

Connectivity of mangrove crab (*Scylla serrata*) populations in the Western Indian Ocean

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Physical and chemical factors, for example oceanography, drive evolution in the ocean (Da Silva *et al.*, 2011), but also life history strategies of the species (Vogler *et al.*, 2012). Mangrove ecosystems serve as a source of resources and provide habitats for many estuarine and marine species, but the dynamics of the mangrove ecosystem also influence the biology and ecology of species that inhabit it. Species like *Scylla serrata* that live as adults in mangroves face threats as the mangroves are under intense human pressure, resulting in degradation and fragmentation. *Scylla serrata* (Portunidae) is a mangrove crab that spends its larval phase in the ocean to complete its life cycle. It is an economically important species and provides protein for coastal communities and beyond. The females migrate to spawn offshore (Hill, 1994). It has a long larval period of 3-4 weeks. In the Western Indian Ocean (WIO) it has been shown that *Scylla serrata* occurs as a large panmictic population (Fratini *et al.*, 2010; Mascaux *et al.*, 2012), corresponding to the hypothesis that species with a long larval period show high gene flow. However, both studies used mitochondrial DNA (mtDNA) sequences as a genetic marker. In this study, microsatellites, identified and characterized by Gopurenko *et al.* (2002), with potentially higher resolution will be used as a genetic marker to assess the population structure of *S. serrata* in the WIO. Tissue samples already collected from Kenya, Tanzania, Madagascar and South Africa will be used for this study. The results will provide more detailed information on the connectivity of *S. serrata* in the WIO.

References

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