# ON SOME SPECIMENS OF ABNORMAL ELASMOBRANCHS

Instances of deformities or abnormalities have been reported on and off in fishes. The abnormality is extreme in certain cases that it is very difficult even to identify them correctly and this leads to creation of new taxa. Days (1878) description of a malformed specimen of *Gymnura poecilura* as *Ceratoptera ehrenbergi* is a typical example. Abnormalities of various

kinds in elasmobranchs have been observed by some earlier workers. Templeman (1965) described some abnormalities in *Raja radiata* from the New Foundland area. Other reports of abnormalities on elasmobranch fishes from Indian waters included those of Menon (1959), Luther (1961), Sam Bennet (1964), Eswaran (1967), Gopalan (1971) and Nair and Chellam (1971). While investigating the elasmobranchs fauna of the PortoNovo coast, three instances of deformities were noticed and they are described presently.

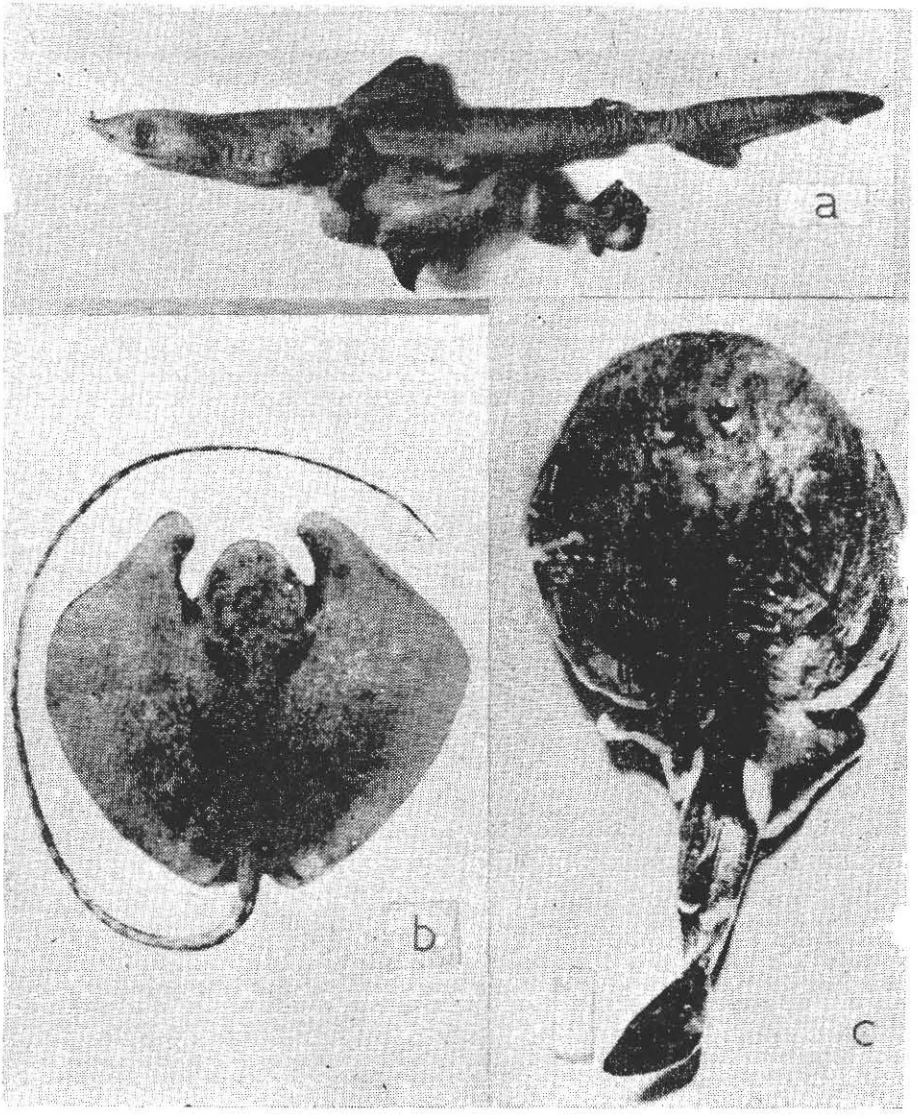


Fig. 1a. An abonormal palasorra, *Scoliodon laticaudus* 212 m in total length.
Fig. 1b. A malformed ray, *Dasyatis jenkinsii* measuring 280 mm across disc.
Fig. 1c. A deformed skate, *Narke dipterygia* 148 mm in total length.

*Deformed Palasorra:* An instance of monozygotic twins of *Scoliodon laticaudus* has been noticed. They are preserved in the Museum of the Marine Biological Stations of Annamalai University, PortoNovo. Both are males and are joined from the pectoral region to the cloaca (fig. 1a). One of them is head less and the distance between the pectoral and cloaca is same in both juvenile forms, but in the deformed one the tail portion is much shorter. It is twisted in a ' U ' shape thrice and the curved portions are joined by skin. The normal one measured 212 mm in Tl. A branch of posterior aorta from in between the pectorals of the normal specimen is seen entering the corresponding region of the abnormal one. All the fins are normal except the caudal. Previous observations of similar nature are by Gopalan (1971) on a double headed *Carcharias walbeehmi.*

*Malformed Ray:* Another instance of malformation has been noticed in a female sting ray, *Dasyatis jenkinsii* 280 mm across disc (fig. 1b) in which the pectoral fins are found separated from the head but otherwise normal. This abnormality is a result of the failure of the anterior lobes of both the pectorals to fuse with the head during the embryonic development. There was no previous observation of such a kind in this species.

*Deformed Skate:* A female numbfish, *Narke dipterygia* 148 mm in Tl with a deep scar on the dorsal side of the disc was recorded. This indicated that the deformity was presumably caused by an injury. The rough black scar had a depth of 10 mm on the dorsal side above the left pelvic fin. The roughness of the scar is seen clearly against the background of velvety smoothness of the animal. As a result of this, the left pelvic fin has wrinkled and twisted up. The impact of the injury is so much that the growth of the left pelvic fin has been retarded (fig. 1c). Hence the difference in sizes of the two pelvic fins. The vertebral column has also curved towards the left side. Except these deformities the specimen appeared to be normal.

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LITERATURE CITED

DAY, F., 1878. *Fishes of India,* **1**: 736-741.

ESWARAN, C. R., 1967. On an abnormal ray from the Gulf of Kutch. *J. mar. biol. Ass. India,* **9(1)**: 198-200.

GOPALAN, U. K., 1971. On two abnormal sharks from Gujarat. *J. Bombay nat. Hist. Soc.,* **68(2)**: 465-466.

LUTHER, G., 1961. On an apparently specific type of abnormality in the white-spotted shovelnose ray, *Rhynchobatus djiddensis. J. mar. biol. Ass. India,* **3**: 198-203.

MENON, M., 1959. On some abnormal sharks preserved at the Marine biological station, West Hill. *Dept. Fisheries, Govt. Madras,* 191-194.

NAIR, K. V. S. AND CHELLAM, A., 1971. An abnormal sting ray caught off Calicut. *Indian J. Fish.,* **18**: 193-195.

SAM BENNET, P., 1964. On an abnormal ray from Vizhinjam. *J. mar. biol. Ass. India,* **6(2)**: 316-317.

TEMPLEMAN, W., 1965. Some abnormalities in skates (*Raja*) of the Newfoundland area. *J. Fish. Res. Bd. Canada,* **22(1)**: 237-238.