

**ON THE OCCURRENCE OF THE JUVENILES OF THE INDIAN  
MACKEREL *RASTRELLIGER KANAGURTA* (CUVIER) IN THE  
INSHORE WATER OF KAKINADA**

It is well known that a knowledge of the distribution, abundance and biology of the younger stages of fishes is necessary for a proper understanding of many problems such as spawning period, success or failure of year classes, population structure etc. Our present knowledge of the distribution of the young of the Indian mackerel *Rastrelliger kanagurta* along the Indian Coasts has been summarised by Rao (1962). He emphasized the importance of collecting additional information on juvenile mackerel as it would enable us to fill up certain lacunae at present existing in our knowledge of the biology of the Indian mackerel. Juvenile mackerel have been reported from the Arabian Sea off the Coasts of Ratnagiri, Karwar, Mangalore, Cannanore, Calicut, Ernakulam and Vizhingam; from the Bay of Bengal off Madras and Visakhapatnam and from the Andaman Sea off Port Blair. (Rao, 1962).

Since only a few records were made on the east coast of India, the present report about the occurrence of juvenile mackerel from the Kakinada area, from where no earlier record has been reported, should be of interest.

The present collection of juvenile mackerel, is represented by 3 samples (Fig. 1) obtained from 3 fishing centres where mackerel fishery is usually present

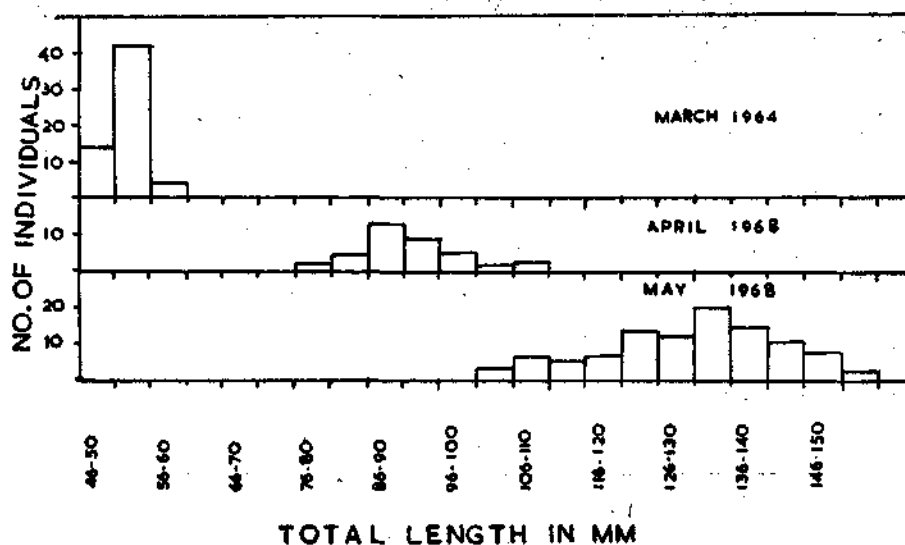


FIG. 1. Represents the length frequencies of 3 samples of juvenile mackerel.

during February to May period. A surface cotton gill net (*Javaka vala*) consisting of 10 pieces, each piece 10 metres wide and 40 meters long with a mesh size of 5 cms. is extensively used during this period to catch mainly adult mackerel. The mackerel landings by these nets are considerable in the above period. Measurements of the mackerel caught by these surface gill nets in April 1968 at Suryaraopeta showed a size range of 260-280 mm.

Sixty small juvenile mackerel measuring 46 mm.-57 mm. in total length (mode between 51-55 mm.) were collected from the shore-seine at Dummulapeta (lat. N.16° 59'; long. E.82° 15') during March 1964. The shore-seines were operated in 6 meters of water about a kilometer from the shore. These young ones (*Chiru-Kanagurthalu*—vernacular name) were found in the catches along with white-baits.

In April 1968, 35 young mackerel measuring 80-109 mm. in total length (mode between 86-90 mm.) were collected from the boat-seines (*Iraga vala*) operating at a depth of 7-10 meters, 3-6 kilometers from the shore at Suryaraopeta (lat. N.17° 2' long. E.82° 17'). These specimens occurred along with white-baits and silver-bellies.

98 juvenile mackerel measuring 101 mm. to 168 mm. in total length (mode between 131-135 mm.) were collected from the boat-seines at Rajavaram (lat. N.17°-18' long. E.82°-36') during May 1968. These were caught along with white-bait, *Dussumieria* sp., *Gerres* sp., *Sciaena* sp. and *Acetes* sp. The boat-seines were operated at a depth of about 5 meters within a distance of 300 meters from the shore.

In general the period of occurrence of juvenile mackerel along the east coast of India is from March to August (Rao *op. cit.*) and the present collections conform to this general pattern of occurrence.

Jones and Silas (1962) established the presence of *Rastrelliger brachysoma* (Bleeker) in the Bay of Bengal, off Andamans. This species can be easily separated from *R. kanagurta* from greater depth of body. In Fig. 2 are plotted the

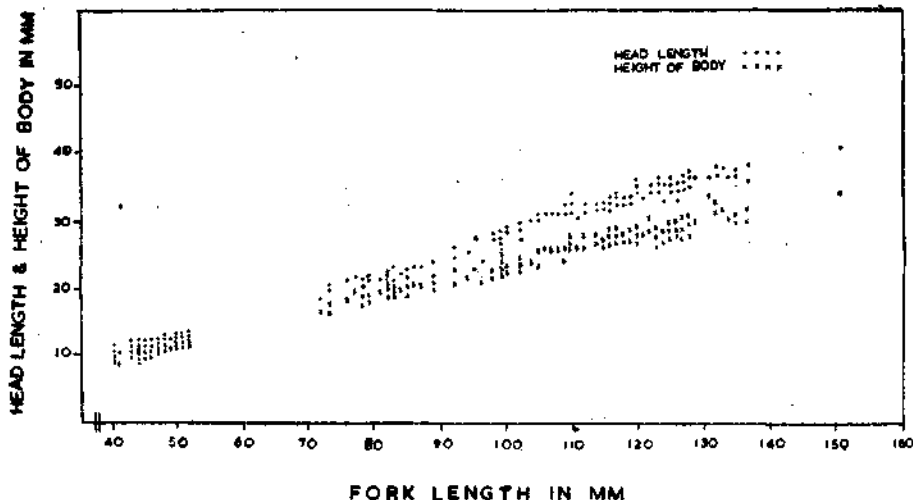


FIG. 2. Graph showing height of body and head length against fork length.

greatest height of body and head length against fork length. It is evident from the figure that head length is distinctly greater than the greatest depth of body, which confirms that the juveniles studied here are those of *R. kanagurta*.

Gut contents of 32 specimens ranging in size from 49-148 mm., were studied in detail (Table I). The intensity of feeding was high in April and May 1968 and