Project Update: December 2016

I was excited and honored to receive a second Rufford Small Grant in November 2016 for my project, "Wildlife recovery amid human expansion in Mozambique's Gorongosa National Park." I received notification about the grant just as I was wrapping up a season of fieldwork.

I described this fieldwork in a blog post "Wildlife Selifes for Science," published on Gorongosa National Park's science website (http://www.gorongosa.org/blog/science/wildlife-selfies-science), which is recopied here:

Fighting my way through waist-high grass and swatting away tsetse flies, I struggled to follow the bearing on my GPS unit as I hiked further and further from the road. I finally emerged at the edge of a drying pond, where I scared away a herd of impala and a noisy baboon troop, and my GPS gave a familiar beep to let me know that I'd arrived.

My destination wasn't anywhere special—although, one could argue that any random point in Gorongosa National Park is pretty special. I was at one of 60 points on a grid that I had placed on a map of the park, back at my office at the University of California, Berkeley. My graduate research uses remote cameras to understand the distribution of Gorongosa's large mammal species in space and time. Last July, my task was to place a camera at each of these locations. These cameras automatically trigger and take a photograph any time a warm object moves in front of them, resulting in thousands of wildlife "selfies".

I hadn't fully appreciated the diversity and beauty of Gorongosa's habitats until I blindly followed my GPS through yellow fever trees, open grasslands, and dense wet forests. Through my research, I hope to understand how this habitat diversity drives patterns of animal activity and species interactions, in concert with the annual floods and human impacts on the system. Camera traps can help us answer key questions about wildlife (who? when? where? why?). These answers can inform conservation plans in the park, which is experiencing rapid changes in its large mammal populations.

Months later, I found myself traversing the same path, but this time I was scaring away the baby warthogs and nyala that had been born in the recent explosion of mammal life. I barely recognized the area, which had been transformed by the dry season, fires, and the first rain. Previously waist-high grass had been burned to the ground, the piles of rotting palm fruit were replaced by Faidherbia seed pods, and a recent growth spurt of understory vegetation made forests lush and green. I struggled to find the exact Acacia tree where my camera was mounted, but luckily I was accompanied by Beca, a Gorongosa ranger with an intuitive understanding of the bush who could navigate to the exact location of the camera without the GPS.

As I removed the camera from its case, its new insect inhabitants scurried away and I retrieved the memory card with a sense of anticipation and excitement. Camera traps yield incredibly fun raw data, and I got a thrill out of flipping through photos to see rare species that I have never

seen in person, like aardvark. Even common species, like waterbuck and baboon, made me smile with awkward selfies.

Over the coming months, with the assistance of citizen scientists at WildCam Gorongosa, the photos will be classified and transformed into numbers in spreadsheets. I will use the data to build models that will help us to understand the basic ecology of wildlife and to inform restoration efforts in the park. Meanwhile, the cameras remain my full-time field assistants, snapping away 24/7 and giving us a window into the secret lives of Gorongosa's large mammals.

Ranger Beca watches for signs of elephants in the yellow fever tree forest, one of their favorite habitats, as I finish mounting my camera on the palm tree at right.

I pose next to a newly-mounted camera with Diolinda Mundoza, one of the fantastic science interns at Gorongosa's E.O. Wilson Biodiversity Laboratory