

19th Annual Colorado Rare Plant Symposium

By Jessica Smith and the Botany/Vegetation Ecology Team at the Colorado Natural Heritage Program (CNHP)

This year's symposium was held on the Friday before the CoNPS annual meeting, September 16, 2022, at the Longmont Museum in Longmont, CO. Over 90 people attended the meeting; for many this was their first time at the Rare Plant Symposium. Jessica Smith, Botany/Vegetation Ecology Team Lead at CNHP, kicked off the meeting with a welcome and then a short tribute to CNHP Senior Botanist, Jill Handwerk, who is retiring at the end of the year. Jill has been instrumental in the planning and organization all the Rare Plant Symposia from 2004-2022.

Presentations commenced with a photo review of globally rare plants of northeastern Colorado by Susan Panjabi, Botanist with CNHP. Summary information was presented on each taxon listed in the table below, including a distribution map, photos of the plant and habitat, last observation date, population size estimates, management concerns, and land ownership. Meeting attendees participated in a discussion of each taxon, adding information on recent observations. In the table below, the G rank refers to the global rarity of the species, and S refers to state rarity, with a 1 indicating critically imperiled, 2 indicating imperiled and 3 indicating vulnerable. For more information on ranks, see [NatureServe's website](#). Herbarium specimens for each taxon, provided on loan by the University of Colorado Herbarium, were also available for reference.

Scientific Name	Common Name	G-rank	S-rank
<i>Aletes humilis</i>	Larimer aletes	G2G3	S2S3
<i>Aquilegia saximontana</i>	Rocky Mountain columbine	G3	S2
<i>Astragalus sparsiflorus</i>	Front Range milkvetch	G2G3	S2S3
<i>Carex oreocharis</i>	Grassy slope sedge	G3	S3
<i>Draba globosa</i>	Rockcress draba	G3	S1
<i>Eriogonum exilifolium</i>	Dropleaf wild buckwheat	G3	S3
<i>Lomatium nuttallii</i>	Nuttall's desert-parsley	G3	S2
<i>Nuttallia speciosa</i>	Jeweled blazingstar	G3	S3
<i>Mimulus gemmiparus</i>	Rocky Mountain monkeyflower	G1	S1
<i>Oenothera coloradensis</i> (<i>Gaura neomexicana</i> ssp. <i>coloradensis</i>)	Colorado butterfly plant	G3T2	S1S2
<i>Oonopsis wardii</i>	Ward's golden-weed	G3	S1
<i>Parthenium alpinum</i>	Alpine fever-few	G3	S2
<i>Phacelia denticulata</i>	Rocky Mountain phacelia	G3	S3
<i>Phacelia formosula</i>	North Park phacelia	G2	S2

<i>Potentilla ambigens</i>	Southern Rocky Mountain cinquefoil	G3	S2
<i>Potentilla rupincola</i> (<i>Potentilla effusa</i> var. <i>rupincola</i>)	Rocky Mountain cinquefoil	G5?T2	S2
<i>Sisyrinchium pallidum</i>	Pale blue-eyed grass	G3	S3
<i>Spiranthes diluvialis</i>	Ute ladies'-tresses	G2G3	S2

Additional data and photos are needed for all these taxa, and we welcome efforts from the Colorado Native Plant Society and others to help expand our knowledge of these plants through targeted field surveys and observations. See the CNHP website for ways to [submit data](#) or contact Susan at susan.panjabi@colostate.edu to contribute information on these species.

Presentations from rare plant conservation partners followed. Carol Dawson, Bureau of Land Management (BLM) State Botanist, provided an update on the BLM's new Threatened and Endangered Species Program strategic plan, the Seeds of Success Program, and new initiatives on pollinator conservation. Raquel Wertsbaugh, Colorado Parks & Wildlife (CPW)/Colorado Natural Areas Program (CNAP) Coordinator, discussed CPW's new conservation dashboard which tracks conservation actions for Colorado's Species and Plants of Greatest Conservation Need, Recovering America's Wildlife Act and conservation actions being led by CNAP for several globally rare plants. Sami Naibauer, University of Northern Colorado Researcher, presented the results of genomic investigations of *Draba weberi* and *Corispermum navicula*, two taxa which their research has shown not to be distinct species. Slides from these and all meeting presentations are available on the [CNHP website](#).

Following lunch, Becky Hufft, Botanist with the Denver Botanic Gardens, presented an update on the ongoing rare plant conservation actions of the Gardens, including monitoring for several globally rare plants, ex situ and exciting specimen collections, rare alpine plant species climate research, and restoration research. Two publications from the Gardens botanists, the 2nd edition of the Colorado Flora by Jennifer Ackerfield and a revision of Harrington and Durell's 1944 "Keys to some Colorado grasses in vegetative condition" by Janet Wingate, are forthcoming. Ross McCauley, Professor at Fort Lewis College, provided an update on the conservation genetics of rare *Astragalus* in Southwestern Colorado, discussing the genetic diversity of populations across the species range for *A. schmolliae*, *A. deterior*, and *A. tortipes*. This was followed by a presentation about a project to investigate the speciation of a hybrid between *Physaria vitulifera* and *Physaria bellii*, which has been made possible through a collaboration of several organizations. This presentation was made by Pam Smith, CNHP Botanist, Tanner Marshall, Jefferson County Open Space Botanist, and Mit McGlaughlin, University of Northern Colorado Professor. Emily Griffoul, Conservation Scientist with the Betty Ford Alpine Gardens, capped the session with an update on the North American Botanic Garden Strategy for Alpine Plant Conservation.

Colorado Natural Heritage Program botanists then showcased several tools and resources available to facilitate rare plant conservation. Jessica Smith presented updates on a species distribution modeling project which has resulted in a model for each of Colorado's Plants of Greatest Conservation Need and the inclusion of the models in CNHP's Colorado Conservation Data Explorer Tool (CODEX). She also introduced the idea of holding a collaborative workshop of rare plant monitoring practitioners to produce a series of template monitoring protocols based on ecological niche. Georgia Doyle updated the group on changes to the rare plant tracking list between 2020 and 2022, the revised description of *Descurainia kenheillii*, and how to contribute data to CNHP with iNaturalist. Susan Panjabi walked the group through the new and improved format of the online Rare Plant Guide and discussed available new and updated profiles. She also described the Siegele Conservation Science Internship program, hosted at CNHP, which is accepting partner organization mentors.

The final presentation of the day was on the natural history and distribution of *Telesonix jamesii* by Andrew Gaier, a graduate student at the University of Colorado Boulder. Andrew presented his findings on the pollination ecology of the species and species distribution models informed by various sources of distribution data.