Carter Conservation Fund Year-End Report for:

Herbarium & Fieldwork for Gila Cliff Dwellings

Kelly Kindscher, University of Kansas, December, 2019

Abstract:

I have been involved in an on-going project to create an accurate list of plants at the Gila Cliff Dwellings National Monument. There was some previous work done, but over the last few years, work led by Bill Norris at Western New Mexico University, with help from Russ Kleinman, and Richard Felger and myself. After this past summer, we have now documented the occurrence of 478 vascular plant taxa at the Cliff Dwellings. For this past year, I was the lead for fieldwork, and through NPSNM funding, I was able to make 4 visits to collect additional taxa. This work had to be coordinated with the National Park Service staff for access and it was preferred that we not be observed collecting plants. As previous work had focused on Cliff Dweller's canyon (the trail to the Cliff Dwellings), and the West Fork of the Gila River, which crosses the northern portion of the park, I focused my work on traversing the back portions of the park, that are very rarely visited. This is rugged country with much relief and the vegetation included rock outcrops, grasslands and savannah, pinyon-juniper, ponderosa pine, and spring/seep plant communities. The routes of my treks and plant collecting locations were made on GaiaGPS, an nice app that mapped all of this without being in cell phone range (see map). The visits made were on March 10, June 12, July 10, September 30, and October 2, 2019. As we had previously collected many species, this was an exercise in collecting new things not on the list. Not all visits were productive, March 10 was too early for much of anything new to be in bloom (the park unit is about 6,000ft.). And July 10 was too dry as the monsoon started late, and was light at the Cliff Dwellings, early in the season. The monsoon finished wet, which was very helpful for fall collections.

The list of plants collected that were new to the list, follows:
Draba mogollonensis, KK 4399, June 12, 2019
Senecio actinella, KK 4400, June 12, 2019
Salsola tragus, KK 4401, June 12, 2019 (collected again in the fall, when in flower/fruit)
Hedyotis greenii KK4416 September 30, 2019
Linum aristatum KK4417 September 30, 2019
Ortheocarpus purpureo-albus KK4418 October 3, 2019
Schistophragma intermedia KK4419 October 3, 2019
Hieracium fendleri KK4420 October 3, 2019
Symphyotrichum ericoides KK4421 October 3, 2019
Antennaria marginata KK4422 October 3, 2019

Conclusions and lessons learned:

When one has a large list, it is hard to add additional species. And we don't see what we don't know. So if you are looking for new species, you may gloss over little things or similar species, such as another aster. One collects a lot more species in the field, than one reports, as what appears different after hiking up and down hills in the heat of the sun, does not appear different enough under a scope later.

Bonus discovery: It is good to keep botanists in the field. As I was hiking with two friends about 20 miles south of the Gila Cliff Dwellings, in the Gila National Forest near the Sheep Corral Canyon, and at the end of the hike, and back at the vehicle, I looked down and there in the ponderosa pine needle mulch was a large-leaved perennial legume, and several other large plants nearby with hairy stems and pods, but no leaves. It was a legume I did not recognize. Later I was unable to identify it, even to genus, and shared it with botanical colleagues in NM and AZ and through their help, explored the genus Cologania, and believe that I have the first collection of Lemmon's cologania, Cologania obovata, which was submitted to the Western New Mexico University this fall. It is only known from pine forests in 3 counties of southern Arizona and into Mexico.

--Kelly Kindscher—University of Kansas—member of the Gila Chapter of the NPSNM