above pectoral, in front of dorsal and base of dorsal; base of most spines with yellow spot in fresh specimens.

Material: One specimen 144 mm S. L. (174 mm T. L.) from shore seine at Vizhinjam

Distribution: South African Coasts, now south west coast of India.

***Diodon maculifer* Kaup**

Diodon maculifer Kaup, 1855. *Wieg. Archiv. Naturge.* P. 229.

D. 12; A. 12-13; P. 20; C. 7. Tip of snout to dorsal origin 86.0; tip of snout to anal origin 89.0; tip of snout to gill opening 47.4; tip of snout to nostril 7.4; tip of snout to eye 15.8; tip of snout to vent 78.7; diameter of eye 11.6; cleft of mouth 12.6; maximum height 63.2; height of caudal peduncle 7.4; lateral depth 74.0; Inter-orbital space 31.6; length of dorsal fin 12.6; anal 9.5; pectoral 19.0; caudal 23.2 per cent of standard length. Number of rows of spines from snout to dorsal 17; transverse rows of spines above pectoral base 9. *Colour*: Body light brown with dark velvety brown patches on the dorsal side; minute black spots on the body, conspicuous on the caudal peduncle; fins spotted.

Material: One specimen 95 mm S. L. (120 mm T. L.) from shore seines at Vizhinjam.

Distribution: South African coasts and now south west coast of India.

Remarks: Smith (1961) recognised *D. maculifer* as a valid species but de Beaufort (1962) has considered it a synonym of *D. holacanthus*. The material collected at Vizhinjam consisted of three distinct species of *Diodon* and hence full descriptions of three species were given. Based on the differences observed in the present material we consider *D. maculifer* as a separate species from *D. holacanthus*.

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