



Note

On a rare species of Spanner crab *Ranina ranina* (Crustacea: Brachyura: Raninidae) from Gulf of Mannar, India

C.Kasinathan, Sandhya Sukumaran, A.Gandhi, N.Boominathan and M.Rajamani

Regional Centre of Central Marine Fisheries Research Institute, Marine Fisheries P.O., Mandapam Camp - 623 520, Tamil Nadu, India

Abstract

A rare species of the Spanner crab *Ranina ranina* (Linnaeus, 1758) is reported from Gulf of Mannar, in India. The description of the morphological features of the species is given.

Spanner crabs inhabit coastal waters of several countries in the Indian and Pacific oceans, from the east coasts of southern Africa to Hawaii and the Great Barrier Reef. They prefer bare sandy areas and inhabit intertidal waters to depths more than 100m. They aggregate to spawn during the warmer months and mate at any stage in the moult cycle (Brown, 1986) and females store the sperm until the eggs are extruded. During spawning the females often bury themselves to incubate and protect the eggs. Large females produce at least 2 batches of eggs, each season with an average number of 1,20,000 per batch. The eggs remain attached to the female for 4 – 5 weeks before hatching (Brown, 1986). They pass through 8 larval stages during the following 5 to 8 (longest in higher latitudes) weeks of their life, and then they settle before metamorphosis to the recognizable spanner crab form (Brown, 1986). They may live for 7 to 9 years with males reaching a size of 150mm carapace length and 900g, while females are smaller, reaching a maximum size of 120mm carapace length and 400g in weight (Brown, 1986). These crabs remain completely buried in the sand for most of the day and emerge rapidly when food appears (Skinner and Hill, 1986). They are opportunistic feeders. Adults feed on sea urchins (echinoderms) and a variety of small bivalve molluscs, crustaceans, polychaete worms and fishes. Spanner crabs are often found in areas where there is an intensive night time prawn trawl fishery, suggesting that discards from the trawl catch may form a significant part of their diet (Brown, 1986). The spanner crabs constitute a major fishery in Queensland and New South Wales in Australia and also support a recreational fishery.

Material

A female Spanner crab (Red frog crab) *Ranina ranina* (Linnaeus, 1758) was landed at Pamban North landing centre on 2nd April 2006. It measured 8.5cm carapace width and 350g weight. It was caught in bottom set gill net operated at a depth of 20 m, 30 km, away from



Fig. 1. *Ranina ranina* landed at Pamban

Table 1. Morphometric measurements of *Ranina ranina*

Characters	Measurement (mm)
Carapace width	85
Carapace length	101
Abdomen length	56
Abdomen width	36
Chelate leg spines (Right side)	
Anterior portion	10
Posterior portion	5
Chelate leg spines (Left side)	
Anterior portion	14
Posterior portion	8
Abdominal segments	6
Carapace spines	21
White spots on the anterior side of carapace	10
Weight	350 g.
Sex	Female (egg bearing)
Colour of specimen	Reddish brown
Colour of egg	Orange

Dhanushkodi in the Gulf of Mannar. The specimen is deposited in CMFRI museum at Mandapam (Fig .1).

Taxonomy: Kingdom: Animalia, Phylum: Arthropoda, Subphylum: Crustacea, Class: Malacostraca, Subclass : Eumalacostraca, Superorder: Eucarida, Order : Decapoda, Suborder: Pleocyemata, Infraorder: Brachyura, Superfamily: Raninoidea, Family: Raninidae, Genus: *Ranina*, Species : *Ranina ranina* (Linnaeus, 1758)

Description: Carapace width 8.5cm, weight 350g. This red crab is the largest representative species of the genus *Ranina* in tropic and subtropic regions. Carapace completely covered by low rounded scale like spines in large or small numbers, are broader anteriorly. Eye stalks set vertical and longer. Strong cheliped bears seven or eight teeth. Paddle-shaped walking legs, anterior and posterior borders hairy. Body reddish brown in colour with some 10 white spots on anterior part of carapace. Morphometric measurements are given in Table 1.

Distribution: The species is widely distributed in the Indo – Pacific region, from Hawaii, Japan, Formosa,

Philippines, Australia through the Indonesian Archipelago to East Africa (Motoh, 1980).

Remarks : This crab is very palatable and is eaten wherever it is caught in gillnet or crab trap. Zamboanga is well noted for this very tasty crab.

Acknowledgements

The authors wish to acknowledge Dr. Mohan Joseph Modayil, Director, CMFRI, for providing facilities and Dr. N.Kaliaperumal, SIC, CMFRI, Mandapam for the encouragements and support.

References:

- Skinner, D.G. and B.J.Hill.1986. *Mar. Biol.*, 91: 461 -465.
 Brown, I.W. 1986. *Aust. Fish.*, 45 (10): 3-7.
 Brown, I.W. 1986. FIRTA project No. 81/71 Final Report, 106pp.
 Motoh, H. 1980. *Field guide of the edible crustacea of the Philippines*. SEAFDEC, Philippines, 96pp.

Received: 25 October 2006

Accepted: 29 May 2007