

WORKING PROJECT TITLE	The tube-dwelling polychaete *Ficopomatus*: clarifying species identity, threats, and benefits in estuarine protected areas
CORE TEAM MEMBER	Prof. Tammy Robinson-Smythe (Stellenbosch University) Co-supervisors: Prof. Carol Simon (Stellenbosch University)
ACADEMIC LEVEL OF THE PROJECT	Postdoc
PROJECT BACKGROUND	*Ficopomatus* is an ecosystem engineer that alters the abiotic environment and the biological community in invaded estuaries. Until recently all invasions across its global range were ascribed to *Ficopomatus enigmaticus*, but recent work has identified a species complex. Presently, it is not clear if South African invasions represent one or multiple *Ficopomatus* species. Despite this species having known impacts on invaded systems, its distribution and abundance in South African estuaries has not been systematically assessed. This project will: 1) Will use genetic approaches to establish the identity of *Ficopomatus* species in protected estuaries across its South African range; 2) Assess the distribution and abundance of this polychaete in invaded protected areas; 3) Evaluate impacts and potential benefits associated with incursions and 4) Develop management strategies that aim to harness the benefits associated with this invader while minimizing negative impacts. This project will provide exposure to taxonomy and genetic laboratory skills and ecologically focused fieldwork in estuaries from Cape Town to Kosi Bay.



	Preferred starting date: January 2023. Two years of funding is available. Requirements: • PhD in marine ecology, Polychaete taxonomy, invasion biology or another relevant field (graduated in the last 5 years); • Strong publication record; • Willingness to travel for fieldwork; • Drivers license; Experience in environmental management or applied ecology will be advantageous.
FURTHER READING	1. Bezuidenhout M Robinson TB (2020) Abundance and distribution of the invasive polychaete *Ficopomatus enigmaticus* in three South African estuaries. Regional Studies in Marine Science 39: 101405 DOI: 10.1016/j.rsma.2020.101405 2. Styan CA, McCluskey CF, Sun Y, Kupriyanova EK (2017) Cryptic sympatric species across the Australian range of the global estuarine invader *Ficopomatus enigmaticus* (Fauvel, 1923) (Serpulidae, Annelida). Aquatic Invasions 12(1): 53-65. https://doi.org/10.3391/ai.2017.12.1.06. 3. McQuaid KA, Griffiths CL (2014) Alien reef-building polychaete drives long-term changes in invertebrate biomass and diversity in a small, urban estuary. Estuarine, Coastal and Shelf Science 138: 101-106. https://doi.org/10.1016/j.ecss.2013.12.016.
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