

The gastropod shells were sent to Kanyakumari for making ornamental items and decorating materials. The total landing of gastropods was estimated as 16.2 t in January, 14.7 t in February and 18.2 t in March 2009. The catch of these gastropods and deepsea prawns help to sustain the trawl fishery at the time of poor catches. Also, there exists scope for developing a seasonal shell craft industry at Tuticorin

which will give additional income to the local fisherwomen. Although this is a regular phenomenon every year at the Tuticorin Fisheries Harbour, this has not been reported earlier.

The length-weight relationship of *N. nivea* was worked out as:  $\text{Log } W = -0.40095 + 1.934758 \log L$  and  $\text{Log } W = 0.2433 + 1.444192 \log \text{MSD}$ .

Table 1. Details of catch landed at Tuticorin Fisheries Harbour during January - March, 2009

Month	Trawl units	Total catch (t)	Quantity landed (t)			Total gastropods (t)
			Deepsea prawns	<i>Nassaraia nivea</i>	<i>Tibia fibia</i>	
January '09	480	1529	28.800	8.064	8.160	16.224
February '09	462	979	60.270	7.791	6.905	14.696
March '09	550	1020	47.250	9.625	8.575	18.200
Total	1492	3528	136.320	25.480	23.640	49.120

## Fishing methods in coral reef areas of the Gulf of Mannar

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Fishing methods being practised in the reef areas of the Gulf of Mannar for finfishes are trawling, gillnetting, fishing by hooks and lines and traps. Out of these, the most important device is trawling by which the most diverse and the highest quantity of finfishes are being landed from coral reef areas in this region.

### Trawling

Trawling in this area is being carried out by a special type of trawl net called roller net, locally known as 'Roller madi' (Fig.1 and 2).



Fig. 1. Roller net



Fig. 2. Roller net showing rollers

It is a modified type of net developed by the Central Institute of Fisheries Technology for operating in uneven grounds. The gear is attached with rollers or wheel-like structures on the foot rope. The rollers or wheel-like structures are made up of wood or rubber. Unlike ordinary trawlnets, this net can easily roll over the coral reef or rock without much damage to the net. The mesh size of the cod end is around 20 mm. Usually, for fishing, the fishermen leave the shore by 1300 – 1500 hrs and come back by 1030 -1630 hrs the next day. The depth of operation

varied between 12 and 100 m. The crafts used are trawlers with 9.5 to 12.5 m length, fitted with an inboard engine of 116-188 HP. Around 100 units operate per day in this region. Every year, the fishing season starts by September-October and will be over by 15<sup>th</sup> April of the succeeding year, along with the commencement of trawl ban. Fishing days are about 14 days in a month. From January onwards, pair-trawling with bigger rollers attached to the net is also being practised in this area. It is a blessing that nature itself has imposed a closed fishing period from 15<sup>th</sup> April to September-October period as the Gulf of Mannar remains rough during this period.

### Gillnetting

Bottom-set gillnet is being operated in the reef areas of this region. This is locally known as 'Mandal valai'. It is nothing but a rectangular piece of net, set at the bottom with weights and floats. This type of fishing is practised throughout the year in the Gulf of Mannar. Nets with different mesh sizes, 100 - 200 mm are being operated in this area to catch fishes along with lobsters and chanks. The craft used are boats with 9.5 – 13 m length fitted with an inboard engine of 20 – 65 HP. When the catch is poor, they may stay in the fishing ground for 3-5 days together to get a reasonable catch and hence there is no fixed time of departure from shore or for arrival. On an average, 25 units are landed per day. Fishing days are about 12 days in a month. They normally operate at a depth of 12-85 m.

### Hooks and lines

Fishing with hooks attached to a single line (Fig. 3) or a series of lines with hooks attached to a long line at regular intervals are practised.



Fig. 3. Hook and line

This gear is being operated by fishermen from Kanyakumari, Colachel and Muttom area. Fishing season is from October to April every year. The baits used are live fishes (*Sardinella sirm*, *Dussumieria acuta* etc.). It is believed that big fishes are being attracted by the smell of blood. The crafts used for this type of fishing are fibre glass boats of length 7-12 m fitted with an outboard engine having 8-10 HP. More than 100 units operate per day in this region. Usually they operate this gear at a depth of 24-84 m. The fishermen may leave the shore early in the morning and come back by evening or they may start by evening and return by morning. Also, they may stay in the fishing ground for more time if catch is poor. Fishing days are about 26 days in a month.

### Traps

Fishing by traps, locally known as 'koodu' are extensively used in this area (Fig. 4).

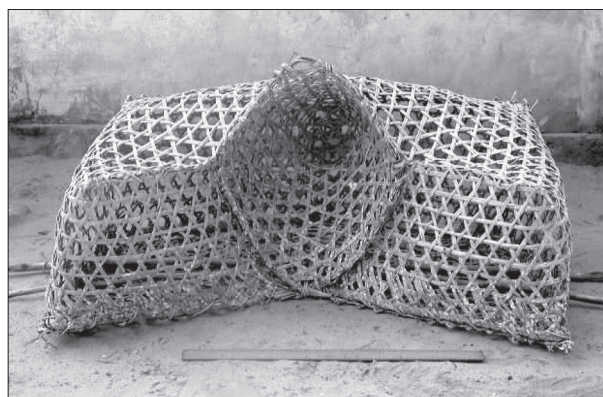


Fig. 4. Fish trap

Three types of traps are in use according to the number of openings present. They are traps with one, two and three openings and out of these, trap with one opening is being used by majority of fishermen. The most commonly used material for the construction of traps is *Acacia planifrons*, locally called 'odai tree'. Fishermen lay the traps in a fishing ground at the bottom with the help of stones after introducing the baits. The commonly used baits are shrimp heads. After about 24 h, the catches are taken out and traps are again left in the ground after introducing the bait and this process will continue. After 10 or 12 days, the traps are taken to the shore for cleaning and sundrying to make them more durable. Around 600 traps are being operated in this area. In most of the centres, it is operated throughout the year and fishing days are 26-27 in a month.