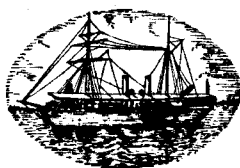


SYMPOSIUM ON SCOMBROID FISHES

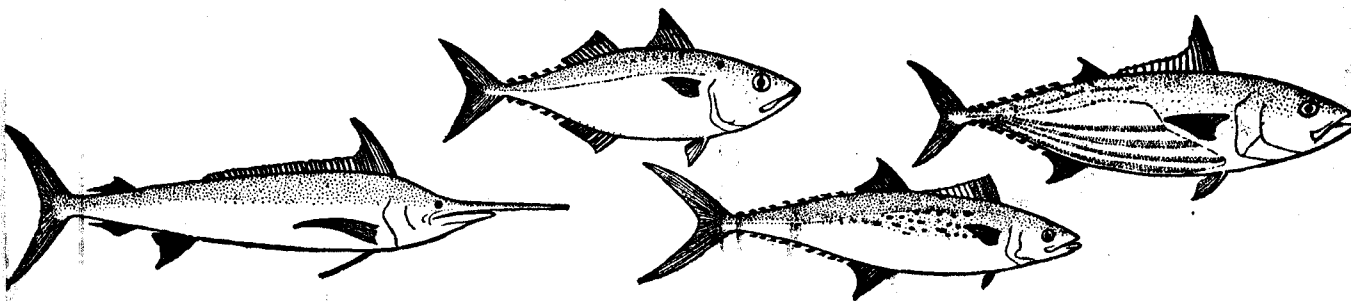
PART II



MARINE BIOLOGICAL ASSOCIATION OF INDIA

MANDAPAM CAMP

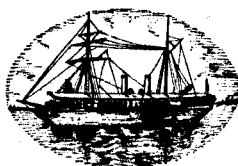
S. INDIA



**PROCEEDINGS OF THE
SYMPOSIUM
ON
SCOMBROID FISHES**

HELD AT MANDAPAM CAMP FROM JAN. 12-15, 1962

PART II



**SYMPOSIUM SERIES I
MARINE BIOLOGICAL ASSOCIATION OF INDIA
MANDAPAM CAMP
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ON THE INTRODUCTION OF TILAPIA (*TILAPIA MOSSAMBICA* PETERS) AS A TUNA LIVE-BAIT IN THE ISLAND OF MINICOY IN THE INDIAN OCEAN

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TUNA fishing by pole and line around Minicoy in the Indian Ocean is carried out by the islanders with bait fish collected from the lagoon (Jones 1958). The tuna caught is mostly the oceanic skipjack *Katsuwonus pelamis* and occasionally the yellowfin, *Neothunnus macropterus* (Jones and Kumaran 1959). During the fishing season the availability of adequate supplies of bait fish is the most important deciding factor in the successful operation of the fishery. The non-availability of bait fish as it sometimes happens restricts fishing activity to a minimum as the fishermen have to devote much time on bait collection even if tuna shoals occur in abundance in close proximity to the island. Though the lagoon provides fairly good quantities of bait fish during the greater part of the fishing season sudden diminishment in their supplies brings about often abrupt suspension in fishing activities. It is said that this happens at a time when the skipjack bites most freely evidently due to the general scarcity of food organisms in the adjacent reefs, in the neighbourhood of which the hungry shoals hover around for food. This considerably affects the economy of the people which is mainly dependent on the tuna fishery.

It is essential therefore that to maintain fishing activity at optimum level adequate supplies of bait fish have to be ensured. The desirability of introducing tilapia as an alternate source of bait fish to tide over periods of scarcity was suggested earlier (Jones *op. cit.*) and this was implemented early in 1961. A consignment of 22 juvenile tilapia was sent from Mandapam Camp on 27-2-1961 in an ordinary tin fry-container through Mr. Ali Manikfan, Laboratory Boy of this Institute who hails from the island of Minicoy. It reached Cannanore the next day and the fish were kept in the same container with occasional changes of water and supplies of waterweeds till 5-3-1961 when they were taken on board a small sailing vessel proceeding to Minicoy. As the wind was not favourable it took 15 days for the journey of 250 miles and the island was reached on 20-3-1961. Due to scarcity of freshwater in the sailing ship, the water in the container was changed only a week after leaving Cannanore and then again on the last day while nearing the island. Two fish had died and the rest which were in a poor condition were liberated into a pond immediately on arrival where they thrived well. Young tilapia, the first progeny of the introduced, were noticed by the middle of May and they were gradually transplanted. By September 1961 they were stocked in 15 ponds and by the end of December almost all the tanks in the Island had tilapia in them. The local people especially the boys had begun to angle for the fish, some of which had grown to about 15 cm. in length by about August. It is relished by the local people who have named the fish 'Mandapa'* after Mandapam from where the fish was sent in spite of special instructions that the fish should be called tilapia !

Bait fish are used to chum tuna near to the boat so as to bring the school within the reach of the pole and line. Tilapia as a bait fish has been experimented in Hawaii and was found quite suitable for the purpose (Brock and Takata 1955). The commercial fishermen who experimented with tilapia have been unanimously of opinion that it is as good as *nehu* (*Stolephorus purpureus*), the premier bait fish in Hawaiian waters. Specimens upto about 5 cm. in length were the most suitable as larger specimens showed a tendency to sound. The cost of tilapia was estimated to

* In the Mahl dialect, which the people of Minicoy speak, all common nouns usually end in a vowel and hence the deletion of the last letter from Mandapam.

be much less than *nehu*. Though large sized tilapia is reported to stand sudden transference from freshwater or brackishwater to seawater, gradual acclimatisation is essential for specimens less than 10 cm. and a period of three days is recommended for the purpose (Brock and Takata *op. cit.*)

In Minicoy there are over 100 ponds, most of them small, covering a few square metres each suitable for stocking tilapia. A good crop could be expected from ponds of this type provided the population is regularly thinned out to avoid over crowding. If tilapia proves to be a success in Minicoy the bait fish problem in the other islands in the Laccadives which is reported to be one of the main reasons for the absence of any tuna fishing there could probably be partially solved by utilising the fish for the purpose. Even if it does not turn out useful as a live-bait to the desired extent no harm will be done by its introduction since it is bound to contribute to the fish diet of the people especially during rough weather when there is little sea fishing. The results are awaited with interest.

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