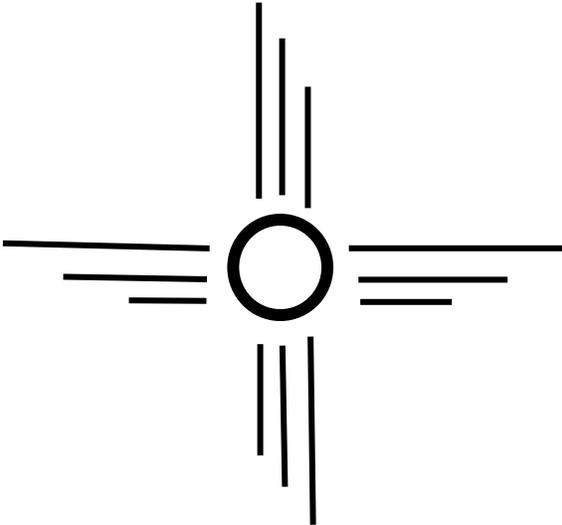


New Mexico

Rare Plant Conservation Strategy

2017





Shootingstar geranium (*Geranium dodecatheoides*)

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Front page photos (clockwise from top left): Mimbres figwort (*Scrophularia macrantha*), Gypsum Townsend's aster (*Townsendia gypsophila*), Lee's pincushion cactus (*Escobaria sneedii* var. *leei*), Todsens' pennyroyal (*Hedeoma todsenii*). © Daniela Roth

EXECUTIVE SUMMARY

New Mexico is one of the most biologically diverse states and has the fourth highest plant diversity in the country. A total of 4,204 plant taxa have been documented, including 109 plant species endemic to the state.

The intent of the New Mexico Rare Plant Conservation Strategy (Strategy) is to help land managers, regulatory agencies, landowners, and other stakeholders to better understand the status and needs of New Mexico's rare plants and act in support of conservation efforts.

The primary target audience for the Strategy include land managers, field office managers, district rangers, agency biologists and botanists, and regulatory agencies looking for guidance and focus areas to prioritize management, evaluate endangerment, and direct funding. The Strategy will not only provide more consistent protection and coordinated management of rare species, but also reduce potential conflict by providing proactive conservation measures and guidelines, and by supporting current land use and resource management planning efforts. It will promote stewardship of New Mexico's rare and endangered plants and provide proactive conservation tools to document current population status, address population declines and habitat loss, and provide management tools and actions required to preclude the need for federal listing and to achieve recovery of some of the most imperiled species in the state. It emphasizes a coordinated and proactive approach to identify and carry out actions needed to address impacts to our rare and endangered flora and provide for their long-term conservation and stewardship. In addition to supporting the recovery of listed plant species, proactive conservation actions will help reduce population declines, habitat loss, and the need for federal listing under the Endangered Species Act.

The Division developed the Strategy in coordination with the Rare Plant Conservation Partnership (NMRPCP), which includes state, federal, and tribal agencies, non-governmental organizations, and interested citizens. The Strategy aims to achieve results through a collaborative approach that is based on the best available science, close coordination, data sharing, and taking strategic action.

The Strategy is focused on 235 rare and endangered plant species in New Mexico, including 109 species that only occur in New Mexico and nowhere else in the world. The list includes 13 federally listed species, 37 plant species listed Endangered in the State of New Mexico, 36 species listed as sensitive with the BLM, and 64 species listed sensitive with the Forest Service.

Most of New Mexico's rare and endangered plants are considered rare because they are restricted to very specific, narrowly distributed habitats. Some species have such small distributions that they are highly vulnerable to stochastic extinction events which may be caused by flooding, fires, invasive species, predation, etc. Primary human caused threats include habitat destruction and alteration, climate change and related ecological changes, resource extraction, and overgrazing.

Climate change is not only expected to affect species directly, but also to have significant impacts on their habitats and the ecological systems on which they depend, which is likely to exacerbate the effects of other human activities on plants. Impacts associated with climate change include prolonged droughts, increased fire frequency and severity, increases in invasive species (plants and animals), changes in associated plant communities, and severe habitat alteration caused by megafires. This is especially

significant for small populations with restricted ranges, including many of the species endemic to New Mexico

Habitat degradation, fragmentation, and loss of habitat are major reasons why some plant species and their habitats are threatened in New Mexico. The primary contributors to habitat degradation for rare and endangered plants are resource extraction (e.g., energy development, mining, water development), recreation, livestock grazing, wildfire, climate change, invasive species, urban development, and road construction and maintenance.

One of the central issues impeding meaningful and proactive conservation is a dearth of knowledge and documentation regarding the abundance, distribution, and status of New Mexico's rare plant species. This baseline information in combination with a lack of knowledge on basic biological requirements of rare taxa is largely unknown for the majority of rare plants in New Mexico (basic habitat requirements, pollinators, seed dispersal, seed bank viability, etc.). Without baseline documentation land managers and regulatory agencies are not able to make meaningful decisions to protect and conserve New Mexico's most rare and endangered plant species.

These challenges are compounded by inadequate legal protection and enforcement, and inadequate funding for botanical staff within land management agencies, which may result in poor management decisions, and lack of funding for conservation actions, surveys and monitoring, as well as research.

The overall goal of the New Mexico Rare Plant Conservation Strategy is to protect and conserve New Mexico's rare and endangered plant species and their habitats through collaborative partnerships between stakeholders and interested parties to aid and improve the conservation and management of rare plant species and to avoid federal listing.

Specific goals include:

1. Inventory, monitor, and research Strategy Species to inform management and regulatory decisions
2. Protect, manage, and restore Strategy Species and their habitats
3. Improve data management, accuracy, storage, & dissemination
4. Develop ex-situ conservation and recovery strategies and implement where appropriate
5. Improve laws, regulations, and policies
6. Increase collaboration, education, and outreach
7. Improve funding, infrastructure, and rare plant programs

The Strategy serves as a reference for priority actions needed to maintain and improve the status of rare plants in New Mexico and to strategically guide future plant conservation actions. In addition, coordinated outreach and education efforts will increase public awareness on the status of rare and endangered plants and provide opportunities to help conserve New Mexico's rare plant species. As a result, much needed programs and resources will be directed to support rare plant conservation efforts throughout the state. The Strategy is a call to action, highlighting conservation steps that federal, state, and local agencies, private groups, academic institutions, and others can take to assist with meeting the seven goals. The Strategy will be an integral part of the Division's Forest Action Plan and will be maintained by the partners to strategically guide future plant conservation efforts in the state.