

UPDATE

In my last communication, I expressed my eagerness to finalise my research topic and source potential supervisors for my return to the academic space. I am thrilled to report that since that time; I have not only finalised my research topic but also found incredible supervisors to support me on this journey.

The research project is currently titled “The Conservation Physiology of the Southern Ground-hornbill (*Bucorvus leadbeateri*)”. The project aims to integrate traditional conservation knowledge and practices with physiological principles to unravel the mysteries behind the species’ ability (or lack thereof) to respond to climate change pressures. As a vulnerable species with immense cultural significance in most of the Southern African region, the conservation of the species is all the more imperative. The research project will be divided into chapters that focus on key physiological aspects, including microbiome, specifically investigating diversity across life stages, exploring how environmental factors such as diet and temperature can influence microbial communities. One chapter will also seek to quantify the species’ thermal physiology, with the following objectives;- to measure core body temperature, evaporative water loss, and metabolic rate under varying environmental conditions, determine the relationship between ambient temperature and thermoregulatory responses to assess physiological thresholds and thermal limits, and to identify potential adaptive traits used to cope with heat stress.

Additionally, cognitive performance under heat stress will be evaluated, alongside the effects of elevated temperature on problem-solving and memory. Parasite load and its correlation with fitness will be assessed, examining how environmental variables like temperature and humidity impact host-parasite dynamics.

I hope that the findings will inform adaptive conservation strategies, directly contributing to not only the species' survival but also towards the broader biodiversity conservation goals.

Below are my supervisors, SARChI holder, Prof Andre McKechnie with the University of Pretoria under the Department of Zoology, as well as Dr Mduduzi Ndlovu with the University of Mpumalanga under the School of Biology and Environmental Sciences.



Prof Andrew McKechnie with UP



Dr Mduduzi Ndlovu with UMP

I am incredibly grateful for the many opportunities that the Alf Rewin Conservation scholarship has afforded me, and I can't wait to continue learning and growing as I contribute towards the conservation of this remarkable species.

Till next time.

All my best

Pluto