

A report on the deep sea swarming crab

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Deep sea swarming crab *Charybdis (Goniohellenus) smithii* MacLeay, is found in the depth range between 60 to 356 m in the Arabian Sea and Bay of Bengal and believed to play a significant role in the marine food web. Observations from a trawl survey aboard *FV Silver Pompano* at 40 m depth that was made on 17th October, 2017 is reported. The trawl was operated in the afternoon for one hour, from 09° 57'55" to 10° 00' 03" North and 75° 55' 37" to 75° 53' 50" East coordinates at a speed of 3.5 knots/hour. The codend mesh size was 25 mm. A total area of 110194 m² was swept during trawling. The total catch recorded was 123 kg, including crabs (95 kg), squid (24 kg) and 4 kg of other fishes (Indian mackerel, lizard fish, anchovy, etc). The total biomass of crab and squid estimated in the surveyed ground was 862.12 and 217.80 kg per square km, respectively. Dense abundance of *C. smithii* has been observed between Mangalore and Quilon at depths of 201-



Fig. 1. *Charybdis (Goniohellenus) smithii* catch

300 m during July to January (Balasubramanian and Suseelan, 2001, *Bulletin of Marine Science*, 68(3): 435-449). The size spectrum and reproductive aspects of *C. smithii* caught was recorded. Catch was dominated by the males. The range of carapace width (CW) varied from 38 to 52 mm in males and 35 to 45 mm in female crabs. The CW was significantly different ($p < 0.01$) among the sexes

(Table 1). About 16.13 % of the crabs caught were ovigerous females. The peak maturation in *C. smithii* is reported to be during the winter monsoon. The temperature and salinity of the sea surface and bottom water in the fishing ground were 28.46° C and 24.62° C, and 35.24 to 35.07 PSU, respectively. Though *C. smithii* is well known as a deep sea crab, its temporal migration towards more shallow and coastal waters needs to be understood to estimate

its potential biomass, migration pattern and possible levels of sustainable exploitation.

Table 1. Details of catch of *C. smithii*

Sex	Number (%)	Weight (%)	Sex ratio	Carapacewidth (mm)		
				Mean	Range	S D
Male	71	79.90	2.44	43	38 - 52	3.60
Female	29	20.10	1	39	35 - 45	2.62