

## Grant Report

### Floral Survey of Manzano Wilderness Area in Valencia County and Baseline Survey of Sabinoso Wilderness

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In 2018, the Native Plant Society of New Mexico (NPSNM) provided funds to the San Juan College Herbarium to conduct floral surveys in the Manzano and Sabinoso Wildernesses. The generous support provided by NPSNM enabled a better of floristic understanding of these under collected areas and resulted in numerous new county records that extended the known distribution of several species. The San Juan College Herbarium would like to express appreciation to the NPSNM for its support of this work. Following is a summary of surveys conducted in the Manzano and Sabinoso Wildernesses in 2018.

#### Manzano Wilderness

##### *Background*

Cibola County was created on June 19, 1981 from the western four fifths of Valencia County. This created botanical uncertainty at the county level as numerous herbarium vouchers that were collected from the original Valencia County were subsequently from Cibola County. In particular, many pre-1981 high elevation county records for Valencia County were collected from Mount Taylor which is currently part of Cibola County. The higher elevation areas of Valencia County now occur along the eastern boundary of the County in the Manzano Wilderness where relatively few floristic surveys have been conducted.

##### *Floral Survey*

Initially, two expeditions were planned for the Manzano Wilderness in 2018. The first of the planned expeditions was conducted on May 22. Due to limited precipitation during the preceding winter, there were relatively few flowering plants at that time. However, 43 vouchers were collected during the expedition and the following collections were new county records for Valencia County.

- *Teloxys graveolens* Fetid Goosefoot (Amaranthaceae)
- *Heliomeris multiflora* var. *nevadensis* Yates Showy Goldeneye (Asteraceae)
- *Sanvitalia abertii* Abert's Creeping Zinnia (Asteraceae)
- *Solidago wrightii* Wright's Goldenrod (Asteraceae)
- *Brickelliastrum fendleri* Fendler's brickellbush (Asteraceae), the voucher from the Manzano Wilderness represents the easternmost collection of this species.
- *Stellaria umbellata* Umbrella Starwort (Caryophyllaceae)
- *Commelina erecta* (Commelinaceae)
- *Euphorbia hexagona* Sixangle Spurge (Euphorbiaceae), the voucher from the Manzano Wilderness is the second documented collection of this species from New Mexico.
- *Geranium caespitosum* James Pineywoods Geranium (Geraniaceae)
- *Philadelphus microphyllus* Littleleaf mock-orange (Hydrangaceae)
- *Muhlenbergia fragilis* Delicate Muhly (Poaceae), the voucher from the Manzano Wilderness is the most northeastern documented collection of this species.
- *Populus x acuminata* Lanceleaf Cottonwood (Salicaceae)

A second expedition to the Manzano Wilderness had been planned for the summer of 2018. However, the second expedition was cancelled due to forest closures that resulted from wildfires. With approval from NPSNM, the resources that would have been used for the second expedition to the Manzano Wilderness were reallocated to the Sabinoso portion of the project.

## Sabinoso Wilderness

### *Background*

In 2009, Congress established the Sabinoso Wilderness in northwestern New Mexico approximately 40 miles east of Las Vegas. The Sabinoso Wilderness protects 19,625 acres of predominantly mesa and canyon habitat within San Miguel County. The topographic diversity supports an assortment of plant communities that vary with elevation. The mesa uplands support grasslands while canyon bottoms contain riparian vegetation such as cottonwoods and willows. The side slopes and canyon walls are characterized by pinyon pine and juniper woodlands with scattered stands of ponderosa pine.

When Sabinoso Wilderness was established, it was surrounded by private lands with no public access route. This isolation prevented comprehensive floral investigations of the Wilderness. However, in November 2017, a public access route to the Wilderness was established, thereby enabling floristic surveys to be conducted. Consequently, the Native Plant Society of New Mexico provided funding to the San Juan College Herbarium to support expeditions in 2018 to characterize the flora of Sabinoso Wilderness.

### *Floral Survey*

Initially only one expedition was planned for Sabinoso Canyon in 2018, however, three expeditions were ultimately conducted. The floral surveys were spread throughout the growing season and occurred in May, July, and October. Although vegetation activity was likely suppressed due to dry conditions, 232 vouchers were collected during the expeditions. Following is a list of new county records collected for San Miguel County.

- *Salsola collina* Slender Russian Thistle (Amaranthaceae), a non-native species that has spread throughout much of the United States.
- *Rhus trilobata* var. *pilosissima* Pubescent Skunkbrush (Anacardiaceae)
- *Sarcostemma cyanchoides* Climbing Milkweed (Apocynaceae), this species was encountered at the expedition campsite near the Sabinoso Wilderness boundary and therefore likely occurs within the Wilderness.
- *Cirsium arizonicum* var. *bipinnatum* Cainville Thistle (Asteraceae), the voucher from Sabinoso Wilderness represents the easternmost collection of this native thistle species.
- *Cirsium neomexicanum* New Mexico Thistle (Asteraceae), the voucher from Sabinoso Wilderness extends the northeastern distribution of this species within New Mexico.
- *Eurybia horrida* Horrid Herrickia (Asteraceae), a species with a relatively limited distribution in southern Colorado and northern New Mexico, the voucher from Sabinoso Wilderness extends the southern distribution of the species.
- *Symphotrichum falcatum* var. *falcatum* Seaside American Aster (Asteraceae)
- *Opuntia macrorhiza* Big-root Prickly Pear (Cactaceae)

- *Tragia amblyodonta* Dogtooth Noseburn (Euphorbiaceae), the collection from Sabinoso Canyon extends the northwestern distribution of this species.
- *Glycyrrhiza lepidota* American Licorice (Fabaceae)
- *Monarda citridoria* subsp. *citridoria* Lemon Bee-Balm (Lamiaceae), generally found in Texas, Kansas, and southeastern states, the Sabinoso Wilderness voucher represents one of the most western collections.
- *Cevallia sinuata* Stinging serpent (Loasaceae), a species most commonly found in Texas, New Mexico, and northern Mexico, the Sabinoso Wilderness voucher is the northernmost collection of the species.
- *Oenothera pallida* var. *trichocalyx* Dorn Pale Evening Primrose (Onagraceae), the Sabinoso Wilderness collection extends the southeastern distribution of the species.
- *Veronica catenata* Pennell Water Speedwell (Plataginaceae)
- *Panicum dichotomiflorum* Autumn Panic Grass (Poaceae)
- *Setaria pumila* Yellow Foxtail (Poaceae)
- *Ipomopsis aggregata* subsp. *collina* Scarlet Gilia (Polemoniaceae), a species limited to Colorado and New Mexico, the Sabinoso Wilderness voucher represents the most southeastern documented collection.
- *Datura quercifolia* Common Thorn-apple (Solanaceae)
- *Solanum nigrum* Black Nightshade (Solanaceae)
- *Viola retusa* Bog Violet (Violaceae), the voucher from Sabinoso Wilderness represents the first collection of this species in New Mexico.