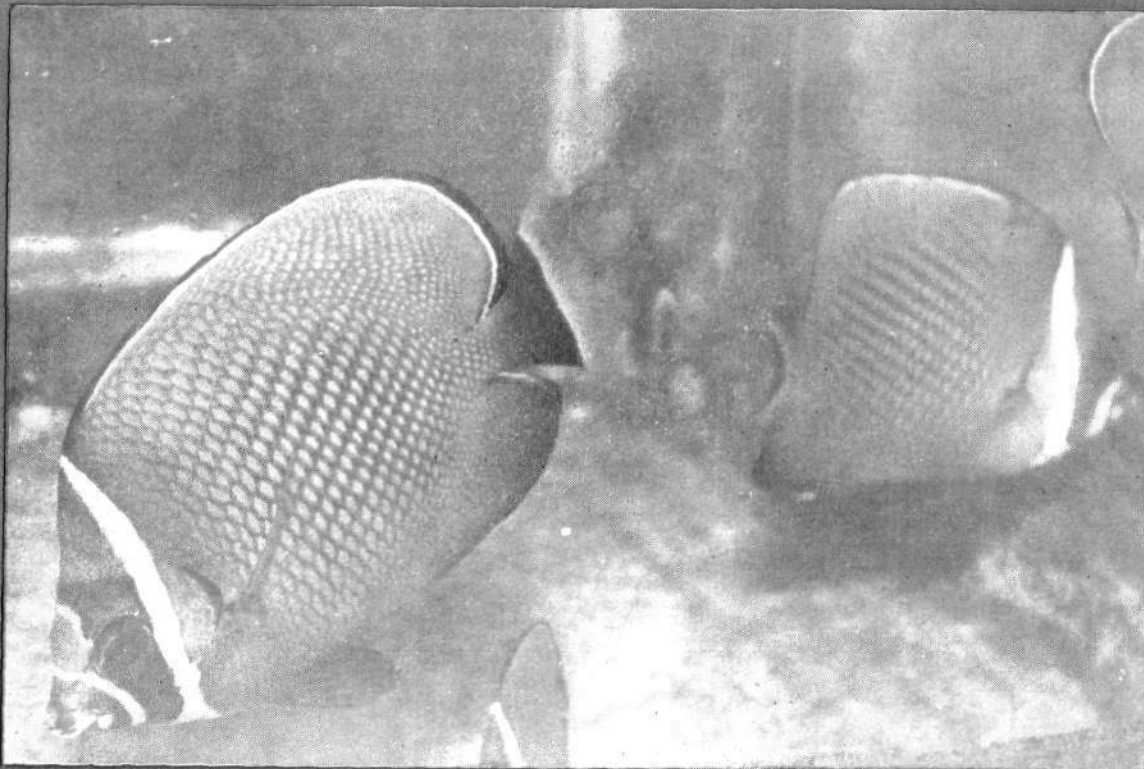




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MARINE FISHERIES RESEARCH IN MAHARASHTRA*

I am presenting some of the observations made during the course of last 30 years on marine fisheries in Maharashtra.

In the fifties when otter trawling was introduced on commercial scale by the Japanese vessel 'Taijo-Maru' bull trawling was started first by the Government of India exploratory vessels M.T. *Ashok* and M.T. *Pratap* and later by the three sets of commercial trawlers '*Satpati*'-'*Pilotan*', '*Arnala*'-'*Paj*' and '*Akashi-Maru*'-No. 23 and 25 of New India Fisheries company and large quantities of quality fishes were exploited from the Bombay-Saurashtra waters. Though this workshop is on the

fisheries of Maharashtra, one cannot ignore Gujarat and take Maharashtra in isolation because of the common fish and fisheries occurring in these two states.

The quality fishes of great commercial importance in the beginning were 'dara', 'ghol', 'koth', 'wam', 'karkara', 'doma', 'cat fish', 'sharks' and 'rays'. Later on commercially less important fishes like 'shende', flat fish and clupeids were also included. The Bombay-Saurashtra region and also the Kutch region were exploited continuously for nearly two decades and fisheries of many species started declining in the late sixties. In the seventies due to export demand, the fishing interest was switched over to prawn resulting in the introduction of shrimp trawls.

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The switching over to prawn fishing should have given enough time for the revival of fisheries of 'dara', 'ghol', 'koth', etc. which had declined. The present status of these fisheries is discussed here.

In the case of 'dara', the inshore fishery by gill net has remained more or less steady at 2.3 to 2.5 thousand tonnes in Gujarat and 1.4 to 1.7 thousand tonnes in Maharashtra on an annual average in the last two decades. This might be because there is no report of fishing for juveniles of 'dara' called 'chelua' by the trawlers which might have indirectly acted as a measure of conservation.

Another point to be mentioned here is that 'dara' net locally called 'waghra' jal is a highly selective gear with the mesh size of 81 to 105 cm. Fishes caught in this net measure between 81 to 105 cm. 'Dara' matures at about 80 cm in standard length in its 4th year. Hence, it is required to live to a size much longer than this. There are also reports of capture of large 'dara' of 142 to 170 cms in size by the 'dol' nets. In view of this it is suggested that if the mesh of some of the 'waghra jals' and not all, is increased by another few centimetres, there is a possibility of getting some specimens measuring larger than 105 cm in the catch.

Catches of 'ghol' have come down very much but since it is clubbed with sciaenids, it is not possible to assess the extent to which the fishery is affected.

'Koth' right from the beginning had a fishery of very small magnitude and it has dwindled greatly.

'Karkara' has almost disappeared from the fishery. Earlier trawl fishery of this species was comprised chiefly of the size 45-55 cm, all adults, the maturity size being at 41 cm. Juveniles upto 18 cm are available sometimes in small quantities in the inshore catch. Since only a small portion of the stock was harvested at that time, it is felt that its fishery should have revived rather than disappeared by now. The survey conducted by the vessel M.T. 'Muraena' for a year during 1977 had shown that 'karkara' formed good fishery at 55-90 m depth range. The catch came by both bottom and pelagic trawls and together formed 4.7 tonnes for the year. This suggests that 'karkara' fishery is in sound state and can be resumed once again.

Eel fishery does not seem to have been affected much. Its catch is more or less steady at about 3,400 tonnes per year.

Among the other varieties, *Polynemus heptadactylus*, *Psettodes erumei*, *Ilisha elongata* and *I. filigera* have also declined and appeared only occasionally in the catch. Some of the new entrants to the trawl fishery are nemipterids, *Saurida*, crabs, lobsters, squids and cuttle fish.

With the replacement of shrimp trawl a number of penaeid prawn species have appeared to contribute to the prawn fishery. Any decline in the catch of one species is not generally felt because it is compensated by others. There are about a dozen species of penaeid prawns contributing to the trawl fishery. This has resulted in the increasing trend in the catch of penaeid prawns in Greater Bombay.

Bombay duck is the major fishery of Maharashtra. It is harvested by the indigenous gear 'dol.' Its fishery was steady at 30,000 tonnes in sixties. The catch started improving after 1975 and reached the highest of 82,000 tonnes in 1981. The second highest of 58,000 tonnes was in 1984. This indicates that Bombay duck fishery is a promising one for some more time to come. This is because the fishery is supported mainly by the juveniles, the adults being far out in the sea. Not much of spawners are caught in the inshore waters.

Pomfrets are mostly coastal species, fished by gill nets and also 'dol'. Though the juveniles have been caught by the 'dol' nets in large quantities, the catches have been more or less steady at about 16,000 tonnes per year.

In the 'dol' net fishery the non-penaeid prawns are represented by a small number of species, the same being exploited for the past so many years. New entrants to the fishery as in the case of penaeid prawns are not observed. This has resulted in the decline in its catch in Thana, the district best known for this group of prawns.

It is time now to ascertain whether the fishery of some of the species like 'ghol' and 'shende' which once were prominent are unable to recover due to heavy pressure of exploitation at that time or whether they have changed their habitat giving room to the new entrants. Fishing for 'karkara' also should be attempted.

