

ON SOME INTERESTING AND NEW RECORDS OF
MARINE FISHES FROM INDIA*

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WHILE examining the fish landings by shore seines and trawl nets at various fishing centres along the Palk Bay and Gulf of Mannar in the vicinity of Mandapam the author came across several specimens of *Drepane longimana* (Bloch and Schneider) which is little known and *Drepane punctata* (Linnaeus) which was recognised as the only valid species of the genus *Drepane*. A study of these specimens has shown that these two species are distinct as shown by some authors (vide Text). A brief comparative account of these two species is given in this paper, along with a few remarks and key to distinguish the two species. The author has also been able to collect specimens of *Platycephalus isacanthus* Cuvier from the above catches, and a single specimen of *Stethojulis interrupta* (Bleeker) from the inshore waters of Gulf of Mannar caught in dragnet, whose occurrence, in Indian seas, is so far not known. Brief descriptions of these two species are also given in this paper.

Family: DREPANIDAE

Drepane longimana (Bloch and Schneider)

This species was first described by its authors from Tranquebar. Cuvier and Valenciennes (1831) studied the specimens of the genus *Drepane*, both morphologically and anatomically and distinguished the two species *D. longimana* (Bloch and Schneider) and *D. punctata* (Linnaeus). Cantor (1850) also recognised the two species as valid. But subsequently Günther (1860), Bleeker (1877) and Day (1878) recognised *D. punctata* only as the valid species. Lele (1924) revised the genus *Drepane* and established both anatomically and morphologically, the distinctness of the two species. However Weber and de Beaufort (1936) considered *D. punctata* as valid and relegated *D. longimana* to its synonymy. Smith (1949) believed that, the Genus *Drepane* consists 'possibly two species'. Herre (1953) pointed out the value of Lele's (*op. cit.*) work and stated that 'the dissection of numerous specimens in conjunction with a study of this paper showed that *D. longimana* is a valid species'. Munro (1955) refers only to *D. punctata* without any mention of the other species.

In spite of its common occurrence in trawl catches and first description from south-east coast of India and the latter revision of the genus *Drepane* by Lele, *D. longimana* is not well known especially in India. Since the species of the genus *Drepane* are commercially important, a brief comparative description is given along with a key to distinguish the two species.

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Thirty specimens of both males and females of *D. longimana* (Plate I, A) ranging from 97-180* mm. in total length and fifty specimens of both sexes of *D. punctata* (Plate I, B) ranging from 88-502 mm. in total length collected during November 1965 to October 1966 have been examined in this study. It has been found that sexes are alike as regards the colour pattern, external form and other anatomical characters in both the species. The specimens are deposited in the Reference Collection Museum of Central Marine Fisheries Research Institute, *D. longimana* No. CMFRI-F79/506 and *D. punctata* No. CMFRI-F79/188a.

The meristic characters of both the species are given below.

D. longimana, D. VIII, 21-22; A. III, 17-19; P I. 17; P 2. I, 5; L I. 50-55; Gill rakers 14-15.

D. punctata, D. IX, 21-22; A. III, 18-19; P I. 17; P 2. I. 5; L I. 50-55, Gillrakers 15-16.

The most important morphological and anatomical differences between the two species, which also agree with Lele's observations, are given in Table I and certain body proportions in per cent of total length are presented in Table II.

TABLE I

Morphological and anatomical differences between D. longimana and D. punctata

Character	<i>D. longimana</i>	<i>D. punctata</i>
I. MORPHOLOGICAL		
(a) Dorsal spines	Always 8. Radial between first two vertebrae supports the first dorsal spine only. 3rd spine longest.	Always 9. Radial between first two vertebrae supports the first two dorsal spines. 4th spine longest.
(b) Colour	4-9 vertical dark bands on each side or bands absent and body silvery.	Each side with 4-11 vertical rows of dark spots or with rows of spots with underlying bands or with both rows of spots and dark bands.
(c) Lateral line.	Makes a strong upward curve.	Makes a low symmetrical arch.
II. ANATOMICAL		
(a) Air-bladder.	Two short anterior and two long tubular posterior horns. About 15 short and variously branched caeca on each side. Three pairs of caeca on the inner margins of the posterior horns.	Two short anterior and two long tubular posterior horns. At each of the anterior corners two lateral caeca, the posterior long and sends out lateral flattened branches. A pair of caeca on the inner margins of the posterior horns.
(b) Pyloric caeca.	Three.	Two.
(c) Liver.	Bilobed, long and thin.	Bilobed, short and thick. The dorsal side is produced into irregular prominences.

* Since the manuscript was sent to press the author examined two specimens of *D. longimana* from Colachel (S.W. Coast of India), measuring 277 and 360 mm., and a single specimen of the same species 211 mm. long from Cape Comorin which agree in all details with the specimens of the lower size range of this species studied in this work.

TABLE II

Body proportions of D. longimana and D. punctata in per cent of total length
(Number of specimens in each case : 13)

S. No.	Morphometric character	<i>D. longimana</i> Range of T. L. 97-180 mm. (139.3 mm.)	<i>D. punctata</i> Range of T.L. 88-251 mm. (147.5 mm.)
1.	Height of body	66.00-70.75 (68.44)	65.33-75.00 (69.54)
2.	Length of head	24.32-28.88 (27.26)	24.56-30.09 (27.69)
3.	Length of caudal	21.17-25.77 (23.48)	21.05-26.21 (23.86)
4.	Length of Pectoral	42.26-49.08 (46.80)	44.80-51.39 (48.17)
5.	Diameter of eye	8.24-10.34 (8.93)	7.39-11.36 (9.25)

Parentheses indicate the mean.

From the above comparison it is clear that although the two species show overlapping body proportions they differ strikingly in the morphological and anatomical

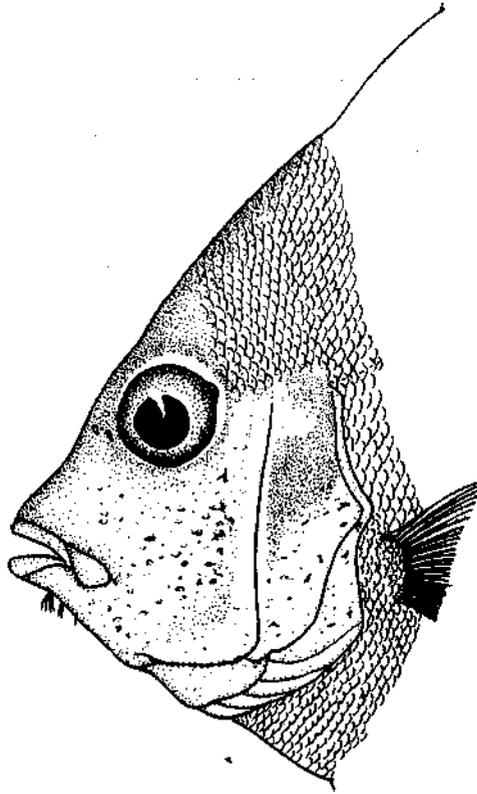


FIG. 1. Head of *Drepane punctata* (Linnaeus) (T.L. 133 mm.) showing the position of barbels.

characters mentioned. Based on the above differences a key to distinguish the two species is given below.

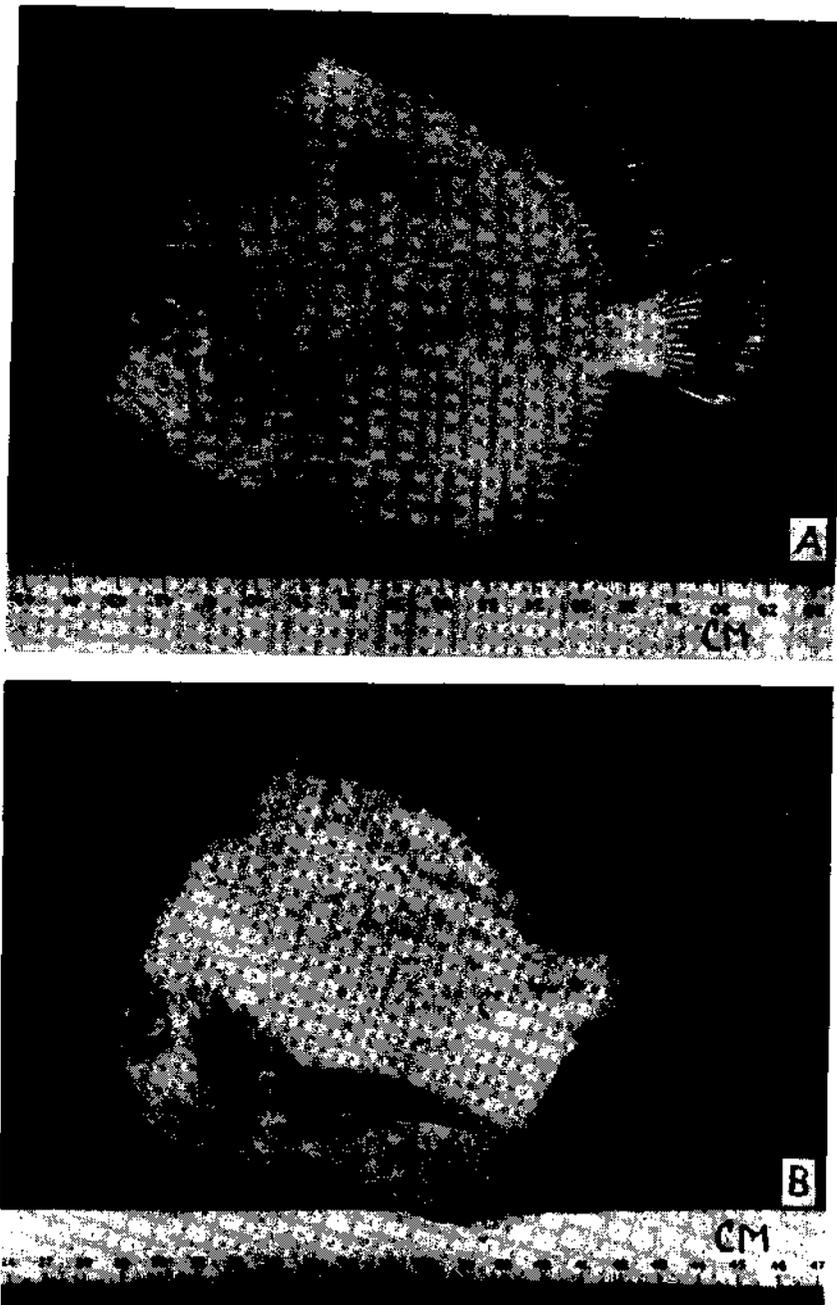


PLATE I, A. *Drepane longimana* (Bloch and Schneider). B. *Drepane punctata* (Linnaeus).

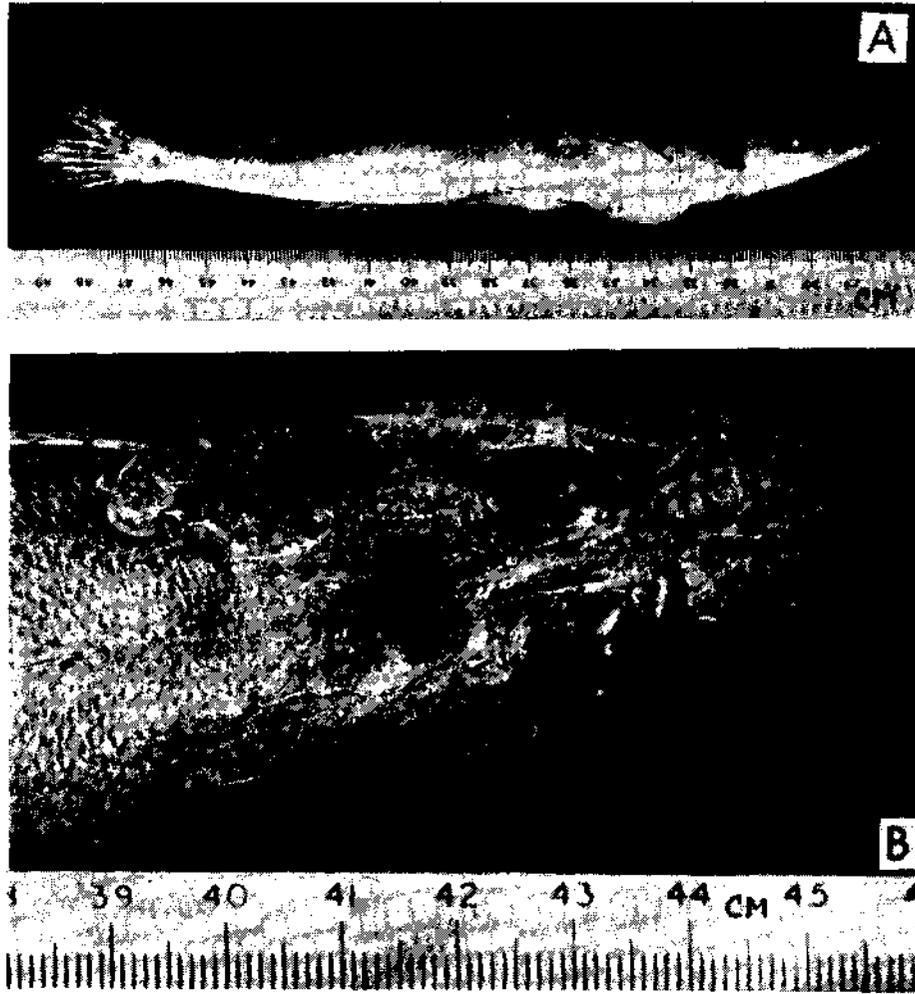


PLATE II, *Platycephalus isacanthus* Cuvier. A. Lateral view (note the subopercular flap).
B. Dorsal view of head.

KEY TO THE SPECIES

1. Spinous dorsal with 9 spines, 4th spine longest ; vertical rows of dark spots with or without underlying black bands on sides ; pyloric caeca 2
..... *Drepane punctata*
2. Spinous dorsal with 8 spines, 3rd spine longest ; no dark spots ; with or without dark bands on sides ; pyloric caeca 3..... *Drepane longimana*

Remarks : In this connection it may be worthwhile to mention the presence of small barbels (Fig. 1) measuring 3-5 mm in length, below the chin in both the species, which seem to have hitherto remained unnoticed by the earlier authors. These are arranged in 3-4 transverse rows ; those of the succeeding rows shorter than the preceding. In *D. punctata* their number varies from 2-10 and they appear to get reduced as the fish grows ; and beyond 270 mm in total length, they are altogether absent. In *D. longimana* the number varies from 4-10 in all the specimens examined. The barbels are longer and thinner in *D. longimana* when compared to those of *D. punctata*.

Distribution : The distribution of *D. longimana* extends from the west and east coasts of Africa through Red Sea, seas of India to Australia and that of *D. punctata* from Red Sea and the east coast of Africa through seas of India to Australia.

Family : LABRIDAE

Stethojulis interrupta (Bleeker) (Fig. 2)

Material : A single specimen from Gulf of Mannar near CMFRI jetty, 79 mm., deposited in the Reference Collection Museum of Central Marine Fisheries Research Institute No. CMFRI, F69/583.

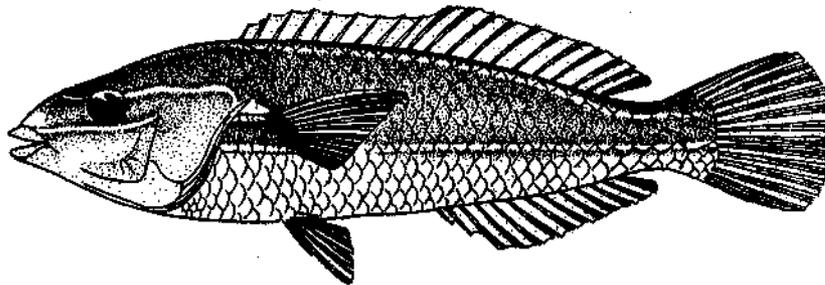


FIG. 2. *Stethojulis interrupta* (Bleeker) 79 mm.

D. IX, 11 ; A. III, 11 ; Pl. 14 ; P 2. I, 5 ; Ll. 28 ; Ltr. 2/1/9.

Height of body 3.8, length of head 2.7, length of pectoral 4.4, snout vent length 1.5 and snout to dorsal origin 2.7 in length without caudal and 4.6, 3.3, 5.6, 1.8 and 3.3 respectively in total length. Snout 3, eye 6 in length of head. Eye 2 in snout and 1.5 in interorbital space.

Head naked except near the occiput where the scales are small when compared to those on sides of body and scales on thorax slightly larger than those on sides of body. Mouth small, horizontal, teeth in jaws incisiviform in a single series with a well developed canine at the corner of the mouth. Lateral line continuous but bent obliquely after the 18th scale running on two scales and thereafter runs horizontally on 8 scales to the middle of caudal. Dorsal spines stiff and pungent. Pectorals about as long as head without snout.

Colour : In fresh condition reddish brown above and creamy below. The body with longitudinal red colour bands on sides. A longitudinal band, beginning from nape runs closely below the base of dorsal fin to the upper caudal rays. Another from middle of snout runs backward and downward through the upper border of eye to the dorsal edge of gill opening and ends just above the dark brown spot dorsal to the pectoral fin base ; another from tip of snout extends along lower edge of eye to the preopercular border ; a short band from gill opening to upper base of pectoral and below this another band runs parallel to this from gill opening to the anterior border of pectoral, interrupted here, but continues further after five scales to the middle of caudal. A dark blotch at pectoral axil. All the colour bands turn dull white on formalin preservation.

Distribution : Previously known from the Red Sea and east coast of Africa as far south as Bashee (cape province) and from Singapore, Indonesia, Coast of China, Philippines and New Guinea. The present report is the first from the central Indian Ocean.

Family : PLATYCEPHALIDAE

Platycephalus isacanthus Cuvier (Plate II, A)

Material : Thirty specimens from Palk Bay and Gulf of Mannar in the vicinity of Mandapam ranging from 144-211 mm T.L. Two specimens deposited in the Reference Collection Museum of Central Marine Fisheries Research Institute No. CMFRI. F. 144/573.

D. IX, 12 ; A. 12 ; P I. 19-20 ; P 2. I, 5 ; L I. 55-57 ; Ltr. 8-10/1/14-17 ; Gill rakers 5-6.

Head 2.9-3.1 in standard length, 3.4-3.8 in total length. Height 7.4-10.1 in standard length 8.9-12.2 in total length. Body elongate dorsal side convex and ventral side flat. Head depressed (Plate II, B) its width 1.6-1.9 in its length. Maxilla reaching to below front border of eye. Eye 4.1-5.1 in head ; 1.2-1.6 in snout. The iris extending on the pupil is divided into a number of cirri. The supraorbital ridge serrated posteriorly with 6-9 small spines, the last one bigger than the preceding ones forming the beginning of the superior postorbital ridge. The superior postorbital ridge smooth ending in two small spines. The inferior postorbital ridge with 5-6 small spines, the last one somewhat larger than the others, terminating near the beginning of the lateral line. The suborbital ridge with a spine below the middle of eye, another below hind border of eye, and some times a third spine indistinct, at the base of the upper preopercular spine. Lateral line smooth, except for 4-5 anteriormost scales provided with small spines. A well developed triangular skinny flap present on the subopercle. The first dorsal spine

about as long as eye; the third spine longest. Pectorals rounded, length of pectoral 5.16-6.12 in standard length and 6.24-7.76 in total length. Ventrals not quite reaching anal. Caudal rounded.

Colour : In fresh condition reddish brown dorsally, light yellow ventrally. Dorsal spines and rays with small dark spots. Pectorals with small dark spots. Caudal with dark spots on rays as well as on membrane. Sometimes three to four broad dark brown cross bands on the upper side of the body which may disappear on preservation.

Distribution : The known distribution of the species extends westwards from Northern Australia and Waigeu through Philippines, Macao (South of Hong Kong) and Tourane (Viet Nam) to Singapore and the present record from the east coast of India is of interest.

Day (1878) described seven species of platycephalids from the seas around India. The description of the flat head given by him under the name *Platycephalus carbunculus* Cuvier and Valenciennes was found similar to that of *P. carbunculus* Cantor by Bleeker (1878) who described the same as a new species, *P. cantori*. *P. carbunculus* Valenciennes (1838) was reported from Bombay on the western coast of India, but Rao (1966) while giving a key to the known Indian species of *Platycephalus* in his paper '*Platycephalus bengalensis* sp. nov. from Bay of Bengal' did not include *P. carbunculus* Valenciennes. He included *P. pristiger* Cuvier and stated that it occurs in the Bay of Bengal off Waltair. Thus the number of species of *Platycephalus* (seven by Day including *P. cantori*, *P. carbunculus* Valenciennes, *P. bengalensis* Rao, *P. pristiger* Cuvier and *P. isacanthus* Cuvier) occurring in Indian seas becomes eleven.

SUMMARY

The distinctness of *Drepane longimana* (Bloch and Schneider) is corroborated, from the study of the specimens from Gulf of Mannar and Palk Bay. The occurrence of *Stethojulis interrupta* (Bleeker) and *Platycephalus isacanthus* Cuvier in the Indian seas (from the east coast of India) is reported for the first time.

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