A report on morphological abnormality in Scylla serrata

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Morphological abnormalities most commonly reported in crabs are alterations in carapace (mainly number and shape of antero-lateral teeth), chelipeds, walking legs and shape of the abdomen. Uran, a fishing village in Raigad district of Maharashtra, supports a good fishery of Scylla serrata commonly known as giant mud crab, found in the coastal estuarine and mangrove areas. During a survey conducted in the intertidal zone on 21st August 2017, a live juvenile of S. serrata was observed with a bifurcated claw. The crab was a male with 56 mm carapace width. Its right cheliped showed two claws articulating separately from the carpus and second claw emerged from the posterior side of the carpus. Merus of the right cheliped also showed strong rows of spines on both sides unlike in a normal crab. The two claws were well developed and resembled each other, except a slight difference in size.

The exact reason for the present abnormality is unknown. Certain authors have concluded that such abnormalities may be due to injuries or accidents (Shelton et al., 1981, J. Embryol Exp Morphol., 63: 285-304), infections (Primavera and Quinitio. 2000, J. Crustacean Biol., 20(4): 796-802), mutation due to ionising radiations and toxins (Klein and Koomen. 1993, Crustaceana, 64(1): 122-126), or due to extreme environmental conditions (Pandourski and Evtimova, 2009, Acta. Zool Bulg., 61(1): 55-67). Possible reason for the present abnormality may be due to injuries or accident in the chelate leg and its regeneration. Chelate legs are used by crabs mainly for defence/ offence, which make it more vulnerable to injuries, autotomy and regeneration.

Unusual landing of blue shark

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On 3rd June 2017, unusual landing of blue shark Prionace glauca (Fig.1) was observed at Thengapattanam landing centre in Kanyakumari district, (8°14’21.67”N, 77°10’03.87”E) of Tamil Nadu. The sharks had been caught by hook and line units operated off Mumbai coast, by fishermen from...
Blue sharks landed at Thengapattanam landing centre Thoothoor and Thengapattanam. Forty-six sharks, weighing 3.5 tonnes (t) were landed. All were males in the length range of 190-285 cm Total Length (TL) and weight range of 55-80 kg each. Blue sharks are reported to reach sexual maturity at about 180 cm (for males) while females mature by 220 cm (Santiago et al., 2014 Fisheries Research, 160:18-32). Other elasmobranchs observed in the landings at Thengapattanam on the same day were spinetail devil ray *Mobula japonica* (3 numbers, 223, 220 and 236 cm Disc Width (DW), pink whipray *Himantura fai* (114 cm DW), tawny nurse shark *Nebrius ferrugineus* (145cm TL), silky shark *Carcharhinus falciformis* (2 numbers), scalloped hammerhead shark *Sphyrna lewini* (181cm TL), bigeye thresher shark *Alopias superciliosus* (200 cm TL) and Pelagic thresher shark *Alopias pelagicus* (234 cm TL).

The fishermen of Thoothoor and Thengapattanam are experts in hook and line operations for sharks and conduct multiday distant water shark fishing off Maharashtra and Gujarat coasts at 150-180 km from shore. Large-sized elasmobranchs caught here are landed in southern India, where the meat is salt-dried and sold for domestic consumption. Blue sharks are not regular contributors to the shark fishery in India and are rarely seen in such large numbers as in the present observation. Known to have a widespread distribution in temperate and tropical waters, the blue shark is relatively fast-growing, matures in 4-6 years and products an average of 35 pups in each litter. The IUCN Red list of Threatened species categorises the blue shark as 'Near Threatened'.

### Indigenous trawl operations during fishing ban period in Chennai

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North Chennai is a major centre for mechanised fishing with approximately 1200 fishing units. Generally during the fishing ban period, the fishermen from these units either sit idle or enroll as labourers for fishing in permitted traditional fishing units. But during the mechanised fishing ban period in 2017, some of the fishers in North Chennai started mini trawl operations to tide over their lean period. The size of the trawl net was 15 m in length and cod end mesh size of 24 mm. These were operated from fibre boats of 10 m overall length (OAL) fitted with 10 hp outboard Yamaha engines and having otter boards of 2 feet length and 1.5 feet width. Their fishing grounds in the coastal waters stretching from Ennore to Pazhaverkadu within 20 m depth sometimes extends to a distance of 20-25 km from shore at a maximum depth of 30 m. The duration of a haul ranges from 2 to 3 hours and with hauls per day. Average catch per day ranged from 60 to 400 kg. 40 units operated in 2017. Crustaceans, mostly prawns accounted for 82% of the catch. Juveniles of *Scomberomorus* sp., *Rastrelliger* sp., *Caranx* sp., *Gerres* sp., sciaenids sp., *Thryssa* sp., silver bellies and crustaceans *Metapenaeopsis* sp., *Penaeus* sp., *Parapenaeopsis* sp. and *Portunus* sp. were also observed.