

Congregations of squids in inshore waters at Mumbai

Squids are known to form large congregations in inshore waters during spawning season. Spawning congregations of squids at staggered intervals along Kerala-Karnataka coast (September – October) have been reported which generally occur along the southwest coast of India with varying intensities during the post monsoon period. The studies suggest that spawning of squids usually occur when water temperatures increase. According to reports, along the southwest coast of India, the surface and sub-surface seawater temperatures in the inshore areas evince a sudden increase during September -October after the southwest monsoon and this could probably explain the congregation of squids. However some experts opine that species of squids congregate along the shore for feeding.

A similar phenomenon of congregations of squids from inshore waters of Mumbai is reported for the first time. The local fishermen were of the opinion that they have never observed such a phenomenon before in their lifetime and hence occurrence of this incidence from Mumbai waters gains more importance. During this phenomenon the sea around Mumbai was very squally with intermittent rains. The squids were mainly *Loligo duvauceli* (90%) followed by *Loligo (Doryteuthis) sibogae* (10%).

Huge congregation of this species was observed along Versova-Juhu beach and inshore waters from 3-10-09 onwards and the phenomenon lasted for about a week. This phenomenon was observed almost all along the coastline of Mumbai, but at Versova it was of a

higher magnitude. In fact at Versova, squids were observed in creeks also and fishermen caught them with scoop nets. At Versova nearshore waters trawl nets, drag nets and even shore seines were used to exploit them. Trawling operation was carried out at nearshore waters at about 2 m depth. The catch rate of the species in trawl was 150 kg/haul at low tide.

The dorsal mantle length of males ranged from 120 – 180 mm and females ranged between 121 to 195 mm. On further biological analysis of the specimens brought to the laboratory, it was observed 100% of the females and 95% of the males were in mature condition and almost all had empty stomachs (95%). The occurrence of such sizeable quantity of mature squids during the period indicates that the squids might have congregated for spawning. The squids could not move out with the receding tides, probably because of spawning exhaustion and therefore they were hand picked by people on the beach. The catch was later marketed in local market and they fetched comparatively higher value because of its freshness.

Studies are being carried out to ascertain the probable causes of this phenomenon along the Mumbai coast.

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Harvested squids