

# Giant devil manta rays landed by purse seiner at Cochin fisheries harbour

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Two specimens of giant devil ray, *Manta birostris* locally known as 'Aanathirandi' measuring 307 and 194.5 cm in TL, 534 and 416 cm in disc width and weighing about 780 and 570 kg respectively were landed at Cochin fisheries harbour on 19.05.14 and 20.05.14 (Fig. 1). *Manta birostris* are caught generally by gill net and on this occasion these rays were caught from the inshore waters off Cochin at 9°52'N., 9°56' E at a depth of 30-40 m by purse seiner boats. Along the Indian coast, landings of devil



Fig. 1. Giant Devil Manta ray *Manta birostris* landed at Cochin Fisheries Harbour

Table 1. Morphometric measurements of *Manta birostris* landed at Cochin fisheries harbour

| Sl. No. | Measurements                 | Specimen 1 (Female) (cm) | Specimen 2 (Male) (cm) | Pup (female) (cm) |
|---------|------------------------------|--------------------------|------------------------|-------------------|
| 1       | Total length                 | 307                      | 194.5                  | 148               |
| 2       | Standard length              | 292                      | 182                    | 87                |
| 3       | Disc width                   | 534                      | 416                    | 176               |
| 4       | Mouth width                  | 80                       | 64                     | 23                |
| 5       | Inter gill length            | 65                       | 48                     | 17                |
| 6       | Inter cephalic horn distance | 95                       | 71                     | 30                |
| 7       | Cephalic horn length         | 65                       | 39                     | 20                |
| 8       | Cephalic horn width          | 26                       | 19                     | 10                |
| 9       | Eye length                   | 6.5                      | 6                      | 3.5               |
| 10      | Eye width                    | 6                        | 5.5                    | 3                 |
| 11      | Inter orbital length         | 140                      | 108                    | 76.5              |
| 12      | Vent length                  | 41                       | 16                     | 9                 |
| 13      | Pelvic fin length            | 25                       | -                      | 13                |
| 14      | Pelvic fin width             | 74                       | -                      | 8                 |
| 15      | First gill slit width        | 72                       | 41                     | 17                |
| 16      | Second gill slit width       | 67                       | 43                     | 18                |
| 17      | Third gill slit width        | 63                       | 41.5                   | 16                |
| 18      | Fourth gill slit width       | 55                       | 37.5                   | 15                |
| 19      | Fifth gill slit width        | 50                       | 29.5                   | 12                |
| 20      | Total weight (kg)            | 780                      | 570                    | 22                |
| 21      | Clasper inner length         | -                        | 26.5                   | -                 |
| 22      | Clasper outer width          | -                        | 10                     | -                 |
| 23      | Clasper width                | -                        | 6                      | -                 |

rays have been reported during 25 occasions. However, is the first report with detailed measurements (Table 1) from Cochin Fisheries Harbour.

The ray could be identified as *Manta birostris* with the unique characteristics such as long gill plate, uniform dark brown/black coloration, terminal mouth, knob-like bulge at base of tail with a small dorsal fin. Inner side of mouth and cephalic fins coloured black, cephalic fins large and unfurl to meet together at the centre of the mouth. The giant oceanic manta ray *M. birostris* belong to the family Mobulidae, and is considered as the largest ray in the world. They are circum global in distribution and are typically found in tropical and subtropical waters, but can also be found in temperate waters. Manta rays feed on plankton which they scoop up with their large mouths. They take a long time to reach sexual maturity, have long gestation periods, and often give birth to a single pup. *M. birostris* is considered as 'Vulnerable' by the IUCN Red List of Threatened Species.

The specimen landed on 19.05.14 was a mature female and the other one was a mature male with calcified and long claspers. When the fish was cut open a young female pup measuring 148 cm in TL, 170 cm disc width and weighing about 22 kg was obtained from inside the womb, stomachs were empty (Table 1). The manta rays are generally utilised for their gill plates, meat, cartilage and skin. There is increasing demand for the brachial filter plates of manta rays in southeast Asian countries for medicinal purpose and for preparation of soups.



Fig. 2. *Remora albescens*, found inside the gill chamber of Manta ray

Four numbers of white manta sucker fishes identified as *Remora albescens* and the Indo-Pacific oval flounder *Bothus myriaster* were collected from the gill chamber (Fig. 2). The sucker fishes were in living condition when collected.

Further landings of manta rays at Cochin Fisheries Harbour were reported by local news papers on 18<sup>th</sup> and 22<sup>nd</sup> May 2014 also. The details are given in the Table 2. Landing of Manta rays in purse seiner was earlier reported from Karwar Fisheries Harbor (Kakati and Dinesh, 1995).

Table 2. Details of manta rays landed at Cochin Fisheries Harbour

| Sl. No. | Date     | Number of rays landed by purse seiner | Total weight (kg) |
|---------|----------|---------------------------------------|-------------------|
| 1.      | 18/05/14 | 2                                     | 2400              |
| 2.      | 19/05/14 | 1                                     | 780               |
| 3.      | 20/05/14 | 1                                     | 570               |
| 4.      | 22/05/14 | 1                                     | 650               |