



MINISTRY OF FISHERIES AND BLUE ECONOMY

MINISTRY OF ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

MUD CRAB PROJECT FATTENING *Scylla Serrata*

SAPPHIRE PROJECT

Presented by Mrs Hantanirina RASOAMANANJARA ,
Director of Aquaculture



Maputo, Mozambique, 8
december 2023

MUD CRABE *Scylla serrata*

- **Scientific name:** *Scylla serrata*
Domain: Eukaryota
Family: Portunidae
Infraorder: Brachyura
Kingdom: Animalia
Order: Decapoda
Phylum: Arthropoda

Scylla serrata is an ecologically important species of crab found in the estuaries and mangroves of Africa, Australia, and Asia. In their most common forms, their shell colours vary from a deep, mottled green to very dark brown.

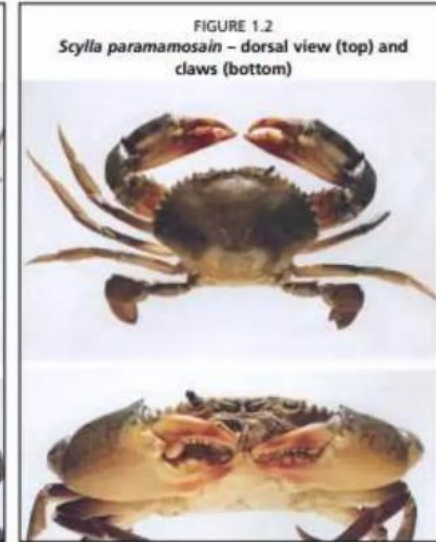


Four species of *Scylla* and details of their claw

Abdomens of immature, mature female and mature male *Scylla serrata*



Source: Reprinted with permission of SEAFDEC.



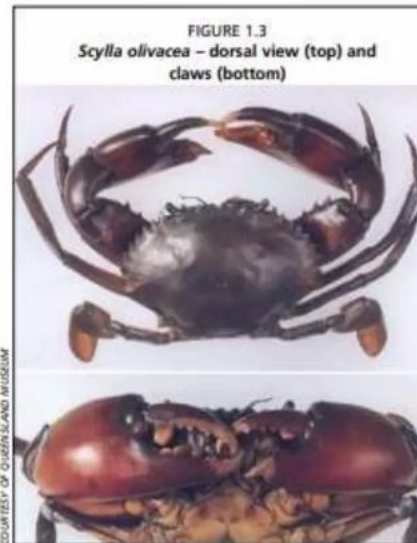
COURTESY OF OISENSLAND MUSEUM



COURTESY OF JACOB MANN



COURTESY OF COLIN DUFFLEY



COURTESY OF OISENSLAND MUSEUM



Figures 1.1–1.4 reproduced with permission from Keenan, Davie and Mann (1998).

Distribution and habitat of *Scylla* species

Species	Distribution	Habitat
<i>S. serrata</i>	Indian Ocean, Red Sea, Pacific Ocean – the most widespread <i>Scylla</i> species.	Associated with mangrove forests inundated with full salinity oceanic water for the greater part of the year. Can tolerate reduced salinity.
<i>S. paramamosain</i>	South China Sea, Java Sea – an abundant species where it occurs.	Associated with various habitats including shallow coral rubble; shallow subtidal flats and estuarine ponds; mangrove forests.
<i>S. olivacea</i>	South China Sea, Indian Ocean, Pacific Ocean – moderately widespread, often associated with <i>S. tranquebarica</i> .	Associated with mangrove forests and coastlines inundated with reduced salinity seawater during the wet season.
<i>S. tranquebarica</i>	South China Sea, Pacific Ocean, Indian Ocean – a widespread species, often associated with <i>S. olivacea</i> .	Associated with mangrove forests and coastlines inundated with reduced salinity seawater for part of year.

Source: Keenan, Davie and Mann, 1998.

Mud crab farming is done by two methods.

i. Grow- out culture

- In this method, young crabs are grown for a period of 5 to 6 months till they attain desirable size.
- Mud crab grow-out systems are generally pond based, with or without mangroves.
- The pond size varies between 0.5-2 ha, with proper bunds and tidal water exchange.
- Fencing is advisable if the pond is small. In large ponds where natural conditions are prevailing, strengthening is necessary along the outlet area.
- Wild collected juvenile crabs of 10-100 g size are used for stocking.
- The duration of the culture varies between 3-6 months.
- mud crabs are stocked at relatively low densities (0.5–1.5 crabs/m²) with survival rates as high as 67 percent.
- These stocking densities reflect both the size of individual mud crabs and their tendency to cannibalistic behaviour.
- Stocking at higher rates of 1–3 crabs/m² has been used with survival from 40 to 60 percent. Stocking mud crabs from 0.5 to 3.0 crabs/m² is considered semi-intensive, compared with extensive mud crab culture commonly practised
- The stocking rates are commonly between 1-3 crabs/m², with supplementary feeding.
- Feeding is usually with trash fish (wet weight feeding rate-5% per day of the biomass), along with other locally available items.
- Regular sampling is necessary to monitor the growth and general health, and to adjust the feeding rate.
- Partial harvesting of marketable sized crabs can be started from 3rd month onwards. This 'stock-thinning' provides chances for better survival by reducing the mutual attacks and cannibalism.

ii. Fattening

- Soft shelled crabs are reared for a period of a few weeks till their exoskeleton gets hardened. These 'hard' crabs are locally known as "mud" (meat) and fetch three to four times better price than the soft crabs.

MUD CRAB FATTENING “ *Scylla Serrata* ”

”

- Identification of the fattening site in the Sub county Marovato - South;
- Construction of a pond by HIMO (high intensity of labor) and a shelter and footbridge by service providers;
- Installation of lockers and pond;
- Training of fishermen for the monitoring of fattening and the handling of measuring equipment such as salinometer, thermometer, pH-meter



LESSONS LEARNT

- Always avail fattened crabs with sea water
- Regular monitoring of breeding
- Feed twice a day
- Use of materials suitable for crab fattening



BEST PRACTICES

- Rectangular tanks were used for crab fattening.
- Each bin is covered by a rigid net called « netlons »
- Each tank should contains one crab to avoid cannibalism
- Diversified diet: mollusks, small crustaceans, marine plants, algae, young fish, snails



CHALLENGES

- Perfect mastery of crab fattening technical
- Selection of the appropriate site
- Transfer of fattening technic to fishermen/fisherwomen
- Adjustment of the technical sheet intended for fishermen to make it handy for them



WAY FORWARD

- Duplication of the mangrove crab fattening model in other villages
- Sharing good practices in crab fattening technics
- Capacity building of all stakeholders
- Improvement of the fattening pond
- You should never feed them with rotten animals
- Monitoring of biological parameters: mortality, growth, conversion index



Male



Female

References

- <https://vikaspedia.in/agriculture/fisheries/brackish-water-fisheries/culture-fisheries/mud-crabculture#:~:text=Mud%20crab%20grow%2Dout%20systems,necessary%20along%20the%20outlet%20area.>
- <https://www.fao.org/3/ba0110e/ba0110e.pdf>
- <https://www.agrifarming.in/mud-crab-fattening-profits-cost>

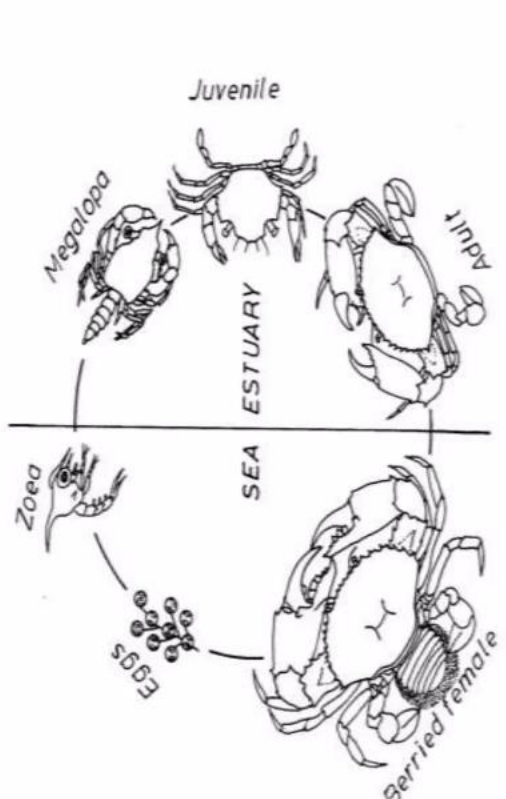


Fig. 1. Life history of a mud crab.



Activer
Accédez au

**THANK YOU FOR YOUR
KIND ATTENTION**