

1. Graham's Thistle and Unknown thistle of the high Mogollons

2. John Gorey (UnderWing Biological LLC)
3. Amount: \$1500.00
4. Additional funding of \$500.00 was provided from the Gila Native Plant Society
5. Funding from the Carter Conservation fund was used to pay for food, transportation, and time spent surveying in Gila Wilderness. Below is a rough estimate of money spent:

i. Gas.....	\$160.00
ii. Food.....	\$275.00
iii. Field Tech.....	\$800.00
iv. <u>Personal time.....</u>	<u>\$265.00</u>
v. Total.....	\$1500.00

6. In 2023 research was continued on *Cirsium grahamii* (Graham's Thistle) and an outing to find an unusual thistle along the crest of the Mogollon Mountains was conducted. *C. grahamii* surveys were conducted in new areas to locate undocumented populations. Bear Wallow, Apache Creek, East Fork of the Gila, Mogollon Creek, Gilita Creek, and the Upper Middle Fork of the Gila were searched. Two populations were found along the Upper Middle Fork. The Middle Fork North population had 13 flowering plants and >80 rosettes. The Trotter Trail population had 71 flowering plants and >40 rosettes. Combined with populations found in 2022 this puts the species around 4000-5000 individuals for the state of NM. There are likely some more small populations (100-300 individuals) in the Gila region but it is unlikely that a large 2000+ population has gone undetected.

The trip to the high Mogollons in August was successfully completed. However, due to the drought this year most plants were not in flower in early August. This is normally a very wet time of year and almost everything that does flower is in bloom. I still think the thistle is a unique species but until it is collected that cannot be proven. 103 locations of *Anticlea mogollonesis* (Mogollon Death-camas) were recorded and other rare species were documented. The trip led to the first sighting of *Bombus occidentalis* (Western Bumble Bee) since 1961. This species is very rare in NM and is at the very southern end of its range.

7. I gave 2 talks this year. The first was in October to the Albuquerque chapter. The second was in November to the Gila chapter. Both talks went well and I was able to express the importance of the species both as a rare plant and as a vital pollinator plant. I will be submitting a report to the USFS in the hopes of protecting the areas that *C. grahamii* remains. Herbarium specimens will be donated to WNMU herbarium and I may have 1 left over to send to UNM in Albuquerque.
8. I cannot stress enough how important this grant has been for furthering research in the Gila region. Every time I get to go out and survey I find something noteworthy. I greatly appreciate the opportunities you have given me!

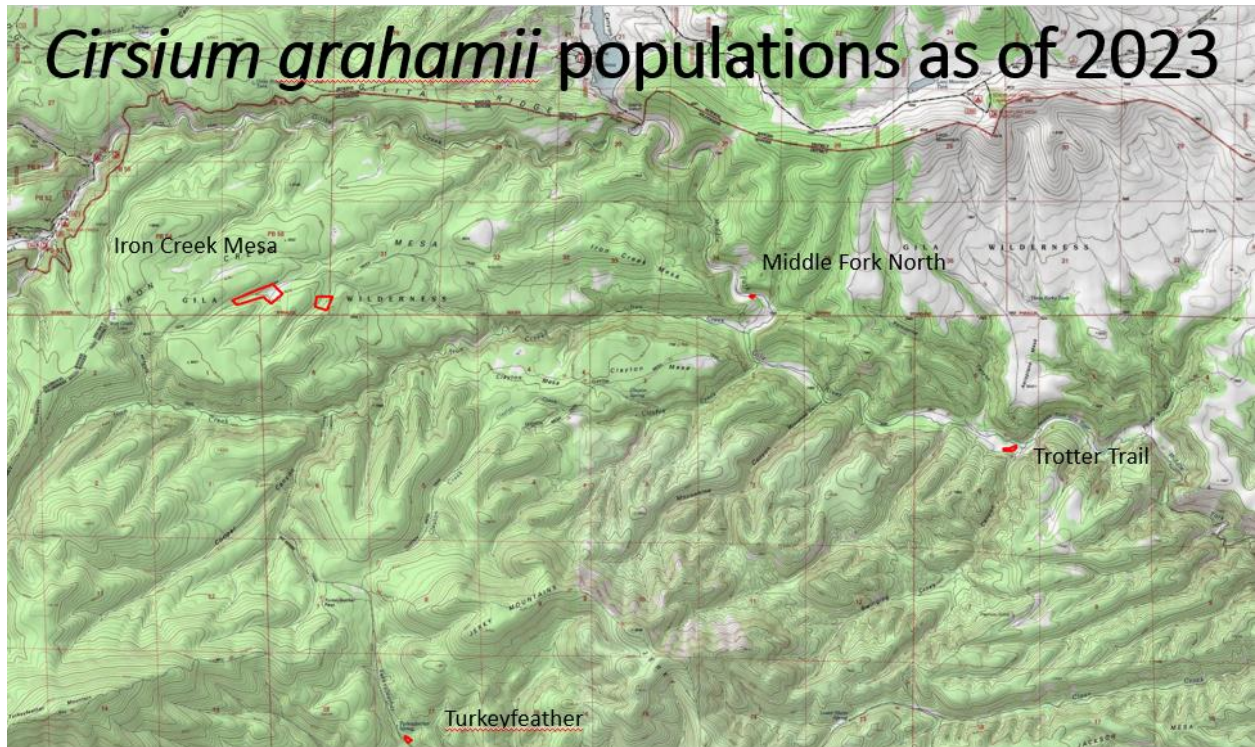


Figure 1. Populations of *Cirsium grahamii* as of the end of 2023.



Figure 2. The 2 new populations found in 2023 along the upper Middle Fork of the Gila



Figure 3. The strange thistle found in 2022 near the top of Mogollon Baldy it was not found again in 2023