



Rare Plant Conservation Initiative: *Saving Colorado's Wildflowers*

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Overview

- Colorado Natural Heritage Program
- Colorado Rare Plant Conservation Initiative
- Colorado rare plants
- Rare Plant Strategy and Implementation Plan
- Future goals for Colorado and beyond

CNHP specializes in tracking the location and status of rare and imperiled...



Plants



Plant Communities



Animals

CNHP is part of the Fish, Wildlife, and Conservation Biology Department in the Warner College of Natural Resources at CSU



A staff of 24 botanists, zoologists, ecologists, conservation planners, and information managers

Mission:

To preserve the natural diversity of life by contributing the essential scientific foundation that leads to lasting conservation of Colorado's biological wealth.



We are part of the NatureServe Network



Colorado Rare Plant Conservation Initiative (RPCI) partners



Goal

To conserve Colorado's most imperiled native plants & their habitats

through collaborative partnerships for the preservation of our natural heritage & the benefit of future generations.



North Park phacelia

Colorado's Imperiled Plants



The Numbers

- 2596 native plants
- 500 tracked by CNHP
- 122 globally imperiled plants

16 Colorado plants are federally listed



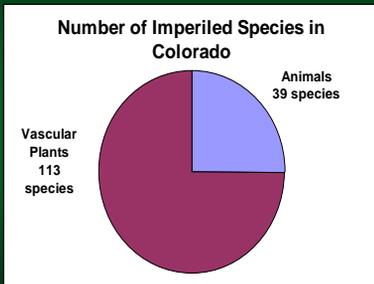
Clay-loving wild buckwheat

Penland penstemon

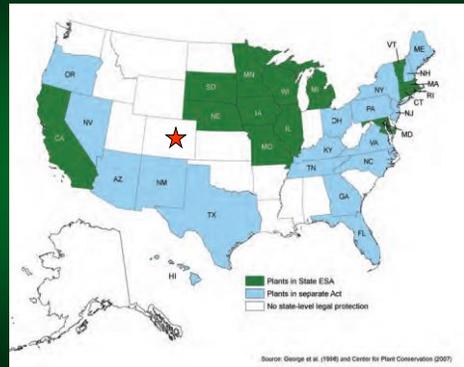
Mesa Verde cactus

5 are candidates for listing

The Forgotten Majority: 75% of CO Imperiled Species are Plants



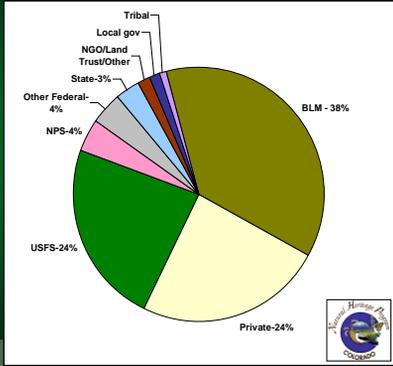
No Plant State Statute in CO



NatureServe (2008)

Most imperiled plants in CO occur on BLM, U.S. Forest Service & Private lands

- 70% occur on federal lands
- Area occupied is only about 62,000 acres (<.001% of total land area in CO)



Impacts to Colorado's imperiled plants



Focused on globally imperiled plant taxa (ranked G1-G2 by the Colorado Natural Heritage Program)

COLORADO RARE PLANT CONSERVATION STRATEGY



BY THE RARE PLANT CONSERVATION INITIATIVE | MAY 2009

Colorado Rare Plant Conservation Strategy Objectives



1. Secure habitat protection
2. Minimize impacts of threats
3. Improve scientific understanding
4. Develop state program and policies
5. Facilitate awareness/stewardship
6. Adopt measures for *ex situ* conservation



Structure for Strategy Implementation

- Steering Committee
- Policy Committee
- Conservation Committee
- Information Committee




- All committees work on Education and Outreach
- All committees have written team charters and work plans

Policy committee

Goal: Develop and implement a state program and policies to enhance the conservation of Colorado's most imperiled plants.



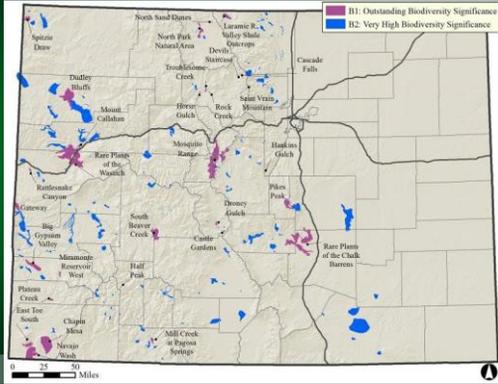
- Establish a state plant list
- Acknowledge CO's interest in protecting plants
- Provide funding mechanisms




Include plants CDOW State Wildlife Action Plan



230 Important Plant Areas



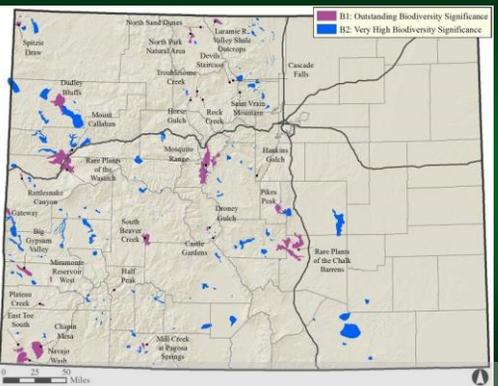
Conservation Committee



Goals:

- 1) Secure on-the-ground, site specific habitat protection and/or management for all of Colorado's imperiled plants; and
- 2) Minimize the adverse impacts of specific land uses.

230 Important Plant Areas



Colorado Important Plant Areas

- Based on the highest quality occurrences of most imperiled plant species.
- Based on an estimate of the primary area necessary to support the long-term survival of plant species of concern, while considering other significant co-occurring natural resources at specific locations.

Consider local landscape patterns



Consider processes, like pollination



Consider other significant elements



Pikes Peak (B1) Irreplaceable



Pikes Peak spring Parsley (G1S1)



James' Telesonix (G2S2)



Rocky Mountain Columbine (G3S3)

Priority Action Areas 2008-2010

Dudley Bluffs bladderpod

N. Park phacelia

Penland penstemon

Pagosa skyrocket

Round-leaf four o'clock

Criteria for prioritizing plant projects within Priority Action Areas

- Large parcels with substantial overlap with rare plant habitat
- Significant contribution to species conservation
- Close proximity to areas with existing/potential protection
- Willing landowners, willing stewards
- Multiple imperiled species
- Funding source available (e.g., USFWS)



Conservation Action Plans and workshops

Piceance Basin

Middle Park

Arkansas Valley

Secure habitat protection for priority species

Working with local land trusts and partners

Best management practices to reduce energy development impacts



Debeque phacelia



200 m buffer to reduce dust, weeds, disturbance to pollinators

Climate change research

- NatureServe vulnerability index
- State-level habitat vulnerability assessments
- Phenology research
- Adaptation strategies



Adopt measures for *ex-situ* conservation of CO's imperiled plants

- Collect seeds & other plant materials
- Store seeds in seed bank
- Cultivate & grow-out of collections for display & reference



Information committee



Goal: improve scientific understanding of the distribution, natural history, and status of Colorado's most imperiled plants through inventory, research, and monitoring.

- Surveys
- Demographic monitoring
- Rare Plant Symposia
- Interactive web based database for sharing information





**Rare Plant Monitoring (RPM)
Stewards**

*"Putting the petal to the metal for rare plant
monitoring in Colorado"*





Facilitate stewardship of CO's imperiled plants through education & outreach



- Expand RPCI partnership
- Develop outreach materials
- Develop native plant gardens & promote local pride
- Incentives for landowners



Award for Outstanding Contributions to Plant Conservation in Colorado

Carla DeYoung
Bureau of Land Management

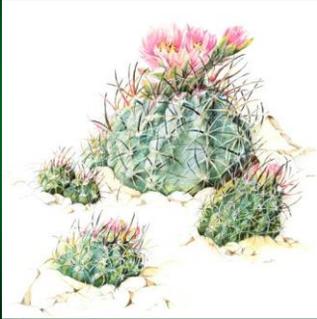
by the Colorado Rare Plant Conservation Initiative
September 12, 2009



Parachute penstemon
(*Penstemon debilis*)
by Suzanne Wuerthele



RARE Imperiled Plants of Colorado 2009-2010 Traveling Art Exhibit



Rocky Mountain
Society of
Botanical Artists

USFWS 2012 Recovery Champion Award



Colorado Rare Plant
Conservation Initiative

Saving Colorado Wildflowers!

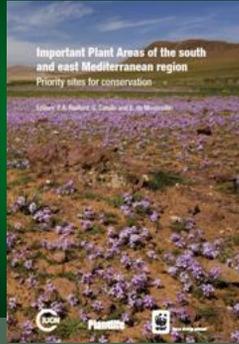
- Serves as a model for other states, regions, including other parts of the world
- Strategy has become a model for collaborative plant conservation, and this approach is now being implemented and expanded to other states and internationally

Plantlife International

- Important Plant Areas (IPAs) have been defined as
- *"natural or semi-natural sites exhibiting exceptional botanical richness and/or supporting an outstanding assemblage of rare, threatened, and/or endemic plant species and/or vegetation of high botanic value."*
- *-Planta Europa Report on IPAs in Europe*

International Union for Conservation of Nature (IUCN)

Important Plant Areas of the south and east Mediterranean region - Priority sites for conservation, 2011 report



Future Direction



- Continue with Strategy and CAP implementation esp. to result in on the ground protection
- Develop a state plant program & funding
- Amend SWAP
- Complete CAPs for all IPAs



Thank you!



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