

ON SOME FISHES FROM THE MADRAS COAST WITH DESCRIPTION OF A NEW SPECIES OF THE FAMILY CLINIDAE

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(With 1 Text-figure)

I—INTRODUCTION

The fishes treated in this paper were collected along the south-east coast of India during the period 1964-1967 by the staff of the Southern Regional Station, Zoological Survey of India. The collection contains seventy-six species belonging to fifty six genera and forty families. Although small, the collection is interesting, as it includes a hitherto undescribed species of the family Clinidae. Most of the species in the collection have a wide distribution and need no special remarks. Such species as *Ambassis interrupta* Bleeker, *Ostorhynchus endekataenia* (Bleeker) and *Triacanthus weberi* Chaudhuri, which have not so far been recorded from the Madras coast, are noteworthy. The list of species, description of of the new clinid, redescription of the new records and discussion of the taxonomic position of some the sciaenids are given in the following pages.

II—SYSTEMATIC LIST OF THE COLLECTIONS

Class ELASMOBRANCHII
Order LAMNIFORMES
Family CARCHARINIDAE

1. *Scoliodon palasorrah* (Cuvier)

Order RAJIFORMES
Family TRYGONIDAE

2. *Dasyatis (Amphotistius) imbricata* (Bloch and Schneider)

Order TORPEDINIFORMES
Family TORPEDINIDAE

3. *Narcine brunnea* Annandale

Class TELEOSTOMI
Order CLUPEIFORMES
Family DUSSUMIERIIDAE

4. *Dussumieria acuta* Valenciennes

Family CLUPEIDAE

5. *Pellona ditchela* Valenciennes

Family ENGRAULIDAE

6. *Stolephorus baganensis* Hardenberg
7. *Stolephorus commersonii* Lacépède
8. *Stolephorus indicus* (van Hasselt)
9. *Stolephorus tri* (Bleeker)
10. *Thryssa dussumieri* (Valenciennes)
11. *Thryssa purava* (Hamilton)

Order CYPRINIFORMES

Family PLOTOSIDAE

12. *Plotosus canius* Hamilton

Family TACHYSURIDAE

13. *Tachysurus nenga* (Hamilton)

Order MUGILIFORMES

Family SPHYRAENIDAE

14. *Sphyraena chrysotaenia* Klunzinger

Family MUGILIDAE

15. *Mugil kelaartii* Günther
16. *Mugil vaigiensis* Quoy and Gaimard

Order POLYNEMIFORMES

Family POLYNEMIDAE

17. *Polydactylus indicus* (Shaw)

Order PERCIFORMES

Family LATIDAE

18. *Lates calcarifer* (Bloch)

Family AMBASSIDAE

19. *Ambassis interrupta* Bleeker

Family SERRANIDAE

20. *Epinephelus chlorostigma* (Valenciennes)
21. *Epinephelus merra* Bloch
22. *Epinephelus tauvina* (Forskål)
23. *Epinephelus undulosus* (Quoy and Gaimard)

Family THERAPONIDAE

24. *Therapon jarbua* (Forskål)
25. *Autisthes puta* (Cuvier)
26. *Pelates quadrilineatus* (Bloch)

Family APOGONIDAE

27. *Apogon frenatus* Valenciennes
28. *Archamia lineolata* (Cuvier)
29. *Ostorhynchus endekataenia* (Bleeker)

Family SILLAGINIDAE

30. *Sillago sihama* (Forskål)

Family CARANGIDAE

31. *Alectis indicus* (Rüppell)
 32. *Carangoides malabaricus* (Schneider)

Family LUTIANIDAE

33. *Lutianus johnii* (Bloch)

Family LIOGNATHIDAE

34. *Gazza minuta* (Bloch)
 35. *Gerres abbreviatus* Bleeker
 36. *Leiognathus bindus* (Valenciennes)
 37. *Leiognathus blochii* (Valenciennes)
 38. *Leiognathus dussumieri* (Valenciennes)
 39. *Leiognathus equulus* (Forsk.)
 40. *Leiognathus lineolatus* (Valenciennes)
 41. *Leiognathus splendens* (Cuvier)
 42. *Secutor ruconius* (Hamilton)

Family SCOLOPSIDAE

43. *Scolopsis leucotaenia* (Bleeker)

Family SCIAENIDAE

44. *Johnius belengerii* (Cuvier)
 45. *Johnius dussumieri* (Cuvier)
 46. *Johnius carutta* Bloch
 47. *Johnius* sp.
 48. *Umbrina dussumieri* Valenciennes
 49. *Umbrina macroptera* Bleeker
 50. *Wak axillaris* (Cuvier)
 51. *Wak sina* (Cuvier)

Family SPARIDAE

52. *Rhabdosargus sarba* (Forsk.)

Family MULLIDAE

53. *Upeneus tragula* Richardson

Family LABRIDAE

54. *Anampses* sp.

Family BLENNIIDAE

55. *Blennius cristatus* Linnaeus
 56. *Entomacrodus vermiculatus* (Valenciennes)

Family CLINIDAE

57. *Helcogramma indicus* sp. n.

Family CALLIONYMIDAE

58. *Callionymus lineatus* (Cuvier and Valenciennes)

Family TRICHIURIDAE

59. *Leputracanthus savala* (Cuvier)

- Family STROMATEIDAE
60. *Parastromateus niger* (Bloch)
 Family GOBIIDAE
61. *Acentrogobius cyanomos* (Bleeker)
 Family PERIOPHTHALMIDAE
62. *Boleophthalmus boddaerti* (Pallas)
 Family SCORPAENIDAE
63. *Apistus carinatus* (Bloch and Schneider)
64. *Parascorpaena bleekeri* (Day)
 Family SYNANCEIDAE
65. *Minous monodactylus* (Bloch and Schneider)
 Order PLEURONECTIFORMES
 Family BOTHIDAE
66. *Pseudorhombus arsius* (Hamilton)
 Family CYNOGLOSSIDAE
67. *Cynoglossus lingua* Hamilton
 Order TETRADONTIFORMES
 Family TRIACANTHIDAE
68. *Pseudotriacanthus strigilifer* (Cantor)
69. *Triacanthus biaculeatus* (Bloch)
70. *Triacanthus weberi* Chudhuri
 Family LAGOCEPHALIDAE
71. *Gastrophysus lunaris* (Bloch)
72. *Gastrophysus scleratus* (Gmelin)
73. *Lagocephalus inermis* (Schlegel)
74. *Troquigener oblongus* (Bloch)
 Family TETRAODONTIDAE
75. *Chelonodon patoca* (Hamilton)
 Order LOPHIIFORMES
 Family ANTENNARIIDAE
76. *Antennarius hispidus* (Bloch)

III—SYSTEMATIC ACCOUNT

Family AMBASSIDAE

***Ambassis interrupta* Bleeker**

1852. *Ambassis interrupta* Bleeker, *Nat. Tijdschr. Ned.-Indie*, **3**, p. 696 (type loc: Ceram, Batavia, Java).

1875. *Ambassis interrupta*: Day, *Fish. India*, p. 53, pl. 15, fig. 5.

2 specimens, 48-58 mm. in standard length, Kovelong, 5.vii.66.

D. VII.1.9; A. III.8; 1.25; Predorsal scales 12; Gill-rakers 6+1+25.

Mouth oblique, chin prominent. Maxilla reaches below front border of orbit. Supraorbital ridge with a posteriorly directed spine. Interoperculum with 13 serrations. Lateral line interrupted below 8th dorsal spine and continued a few scales further back along median line. Colour-in-alcohol-yellowish brown. Opercles, lateral median band on body and caudal silvery. Membrane between second and third dorsal spine dusky.

Remarks.—This species has previously been reported only from the Andamans, the East Indies and the Philippines. This is the first record of this species from the East coast of India.

Family APOGONIDAE

Ostorhynchus endekataenia (Bleeker)

1852. *Apogon endekataenia* Bleeker (*nec.* Day), *Nat. Tijdschr. Ned.-Indie*, 3 p. 419 [type loc: Banka].

1 specimen, 84 mm. in standard length; Cape Comorin, 22.xii.64.

Remarks.—Though this species has a wide geographical range of distribution from the East coast of Africa through Ceylon, the Andamans to the East Indies, the Philippines, Australia and Tasmania, it was recorded only recently by us (Talwar & Sen, 1967) from the north-east coast of India.

Family SCIAENIDAE

Johnius sp.

2 specimens, 37-64 mm. in standard length, 28.xii.64.

D.X.I. 28; A. II. 7; P. 17; Gill rakers 6+14.

Depth of body 0.9 in head length. Eye in anterior half of head. Preopercle crenulate; its angle rounded. Mouth terminal, lower jaw included with five symphyseal pores. Teeth villiform, outer row of upper jaw and inner row of lower jaw enlarged, not caninoid. Second anal spine strong, equals first anal ray. Gas bladder T-shaped of the otolithini-type.

Remarks.—It has not been possible to specifically determine these two specimens. They have the *Johnius* type of gas bladder but the strong second anal spine suggests relationships with *Nibea* or a genus allied to it.

Umbrina dussumieri Valenciennes

1833. *Umbrina dussumieri* Valenciennes, *Hist. nat. Poiss.*, 5, p. 481 (type loc: Coromandel coast).

1876. *Umbrina dussumieri*: Day, *Fish. India*, p. 183, pl. 43, fig. 23.

1 specimen, 69 mm. in standard length, Thondi, 13.i.65.

Remarks.—The generic position of this barbel bearing species is still uncertain. Chu, Lo and Wu (1963) gave no generic importance to the mental barbel and hence accommodated this species in *Johnius*. Since there was already a *Johnius dussumieri* (without a barbel), Chu *et. al* (*l.c.*) used the synonym *Johnius amblycephalus* for the barbel bearing species. Trewavas (1964) accommodated this species in *Dendrophysa* but subsequently (1965) restricted *Dendrophysa* to its

type species, *D. russelli* (Cuvier) only. The generic relationship of this species is under study.

Umbrina macroptera Bleeker

1853. *Umbrina macropterus* Bleeker, *Nat. Tijdschr. Ned.-Indie*, **4**, p. 254 (type loc: Sumatra).
 1876. *Umbrina macroptera*: Day, *Fish. India*, p. 182.

1 specimen, 80 mm. in standard length, Madras, 5.xi.66.

Remarks.—The generic position of this barbel bearing species is also uncertain. Trewavas (1964) accommodated it in *Dendrophysa* but subsequently separated it out since *D. macroptera* has a gas bladder similar to *Johnius* and suggested that the species should be accommodated in *Johnius* or a genus closely allied to it. The genus *Johnius* as is now understood is used to include species without a barbel. A new genus would probably have to be erected to accommodate *U. dussumieri* and *U. macroptera*. Further studies are in progress.

Wak axillaris (Cuvier)

1830. *Corvina axillaris* Cuvier, *Hist. nat. Poiss.*, **5**, p. 113 (type loc: Malabar coast).
 1876. *Sciaena axillaris*: Day, *Fish. India*, p. 188, pl. 43, fig. 6.
 1963. *Wak axillaris*: Chu, Lo & Wu, *Fish. China*, p. 33.

3 specimens, 30-46 mm. in standard length, Tuticorin, 27.xii.64.

5 specimens, 72-98 mm. in standard length, Madras, 5.xi.66.

Remarks.—This species has a gas bladder of the pseudotolithine type. The genera to which this species was earlier assigned have either the otolithine or sciaenine type of gas bladder. Studies on the generic position of this species are in progress and the results will be published elsewhere.

Family CLINIDAE

Helcogramma indicus sp. n.

[Text-fig. 1]

Description.—Dorsal III. XIII. 9-10; height of first dorsal spine three fourths in first spine of second dorsal; first dorsal originates above hind border of preopercle.

Anal I. 17; origin below 7th spine of second dorsal.

Pectoral 15-16, the upper 9 rays divided, the lower 6-7 rays simple. Pelvic 2; jugular, inner ray the longer; rays bound together at their base by a membrane.

Scales in the lateral series 33-34, composed of both pored and unpored scales; lateral line separated from base of second dorsal fin by six scales.

Gill rakers on first gill arch (one paratype examined) 5 short stumps; gill filaments about $\frac{1}{2}$ eye diameter. Gill membranes united but free from isthmus.

Depth of body 21.15-23.07; head length 30.76-32.85; postorbital length of head 12.85-15.38; snout length 8.19-10.00; length of maxilla 11.42-11.53; length of pectoral fin 33.33-36.53; length of pelvic fin

21.79-22.85; length of second dorsal fin base 30.76-34.28; length of third dorsal fin base 20.51-23.07; length of anal fin base 37.17-40.98; length of first dorsal spine 12.82-15.38; length of third spine of second dorsal 14.28-17.30; all in percent of standard length. Eye diameter 29.16-30.43, postorbital length 39.13-50.0; snout length 25.0-31.25; length of first dorsal spine 39.13-50.0; all in percent of head length.

Mouth slightly oblique, large; maxilla extending upto midpoint of eye; interorbital space narrow, about $\frac{1}{2}$ eye diameter. Short lobate tentacle above orbit and nostril. Lateral line concavely curved downward behind pectoral fin thence continuing along mid-lengthwise axis of body. Caudal rounded. Teeth conical, arranged in bands, outer most row in both jaws slightly enlarged; vomer with a V-shaped patch of minute teeth; a small patch of teeth at head of palatine. Scales—otenoid; absent on head, nape and pectoral base. Colour-in-alcohol—reddish brown with 5-6 indistinct cross bars; each scale outlined with dark pigment spots. Pectorals with five cross bands; first dorsal dusky, the other vertical fins with 2-3 rows of brown spots. Orbital tentacle black, nasal tentacle pale. Pectoral with a dark ocellus.

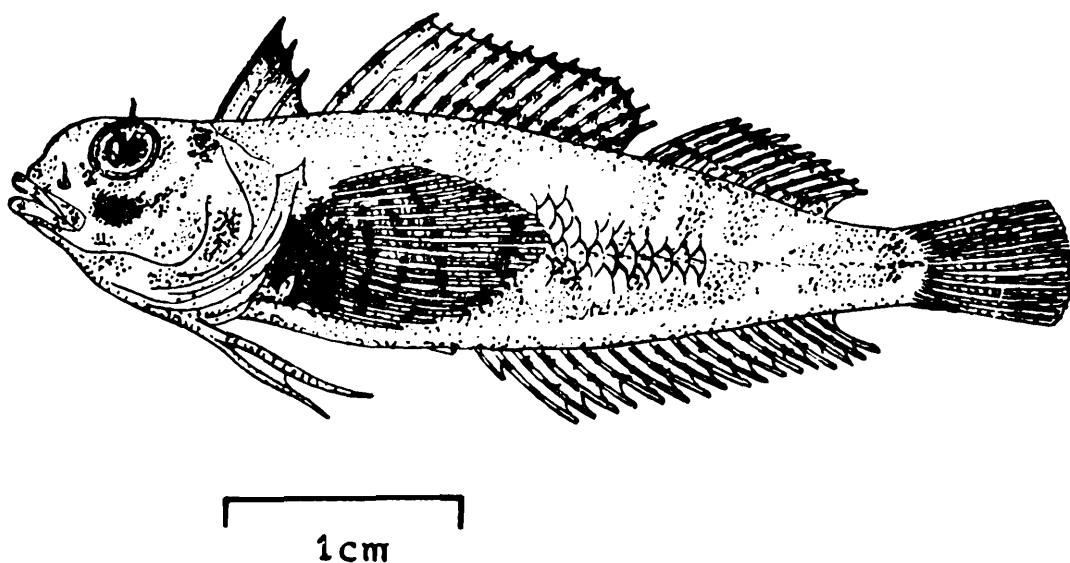
Material.—Holotype: 39 mm. in standard length; Cape Comorin (Tamil Nadu, South India); Southern Regional Station of the Zoological Survey of India; 22.xii.64. Deposited Zoological Survey of India, F. 6074/2. Paratypes: Three specimens, 26.0, 30.5 and 35.0 mm. in standard length; Reg. No. F. 6075/2, other data as the holotype.

Measurements (in mms.) and Meristic Counts

	<i>Holotype</i>		<i>Paratypes</i>	
		1	2	3
Pelvic fin length	8.5	8.0	6.5	5.5
Total length	47.0	43.0	36.5	31.5
Standard length	39.0	35.0	30.5	26.0
Body depth	9.0	8.0	6.5	5.5
Head length	12.0	11.5	10.0	8.0
Postorbital length	5.5	4.5	4.0	4.0
Snout length	3.5	3.5	2.5	2.5
Maxilla length	4.5	4.0	3.5	3.0
Eye diameter	3.5	3.5	3.0	2.5
Pectoral fin length	13.0	12.5	11.0	9.5
Pelvic fin length	8.5	8.0	6.5	5.5
Dorsal fin	III.XIII.10	III.XIII.9	III.XIII.9	III.XIII.10
Anal fin	I.17	I.17	I.17	I.17
Pectoral fin	9+7	9+7	9+7	9+7
I. l. scales	34	33	34	34

Remarks.—The new clinid is referable to the genus *Helcogramma* McCulloch and Waite, 1918 as redefined by Schultz (1960). This genus is usually referred to the family Clinidae but sometimes separated from it and grouped in the family Tripterygiidae.

Helcogramma indicus sp. n. agrees well with Day's (1876) description of *Tripterygium trigloides* (Bleeker). Day (l.c.) based his account on a drawing from Sir Walter Elliot's collection of fishes from the Waltair coast. Weber (1913) and Herre (1953) were uncertain about the systematic status of Day's *trigloides*. Though Day's description is brief, it appears to be the present new species.



Text-fig. 1. *Helcogramma indicus* Talwar and Sen.
— Sketch of the holotype.

The new species is most closely related to *Helcogramma trigloides* (Bleeker) and *Helcogramma obtusirostre* (Klunzinger). The three species have the first dorsal with three spines, and scales are absent on head, breast and pectoral fin base. The new species differs from *H. trigloides* (Blkr.) and *H. obtusirostre* (Klunz.) in having lesser number of scales in the lateral series (33-34 vs 36-55) and in having an orbital and nasal tentacle. Further, the head of *H. obtusirostre* (Klunz.) is completely covered with small black specks. This is the fourth record of a representative of the Clinidae from Indian waters, the species recorded earlier are: *Paracristiceps filifer* (Steindachner), *Tripterygion fasciatum* Weber and *Cristiceps helei* Day.

Family TRIACANTHIDAE

Triacanthus weberi Chaudhuri

1910. *Triacanthus weberi* Chaudhuri, J. & Proc. Asiat. Soc. Bengal 6 (9), p. 497, fig. 1 (type loc: Bay of Bengal).

1 specimen, 130 mm. in standard length, Cape Comorin, 22.xii.64.
D V. 22 ; A 19 ; P 13 ; C 14.

Depth of body slightly more than the length of head and both about 3.0 in standard length. Eye diameter 3.2 in head length, equals interorbital width. Eight incisors in each jaw, the lower slightly prominent and prolonged.

Remarks.—This specimen agrees well with the syntypes of this species. Chaudhuri (1910) described the species on the basis of 11 specimens from the Arakan coast, mouth of the Hooghly river and the Orissa coast. Subsequent to the original discovery, this is the first report of this species and the present record extends its distribution to the south-east coast of India.

IV—SUMMARY

This paper is based on a collection of fishes from the south-east coast of India. Although small, the collection is interesting, as it

includes a hitherto undescribed species of the family Clinidae. Most of the species in the collection have a wide distribution and need no special remarks. Such species as *Ambassis interrupta* Bleeker, *Ostorhynchus endekataenia* (Bleeker) and *Triacanthus weberi* Chaudhuri, which have not been recorded earlier from the Madras coast, are noteworthy. A detailed description of *Helcogramma indicus* sp. n. is given in the paper.

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