

IRIS Summer Fieldwork Award Report 2024
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With the generous support of the IRIS Summer Fieldwork Award, I was able to carry out a summer field season in the Ghanzi District of Botswana for my PhD in Environment and Resources at the University of Wisconsin-Madison's Nelson Institute. This Fieldwork Award covered essential international travel to and from Botswana and locally within Botswana to allow my project fieldwork to be completed. As Botswana has one of the highest populations of Endangered and Vulnerable carnivores in Africa, such as African wild dogs and cheetahs, and the Kalahari desert is comparatively understudied compared to the Okavango Delta, my PhD project to test a non-lethal deterrent to prevent carnivores from hunting farmers' livestock is a critically important one.

The first step to doing this work was my community consultation process in New Xade, with the San people. New Xade is an extremely rural San settlement close to the Central Kalahari Game Reserve. The San people are one of the Indigenous peoples of southern Africa, and as they tend to survive mainly from governmental grants and subsistence from their livestock, losses of livestock to wild carnivores can potentially have a major impact on their livelihoods and well-being.

This community consultation process was successfully completed June 10th-13th, with a meeting with the New Xade chief's office and the farmer community chairperson, Mr. Mothukhuthe, and subsequently visiting twelve cattle posts surrounding New Xade to speak to smallstock (sheep and goat) farmers about the project and determine the suitability of cattle posts for the study. During this process and subsequent farm visits, I was able to gain 30+ qualitative

surveys to contextualize livestock husbandry practices in the area. Cheetah Conservation Botswana (CCB), the collaborating nonprofit organization, was very helpful in this process.

In June 2024, after gaining consent from farmers to work on their farms, I deployed a total of 66 trail cameras on trees or posts at approximately 70 cm from the ground in New Xade at seven cattle posts (Mokha, Gope, Thabo Manyatse, Charks, Kelebemang, GX, One Shot). At each cattle post, save for two small exceptions, an experimental kraal (with Foxlight flashing light deterrents) and a control kraal (without Foxlights) was selected. Kraals within this context refer to “livestock enclosures”.

For June 24th-July 17th, Foxlights were turned off and camera traps placed directly at both experimental and control kraals and at 100 meters to collect baseline data on carnivores approaching nearby the kraals. Cameras were also placed at 500 m, 1k, and 1.5k intervals from the last cattle post gate along the cattle post roads to get a sense of overall carnivore presence. Twenty-four cameras were placed on the kraals, twenty-four placed out in the bush at 100 m away from the kraals, and eighteen cameras on the roads. Amount of cameras and number of cattle posts were chosen for logistical possibility and maximum data collection within those confines.

From June until September, I checked the 66 camera traps placed in New Xade to switch out SD cards and batteries – checks occurred July 17th-19th, August 21st-23rd, and September 16th-18th. I continued to engage farmers at the cattle posts about research objectives and recorded any data on livestock losses during the experimental period. I recorded on camera traps June 24th-July 17th without turning on the Foxlights deterrents for a “baseline” and then turned on the Foxlights July 17th-19th and recorded on camera traps mid-July-mid-September for the experimental period. I removed cameras and Foxlights at the end of experimental period –

September 16-18th. I also collected basic vegetation information using the Robel pole method during the camera checks for July 17th-19th.

In addition to my work in New Xade, I placed eight cameras at central waterpoints to gain baseline carnivore presence at the commercial farm where I'll be doing a guardian animal trial (donkeys) next year. These data were collected August 1st- September 19th.

All in all, it was a successful field season, and I'm very excited and proud of the data I was able to source despite the extremely challenging environment of the Kalahari. This will be an important dataset from an understudied area and I'm excited to be contributing to the literature with this PhD. Thank you again to the IRIS Summer Fieldwork Award for helping to make it possible!