

Project Year-End Summary Report

Title of Project: An Annotated Checklist of Ferns and Fern Allies of New Mexico

Begin answering in the shaded box right beside or below each question and it will expand to accommodate as you type. Use up to a total of two and a half pages for questions 1-8. More detailed presentations, a final report, articles or posters are welcome separately(See final instructions at the end of this form.)*

1. Organization name or Individual who received the grant: Harpo Faust

2. Amount of Grant: \$2,500

4. Was additional outside funding obtained? (check box that applies) Yes No

Other funding source(s) if you checked "yes."

5. Briefly, how was the grant money from the Carter Conservation Fund used?

The grant money was used towards gas funds for 16 fern collection focused field work trips between April to October 2024, covering over 7,986 miles in the state, and collecting around 700 specimens including roadside weeds and associate species.

6. Write an abstract or summary of the activities performed and the progress that was made this year on your project. (Save any conclusions, lessons learned, and benefits achieved for the final sections, 7&8.)

Between April to October of 2024, 16 collection expeditions occurred, targeting ferns and fern allies in the state of New Mexico, as well as associate species. Travel was a huge piece of this, including driving to sites, but more importantly remote hiking access to sites with previous collections or no collections at all. Multiple new localities for multiple taxa were located and recorded, and insight into travel and land access with focus on this group was developed, illuminating next years focus onto private land. Collections are currently still being processed and progress is ongoing and the full progress and impacts of the summers collection will be known in spring before the third year of field work. Thus far, three state collection records have been identified as well as a handful of range extensions and county records.

7. How does your project further a Native Plant Society mission area, namely: *plant or ecological education; conservation/restoration of native plants and/or their habitats; adds to botanical research; promotes appropriate use of native plants to conserve water, land and/or wildlife.*

The impact of this work is huge, and has already intersected into informing rare plant conservation, direct education, and increasing our baseline understanding of state biodiversity of a previously overlooked plant group. On the most basic level, increased collections of this group, has increased understanding of the distributions of many taxa in the region. Multiple collections are new for the state and illustrate the importance of ongoing collections during global change. These updated collections not only confirm prior presence of the species but also expand distribution knowledge. Multiple taxa distribution has been expanded and further honed in on. Additionally, multiple taxa not found, are on the radar to be added to the state rare plant list, with rare plant reports resulting from this work. As well, Faust will give another talk to the Native Plant Society in March 2025 in Albuquerque. Lastly, Faust models this work

to the graduate and undergraduate students she mentors at the UNM Herbarium, and ongoing biodiversity research is an underrepresented realm of research that needs to be modeled and performed, especially in an era of climate change.

8. Any other conclusions., lessons learned, benefits to you, the community or the environment hopefully result from your work as assisted by this grant.

While wear and tear on the vehicle was requested, it was not accounted for in the distribution of this grant request. While almost exactly \$2500 was spent solely on gas funds, more than that was spent on 4WD maintenance. Considering the localities needed to be visited to locate this undercollected group, wear & tear on the field vehicle will need to be accounted for in ongoing work. Multiple localities visited made specific issues on struts and 4WD hardware that needed immediate attention and ongoing work needs to account for this so this isn't taken out of the researcher's personal funds. The impact of this work on individual researcher's vehicles continues to be huge, and more funds are needed next year to make this work sustainable. \$2800 was spent on wear and tear on Faust's vehicle just from fern-based field work alone and grants awarding travel funds should account for this crucial element of remote field work in New Mexico. Additionally, the second lesson learned is the large amounts of time it takes to get into these undercollected areas. In the future, per diem should also be calculated. Faust spent 50 days conducting field work this year, and the wear and tear on the body of the researcher is now becoming an issue.

Final Instructions

Please send your completed form as pdfs an email attachment to cartergrantapps@gmail.com by November 1.

** To remain in good standing for any future funding from the Native Plant Society of New Mexico, we ask that you educate our membership more fully in some way. This could be an article (250 words minimum, at least 1 high resolution illustration or photo) for our newsletter, ora paper or electronic copy or link to a published article connected with the past year's work, or by making an educational and visual presentation to one of our chapters. Contact information for our 7 area chapters is found on our website at www.npsnm.org under the Chapters tab.*

What are your intentions in this regard? I am signed up to give a talk to the Albuquerque Chapter in March 2025. I am also planning on applying again for the same grant support next month and am happy to engage with the society more whether is now or later, just keep me updated with your needs.

This year end report is submitted by (Type your name) Harpo Faust

My typed name is equal to my handwritten signature in testifying to the accuracy and truth of this report to the best of my knowledge today.

eMail address harpofaust@unm.edu

Date October 31, 2024

Please contact us again at cartergrantapps@gmail.com if you have any questions or alternate suggestions.