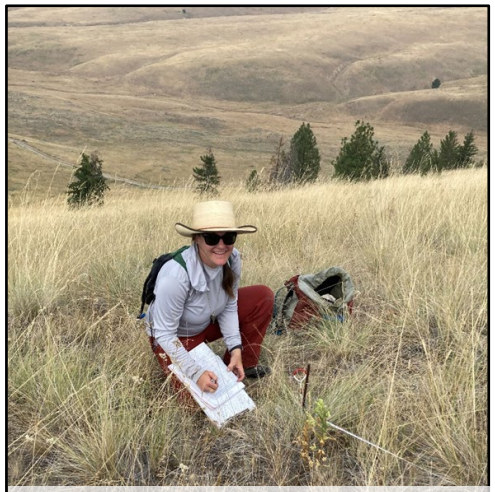


Scott Mincemoyer
Consulting Botanist



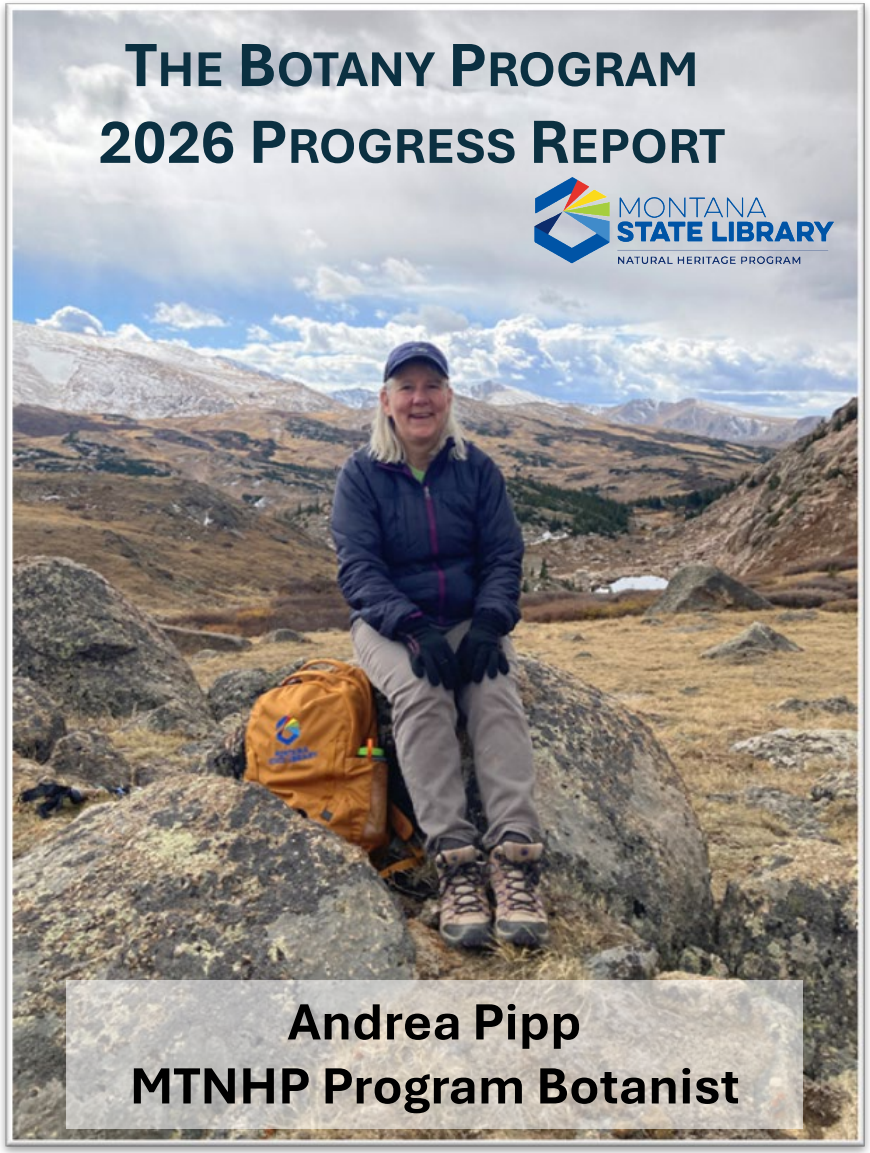
Kenda Herman
MTNHP Botany Data Assistant



Grace Hoelscher
Citizen Botany Coordinator
MT AgCorps



Connie Geiger
Volunteer



Montana's Botanical Taxa

...tracking native & exotic species, their status, & distributions



>1,659 Fungi



> 1,059 Lichens



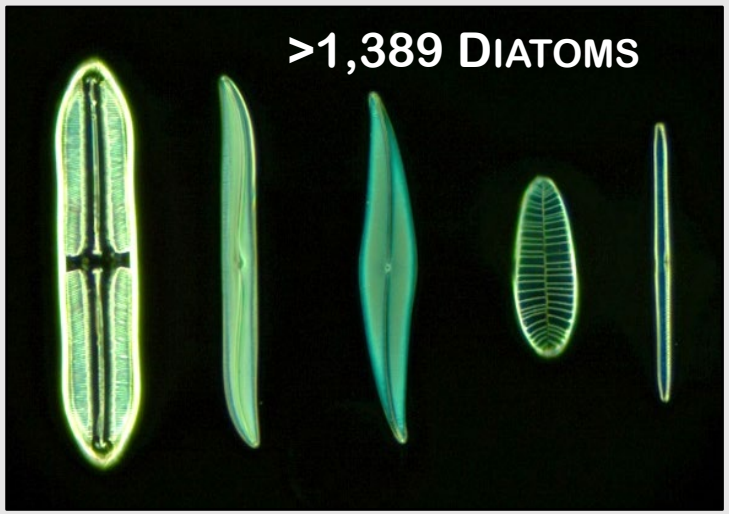
≈ 132 Liverworts



≈ 2,833 Vascular Plants



>1 Hornworts





≈184 Cyanobacteria



> 828 Algae
as traditionally classified



> 521 Mosses



Montana Field Guide - 2026 updated profiles

Native Plants

- *Musineon glaucescens* - Big Belt Wild Parsley
- *Acorus americanus* - American Sweetflag

Exotic Plants

- *Amaranthus palmeri - Palmer's Amaranth*
- *Artemisia absintium - Absinth Wormwood*
- *Artemisia vulgaris - Common Wormwood*
- *Conium maculatum - Poison Hemlock*
- *Gypsophila paniculata - Tall Baby's-breath*
- *Hyoscyamus niger - Black Henbane*
- *Sonchus arvensis - Field Sowthistle*

Biological Control Insect

- *Agonopterix alstroemeriana - Poison Hemlock Moth*

Funded By
US Forest Service, Region 1
& MTNHP

Montana Field Guide - 2026 updated profiles

Home - Return Home
Kingdom - Protists - *Protoctista*
Division - Ochrophytes - *Ochrophyta*
Class - (Bacillariophyceae) - *Bacillariophyceae*
Order - (Naviculales) - *Naviculales*
Family - (Stauroneidaceae) - *Stauroneidaceae*
Species - A Diatom - ***Stauroneis subhyperborea***

A Diatom - *Stauroneis subhyperborea*

Other Names: *Stauroneis sacajaweae*

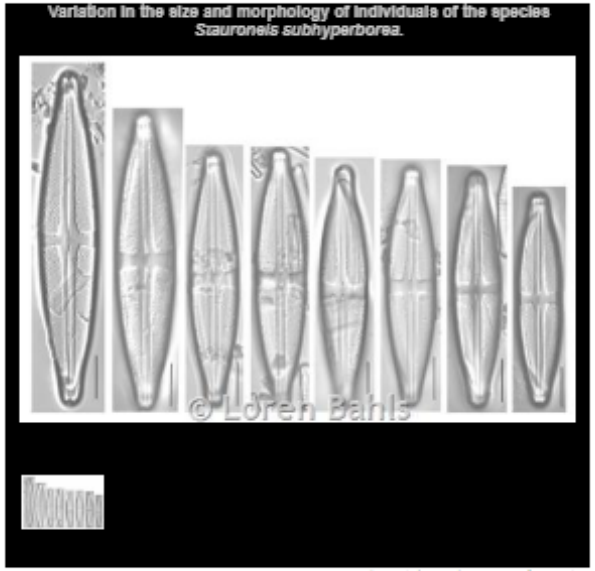


Image Copyright and Usage Information

Species of Concern
Native Species

Global Rank: GNR
State Rank: S1S3
(see State Rank Reason below)

Agency Status
USFWS:
USFS:
BLM:

iNaturalist Submit MT Observations
Map Viewer Montana Observations
NatureServe Species Report

State Rank Reason (see State Rank above)
Stauroneis subhyperborea is considered to be a rare to uncommon cold-water stenotherm th
by climate change and regional warming (Bahls 2018).

General Description

Morphological Category – Symmetric biraphid

Valves lanceolate with subrostrate apices. A pseudoseptum occupies both apices. **Axial Are**
three times the width of the raphe. **Central Area** has a stauros shaped like a bow tie. **Raph**
becoming thread-like near the proximal and distal ends. Proximal raphe ends bent weakly to
tipped with inflated pores. Distal raphe ends curved to one side. **Striae** radiate throughout. **A**
16-18 in 10 µm.

Length: 56-86 µm
Width: 12-16 µm
Striae in 10 µm: 22-26.

Diagnostic Characteristics

Distinguished from ***Stauroneis superhyperborea*** by its smaller valves and narrower apices
Distinguished from ***Stauroneis hyperborea*** by its wider apices and higher striae and areolae density.
Distinguished from ***Stauroneis clarkii*** by its narrower apices and wider axial area.

Range Comments

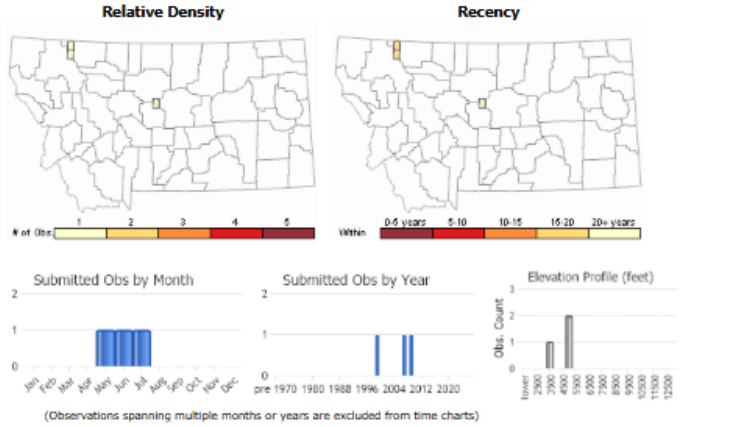
Type Locality
Zackenberg area, East Greenland

Global Distribution
Recorded from a seep along the Going-to-the-sun Road and from Red Rock Lake in Glacier National Park; also from a flowing spring at the base of Square Butte near Geraldine, Montana. Previously, this species was known only from the type locality in Greenland.

Number of Observations in Montana Diatom Collection Database (Bahls 1968-2019): 3
Montana: 3

Observations in Montana Natural Heritage Program Database

Number of Observations: 3
(Click on the following maps and charts to see full sized version)
Data Use Terms and Conditions
Map Help and Descriptions



(Observations spanning multiple months or years are excluded from time charts)

Habitat

Seeps and springs in the mountains (Bahls 2021).

Ecology

Cold, circumneutral waters with low nutrients and conductivity (Bahls 2021).

Reproductive Characteristics

Diatoms typically reproduce by cell division (mitosis) and occasionally by meiosis—sexual reproduction in which female and male gametes combine to form a specialized zygote called an auxospore. Repeated divisions result in cells of a population becoming progressively smaller and smaller. When cells reach a critically small size, sexual reproduction is initiated, resulting in an auxospore and initial cells that are the largest attainable for the species, after which cell division and size reduction resume (Amato 2010).

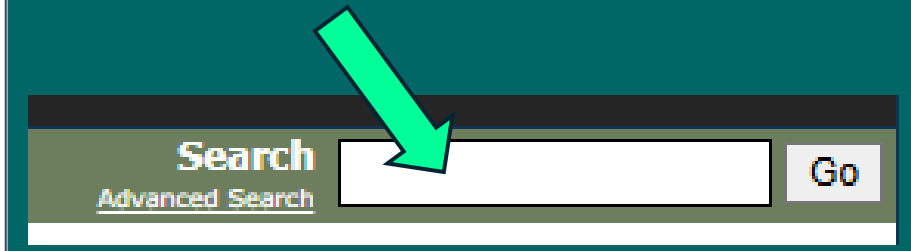
Threats or Limiting Factors

As a rare, cold-water stenothermal diatom in Montana and the contiguous United States, Bahls (2018) rated *Stauroneis subhyperborea* at moderate risk of extirpation due to climate change and regional warming.

DIATOMS

- MT Field Guide of 1,417 taxa
- Created 42 profiles
- Ranked 5 species
- Designated SOC to 1 species
- Expertise from Loren Bahls

FIND DIATOMS!
Type “Diatom” into Search



Montana Field Guide

adding, replacing, & captioning photographs:

> 590 botanical species, 2023-2026

> 40 insect species, 2026

Connie Geiger, volunteer

Two Spotted Melyrid - *Collops bipunctatus*



Band-winged Meadowhawk - *Sympetrum semicinctum*



Orange Agoseris - *Agoseris aurantiaca* var. *aurantiaca*



Sitka Columbine - *Aquilegia formosa*

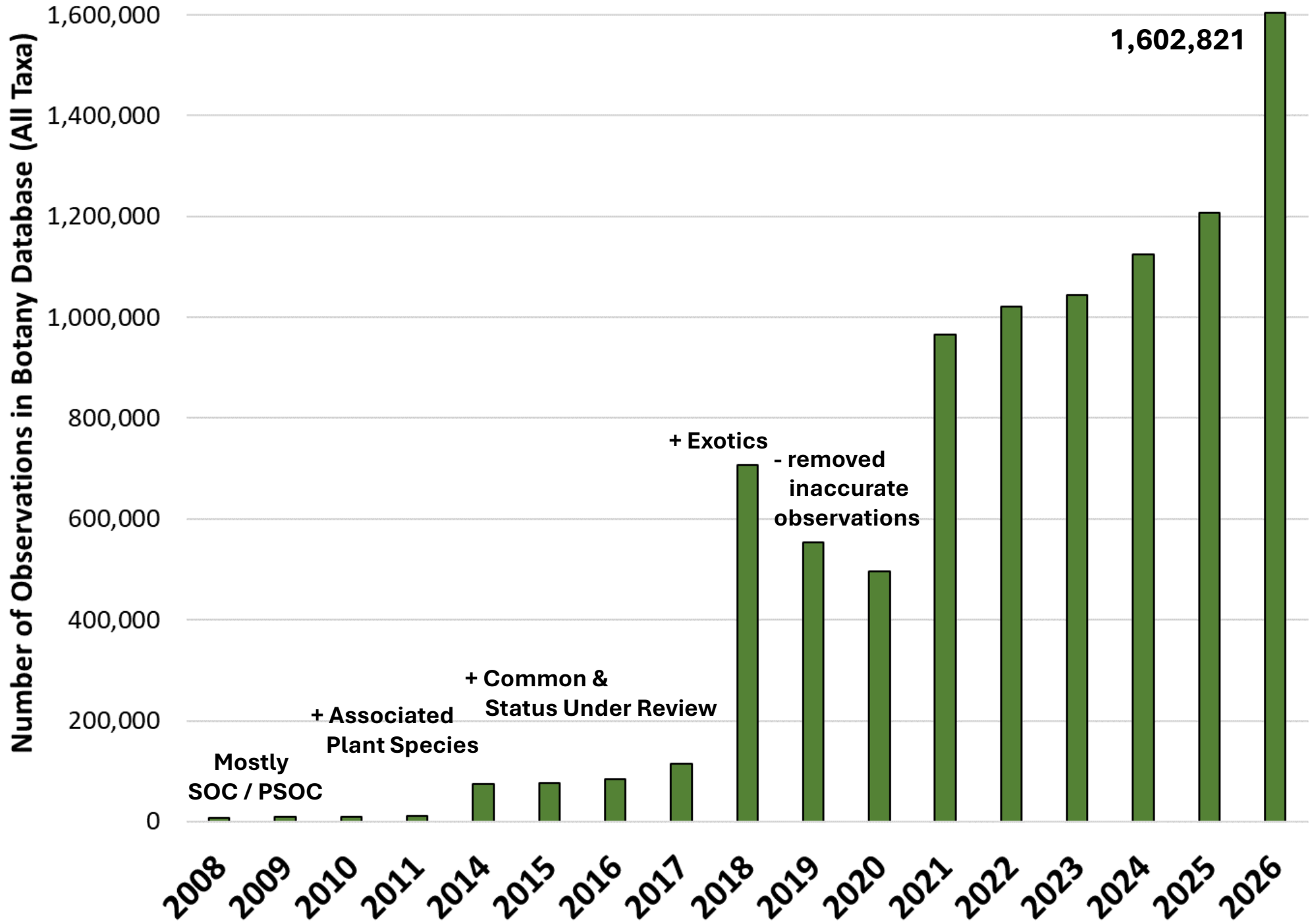


Maidenhair Spleenwort - *Asplenium trichomanes*



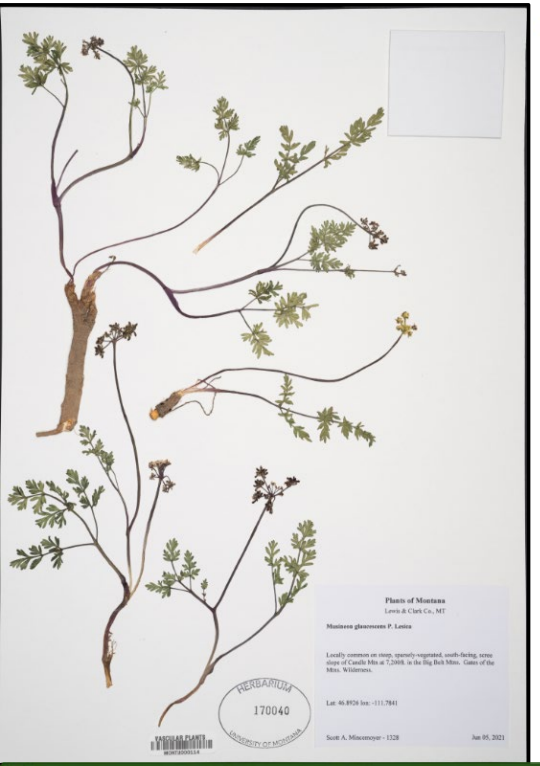
Number of Botanical Observations

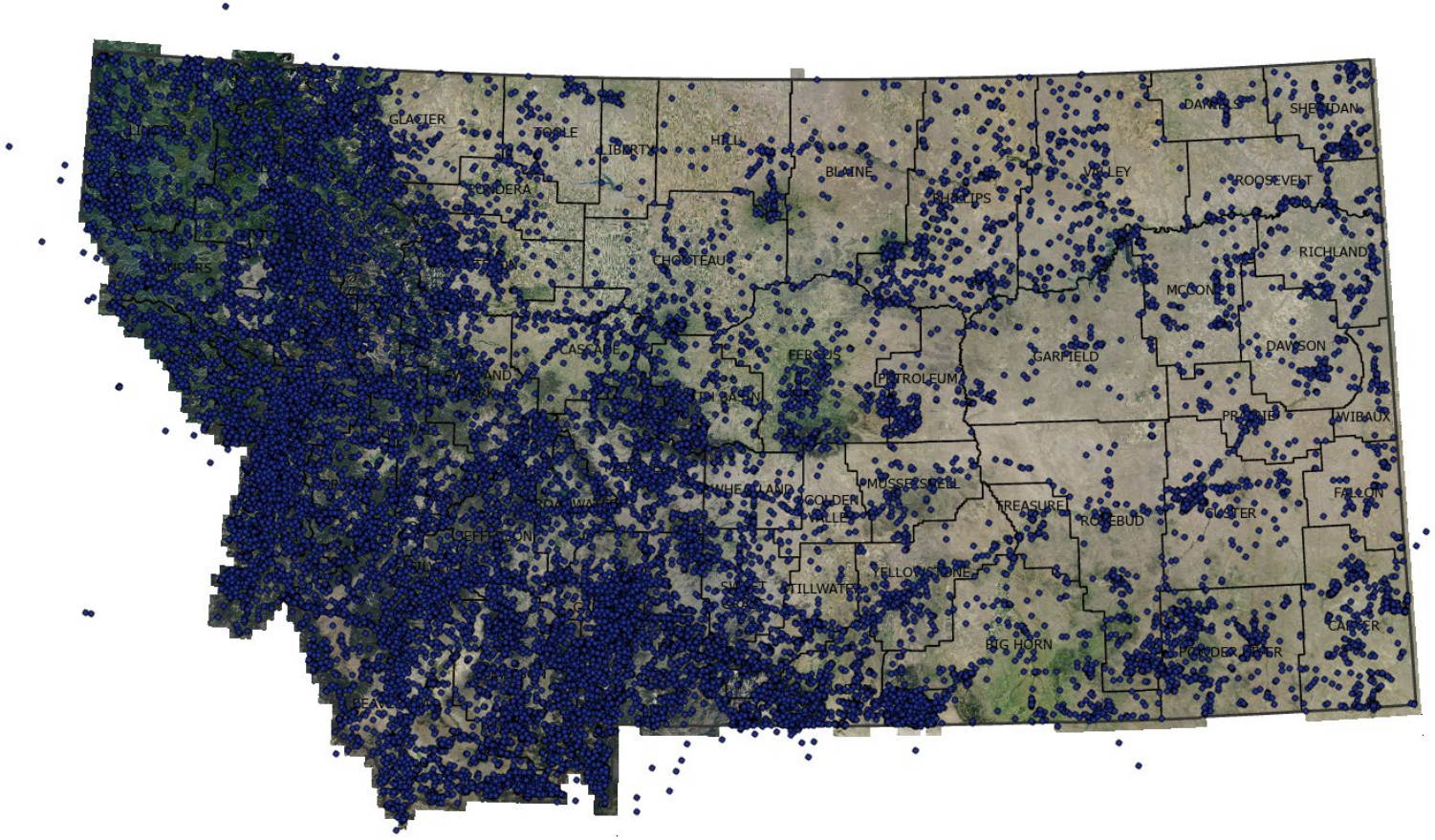
- all taxa -



Importing Vascular Plant Herbarium Specimens into Observation Data

140,120 observations





54,520 observations



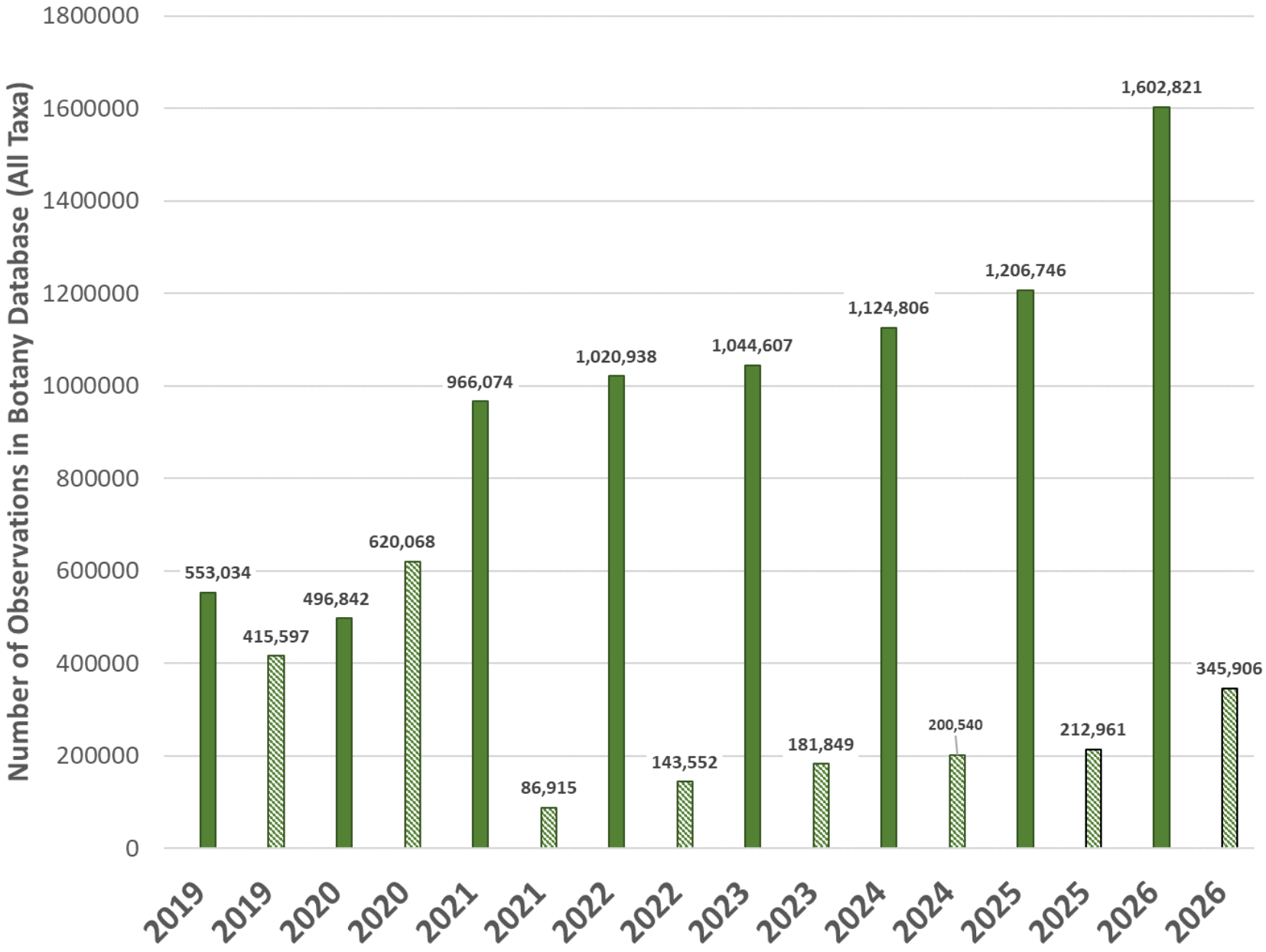


UNIVERSITY OF WYOMING | Rocky Mountain Herbarium

Reviewing Provisional Botany Observation Data

prioritizing Non-Native & SOC Plants

- **Conduct quality control**
  - to extent possible
- **Remove 'Questionable Value' OBS**
  - -imprecise & not useful
    - better data available
  - -mis-identified
  - -coded incorrectly
  - -mapping is spatially problematic
  - -duplicated data
  - -problematic & not trust-worthy
- **2026:** almost **12,000 observations sent to deleted database**



Funding: Montana Department of Agriculture - Noxious Weed Trust Fund

VASCULAR PLANT OVERVIEW

> 2,800 native & exotic taxa:

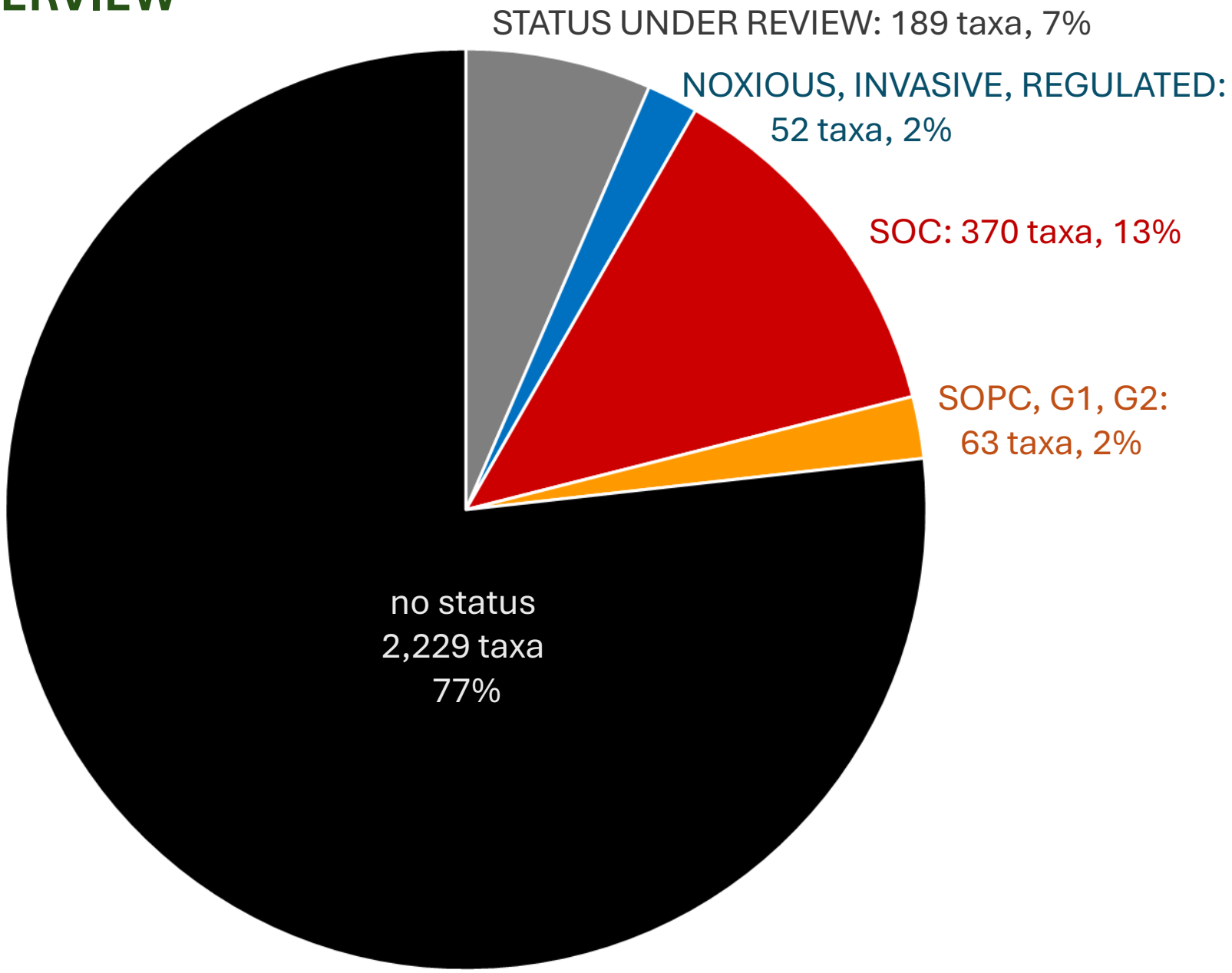
- species
- varieties
- subspecies
- hybrids

> 1.1 million observations

- missing numerous herbarium records

Last partial SOC review:

2019



State Conservation Status Rank

Assigned to native taxa using NatureServe methodology

S1: Critically Imperiled
Clasping Groundsel



© Refsdal-Delmatier

S2: Imperiled
Spotted
Joepye-weed



© Jim Vanderhorst

S3: Vulnerable
Cliff Toothwort



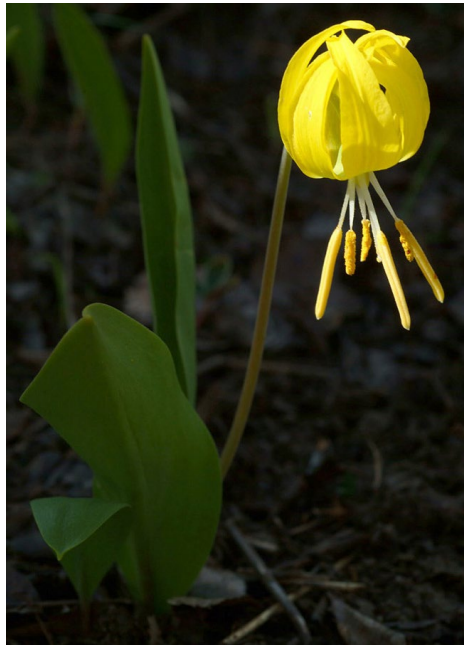
©

S4: Apparently Secure
Gunnison's
Maroposa Lily



© Bruce Selyem

S5: Secure
Glacier Lily



© Bruce Selyem

State Conservation Status Rank

Assigned to native taxa using NatureServe methodology

RARITY

THREATS

POPULATION TRENDS

S1: Critically Imperiled

S2: Imperiled

S3: Vulnerable

S4: Apparently Secure

S5: Secure


© Refsdal-Delmatier


© Jim Vanderhorst


© Taryn Brahmsteadt


© Bruce Selyem


© Bruce Selyem

State Conservation Status Rank

Assigned to native taxa using NatureServe methodology

RARITY

THREATS

POPULATION TRENDS

S1: Critically Imperiled

S2: Imperiled

S3: Vulnerable

S4: Apparently Secure

S5: Secure

Problem = Old Ranks

- **Ranking requires periodic reviews!**
- **Rank methods have evolved**
- **Data is dynamic - need old & new**
- **2021 State Threat Score is NOT part of current S-Rank**


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© Jim Vanderhorst


© Taryn Brahmsteadt


© Bruce Selyem


© Bruce Selyem

State Conservation Status Rank

Assigned to native taxa using NatureServe methodology

Sources of Information Keep Expanding

- **MTNHP Threat Table**: Catalogues reported threats at the observation, SO, and State levels
- **Citizen Botanists**: revisit known rare plant sites to determine presence/absence, photograph, & collect population, habitat, threat, and mapping data on Montana's 433 SOC/SOPC vascular plants
- **Herbaria** image, digitize, and provide online specimen data - free of charge
- **Scientific research** continues to bring together morphology, biogeography, ecology, genetic / molecular, and other data to revise floras, species concepts, nomenclature, and taxonomic relationships
- **Land managers** continue to **survey and monitor** populations





Ranking Montana's Vascular Plant Flora

2025 - 2027 Preliminary Ranking

- Conducted by Scott Mincemoyer
- Revised ranking done for
  379 of 2,516 native vascular plants

2025 - 2027 Revised Ranking

- Preliminary ranks reviewed by Andrea Pipp
- Updates ranking published
  ≈ 90 of 379 plants w/preliminary ranking

Geyer's Milkvetch - *Astragalus geyeri*

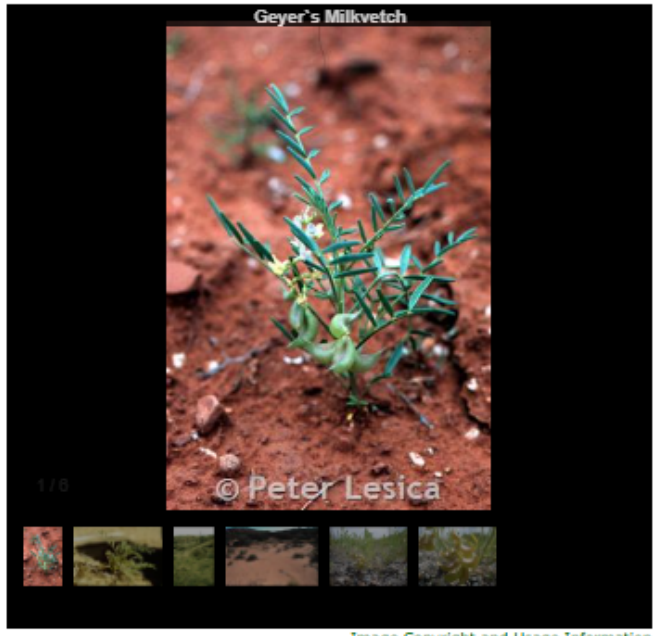


Image Copyright and Usage Information

Species of Concern
Native Species

Global Rank: G4
State Rank: S2S3
(see **State Rank Reason** below)
CCVI: Highly Vulnerable
C-value:

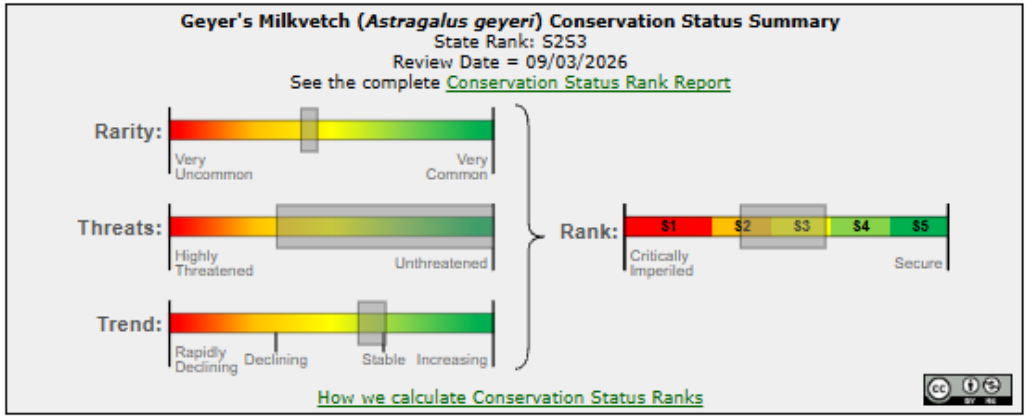
Agency Status
USFWS:
USFS:
BLM:

iNaturalist Submit MT Observations
Map Viewer Montana Observations
Google for more Images
NatureServe Species Report
Google for more Web Pages
USDA PLANTS Profile

State Rank Reason (see State Rank above)

Astragalus geyeri is rare in Montana, where it occurs at the northern extent of the species' range. Plants have been documented from at least 10 occurrences across several counties in the state. As an annual plant, population levels can fluctuate widely from year to year. Population counts are imprecise but appear to be in the range of at 3,000 plants. Population trend data is not available. Populations are presumed to be relatively stable or to have not declined significantly because the habitat is largely intact. Significant, widespread threats are not known though a few sites could be negatively impacted by their proximity to roads, from ORV use, and from invasive plant species. Climate change may pose a potential risk to the state's populations.

Revisits to known occurrences, at specified intervals, to collect data on population parameters, habitat conditions, and potential threats are necessary to maintain an accurate and timely state conservation status rank. Monitoring at a subset of occurrences is necessary to track population trends. Surveys into areas with suitable habitat are also needed.



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2025 - 2027 Accepted Ranking

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- Revised ranking done for
  ≈ 90 of 2,516 vascular plants

Population Trend Monitoring
Essential & lacking for most species!

Geyer's Milkvetch - *Astragalus geyeri*

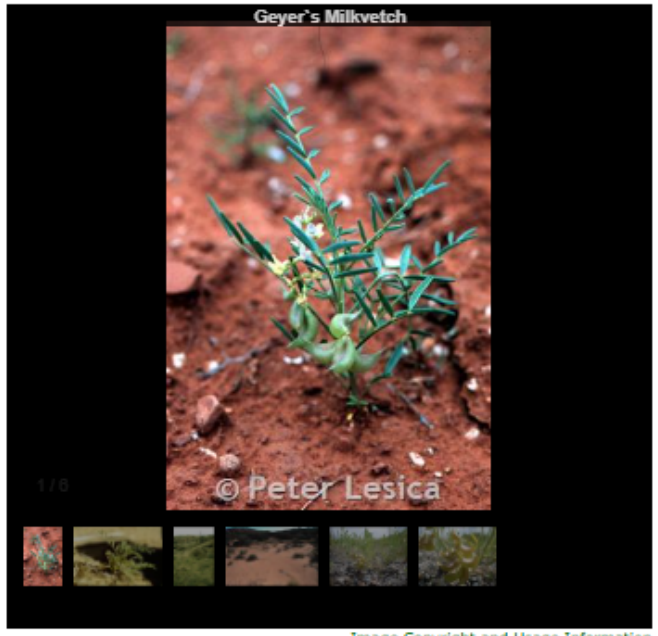


Image Copyright and Usage Information

Species of Concern
Native Species

Global Rank: G4
State Rank: S2S3
(see **State Rank Reason** below)
CCVI: Highly Vulnerable
C-value:

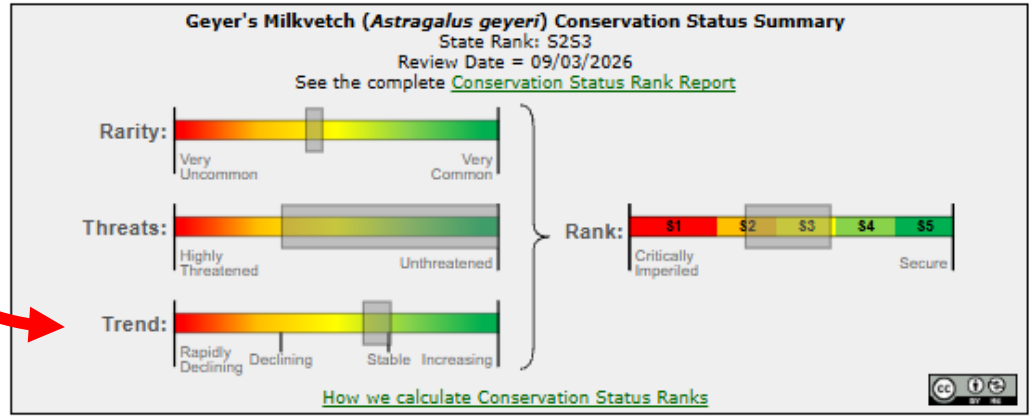
Agency Status
USFWS:
USFS:
BLM:

iNaturalist Submit MT Observations
Map Viewer Montana Observations
Google for more Images
NatureServe Species Report
Google for more Web Pages
USDA PLANTS Profile

State Rank Reason (see State Rank above)

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Geyer's Milkvetch - *Astragalus geyeri*

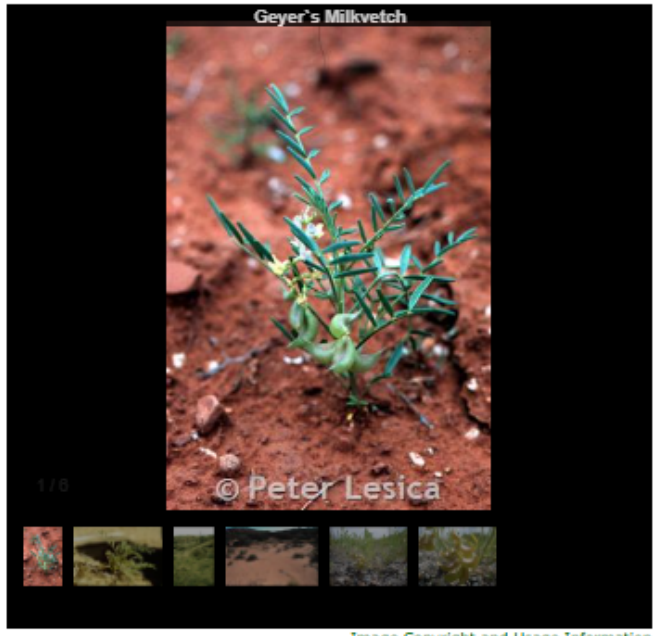


Image Copyright and Usage Information

Species of Concern
Native Species

Global Rank: G4
State Rank: S2S3
(see **State Rank Reason** below)
CCVI: Highly Vulnerable
C-value:

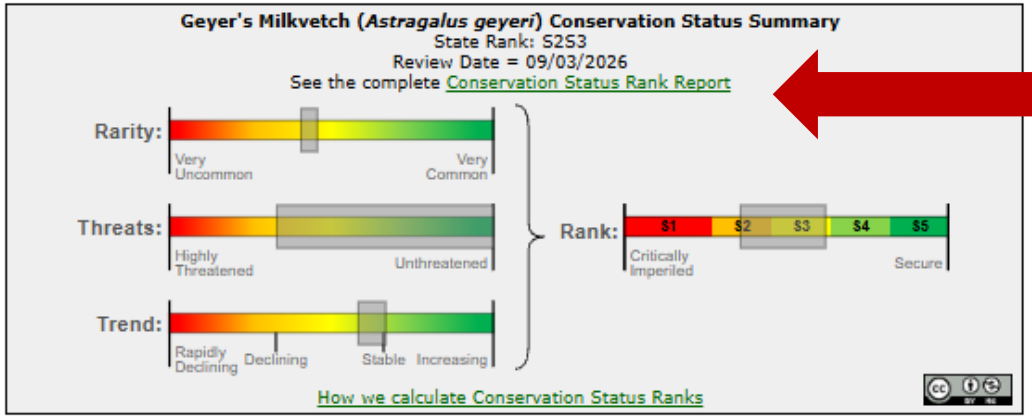
Agency Status
USFWS:
USFS:
BLM:

iNaturalist Submit MT Observations
Map Viewer Montana Observations
Google for more Images
NatureServe Species Report
Google for more Web Pages
USDA PLANTS Profile

State Rank Reason (see State Rank above)

Astragalus geyeri is rare in Montana, where it occurs at the northern extent of the species' range. Plants have been documented from at least 10 occurrences across several counties in the state. As an annual plant, population levels can fluctuate widely from year to year. Population counts are imprecise but appear to be in the range of at 3,000 plants. Population trend data is not available. Populations are presumed to be relatively stable or to have not declined significantly because the habitat is largely intact. Significant, widespread threats are not known though a few sites could be negatively impacted by their proximity to roads, from ORV use, and from invasive plant species. Climate change may pose a potential risk to the state's populations.

Revisits to known occurrences, at specified intervals, to collect data on population parameters, habitat conditions, and potential threats are necessary to maintain an accurate and timely state conservation status rank. Monitoring at a subset of occurrences is necessary to track population trends. Surveys into areas with suitable habitat are also needed.



Bidens beckii (Beck Water-marigold)
Conservation Status Rank Summary

Date Published: August 13, 2026

For details on assessment and ranking methodology, see: *Conservation Status Assessment Definitions, Process, Rank Factors, and Calculation of State Ranks for Montana Species*

Rarity and Trends

Rank Factor	Date Assessed	Value / Factor Rating	Score	Data Source	Comments
Rarity					
Range Extent	2025-11-28	19066.3 km² / E = 5,000-20,000 km²	3.140	MTNHP Range Maps	None
Area of Occupancy	2025-11-28	23 | 4km² cells / D = 6-25 4-km² grid cells	2.060	MTNHP databases	Of the approximate 96,004 2km x 2km grid cells that cover Montana, about 23 cells contain observations of the species.
Number of Occurrences	2025-11-28	56 / C = 21 - 80	2.750	MTNHP Databases	None
Population Size	2025-11-28	* / U = Unknown	-	MTNHP databases	Factor not used in ranking. The vast majority of observations lack population data, which are often difficult to estimate for aquatic plants.
# of Occurrences in Good Condition	2025-11-28	* / U = Unknown	-	MTNHP databases	Factor not used in ranking. Data to determine or estimate this factor are lacking.
% of Area Occupied in Good Condition			-		Factor not used in ranking.
Environmental Specificity	2025-03-01	Narrow / B = Narrow; specialist or community with key requirements common	-	Expert Opinion	Factor not used in ranking. Assessed by Scott Mincemoyer
Rarity is calculated by averaging weighted factor scores: ((3.14 × 1) + (2.06 × 2) + (2.75 × 1)) / 4 = 2.50					
Trends					
Short-term Trend	2025-11-28	* / U = Unknown	-	Expert Opinion	Factor not used in ranking. Data to calculate or estimate short term trends or trends in habitat for this aquatic plant are lacking.
Long-term Trend	2025-11-28	* / U = Unknown	-	Expert Opinion	Factor not used in ranking. Data to calculate or estimate long term trends or trends in habitat for this aquatic plant are lacking.
No trend data used in this rank					

*Values may be absent if not precisely estimated; factors may still be assessed for rank if a Factor Rating can be assigned.

Threats

Rank Factor	Date Assessed	Value / Factor Rating	Score	Data Source	Comments
Threats					
Overall Threat Impact		Low / D = Low	5.500		None
Intrinsic Vulnerability	2025-03-01	Moderately vulnerable to not intrinsically vulnerable / BC = Moderately vulnerable to not intrinsically vulnerable	-	Expert Opinion	Factor not used in ranking. Assessed by Scott Mincemoyer
Threat score is calculated from Overall Threat Impact when available or Intrinsic Vulnerability if not: (5.50) = 5.50					

Individual Threats Data

Threat Category	Date Assessed	Impact Score	Scope	Severity	Immediacy	Comments
Human Intrusions & Disturbance	2025-11-28	Low	Small	Slight	High	Boating and related recreational activities may have minor impacts at some locations.
Invasive & Other Problematic Species, Genes & Diseases	2025-11-28	Low	Restricted -Small	Slight	Moderate-Low	
Pollution	2025-11-28	Low	Restricted -Small	Moderate-Slight	High-Low	Water pollution from nutrient and herbicide runoff, septics, and sewage treatment have the potential to impact some populations
Threat Tally: 0 - Very High, 0 - High, 0 - Medium, 3 - Low Overall Threat Impact* = Low						

*See Conservation Status Assessment Definitions, Process, Rank Factors, and Calculation of State Ranks for Montana Species for calculation of Overall Threat Impact based on the number and impact of individual threats.

Conservation Status Rank Calculation

Raw score

Rarity: (2.50 × 70%) + Threats: (5.50 × 30%) + Trends: (0.00) = 3.40

Calculated Rank: S3

Accepted Rank	S3
Author(s)	Scott Mincemoyer
Rank Approved By	Andrea Pipp
State Rank Reason	*Bidens beckii* is known from at least 20 waterbodies associated with several major drainages in western Montana. Since 2015, surveys by Montana Fish, Wildlife & Parks (MFWP) have found more populations than previously known. However, population trends remain unknown. Its widespread distribution coupled with low threat levels reduces concerns about the species' viability, though it potentially remains vulnerable within the state. Therefore, the state conservation status rank has been changed from an S2 (imperiled) to an S3 (vulnerable) in 2025. Surveys that monitor population counts and distributions and assess habitat quality and threats are needed to determine population trends, and to more accurately assess the state conservation status rank.

Supplementary Information

Montana Natural Heritage Program. 2021. Conservation Status Assessment Definitions, Process, Rank Factors, and Calculation of State Ranks for Montana Species. 18 p.
https://mtnhp.mt.gov/docs/Montana_State_Rank_Criteria_20211201.pdf

Montana Field Guide Species Account:
https://fieldguide.mt.gov/speciesDetail.aspx?elcode=PDAST6A010

Predicted Suitable Habitat Model:
https://mtnhp.mt.gov/resources/models/?elcode=PDAST6A010

Information Needs

Information needs are assessed by considering the availability of factors used to assess species status as well as the quality of these assessments. Current information availability and quality to inform Conservation Status Rank for this species are highlighted.

Rank Factor	Assessment Category	Value	Criteria
General Status	Status Quality	Adequate	Calculated rank has low uncertainty and is represented by a single rank (e.g. S3); accepted rank may be adjusted to a range rank (e.g. S2S3)
		Poor	Rank assessed as SU or calculated rank has notable uncertainty and corresponds to a range rank with 2 or more values (e.g. S2?, S1S3, or S4S5)
Rarity	Range Quality	Adequate	Range polygon adequately represents area of probable occupancy and does not include substantial unoccupied areas; range may be adequately defined and still include areas of unsuitable habitat (e.g. mountain ranges for plains species)
		Marginal	Range polygon defined, but may include or exclude notable areas where the species may or may not occur on the landscape
		Poor	Range polygon not defined
	Habitat Quality	Adequate	Species-habitat relationship is well-defined (e.g. relevant literature or robust habitat model available)
		Marginal	Understanding of species-habitat relationship is adequate among some but not all habitats (e.g. literature covers similar habitats outside of Montana or habitat model performance is only somewhat adequate)
		Poor	Species-habitat relationship is not well understood
Threats	Threat Quality	Adequate	Threat impact is a single value (including "Unthreatened")
		Marginal	Threat impact assessed at more than one value (e.g. "High - Medium")
		Poor	Threat impact is Unknown but Intrinsic Vulnerability is assessed
		Unknown	Threat impact is Unknown and Intrinsic Vulnerability is not assessed
Trends	Recency	Current	Short-term Trend assessment date less than 10 years old
		Out of Date but Adequate	Short-term Trend assessment date is more than 10 years old or Unknown, but species is Unthreatened
		Out of Date	Short-term Trend assessment date more than 10 years old
		Not Available	Short-term Trend data are not available
	Trend Quality	Sufficient	Short-term Trend assessed at a single value or multiple values with a minimum trend greater than -10% (stable or increasing)
		Unknown but Sufficient	Short-term Trend is Unknown, but species is Unthreatened
		Poor	Short-term Trend is less than -10% (in decline) with two or more values selected
		Unknown	Short-term Trend is Unknown

Summary of Information Availability

Summary of Information Needs

Surveys that monitor population counts and distributions and assess habitat quality and threats are needed to determine population trends, and to more accurately assess the state conservation status rank.

Additional Threat Details

The table below contains the complete threats assessment for this species. While the Conservation Status Rank Calculation is based on cumulative, broadly categorized (Level 1) threats data, threats are assessed and tracked for more specifically categorized (Level 2) threats when available.

Threat Category	Date Assessed	Assessed By	Data Source	Scope	Severity	Immediacy	Comments
Human Intrusions & Disturbance - 6.1 - Recreational Activities	2025-11-28	S. Mincemoyer	Expert Opinion	Small	Slight	High	Boating and related recreational activities may have minor impacts at some locations.
Invasive & Other Problematic Species, Genes & Diseases - 8.1 - Invasive Non-Native/Alien Species/Diseases	2025-11-28	S. Mincemoyer	MTNHP Threat Ranking 2021	Restricted -Small	Slight	Moderate-Low	
Pollution - 9	2025-11-28	S. Mincemoyer	Expert Opinion	Restricted -Small	Moderate-Slight	High-Low	Water pollution from nutrient and herbicide runoff, septics, and sewage treatment have the potential to impact some populations

State Conservation Status Rank

Assigned to native taxa using NatureServe methodology

RARITY

THREATS

POPULATION TRENDS

S1: Critically Imperiled

S2: Imperiled

S3: Vulnerable

S4: Apparently Secure

S5: Secure


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State Conservation Status Rank & SOC / SOPC Designations

RARITY

THREATS

POPULATION TRENDS

S1: Critically Imperiled

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Species of Concern (SOC)


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State Conservation Status Rank & SOC / SOPC Designations

RARITY

THREATS

POPULATION TRENDS

S1: Critically Imperiled

S2: Imperiled

S3: Vulnerable

S4: Apparently Secure

S5: Secure

Species of Concern (SOC)

S3S4 Species of Potential Concern (SOPC) or NOT of concern


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State Conservation Status Rank & SOC / SOPC Designations

RARITY

THREATS

POPULATION TRENDS

S1: Critically Imperiled

S2: Imperiled

S3: Vulnerable

S4: Apparently Secure

S5: Secure

PROBLEM

A large percentage of species rank as S3 or S3S4!

Why?

- Not enough observations & NOT current enough
- 'Reported' threat types lack validation
- Unknown impacts from 'reported' threat types
- Habitat conditions largely unknown
- Population trend monitoring nearly absent


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Re-thinking the "of concern" Definition For Vascular Plants

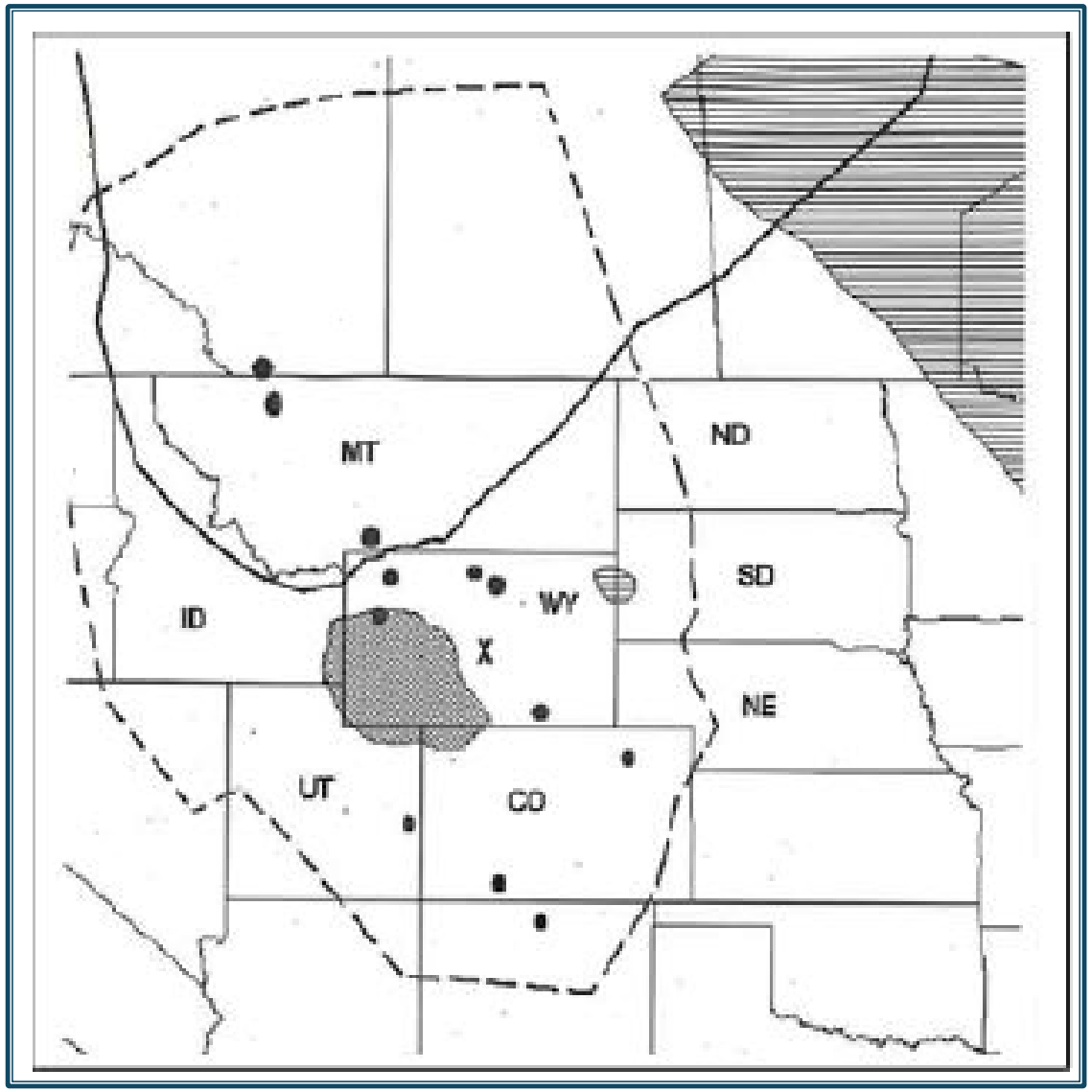
MT Native Plant Conservation Conference (April 2026) - factors that may indicate "of conservation concern":

- Global- and State-Ranks remain a useful tool
- Species endemic to state or a few states?
- Estimate of Montana's contribution to the range wide persistence of the species?
- Should 'threat type' or the 'magnitude of threat' versus 'no identified threat' be a deciding factor or weighted more?
- Should species with taxonomic questions or problems be weighted less heavily?
- Others?

In 2027, I hope to explore with botanists a revised definition for "Species of Concern" and "Species of Potential Concern"

Seeking your thoughts & assistance

Plant Distribution Patterns



MOSS OVERVIEW

540 native + 2 exotic taxa:

- species
- varieties
- subspecies

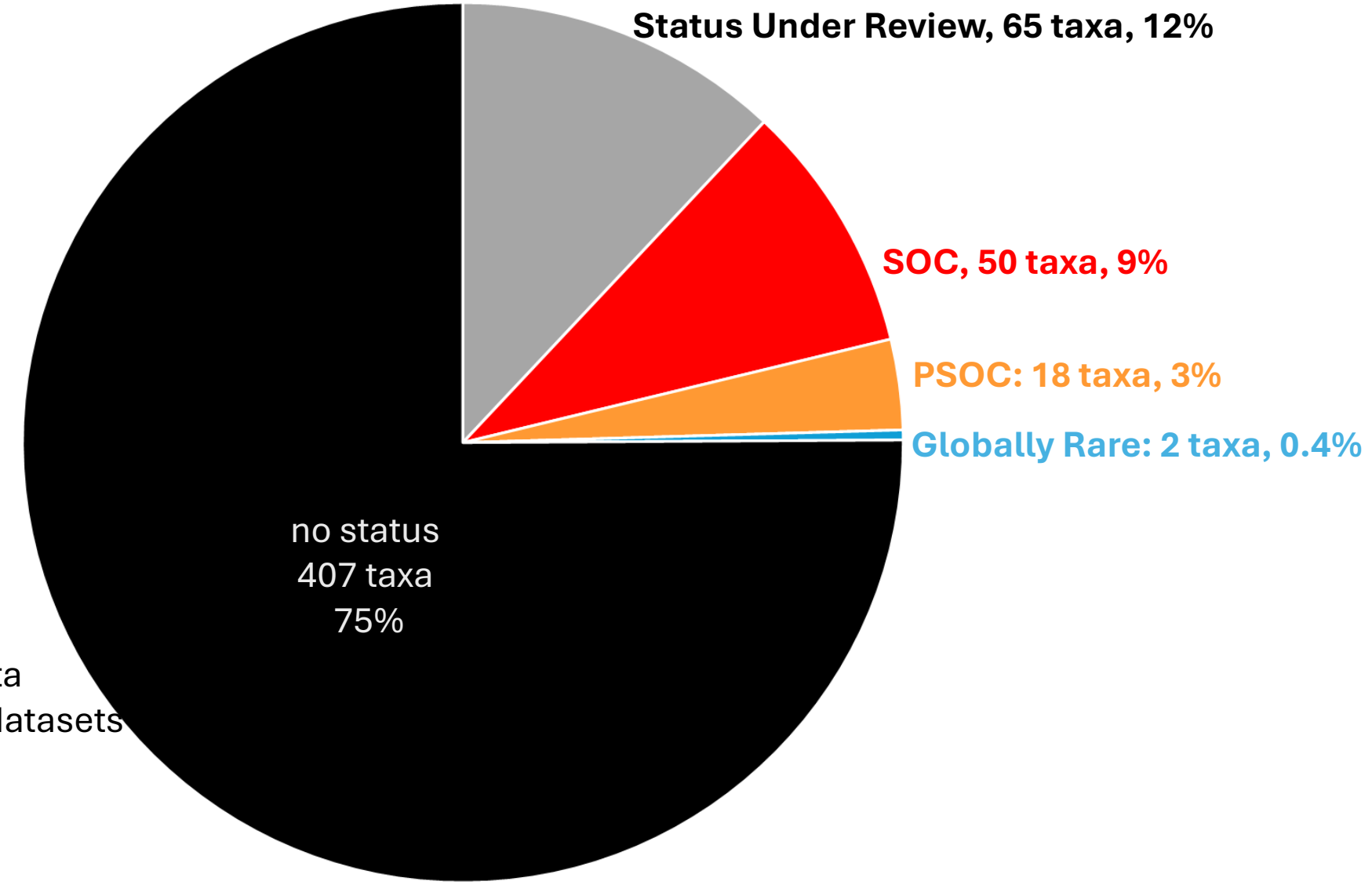
2021: updated checklist

Last SOC review: 2009

- based on expert opinion & less on compiled data

> 13,433 observations

- includes best, credible data
- excludes some historical datasets



RANKING MONTANA'S MOSS FLORA

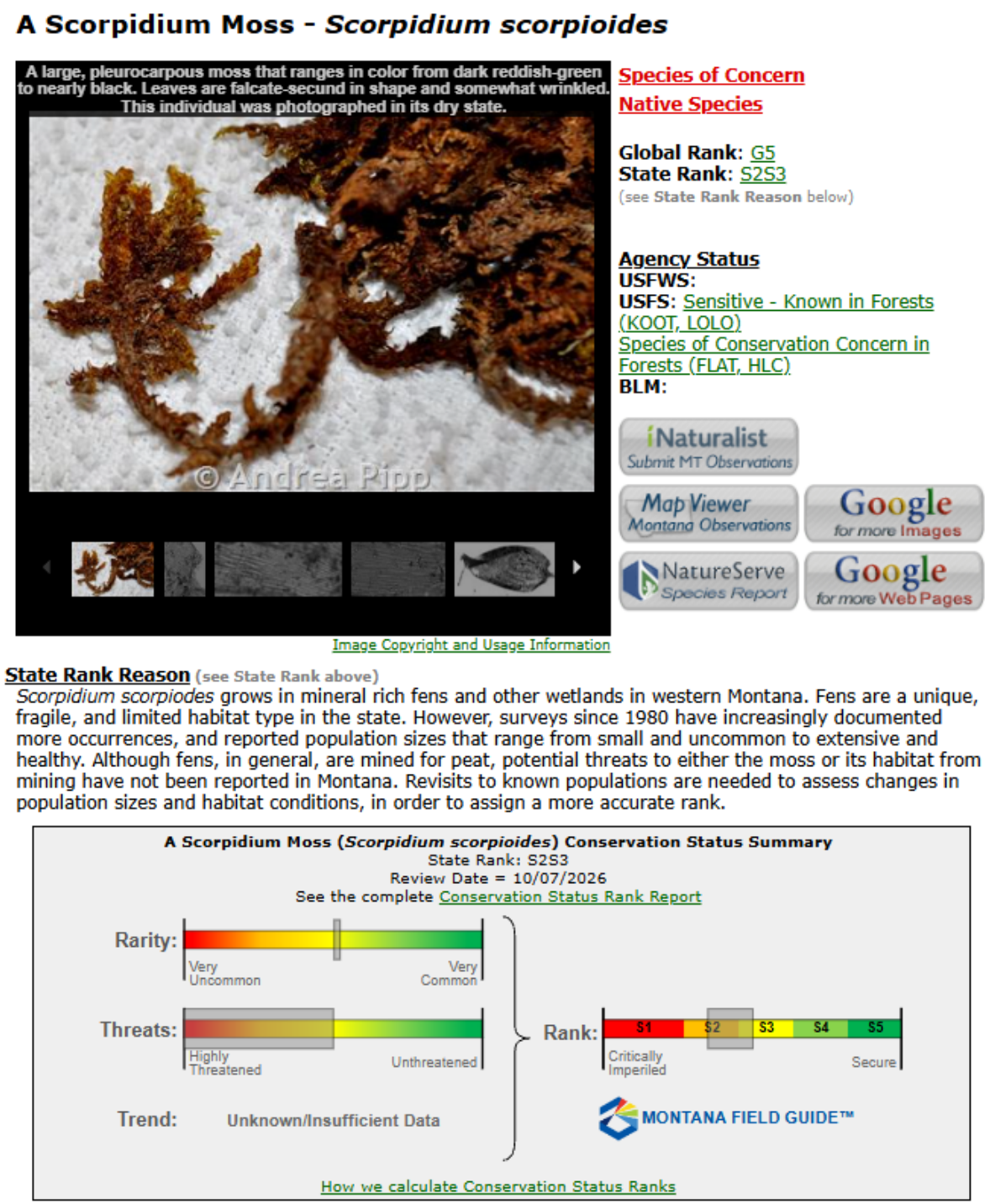
2025 - 2027 GOALS

- Review observation data
- Consult literature
- Revise State Rank for at least
  100 of 542 moss taxa

2025-2026 Revised Ranks

- *Scorpidium scorpioides*
- *Abietinella abietina*
- *Thuidium recognitum*
- *Timmia austriaca*
- *Timmia megapolitana*
- *Timmia megapolitana* ssp. *bavarica*

- Ultimate Goal: Rank all mosses, gather experts, re-evaluate, and revise Species of [Potential] Concern lists



Bryophyte Conservation Alliance

https://www.bryoconservation.com/

HOME ABOUT US BRYOPHYTE BASICS BRYOPHYTE CONSERVATION BCA REGIONAL GROUPS GET INVOLVED







A Moss & Lichen Workshop - MT Discovery Foundation





Lichen Biomonitoring

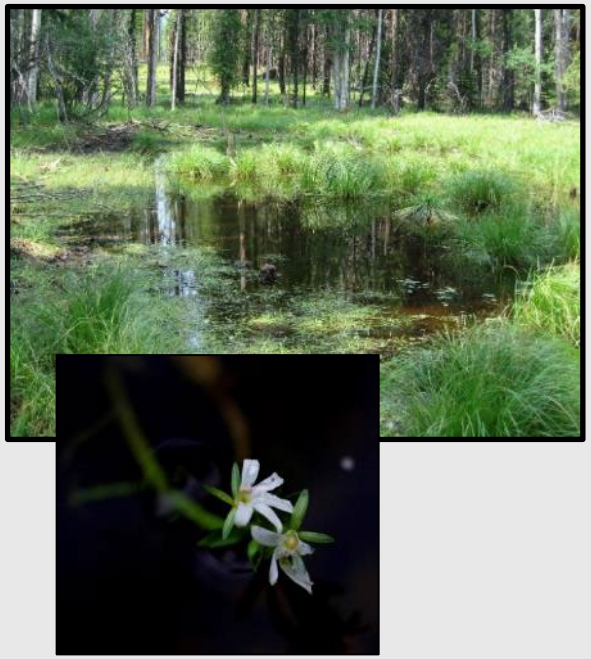
Using lichens to monitor air quality and climate trends

2026

Certified lichen collectors monitored plots on Custer-Gallatin, Beaverhead-Deerlodge, & Bitterroot NFs

Funded By: US Forest Service - Region 6 & MTNHP

PLANTS & ENDANGERED SPECIES ACT



Howellia aquatilis
Water Howellia
2021 DE-LISTED
2022-2036 POST-DELISTING MONITORING



Silene spaldingii
Spalding's Catchfly
THREATENED



Pinus albicaulis
Whitebark Pine
THREATENED



Spiranthes diluvialis
Ute Ladies'-tresses
THREATENED



Physaria pachyphylla
Thick-leaf Bladderpod
PETITIONED

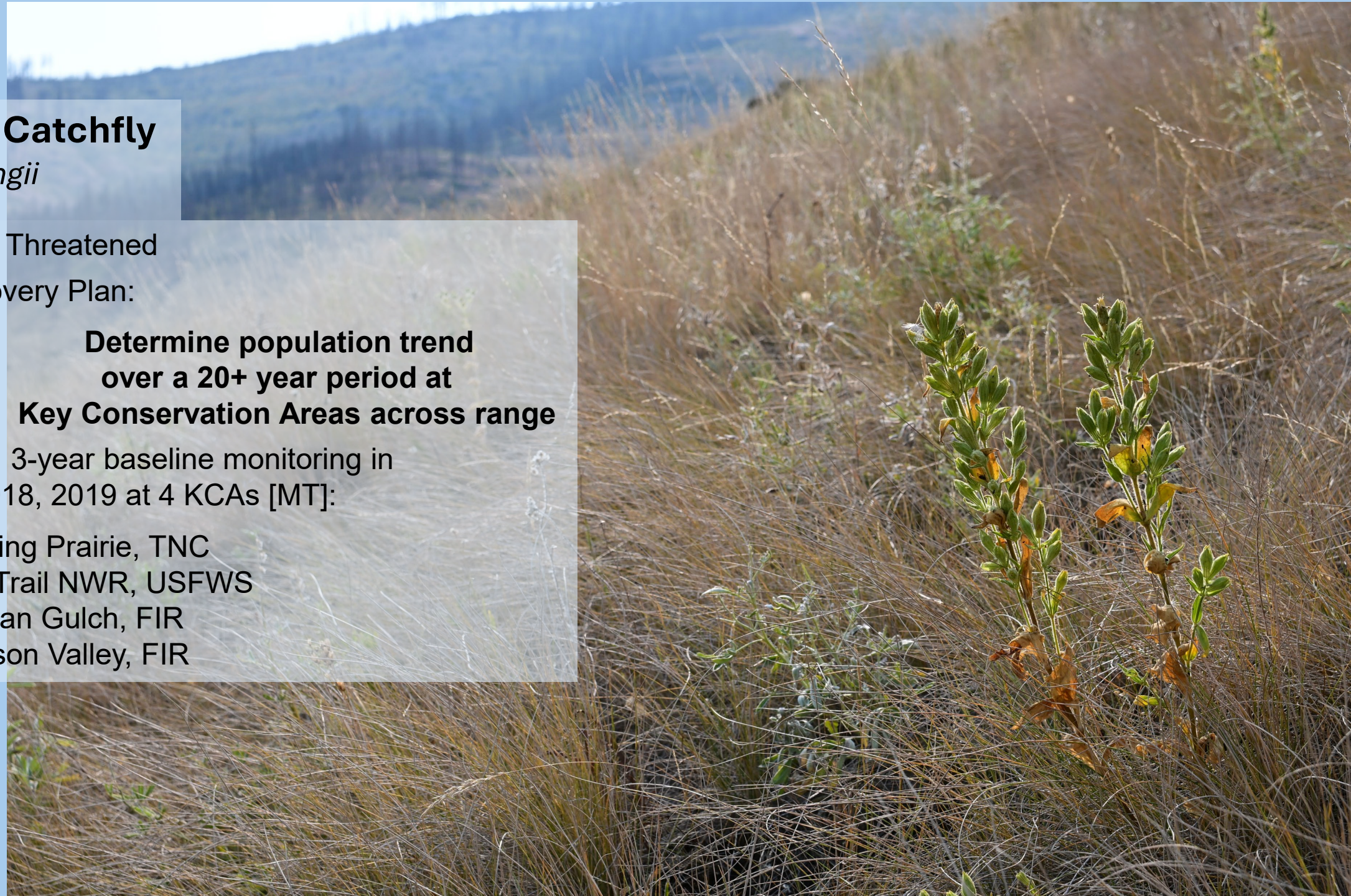
Spalding's Catchfly

Silene spaldingii

- ESA-listed Threatened
- 2007 Recovery Plan:

Determine population trend over a 20+ year period at Key Conservation Areas across range

- Completed 3-year baseline monitoring in 2016, 2018, 2019 at 4 KCAs [MT]:
  - Dancing Prairie, TNC
  - Lost Trail NWR, USFWS
  - Sullivan Gulch, FIR
  - Crosson Valley, FIR



Spalding's Catchfly

Silene spaldingii

- ESA-listed Threatened
- 2007 Recovery Plan:

Determine population trend over a 20+ year period at Key Conservation Areas across range

- Completed 3-year baseline monitoring in 2016, 2018, 2019 at 4 KCAs [MT]:
  - **Dancing Prairie, TNC: Round 2, 2022-2024**
  - **Lost Trail NWR, USFWS: Round 2, 2027-2029**
  - Sullivan Gulch, FIR
  - Crosson Valley, FIR





Spalding's Catchfly

Silene spaldingii

2026 - 2028

- 2nd Round of 3-year monitoring - Flathead Indian Res.
- Crosson Valley & Sullivan Hill KCAs
- Collaborative effort with & 2026 assistance from CSKT, USFWS, & NRCS



FUNDING

USFWS - Section 6 Grant











Spalding's Catchfly

Silene spaldingii

2026

Species Occurrence Revisits

Obtained current population, habitat, & threat data for:

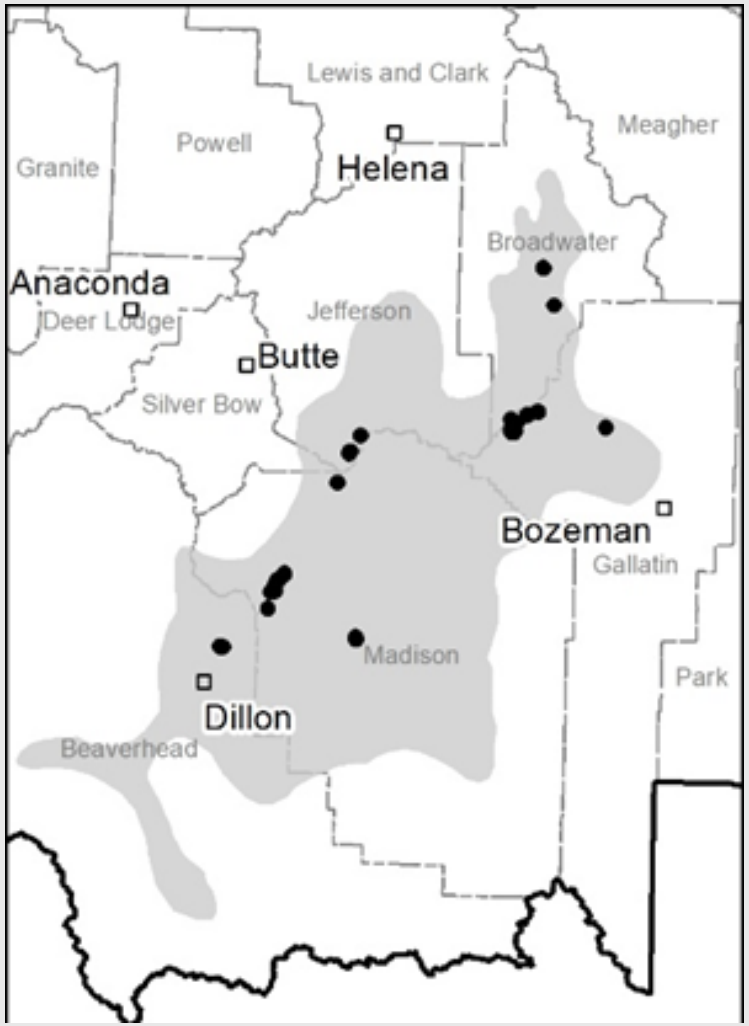
- all SOs in KCAs
- 1 SO on CSKT/DNRC land
- 6 SOs in 2023 Niarada Fire





- ESA Listed - Threatened
- USFWS:
  - Draft Post-Delisting Monitoring Plan: 2024
  - Proposed to Delist: January 7, 2025
- Montana Status???
  - Mostly small populations
  - On state & private lands
  - 29 + 1 new Species Occurrences:
    - -- 1 SO extirpated
    - -- 1-2 SOs facing likely-adverse effects
    - -- 21 SOs last visited 12 - 20+ years ago

  + MDT manages and monitors to promote viable populations
- Looking for opportunities to:
  - Engage with public
  - Conduct revisits
  - Disseminate brochure
  - Work with private landowners

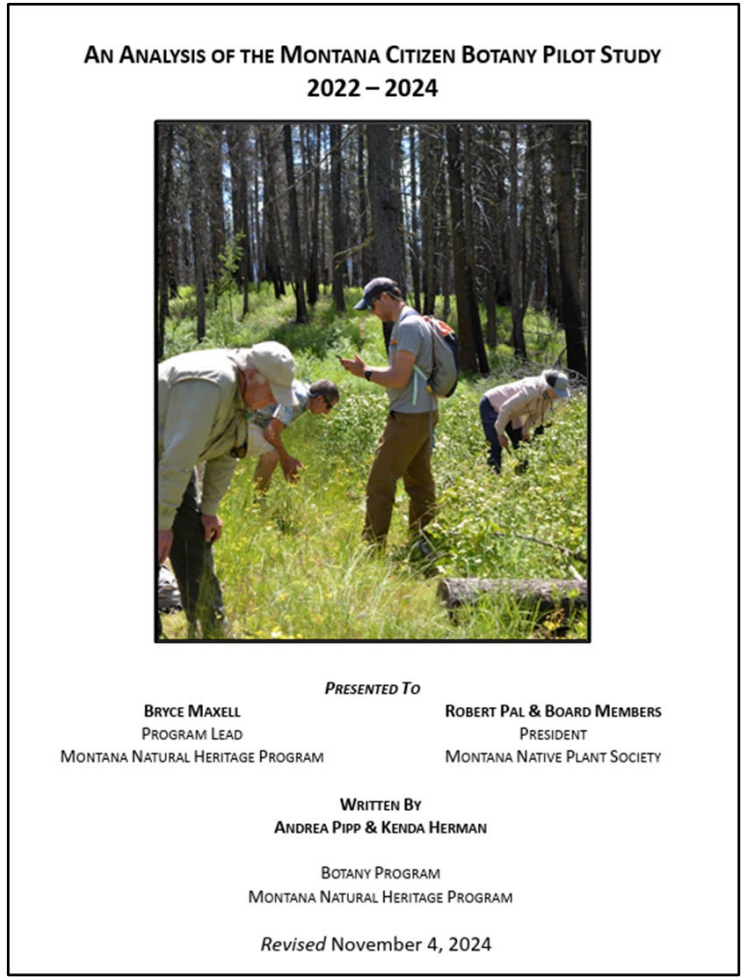


Montana Citizen Botany Program

jointly managed by MTNHP & Montana Native Plant Society

Pilot Study: 2022-2024

successful - not yet sustainable



An Analysis of the Montana Citizen Botany Pilot Study
2022 – 2024

Presented To

Bryce Maxell
Program Lead
Montana Natural Heritage Program

Robert Pal & Board Members
President
Montana Native Plant Society

Written By
Andrea Pipp & Kenda Herman

Botany Program
Montana Natural Heritage Program

Revised November 4, 2024

Phase 3 Objectives: 2025 to 2029

1) Establish a paid Citizen Botany Coordinator that is separate from the MTNHP Botanists
2) Explore how Citizen Botanists can help gather data on native plant seed sources or collect seed
3) Continue revisits to known rare plant occurrences:
   - presence/absence
   - population size
   -habitat condition
   -threats
4) Host group-based revisits and seed collecting activities
5) Investigate financial planning

Funded By

Montana/Dakotas
Bureau of Land Management

Region 1
United States Forest Service

Montana AgCorps
Montana Department of Agriculture

Montana Native Plant Society

Montana State Library
Natural Heritage Program

Montana Citizen Botany Program

jointly managed by MTNHP & Montana Native Plant Society

Citizen Botany Coordinator

- Montana AgCorps - AmeriCorps member
- Serving 11-month term: January - November 2026





Montana Citizen Botany Program
2026 Accomplishments

- On the web…page hosted by MNPS
- 92 Applicants - majority accepted
- Trained citizens to qualify as Citizen Botanist - 4 virtual training opportunities
- 56 new Citizen Botanists recruited & trained
- Expanded plant conservation tasks:
  - Known Rare Plant Revisits
  - Native Plant Seed Source Scouting
    SOS, MT/Dakotas BLM, MT DNRC
- Facilitated 5 Workshops / Events:
  - Seed Collection
  - Plant ID Workshops
  - Plant Surveys
  - 1st Spring Fling Citizen Botany Gathering












MT CITIZEN BOTANY PROGRAM

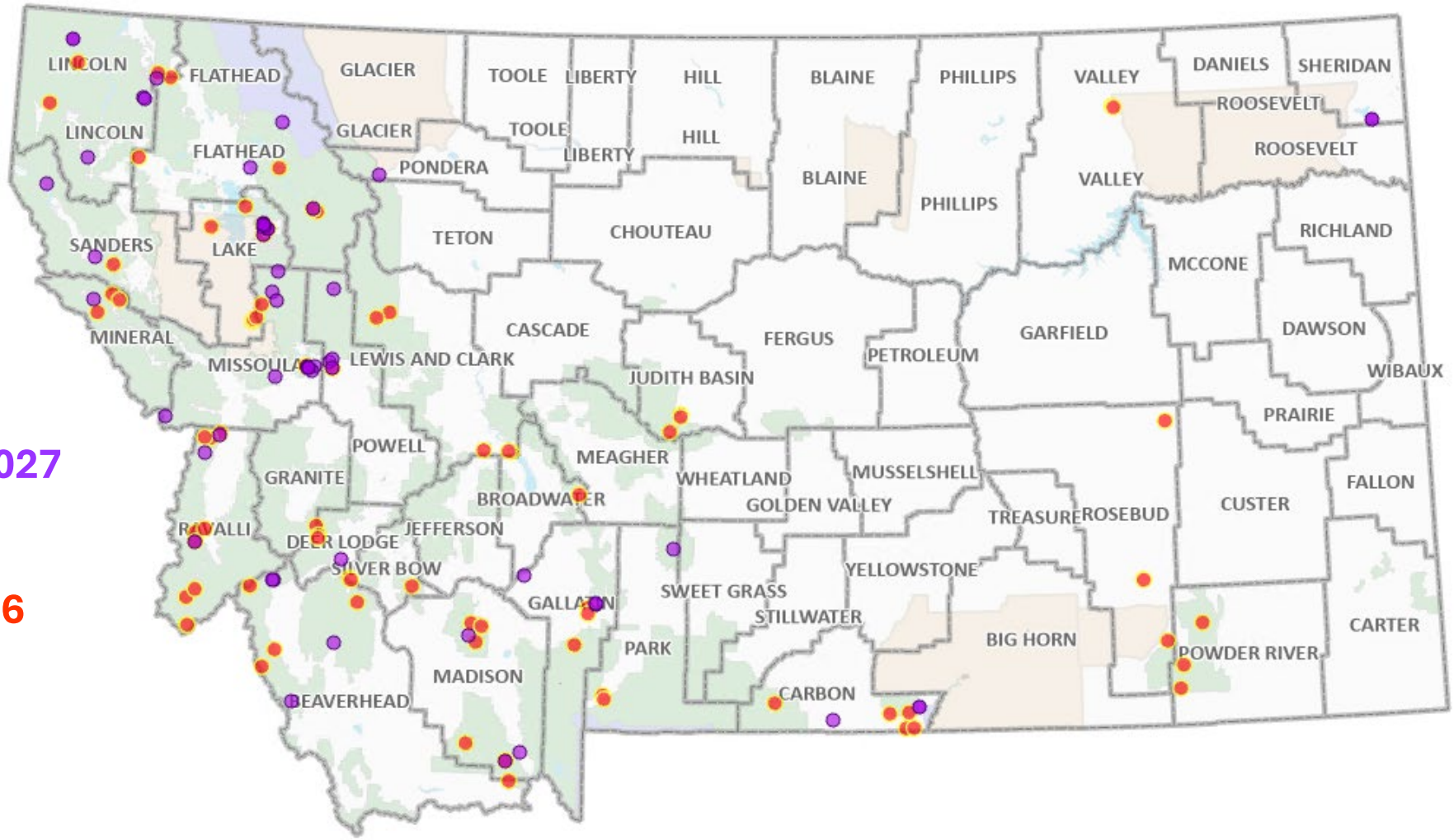
1st Annual Spring Fling

Flathead Lake

Camping, Socializing, & Botanizing

Montana Citizen Botany Program
2026 Accomplishments

- **130 rare plant occurrences selected to revisit in 2026-2027**
- **48 Citizen Botanists completed 88 revisits in 2026**





Montana Citizen Botany Program
2026 Accomplishments

Scouting for Native Plant Seed Sources

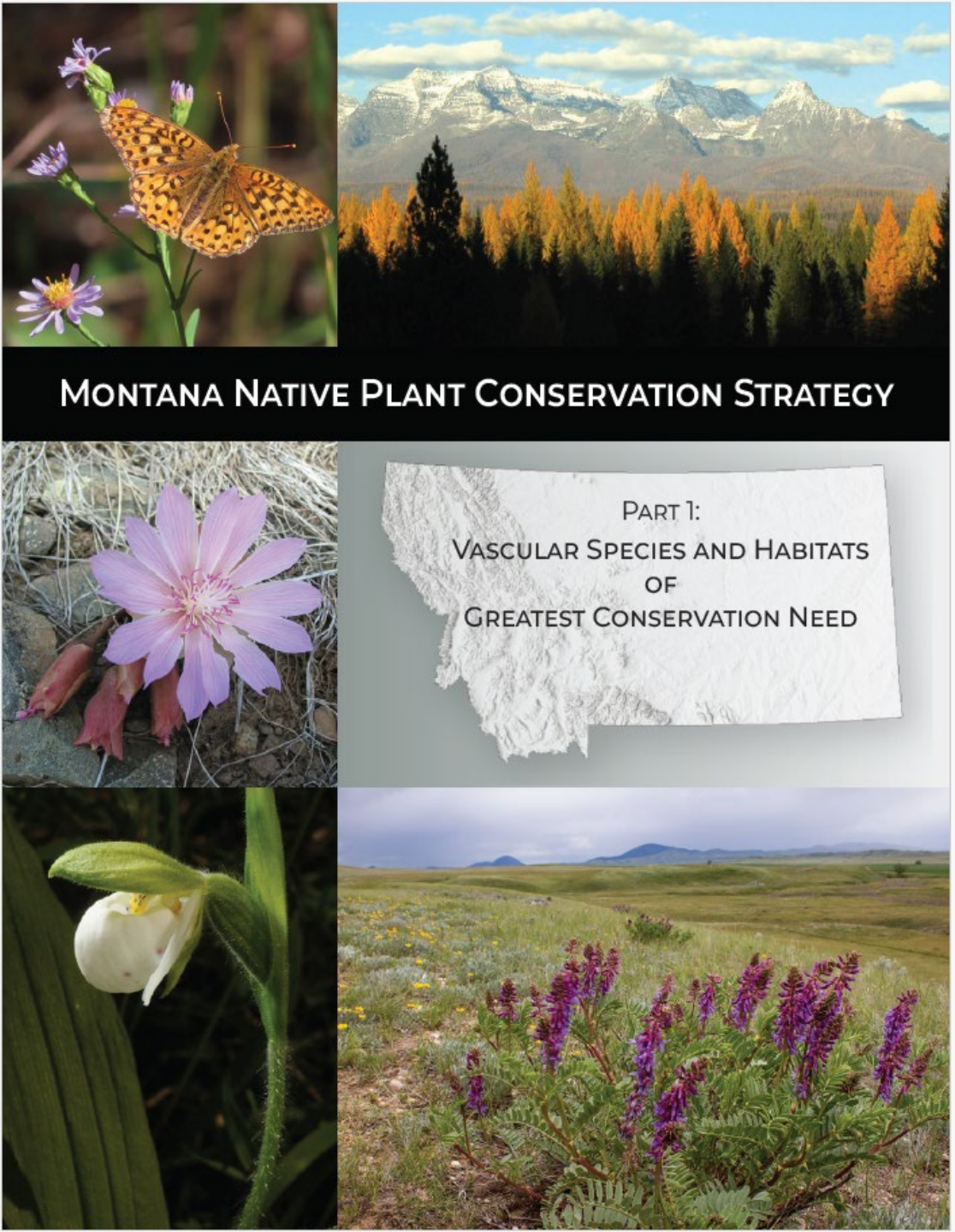
- Collaborated with Seeds of Success - national protocol
- Prioritized species determined by MT/Dakotas BLM & MT DNRC
- Trained 21 citizens in ‘seed scouting protocol’ - 6 completed qualifications to Seed Scout
- Facilitated seed collecting workshops through MNPS
- Developed Seed Scouting Survey123 app & Tutorial
- In progress - Seed Scouting manual

SEEDS OF SUCCESS

The Montana Department of Natural Resources & Conservation

U.S. Department of the Interior Bureau of Land Management

Montana/Dakotas Bureau of Land Management



Find It!

MTNHP website / Botany / Native Plant Conservation Strategy

In-Progress Strategy-supported Projects & Proposals

- Missoula Phlox conservation agreement - Missoula City/County
- Howell's Gumweed genetic research
- Ute Ladies'-tresses statewide monitoring
- Water Howellia - restored interpretive sign

Montana SWAP - 2025 revision

- Adopted 109 Plant Species of Greatest Conservation Need!

Strategy Stewards Committee - January 2025

- USFS Regional Botanist – Amanda Hendrix
- MT/Dakotas BLM State Botanist – Wendy Velman
- MT DNRC – Tim Spoelma
- Tribal Nation / Ethno-Botanist: [Dennis Longknife]
- MFWP Plant Ecologist: Jarrett Payne
- MNPS Conservation Chair – [Elizabeth Bergstrom]
- MTNHP Botanist or Ecologist – Andrea Pipp