

On the egg case of Arabian carpet shark, *Chiloscyllium arabicum* from Gujarat

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On 18.04.2013, a female specimen of *Chiloscyllium arabicum* (Fig. 1) measuring 52.5 cm (TL) and 405 g was obtained from the trawl landing at Mangrol. The Arabian carpet shark, *C. arabicum* (Order: Orectolobiformes; Family: Hemiscylliidae) is native to Western Indian Ocean and has been currently reported from India, Islamic Republic of Iran; Kuwait; Oman; Pakistan; Qatar;

Saudi Arabia and United Arab Emirates. It is common in the waters off Gujarat. The shark which is a bottom dwelling species predominantly inhabits coral reefs, lagoons, rocky shores and mangrove estuaries, between depths of 3-100 m on the bottom. It has been reported that the species grows up to 70 cm and matures between 45- 54 cm. It is mainly caught as a bycatch in trawl nets along the

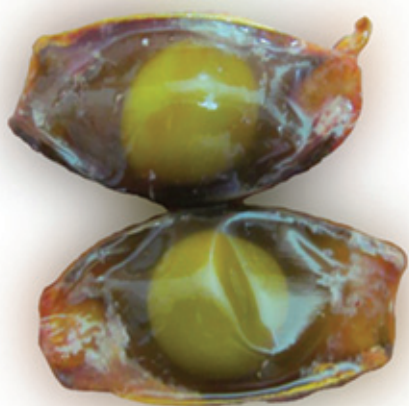


Fig. 1. A view of the egg cases

Gujarat coast. It contributes to a meager 0.1% of the total shark landings in Gujarat. Specimens in the size range of 50.5-58 cm (558-695 g) have been found to be occurring in the trawl catches. It fetches a market value of Rs. 80- 100/kg locally and is mainly consumed as fresh or dried form in the local market. The species was declared as Near Threatened (NT) by IUCN in 2009.

It had a broad, flat head and body with moderately large eyes and a fairly thick and rounded snout. There is very little documented information on this shark as compared to other species. It is an egg-laying species, laying up to four eggs at a time with a preference for coral reef substratum. These shark eggs are often referred to as “mermaids’ purses” and are fixed firmly to items found on the substratum or sea bed.

Being an oviparous species, the egg cases (Fig. 2) were found inside the uterus attached by an anchoring core. The uterus was found to be very thin. The keratinous egg cases were more or less rectangular in shape, strongly convex on both the broader sides, and dark brownish in colour with the eggs inside. Only one egg case was present in each uterus. The content of the egg-cases was a viscous fluid of dull white colour. As the egg is laid, salt water hardens the egg case, forming a protective exterior which contains an internal yolk that provides the developing embryo with food. Arabian carpet shark eggs hatch after 70 to 80 days of incubation. Detailed morphometric measurements of the specimen and the egg case have been given in Table 1 & 2 respectively.



Fig. 2. *C. arabicum* with egg cases

Table 1. Morphometric measurements of *C. arabicum* specimen landed at Mangrol

Morphometric characters	Measurements (cm)
Total length	52.5
Body depth	5
Mouth width	2.5
Snout length	1.9
Head length	4.5
Eye diameter	0.6
Spiracle length	0.7
Snout to origin of 1st gill	7
First dorsal fin height	4
Second dorsal fin height	3.6
First dorsal fin base length	3
Second dorsal fin base length	3.3
Inter nasal	1.5
Inter dorsal	5.5
Inter orbital	2.2
Trunk length	15
Tail length	31.5
Uterus length	5.9
Ovary length	8.5
Oviduct length	6.5
Oviduct gland length	2
Ova dia in the ovary (24 eggs)	0.4-1.5
Weight (g)	405

Table 2. Morphometric measurements of the egg case

Parameters	Measurements (cm)
Width at Anterior, Posterior and Middle regions	0.6, 0.9, 2.8
Total length	5.3
Maximum Thickness	1.5
Egg diameter	2.2
Length of anchoring core	5.1