This summer, I had the fortunate opportunity to work as an entomology intern at the Valles Caldera National Preserve in the Jemez Mountains of New Mexico. My internship has been full of challenges and adventures, and I am incredibly thankful to have embarked on such a remarkable journey. Now, at summer's close, I look back on my summer experience with the deepest fondness and respect for the entire crew at VCNP, my professors at Sewanee, and my two-year running internship partner, Arden Jones. The project has instilled me with a new set of field and lab skills and presented me with incredible opportunities for the future.

The primary purpose of my summer internship was to conduct a moth survey in the ponderosa pine and mixed conifer forests of the Valles Caldera National Preserve, assessing the effects of last year’s Las Conchas fire on the biodiversity and abundance of moth species in the area. This specific project is part of a much larger fire-response study assessing the overall effects of the expansive Las Conchas fire, which swept through huge portions of the Preserve’s 89,000 acres and dramatically altered the landscape last June. Under the leadership Dr. Bob Parmeter, the VCNP’s head scientist, and with the help of the entire wildlife technician crew, Arden and I aim to eventually publish our report in a relevant scientific journal. This great opportunity was not anticipated when we began our internship. We had no idea that our work on moths could be turned into a scientific report worthy of publication, but the support and encouragement we have received and our growing interest in the topic has compelled us to complete the paper over the course of the coming school year. Our summer internship has unexpectedly and luckily turned into an extended research project, and we both look forward to working on it while in Sewanee.

Between our own moth survey duties and helping out with other scientific projects going on with the VCNP. Our days were always very busy and eventful. During moth collection days, Arden and I would head out to the Valles Caldera in the late afternoon to set our traps. We used
blacklight bucket traps to catch our moths, which is basically just a bucket topped with a funnel and a blacklight surrounded by plexi-glass. Moths in the general vicinity of the trap are attracted to the light, fly into the plexi-glass, and then fall down into the funneled bucket. Within the bucket we placed cyanide socks that immediately kill the sorry victims. The sixteen collection sites where we set these death traps were dispersed throughout the Preserve at designated spots: four burned and unburned ponderosa pine forest sites and four burned and unburned mixed conifer forest sites. With this mixture of habitat, we will be able to compare and contrast the effects of fire and forest type on moth species.

After we set our traps in the afternoon, we would return the following morning to collect our finds. Most mornings, we would find our traps upright and filled with moths, but once monsoon season commenced, we had very unsuccessful or overturned trappings. It also didn’t help that many of our sites were located near feeding areas for the high altitude cattle that are reared in the Caldera! Once we returned to the lab with our trappings, we would being sorting, pinning, spreading, and identifying the heaps of moths we gathered in the field. Apart from this work, we also curated many moth specimens for the collection here, helped gather “pitfall” (traps for ground-dwelling arthropods) and “malaise” (netted traps for flying arthropods) traps for the entomology department, track turkeys with GPS with the wildlife crew, and set up small mammal traps.

The lessons learned and skills I have acquired this summer at the Valles Caldera are endless. Before this summer, the realm of moths was a foreign topic to me. I knew nothing about their taxonomy, behavior, or methods for trapping. Now, Arden and I can successfully trap and identify hundreds of species of moths within a single morning. Through this project, I have developed an unforeseen fondness for moths. It has opened my eyes to an aspect of nature I once overlooked and verified the truth that with understanding comes appreciation. I have also
learned how the members of a scientific technician crew work together to carry out various projects and how much planning goes into the execution of a successful field project.

In addition to these practical skills, being an entomology intern has also helped me decipher my future career goals. The work has verified my love for ecology and field work and filled me with ambition to find a suitable graduate program or occupation that allows me to fulfill these dreams. While I am still unsure about my particular plans for after graduation, this summer has filled me with a peaceful optimism and understanding that opportunities present themselves to those willing to take them on. Arden and I have met some exceptional people while living and working at the VCNP headquarters, and their friendship and advice has given me this confidence for the future. The thought of life after Sewanee is still a bit daunting, but hearing their life stories has filled me with great optimism and hope. As long as I am doing what I love and what interests me, I will always feel love and be interested!

My summer internship at the Valles Caldera gave me an experience I could have never anticipated. The places I have seen and the friends I have made have been the stuff of dream summer excursions. Now at summer’s close, I find myself thirstier for life than I have ever been. Both Arden and I are incredibly eager to return to Sewanee and bring the Valles Caldera spirit with completion of our moth project.
Entomology Technician and our supervisor), Arden, and myself at a pitfall, malaise, and blacklight trap in an unburned mixed conifer forest.

Our moth processing workshop in the VCNP lab.
Arden and I setting up a blacklight trap in an unburned mixed conifer forest.