

NOTES ON A GIANT DEVILRAY, *MANTA BIROSTRIS*
(WALBAUM), CAUGHT OFF MADRAS

D. B. JAMES

Central Marine Fisheries Research Centre, Madras-105.

ABSTRACT

Detailed measurements of a devil ray, *Manta birostris* (Walbaum), caught on 23-3-1981 off Madras along with some details on the internal organs are given.

Although the devil ray, *Manta birostris* (Walbaum), enjoying a wide distribution, has been recorded by Day (1978), Lloyd (1908), Sivaprakasam (1965) and Jones and Kumaran (1980) from Indian waters, by Tombazi (1934) from Karachi and by Smith (1961) from South Africa, hardly any information is available on the internal anatomy of the animal.

One female specimen (Fig 1, A) measuring 4.27 m in width was caught in a gill net (*Iraga Vala*) off Nochikuppam near Madras on 23-3-1981. Since there was no ready market for it, it was brought to Royapuram landing centre in a catamaran and sold for Rs. 200|. Judging from the observations of Grant (1965), it would have weighed 750 kg.

The measurements of the specimen are:

Breadth of the body	4270 mm
Length of the body	1870 mm
Distance between two eyes	1080 mm
Breadth of cephalic horn	200 mm
Length of cephalic horn	520 mm
Width of mouth	670 mm
Diameter of eye	350 mm
Length of tail	1110 mm
Length of pelvic fin	260 mm
Width of first gill slit	410 mm
Width of second gill slit	420 mm
Width of third gill slit	410 mm
Width of fourth gill slit	370 mm

Width of fifth gill slit	270 mm
Distance between the first and second gill slit	480 mm
Distance between the second and third gill slits	400 mm
Distance between the third and fourth gill slits	360 mm
Distance between the fourth and fifth gill slits	290 mm
Distance from the mouth to the first gill slit	280 mm
Distance from the mouth to the second gill slit	450 mm
Distance from the mouth to the third gill slit	540 mm
Distance from the mouth to the fourth gill slit	680 mm
Distance from the mouth to the fifth gill slit	780 mm

The colour on the dorsal side of the specimen was uniformly black and the ventral side was white.

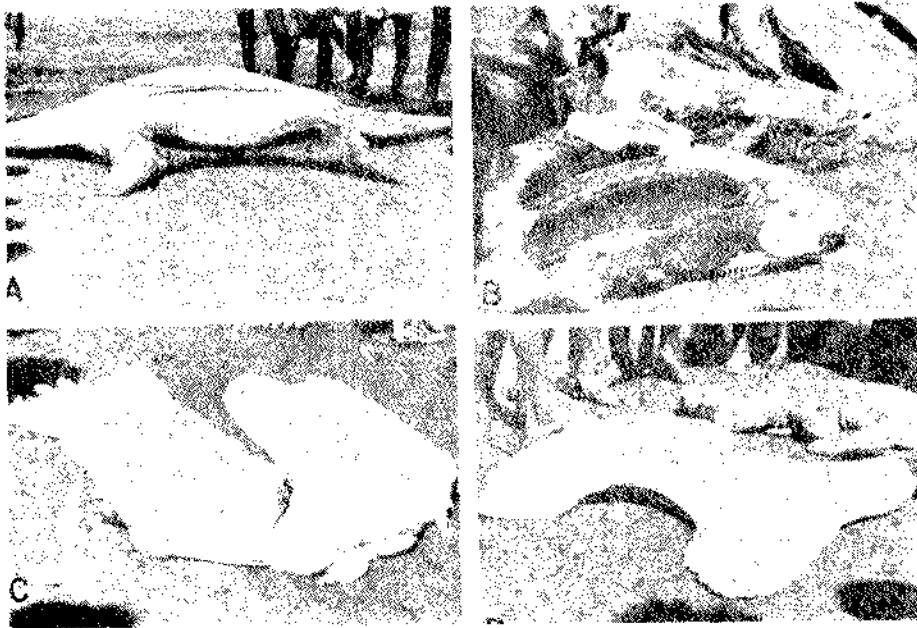


FIG. 1. The desilid *Manna bi-ostri's*, caught off Madras. A: Ventral view of the specimen; B: Sieve-like structures of the gill-chamber; C: Stomach and uterus cut open; D: Liver.

The liver was sickle-shaped (Fig. 1, D) and weighed about 10 kg. The breadth of the liver was 820 mm and the length of each lobe was 620 mm. The uterus (Fig. 1, C) was 630 mm in length and was cylindrical in shape. No embryos were found inside the uterus. The inner wall of the uterus had two rows of muscular bands arranged in transverse manner. Each row had 47 muscle

bands. The stomach (Fig. 1, C), which was empty, was divided into three distinct parts. The anterior portion had simple velli arranged in 22 distinct rows. The central portion was long with 31 muscular bands and the posterior portion had branched velli in six bunches. According to Smith these rays live on minute forms of life, strained by the curious sieve-like structures of the gills (Fig. 1, B).

Two species of sucker fish, viz., *Remora remora* and *R. albescens*, were collected from the gill chamber. Both the specimens were in the living condition when collected.

I thank Shri. A. C. Sekar, Technical Assistant, for the assistance given in the field.

REFERENCES

- DAY, F. 1878. *The fishes of India, being a Natural History of the fishes known to inhabit the seas and fresh waters of India, Burma and Ceylon*. 4 Parts. London, 1-778. (Reprinted, 1958).
- GRANT, E. M. 1965. *Guide to fishes*. Department of harbours and marine, Queensland, 280 pp.
- JONES, S. AND M. KUMARAN. 1980. *Fishes of the Laccadive Archipelago*. 757 pp. The Nature Conservation and Aquatic Sciences Service, Trivandrum.
- LLOYD, R. E. 1908. *Rec. Indian Mus.*, 2(2): 175-180.
- SIVAPRAKASAM, T. E. 1965. *J. Mar. biol. Ass. India*. 7(1): 204-205.
- SMITH, J. L. B. 1949. *The sea fishes of Southern Africa*. Central News Agency Ltd., South Africa. 1961. 1-580. 5th Edition.
- TOMBAZI, N. A. 1935. *J. Bombay nat. Hist. Soc.*, 37: 227-229.