

Background

- The Emory Oak Collaborative Tribal Restoration Initiative (EOCTRI) goal is to restore and protect Emory oak groves (*Quercus emoryi*) and to ensure the sustainability of subsistence food for Arizona tribes.¹
- Within *Q. emoryi* groves are plants of great importance that holds traditional ecological knowledge on culturally and medicinal plants usage.
- Assembling literature details of *Q. emoryi* understory can provide information for Arizona tribes, future conservation and restoration projects.

Objective

To gain in an understanding of traditional use plants in Emory oak (*Q. emoryi*) understories.

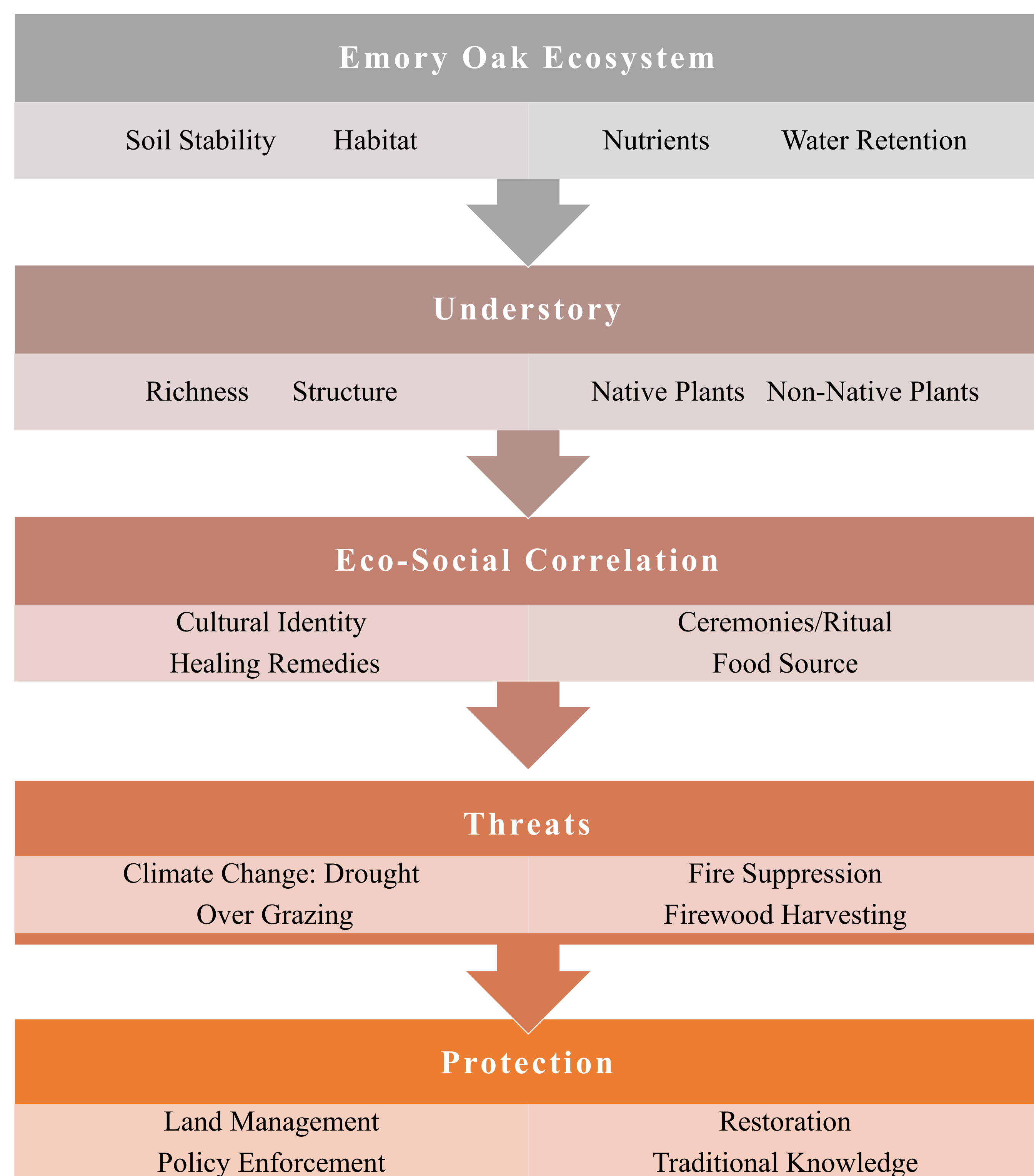


Fig 1. *Q. emoryi* is connected to its environment and various social groups, understanding these links could aide in providing information for future conservation efforts.

Methods

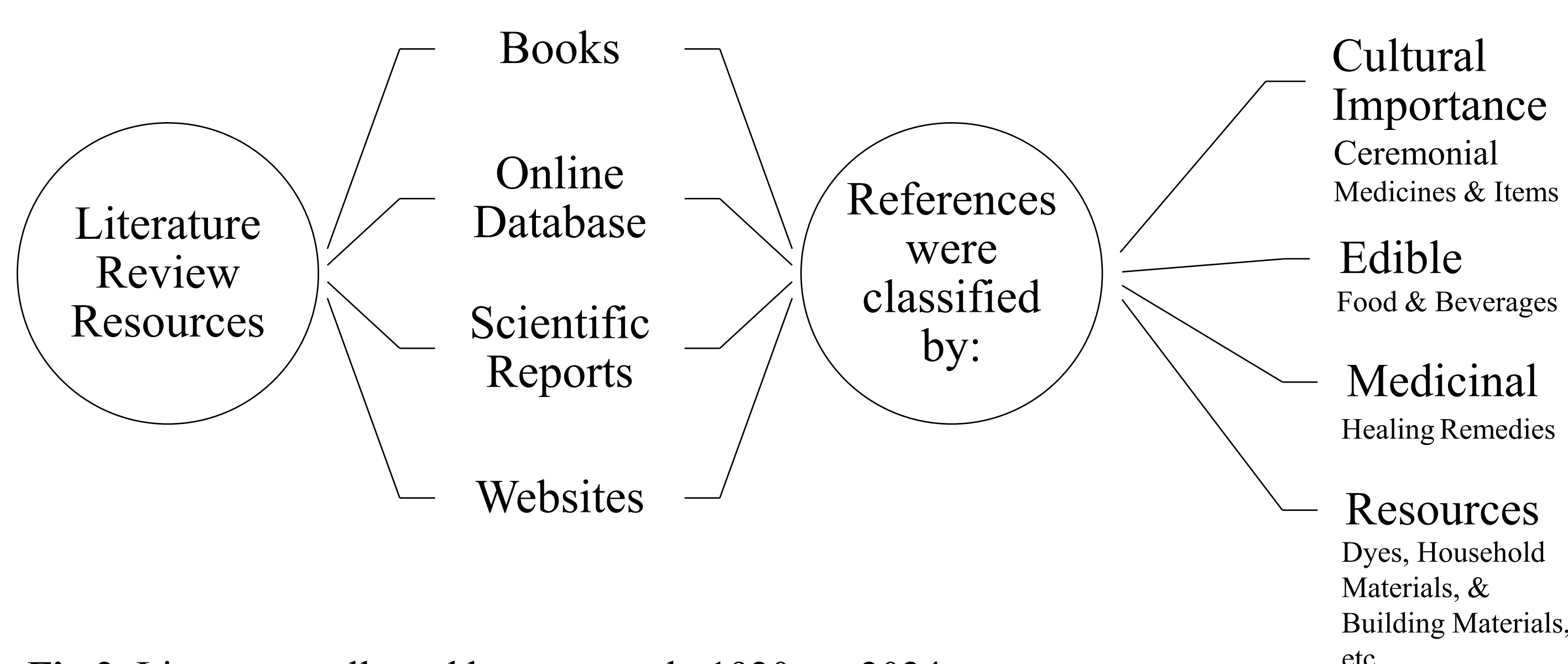


Fig 2. Literature collected between early 1920s to 2024.

Results



Fig 3. A total of 263 species are characterized as Focal and Non-focal Plants. Focal plants belong to the six most diverse families of *Q. emoryi* groves (listed below). A total of 138 plants are found within the focal category and are sorted into native and non-native categories.

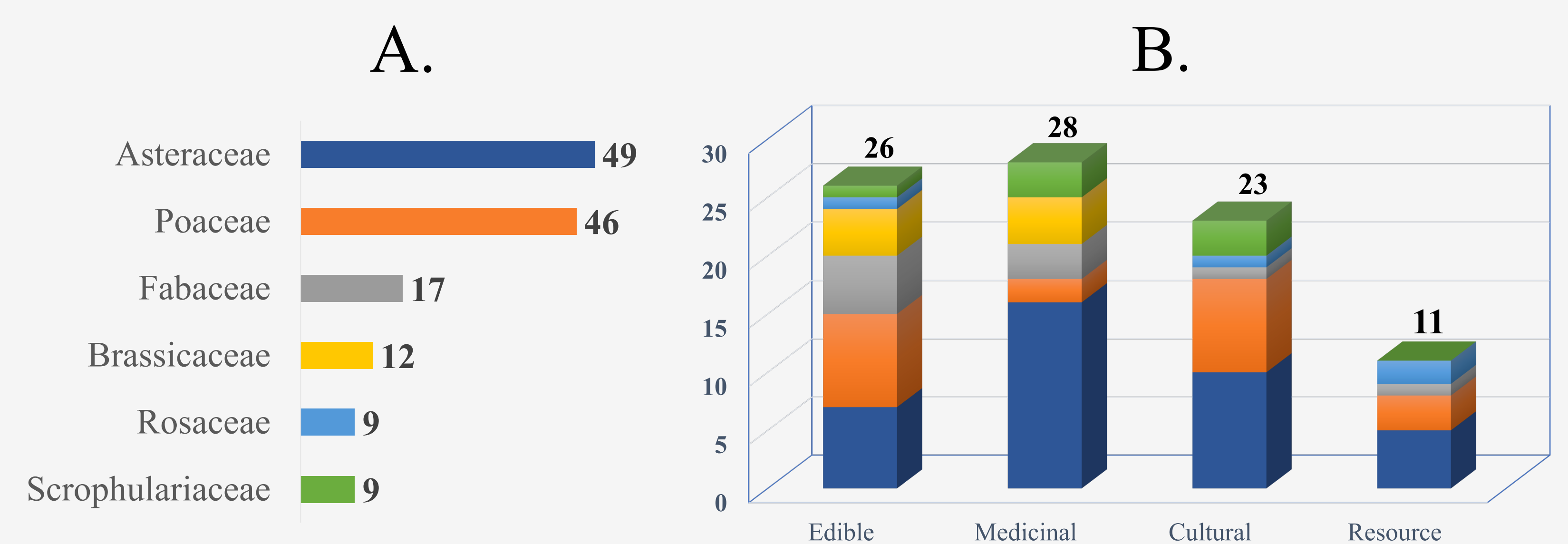
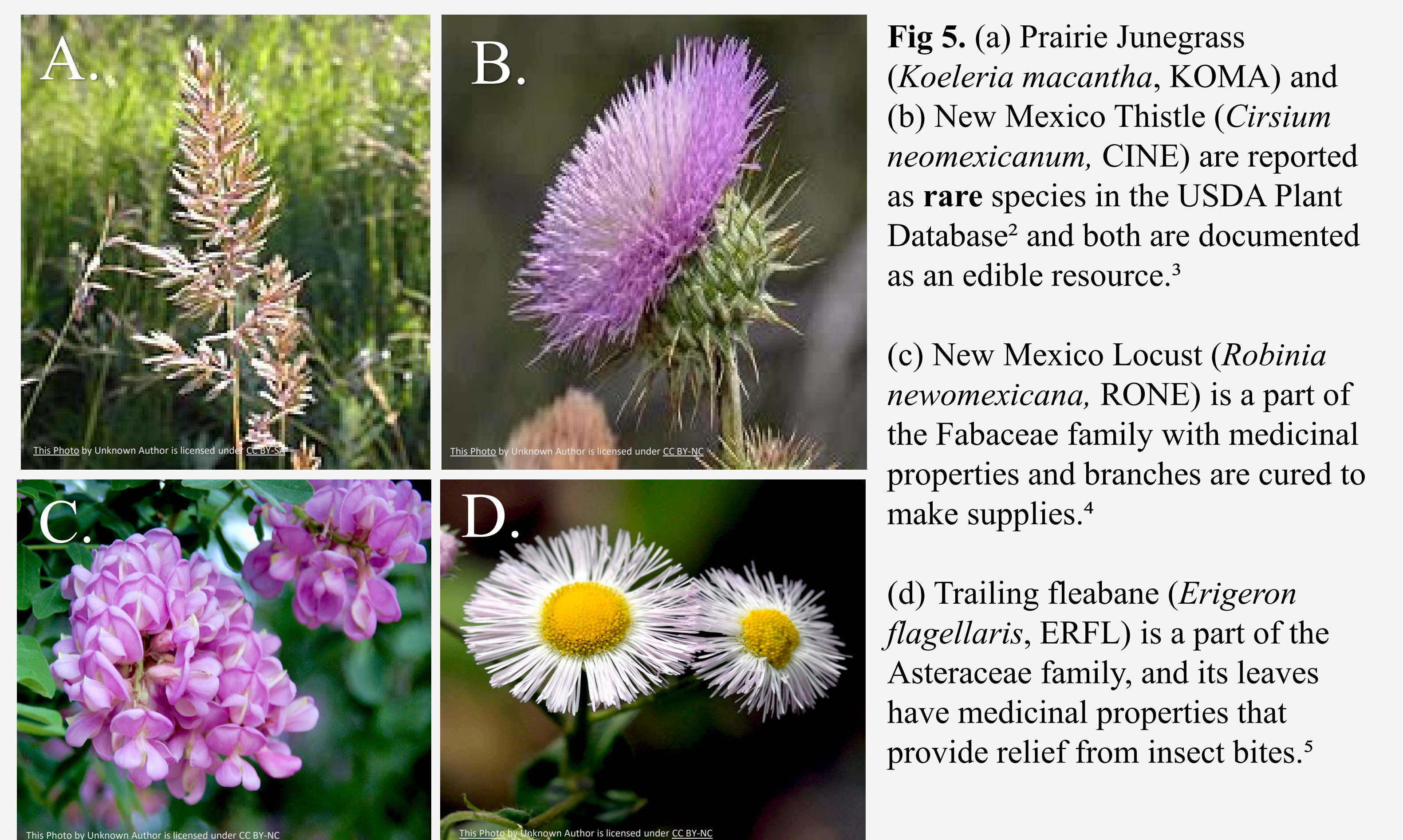


Fig 4. (A) Species diversity in each Family included in the analysis; (B) Of the 63 species for which there is traditional use information available, a bar chart of which Families are used for each traditional use category



Discussion

- This research is the first collection of literature on medicinal plants within the EOCTRI project and further research needs to put more emphasis on incorporating traditional ecological knowledge from elders and tribal members.
- Recognizing the cultural and spiritual values associated with these plants is significant for the conservation efforts of preserving biodiversity in *Q. emoryi* groves. Ceremonial usages was accounted for, but descriptive details were kept sacred.
- Data collected on conservation ranking of plants was outdated for Arizona and it is highly recommended to update current listing or conduct land survey to grasp true population of species.⁶

ACKNOWLEDGEMENTS

This study was funded by the National Science Foundation #22-506, the Research assistant Mentoring Program for Postbaccalaureate in Biological Sciences. Emory Oak Collaborative Tribal Restoration Initiative providing list of plants! I would like to thank Sara Souther, Clare Aslan & Collin VanBuren for their assistance and mentorship. Thank you to the RaMP faculty, fellows, and student mentors for your support!

Contact Information



Citation

WestLand Resources. (2020, December). Emory Oak Collaborative Tribal Restoration Initiative. https://westlandresources.com/wp-content/uploads/2021/11/EmoryOaksNewsDecember2020_final.pdf United States Department of Agriculture: Natural Resources Conservation Service. Plant Database. <https://plants.usda.gov/home> Weber, Steven A. and P. David Seaman, 1985, Havasupai Habitat: A. F. Whiting's Ethnography of a Traditional Indian Culture, Tucson. The University of Arizona Press, page 66 Whiting, Alfred F., 1939, Ethnobotany of the Hopi, Museum of Northern Arizona Bulletin #15, page 83 Vestal, Paul A., 1952, The Ethnobotany of the Ramah Navaho, Papers of the Peabody Museum of American Archaeology and Ethnology 40(4):1-94, page 50, 51 Nature Serve. "NatureServer Explorer." <https://explorer.natureserve.org/>. March 2024.