1. INTRODUCTION

The Indian mackerel, *Rastrelliger kanagurta* (Cuvier) of family Scombridae is one of the 3 species recorded from our waters. Though found on east and west coast, as Silas (1974) points out, it is the only species reported from the west where it forms one of the 2 important pelagic fisheries affording large-scale exploitation on the southern areas.

Some statistics on this resource along the Malabar and South Kanara coast are available as far back as 1893-'94 to 1898-'99 (Thurston 1900). Subsequently its catch statistics from the same area for 1925-'26 to 1930-'31 were published by Raj (1927, 1931, 1933 and 1939) and for 1931-'32 to 1949-'50 by Chacko (1954 and 1955). Arrivals of mackerel to Bombay Market from Konkan and Karwar coast during 1936-'37 to 1952-'53 (Pradhan 1956) indicate the northward extent of this fishery.

In view of its commercial importance, the Department of Fisheries of the erstwhile Madras Presidency, paid special attention to this fishery. The works of Hornell (1910), Devanesan and John (1940), Devanesan (1942), Chidambaram (1944), Chidambaram and Krishnamurthy (1951) and Chidambaram et al. (1952) provide evidence to it. A concerted attempt on acquisition of knowledge on the fishery, by and large, commenced only with the inception of Central Marine Fisheries Research Institute
Rao and Pampapathi Rao 1957, and Narayana Rao 1962 a) and Andamans (Jones and Silas 1962 b, and Luther 1973) and accumulated on. But these contributions were specific to the localities from where the investigations were carried out.

The Indian mackerel has a wide distribution in the Indo-Pacific region. Synopsis of biological data on it by Jones and Rosa (1962 and 1965) and the picture on the mackerel fishery in Indian Ocean by Panikkar (1967) are fitting contributions ranking India as the major producer of this valuable commodity. An objective assessment of the results obtained through investigations carried out in the country on decades up to the end of nineteen sixties documented for the first time hence was given out by CMFRI in 1970.


All-India and statewise annual landing figures for a long period are now available. Yet what we know is far too short. The present study consisting of an appraisal of exploited resource in space and time through 1976 to 1980 adds to our knowledge on stock structure and other related problems of this resource.

An in-depth survey on potentials of the resource through investigations on biological characteristics of the fish and
fishery from the commercial catches at Cochin over a long stretch of 16 seasons, hoping to cover different phases if any in its long-term fluctuations, was made with the intention that it would serve the scientists and industrialists the picture of a stable fishery promising maximum sustainable yield without endangering the stock and exterminating the species from our fishery atlas. For this a study on age and growth is made, and estimates on mortality rates, \( L_0 \), \( K \), \( t_0 \), yield per recruit, standing stock, potential yield and the quantum of effort required obtained. The length-weight relationship of the fish from season to season was derived and implications on its fluctuations indicated.