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Funding from the Mellon Recruitment Grant allowed me to spend four months in South Africa gathering preliminary data for my thesis regarding the ecology and evolution of the Cape Floristic Province (CFP). I spent my time in South Africa reestablishing ties to landowners and local conservation organizations, traveling the region to conduct preliminary vegetation surveys, and collecting tissue samples for a phylogenetic analysis.

The Cape Floristic Province, an area of Mediterranean climate in southwest South Africa, is one of the most floristically diverse regions on Earth. Over 9000 species of flowering plants grow in an area less than the size of Wisconsin, more than twice that of any other region of similar rainfall, latitude, and area. My work focuses on one of the primary vegetation types that makes up this diversity, renosterveld ("rhinocerous-field" in Afrikaans). Renosterveld occupies heavier, fertile, mostly shale-derived soils and is marked by an unrivaled diversity (> 900 spp) of geophytes – plants with small to enormous belowground storage organs with many representatives from the iris family (Iridaceae). Despite its extraordinary diversity, renosterveld is largely unstudied by ecologists and evolutionary biologists and faces a silent crisis, having already lost 95% of its area to agriculture, with the remaining habitat fragmented by fields of cereal crops, vineyards, and sheep pasture.

The Mellon Recruitment Grant allowed me to travel the full area that renosterveld covers in the Western Cape (and the world). One of my goals during these travels was to reestablish ties with the landowners and conservation organizations I worked with as a National Geographic Young Explorer a year prior. I also started conducting preliminary vegetation surveys across the full range of environmental conditions that renosterveld occupies in order to better understand what abiotic factors most influence community composition. The third goal of the trip was to start collecting tissue samples of every species within the genus, *Geissorhiza* (Iridaceae). It will take a few years to gather all 103 species, but I hope to construct a phylogeny (family tree) for this extremely diverse group of irises based on molecular data gleaned from these samples. This should provide insights into the drivers of speciation and evolution within this group of bulbs, and within the CFP more broadly.

I started my trip by traveling a region of the CFP east of Cape Town called the Overberg. Here I reconnected with many farmers and conservation organizations I worked with as a National Geographic Young explorer a year prior. After spending two weeks there I traveled to the very northern extreme of the CFP where the otherwise temperate, Mediterranean-type climate grades into semi-arid desert. There I visited one of the wildflower-viewing capitols of the world, a small town called Nieuwoudtville where > 300 bulbous species occur within 10 km of the town, almost all in renosterveld. There I conducted a vegetation survey and collected specimens for a phylogenetic analysis. After this I spent two weeks in a town called Darling where I established relationships with local farmers and delimited a permanent vegetation survey plot in addition to collecting samples for the phylogenetic analysis. After that I spent about a month searching the natural areas around Cape Town for *Geissorhiza* species and exchanging ideas with my local advisor at the University of Cape Town. After that, I traveled back to the Overberg where I continued surveying and collecting samples for the remainder of my time in country.

Although I had car trouble and was stranded on the side of the road not once but twice during the trip and the forces of El Nino prevented many of the species I was looking for from coming up, I still made it out of the country with valuable preliminary data that will influence the trajectory of my PhD.