

Unusual landing of cephalopods along Ratnagiri coast off Maharashtra

Santosh N. Bhendekar^{*1}, David D. Sawant¹, K. R. Mainkar¹, Anulekshmi Chellappan¹, S. Ramkumar¹, K. V. Akhilesh¹, R. Ratheesh Kumar¹, Ajay D. Nakhawa¹, Nilesh A. Pawar¹, Veerendra Veer Singh¹ and K. Sunil Mohamed²

¹Mumbai Research Centre of ICAR-Central Marine Fisheries Research Institute, Mumbai - 400 061, Maharashtra

²ICAR-Central Marine Fisheries Research Institute, Kochi - 682 018, Kerala

*E-mail: santucofs@gmail.com

Cephalopods are a marine fishery resource of increasing importance along Maharashtra coast and mostly exploited

by trawlers. In 2017 cephalopods forms 9.4% of total marine fish landing of Maharashtra. During month of mid-October

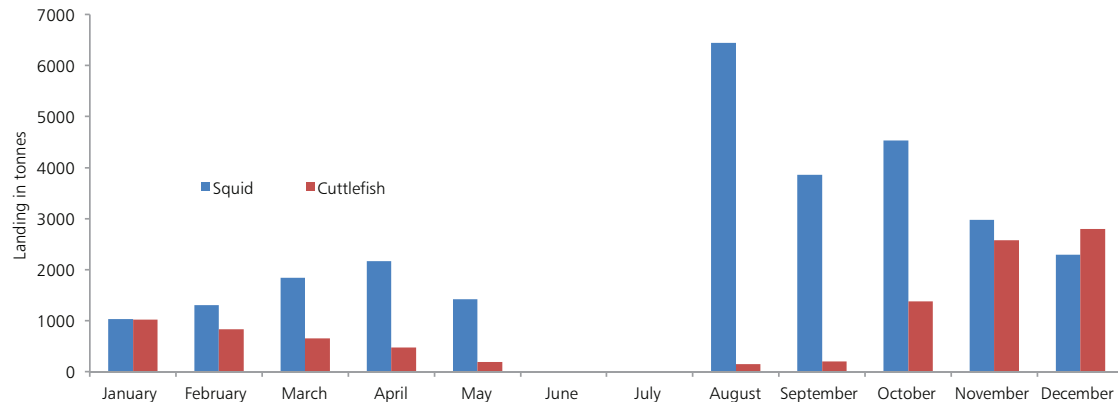


Fig. 1: Squid and cuttlefish landings of Maharashtra in 2017

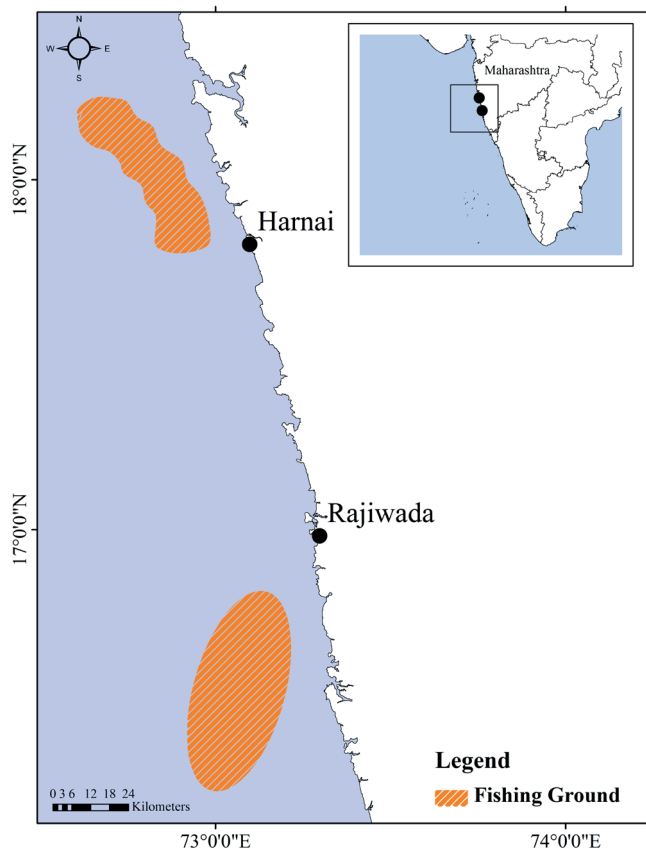


Fig.2: Fishing ground of unusual landing of cephalopod off Ratnagiri coast

to mid- November 2017 there was sudden spurt in Indian squid (*Uroteuthis (Photololigo) duvaucelii*) and Pharaoh cuttlefish (*Sepia pharaonis*) catch at Harnai and Rajiwada fish landing centre of Ratnagiri district of Maharashtra.

At Rajiwada, 20 hand jiggers were operated at 18-20 km away from Ratnagiri in South West direction in 20-22 m depth. Each hand jigger having 20 jigs suspended to 5 ropes. Their catch varies from 50-150 kg/day. But during month of mid-October to mid-November 2017 on an average each hand jigger was getting 500-700 kg catch Indian squid and Pharaoh cuttlefish per day.

At Harnai, during same period trawlers were also getting abundant catch of Indian squid and Pharaoh cuttlefish 18-19 km in North west direction. The fishing ground were demarcated on GIS platform (Fig.2).

The measurements taken at the landing centre indicated that the Dorsal Mantle Length (DML) of Indian Squid ranges from 156 to 381 mm and in Pharaoh cuttlefish ranges from 157 to 420 mm that indicate almost all were adults captured using various kinds of jigs (Figs. 3-5).

The oceanographic parameters retrieved from satellite data sea indicated that Sea Surface Temperature (SST) was in the range of 29-30°C during abundant catch of cephalopods. Mid-column (10-15m depth) temperature was 28°C. Sea surface height above geoid (SSH) increased from 20 cm to 44 cm during abundant catch period and the SSH anomalies may be influenced by ocean circulation also. Fishermen reported increased sea water currents during abundant catches and told that they never observed such high catch in last 2-3 decades. The Indian squid reportedly forms large congregations in inshore waters during the spawning season at which time they are caught by purse seiners using lights.



Fig. 3. Landings of Pharaoh cuttle fish



Fig. 4. Landings of Indian squid



Fig.5. Jigs varieties used by hand jiggers