

Unprecedented landing of spine tail devil ray *Mobula japonica* (Muller & Henle, 1841) at Tharuvaikulam, Tuticorin

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The spine tail devil ray *Mobula japonica* (Muller & Henle, 1841) is a large zooplanktivorous ray circum-globally distributed within tropical to warm temperate waters. This species belongs to the family Mobulidae. In the genus *Mobula*, the mouth is located

ventrally and is currently represented by nine recognised species. The species *M. japonica* has a broad disc and very long tail with a caudal spine. Tail is ventrally flattened near the base of dorsal fin and is covered in distinct rows of tiny white tubercles

along either side. The colour is dark blue dorsally and white ventrally. The dorsal fin is white tipped.

Normally the surface drift gillnet units that target tuna and seer fishes land one or two devil rays at Tharuvaikulam landing centre. But on 13.9.2013, 10 numbers of *M. japanica* was landed by a drift gillnet unit and all of them were caught in the same haul (Fig.1). These were caught off Kanyakumari at a depth of 150 m. Its disc width ranged from 234-108 cm. The stomachs were empty containing only fluids. Among these, one female (234 cm DW) contained a fully developed young one with its tail completely protruded out indicating the impending release of the young one. The young one had its pectoral fin fully folded giving a cylindrical shape when it was inside the oviduct of mother. The young one was a male pup (Fig. 2) with a disc width of 110 cm. The width of the mouth was 10 cm and width between horns was 11 cm. The total weight of the pup was 10.35 kg.



Fig. 1. A view of the catch of *M. japanica* at the Tharuvaikulam landing centre

The reproductive mode within this family is aplacental viviparity and the species possesses only a single functional ovary. Embryos obtain nutrients initially by yolk, then through absorption of enriched



Fig. 2. Dorsal view of the pup after unfolding its fin

uterine fluid from the mother. Size at birth ranges between 70 and 85 cm DW (Whiteet al., 2006; *Mobula japanica*. In: IUCN 2013). The fact that the present catch contained a fish with 108 cm DW and the size of the pup yet to be released was 110 cm DW indicates a possible spatial difference in the size at birth as well as size at maturity.

M. japanica, *M. tarapacana* and *M. thurstoni* are all considered vulnerable in Southeast Asia where catches and demand are increasing (White et al. 2005, Clark et al. 2005). The high value of gill rakers in some countries is driving a dramatic increase in the catch of mobulids in Indonesia where devil rays are now targeted. In India, though there is no target fishing, it forms a by-catch fishery. Here also, the gillrakers of mobulid rays are in demand as an export item and its flesh is used for local consumption. From Tuticorin, the flesh is transported to Kerala. The species appear to be particularly susceptible to overfishing as their fecundity is among the lowest of all elasmobranchs with a single pup and the gestation period is nearly one year.