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Short Communication

Morphometric characteristics of the pelagic stingray *Pteroplatytrygon violacea* (Bonaparte, 1832) caught off Cochin, southwest coast of India

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Abstract

The morphometric characteristics of the pelagic stingray *Pteroplatytrygon violacea* (Bonaparte, 1832) are described for the first time from the Indian waters. The specimen was collected at Cochin in August, 2008. The mature male specimen measured 102 cm in total length, 47 cm in disc width, 35 cm in disc length and weighed 2.5 kg. The morphometric characteristics of the specimen were very similar to that described from the North Sea.

Keywords: Dasyatidae, stingray, *Pteroplatytrygon violacea,* Indian Ocean

Introduction

Pteroplatytrygon is a monotypic genus (Compagno, 1999; Nelson, 2006) and one of the six genera of family Dasyatidae (Myliobatiformes), which is the largest stingray family comprising about 68 species. In the Indian waters, 32 rays including 18 species of Dasyatidae have been reported (Raje *et al.,* 2002, 2007) and the presently described species *Pteroplatytrygon violacea* is a new addition. It was earlier considered as a rare species occurring only in the Mediterranean Sea (Tortonese, 1956), but later its distribution in the Indian, Pacific and Atlantic Oceans has been reported (McEachran and Capape, 1984; Mollet, 2002; Domingo *et al.,* 2005; Ellis, 2007; Froese and Pauly, 2008). However, reports from the Indian Ocean are very rare and restricted to the waters off South Africa and eastern Indonesia (White and Dharmadi, 2007). *P. violacea* has been reported in the exploratory survey of FORV *Sagar Sampada* along the southwest coast of India (Jayaprakash *et al.,* 2006) and in the fishery survey of *Matsya Vrusti* (Anon, 2007). This communication gives the first report on the morphometric characteristics of *P. violacea* from the Arabian Sea.

Material and methods

The pelagic stingray *Pteroplatytrygon violacea* (Bonaparte, 1832) was collected from the Cochin Fisheries Harbour, Kerala in August 2008. The mature male specimen was obtained as by-catch from a tuna gillnetter, which operated at a depth of about 150 m. It measured 102 cm in total length (TL), 47 cm in disc width (DW) and 35 cm in disc length (DL) and weighed 2.5 kg. The morphometric measurements of the specimen were measured with a Mitutoyo digital vernier caliper with an accuracy of 0.5 mm. Morphometric characteristics were compared with the specimen from North Sea (BMNH 2007.7.3.1), which is deposited in the British Museum of Natural History (Ellis, 2007). The present specimen has been deposited in the National Marine Biodiversity Referral Museum at CMFRI, Cochin.

Results and Discussion

The pelagic stingray *P. violacea* (Bonaparte, 1832) is found in the open oceans and inshore bays. It is the only whiptail stingray known to inhabit epipelagic waters of oceans (Wilson and

Beckett, 1970; Menni and Stehmann, 2000; Mollet, 2002; Neer, 2008). *P. violacea* is identified by its symmetry and dark coloration on the dorsal and ventral surfaces of the characteristically broad wedge-shaped disc. The snout is very small and the tail has a membranous fold on the ventral surface underneath the spine (Fig. 1). The morphometric characteristics of the present specimen matches with the representative described from the North Sea by Ellis (2007) (Table 1). A slight variation was observed in the interorbital distance, which may be due to geographical

Fig. 1. Dorsal view of *Pteroplatytrygon violacea* (Bonaparte, 1832)

variation and size difference. There are a few reports on the biology of *P. violacea* Mollet *et al.,* 2002; Hemida *et al.,* 2003; (Neer, 2008). The diet of the ray has been reported to consist of coelenterates, decapods, squids, crustaceans and pelagic fishes (Mollet *et al.,* 2002). Analysis of stomach content of the specimen collected at Cochin showed that crustacean biomass was dominant (60%) followed by digested fish and squid.

Table 1. Morphometric comparison (% of total length in mm) of *Pteroplatytrygon violacea* (Bonaparte, 1832) captured off Cochin with specimen from North Sea (Ellis, 2007)

Dimension	Arabian Sea (off Cochin)	North Sea
Total length (cm)	102.00	99.5
Disc width	46.08	42.20
Disc length	34.31	33.70
Pre-orbital length	5.49	5.30
Length of the eye	1.57	1.60
Inter-orbital distance	6.57	4.10
Pre-spiracular distance	7.35	6.90
Length of the spiracle	2.55	2.20
Inter-spiracular distance	7.65	7.70
Pre-narial length	5.10	4.80
Inter-narial distance	4.41	4.20
Pre-oral distance	6.27	6.30
Mouth width	5.39	4.90
Interspace first gill slits	8.82	8.50
Interspace fifth gill slits	6.47	6.00
Snout to first gill opening	11.37	10.80
Snout to fifth gill opening	16.57	15.70
Snout to cloaca (anterior) distance	29.90	29.60
Cloaca (anterior) to end of the tail	70.10	71.40
External clasper length	6.18	5.50

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