

CRAB FISHERY OF THE PULICAT LAKE

ABSTRACT

The flourishing fishery for the Green crab, *Scylla serrata* (Forsk.) on the Pulicat Lake, extending throughout the year but reaching its peak period during November-January, is described. The indigenous method of dropping a coir rope with baits suspended from it, the scope of catches, marketing, socio-economic aspects of this fishery and its future are all described and discussed. Minor fishery for other species of crabs around this Lake is also included.

Commercial fishing of crabs has been reported from Bombay (Rai, 1933; Chappgar, 1962); the Chilka Lake (Jones and Sujahsingani, 1952); Uttarbhag in Lower Bengal (Hora, 1935; Chopra, 1935); Mandapam (Prasad and Tampi, 1954); and also from the South West coast (Menon, 1952; George and Nayak, 1961). This note embodies a report on the fairly large scale fishery of the Green crab, *Scylla serrata* (Forsk.), in the Pulicat Lake situated at 13° 26' N - 13° 43' N and 80° 03' E - 80° 16' E extending between the Tamil Nadu and the Andhra States and having an area of about 458 sq. Kilometres.

The Green crab is locally called in Tamil as *kat nandu* or *kadike nandu*. This crab is preferred to other species of crabs on account of its meat quality, its large size and its ability to remain alive out of water for a few days. Next in importance is *Portunus pelagicus* (Linnaeus), a marine species which is sometimes caught along with *S. serrata* in a ratio of about 1 : 10. Crab fishing is done on the Lake mostly near the villages Pulincheri, Arangam, Kasappa, Irakkam, Veynad, Ramapuram, Cochine and Zonangipalayam. Crabs are caught all round the year, but the peak period extends from November to January.

Methods of fishing: The chief method of crab fishing is similar to that employed at Bombay. Large scale crab fishing in the Pulicat Lake is done by fishermen from Pulicat village alone.

Fishermen, two in each boat, set out each Monday and Thursday at about 3 p.m. and return on Wednesday and Saturday respectively by about 2 p.m. During this period the fishermen live in their boats and do not touch the shore.

When the boat reaches the crab-fishing grounds, a coir rope 7 to 8 mm thick and about 250 metres long is taken and one end is tied to a pole stuck into the muddy bottom of the lake. The boat is then rowed away from the pole and the rope is dropped into the water. At intervals of about 75 cms on the rope, baits are tied to the rope to nooses made out of the fibre of the roots of *Pandanus* so that the baits hang about 8 to 10 cms from the rope. The meat of sharks, rays, catfishes, carangids and eels are used as bait after soaking it in salt-water for a week. During the processing of the bait, the salt-water is changed once in two days to prevent the appearance of dipteran maggots. Reserve bait is carried in the boat to replace those which might have slipped off the noose.

About 10 to 15 minutes after laying the line it is hauled in from the farthest end by one of the fishermen while the other rows the boat towards the pole. When the line is being hauled up, crabs if feeding on the bait, tend to cling to the bait. The fisherman sensing the presence of the crab by the pull on the line, inserts skilfully a scoop net, locally called the *kacha* into the water and scoops out the crab from the bait and throw it into the boat. The *kacha* consists of a thin bamboo pole of 1½ metres length to which a thick wire loop of about 25 cms in diameter is attached. The loop holds a shallow net of twist yarn with about 4 cm mesh. The line is laid out and hauled about 10 times a day and each time at least 10 to 15 crabs are caught. The chelae of the crabs are then fastened to the lower parts of their bodies and packed into narrow-mouthed palmyra baskets called *pari*, each basket holding about 200 crabs. One boat with two men working may make an average catch of about 200 crabs in one trip.

Other methods of fishing of very little commercial significance are also in practice in the Pulicat Lake. In one, a group of women squat in a straight line in shallow waters with a palmyra bag on their backs. They move forward in an orderly way, searching for crabs. It is done at noon so that they can see through the clear water. When crabs are spotted, they are picked up and thrown over the shoulder into the bag. On full moon days when crabs come to the water edge to moult they are captured. Lone fishermen sometimes capture crabs by spearing them in shallow water. Occasionally specimens of *Charybdis* sp. are caught. Fishermen stand individually in the receding tide and when the crabs are washed ashore they catch them.

Socio-economic Factors : The fishermen who set out for crab-fishing on Mondays belong to Naduvur, (central part of Kottaikuppam Village) and are mostly Catholic christians. They gather at about 3 o'clock near Kottaikuppam boatyard in about 30 boats and they all start at the same time to the crab-fishing grounds. The boat which leads, naturally reaches the best fishing grounds first, and stakes out that area for fishing rights. In this manner all boats will stake out areas for fishing rights. The crabs that are caught will be landed at Pulicat Village by about 12 noon to 3 p.m. on Wednesdays. On Thursdays, the rest of the fishermen on Kottaikuppam Village, who are mostly Muslims, go for fishing in a similar manner and return on Saturdays.

Socio-economic factors involved in the fishery are interesting. Some women on Naduvur advance sums of money ranging from Rs. 100 to Rs. 350 to one or more fishermen, who when they return are obliged to sell their catch only to the money-lender. This system is called the *padu* system in Pulicat. The fishermen will sell their catch to the money-lender at the rate of Rs. 15 per *kav*. One *kav* consists of 50 large crabs or proportionately for small sized crabs.

Before a fisherman sets out for fishing, he buys some bait for Rs. 5, he hires another man for help at Rs. 7 per day, he hires a boat for three days for about Rs. 5 and he also takes food to last them three days costing about Rs. 10. He also incurs some miscellaneous expenses such as the purchase of fibre for nooses, etc., for about Rs. 3. Thus a fisherman invests about Rs. 45 before he goes fishing and he therefore must catch enough crabs to fetch him a reasonable profit beyond his investments. On an average a fisherman makes a profit of about Rs. 20 per trip.

Marketing : Money-lenders buy the crabs from the fishermen and pack them into *paris* (baskets). These baskets are transported by bullock-cart to the bus stop in Pulicat Village, from where they are taken by buses to fish-markets in Madras. In the market, the crabs are sold by the money-lender herself. The crabs are changed from one basket to another everyday, removing the dead and sprinkling water occasionally. Crabs thus maintained will live for about 5 to 6 days. They are sold at prices ranging from Rs. 1.50 to 2.00 per pair of large-sized crabs.

Intensive fishing is carried on during the breeding season and gravid females are caught and sold in large quantities in the markets. Due to the limited nature of this resource which is estimated at about 250 tonnes of annual production, measures may have to be taken to restrict the fishing season to control the fishing so that berried females will be returned to the Lake. Problems in the artificial culture of this crab and recruitment of post-larval stages in the lake, mortality rate and growth rate and the ecology and behaviour need study. The feasibility of starting large scale crab-farming in the lake also need attention.

I am grateful to Dr. P. J. Sanjeeva Raj for suggesting this topic and for helping in the preparation of this report.

*Madras Christian College,
Tambaram, Madras-59.*

A. JOHN THOMAS

REFERENCES

- CHACKO, P. I. and PALANI, P. 1955. *J. Bombay nat. Hist. Soc.* **52** : 946-947.
 CHAPPGAR, B. F. 1962. *Ibid.*, **59** : 306-309.
 CHOPRA, B. 1939. *Ibid.*, **41** : 221-234.
 GEORGE, P. C. and NAYAK, K. R. 1961. *Indian J. Fish.*, **8** (1) : 44-53.
 HORA, L. 1935. *Curr. Sci.* **3** (11) : 543-546.
 JONES, S. and SUJAHsingani, K. H. 1952. *J. Bombay nat. Hist. Soc.* **51** : 128-134.
 MENON, M. K. 1952. *J. Zool. Soc. India.* **4** (2) : 177-184.
 RAI, H. S. 1933. *J. Bombay nat. Hist. Soc.* **36** (4) : 884-897.