

**MPhil position in ecological modeling of *Pseudosuccinea columella* -  
an invasive fasciolosis vector snails in South Africa**

Climatic and altitudinal analysis and spatial distribution of *Pseudosuccinea columella* (an intermediate host snail for fasciolosis) and infections in South Africa. *Pseudosuccinea columella* has been reported in South Africa and is regarded as an invasive species. It is assumed to transmit both *Fasciola hepatica* and *Fasciola gigantica*. The study will focus on the spatial distribution of this snail species so as to understand its ecology and the related climatic factors and altitude in the natural environment. Since it is considered invasive there is a need to understand its habitat preference in different agro-ecological regions and how it competes with native species including *Radix natalensis* and *Galba truncatula* which are also hosts for fasciola. Therefore, while the candidate will mainly focus on *Pseudosuccinea columella* they will also collect data on other species and related factors. In addition, the candidate will collect data on fasciola in vector snails, water quality at sampling sites, and livestock waste around the snail sampling sites to have an idea of the spatial distribution of the disease in vector snails and livestock.

This study is part of a bigger project – PREPARE4VDS (A Cross-Disciplinary Alliance to Identify, PREDict and prePARE for Emerging Vector-Borne Diseases) funded by EU and managed by the KwaZulu-Natal Ecohealth Project (KEP) in the College of Health Sciences at the University of KwaZulu-Natal.

**Profile**

The preferred candidates must

- Hold an Honours Degree in GIS and Remote Sensing, Environmental Science, Zoology, Biology or Public Health a related discipline linked to the profile (e.g. epidemiology, ecology, parasitology)
- Have a good knowledge of statistical analysis and spatial analysis.
- Have experience with GIS software packages e.g. QGIS, ArcGIS, R, etc.
- Have a broad range of experience in conducting field research.
- Be able to work in a dynamic and multi-discipline and multi-cultural team.
- Have research interests in line with the proposed project (can be availed to interested candidates)
- Must pay attention to quality, integrity, creativity, and cooperation.

**Who should apply and how should the application be made?** Although this is an open call for candidates from any country in Africa, South African citizens and those with South Africa Permanent Residence will be preferred. Applications should be submitted through email to [kep@ukzn.ac.za](mailto:kep@ukzn.ac.za) by April 30, 2022 (by midnight CAT). Academic enquiries can also be directed to [kep@ukzn.ac.za](mailto:kep@ukzn.ac.za)