Consequences of the megaherbivore poaching crisis for ecosystem functioning

4-year PhD Position at the Department of Wildlife, Fish & Environmental studies, Umeå, Sweden.

In twenty years’ time the world may have lost its last free-ranging white rhinos due to a rampant poaching crisis. The consequences of losing these megagrazers are poorly understood. Ironically, research on extinct Pleistocene megaherbivores is booming and suggests that their extinction caused major changes in ecosystem structure and functioning, including potential earth system-level consequences. In this project we will investigate the consequences of losing the world’s last extant megagrazers for the functioning of African savannas, with a specific emphasis on climate-vegetation feedbacks and biodiversity. We will combine empirical field studies in Hluhluwe-iMfolozi Park (HIP), South Africa, with earth system modeling to develop a novel understanding of climate mitigation services delivered by severely threatened African megafauna. The project is part of the larger HOTSPOT program that looks at white rhino ecology and management in HIP and the successful candidate will be part of a broad team including a postdoc (Dr. Liza le Roux), MSc students, a white rhino monitor and field technician. The project collaborates with Ezemvelo KZN Wildlife (Dr. Dave Druce), Nelson Mandela University (Prof. Graham Kerley), Utrecht University (Dr. Mariska te Beest) and University of Edinburgh (Dr. Cecile Menard).

This PhD position includes full funding of research expenses and salary and is based at the Department of Wildlife, Fish & Environmental studies (VFM). VFM offers a vibrant, international, research environment investigating a wide range of scientific fields but with a particularly strong focus on the ecology of animals and the ecosystems they live in. VFM has about 80 employees, including a large number of PhD students and postdoctoral researchers from around the world. Umeå is the largest town in northern Sweden with approx. 120,000 inhabitants, a vibrant campus with two universities, a high standard of living, and frequent flight and train connections to the rest of the world.

Qualifications
You have an MSc degree in a relevant topic, such as ecology or earth system and climate change science. You are prepared to spend long field work periods in Hluhluwe-iMfolozi Park, South Africa, under sometimes harsh field conditions. You can also deal with the specific social conditions related to living at a relatively isolated field station. In addition, there may be short visits to the Netherlands and/or UK to collaborate with earth system science modelers. You are fluent in spoken and written English and have a valid driver’s license. Knowledge on and experience with climate-vegetation interactions, earth system modeling and with the study system will be a merit. Documented statistical modeling skills, particularly in R, will be seen as a strong merit. You are able to work independently as well as in a team. Experience in writing and publishing scientific papers will be evaluated positively.

Forms for funding or employment
Employment as PhD student (2 or 4 years education)