

March 11, 2024

During the 2024 field season, Canyonlands Natural History Association Discovery Pool Funds were used to support data collection on the recovery of the pinyon-juniper woodlands impacted by the 2021 Pack Creek Fire. We were able to revisit 16 sites that were originally established in 2021 to assess vegetation and soil recovery three years after the fire. Field work was conducted by USGS biological science technicians, biologists, and ecologists, with additional support from co-PI Dr. Tara Bishop (Utah Valley University (UVU)) and several UVU students. Data collection relied on standardized monitoring protocols modified from those used by the Bureau of Land Management and the USGS for surveying similar ecosystems across the Colorado Plateau. This included setting up three 25 m transects at each plot and conducting surveys on vegetation and soil surface cover, size of canopy gaps of herbaceous plants and woody vegetation greater than 1 m, soil stability tests, site pictures, species inventory, and soil samples. Additionally, data is compiled in a complimentary ESRI Survey123 database to that of an active Joint Fire Sciences Program project (co-PIs Mike Duniway, Kristina Young, and Tara Bishop) so that the data collection could be applied to a broader range of scientific inquiry.

Currently, we are in the process of finishing up data entry and data QA/QC. Next, project leaders will begin data processing and analysis, which will contribute to a USGS data release. We also aim to write scientific manuscripts for peer-reviewed journals to help disseminate our findings and share our research with other interested parties. Additionally, we collected numerous soil samples that we hope to process if time, budget, and access to facilities allows.

We appreciate the continued support of CNHA for this project. Through our two years of funding, we have worked with numerous early-career researchers (including undergraduate students from both USU (2023) and UVU (2024)). Additionally, these funds have provided me with experience in scientific project management and study design, and funding acquisition which is important as I further my career as a research scientist.