

## Dry cephalopods - A new market

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Cephalopods contribute 15.5% towards the marine fish landings in Maharashtra (CMFRI, 2013). The major cephalopod landing centres of Maharashtra namely New Ferry Wharf, Sasoon Docks and Versova are situated in Mumbai and they account for nearly 60% of landings in the state (Annam and Sindhu, 2005). There are about 45 municipal fish markets in Mumbai and more than 20 dry fish markets are located in Mumbai at various locations such as Worli, Sewri, Crawford market, Khar, Versova, Sion etc.

Fish being a highly perishable food item, it is preserved traditionally by sun-drying, smoking and salting. The oldest traditional way of preserving fish was to sundry it. Dried fish has been relished as food all along the coastal states of India and there is a tradition to consume it during special functions, especially among the lower strata of the society. It is widely consumed in the interior parts of India since availability and transport of fresh fish was poor. Dried fish is also used as a supplemental food for pets, which is a growing industry.

In Mumbai dry fish mainly belong to the species *Harpadon nehereus* (Bombay duck), *Lepturacanthus savala*, *Trichiurus lepturus*, *Eupleurogrammus muticus* (Ribbon fish), *Acetes indicus* (Paste Shrimp), *Bregmaceros mccllellandi* (Unicorn cod), *Coilia dussumieri* (Gold-spotted grenadier anchovy), *Lactarius lactarius* (Whitefish) and *Rastrelliger kanagurta* (Mackerel). As far as prawns are concerned they mainly belong to the species *Parapenaeopsis styliifera* (Kiddi Prawn) and *Exhippolysmata ensirostris* (Hunter Shrimp). Dry fish and dry prawns are observed regularly as it forms a very lucrative industry but dry cephalopods have never been reported. The activity of drying cephalopods that started off as a subsistence form of occupation is now slowly developing.

Largesized cephalopods are mainly exported while small size cephalopods are used as animal fodder and most of the times they discarded in the sea. But with the scope in dry cephalopod markets they are now dried. The oldest traditional way of preserving fish was to let the wind and sun-dry it and the same method is used by Worli fishermen to dry cephalopods. Cephalopods are sun-dried wholly without using salt which is cheap. It takes about 2-4 days for complete drying. All members of fishermen family are involved and there is a ready market available for dry cephalopods now. As mechanised trawling is suspended from 10<sup>th</sup> June to 15<sup>th</sup> August, due to southwest monsoon and restrictions on fishing imposed by the government of Maharashtra, the demanding main market for dry fish, prawn and cephalopods are during this period.

Two species of cephalopods are used for drying namely *Loliolus investigatoris* (Plate 1) commonly



Fig. 1. *Loliolus investigatoris* placed for sundrying



Fig. 2. Dried Cuttlefish *Sepiella inermis*

known as 'Investigator squid' and small sized 'Spineless cuttlefish' *Sepiella inermis* (Plate 2) both are exploited by *dol* netters and the fresh catch is used for drying. *L. investigatoris* is a small sized squid with maximum dorsal mantle length 55 mm and *S. inermis* ranging in dorsal mantle length between 20-40 mm are considered for drying. The price of dry *L. investigatoris* ranged between ₹ 20-30/kg while the price of *S. inermis* ranged from ₹ 40-50/kg in local markets. Being relatively cheaper it is economical for the buyers too as alternative to fresh fish and meat.

Locally fishermen use the sun dried cephalopods in the preparation of dry gravy known as 'Makul korma'. It is prepared by adding dry cephalopods along with oil, onion, ginger-garlic paste, coconut etc. in a frying pan and mixed well to sauté in oily mixture of masala. When the water has almost dried up, green chillies and the 'Kewra flower' (a local spice) are added and heated in simmering flame. When the oil begins to float on top the dish is ready to serve.

The method of cephalopod drying can also be emulated by other coastal states of India. Cephalopod drying is cheap and easy and identifying clean fish drying yards near to the fishing harbor will go in a long way in improving the quality of fish, prawn and cephalopods dried and also increase utilization of dry fish for human consumption.