



**Rising to the challenge – how mountains shape animal behaviour in the Eastern Free State.**

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In order to thrive, any organism has to respond adaptively to their external environment, which poses both challenges and opportunities to individual animals. Increasingly, these external factors do not stem only from natural sources, but from anthropogenic disturbance. Golden Gate Highlands National Park (GGHNP) offers an unusual opportunity to study the behavioural responses of wildlife to a challenging natural terrain: a high altitude grassland ecosystem that encompasses abrupt altitudinal changes, creating biogeographical “islands” within the park.

Further, human-induced fires have changed the potential impact of the “fire season,” shifting it from the natural time (during wet summers), to the dry winter season. This project aims to investigate behavioural flexibility and adaptation as a multifaceted response to this unusually complex environment. My students and I ask two broad questions: (1) How do vertebrates adaptively respond to the physical features that characterize a montane environment? (2) How does anthropogenic change in GGHNP impact animal behaviour? This project includes observations of natural animal behaviour in the Park, and also experimental work (such as sound playback studies). This study should open the doors to continued future research on animal behaviour in disturbed montane habitats, addressing the consequences of both natural and anthropogenic forces of selection.

For more information: Refer to Dr le Roux’s profile listed under Researchers/Project leaders