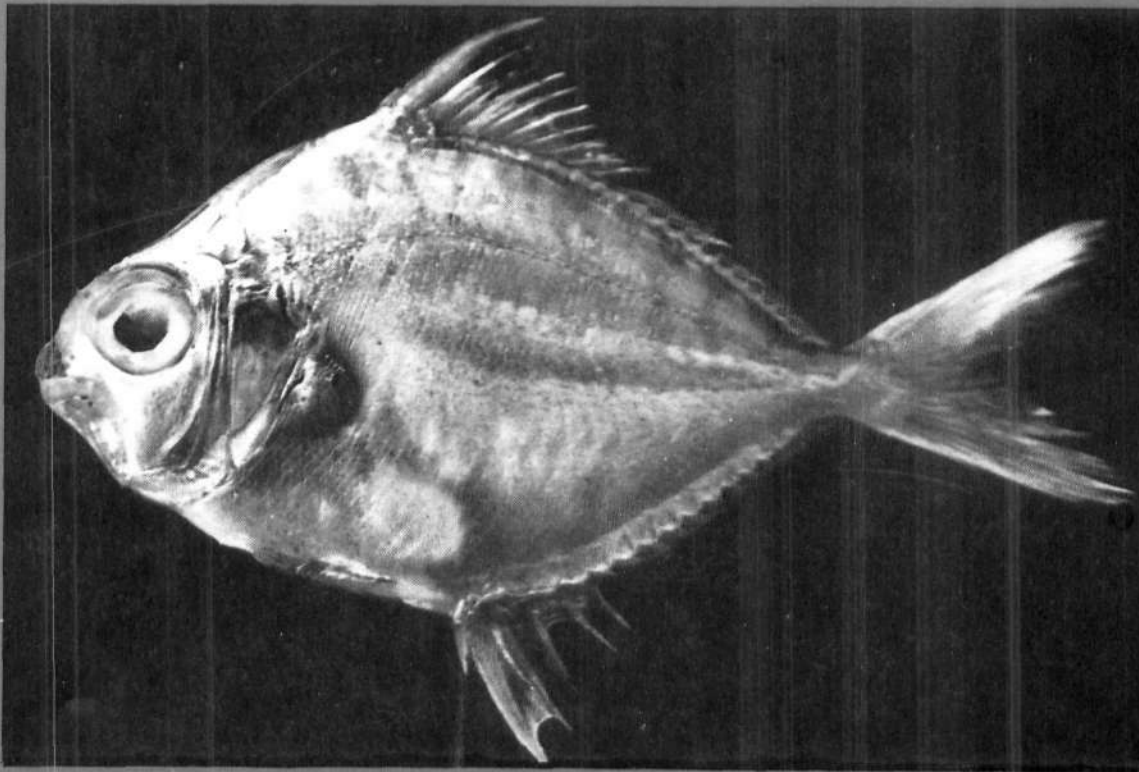




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ON THE COLLECTION OF SPINY LOBSTERS BY SKIN-DIVERS IN THE GULF OF MANNAR OFF TUTICORIN*

Skin-diving is practised every year in the Gulf of Mannar off Tuticorin for a period of four or five months from November/December to March/April mainly for collecting the sacred chank, *Xancus pyrum*. During that time spiny lobsters are also collected by the skin-divers incidentally and are brought to the fish landing centre at Tuticorin for auctioning. The landing of the spiny lobsters thus collected by the skin-divers was monitored twice a week during January and February, 1991. The estimated catch, species composition, size-frequency distributions and sex ratio, of the lobsters collected by the skin-divers were studied and the particulars are presented here.

As the collection of the chank is made by visually searching the floor of the sea, good visibility of the sea water is one of the most important factors that determine the season for the chank fishing. Normally the visibility of the sea water is good along Tuticorin coast from November/December to March/April. So during

these months intensive chank fishing is carried out along Tuticorin coast with about 1,200 skin-divers actively engaging in the fishery. The fishing for the chank is carried out at a depth range of 10 to 20 metres. The method of collection of chank by skin-divers has been reported earlier by Nagappan Nayar and Mahadevan (*Proc. Symp. on Living Resources of the seas around India*, 1973).

Two species of the spiny lobsters namely, *Panulirus ornatus* (Fabricius) and *P. homarus* (Linnaeus) were collected by the skin-divers, the former being the dominant one and the latter occurring only sporadically. During the two months period of observation an estimated number of 2,424 lobsters of the species *P. ornatus* weighing 1,599 kg were collected by the skin-divers from the sea off Tuticorin. Out of this 87% of the catches were landed in January itself. The total number of divers involved in chank fishing was 28,440 during January whereas in the subsequent month it was only 9,750.

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The size of *P. ornatus* collected by the skin-divers during the two months period ranged between 154 and 450 mm (total length) in male. In females the size ranged from 169 to 423 mm only. However, majority of the lobsters were within the size range of 211 to 280 mm in both the sexes (Fig. 1). The occurrence of *P. homarus* was rare in the collection. Further, the size also was small ranging from 139 to 236 mm in male and from 120 to 245 mm in female. In *P. ornatus*, males were dominant constituting 74.2% of the total number of lobsters collected whereas in *P. homarus* females were dominant forming 67% of the total numbers collected. One specimen of *P. homarus* weighing 480 g and measuring a total length of 237 mm was observed with berry under its abdomen.

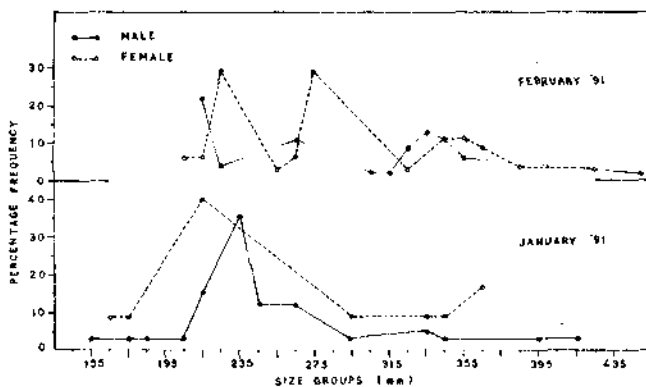


Fig. 1. Size-frequency distribution of *P. ornatus* collected by the skin-divers from the sea off Tuticorin during January and February, 1991.

When compared to the quantity of lobsters landed at Tuticorin by other gears viz. bottom-set gill nets and trawl nets, the quantity of lobsters collected by the skin-divers is insignificant. Nevertheless the importance of this small quantity collected by the skin-divers by visually observing their original habitats cannot be ignored as it throws light on their habitat and certain aspects of their behaviour. Normally the spiny lobsters live in rocky areas and prefer to hide themselves inside the holes and crevices of the submerged rocks (Balasubramanyan *et al.*, 1960, *Indian J. Fish.*, 7 (2)). But the ground where chank fishing is carried out is mostly sandy. According to the information gathered from the divers, the bottom is rocky in certain parts of the chank fishing ground. So if they happen to dive in such rocky areas they look out for the lobsters also and when they notice the presence of the lobsters inside the crevices or holes they catch them and bring them up to the boat. It has been reported that lobster catch is much better when fishing is carried out during night hours. Inside the Colombo harbour a total of 202 *P. dasypus* were collected by the skin-divers working with fish light for about two hours during night (Jonklass, 1965, *Proc. Symp. on Crustacea*, Part IV). When compared to this, the number of lobsters collected by the skin-divers from the sea off Tuticorin is negligible. But the collection of lobsters by the skin-divers from the sea off Tuticorin is only incidental as the fishing is carried out during day time primarily for collecting the sacred chank, *Xancus pyrum*.