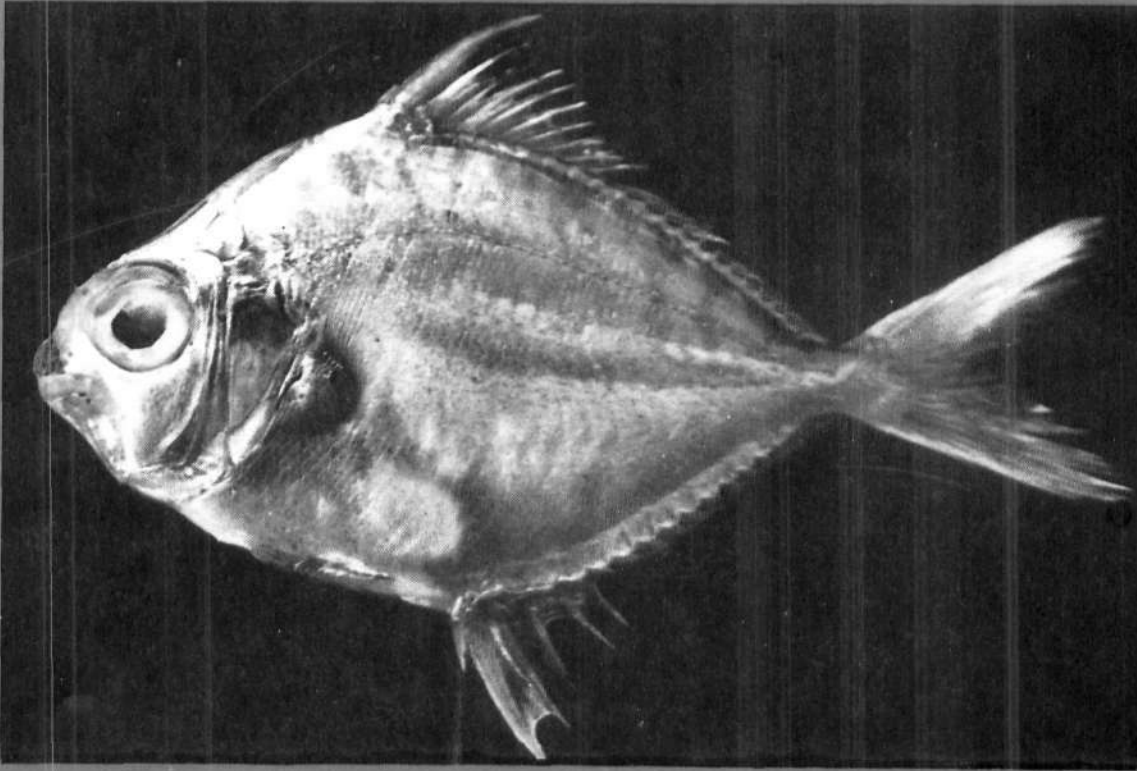




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INDIAN COUNCIL OF AGRICULTURAL RESEARCH

AN ACCOUNT OF HAND LINING FISHERY FOR SNAPPERS AND GROUPERS AT BEYPORE, CALICUT WITH A NOTE ON THE BIOLOGY OF *PRISTIPOMOIDES TYPUS**

Introduction

The hooks and line fishery at Calicut is mainly for sharks and seerfishes and is used either in long lining or trolling. It is operated both by local and migrant fishermen. However, there is a seasonal hand lining fishery for groupers and snappers by Colachel and nearby fishermen. The snappers of which *Pristipomoides typus* forms the main species are totally untapped by any other gear in this area. Hence a brief note on its biology is also given along with the general description of the fishery based on the data collected during December, 1990 to April, 1991 from Beypore and Calicut.

Craft and gear

The craft is the mechanised boat similar to trawlers of 30-32' OAL fitted with Ruston or Leyland engines (see back cover photo). The gear consists of a monofilament main line with branch line of 13 cm length containing barbed hooks of Nos. 8 & 12. The number of hooks varies from 8-15 and they are attached at a distance of 18 cm from one another (Figs. 1 and 2). The main line is weighted at the bottom. In a boat, there will be 7-8 persons. One will steer the boat while the others operate the gear. About 25 units are operated from Beypore.

Operation

The fishery starts by November/December and lasts till March as the weather becomes unfavourable afterwards. But in 1991, it continued upto the end of April. The gear is operated in rocky areas of depth upto 150 metres. Usually they go for fishing by midnight between 12 and 1 O'clock and reach the ground around 7 or 8 in the morning. The tunas caught en route by operating smaller hooks and line are used as bait. Instead of bait, coloured silk twines are attached as lures on these hooks.

After reaching the probable ground, the nature of the ground is ascertained by operating the gear. Once the desired fishes are hooked, the operation continues till sun set. After sunset, irrespective of the quantity of the catch, they return and reach the landing centre by midnight. But some will stay overnight due to poor catch and resume fishing the following day and come back.

Species caught and average catch

The main species caught are the snappers; *Pristipomoides typus*, *Lipocheilus carnolabrum*, the groupers, *Epinephelus* sp. and *Septia* sp. of which *P. typus* form the dominant catch followed by *Epinephelus* sp.

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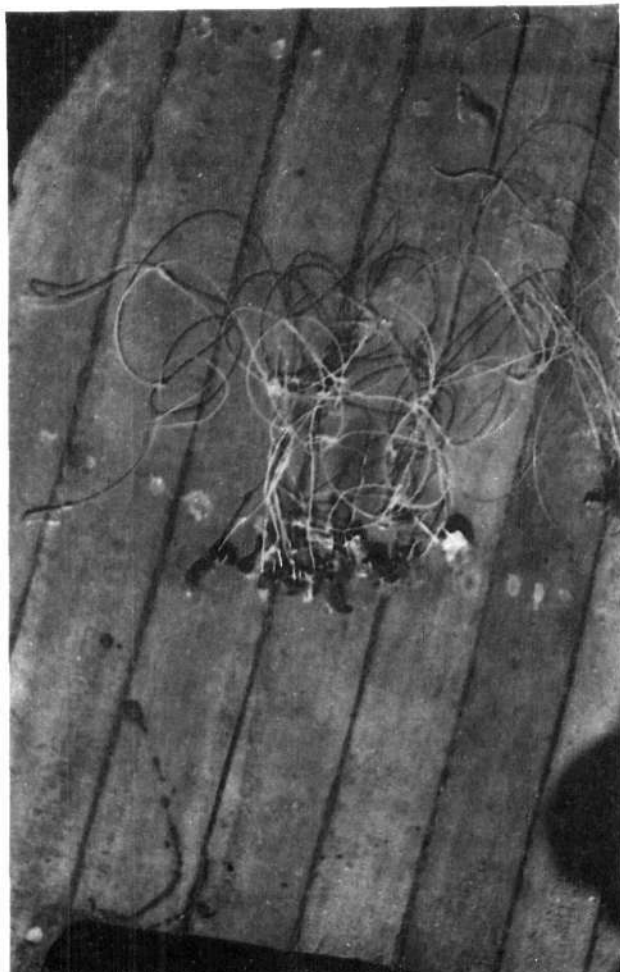


Fig. 1. A unit of hand line with the baits attached to each hook.

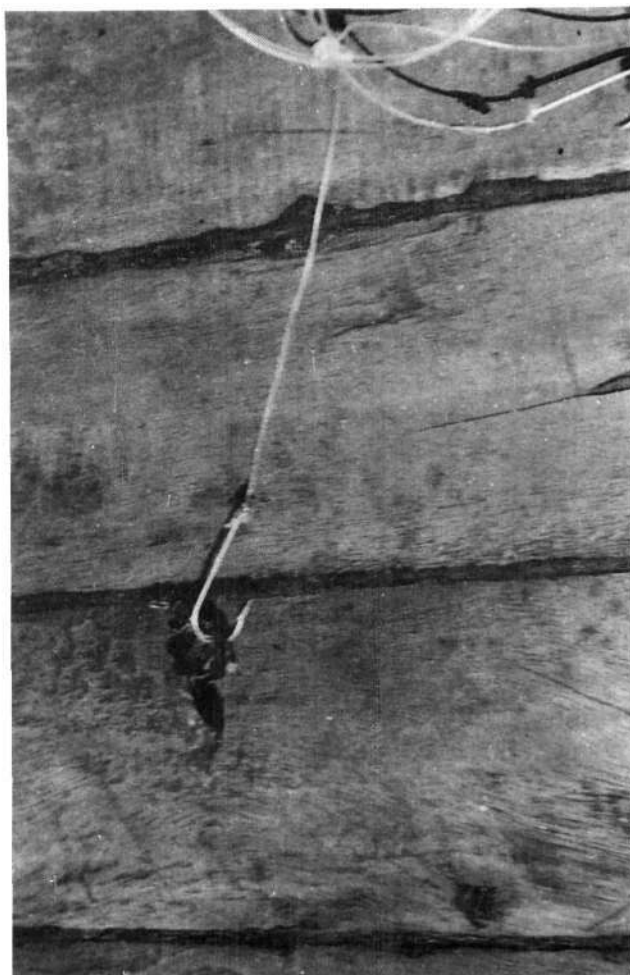


Fig. 2. An individual hook with the bait.

Though the exact catch details are not available, it was found that on an average about 300 kg of *P. typus* and 100 kg of *Epinephelus* sp. were landed per trip by a boat. The *Sepia* sp. and others were negligible in quantity.

Biology of *Pristipomoides typus*

Size distribution (Fig. 3): The size varied from 300-600 mm. In January and March, 420 mm followed by 440 mm formed the dominant group whereas in February, 460 mm followed by 440 and 500 mm were dominant. But, in general it could be seen that size groups between 380 and 460 mm were more common and the representation of bigger ones above 520 mm were scarce.

Length-weight relationship: The relationship based on 100 fishes was found out to be:
 $\text{Log } W = -3.51 + 2.42 \text{ Log } L$

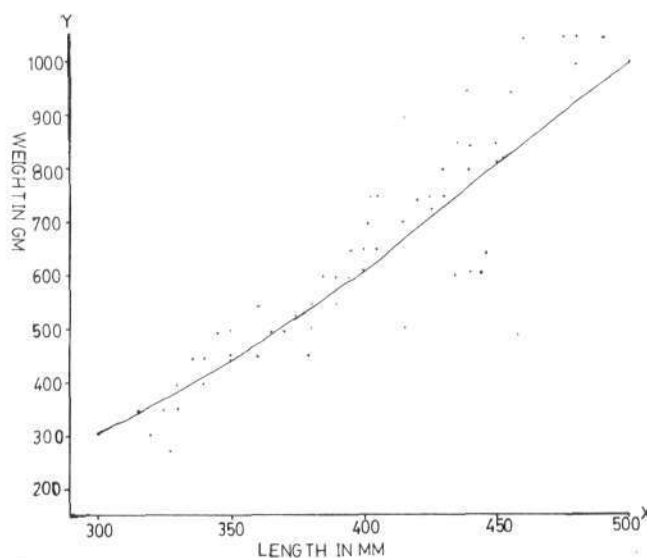


Fig. 3. Length-frequency distribution of *P. typus* in mm.

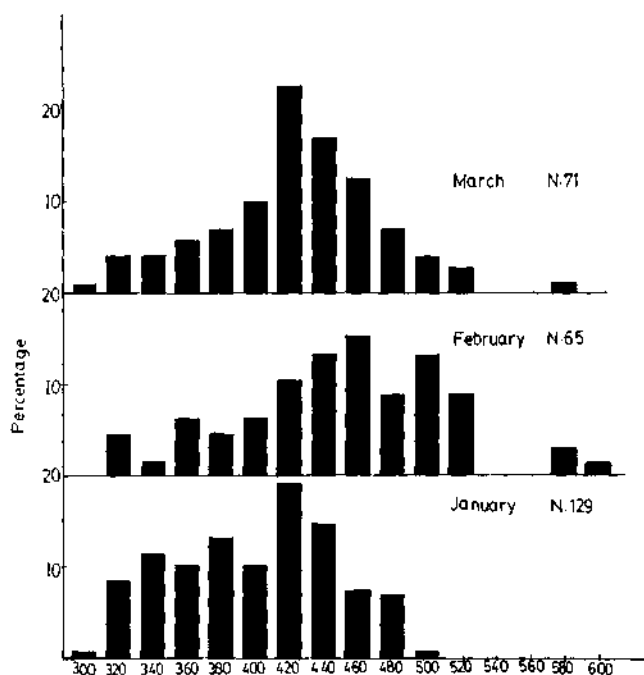


Fig. 4. Observed length and weight plotted against calculated relationship of *P. typus*.

The correlation coefficient (r) was found to be 0.91 (Fig. 4).

Stomach conditions

Most of the examined stomachs were found to be everted and others contained little or no food.

Gonadial condition

Both immature and mature fishes were observed. The mature ones were mainly in partially spent condition.

Disposal of the catch

The snappers were taken to the main

market of Calicut and sold by auction and its retail price varied from Rs. 15-20.0 per kg. The groupers on the otherhand were taken by the processing companies from the landing centre itself and its price varied from Rs. 10-15/- per kg. Groupers below 500 g were generally not taken by them.

General remarks

Though the fishing is profitable, the local fishermen show little interest because of the inherent difficulties and inconveniences associated with this fishery. The fishing is quite tedious mainly with the hauling of the line as is evidenced from the horizontal cuts on the forefingers of the fishermen. Moreover, since the departure and arrival are at odd times, the fishermen get little time for proper sleep, bath, food etc. Above all, as the fishing is carried out farther off from the usual fishing ground of other gear, the persons have to be more hardy and seafaring and these qualities are less in the local people when compared to the migrants.

However, considering the untapped nature of the resources and dwindling of catches in other gears, it is likely that atleast a few local fishermen will resort to this fishing in future. This belief is strengthened by the fact that in Malabar, especially Calicut, a new type of gear, craft or fishing method will be accepted only after its popularity in the nearby areas as is evidenced in the case of mechanisation of craft, introduction of ring-seine etc.