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ABSTRACTS



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Possibilities of developing a low-impact oceanic squid fishery in Central Arabian Sea

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Exploratory surveys conducted by CMFRI (2008-2011) in the Central Arabian Sea established the abundance of purple-back squid, *Sthenoteuthis oualaniensis* in the offshore waters of Indian EEZ. This fast growing oceanic squid is considered to have enormous potential for contributing to the share of oceanic fisheries from a fishable stock estimated at 1.0-1.5 million t. This study details the results of resource surveys conducted in the Central Arabian Sea, the spawning grounds identified, recruitment periods and biological parameters of oceanic squid resources. Oceanic squid abundance was estimated by undertaking surveys using a converted squid jigger *MV Titanic* and FSI vessel *MV Varshini*, in the oceanic waters up to 4,000 m depth, from 8°N to 17°N lat and 64°E to 76°E long. The area around the Lakshadweep Islands near Agatti and Kalpeni Islands (10°00'-10°14' N lat; 71°59'-73°44' E long) were identified as a major spawning ground for oceanic squids probably because of higher productivity as compared to the Central Arabian Sea basin which is the normal foraging area for adults. Spawning in these squids was observed during the post-monsoon period. Comparison of efficiency of oceanic squid fishing methods viz., squid jigging using larger vessel, squid jigging using smaller vessel, gillnetting, hand jigging, trammel net operation, scoop net operation and purse seining were

explored. Gillnet catch rates were relatively higher, followed by mechanized jigging using larger vessel. Analysis of size frequencies of oceanic squids caught in different gears indicated that larger squids of Dorsal Mantle Length 232 ± 27 mm are caught in gillnets. This suggest the use of gillnets which is low-impact passive gear, for the exploitation of oceanic squids.

Keywords: Purple-back squid, squid fishing methods, *Sthenoteuthis oualaniensis*, Central Arabian Sea