



Nelson A. F. Miranda

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Natural Sciences

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South Africa

I am part of the DST/NRF Research Chair in Shallow Water Ecosystems. My broad interests lie in the fields of Biological Sciences and Earth and Marine Sciences, particularly in research involving the aquatic environment of coastal and estuarine systems. Much of my research involves adapting and developing methodology for novel applications. The focus of my research has been on the gastropod *Tarebia granifera*, which I have found to be an excellent species to explore some of my particular interests in the fields of invasion biology, ecophysiology, population dynamics, stable isotope analyses, diet and feeding studies and malacology.

## CURRENT RESEARCH

Topic	Methodology	Application
Invertebrate biodiversity and alien invasions in shallow water ecosystems of South Africa	<ul style="list-style-type: none"><li>Standard quantitative and semi-quantitative sampling techniques for invertebrates</li><li><i>In situ</i> and laboratory ecophysiology experiments</li><li>Stable isotope analyses</li><li>Genetic and morphologic analyses</li><li>Force meters</li><li>Fluoroprobes</li></ul>	<ul style="list-style-type: none"><li>Biodiversity assessment</li><li>Taxonomy</li><li>Alien invasive species monitoring and impact assessment</li><li>Monitoring of ecosystem dynamics and water quality</li></ul>

## UKZN main Publications

1. Raw JL, Miranda NAF, Perissinotto R (2013). Chemical cues released by an alien invasive aquatic gastropod drive its invasion success. PLoS ONE 8, e64071.
2. Miranda NAF, Adams JB (2013) Chapter 19: Alien and invasive species. In: Ecology and conservation of estuarine ecosystems: Lake St. Lucia as a model. Perissinotto R, Stretch DD, Taylor RH (Eds) Cambridge University Press.
3. Miranda NAF, Perissinotto R (2012) Stable isotope evidence for dietary overlap between invasive and native gastropods in coastal lakes of northern KwaZulu-Natal, South Africa. PLoS ONE 7: e31897.
4. Miranda NAF, Perissinotto R, Appleton CC (2011) Population structure of an invasive parthenogenetic gastropod in coastal lakes and estuaries of northern KwaZulu-Natal, South Africa. PLoS ONE 6: e24337.
5. Miranda NAF, Perissinotto R, Appleton CC (2011) Feeding dynamics of the invasive gastropod *Tarebia granifera* in coastal and estuarine lakes of northern KwaZulu Natal, South Africa. Estuarine, Coastal and Shelf Science 91, 442-449.
6. Miranda NAF, Perissinotto R, Appleton CC (2010) Salinity and temperature tolerance of the invasive freshwater gastropod *Tarebia granifera*. South African Journal of Science 106, 55-61.

## Future Interests

1. Becoming established as a researcher in my field in South Africa
2. Continuing to work in association with an innovative and excellent team
3. Being involved in postgraduate supervision and mentorship

## Extra Interests

Psychology, Philosophy, Exercise, Discovery