

## **DNA barcoding of macroinvertebrates in south-eastern African estuaries**

Estuaries are highly productive, semi-enclosed bodies of water that serve as nurseries for many coastal fish species. While the estuarine fish fauna has been studied extensively, and most species are well represented in BOLD or GenBank, the same cannot be said about the invertebrate fauna. Many species cannot be identified to species level, and many of the identifiable species are 'cosmopolitan', which suggests that they are in fact indigenous species that closely resemble species described elsewhere. Here, we provide an outline of a pilot study to comprehensively document the macroinvertebrate fauna in estuaries along the south-east coast of South Africa and into southern Mozambique. We will not only determine how many species are likely new to science, but also explore whether or not they are genetically subdivided along the sampling area, pointing to cryptic speciation. If successful, this study can grow into a full DNA barcoding initiative that will include estuaries along the entire South African coastline, and provide important baseline data for monitoring the effects of pollution and climate change.