

Unusual landing of Spine tail devil ray from Andhra Pradesh

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Bandaruvanipeta is a major landing centre near Kalingapatnam in Srikakulam district of Andhra Pradesh and nearly 120-140 motorised fibre *teppa*, 20 to 30 non-motorized fibre *teppa* and *masula* boats (*kuttupadava*) are operated from this base. The major fishing gears used from these boats include gillnets (*Kavvalavala*, *Jogavala*, *Chanduvavala*), drift gillnet (*Panduvala*) and hooks & line (*Jamu thradu*).

Thirty nine individual Spine tail devil rays, *Mobula mobular* (Bonnaterre, 1788) locally called as *Yenuguteku* (sometimes *chinnadeyyapu*) were landed at Bandaruvanipeta landing centre during 06.04.2017 to 10.04.2017. Ranging in size from 111-130 cm disc width, the individual weight of the rays ranged between 12-26 kg (Table 1). Information collected from fishermen confirmed that the rays were caught incidentally in monofilament gillnets (*Jogavala*), a gillnet operated from inboard and outboard fibre *teppa* throughout the year for catching *R. kanagurta*, *Selar* sp., *Alepes* sp., *S. guttatus*, croakers and *Caranx* sp.. The *Jogavala* that caught the rays had a mesh size 5

to 5.5 cm and net length of 250 to 350 m and the net was operated 12 to 20 km away from the shore, in areas of 50-65 m depth, south-east of Kalingapatnam. The fishermen had modified the gear by stitching thermocol pieces on the top of the mother wire for enabling surface drifting of the net. This is locally called *Teluvavala* and is operated mostly during April to July. The spine tail devil rays were sold by local auction at a price ranging between ₹35-45 per kg.

Identification of *M. mobular* is based on morphometric characters such as spine on base of tail, dorsal fin white tipped, tail very long, spiracles above anterior margin of pectoral fin (Fig.1). The species give birth to young ones with sizes of such pups ranging from 90-160 cm disc width. Since the animals were caught over 4 days it can be assumed to have been in residence in the area during the time. Further studies would be needed to confirm if this is a regular pup shoaling area for the species since elsewhere the species is known to seasonally aggregate in the same area (Celona, 2004).

Table 1. Morphometric measurements of specimens of *Mobula mobular* landed at Bandaruvanipeta

Character	06.04.2017			07.04.2017		08.04.2017	
	1	2	3	1	2	1	2
Disc length (cm)	56	52	54.5	57	50	58	48
Disk width (cm)	128	120	125	130	117	128	111
Length of mouth (cm)	18	16	17	18	15	18	13
Width between cephalic fins (cm)	21	19.5	20.5	21	19	20	17
Length of head (cm)	24	21	19	20.5	20.5	20	19
Length of tail (cm)	102	116	105	122	108	118	102
Sex	F	M	F	F	M	M	M
Weight (kg)	23	18	20	26	13	22	11
Auction price (₹)	900	500	750	1100	400	1000	400
Per Kg price (₹)	30-45	30-45	30-45	30-45	30-45	30-45	30-45



An important biological factor that makes devil rays vulnerable to overfishing is that they produce only one young each pregnancy and hatch eggs inside their body giving birth to a single pup after an extended gestation of approximately one year which is followed by a prolonged interval to another breeding cycle. These life history traits along with their vulnerability as bycatch led to the IUCN declaring it as an “Endangered” species (Marshall *et al.*, 2019). The species is also listed under Appendix II of CITES wherein its international trade is monitored. In India, there is no targeted fishing of mobulids but it occurs mostly as incidental or bycatch. The gill rakers of mobulid rays are in demand in China, Singapore and

Japan and dried gill rakers and livers form an export item. The salted and dried flesh of the rays along with their livers are usually transported to Chennai and Kerala for consumption.

References:

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