

## Occurrence of pelagic stingray *Pteroplatytrygon violacea* (Bonaparte, 1832) in the inshore waters of Parangipettai, Southeast coast of India

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Present paper study is the first occurrence of pelagic stingray *Pteroplatytrygon violacea* from Parangipettai coastal waters, Tamilnadu and second report from east coast of India. Male specimen measured 32.3 cm in disc length, 44.6 cm in disc width and weighed 2.5 kg. Standard morphometrics were measured and is imposed with that of earlier works, and also discussed the possible reason for its occurrence in Parangipettai waters.

[Keywords: Morphometric, Parangipettai, Pelagic, Stingray]

### Introduction

The pelagic stingray, *Pteroplatytrygon violacea* (Bonaparte, 1832)<sup>1</sup>, also known as blue stingray; which is the only pelagic dasyatid ray belong to the genus *Pteroplatytrygon*<sup>2&3</sup>. *Pteroplatytrygon* is considered as a monotypic genus among the largest stingray family Dasyatidae (Myliobatiformes) which has six genera and about 68 species. The occurrence of *P.violacea* was once belived rare and was reported only from Mediterranean region<sup>4</sup>; later it is considered as cosmopolitan, with circum-global distribution, throughout tropical and subtropical areas of the Atlantic, Pacific and Indian Oceans<sup>5,6,7,8,9&10</sup>. Meanwhile, this species was placed under “Least Concern” status in the Red List of Threatened species, because of its exploitation and lack of assessemnet<sup>11</sup>. So, knowledge of its biology, migration and its exact taxonomic position were still found wanting. Occurrence of *P.violacea*, from Southwest Indian Ocean was rare, until it was first reported as a commonly caught bycatch of the longline fleet, but generally neglected to being reported<sup>12</sup>. Reports from the Indian Ocean are very limited and are restricted to the waters off South Africa and eastern Indonesia<sup>13</sup>. *P.violacea* has been first reported from the west coast of India by Jayaprakash *et al.*<sup>14</sup>, followed by Akilesh *et al.*<sup>15</sup>. Recently a single specimen of *P.violacea* has been reported in the Gulf of Mannar region, east coast of India<sup>16</sup>. The present paper registered as the first occurrence of pelagic stingray, *P.violacea*

from Parangipettai waters and also as the second report from the east coast of India; it aimed to concern on careful monitoring of its population along east coast of India.

### Materials and Methods

A single specimen of pelagic stingray was landed on 21<sup>st</sup> September, 2012, in hooks and line where the fishermen operated at a depth of 20 m (lat.11°29'N; long. 79°46'E). The specimen was identified as pelagic stingray *Pteroplatytrygon violacea*, due to its body symmetry, broad wedge shaped disc, eyes with thick eyelid, dark colouration of the dorsal and ventral surface.



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

Mouth transverse, narrow, slightly arched and with labial fold, several rows of teeth present in the mouth, single row of 47 tubercles facing downward runs through the middle of the body, well developed dorsal fin suitable for pelagic life, snout is more less rudimentary in nature. Second dorsal fin small and oar shaped, tail with a single spine<sup>17</sup>. The specimen was identified as male noticed by presence of claspers.

### Results and Discussion

The specimen measured 92.4 cm in total length (TL), 44.6 cm in disc width (DW) and weighed 2.5kg. Standard morphometrics were measured as per the method<sup>18</sup>, with a Mitutoyo digital vernier caliper with an accuracy of 0.5 mm. Complete body measurements and comparison with its congener species is mentioned in Table.

Wallace<sup>19</sup> opined that two populations of *P.violacea* were presents in the Indian Ocean; in

which one is among the equator between Africa and Australia and another population are along the south-east coast of Australia<sup>20</sup>. Zacharia *et al.*<sup>16</sup> postulates that the *P.violacea* reported in Indian waters belongs to the population among equator, its occurrence in the west coast of India might be due to the west wardly flowing South Equatorial current that meets with Somali current and continues as monsoon currents, and it reaches along the Indian coast during June-July months. Mean while, the report of *P.violacea* from Gulf of Mannar region might be attributed, to its possible migration of equator population which is triggered by the monsoon currents, that reaches the Gulf of Mannar coast in July as the current flows in an eastwardly direction during the south-west monsoon<sup>16</sup>.

Table 1- Morphometric measurements of the present specimen in comparison with paratypes reported elsewhere from Indian waters.

Measurements (cm)	Arabian Sea off Cochin (Akilesh <i>et al.</i> , 2008) (Male)	Gulf of Mannar of Tuticorin (Zacharia <i>et al.</i> ,2011) (Female)	Parangipettai (present study) (Male)
Disc width	46.08	51.43	44.6
Disc length	34.31	41.43	32.3
Pre-orbital length	5.49	4.51	5.16
Length of the eye	1.57	3.14	2.14
Inter-orbital distance	6.57	5.27	6.17
Pre-spiracular distance	7.35	6.59	6.83
Length of the spiracle	2.55	3.19	2.47
Inter-spiracular distance	7.65	8.02	7.09
Pre-narial length	5.10	4.51	4.76
Inter-narial distance	4.41	4.29	4.38
Pre-oral distance	6.27	6.03	6.21
Mouth width	5.39	5.38	5.38

Inter space first gill slits	8.82	11.10	8.87
Inter space fifth gill slits	6.47	8.68	6.51
Snout to first gill opening	11.37	10.77	10.86
Snout to fifth gill opening	16.57	16.26	16.49
Snout to cloaca (anterior) distance	29.90	32.09	30.02
Cloaca (anterior) to end of the tail	70.10	57.14	68.80
External clasper length	6.18	-----	5.80

It is safe to vouch that the occurrence of pelagic stingray *P.violacea* from Parangipettai coastal waters, triggers the need for the reassessment of its conservation status. Mean while this study concludes with the warrant for a further detailed assessment of *P.violacea* population and its migration patterns so as wanting to unravel the mysteries of its migratory pattern along Indian waters; especially from southwest to southeast coast of India.

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