

Survey of freshwater prawns in the Eastern Cape and KwaZulu-Natal

S.R. Daniels, Stellenbosch University
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The freshwater prawn fauna of South Africa remains taxonomically poorly studied and has received no modern systematic attention since Barnard's (1950) monographic work. A systematic study of freshwater crabs (the largest native freshwater decapod group) in South Africa has revealed a wealth of species new to science. Given the latter result, it would be reasonable to assume that a similar pattern exists among freshwater prawns. During the proposed study, we will survey river systems in the Eastern Cape and KwaZulu-Natal province of South Africa in order to explore the taxonomic diversity. Only eight species are known (a clear underestimation) to occur in the two provinces (*Palaemon capensis*, *Macrobrachium peters*, *M. rude*, *M. petersii*, *Caridina nilotica*, *C. africana*, *C. belazoniensis* and *C. typus*). A large number of drainages in the provinces remain unsampled and these species are wide spread, suggesting the possible presence of cryptic lineages. Preliminary genetic research on the KwaZulu-Natal prawns already provides corroborative evidence for novel freshwater prawn taxa. Samples will be preserved in ethanol, and upon identification will be subjected to DNA extraction and PCR for the mtDNA COI locus, as well as two nuclear DNA loci (histone 3 and 28S). In addition to the taxonomic focus, the biomass of the larger species will be explored to examine the possibility of using these animals in small scale subsistence farming since in these two provinces are economically impoverished. Hence the project has the potential to contribute to the bio-economy of the region. Results from the present study will be published in top tier international peer reviewed journals, the generation of DNA barcodes for the freshwater prawns of the two provinces, and the exploration of selected taxa in a small scale subsistence fisheries. This study will also allow for the assessment of potential genetic stocks of these widespread species and can feed into DAFF initiatives on food security.