

CNHP Botany Updates

22nd Annual Rare Plant Symposium • Denver, CO • September 19, 2025

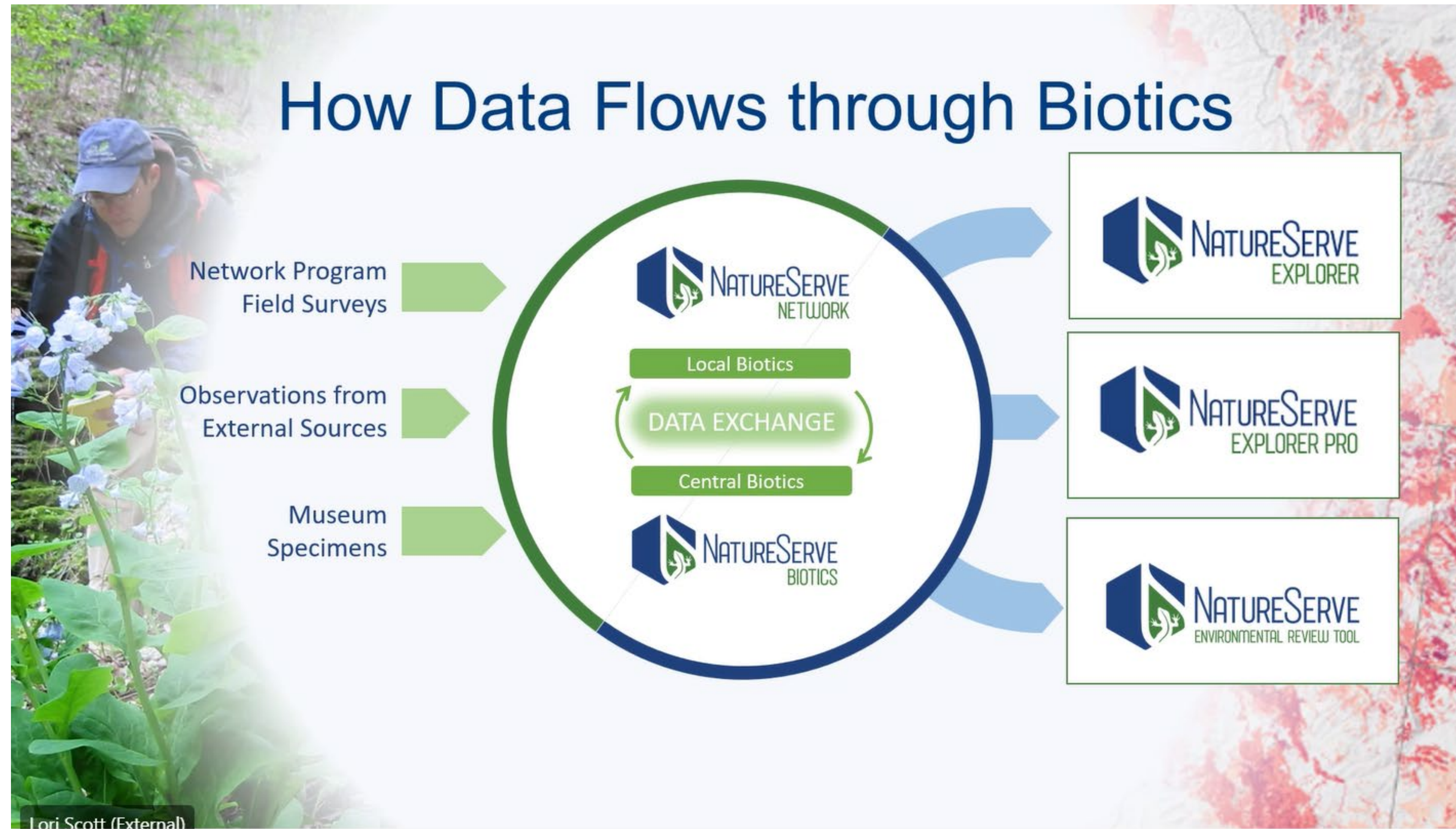
Penstemon angustifolius var. *vernalensis*, G3,
Ernie Marx, iNaturalist

Jessica Smith & Clark Hollenberg
Colorado Natural Heritage Program



**WARNER COLLEGE OF
NATURAL RESOURCES**
COLORADO STATE UNIVERSITY

Conservation Status Definitions: Global (G) and State (S)



Global/Subnational Ranks

G/S1 —Critically Imperiled
G/S2 —Imperiled
G/S3 —Vulnerable
G/S4 —Apparently Secure
G/S5 —Secure
G#T# Trinomial (T) rank
for subspecies or
varieties

Ranking Criteria

<https://www.natureserve.org/products/conservation-rank-calculator>



Conservation Rank Calculator

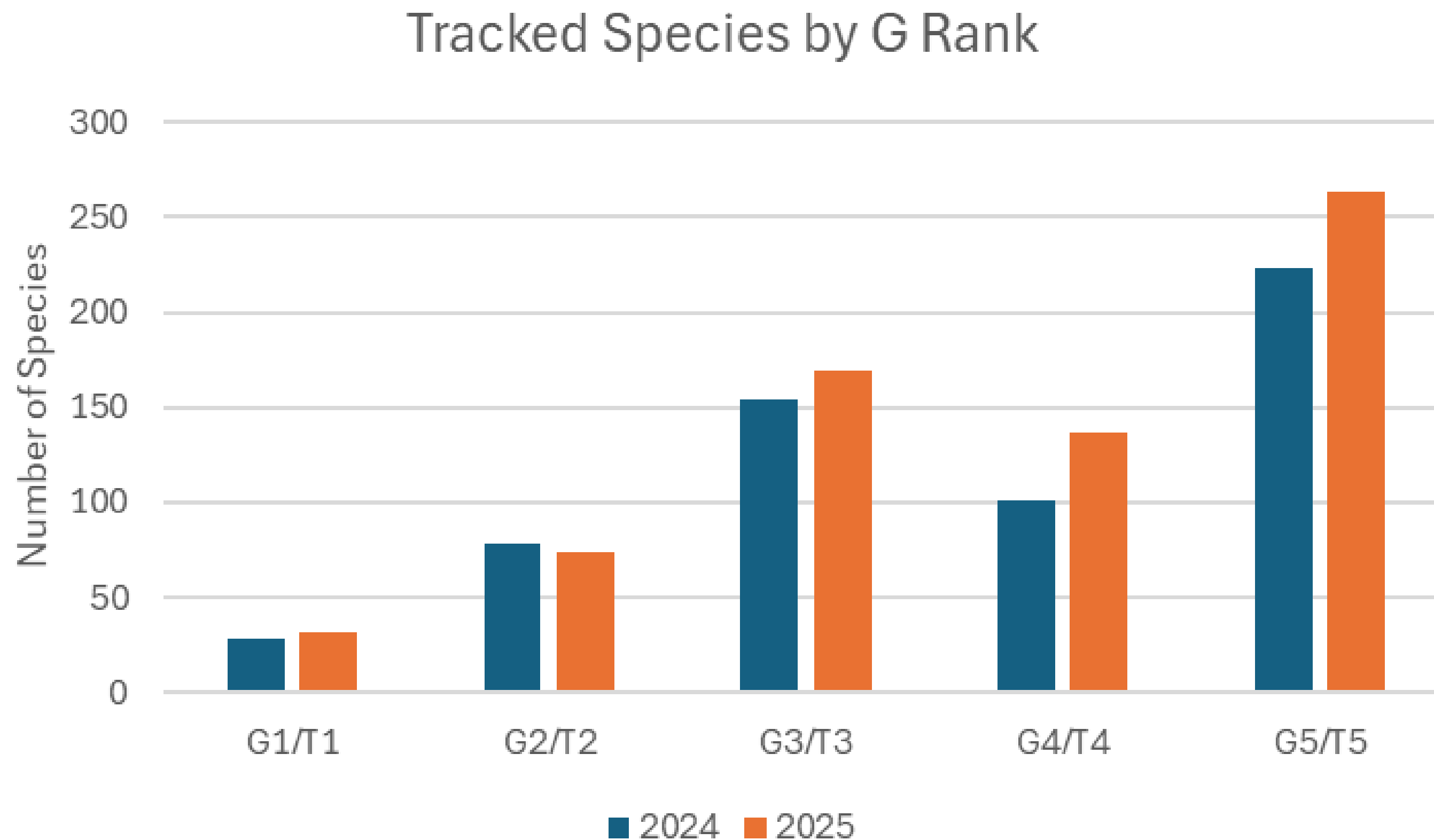
Overview

The Conservation Rank Calculator is a tool that automates the process of assigning a conservation status rank—an evaluation of the level of risk of extinction of species and elimination or collapse of ecosystems. It is used extensively by NatureServe and its member programs and collaborators that collect and evaluate data for species and ecosystems of concern using a common methodology. The

- Range Extent
- Area of Occupancy
- Number of Element Occurrences (EO)
- Viability (A-ranked or B-ranked EOs)
- Population Size
- Threats
- Trend



Vascular Plants – Notable Tracking List Additions



2024-2025 Changes

- Track:
 - G1-G3
 - G4,G5/S1,S2
- Tracking 677 species
 - Increase from 585
- Reviewed 30 G3
- Reviewed over 200 G4/G5



Vascular Plant Watch List Updates

CNHP Tracked Vascular Plant Species

[Click Here](#) to see the online document that explains the ranking criteria as found in the table below. Last updated July, 2024.

Filters:

Major Group:

Vascular Plants

Global Rank:

--All--

State Rank:

2 selected

Status:

--All--

CNHP Tracking Status:

Watchlisted Only

Wetland-related only ☐ Colorado Endemic ☐ CNHP Sensitive Element ☐

Elements with State Profile ☐

The spatial filters below are based on current and historical CNHP element occurrence and observation locations, and not known distributions documented in the literature.

Major River Basin:

--All--

River Subbasin:

--All--

County:

--All--

Elements without Spatial Information ☐

Filter Tracking List

Clear Filter

Download

- “Poorly Known” - **NEW!**
 - 134 species
 - S1 & S2
- “Relatively Secure” - Retained
 - 71 species
 - S3, S3S4
- How You Can Help:
 - iNat submissions for Poorly Known (S1 & S2)



<https://cnhp.colostate.edu/ourdata/trackinglist/>

Contribute Data - iNaturalist



« Projects

Search Projects

colorado natural heritage 1 - 5 of 5

Colorado Natural Heritage Program
Help the Colorado Natural Heritage Program document Colorado's remarkable plant and animal diversity!

Flora of Colorado
The purpose of this project is to document the flora of Colorado and provide an educational tool for novices and experts alike. This project is administered by the Colorado Natural Heritage Program at Colorado State University.

How You Can Help!

- Add the CNHP project to your user profile
- Trust this project with hidden coordinates

Other

☒ Receive updates from this project
Receive updates about this project on your dashboard and in the daily updates email.

Trust this project with hidden coordinates?
Granting access to your hidden coordinates will allow the managers of this project to see the true, unobscured location of your observations in situations where scientists or resource managers need access to exact coordinates for analysis and decision-making.

- ☐ No
- ☒ Yes, for any of my observations
This includes observations where you have set the geoprivacy to "obscured" or "private," e.g. observations from your backyard.
- ☐ Yes, but only for my observations of threatened taxa, not when I've set the geoprivacy
Many projects just need access to coordinates that are obscured because the

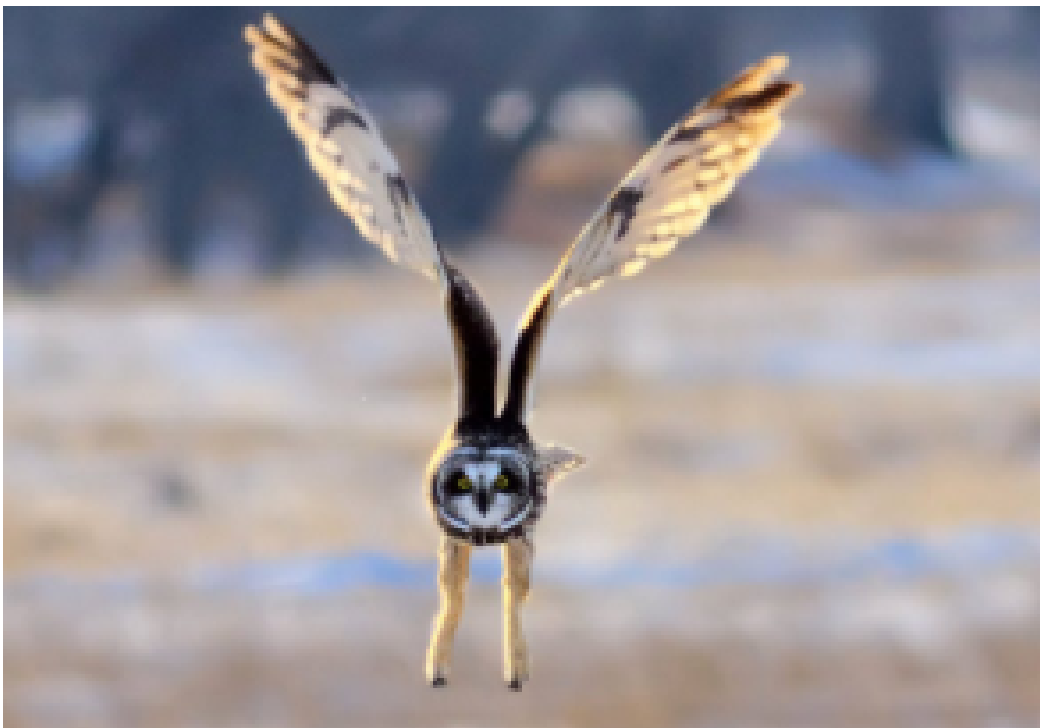
Please Be Careful!
Coordinate access is important for scientists, but can also be abused by poachers and other bad actors.



CNHP – Contribute Data

<https://cnhp.colostate.edu/ourdata/contribute-data/>

Contribute Data



If you have field data that you would like to submit to CNHP concerning imperiled species in Colorado, download the appropriate field form(s) from the table below and submit to the person listed on the form. For federally listed (Threatened/Endangered) or candidate plant species please use the "T&E Field Form". The "Online Web Form" versions are interactive web forms that will be submitted online to CNHP. "Hard Copy" versions are PDF files that can be printed and filled out by hand and then mailed to CNHP. "Electronic" versions are Word files that can be filled out digitally and then emailed to the address indicated on the form.

Form	Online Web Form	Hard Copy/Electronic Version (PDF File)	Data Dictionary
Animal Field Form	Online Web Form	Download PDF Form 30 kb	Download Data Dictionary (PDF) 52 kb
Natural Community Field Form	Online Web Form	Download PDF Form 104 kb	Download Data Dictionary (PDF) 78 kb
Plant Field Form	Online Web Form	Download PDF form 250 kb Download Word Form 462 kb	Download Data Dictionary (PDF) 335 kb

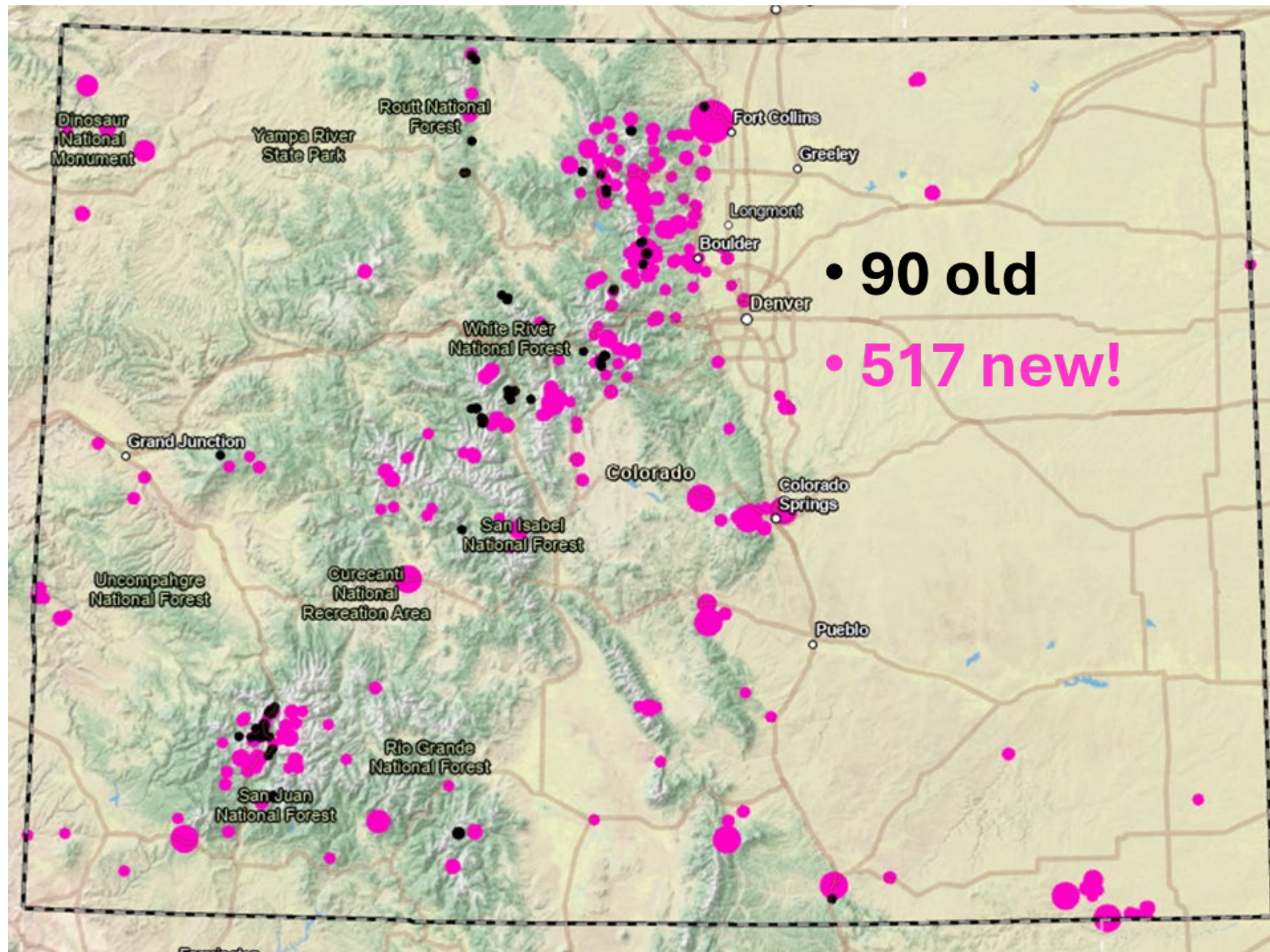


Non-vascular Plant & Fungi Tracking Updates



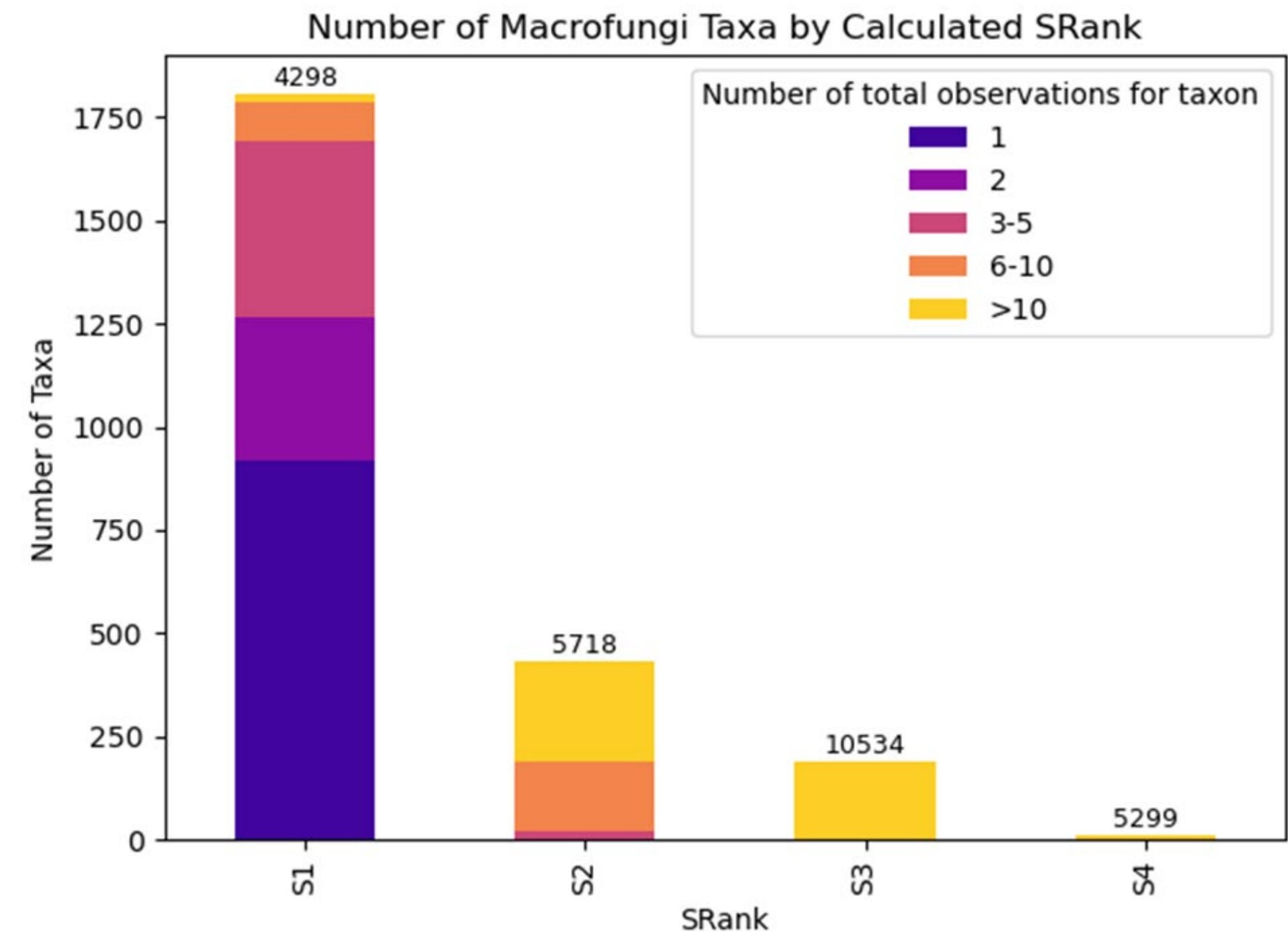
Marchantia spp.
(photo: Clark Hollenberg)

Bryophytes

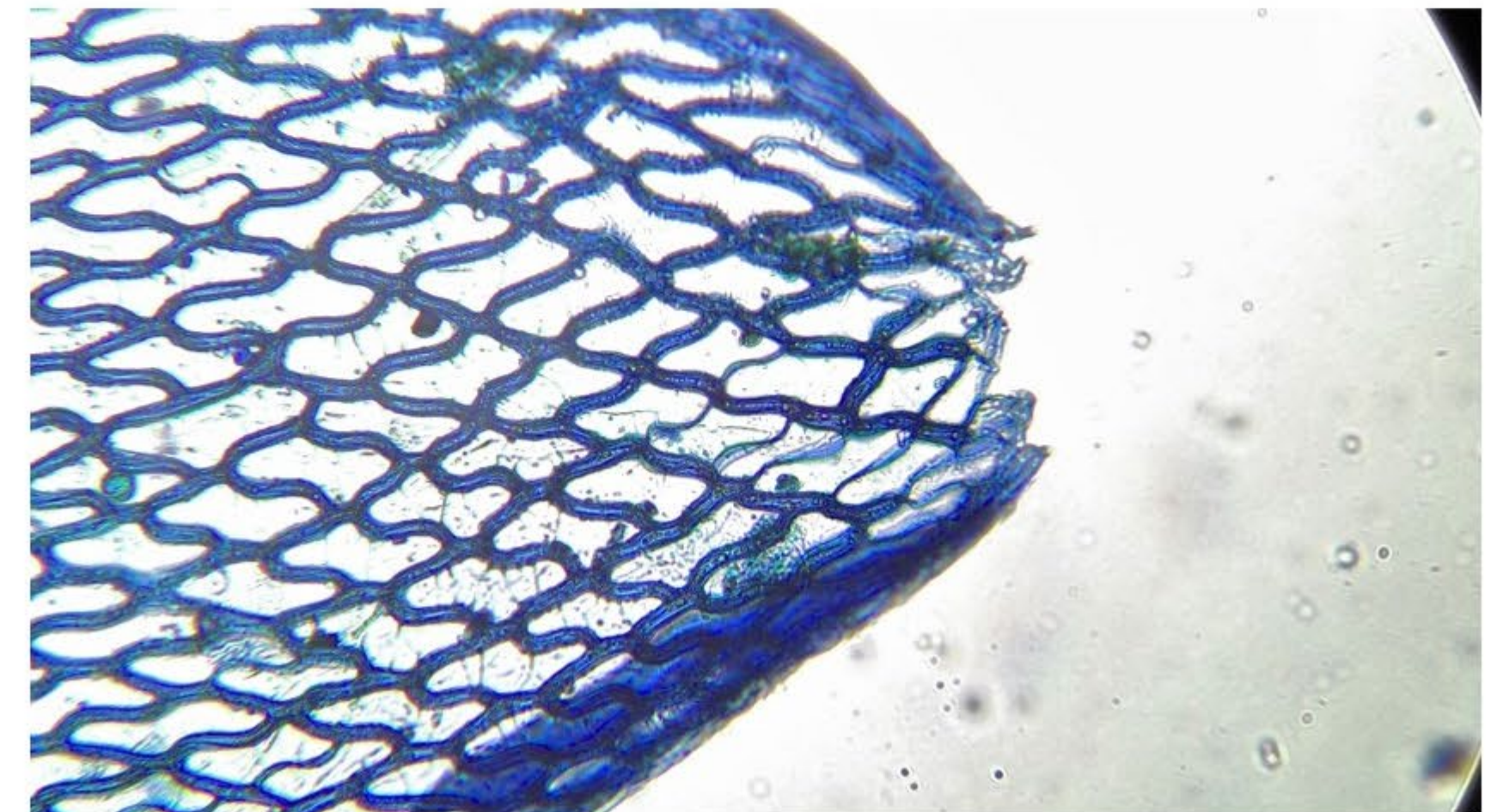


Amanita muscaria
(photo: Clark Hollenberg)

Macrofungi



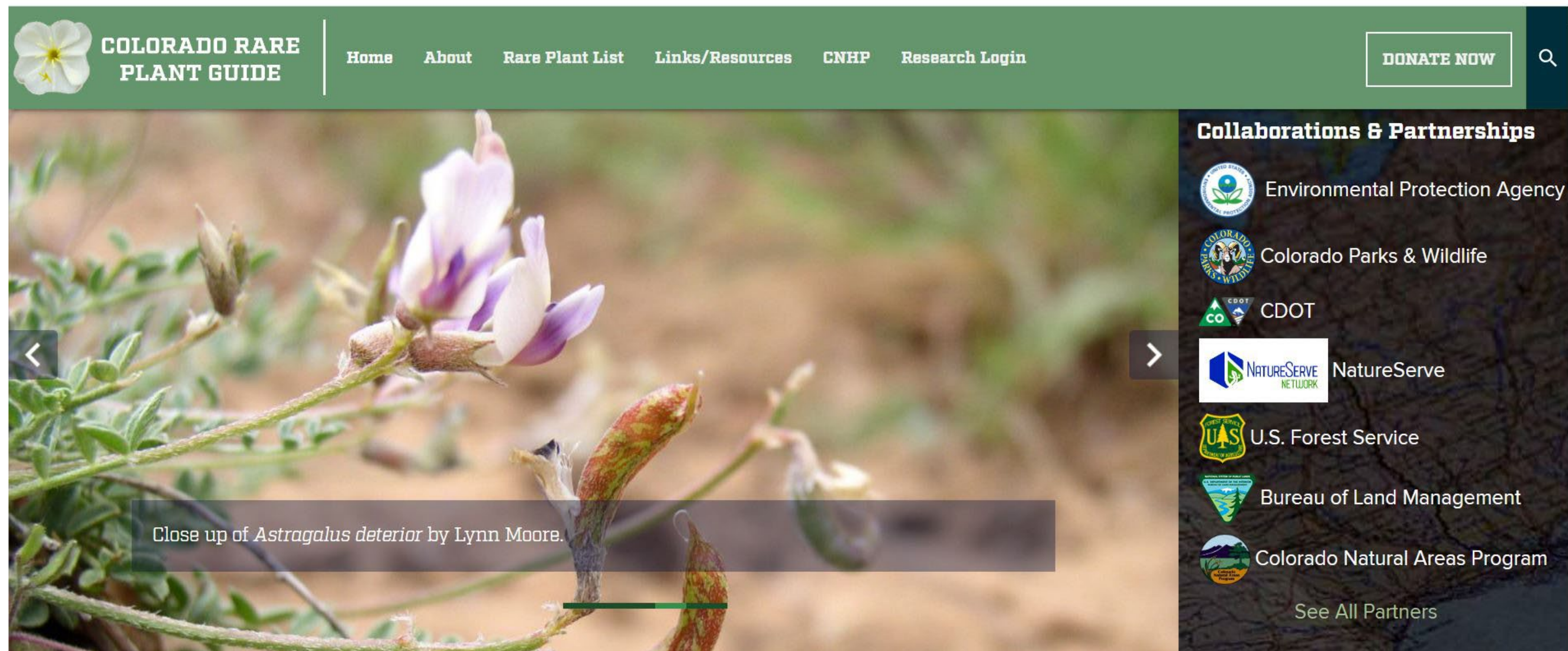
Non-vascular Plant & Fungi Tracking Updates



Assorted bryophytes: Unknown saline moss, *Conocephalum conicum*, *Sphagnum fimbriatum*, *Sphagnum* spp.
(photos: Clark Hollenberg)



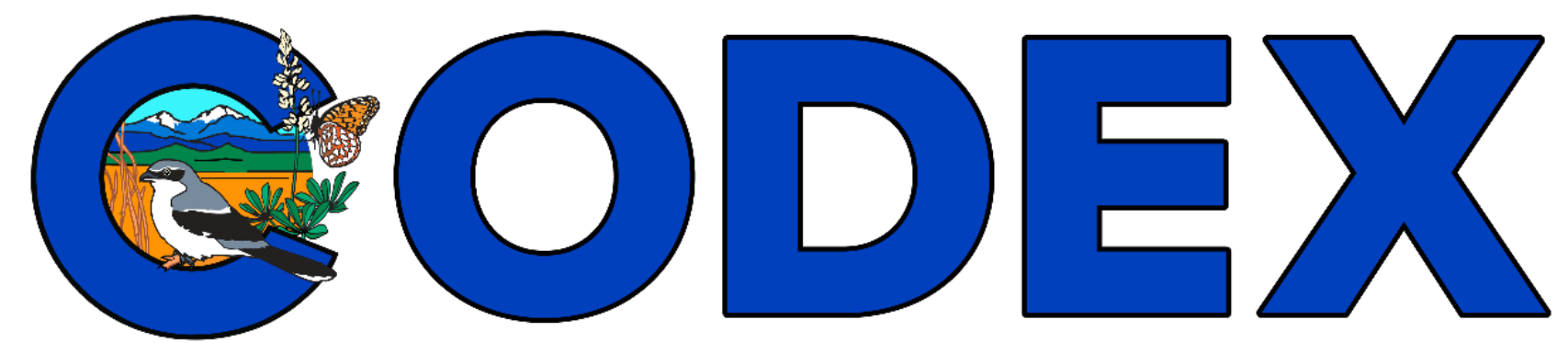
CNHP Online Rare Plant Guide



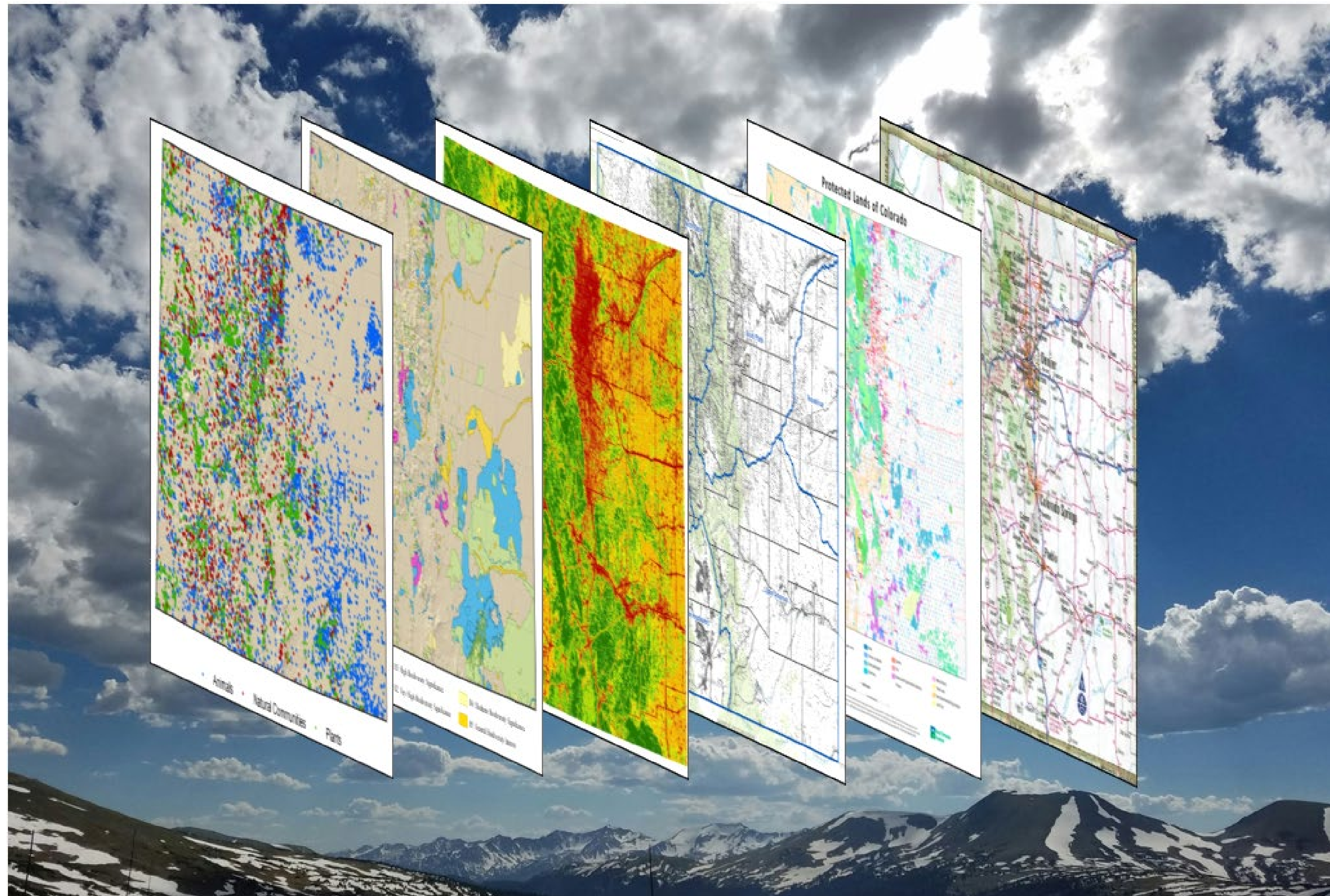
- 186 species with new format profiles
- 62 species with 1997 format profile only
- Ultimate Goal: All tracked vascular plants



<https://cnhp.colostate.edu/rareplant/>

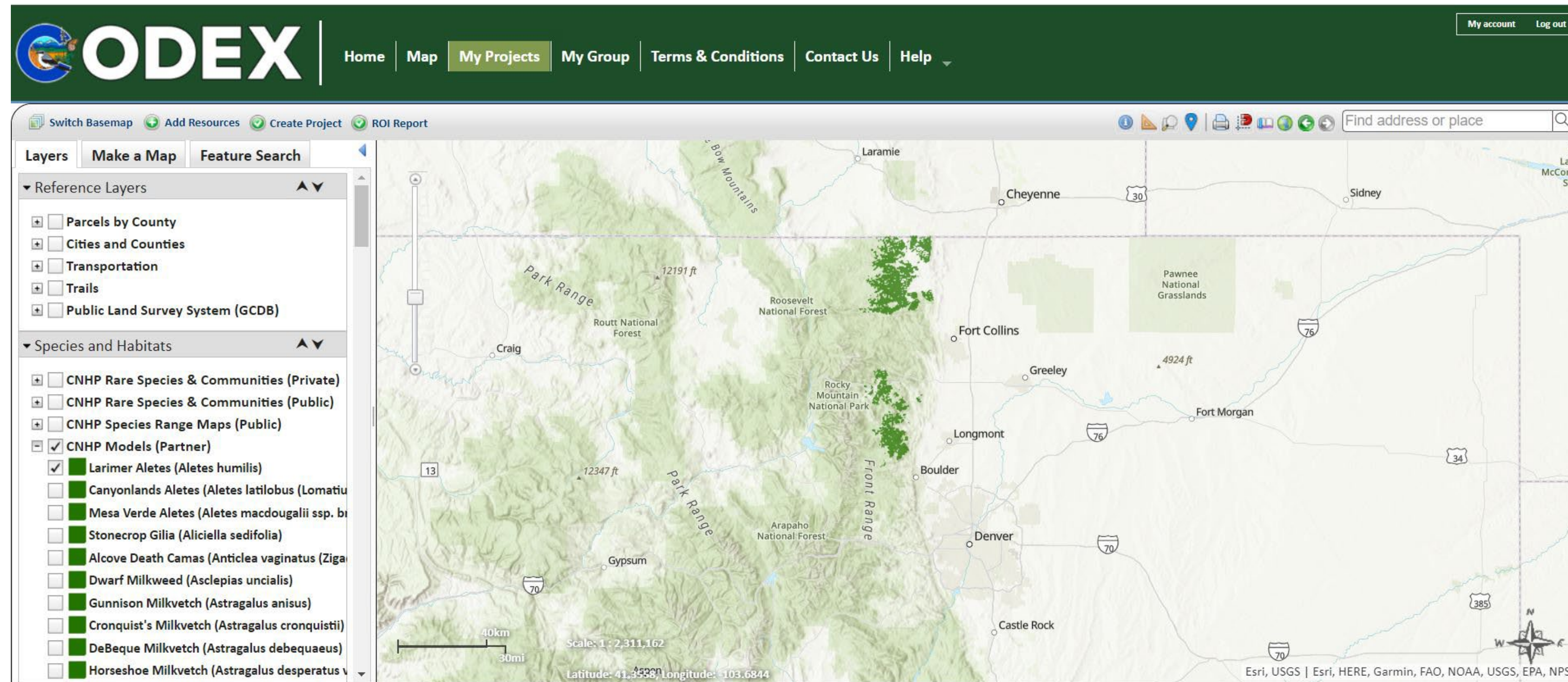


Colorado's Conservation Data Explorer

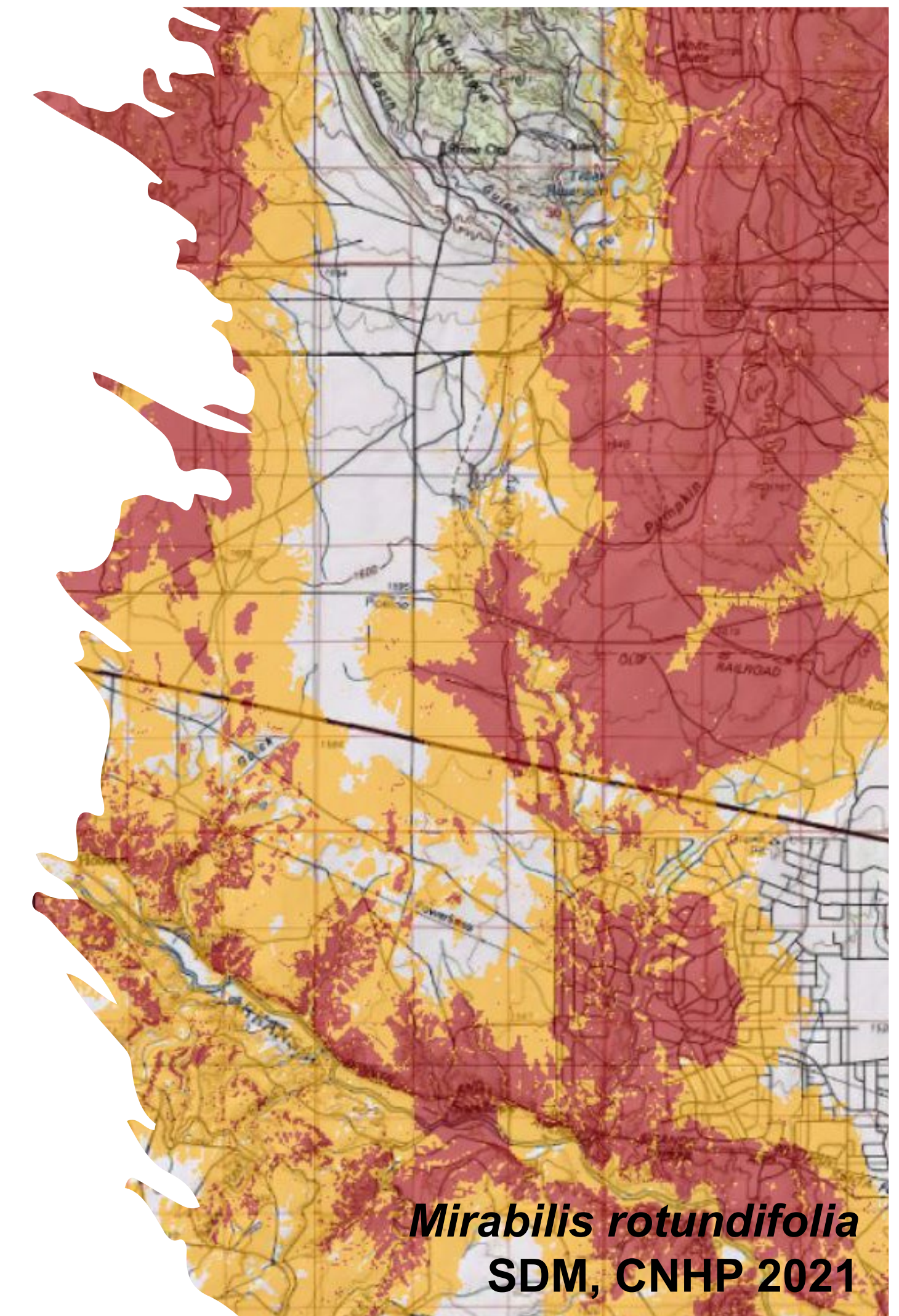


<https://codex.cnhp.colostate.edu>

Colorado Conservation Data Explorer Tool (CODEX)



- PGCN Models in CODEX
 - Viewable with signed data sharing agreement
 - Returned in Environmental Review
- Full probability models
 - Available with signed data sharing agreement



<https://codex.cnhp.colostate.edu>

Thank You!

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Lupinus argenteus ssp. *moabensis*, G3,
Loraine Yeatts, iNaturalist

