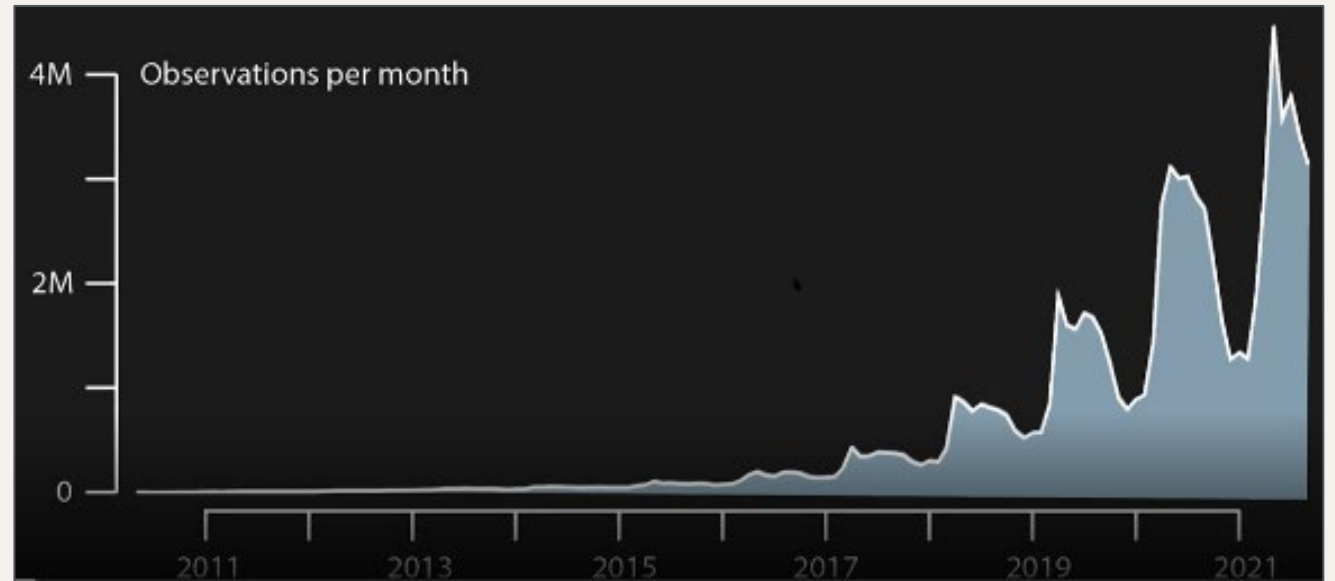
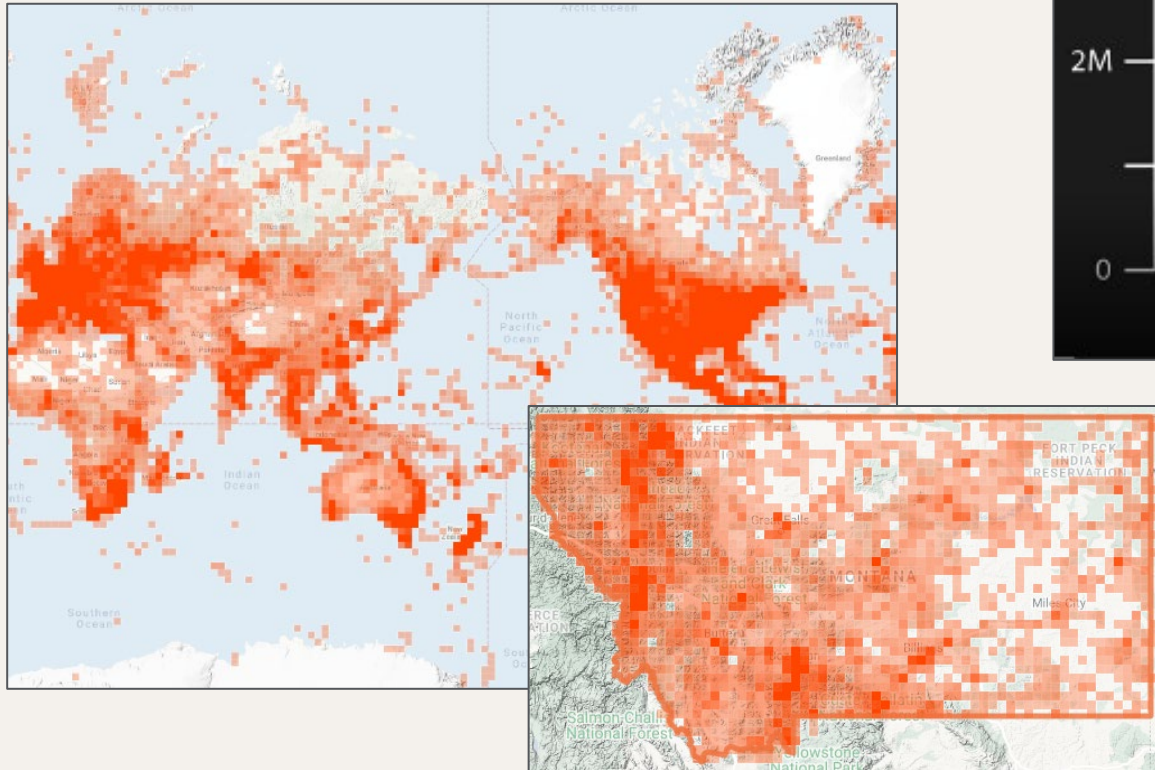




Leveraging Community Science to Increase Knowledge of Understudied Species in Montana

Dan Bachen – Sr. Zoologist

iNaturalist

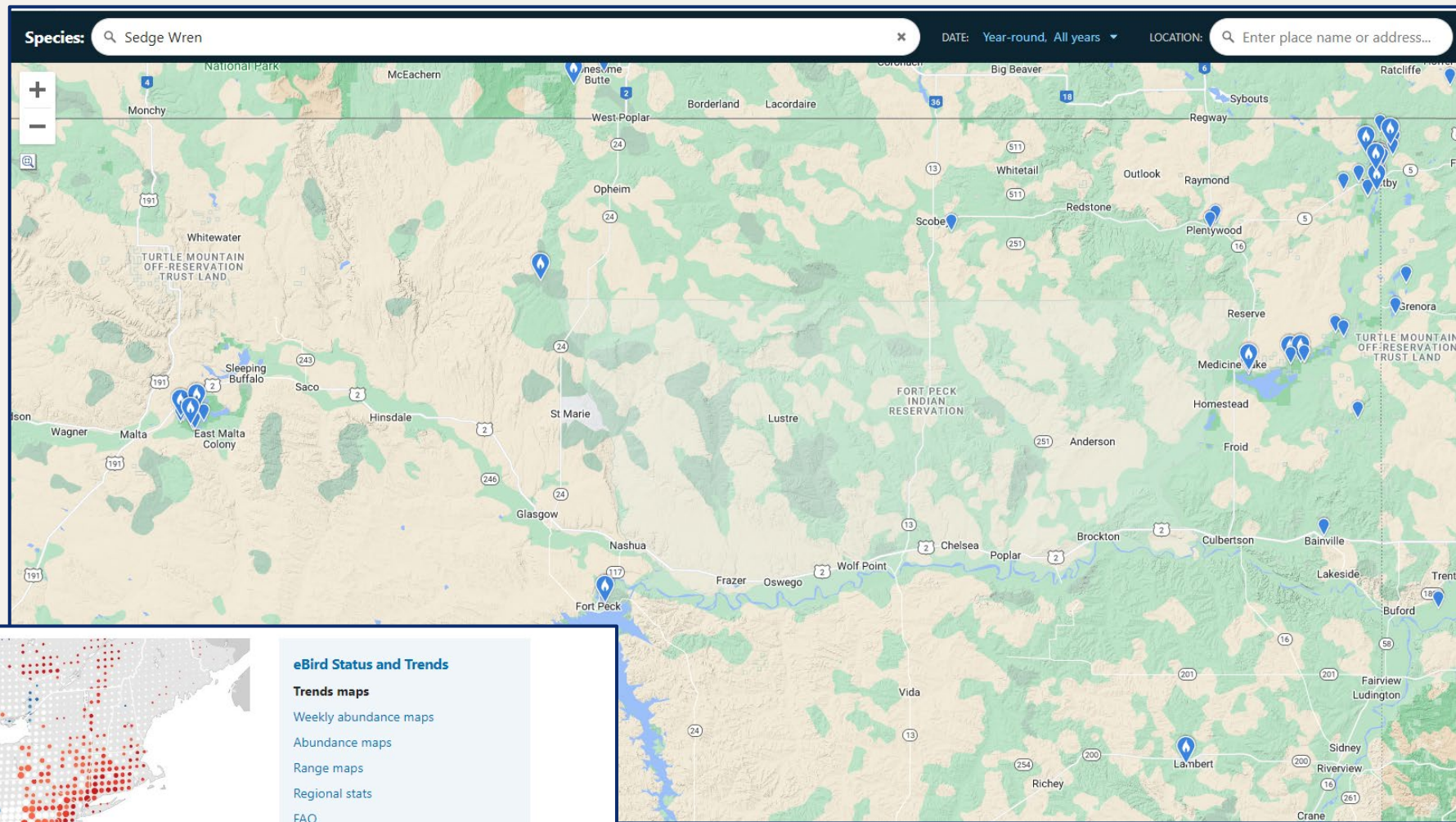


212,815 OBSERVATIONS	7,090 SPECIES	6,982 IDENTIFIERS	12,619 OBSERVERS
-------------------------	------------------	----------------------	---------------------

- Maintained by California Academy of Sciences and National Geographic
- Community Science database
- User generated consensus identifications
- AI driven species identifications
- Companion applications

eBird

- Cornell Lab of Ornithology
- Database of bird observations
 - Point Count
 - Traveling Count
 - Incidental Observations
- Other Birding tools
- Over 1,000,000,000 observations



Trends, 2007-2021

Breeding season
31 May - 13 Jul

Abundance trend

More loss Uncertain More gain

Abundance

Lower Higher



Wood Thrush *Hylocichla mustelina*

Trend (confidence intervals)
upper +71%
median +55%
lower +21%
Relative abundance 0.72

Data provided by eBird The Cornell Lab

eBird Status and Trends

Trends maps

[Weekly abundance maps](#)

[Abundance maps](#)

[Range maps](#)

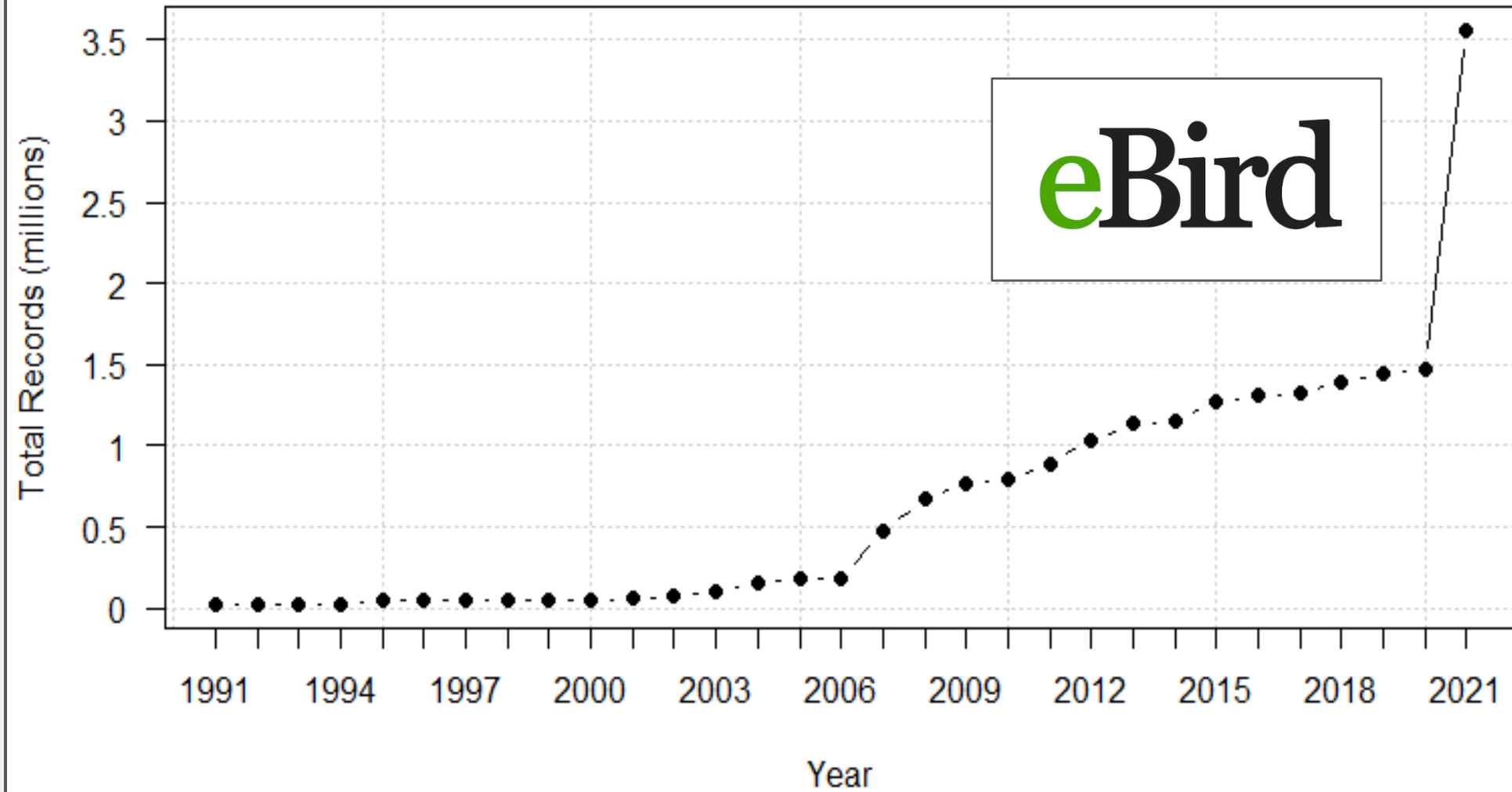
[Regional stats](#)

[FAQ](#)

[Recommended citation](#)

[Download data products](#)

[Products terms of use](#)



Small-flower Columbine (*Aquilegia brevistyla*) Research Grade



dbachen
186 observations

Observed:
Jun 20, 2020 - 10:50 AM MDT



Be the first to save this observation

Activity

- dbachen suggested an ID ID Withdrawn 2y

Columbines
Genus Aquilegia
- taitsougstad suggested an ID 2y

Columbines
Genus Aquilegia

Compare
Agree
- scott_mt suggested an ID ID Withdrawn 2y

Columbines
Genus Aquilegia
- scott_mt suggested an ID Improving 2y

Small-flower Columbine
Aquilegia brevistyla

Compare
- dbachen suggested an ID 2y

Community Taxon

Small-flower Columbine (*Aquilegia brevistyla*)
Cumulative IDs: 4 of 4

0

Agree

Annotations

Attribute: V

Plant Phenology: S

Sex: S

Projects (2)

- NatureServe Network

⚙
- Montana Natural Heritage Observations

⚙



Identify

Species List
plus Occurrences
plus Obs

▾ Vascular Plants - *Aquilegia brevistyla* (Short-styled Columbine)

SO Count: 2
Obs Count: 6
Earliest Obs: 1991
Recent Obs: 2021

View in Field Guide

Species of Concern

Native Species

Global Rank: G5

State Rank: S2S3

Agency Status

USFWS:

USFS: Species of Conservation Concern in Forests (HLC)

BLM:

Delineation Criteria

Individual occurrences are generally based upon a discretely mapped area provided by an observer and are not separated by any pre-defined distance. Individual clusters of plants mapped at fine spatial scales (separated by less than approximately 25-50 meters) may be grouped together into one occurrence if they are not separated by distinct areas of habitat or terrain features. Point observations are buffered to encompass any locational uncertainty associated with the observation.

Last Updated

Oct 21, 2022

▾ SO ID: 2137359

Acres: 3,104
Obs Count: 1
Earliest Obs: 2020
Recent Obs: 2020

SO Num: 0

Last Survey: Jun 20, 2020

Location: Hobson

OBS ID	OBSERVERS	OBSERVATION DATE	LOCATION (Calculated)	INFO
2137359	Bachen, Dan	Jun 20, 2020	County <i>Judith Basin, MT</i> QQLL 29B1 Location Hobson Precision 2000 meters	Documentation Type: Observation - Photographed

- Incidental observation of unidentified plant
- Identified via iNaturalist as Small-flower Columbine - SOC S2S3
- First observation submitted for area since 1991
- Confirmed presence within SO

Small-flower Columbine (*Aquilegia brevistyla*) Research Grade



dbachen
186 observations

Observed:
Jun 20, 2020 - 10:50 AM MDT



Be the first to save this observation

Activity

- dbachen suggested an ID ID Withdrawn 2y

Columbines
Genus Aquilegia
- taitsougstad suggested an ID 2y

Columbines
Genus Aquilegia

Compare
Agree
- scott_mt suggested an ID ID Withdrawn 2y

Columbines
Genus Aquilegia
- scott_mt suggested an ID Improving 2y

Small-flower Columbine
Aquilegia brevistyla

Compare
- dbachen suggested an ID 2y

Community Taxon

Small-flower Columbine (*Aquilegia brevistyla*)
Cumulative IDs: 4 of 4

Agree

Annotations

Attribute: V
Plant Phenology: S
Sex: S

Projects (2)

- Add to a Project
- NatureServe Network ⚙️
- Montana Natural Heritage Observations ⚙️



Identify

Species List | plus Occurrences | plus Obs

Vascular Plants - *Aquilegia brevistyla* (Short-styled Columbine)

SO Count: 2	Obs Count: 6	Earliest Obs: 1991	Recent Obs: 2021
-------------	--------------	--------------------	------------------

<p>View in Field Guide</p> <p>Species of Concern</p> <p>Native Species</p> <p>Global Rank: G5</p> <p>State Rank: S2S3</p>	<p>Agency Status</p> <p>USFWS:</p> <p>USFS: Species of Conservation Concern in Forests (HLC)</p> <p>BLM:</p>	<p>Delineation Criteria</p> <p>Individual occurrences are generally based upon a discretely mapped area provided by an observer and are not separated by any pre-defined distance. Individual clusters of plants mapped at fine spatial scales (separated by less than approximately 25-50 meters) may be grouped together into one occurrence if they are not separated by distinct areas of habitat or terrain features. Point observations are buffered to encompass any locational uncertainty associated with the observation.</p>	<p>Last Updated</p> <p>Oct 21, 2022</p>
---	---	--	--

SO ID: 2137359

Acres: 3,104 Obs Count: 1 Earliest Obs: 2020 Recent Obs: 2020

SO Num: 0

Last Survey: Jun 20, 2020

Location: Hobson

OBS ID	OBSERVERS	OBSERVATION DATE	LOCATION (Calculated)	INFO
2137359	Bachen, Dan	Jun 20, 2020	County <i>Judith Basin, MT</i> QQLL 29B1 Location Hobson Precision 2000 meters	Documentation Type: Observation - Photographed

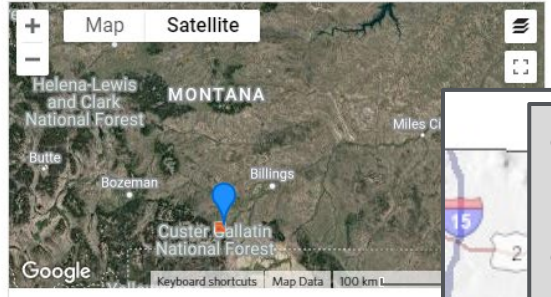
- Incidental observation of unidentified plant
- Identified via iNaturalist as Small-flower Columbine - SOC S2S3
- First observation submitted for area since 1991
- Confirmed presence within SO

Meadow Jumping Mouse (*Zapus hudsonius*) Research Grade

Follow

hydapse
4,850 observations

Observed: Jul 17, 2016 · 10:34 PM MDT
Submitted: Jul 17, 2020 · 3:53 PM MDT



Carbon County, MT, USA

You faved this!

Notes

Meadow Jumping Mouse (*Zapus hudsonius*)

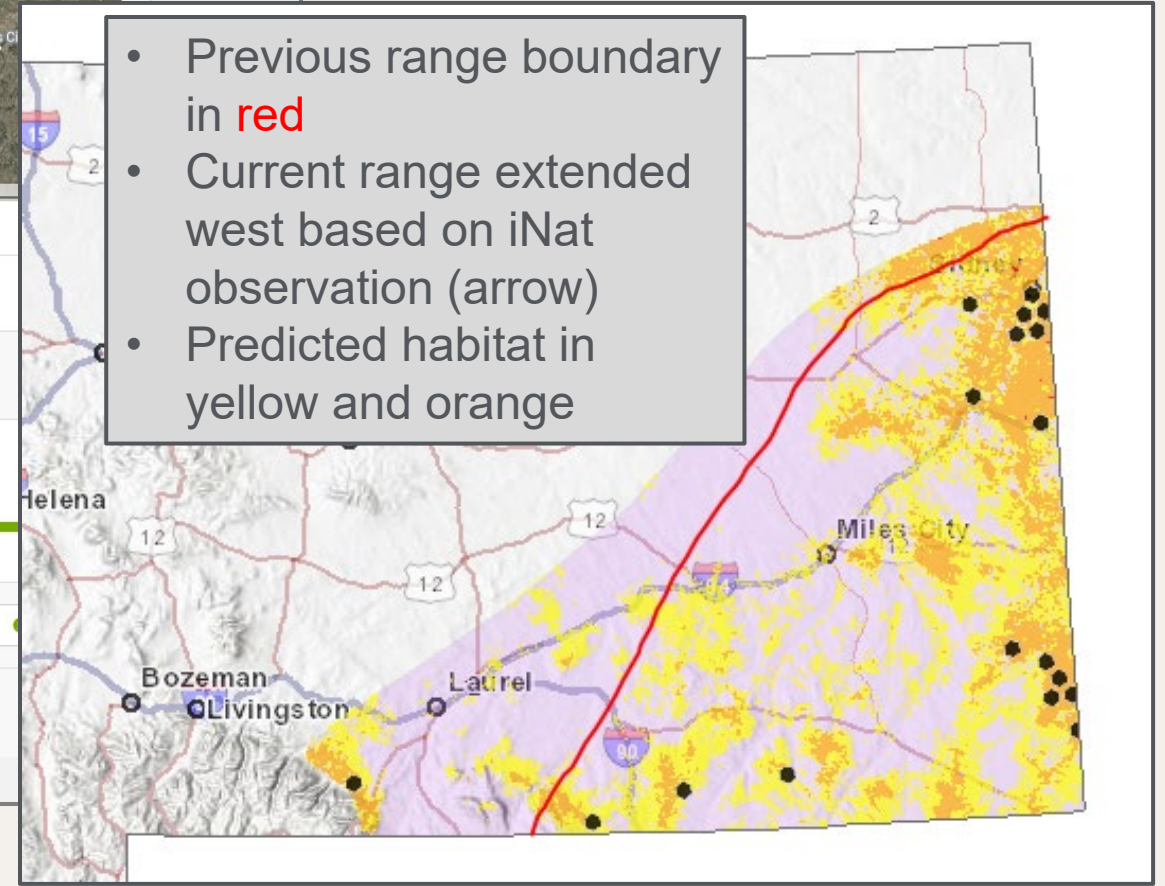
Activity

Community Taxon

Meadow Jumping Mouse (*Zapus hudsonius*)
Cumulative IDs: 2 of 2

- Detections of rare or under-surveyed species can
- Aid in refinement of range maps
 - Inform predicted habitat suitability models
 - Refine status ranks
 - Identify areas in need of survey

- Previous range boundary in red
- Current range extended west based on iNat observation (arrow)
- Predicted habitat in yellow and orange



Barred Tiger Salamander (*Ambystoma mavortium*)

Research Grade

Follow ▾



jameszaworski

692 observations

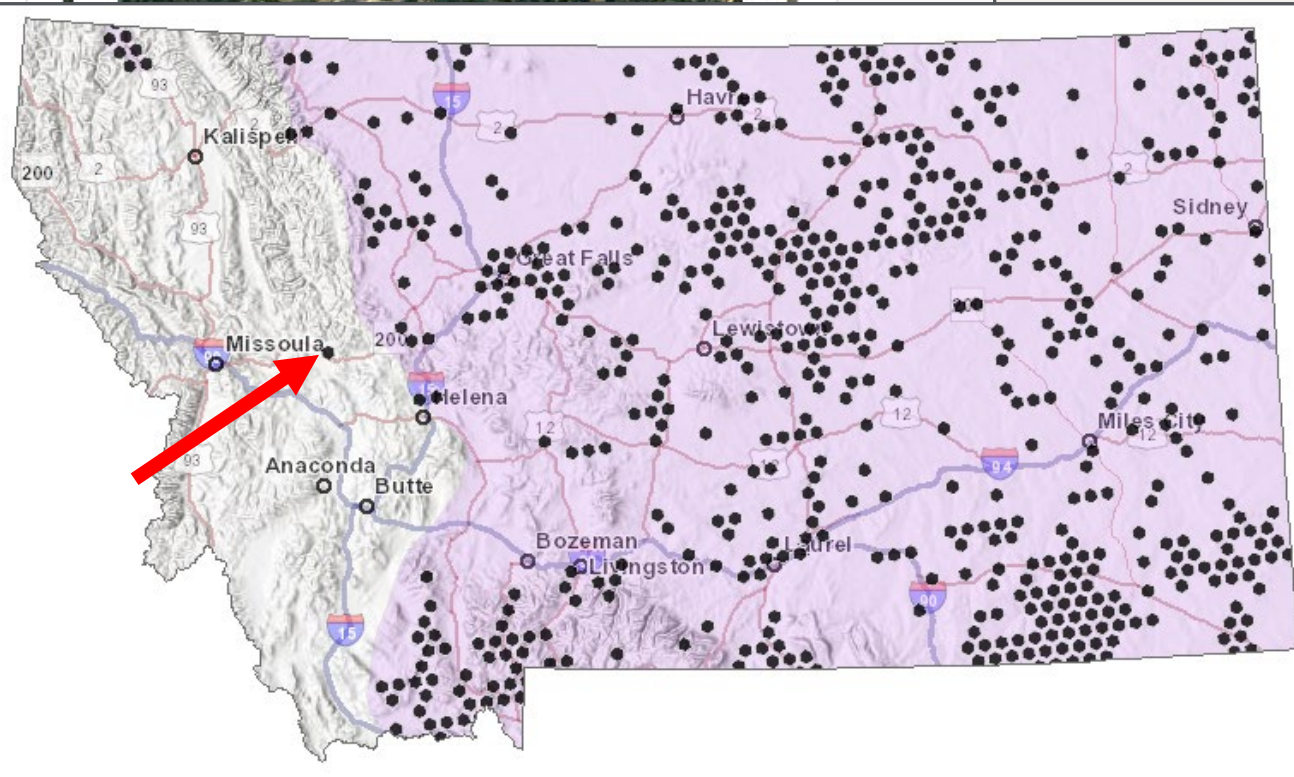


Observed:

Jul 29, 2019 · 5:20 PM HKT

Submitted:

Feb 7, 2021 · 2:06 AM MST




Notes

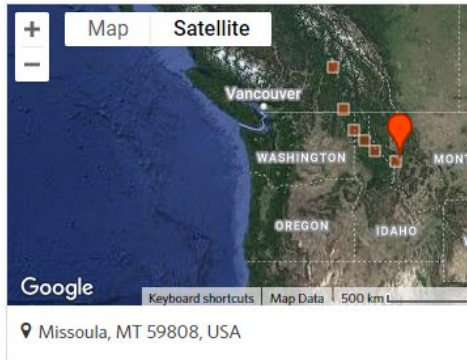
I came across this red sided garter snake which was consuming a tiger salamander, and it regurgitated the meal.

Roman Snail (*Helix pomatia*) ! Research Grade



 aeb1984
🌿 294 observations

Observed: May 27, 2021 · 2:52 PM MDT Submitted: May 28, 2021 · 8:01 AM MDT



🌟 Be the first to fave this observation!

Activity

 aeb1984 suggested an ID 🗑️ ID Withdrawn 2y | ▾

 Oregon Forestsnail
Allogona townsendiana


Community Taxon

Roman Snail (*Helix pomatia*)
Cumulative IDs: 4 of 4

0 2/3rds

- Observations of nonnative species can track invasion/spread
- Comments can provide context as to why this species is present

From an observation in Idaho

 Roman Snail
Helix pomatia

verminsupremes suggested an ID* ⚡ Maverick 2y | ▾

 Garden Snail
Cornu aspersum

Compare Agree

Roman snails are only in Europe.

* verminsupremes disagrees this is Roman Snail (*Helix pomatia*)



kintauna commented 2y | ▾

@jacknife we had a restaurant in the 1990's burn down and some of the Roman snails escaped/survived and the climate of the Idaho panhandle has allowed them to breed and flourish. They are an invasive species for the area.



featherlessbiped commented 2y | ▾

@jacknife helix pomatia has distinct texturing on the body that cornu aspersum lack, as well as a much "duller" shell (in terms of color) than cornu aspersum



charlie_garcia_spiegel suggested an ID* 🗑️ ID Withdrawn 2y | ▾

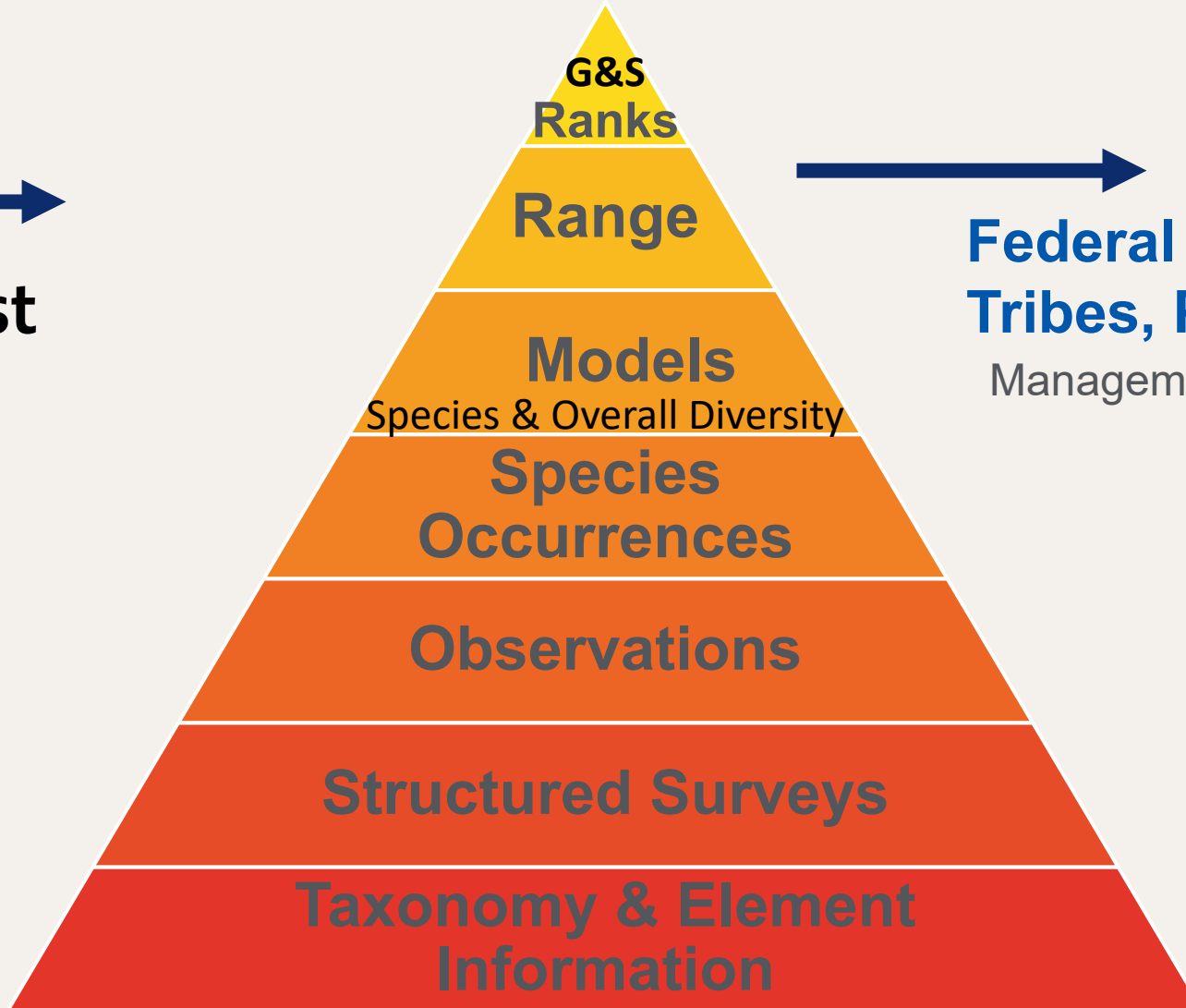
 Garden Snail
Cornu aspersum

*charlie_garcia_spiegel disagrees this is Roman Snail (*Helix pomatia*)

eBird



iNaturalist



**Federal and State Agencies,
Tribes, Private Consultants, NGOs**
Management Decisions

iNaturalist Resources

Questions? dbachen@mt.gov

- **Seek by iNaturalist for assistance with identification**
 - https://www.inaturalist.org/pages/seek_app
- **iNaturalist Resources for observers**
 - <https://www.inaturalist.org/pages/video+tutorials>
- **Montana Natural Heritage Observations Project**
 - <https://www.inaturalist.org/projects/montana-natural-heritage-observations>
- **How to submit data to the Montana Natural Heritage Observations Project**
 - <https://www.youtube.com/watch?v=uiXwDiAuXxw>
- **Individuals with expertise willing to be tagged to assist with ID in Montana**
 - Scott Mincemoyer (vascular plants): [@scott_mt](#)
 - Peter Achuff (vascular plants): [@plachuff](#)
 - Kenda Herman (vascular plants): [@kendarae](#)
 - Dan Bachen (general resource, vertebrates): [@dbachen](#)
 - Bryce Maxell (general resource, vertebrates): [@bmaxell](#)
 - Alexis McEwan (amphibians, reptiles): [@lex_13](#)
 - Bo Crees (birds): [@bocrees](#)
 - Ian Foley (invertebrates): [@ian26](#)
 - Noah Siegel (fungi): [@noah_siegel](#)
 - Ryan Patrick (fungi): [@biglaughinggym](#)