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955 **Whelk processing industry at Thirespuram — Tuticorin**

Tuticorin located on the southeast coast of India with its rocky and reely grounds in the Gulf of Mannar affords vast opportunities for the exploitation of a variety of finfishes, shellfishes, molluscan resources.

Most of the molluscan shells especially gastropod shells have been known from time immemorial for their ornamentation, meat, lime shell and other purposes. Many commercially important gastropods are landed as by-catch from shrimp trawlers at Tuticorin fishing harbour area along with fishes, crustaceans and cephalapods.

In recent years, there has been an upsurge of interest in the use of processed gastropod shells for various type of applications. They assume much importance in export as well as ornamentation trade. This note enlightes the processing stages of whelks in a small industry at Thirespuram, Tuticorin.

Whelks are recently being exploited from east and west coast of India on commercial basis for extraction of meat and operculum for export trade and for shells, shell based handi-craft industry. Whelks assumed importance in early 1990's since the meat of the shells are exported in good quantities from India to Japan since July 1993. In 1994, India exported good quantity of meat to Japan and Singapore.

In Tuticorin, whelks inhabit depth of 100-150 m at 50-60 km away from the shore. Also whelks prefer to live in sandy bottom,. Two species of edible whelks, *Babylonia spirata* (Linne) and *B. zeylanica* are landed along with other gastropods and bivalves as by-catch from shrimp trawlers.

During January & February (180-210 basket/month/trawler) and June & July (210-250 basket/month/trawler) whelk landings were heavy when compared to other months.

The average by catch ranges from 5-7 basket/day/trawler. A basket contains approximately 7-8 kgs. (wet weight). Fresh whelks cost about Rs. 2/Kg.

The following steps are observed at the processing, exporting industry.

Cooking

Big size aluminum drum/vessel (50-100 litre capacity) is used to boil the raw shells. Before boiling, sufficient quantity of baking soda is added. Boiling with baking soda for a few minutes softens the molluscs muscle which facilitates to remove the soft parts manually at quicker speed.

Cleaning with bleaching powder

After removing the flesh, the whelks are transferred to another vessel containing solution of chlorine bleach (50 gm bleaching powder in one litre water) so as to dissolve the remaining flesh / soft parts and outer shell organic growth found in the shells.

Cleaning with acid

Now the contents are passed on to the other vessel containing hot water with hydrochloric acid (HCl)/sulphuric acid (H_2SO_4) in the ratio of 30:0.5 (for 10 Kg Shells). As a result the shells are well polished.

Cleaning with water

In order to free these shells from acid effects, once again water is used to clean the shells and rubbed with clean cloth. Now all the shells become brighter and glittering.

Sun drying

Finally all the shells are spread on a palm mat/thick polythene sheet for a couple of days (Fig.1) Entire processing stages would be completed within five days.

This has resulted in the generation of better income to the fishermen.

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Fig. 1: Sun drying of whelk.

All the polished shells are packed in a plastic container/ trough (10-20 Kg) and transported to the shell based handicraft industry situated in and around Tuticorin and other areas of Tamil Nadu. The processed shells are sold at the rate of Rs 8-10/Kg (Fig.2).

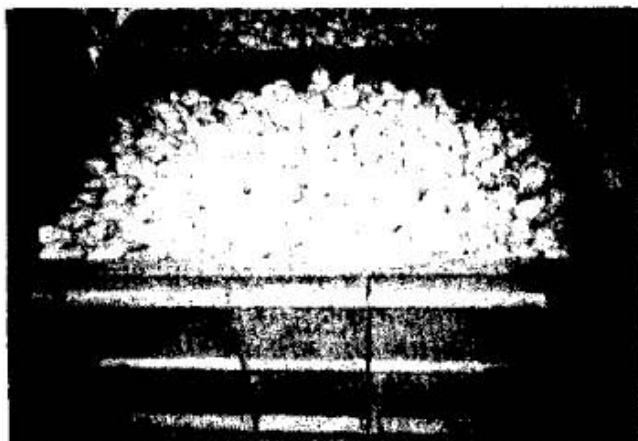


Fig. 2: Whelk ready for transportation

Conclusion

Prior to 1993, these shells were used only for lime industry and fetched very low price. With the progress of local processing technology in the recent years and with the emergence of specialised use, each and every member of molluscan species came to receive special attention and therefore found newer markets.