ISSN 0254-380 X

भाकृअनुप
ICAR

समुद्री मात्स्यिकी सूचना सेवा
MARINE FISHERIES INFORMATION SERVICE

No. 103 JANUARY, FEBRUARY, MARCH 1990

तकनीकी एवं विस्तार अंकावली
TECHNICAL AND EXTENSION SERIES

केन्द्रीय समुद्री मात्स्यिकी अनुसंधान संस्थान कोचिन, भारत
CENTRAL MARINE FISHERIES RESEARCH INSTITUTE COCHIN, INDIA

भारतीय कृषि अनुसंधान परिषद
INDIAN COUNCIL OF AGRICULTURAL RESEARCH

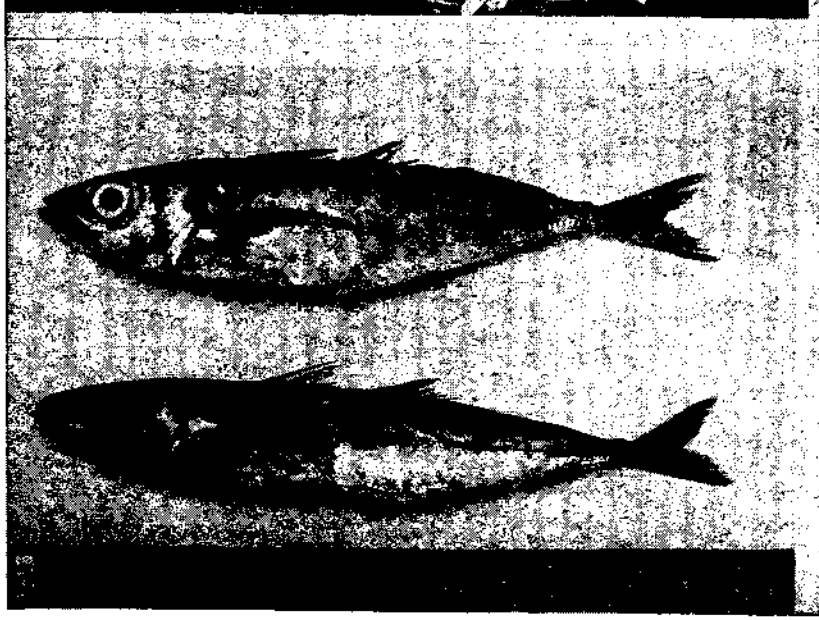
ON THE OCCURRENCE OF *DECAPTERUS MACROSOMA* IN TRAWL CATCHES AT FISHERIES HARBOUR, COCHIN*

The scads *(Decapterus* spp.) locally known as 'Thiriyan' forms an important carangid fishery in 'trawls' at Fisheries Harbour, Cochin contributing about 45.09 and 60.67% of the carangids caught in trawls during 1987 and 1988 respectively. Generally catches of scads brought at this centre are represented by *Decapterus russelli* (Fig. 1). However, during the 26th June, 1989 to 11th July, 1989, the scads caught were represented by *D. macrosoma* also. The present report deals with the fishery and some biological aspects of *D. macrosoma* caught during the above period.

Fishery (Table 1)

It is discernible from the Table that during all the days observed, *Decapterus* spp. represented by *D. russelli* and *D. macrosoma* formed the only carangids caught in the trawl (Fig. 2). Of these, *D. macrosoma* contributed upto 50% of the catches with the maximum catch per effort of 44.50 kg. At Calicut this species is reported to form only 4.62% of the scads caught (Yohannan and Balasubrahmaniam, *Mar. Fish Inform. Serv., T & E Series,* 73: 12). In the present case this species was represented by an abundant catch of juveniles and sub adults also contributing upto an estimated catch of 2,941 kg (catch/effort: 17 kg) as on 4–7–1989 (Fig. 3). They were caught along with other component groups like *Cynoglossus* sp. (7%), *Otolithus ruber* (3%), *Uroconger lepturus* (0.5%), *Squilla* (8%), *Parapenaeopsis stylifera* (29%), other prawns (24%), molluscan shells (1.5%) and others (8%) with *D. macrosoma* forming 19% of the catch [redacted]. At times they formed the sole representatives of the shoals also.

* Prepared by S. Sivakami and P.K. Seetha, CMFRI, Cochin.



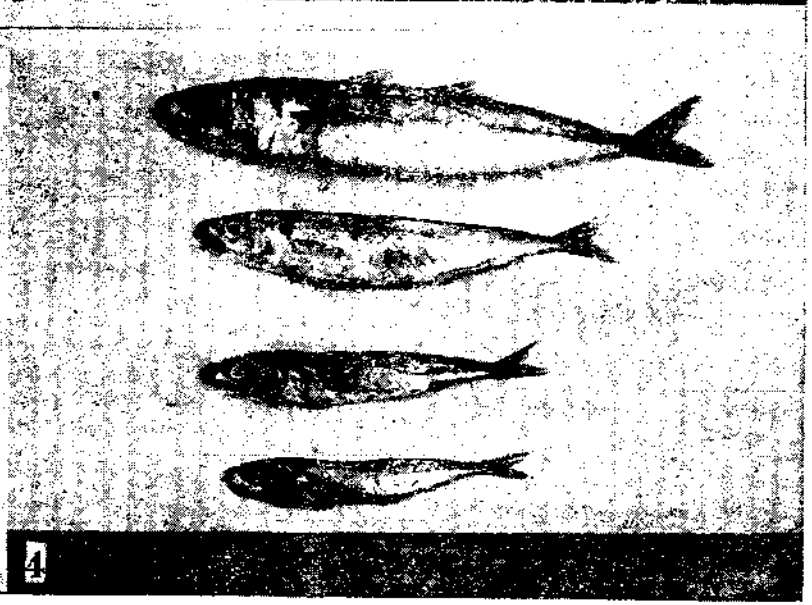


Fig. 1. Scads landed at Fisheries Harbour.
Fig. 3. *Decapterus russelli* (above) and *D. macrosoma* (below).

Fig. 2. A boat full of young ones of scads landed on 4-7-1989.
Fig. 4. Juveniles, sub-adults and adults of *D. macrosoma*.

Table 1. *Catch details of* Decapterus spp. *including juvenile* spp. *in trawls from Fisheries Harbour, Cochin during* 24-6-1989 *to* 11-7-1989

Observation dates	Total estimated carangid catch (kg)	C/E (kg)	*D. macrosoma*			*D. russelli*			Other carangids
			Estimated catch (kg)	C/E (kg)	%	Estimated catch (kg)	C/E (kg)	%	
24-6-1989	6,248	42.50	2,352	16.00	37.64	3,896	26.50	62.35	Nil
1-7-1989	6,370	45.50	3,080	22.00	48.35	3,290	23.50	51.64	Nil
4-7-1989	15,571	90.00	7,699	44.50	49.44	7,872	45.50	50.56	Nil
6-7-1989	8,459	41.66	3,722	18.33	44.00	4,737	23.33	56.00	Nil
11-7-1989	752	4.00	376	2.00	50.00	376	2.00	50.00	Nil

Length-frequency distribution

A total 460 specimens of juveniles, sub adults and adults (Fig. 4) within the length range of 80–220 mm analysed for length-frequency distribution revealed the occurrence of 2 dominant modes at 115 mm and 195 mm (Fig. 5).

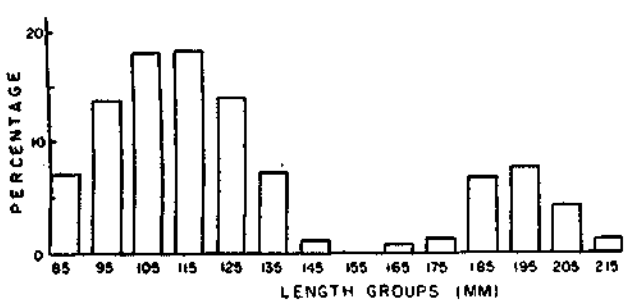


Fig. 5. Length-frequency distribution of *D. macrosoma*.

Food habits

Random analysis of gut contents of young ones of *D. macrosoma* indicated that they fed mainly on crustaceans such as copepods *(Eucalanus* spp., *Rhincalanus* spp., *Calanus* spp.), *mysids* and cladocerans *(Conchoesia* sp.), chaetognaths and foraminiferans. In most of the guts analysed, *Eucalanus* spp. was the dominant food item noticed.

Since carangids are habituated to remain in the bottom during day time, they would have been caught in the trawl. Their occurrence in the inshore waters is further substantiated by their catches in the indigenous boats, operating ring seines and *thanguvala* of 15–20 mm mesh size at 12 m depth bringing good quantities of juveniles and sub adults of *D. macrosoma* during the latter half of August, 1989. It is suggested that steps may be initiated not to exploit the undersized carangids which if allowed to grow can support a substantial pelagic fishery resource.