

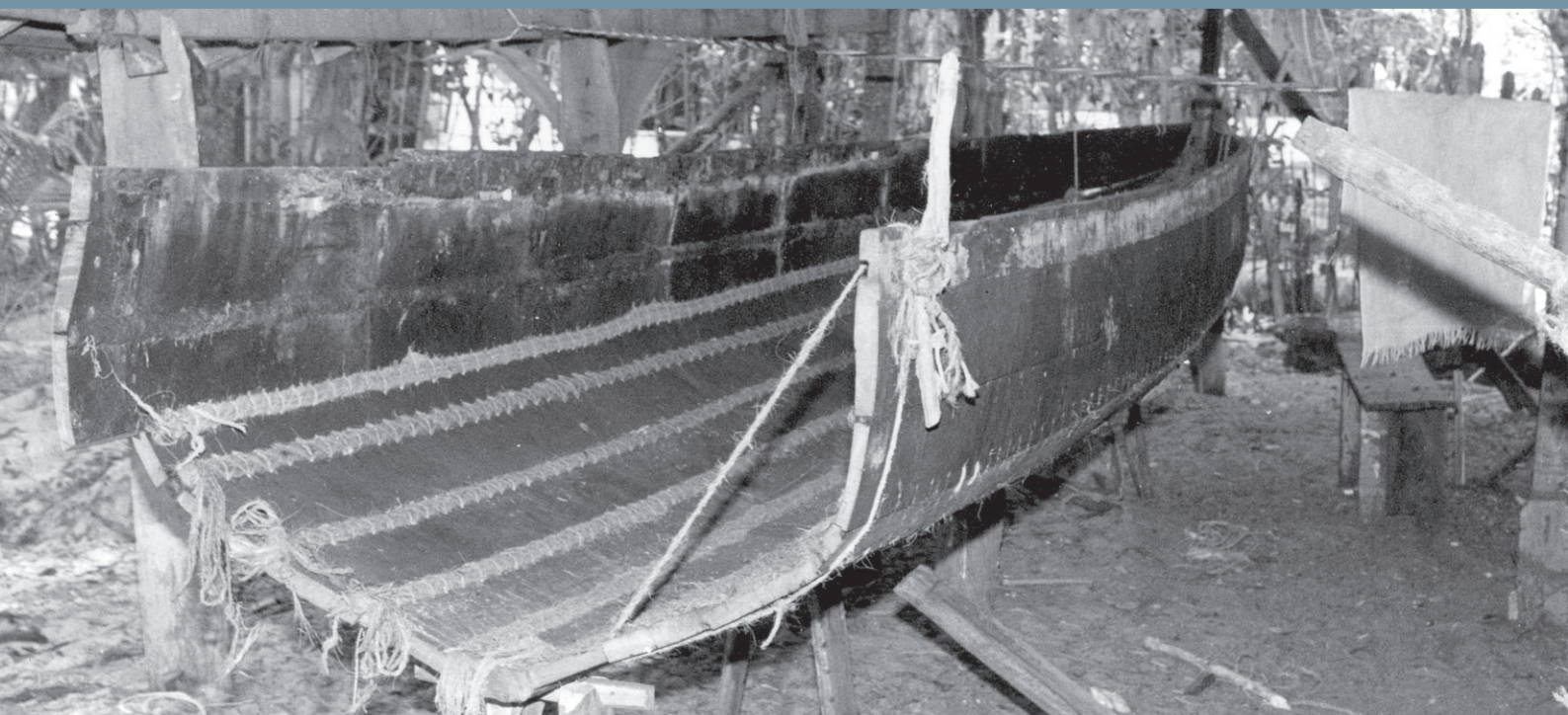
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## Lobster fishery by a modified bottom set gill net at Kayalpattanam

Lobster fishery is a traditional avocation throughout the year in Kayalpattanam, south of Tuticorin in Gulf of Mannar. Lobsters are fished by bottom set gill nets with 85 mm mesh size. Each boat with inboard engine of 10 to 15 HP, carries 2 to 3 bundles of nets and the length of a net varies from 90 to 120 m. There will be 4 to 5 fishermen in a boat. The fishermen leave the shore around 14.00 hrs., leave the nets at a depth of 4 to 6m and return to the shore. The fishermen go in the next day at 04.00 hrs., collect the bundles of nets along with lobsters and return to the shore around 10.00 hrs.

(Table 1).

A shift from “monofilament nylon” to “plastic valai” by increasing the mesh size from 85 to 130 mm yielded better and larger sized lobsters during Jan-April 2004. The length of a net was 160 m instead of the usual 90 m. The fishers went up to a distance of 25-30 km and operated the nets at a depth of 60m instead of the usual fishing ground of 4 to 6m depth in 3-4 km distance. The manpower per unit was also enhanced from 4 or 5 to 6 or 7 and the number of boats operated per day also went up to 50 to 60 from 10 units. The nets per fisher-

men were raised from 2 to 4.

After laying the nets generally, the fishermen went next day at 04.00hrs and returned at 10.00 hrs, but after modifications were made they went at 01.00hrs itself and returned the same day at 16.00hrs. Previously, the fishermen operated on all days except Sundays and during January to April 2004 they operated for three days in a week i.e. Monday, Wednesday and Friday only.

In the previous case, the spiny lobster catch comprised of *Panulirus ornatus* and *P. homarus* of which *P. ornatus* dominated forming 54.5%. After the modifications of the mesh size, the catch consisted of *P. ornatus* and *P. versicolor* of which the former dominated forming 71.0% of the catch. The size of *P. ornatus* at 85 mm mesh size varied from 135 to 290mm (April.2003), whereas at 130mm mesh size, the size of *P. ornatus* varied from 160 (April 2004) to 390mm (February 2004) (Table2).

The present observation indicated clearly the advantages of operation of nets of larger mesh size in deeper grounds for spiny lobster fishery.

Table 1 showing the differences between 85 mm and 130 mm mesh sizes.

SL. No.	85mm mesh size	130mm mesh size
1.	Departure time: 14.00hrs	14.00hrs
2.	Departure time to bring the nets: 04.00hrs of next day	01.00hrs of next day
3.	Arrival time: 10.0hrs of next day	16.00 hrs, same day
4.	Fishing days: All days except Sundays	Monday, Wednesday and Friday
5.	Man power : 4 to 5 nos	6 to 7 nos

6. Average No.of units operated per day : 10
7. Depth of operation: 4 to 6m 60m
8. Distance from the shore: 3 to 4 km 25 to 30km
9. Length of a net: 90 to 120m 160m
10. Nets per fisherman: 2 to 3Nos 4 Nos.
11. Horse Power: 10 to 15 HP 10 to 15 HP
12. Catches: *P. ornatus* and *P. homarus*; *P. ornatus* dominated (54.4%) *P. ornatus* and *P. versicolor*; *P. ornatus* dominated (71%)
13. Sizes of *P. ornatus*: 135 to 290 mm 160 to 390 mm
14. Make of nets: Monofilament nylon Plastic nets
15. Catches in kg:

Month	2003		2004	
	<i>P. ornatus</i>	<i>P. homarus</i>	<i>P. ornatus</i>	<i>P. versicolor</i>
Jan.	26	312	238	0
Feb.	506	308	1032	528
March	248	112	448	154
April	294	168	469	210
Total	1074	900	2187	892
%	54.4	45.6	71.0	29.0

Table 2. Size range of *P. ornatus* (in mm) in the spiny lobster fishery

Year	2003		2004	
	Min	Max.	Min.	Max.
Jan.		328	381	
Feb.	170	232	220	390
Mar.	137	280	300	380
April	135	290	160	387

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