

A first modern record of the Mangrove Crab *Scylla serrata* in the U.A.E. and south-eastern Arabian Gulf

by Peter Hogarth and Mark Beech

A recent meal in Ra's al-Khaimah led to an addition to the list of crab species recorded from the United Arab Emirates. This was a female of the mangrove or mud crab, *Scylla serrata*. The specimen, when identified, was badly damaged by preparation for the table, but had a carapace breadth of approximately 17.5 cm. This specimen was caught at UTM 393700 E / 2850300 N near the Police Club, Ra's al-Khaimah, UAE, in April 2001. An example of a complete *Scylla serrata* is depicted in Figure 1.

Scylla serrata is a member of the family *Portunidae*, the swimming crabs, in which the tips of the last pair of legs are modified into flat paddles, and reaches a spectacular 22-23 cm in carapace breadth (Guinot 1966), and a weight of 1500-2000 gm (Apel & Spiridonov 1998). The Ras al-Khaimah specimen, although apparently mature, was not unusually large. The species has a strong association with mangroves, where it digs sizeable burrows.

In many parts of the world *Scylla serrata* is an important commercially caught food species, and in south-east Asia is the basis of a developing aquaculture industry (Guinot 1966; Overton & Macintosh 1997).

The species is widespread throughout the Indian Ocean and west Pacific, although there is some doubt about its exact distribution since a number of varieties have recently been reclassified as separate species (Keenan, Davie & Mann 1998). It is known to occur in the Western Indian Ocean, including the Arabian Sea and the Gulf of Oman (Apel & Spiridonov 1998). Until now, its presence in the south-eastern Arabian Gulf has been suspected from anecdotal sightings of large crabs – and there are few species remotely as big – and by occasional reports of burrows. Recent surveys of the Gulf coastline of the UAE failed to identify this species (Al-Ghais & Cooper 1997; Hornby 1997, Hogarth & Beech, *in prep.*). This record is the first confirmation of its occurrence within the Arabian Gulf.

This is somewhat surprising, as it is quite common in archaeological deposits in, for example, Iron Age deposits at Rafaq in the Wadi al-Qawr, in the Hajar Mountains, near Hatta, and Sasanian/Islamic levels at Kush north of Ra's al-Khaimah. At Rafaq the abundance of *Scylla* remains suggests that it was an important food species which was transported some distance into the interior from the coast (Beech 2001; Beech *et al.*, *in press*). These *Scylla* however, are perhaps more likely to have been brought to Rafaq from the East Coast of the UAE, on the Gulf of Oman, to which it is closer, rather than from the Arabian Gulf coast.

Why should a once fairly common species have virtually disappeared from the Gulf? The usually reasons for a species' disappearance are over-exploitation, environmental change, or reduction in suitable habitat. Perhaps the most likely explanation in this case is the loss of much of the mangrove habitat. In past times mangroves were much more widespread. Their use as timber for architecture and boat-building severely depleted mangroves in the Gulf, reducing them in area and diversity to relatively small patches, almost exclusively of the grey mangrove, *Avicennia marina*. Possibly the deliberate replanting of mangroves, such as the extensive programme in Abu Dhabi, will be followed by a resurgence of this spectacular – and tasty – species in the area.

Any further records of *Scylla serrata* would be of considerable interest.

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