

# Crabs at KAUST

Ocypode saratan  
Red Sea  
Ghost Crab.

photo Brian  
James





# Crabs at KAUST.

Crabs are decapods. Crabs have thick exoskeletons and a single pair of claws. Many crab species are dimorphic, with the male and female species being quite different in appearance. Males often have the larger claws, especially in fiddler crabs. Females have a broader, rounded abdomen because they brood the fertilised eggs on the pleopods (swimming legs) to protect them in the embryonic phase. Crabs are classified in the suborder 'Brachyura' meaning short-tailed. The tail though is usually hidden under the thorax. Of the nearly 7000 species of crab, 11 have been identified at KAUST, mostly through the work of Marco Fusi, from the Red Sea Research Unit. Marco has also generously provided most of the photographs used in this presentation.



photos  
Austruca albimana (left)  
Metopograpsus messo (right)  
by Brian James





# Scientific name- *Dotilla sulcata*

- Sand bubbler crabs (or sand bubblebers) are of the genera *Scopimera* and *Dotilla* in the family *Dotillidae*.
- They are small crabs which live on sandy beaches in the tropical Indo-Pacific. They feed by filtering sand through their mouthparts, leaving behind balls of sand that are disintegrated by the incoming high tides. The carapace is roughly 10 mm wide.
- Photo Marco Fusi





# Scientific name- *Eurycarcinus natalensis*

- This beautifully coloured crab is a predator with strong jaws. It ambushes its prey, mostly other crustaceans, by hiding in wait from mud holes.
- It has a purple smooth carapace which is about 4 cm wide. The tips of the claws are white.
- Photo Marco Fusi





# Scientific name- *Macrophthalmus depressus*

- Also called Mud Crab, ( in Arabic: Saratan at-tin ). Adults have a carapace width of around 30 mm. Mud Crabs inhabit the intertidal zone. At KAUST they are abundant in the mangroves zones where thicker mud occurs.
- Photo Marco Fusi





# Scientific name- *Scylla serrata*

- Common names- Giant mud crab or mangrove crab
- Mostly found in Southern Red Sea but found at North Beach where they hunt nocturnally
- Shell colour varies from mottled green to dark brown. Large with the carapace up to 240 mm in width. Females may lay up to 1 million eggs.
- Highly sought after as a delicacy but aquaculture problematic as in some stages highly cannibalistic
- photos Marco Fusi





# Scientific name- *Metopograpsus messor*.



- *Metopograpsus messor* is a species of crab that lives in mangroves from East Africa to Fiji. Its carapace grows to a width of 30 mm. The carapace and legs are mottled brownish green, while the claws are brownish red. A mangrove species which can climb well.
- This is the most common crab found at KAUST and is particularly easy to observe on the sea wall at the King Abdullah Monument (KAM).
- Photo Marco Fusi



# Scientific name- Ocypode saratan



Common name - Red Sea Ghost Crab.

This medium to large-sized species (carapace to 50 mm) is very common on the shores of the Red Sea. They have thick & elongated eyestalks. The male builds a sand mound about 16 cm high & tramps a path to his burrow, some 40 cm away. The female, attracted to the mound, then follows the path to the male's burrow. The main food is sand fleas. Found in daylight at North Beach & the sand beach at KAM.

Photo Marco Fusi



# Scientific name- *Parasesarma guttatum*.

- Common name- The Red-claw mangrove crab
- Distribution- coastal brackish water habitats & closely associated with *Avicennia marina* (Grey Mangrove). In the Red Sea mainly found in the southern section near the Farasan Archipelago. Also occurs across coastal areas of the western Indian Ocean.
- The carapace is about 30 mm wide. An omnivore, feeding on anything found on the estuary or forest floor.
- Photo Marco Fusi





# Scientific name- Portunus armatus (pelagicus)



- Common names- the Flower Crab, Blue Crab, Blue Swimmer Crab, or Sand Crab.
- Common in the mangroves at KAM where juveniles use the mangroves to hide from predators.
- Usually the carapace is between 45 & 65 mm wide. Mostly nocturnal & excellent swimmers.
- A delicacy throughout Asia.
- Photos Marco Fusi



# Scientific name- *Thalamita crenata*

- Common names include Mangrove Swimming Crab, Spiny Rock Crab
- Usually forages nocturnally eating bivalves & slow moving crustaceans. Common at KAUST but usually only seen after sunset.
- Carapace to 100 mm
- Is known to use landmarks to locates its refuge using direct shortcuts.
- Photo Marco Fusi





# Scientific name- *Austruca (Uca) albimana*

- Common name- White-handed Fiddler Crab
- As in other fiddler crabs the male has a greatly enlarged claw which is used to attract mates. The higher the claw is waved the greater likelihood of attracting mates.
- Distribution Red Sea & Arabian Gulf
- Photos Marco Fusi





# Scientific name- *Austruca (Uca) inversa*

- Common name - Inversed Fiddler Crab
- Males develop a single enlarged claw used to signal & attract females
- Found throughout Red Sea & along the east coast of Africa
- Photo Marco Fusi





# Crabs and the Mangroves- - a symbiosis



photos Brian James



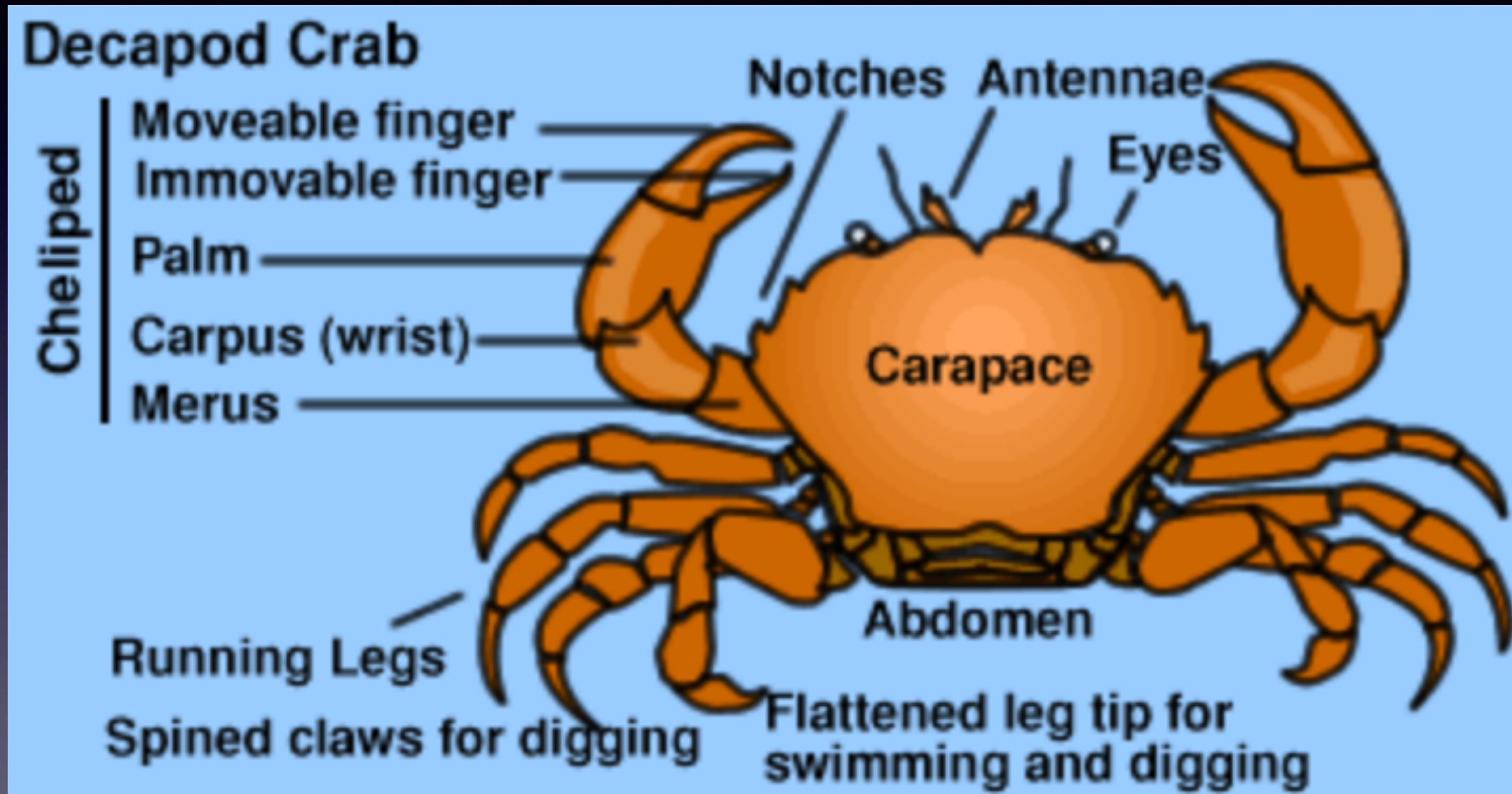
Crabs and the mangroves have a symbiotic relationship.

Crabs are the most abundant and important large invertebrate in the mangroves at KAUST. When they dig holes they help to improve the flow of water through the mangroves. This helps the mangrove flush out excess salt. The burrows also allow oxygen to reach the roots by creating air pockets in the mud.

The crabs in turn eat large amounts of fallen mangrove litter. This further helps the food web by breaking down the detritus so that **zooplankton** and algae can eat it. In this way they help to recycle nutrients, particularly nitrogen.



# Parts of a crab



[mesa.edu.au/friends/seashores/decapods.html](http://mesa.edu.au/friends/seashores/decapods.html)