

**Umphafa Private Nature Reserve**

Research Topic Ideas	Explanation	Desired Outcome	Research Period	No. of Days Research Estimate	No. of days Intern Estimate
<b>White Rhino Ecology</b>					
Distribution of White Rhino on UmPhafa	We have moved the internal fences on UmPhafa, so our rhino population is now free roaming. This study would determine the home range size of individuals, coupled with an analysis of spatial distancing between such home ranges and habitat type within each range. Opportunity to compare with two years worth of previous collected data	Understanding of home ranges of White Rhino on UmPhafa and habitat suitability	All year. This study will show seasonal differences, so available for multiple students over different seasons (and/or could compare with previous collected data)	3	2
Feeding Preferences of White Rhino on UmPhafa	White Rhino are grazers. This study would look at preference for different grass species and provide recommendations for UmPhafa habitat management	Understanding of food preference of White Rhino on UmPhafa and habitat management suggestions	September - May. This study will show seasonal differences, so available for multiple students over different seasons	3	2
Impact of the introduction of a new Male Rhino to UmPhafa and distribution changes to existing Rhino	Tugela our new Male Rhino joined us in August 2023, this study would determine his home range size and interactions with other Rhino. Data being collected since August 2023	Understanding of impact of Tugela joining the Reserve and how this has impacted the other Rhino's home ranges	All Year	3	2
<b>Poaching</b>					
The Effects of Poaching on UmPhafa	This study would map the distribution of poaching incidents per species on UmPhafa based on records collected over multiple years. Cost analysis of the effects of poaching can also be carried out. Recommendations for improvement in security at key areas can also be made	Understanding of the distribution of poaching incidences and security management suggestions	All year	3	2
<b>Geology</b>					
Impact of Erosion on Soil and Vegetation Quality on Umphafa	UmPhafa suffers from wind and water erosion. This study will look at habitat quality around the erosion sites, including vegetation surveys and soil condition. Recommendations for erosion management techniques can also be made	Understanding of impact of erosion on the habitat availability and quality on UmPhafa	All Year	3	2
<b>Habitat - Bulk Grazers</b>					
The Effects of Buffalo Grazing on UmPhafa	UmPhafa currently have a lack of bulk grazers. In late 2023, we will hopefully introduce buffalo to counter this problem. There is an opportunity for a pre- and post-introduction study looking at the effects of buffalo grazing on UmPhafa	Impact assessment of buffalo grazing	All year, multiple studies before and after buffalo introduction	2	3

Data analysis					
Analysis of Species Movements on UmPhafa	This study would use collected game count records to analyse the trends, patterns and movements of species on UmPhafa	Understanding of animal movements on UmPhafa	All year	2	3
Blue Crane					
Analysis of Blue Crane Habitat on UmPhafa	Listed as Vulnerable, UmPhafa want to ensure that the Blue Cranes have the right habitat to survive and flourish here. This study would assess habitat suitability for Blue Cranes on UmPhafa and provide recommendations for management	Habitat assessment and management recommendations for Blue Cranes	All Year	2	3
Predator Management					
Leopard Density and Identification	This study would use camera trap data and visual sightings to analyse the distribution and home range size of individual leopards on UmPhafa. Impact on other species within these ranges can be deduced by analysis of kill sites	Understanding of leopard distribution, home range and predation levels	All year	2	3
Impact of a new predator species – Cheetah introduction to UmPhafa	UmPhafa is hoping to introduce Cheetah in the first 6 months of 2024. Using satellite data and visual sightings this is an opportunity to study Cheetah in a new environment and to assess the home ranges and prey densities on UmPhafa to ensure a successful introduction	Provide management recommendations on distribution, ranges and prey species	All Year	2	3