

ON A COLLECTION OF FISH FROM CANNANORE-MANGALORE SECTOR OF THE WEST COAST OF INDIA

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INTRODUCTION

A Faunastic Survey was undertaken in January-February, 1989 by one of us (M. S.) to the coastal areas between Cannanore and Mangalore (Fig. 1) in pursuance of the Annual Programme "Coastal and Marine Ecosystems of the coasts of India" of the Marine Biological Station, Zoological Survey of India, Madras and this paper is based on the fish fauna collected during the survey. Fishes collected between Kakinada and Gopalpur coast pertaining to this programme was already published (Krishnan and Mishra, 1993). The ultimate aim of these surveys is to have a comprehensive account of the fauna of the coasts of India. After Day (1865), there has not been much taxonomic information added to our knowledge of the fish fauna of the Malabar coast. It is, therefore, believed that this paper will be of great use to the students of ichthyotaxonomy of the area.

The arrangement of families in this account is after Nelson (1984) and the genera and species are arranged in alphabetical order. The type locality of the species are given in parentheses after the first citation. All the examined samples are registered and deposited with the Marine Biological Station, Zoological Survey of India, Madras.

SYSTEMATIC ACCOUNT

Class : CHONDRICHTHYES
Order : CARCHARHINIFORMES
Family : CARCHARHINIDAE

1. *Rhizoprionodon acutus* (Ruppell)

1837. *Carcharias acutus* Ruppell, *Neue Wirbel. Fauna Abyss., Fische Rothen Meeres*, (11) : 65, pl. 18, fig. 4 (Djedda, Red Sea).

1984. *Rhizoprionodon acutus* : Compagno, *FAO Fish. Synop.*, (125) 4(2) : 525.

Material examined : 1, 222 mm, Kasaragod, 31.01.89, ZSI/MBS-1878.

Distribution : Indo-west Pacific; West coast of Africa.

2. *Scoliodon laticaudatus* Muller & Henle

1838. *Scoliodon laticaudatus* Muller & Henle, *Syst. Besch. Plagiost.*, (1) : 27 (Aus Indien).

Material examined: 1, 245 mm, Kotikulam, 30.01.89, ZSI/MBS-2001; 1, 265 mm, Kasaragod, 31.01.89, ZSI/MBS-1877; 1, 117 mm, Cannanore, 01.02.89, ZSI/MBS-2012.

Distribution : Tanzania; Persian Gulf to Indonesia, north to Japan.

Family : SPHYRNIDAE

3. *Sphyrna lewini* (Griffith & Smith)

1834. *Zygaena lewini* Griffith & Smith, in Cuvier, Griffith & Smith, *Anim. Kingd.*, 10 : 640, pl. 50 (South coast of New Holland, Australia).

1984. *Sphyrna lewini* : Compagno, *FAO Fish. Synop.*, (125) 4(2) : 545.

Material examined : 1, 290 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1800.

Distribution : Circumglobal in coastal temperate and tropical seas.

Class : OSTEICHTHYES

Order : ANGUILLIFORMES

Family : CONGRIDAE

4. *Uroconger lepturus* (Richardson)

1845. *Congrus lepturus* Richardson, *Zool. Voy. Sulphur* : 106, pl. 56, figs. 1-6 (Canton, China).

1986. *Uroconger lepturus* : Castle, in Smith & Heemstra, *Smith's Sea Fishes* : 165, fig. 40.12.

Material examined : 5, 290-340 mm TL, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1901; 4, 200-310 mm TL, off Mangalore, 27.01.89, ZSI/MBS-1902 ; 1, 300 mm TL, Someshwar, 28.01.89, ZSI/MBS-1766.

Distribution : Indo-Pacific.

Family : MURAENESOCIDAE

5. *Muraenesox cinereus* (Forsskal)

1775. *Muraena tata cinerea* Forsskal, *Descript. animal.* : 22 (Red Sea).

1991. *Muraenesox cinereus* : Talwar & Jhingran, *Inland Fishes of India*, 1 : 92.

Material examined : 1, 580 mm TL, Cannanore, 01.02.89, ZSI/MBS-2000.

Distribution : Eastern Mediterranean, Red Sea, through India to Indonesia, north to Japan, south to northern Australia.

Order : CLUPEIFORMES

Family : CLUPEIDAE

Subfamily : DUSSUMIERINAE

6. *Dussumieria acuta* Valenciennes

1847. *Dussumieria acuta* Valenciennes, *Hist. nat. poiss.*, 20 : 467 (Bombay, Coromandel).

Material examined : 1, 115 mm, Puthiyangadi, 02.02.89, ZSI/ MBS-1899.

Distribution : Gulf of Aden, to India, Indonesia, the Philippines.

Remarks : This sample is slightly slender (21% of SL) than the normal range (22 to 29% of SL) cited by Whitehead (1985). This is assigned to the taxon based on the presence of a number of striae on the posterior part of scales.

Subfamily : CLUPEINAE

7. *Escualosa thoracata* (Valenciennes)

1847. *Kowala thoracata* Valenciennes, *Hist. nat. poiss.*, 20 : 363 (Pandicherry).

1985. *Escualosa thoracata* : Whitehead, *FAO Fish. Synop.*, (125) 7(1) : 119.

Material examined : 7, 57-62 mm, Kotikulam, 30. 01. 89, ZSI/MBS-2005.

Distribution : Coast of Pakistan, eastward to Indonesia, the Philippines to Papua New Guinea, Australia.

8. *Sardinella albella* (Valenciennes)

1847. *Kowala albella* Valenciennes, *Hist. nat. poiss.*, 20 : 362 (Pondicherry).

1985. *Sardinella albella* : Whitehead, *FAO Fish. Synop.*, (125) 7(1) : 91.

Material examined : 1, 78 mm, Kotikulam, 30.01.89, ZSI/MBS-2004.

Distribution : Indo-West Pacific.

9. *Sardinella gibbosa* (Bleeker)

1849. *Clupea gibbosa* Bleeker, *J. Ind. Arch.*, 3 : 72 (Macassar).

1985. *Sardinella gibbosa* : Whitehead, *FAO Fish. Synop.*, (125) 7(1) : 100.

Material examined : 5, 113-123 mm, Puthiyangadi, 02.02.89, ZSI/MBS-1898.

Distribution : Indo-west Pacific.

10. *Sardinella longiceps* Valenciennes

1847. *Sardinella longiceps* Valenciennes, *Hist. nat. poiss.*, 20 : 273 (Pondicherry).

Material examined : 2, 90 & 140 mm, off Mangalore, 27.01.89, ZSI/MBS-1895 ; 8, 82-139 mm, Kotikulam, 30.01.89, ZSI/MBS-2003 ; 1, 81 mm, Kasaragod, 31.01.89, ZSI/MBS-1908 ; 2, 94 & 99 mm, Cannanore, 01.02.89, ZSI/MBS-1894.

Distribution : Gulf of Aden, Gulf of Oman, to southern coasts of India, Andamans.

Subfamily : DOROSOMATINAE

11. *Anodontosoma chacunda* (Hamilton)

1822. *Clupanodon chacunda* Hamilton, *Fishes of Ganges* : 246 (Ganges estuaries).

1985. *Anodontosoma chacunda* : Whitehead, *FAO Fish. Synop.*, (125) 7(1) : 252.

Material examined : 1, 115 mm, Kasaragod, 31.01.89, ZSI/MBS-1886; 1, 114 mm, Puthiyangadi, 02.02.89, ZSI/MBS-1887.

Distribution : Persian Gulf to Indonesia, the Philippines, Viet Nam, to northern Australia, Caroline Islands, New Caledonia.

12. *Nematalosa nasus* (Bloch)

1795. *Clupea nasus* Bloch, *Naturges. ausland. Fische*, 9 : 116, pl. 429, fig. 1 (Malabar).

1985. *Nematalosa nasus* : Whitehead, *FAO Fish. Synop.*, (125) 7(1) : 248.

Material examined : 2, 55 & 79 mm, Kasaragod, 31.01.89, ZSI-MBS-1903 ; 1, 62 mm, Cannanore, 01.02.89, ZSI/MBS-1913.

Distribution : Persian Gulf to Andaman Sea, Gulf of Thailand, South China Sea, the Philippines, north to southern Japan.

Family : PRISTIGASTERDAE

13. *Ilisha melastoma* (Schneider)

1801. *Clupea melastoma* Schneider, *Syst Ichthyol. Bloch* : 427 (Coromandel).

1985. *Ilisha melastoma* : Whitehead, *FAO Fish. Synop.*, (125) 7(1) : 272.

Material examined : 1, 104 mm, off Mangalore, 27.01.89, ZSI/MBS-1925.

Distribution : South-west coast of India to Calcutta in northeast coast; Java Sea, South China Sea, East China Sea.

14. *Ilisha striatula* Wongratana

1983. *Ilisha striatula* Wongratana, *Jap. J. Ichthyol.*, 29 (4) : 396, fig. 13 (Karachi, Porto Novo, Madras, Tuticorin).

Material examined : 2, 105 & 115 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1926 ; 1, 116 mm, Someshwar, 28.01.89, ZSI/MBS-1774 ; 1, 106 mm, Kasaragod, 31.01.89, ZSI/MBS-2021.

Distribution : Coasts of India and Pakistan.

15. *Opisthopterus tardoore* (Cuvier)

1829. *Pristigaster tardoore* Cuvier, *Regne animal*. (2nd ed.), 2 : 381 (Vizagapatnam).

1985. *Opisthopterus tardoore* : Whitehead, *FAO Fish. Synop.*, (125) 7(1) : 294.

Material examined : 1, 146 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/ MBS-1896 ; 1, 120 mm, off Mangalore, 27.01.89, ZSI/MBS-1897 ; 1, 132 mm, Kotikulam, 30.01.89, ZSI/ MBS-2002; 2, 47 & 118 mm, Cannanore, 01.02.89, ZSI/MBS-1993.

Distribution : Gulf of Oman to south-east coast of India, coasts of Myanmar, Singapore and Java Sea.

Family : ENGRAULIDIDAE

16. *Stolephorus indicus* (van Hasselt)

1823. *Engraulis indica* van Hasselt, *Algemeene Konst-en Letterbode*, 1(23) : 329 (Java).

1988. *Stolephorus indicus* : Whitehead *et al.*, *FAO Fish. Synop.*, (125) 7(2) : 412.

Material examined : 1, 115 mm, Puthiyangadi, 02.02.89, ZSI/MBS-1900.

Distribution : Indo-West Pacific.

17. *Stolephorus insularis* Hardenberg

1933. *Stolephorus insularis* Hardenberg, *Natuurk. Tijdschr. Ned-Indie*, 93(2) : 260 (Java, Lingga, Bawean, Kangean, Moluccas).

Material examined : 1, 60 mm, Cannanore, 01.02.89, ZSI/MBS-1914.

Distribution : Gulf of Aden to Andaman Sea, Gulf of Thailand, Java Sea, Hong Kong, Fujian, Taiwan.

18. *Stolephorus Waitei* Jordan & Seale

1926. *Stolephorus waitei* Jordan & Seale, *Bull. Mus. comp. Zool. Harvard*, 67(11) : 380 (Queensland).

Material examined : 3, 72-85 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1922 ; 4, 73-78 mm, off Mangalore, 27.01.89, ZSI/MBS-1923 ; 1, 76 mm, Someshwar, 28.01.89, ZSI/MBS-1783 ; 2, 75 & 76 mm, Cannanore, 01.02.89, ZSI/MBS-1921 ; 5, 61-73 mm, Puthiyangadi, 02.02.89, ZSI/MBS-1924.

Distribution : South-west and east coast of India, through Java Sea, to Papua New Guinea, Queensland in Australia.

19. *Thryssa dayi* Wongratana

1983. *Thryssa (Scutengraulis) dayi* Wongratana, *Jap. J. Ichthyol.*, 29(4) : 404, fig. 24 (Bombay, Karachi).

1988. *Thryssa dayi* : Whitehead *et al.*, *FAO Fish. Synop.*, (125) 7(2) : 428.

Material examined : 3, 111-142 mm, Cannanore, 01.02.89, ZSI/MBS-1892.

Distribution : West coast of India and Pakistan.

20. *Thryssa mystax* (Schneider)

1801. *Clupea mystax* Schneider, *Syst. Ichthyol. Bloch* : 426, pl. 83 (Malabar).

1988. *Thryssa mystax* : Whitehead *et al.*, *FAO Fish. Synop.*, (125) 7(2) : 348.

Material examined : 2, 120 & 145 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1891 ; 1, 116 mm, Someshwar, 28.01.89, ZSI/MBS-1784 ; 1, 78 mm, Kotikulam, 30.01.89, ZSI/MBS-2006 ; 2, 112 & 129 mm, Kasaragod, 31.01.89, ZSI/MBS-1889 ; 7, 112-133 mm, Puthiyangadi, 02.02.89, ZSI/MBS-1890.

Distribution : Coasts of India, Myanmar, Pinang, Indonesia.

21. *Thryssa polybranchialis* Wongratana

1983. *Thryssa (Scutengraulis) polybranchialis* Wongratana, *Jap. J. Ichthyol.*, 29(4) : 402, fig. 21 (Canara, Cochin, Porto Novo, Waltair).

1988. *Thryssa polybranchialis* : Whitehead *et al.*, *FAO Fish. Synop.*, (125) 7(2) : 439.

Material examined : 3, 90-117 mm, Cannanore, 01.02.89, ZSI/MBS-1893.

Distribution : Coasts of India.

22. *Thryssa setirostris* (Broussonet)

1782. *Clupea setirostris* Broussonet, *Ichthyol.* : unpagged, pl. 2 (Tana Island, New Herbrides).

1988. *Thryssa setirostris* : Whitehead *et al.*, *FAO Fish. Synop.*, (125) 7(2) : 443.

Material examined : 1, 117 mm, Kasaragod, 31.01.89, ZSI/MBS-1888.

Distribution : Indo-west Pacific.

Family : CHIROCENTRIDAE

23. *Chirocentrus nudus* Swainson

1839. *Chirocentrus nudus* Swainson, *Nat. Hist. anim.*, 2 : 294 (Vizagapatnam).

Material examined : 1, 278 mm, off Mangalore, 27.01.89, ZSI/MBS-1955.

Distribution : Indo-West Pacific.

Order : SILURIFORMES

Family : ARIIDAE

24. *Arius dussumieri* Valenciennes

1840. *Arius dussumieri* Valenciennes, *Hist. nat. poiss.*, 15 : 84 (Malabar).

Material examined : 1, 75 mm, Cannanore, 01.02.89, ZSI/MBS-1917.

Distribution : Pakistan, India, Sri Lanka, Bangladesh, Myanmar.

25. *Arius maculatus* (Thunberg)

1792. *Silurus maculatus* Thunberg, *Kongl. Vetensk. Akad. Nya. Handl.*, 13 : 31 pl. 1, fig 2 (Japan).

1982. *Arius maculatus* : Jayaram, *Rec. zool. Surv. India, Occ. Pap.*, (37) : 23, fig. 5A, 17.

Material examined : 3, 41-99 mm, Kasaragod, 31.01.89, ZSI/MBS-1792; 1, 121 mm, Cannanore, 01.02.89, ZSI/MBS-1991.

Distribution : Pakistan, India to Indonesia, Thailand, China.

26. *Arius sona* (Mamilton)

1822. *Pimelodus sona* Hamilton, *Fishes of Ganges* : 172, 376 (estuaries of Bengal).

1982. *Arius sona* : Jayaram, *Rec. zool. Surv. India, Occ. Pap.*, (37) : 28, figs. 9, 21.

Material examined : 2, 71 & 100 mm, off Mangalore, 27.01.89, ZSI/MBS-1791

Distribution : Pakistan, India to Indonesia, Polynesia.

27. *Arius thalassinus* (Ruppell)

1837. *Bagrus thalassinus* Ruppell, *Neue Wirbel. Fauna Abyss., Fische Rothen Meeres*, 11 : 75, pl. 20, fig. 2 (Massaua, Red Sea).

1984 *Arius thalassinus* : Jayaram, in Fishcher & Bianchi, *FAO Species Identification Sheets for Fishery Purposes. W. Indian Ocean (Fishing Area 51)*, 1 : ARIID Ariu 4.

Material examined : 2, 100 & 118 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1790; 1, 113 mm, Off Mangalore, 27.01.89, ZSI/MBS-1789; 1, 98 mm, Someshwar, 28.01.89, ZSI/MBS-1764.

Distribution : Indo-West Pacific.

Order : AULOPIFORMES

Family : SYNODONTIDAE

28. *Saurida micropectoralis* Shindo & Yamada

1972. *Saurida micropectoralis* Shindo & Yamada, *Uo Jap. Soc. Ichthyol.*, 11 : 1-13; 12 : 1-14 (Gulf of Thailand).

Material examined : 2, 143 & 158 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1981; 1, 151 mm, Someshwar, 28.01.89, ZSI/MBS-1982.

Distribution : East coast of India; Andaman Sea to South China Sea, the Philippines.

Remarks : Studies of Dutt and Sagar (1981) revealed the distribution of this species upto the east coast of India. The present study further reveals the presence of this species also in the west coast of India.

29. *Saurida tumbil* (Bloch)

1795. *Salmo tumbil* Bloch, *Naturges. ausland. Fische*, 9 : 112, pl. 430 (Malabar).

1984. *Saurida tumbil* : Cressey & Waples, in Fischer & Bianchi, *FAO Species Identification Sheets for Fishery Purposes. W. Indian Ocean (Fishing Area 51)*, 4 : SYNOD Sauri 2.

Material examined : 1, 188 mm, Puthiyangadi, 02.02.89, ZSI/MBS-1980.

Distribution : East coast of Africa (excluding Kenya and Somalia) from Red Sea to Indonesia, Malay, north to China Sea, south to New South Wales (Australia).

Order : BELONIFORMES

Family : BELONIDAE

30. *Tylosurus crocodilus crocodilus* (Peron & LeSueur)

1821. *Belone crocodila* Peron & LeSueur, in LeSueur, *J. Acad. nat. Sci. Philad.*, 2 : 129 (Mauritius).

1986. *Tylosurus crocodilus crocodilus* : Collette, in Smith & Heemstra, *Smith's Sea Fishes* : 387, fig. 113.4.

Material examined : 1, 250 mm, Cannanore, 01.02.89, ZSI/MBS-1992.

Distribution : Tropical and Subtropical waters of Indo-West Pacific and Atlantic.

Family : HEMIRAMPHIDAE

31. *Hyporhamphus (Hyporhamphus) limbatus* (Valenciennes)

1846. *Hemiramphus limbatus* Valenciennes, *Hist. nat. poiss.*, 19 : 44 (Malabar, Bombay and Pondicherry).

1984. *Hyporhamphus (Hyporhamphus) limbatus* : Collette, in Fischer & Bianchi, *FAO Species Identification Sheets for Fishery Purposes. W. Indian Ocean (Fishing Area 51)*, 2 : HEMIR Hypor 4.

Material examined : 1, 134 mm, Cannanore, 01.02.89, ZSI/MBS-1979.

Distribution : Persian Gulf, through India, Myanmar to Thailand, China.

Order : SYNGNATHIFORMES

Family : FISTULARIIDAE

32. *Fistularia petimba* Lacepede

1803. *Fistularia petimba* Lacepede, *Hist. nat. poiss.*, 5 : 189 (New Britain, Reunion and equatorial Pacific).

Material examined : 1, 290 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1974.

Distribution : Indo-West Pacific, eastward to Hawaii; also in tropical Atlantic.

Order : SCORPAENIFORMES

Family : SCORPAENIDAE

33. *Pterois russellii* Bennett

1831. *Pterois russellii* Bennett, *Proc. zool. Soc. London*, 1 : 128 (India).

Material examined : 1, 121 mm, Bunder jetty, Mangalore, 26.01.89, ZSI/MBS-1947; 1, 135 mm, Puthiyangadi, 02.02.89, ZSI/MBS-2018; 1, 136 mm, Puthiyangadi, 02.02.89, ZSI/MBS-2019.

Distirbution : Indo-West Pacific.

Remarks : It is interesting to note that the left pectoral fin of the third specimen (136 mm SL) is entirely absent without having any sign of being mutilated, and it was captured alive from the trawl net.

Family : PLATYCEPHALIDAE

34. *Grammoplites suppositus* (Troschel)

1840. *Platycephalus suppositus* Troschel, *Wiegmanns Arch. Naturgesch.*, 6 : 269 (no locality)

1984. *Grammoplites suppositus* : Knapp, in Fischer & Bianchi, *FAO Species Identification Sheets for Fishery Purposes. W. Indian Ocean (Fishing Area 51)*, 3 : PLATY Gram 2.

Material examined : 1, 133 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1950; 2, 162 & 195 mm, Off Mangalore, 27. 01.89, ZSI/MBS-1949; 1, 152 mm, Cannanore, 01.02.89, ZSI/MBS-1989; 1, 153 mm, Puthiyangadi, 02.02.89, ZSI/MBS-1948.

Distribution : Red Sea to south-east coast of India.

35. *Sorsogona melanoptera* Knapp & Wongratana

1987. *Sorsogona melanoptera* Knapp & Wongratana, *Proc. Biol. Soc. Wash.*, 100(2) : 381 (Cochin).

Material examined : 2, 83 mm each, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1952; 1, 87 mm, Off Mangalore, 27.01.89, ZSI/MBS-1951; 1, 80 mm, Someshwar, 28.01.89 ZSI/MBS-1771.

Distribution : Gulf of Oman to the Andaman Sea off southern Thailand.

Order : PERCIFORMES

Family : AMBASSIDAE

36. *Ambassis gymnocephalus* (Lacepede)

1801. *Lutjanus gymnocephalus* Lacepede, *Hist. nat. poiss.*, 3 : pl. 23, fig. 3; 4 (1802) : 181, 216 (Indo-Pacific).

1986. *Ambassis gymnocephalus* : Heemstra, in Smith & Heemstra, *Smith's Sea Fishes* : 507, fig. 163.1.

Material examined : 1, 58 mm, Off Mangalore, 27.01.89, ZSI/MBS-1966; 6, 35-60 mm, Kotikulam, 30.01.89, ZSI/MBS-2007; 11, 36-55 mm, Cannanore, 01.02.89, ZSI/MBS-1965.

Distribution : Tropical waters of Indian Ocean, Indonesia and the Philippines.

Family : SERRANIDAE

37. *Epinephelus diacanthus* (Valenciennes)

1828. *Serranus diacanthus* : Valenciennes, in Cuvier & Valenciennes, *Hist. nat. poiss.*, 2 : 319 (Malabar coast, Kerala).

1993. *Epinephelus diacanthus* : Heemstra & Randall, *FAO Fish. Synop.*, (125) 6 : 140, fig. 291, pl. 121 a.

Material examined : 2, 134 & 149 mm, Off Mangalore, 27.01.89, ZSI/MBS-1973.

Distribution : Gulf of Aden to Sri Lanka, south-east coast of India.

Family : TERAPONIDAE

38. *Terapon jarbua* (Forsskal)

1775. *Sciaena jarbua* Forsskal, *Descript. animal.* : 50 (Djedda, Red Sea).

1991. *Terapon jarbua* : Talwar & Jhingran, *Inland Fishes of India*, 2 : 811.

Material examined : 1, 106 mm, Off Mangalore, 27.01.89 ZSI/MBS-1884; 2, 87 & 113 mm, Someshwar, 28.01.89, ZSI/MBS-1987; 1, 57 mm, Kasaragod, 31.01.89, ZSI/MBS-1919; 1, 104 mm, Puthiyangadi, 02.02.89, ZSI/MBS-1883.

Distribution : Indo-West Pacific.

39. *Terapon theraps* (Cuvier)

1829. *Terapon theraps* Cuvier, *Hist. nat. poiss.*, 3 : 129, pl. 53 (Java; Mahe, India).

1991. *Terapon theraps* : Talwar & Jhingran, *Inland Fishes of India*, 2 : 812, fig. 251.

Material examined : 4, 87-105 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1880; 1, 88 mm, Off Mangalore, 27.01.89, ZSI/MBS-1881; 1, 107 mm, Someshwar, 28.01.89, ZSI/MBS-1986; 1, 120 mm, Puthiyangadi, 02.02.89, ZSI/MBS-1882.

Distribution : Tropical Indo-West Pacific.

Family : PRIACANTHIDAE

40. *Priacanthus hamrur* (Forsskal)

1775. *Sciaena hamrur* Forsskal, *Descript. animal.* : 45 (Djedda, Red Sea).

1984. *Priacanthus hamrur* : Talwar & Kacker, *Commercial Sea Fishes of India* : 415.

Material examined : 2, 160 & 161 mm, Off Mangalore, 27.01.89, ZSI/MBS-1885.

Distribution : Indo-Pacific.

Family : APOGONIDAE

41. *Apogon quadrifasciatus* Cuvier

1828. *Apogon quadrifasciatus* Cuvier, in Cuvier & Valenciennes, 2 : 153 (Pondicherry).

Material examined : 1, 38 mm, Someshwar, 28.01.89, ZSI/MBS-1768.

Distribution : Indo-West Pacific.

Family : SILLAGINIDAE

42. *Sillago sihama* (Forsskal)

1775. *Atherina sihama* Forsskal, *Descript. animal.* : 70 (Lohaja, Red Sea).

1992. *Sillago sihama* : McKay, *FAO Fish. Synop.*, (125) 14 : 59, fig. 130.

Material examined : 3, 95-121 mm, Kasaragod, 31.01.89, ZSI/MBS-1985; 1, 86 mm, Cannanore, 01.02.89, ZSI/MBS-1911.

Distribution : Indo-West Pacific.

Family : LACTARIIDAE

43. *Lactarius lactarius* (Schneider)

1801. *Scomber lactarius* Schneider, *Syst. Ichthyol. Bloch* : 31 (Tranquebar).

1984. *Lactarius lactarius* : Talwar & Kacker, *Commercial Sea Fishes of India* : 427, fig. 165.

Material examined : 3, 93-128 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1944; 1, 133 mm, Kasaragod, 31.01.89, ZSI/MBS-1942; 1, 149 mm, Puthiyangadi, 02.02.89, ZSI/MBS-1943.

Distribution : Tropical Indo-West Pacific.

Family : ECHENEIDAE

44. *Echeneis naucrates* Linnaeus

1758. *Echeneis naucrates* Linnaeus, *Syst. Nat.*, 1 : 261 (Pelago Indico) (Species name misspelled).

Material examined : 1, 220 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1975.

Distribution : In all tropical and temperate warm waters, except Eastern Pacific.

Family : CARANGIDAE

45. *Alepes djedaba* (Forsskal)

1775. *Scomber djedaba* Forsskal, *Descript. animal.* : 56 (Djedda, Red Sea).

1984. *Alepes djedaba* : Talwar & Kacker, *Commercial Sea Fishes of India* : 438, fig. 168.

Material examined : 2, 114 & 135 mm, Off Mangalore, 27.01.89, ZSI/MBS-1935; 1, 80 mm, Kasaragod, 31.01.89, ZSI/MBS-1936; 1, 101 mm, Puthiyangadi, 02.02.89, ZSI/MBS-2013.

Distribution : Indian Ocean, Sumatra, Thailand, the Philippines, Taiwan and eastern Mediterranean.

46. *Atropus atropos* (Schneider)

1801. *Brama atropos* Schneider, *Syst. Ichthyol. Bloch* : 98 (Tranquebar).

1984. *Atropus atropos* : Smith-Vaniz, in Fischer & Bianchi, *FAO Species Identification Sheets for Fishery purposes. W. Indian Ocean (Fishing Area 51)*, 1 : CARAN Atrop 1.

Material examined : 1, 97 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1929; 1, 154 mm, Off Mangalore, 27.01.89. ZSI/MBS-1930.

Distribution : Persian Gulf to Indonesia, Gulf of Thailand, Taiwan, Okinawa.

47. *Caranx para* Cuvier

1833. *Caranx para* Cuvier, in Cuvier & Valenciennes, *Hist. nat. poiss.*, 9 : 58 (Malabar).

Material examined 3, 78-108 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1938; 1, 110 mm, Off Mangalore, 27.01.89, ZSI/MBS-1937; 1, 104 mm, Someshwar, 28.01.89, ZSI/MBS-1772, 3, 90-92 mm, Kasaragod, 31.01.89, ZSI/MBS-1939.

Distribution : Pakistan to Indonesia, east ward to Papua New Guinea, Australia, north to Japan.

Remarks Generic allocation is tentative (Smith-Vaniz, 1984).

48. *Decapterus russelli* (Ruppell)

1830. *Caranx russelli* Ruppell, *Atlas Reise nordl. Afrika, Fische Rothen Meeres* : 99 (Red Sea).

1986. *Decapterus russelli* : Smith-Vaniz, in Smith & Heemstra, *Smith's Sea Fishes* : 651, fig. 210.29.

Material examined : 1, 85 mm, Someshwar, 28.01.89, ZSI/MBS-1773.

Distribution : Indo-West Pacific.

49. *Megalaspis cordyla* (Linnaeus)

1758. *Scomber cordyla* Linnaeus, *Syst. Nat.*, : 1 (ed. 10) : 298 (no locality).

1991. *Megalaspis cordyla* : Talwar & Jhingran, *Inland Fishes of India*, 2 : 824.

Material examined : 2, 154 & 173 mm, Off Mangalore, 27.01.89, ZSI/MBS-1930 & 1931; 1, 168 mm, Cannanore, 01.02.89, ZSI/MBS-1932.

Distribution : Indo-West Pacific.

50. *Scomberoides tala* (Cuvier)

1832. *Chorinemus tala* Cuvier, in Cuvier & Valenciennes, *Hist. nat. poiss.*, 8 : 377 (Malabar).

1984. *Scomberoides tala* : Talwar & Kacker, *Commercial Sea Fishes of India* : 478.

Material examined : 1, 155 mm, Off Mangalore, 27.01.89, ZSI/MBS-1940; 1, 175 mm, Cannanore, 01.02.89, ZSI/MBS-1934; 1, 176 mm, Puthiyangadi, 02.02.89, ZSI/MBS-1954.

Distribution : From south-west coast of India to Andamans, Indonesia, Gulf of Thailand, the Philippines. Australia and the Solomon Islands.

Remarks : According to Smith-Vaniz (1984) "it probably occurs on the west coast of India." But Talwar and Jhingran (1991) stated that this species is known only from Sri Lanka in the Indian Ocean. The presence of this species in the collected samples from the west coast of India confirms the view of Smith-Vaniz (1984).

Family : LEIOGNATHIDAE

51. *Leiognathus bindus* (Valenciennes)

1835. *Equula bindus* Valenciennes, *Hist. nat. poiss.*, 10 : 78 (Vizagapatnam).

1991. *Leiognathus bindus* : Talwar & Jhingran, *Inland Fishes of India*, 2 : 829, fig. 256.

Material examined : 1, 83 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS- 1786.

Distribution : Indo-West Pacific.

52. *Leiognathus brevirostris* (Valenciennes)

1835. *Equula brevirostris* Valenciennes, *Hist. nat. poiss.*, 10 : 83 (Malabar).

1984. *Leiognathus brevirostris* : Talwar & Kacker, *Commercial Sea Fishes of India* : 506.

Material examined : 1, 81 mm, Puthiyangadi, 02.02.89, ZSI/MBS-1799.

Distribution : Seas of India, Sri Lanka, through Indonesia to China, the Philippines.

53. *Leiognathus dussumieri* (Valenciennes)

1835. *Equula dussumieri* Valenciennes, *Hist. nat. poiss.*, 10 : 77, pl. 283 (Coromandel).

1984. *Leiognathus dussumieri* : Talwar & Kacker, *Commercial Sea Fishes of India* : 509.

Material examined : 1, 59 mm, Kasaragod, 31.01.89, ZSI/MBS- 1794.

Distribution : Madagascar; Pakistan, Sri Lanka, India, Singapore, Celebes, the Philippines.

54. *Leiognathus equulus* (Forsskal)

1775. *Scomber equula* Forsskal, *Descript. animal.* : 75 (Red Sea).

1984. *Leiognathus equulus* : Talwar & Kacker, *Commercial Sea Fishes of India* : 510, fig. 198.

Material examined : 1, 83 mm, Bunder Jetty, Mangalore, 26.01.89. ZSI/MBS-1787.

Distribution : Tropical Indo-West Pacific.

55. *Leiognathus splendens* (Cuvier)

1829. *Equula splendens* Cuvier, *Regne Animal*. (ed. 2), 2 : 212 (India).

1991. *Leiognathus splendens* : Talwar & Jhingran, *Inlands Fishes of India*, 2 : 832.

Material examined : 10, 41-84 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1788; 2, 41 & 68 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1796; 2, 66 & 68 mm, Off Mangalore, 27.01.89, ZSI/MBS-1795; 1, 47 mm, Off Mangalore, 27.01.89, ZSI/MBS-1904; 2, 70 & 80 mm, Someshwar, 28.01.89, ZSI/MBS-1769; 2, 45 & 50 mm, Kasaragod, 31.01.89, ZSI/MBS-1793; 1, 47 mm, Cannanore, 01.02.89, ZSI/MBS-1912; 5, 44-51 mm, Cannanore, 01.02.89, ZSI/MBS-1994.

Distribution : Indo-West Pacific.

56. *Secutor insidiator* (Bloch)

1787. *Zeus insidiator* Bloch, *Naturges. ausland. Fische*, 8 : 41, pl. 192, figs. 2 & 3 (Suratte, India).

1991. *Secutor insidiator* : Talwar & Jhingran, *Inland Fishes of India*, 2 : 833, fig. 258

Material examined : 1, 77 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1797; 4, 72-79 mm, Off Mangalore, 27.01.89, ZSI/MBS-2022; 2, 68 & 76 mm, Someshwar, 28.01.89, ZSI/MBS-1770; 1, 75 mm, Kasaragod, 31.01.89, ZSI/MBS-1798.

Distribution : Indo-West Pacific.

Family : GERREIDAE

57. *Gerres lucidus* Cuvier

1830. *Gerres lucidus* Cuvier, in Cuvier & Valenciennes, *Hist. nat. poiss.*, 6 : 477 (Pondicherry).

Material examined : 1, 72 mm, Cannanore, 01.02.89, ZSI/MBS-1916.

Distribution : India, Sri Lanka to south-east Asia and the South China Sea.

Remarks : This is often considered as *Gerres limbatus* Cuvier. According to Woodland (1984), "*G. limbatus* differs from *G. lucidus* mainly in absence of the black spot on the tip of spinous part of dorsal fin, but probably conspecific" Based on the descriptions provided by Day (1875), Weber and de Beaufort (1931) and Woodland (1984), it is observed that apart from the spinous dorsal fin tip with black spot, there are three rows of scales between 5th dorsal spine and lateral line (cf. four rows in *G. limbatus*); pectoral fin tip reaching to the level of anus (cf. reaching to anal fin origin in *G. limbatus*). Hence, it is considered that both the taxa are valid. Further, the authors are of the opinion that synonymising *G. lucidus* with *Gerres setifer* (Hamilton) by Weber and de Beaufort (1931) is erroneous.

Family : HAEMULIDAE

58. *Pomadasys maculatum* (Bloch)

1797. *Anthias maculatus* Bloch, *Naturges. ausland. Fische*, 7 : 9, pl. 326, fig. 2 (East Indies).

1986. *Pomadasys maculatum* : Smith & McKay, in Smith & Heemstra, *Smith's Sea Fishes* : 570, fig. 179.15.

Material examined : 1, 71 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS-1927; 1, 73 mm, Off Mangalore, 27.01.89, ZSI/MBS-1928; 1, 64 mm, Someshwar, 28.01.89, ZSI/MBS-1984; 1, 71 mm, Kasaragod, 31.01.89, ZSI/MBS- 1909.

Distribution : Indo-West Pacific.

Family : NEMIPTERIDAE

59. *Nemipterus japonicus* (Bloch)

1791. *Sparus japonicus* Bloch, *Naturges. ausland. Fische*, 5 : 110, (no locality).

1990. *Nemipterus japonicus* : Russel, *FAO Fish Synop.*, (125) 12 : 40, fig. 72, pl. 2 b.

Material examined : 2, 90-100 mm, Cannanore, 01.02.89, ZSI/MBS-1998 & 1970; 1, 87 mm, Puthiyangadi, 02.02.89, ZSI/MBS-1971.

Distribution : Indo-West Pacific.

60. *Nemipterus randalli* Russell

1986. *Nemipterus randalli* Russell, *Sanckenberg. Biol.*, 67 : 23, fig. 2 (Persian Gulf, Red Sea, Gulf of Aden, Zansibar, Seychelles, Madagascar, Pakistan, India).

Material examined : 1, 76 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS- 1968; 2, 68 & 87 mm, Off Mangalore, 27.01.89, ZSI/MBS- 1967; 3, 63-73 mm, Off Mangalore, 27.01.89, ZSI/MBS- 1969; 1, 87 mm, Cannanore, 01.02.89, ZSI/MBS- 1999.

Distribution : East coast of Africa, Red Sea, Persian Gulf to east coast of India, Andamans.

Family : SCIAENIDAE

61. *Johnieops sina* (Cuvier)

1830. *Corvina sina* Cuvier, *Hist. nat. poiss.*, 5 : 122 (Pondicherry and Malabar).

1991. *Johnieops sina* : Talwar & Jhingran, *Inland Fishes of India*, 2 : 854.

Material examined : 1, 55 mm, Someshwar, 28.01.89, ZSI/MBS-1767; 3, 57-63 mm, Kotikulam, 30.01.89, ZSI/MBS- 2010; 1, 88 mm, Cannanore, 01.02.89, ZSI/MBS-1959.

Distribution : Gulf of Oman, through India, Indonesia to the Philippines, and northern Australia.

62. *Johnius belangerii* (Cuvier)

1830. *Corvina belangerii* Cuvier, *Hist. nat. poiss.*, 5 : 120 (Pondicherry).

1991. *Johnius belangerii* : Talwar & Jhingran, *Inland Fishes of India*, 2 : 856.

Material examined : 9, 40-111 mm, Cannanore, 01.02.89, ZSI/MBS- 1962.

Distribution : Pakistan, India through Indonesia to eastern coast of Australia, north to Japan.

63. *Johnius elongatus* Mohan

1976. *Johnius elongatus* Mohan, *Matsya*, 1 : 19, fig. 1 (Veraval, Gujarat).

Material examined : 1, 88 mm, Kotikulam, 30.01.89, ZSI/MBS- 2011.

Distribution : West coast of India, and Sri Lanka.

64. *Johnius glaucus* (Day)

1876. *Sciaena glaucus* Day, *Fishes of India* : 192, pl. 46, fig 2, (Malabar and Bombay).

1984. *Johnius glaucus* : Mohan, in Fischer & Bianchi, *FAO Species Identification Sheets for Fishery Purposes. W. Indian Ocean (Fishing Area 51)*, 4 : SCIAEN John 8.

Material examined : 4, 60-78 mm, Cannanore, 01.02.89, ZSI/MBS-1996.

Distribution : West coast of India.

65. *Kathala axillaris* (Cuvier)

1830. *Corvina axillaris* Cuvier, *Hist. nat. poiss.*, 5 : 113 (Malabar).

1984. *Kathala axillaris* : Talwar & Kacker, *Commercial Sea Fishes of India* : 656, fig. 261.

Material examined : 3, 56-67 mm, Kasaragod, 31.01.89, ZSI/MBS- 1961; 4, 59-66 mm, Cannanore, 01.02.89, ZSI/MBS- 1995; 10, 55-110 mm, Cannanore, 01.02.89, ZSI/MBS- 1958.

Distribution : India, Sri Lanka, probably eastward to Malay.

66. *Otolithes ruber* (Schneider)

1801. *Johnius ruber* Schneider, *Syst. Ichthyol. Bloch* : 75, pl. 17 (Tranquebar).

1984. *Otolithes ruber* : Talwar & Kacker, *Commercial Sea Fishes of India* : 644, fig. 267.

Material examined : 7, 55-93 mm, Cannanore, 01.02.89, ZSI/MBS- 1960; 1, 64 mm, Cannanore, 01.02.89, ZSI/MBS- 1997.

Distribution : Indo-West Pacific.

Family : MULLIDAE

67. *Upeneus sulphureus* Cuvier

1829. *Upeneus sulphureus* Cuvier, *Hist. nat. poiss.*, 3 : 450 (Anjer Straits of Sunda).

Material examined : 1, 133 mm, Off Mangalore, 27.01.89, ZSI/MBS-1946.

Distribution : Tropical Indo-West Pacific.

68. *Upeneus vittatus* (Forsskal)

1775. *Mullus vittatus* Forsskal, *Descript. animal.* : 31 (Djedda).

1986. *Upeneus vittatus* : Ben-Tuvia, in Smith & Heemstra, *Smith's Sea Fishes*: 613, pl. 70, fig. 196.13.

Material examined : 2, 84 & 108 mm, Someshwar, 28.01.89, ZSI/MBS- 1785; 1, 125 mm, Puthiyangadi, 02.02.89, ZSI/MBS- 1943.

Distribution : Indo-West Pacific.

Family : SCATOPHAGIDAE

69. *Scatophagus argus* (Linnaeus)

1766. *Chaetodon argus* Linnaeus, *Syst. Nat.* (ed. 12), 1 : 464 (India).

1991. *Scatophagus argus* : Talwar & Jhingran, *Inland Fishes of India*, 2 : 875, fig. 264.

Material examined : 1, 110 mm, Cannanore, 01.02.89, ZSI/MBS- 1990.

Distribution : India, Sri Lanka, through Indonesia, to Australia, the New Hebrides and the Solomon Islands.

Family : MUGILIDAE

70. *Liza macrolepis* (Smith)

1849. *Mugil macrolepis* Smith, *Illustr. Zool. S. Africa*, 4 : pl. 28, fig. 2 (Freshwater lakes and rivers of South Africa).

1991. *Liza macrolepis* : Talwar & Jhingran, *Inland Fishes of India*, 2 : 891.

Material examined : 1, 115 mm, Kasaragod, 31.01.89, ZSI/MBS-2017.

Distribution : Indo-West Pacific.

Family : SPHYRAENIDAE

71. *Sphyraena obtusata* Cuvier

1829. *Sphyraena obtusata* Cuvier, *Hist. nat. poiss.*, 3 : 350, pl. 10, fig. 2 (Pondicherry).

Material examined : 2, 142 & 182 mm, Off Mangalore, 27.01.89, ZSI/MBS- 1953.

Distribution : Indo-Pacific.

Remarks : The exact distribution of small baracudas of the Indo-Pacific is not known because of difficulties in identification of the types and other museum specimens (De Sylva and Williams, 1986). The present specimens are assigned to the species after de Sylva (1975) and Rose (1984).

Family : POLYNEMIDAE

72. *Eleutheronema tetradactylum* (Shaw)

1804. *Polynemus tetradactylus* Shaw, *General Zoology*, 5 : 155 (Vizagapatnam).

1991. *Eleutheronema tetradactylum* : Talwar & Jhingran, *Inland Fishes of India*, 2 : 907, fig. 271.

Material examined : 1, 65 mm, Cannanore, 01.02.89, ZSI/MBS- 1910.

Distribution : Persian Gulf, through India to Indonesia, to China, the Philippines and north and western Australia.

Family : CALLIONYMIDAE

73. *Callionymus japonicus* Houttuyn

1782. *Callionymus japonicus* Houttuyn, *Verh. Holl. Maatsch. Wet. Haarlem*, 20 : 311 (Japan ?).

Material examined : 1, 76 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS- 2020.

Distribution : India, eastward to Western Pacific.

Remarks : The assignment of the taxon is tentative. The present specimen resembles *Callionymus longicaudatus* Schlegel as it is described by Day (1876). Although de Beaufort (1951) has doubtfully synonymised it with *C. japonicus* Houttuyn, the same is followed by latter authors. The specimen under study has 18 rays in pectoral fin, second spine of the first dorsal fin not elongated and the first dorsal fin is freckled but a large black spot between the first and second spine absent.

Family : TRICHIURIDAE

74. *Trichiurus lepturus* Linnaeus

1758. *Trichiurus lepturus* Linnaeus, *Syst. Nat.* (ed. 10) : 246 (South Carolina, North America).

Material examined : 1, 395 mm TL, Off Mangalore, 27.01.89, ZSI/MBS- 1963; 2, 435 mm TL (in the second specimen the tail portion broken), Cannanore, 01.02.89, ZSI/MBS- 1964.

Distribution : Throughout tropical and temperate waters of the world.

Family : SCOMBRIDAE

75. *Rastrelliger kanagurta* (Cuvier)

1817. *Scomber kanagurta* Cuvier, *Regne Animal.*, 2 : 313 (Vizagapatnam).

1983. *Rastrelliger kanagurta* : Collette & Nauen, *FAO Fish. Synop.*, (125) 2 : 48.

Material examined : 1, 146 mm, Off Mangalore, 27.01.89, ZSI/MBS- 1956; 2, 107 & 144 mm, Kasaragod, 31.01.89, ZSI/MBS- 1957.

Distribution : Indo-West Pacific.

76. *Scomberomorus commerson* (Lacepede)

1800. *Scomber commerson* Lacepede, *Hist. nat. poiss.*, 1 : 598, 600-603, pl. 20, fig. 1 (Mauritius).

1983. *Scomberomorus commerson* : Collette & Nauen, *FAO Fish. Synop.*, (125) 2 : 63.

Material examined : 1, 200 mm, Off Mangalore, 27.01.89, ZSI/MBS- 2015; 1, 205 mm, Kasaragod, 31.01.89, ZSI/MBS-2016; 1, 250 mm, Puthiyangadi, 02.02.,89 ZSI/MBS- 2014.

Distribution : Indo-West Pacific.

Family : STROMATEIDAE

77. *Pampus argenteus* (Euphrasen)

1788. *Stromateus argenteus* Euphrasen, *Kongl. Vet. Acad. Handl. Stockholm*, 9 : 49 (Castellum Chinese Bocca Tigris Dictum).

1984. *Pampus argenteus* : Talwar & Kacker, *Commercial Sea Fishes of India* : 837, fig. 344.

Material examined : 1, 34 mm, Kasaragod, 31.01.89, ZSI/MBS- 1941.

Distribution : Persian Gulf, through Indonesia to Japan.

Order : PLEURONECTIFORMES

Family : PSETTODIDAE

78. *Psettodes erumei* (Schneider)

1801. *Pleuronectes erumei* Schneider, *Syst. Ichthyol. Bloch* : 150 (Tranquebariam, India).

1984. *Psettodes erumei* : Talwar & Kacker, *Commercial Sea Fishes of India* : 842, fig. 346.

Material examined : 1, 150 mm, Someshwar, 28.01.89, ZSI/MBS- 1983.

Distribution : Indo-West Pacific.

Family : BOTHIDAE

79. *Pseudorhombus triocellatus* (Schneider)

1801. *Pleuronectes triocellatus* Schneider, *Syst. Ichthyol. Bloch* : 145 (East Indian Seas).

1984. *Pseudorhombus triocellatus* : Nielson, in Fischer & Bianchi, *FAO Species Identification Sheets for Fishery Purposes. W. Indian Ocean (Fishing Area 51)*, 1 : BOTH Pseud 7.

Material examined : 2, 74 & 77 mm, Kasaragod, 31.01.89, ZSI/MBS- 1972.

Distribution : West coast of India, eastward to Malay Archipelago.

Family : CYNOGLOSSIDAE

80. *Cynoglossus dubius* Day

1873. *Cynoglossus dubius* Day, *J. Linn. Soc. Zool.*, 11 : 525 (Gwadur).

Material examined : 1, 121 mm, Cannanore, 01.02.89, ZSI/MBS- 1918.

Distribution : West coast of India and Pakistan.

81. *Cynoglossus macrostomus* Norman

1928. *Cynoglossus macrostomus* Norman, *Rec. Indian Mus.*, 30 (2) : 204, fig. 20 (Hooghly estuary, Calcutta).

Material examined : 1, 60 mm, Off Mangalore, 27.01.89, ZSI/MBS- 1906; 2, 115 & 134 mm, Someshwar, 28.01.89, ZSI/MBS-1764; 6, 58-114 mm, Kotikulam, 30.01.89, ZSI/MBS-2008; 1, 125 mm TL, Kotikulam, 30.01.89, ZSI/MBS- 2009; 1, 119 mm, Kasaragod, 31.01.89, ZSI/MBS- 1907.

Distribution : Coasts of India.

Remarks : The hind part of the body seems to have broken and a regeneration of rays seem to have occurred from the broken area in the specimen numbered ZSI/MBS- 2009.

Order : TETRAODONTIFORMES

Family : TRIACANTHIDAE

82. *Triacanthus biaculeatus* (Bloch)

1786. *Balistes biaculeatus* Bloch, *Naturges. ausland. Fische*, 2 : 19 (East Indies).

1991. *Triacanthus biaculeatus* : Talwar & Jhingran, *Inland Fishes of India*, 2 : 1051.

Material examined : 1, 67 mm, Kasaragod, 31.01.89, ZSI/MBS-1920; 2, 89 & 98 mm, Cannanore, 01.02.89, ZSI/MBS- 1879 & 1988.

Distribution : Indo-West Pacific.

Family : TETRAODONTIDAE.

83. *Lagocephalus spadiceus* (Richardson)

1845. *Tetrodon spadiceus* Richardson, *Voy. Sulphur Ichth.* : 123, pl. 58, figs. 4 & 5 (Canton, China).

1991. *Lagocephalus spadiceus* : Talwar & Jhingran, *Inland Fishes of India*, 2 : 1059.

Material examined : 1, 89 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS- 1976; 5, 57-95 mm, Bunder Jetty, Mangalore, 26.01.89, ZSI/MBS- 1978; 1, 61 mm, Off Mangalore, 27.01.89, ZSI/MBS- 1905; 1, 77 mm, Kasaragod, 31.01. 89, ZSI/MBS- 1977.

Distribution : Indo-West Pacific.

ZOOGEOGRAPHICAL REMARKS

The range of distribution of the species included in this paper was studied to throw more light on the zoogeographical affinities of the fish fauna of the Cannanore- Mangalore sector of the west coast of India and arranged in five groups according to zoogeographical relations.

Of the 83 species reported here, four species (4.82%), viz. *Echeneis naucrates* Linnaeus, *Fistularia petimba* Lacepede, *Trichiurus lepturus* Linnaeus and *Sphyrna lewini* (Griffith and Smith) are nearly circumtropical (Group I) in distribution. Thirty seven species (44.58%) are widely distributed in the Indo-West Pacific region (Group II) of which *Rhizoprionodon acutus* (Ruppell) and *Tylosurus crocodilus crocodilus* (Peron and LeSueur) are also found in the Atlantic Ocean. Twenty eight species (33.73%) are spread over the Indo-Polynesian province (Group III) of which *Saurida micropectoralis* Shindo and Yamada is recorded for the first time from the west coast of India.

Seven species (8.43%), viz., *Epinephelus diacanthus* (Valenciennes), *Grammoplites suppositus* (Troschel), *Kathala axillaris* (Cuvier), *Nemipterus randalli* Russell, *Sardinella longiceps* Valenciennes, *Sorsogona melanoptera* Knapp and Wongratana and *Thryssa*

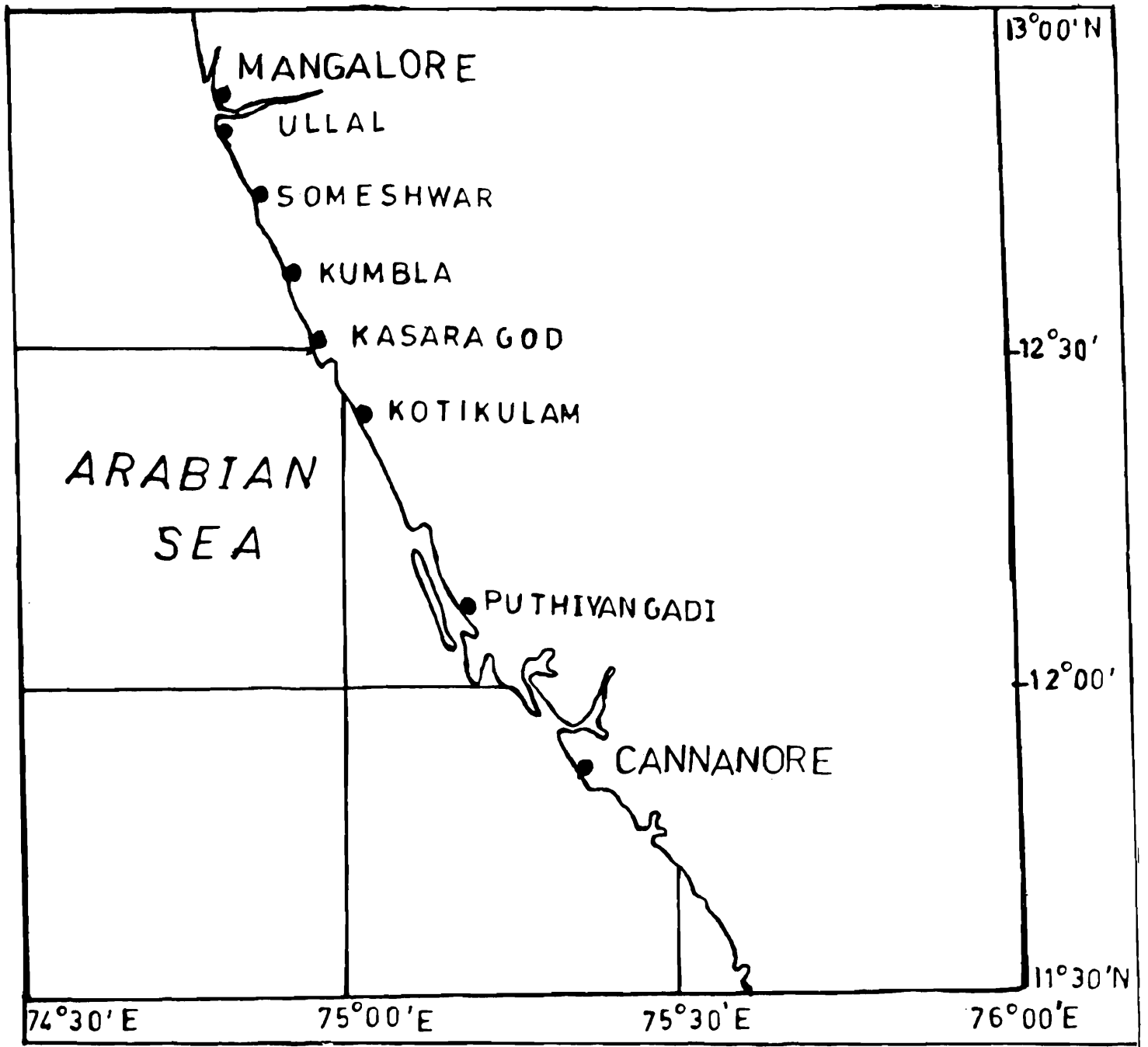


Fig. 1. Map showing the sampling stations.

polybranchialis Wongratana are more or less restricted to the northern Indian Ocean (Group IV). The remaining seven species (8.43%) are endemic to Indian Subcontinental coastal waters (Group V) of which *Cynoglossus dubius* Day, *Johnius elongatus* Mohan and *Johnius glaucus* (Day) are restricted to the West coast of India with ranges extending between Pakistan and Sri Lanka; While *Arius dussumieri* Valenciennes, *Cynoglossus macrostomus* Norman, *Ilisha striatula* Wongratana and *Thryssa dayi* Wongratana are found between the coasts of Pakistan and Myanmar.

Thus, 83.13% of fishes of the Group I, II and III are found in Malay Peninsula, which is considered as the richest faunistic centre and the centre of evolution of most of the shore fauna of the Indo-Pacific region (Ekman, 1953). In accordance with the observations of Menon (1966), the present study too indicates that India has derived its shore fish fauna from this centre of distribution. The rest 16.86% (Group IV and V) of fishes in this composition are certainly the species arising in the peripheral region and as inferred by Briggs (1974), they apparently have been unable to penetrate and successfully colonise the eco-stable evolutionary centre of the Malayan region.

SUMMARY

Fishes collected during the Survey along the Cannanore-Mangalore coasts in January-February, 1989 are studied and a systematic account of 83 species belonging to 61 genera and 43 families are presented. *Saurida micropectoralis* Shindo and Yamada is reported for the first time from the west coast of India and the occurrence of *Scoberoides tala* (Cuvier) in the west coast is confirmed. Validity of two taxa, *Gerres limbatus* Cuvier and *Gerres lucidus* Cuvier is discussed. A teratogenic phenomenon of the absence of pectoral fin in *Pterois russellii* Bennett and a case of regeneration of caudal fin rays in *Cynoglossus macrostomus* Norman are reported. Further, a brief zoogeographical discussion of the fishes in the collection is also given in this account.

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