

FISHES OF THE FAMILY CARANGIDAE FROM VISAKHAPTANAM :
LIST OF SPECIES AND NEW RECORDS FROM THE INDIAN SEAS

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ABSTRACT

Fishes of family Carangidae are widely distributed in the Indian coastal waters. At Visakhapatnam on the east coast of India, they are captured both by traditional gear and by trawl nets. In spite of recent studies, confusion still persists in the identification of many Indo-Pacific carangids, because many of the earlier descriptions were inadequate and because in carangids the colour, pigmentation and body proportions change with growth. So, the present study was undertaken to determine the species represented in the area and to provide full descriptions of them. A total of fifty species were recorded from Visakhapatnam. Of these four species *Carangoides dinema*, *Seriola rivoliana*, *S. dumerili* and *S. lalandi* are new records from Indian sub-continent.

INTRODUCTION

FISHES of the family Carangidae are widely distributed in Indian coastal waters. In the traditional fishery involving nonmechanised craft like canoes and catamarans and gear like boat-seine and hand-line particularly, carangids have been regularly captured although in small numbers, over a long period. But after the wide spread introduction of the trawling, it is observed that the representation of the juveniles of the species which normally grow to a larger size, as also of species not so far represented in catches by traditional gear, has increased significantly. Since Visakhapatnam (17° 44'N; 83°23' E) on the east coast has become the base-port, for 250 mini-trawlers and 80 Mexican trawlers were operated and it was observed that carangids are regularly represented in their catches. Hence the present work was undertaken to obtain a picture of the species represented in the area. Simultaneously observations were also made on species represented in catches by the traditional gear. The first work on the carangids of Visakhapatnam was that

of Russell (1803). He recorded 19 species from the local catches and named them after their local names in Telugu. Karuna (1959) recorded 16 species of carangids from Visakhapatnam based on catches from traditional gear.

The carangid species occurring at Visakhapatnam were identified following the key given for Indo-Pacific carangids by Smith-Vaniz (1980) in FAO species identification sheets. Smith-Vaniz has placed *Parastromateus* under family Carangidae since it possesses many carangid characters like exposed upper jaw, presence of lateral line scutes and the number of vertebrae 10 + 14, etc. The above work was followed in listing the species and in the identification of new records of carangids.

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MATERIAL AND METHODS

The material was collected in weekly samples from the fishing harbour during the years 1976-1980. A few samples were collected from the fish markets and from traditional catches. The colour and pigmentation was noted in fresh condition. The meristic and morphometric data were collected from fresh specimens and from specimens preserved in 10% formalin. In case of larger specimens 10% formalin was injected into the body cavity.

RESULTS

A total of 50 species were collected from Visakhapatnam. The species are listed below:

1. *Alectis ciliaris* (Bloch, 1788)
2. *A. indicus* (Rüppell, 1830)
3. *Alepes djedaba* (Forskål, 1775)
4. *A. melanoptera* Swainson, 1839
5. *A. vari* (Cuvier, 1833)
6. *A. kalla* (Cuvier, 1833)
7. *Atropus atropus* (Bloch & Schneider, 1801)
8. *Atule mate* (Cuvier, 1833)
9. *Carangoides armatus* (Rüppell, 1830)
10. *C. coeruleopinnatus* (Rüppell, 1830)
11. *C. chrysophrys* (Cuvier, 1833)
12. *C. dinema* Bleeker, 1851
13. *C. ferdau* (Forskål, 1775)
14. *C. gymnostethus* (Cuvier, 1833)
15. *C. hedlandensis* (Whitley, 1933)
16. *C. malabaricus* (Bloch & Schneider, 1801)
17. *C. praeustus* (Bennett, 1830)
18. *C. talamparoides* Bleeker, 1852
19. *C. plagiotaenia* Bleeker, 1857
20. *C. uii* Wakiya, 1924
21. *Caranx ignobilis* (Forskål, 1775)
22. *C. melampygus* Cuvier, 1833
23. *C. sem* Cuvier, 1833
24. *C. sexfasciatus* Quoy & Gaimard, 1824
25. *C. tille* Cuvier, 1833
26. *Decapterus kurroides* Bleeker, 1855
27. *D. macarellus* (Cuvier, 1833)
28. *D. macrosoma* Bleeker, 1851
29. *D. russelli* (Rüppell, 1830)
30. *Elagatis bipinnulatus* (Quoy & Gaimard, 1824)
31. *Gnathanodon speciosus* (Forskål, 1775)
32. *Megalaspis cordyla* (Linnaeus, 1758)
33. *Naucrates ductor* (Linnaeus, 1758)
34. *Parastromateus niger* (Bloch, 1795)
35. *Scomberoides ommersonianus* Lacépède 1801
36. *S. lysan* (Forskål, 1775)
37. *S. tala* (Cuvier, 1832)
38. *S. tol* (Cuvier, 1832)
39. *Selar crumenophthalmus* (Bloch, 1793)
40. *Selaroides leptolepis* (Cuvier, 1833)
41. *Seriola dumerili* (Risso, 1810)
42. *S. lalandi* Valenciennes, 1833
43. *S. rivollana* Valenciennes, 1833
44. *Seriolina nigrofasciata* (Rüppell, 1829)
45. *Trachinotus blochii* (Lacépède, 1801)
46. *T. baillonii* (Lacépède, 1801)
47. *T. mookalee* Cuvier, 1832
48. *T. russellii* Cuvier, 1832
49. *Ulua mentalis* (Cuvier, 1833)
50. *Uraspis helvola* (Forster, 1801)

Of these species listed above *C. williamsi* (= *C. sem*) was recorded by Dutt & Shameem (1976), *C. hedlandensis* recorded by Williams *et al.* (1980) and *C. tille* and *D. kurroides* were reported by Shameem (1986) as new records from Indian waters. The following four species described below are new records from Indian seas.

Carangoides dinema Bleeker, 1851

Material: 2 specimens (juveniles) measuring 125 & 155 mm TL.

Description: D₁VIII, D₂I, 17-18; A II I, 15-16; Lateral line scutes 23-25; Gill rakers 7-8 + 16-17 = 23-24.

Body ovate to subovate, compressed. Eye smaller than snout. Jaws, vomer, palatine and tongue with villiform teeth. Lobe of soft dorsal longer than head. Breast partly naked. Lateral line becomes straight below 11 to 12th dorsal ray. Colour greenish blue above. Dorsal and caudal with black margin. Distal part of ventrals black. Dark vertical bands on body.

The two juveniles were collected on 26.6.86 from the fishing harbour.

Seriola rivoliana Valenciennes, 1833

Material: 2 specimens measuring 350 and 356 mm respectively.

Description: D₁ VI, D₂ I, 27-28; A II, 18-19; Gill rakers 6-8 + 8-9 = 25-26.

Body elongate, compressed. Dorsal profile more convex than the ventral profile. Upper jaw broad and reaches the anterior margin of the pupil. Jaws, vomer and palatines are provided with villiform teeth. Dorsal fin lobe conspicuously longer than the pectoral. Body greyish blue above paler below. A conspicuous stripe from upper margin of eye to nape by which it can be distinguished from other species.

The above two specimens were collected on 10.11.86 from Waltair fish market.

Seriola dumerili (Risso, 1810)

Material: Single specimen (male) measuring 380 mm TL.

Description: D₁ VII, D₂ I, 29; A II, 18; Gill rakers 5 + 16 = 21.

Body elongate, compressed slightly. Dorsal profile more convex than the ventral profile. Upper jaw broad reaching almost the posterior edge of the pupil. Jaws, Vomer and palatines with villiform teeth. Dorsal fin lobe equal to pectoral length. Gill rakers normal.

Colour bluish grey and paler below. No conspicuous pigmentation on body. Stomach contains squids.

This specimen was collected on 21-11-86 from Waltair fish market.

Seriola lalandi Valenciennes, 1833

Material: 1 specimen (male) measuring 400 mm TL.

Description: D₁ VIII, D₂ I, 31; A II, I, 25; Gill rakers 8 + 20 = 28.

Body oblong, moderately compressed. Upper jaw reaches front border of eye. Lateral line becomes straight below 15th dorsal ray. Soft dorsal length equal to snout length. Jaws, vomer and palatines with fine teeth. Gill rakers normal in size. Colour bluish grey above and silvery below. No conspicuous pigmentation on body.

The above specimen was collected on 8-12-86 from Waltair fish market.

DISCUSSION

In recent years a number of known species have been recorded as new records from Indian waters. Rao (1968) has recorded *D. russelli* (as *D. dayi*) from Indian waters. Reuben (1968, 1969) has recorded *Uraspis helvola* from Visakhapatnam. Sreenivasan (1975, 1978) has reported 8 carangid species as new records from Vizhinjam region.

The carangid fishery at Visakhapatnam starts generally during the months of August to March with peak catches from September to February. At this time the inshore waters are rich in plankton comprising a large variety of zooplanktonic elements after the monsoon. Hence it seems that carangids and most other fish utilise the continental waters, with regions of plenty of food as feeding grounds. During summer fishing activity is temporarily withheld due to strong winds.

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