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Oregon State Rank Assessment for Mountain Townsendia (Townsendia montana)

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Natural Heritage Ranking Form - Oregon State Rank

Oregon Ranking Form **Mountain townsendia (Townsendia montana)** **Oregon Biodiversity Information Center**

SPECIES ASSESSED

Scientific Name ***Townsendia montana*** **ELCODE** PDAST9C0Y0

Common Name **Mountain townsendia** **Element ID** 8352

Species Concept Reference Citation

Flora of North America Editorial Committee (FNA). 2006b. Flora of North America north of Mexico. Vol. 20. Magnoliophyta: Asteridae, part 7: Asteraceae, part 2. Oxford Univ. Press, New York. xxii + 666 pp.

CONSERVATION STATUS RANK

Assigned Rank **S1**

Rank Assignment Author	Lindsey Wise	**Rank Review Date**	7/08/2024
Rank Factors Author	Lindsey Wise	**Rank Factors Date**	7/08/2024
Calculated Rank	S1	**Rank Change Date**	05/31/1984
Rank Methodology Used	Rank calculation - Biotics v2		

Assigned Rank Reasons

Mountain Towsendia is among the rarest plants on the Wallowa-Whitman National Forest. It has only 7 known records and population counts are very small, not exceeding 30 plants. Mountain Townsendia occurrence on the Wallowa-Whitman National Forest is unique, as these sites are disjunct by several hundred miles from the bulk of the species' range in Idaho. Its small population sizes make it highly vulnerable to local extinction from stochastic events, such as landslides, plus its high elevation habitat, generally above 8000 ft., makes it highly vulnerable to climate change, which is predicted to lead to alpine habitats becoming forested. (Eugene Yates comment in Campbell & Robinson 2024)

RANGE/DISTRIBUTION

Range Extent

Rating <100 square km (less than about 40 square miles)

Estimate 50 **Unit Used for Estimate** Square Kilometers

Comments Only known from the Eagle Cap WA in the Wallowa Mts.

Area of Occupancy

Grid Cell Size

Rating (as Number of 4 km2 Grid Cells)

Comments

ABUNDANCE AND CONDITION

Number of Occurrences

Rating 6 - 20

Estimate 7

Comments

Population Size

Rating 1 - 1000 individuals

Comments

Sites with plant counts have recorded few to 30 plants, but many sites have not been revisited recently.

Good Viability/Ecological Integrity

Number of Occurrences with Good Viability/Ecological Integrity

Rating

Comments

All sites are within a wilderness area.

Number of Protected and Managed Occurrences C = Several (4-12) occurrences appropriately protected and managed

Number of Protected and Managed Occurrences Comments

All sites are within a wilderness area.

THREATS

Threat Category Code	Threat Category	Calculated Impact	Scope	Severity	Timing	Comments
11	Climate change & severe weather	AC = Very high - medium	Pervasive: Affects all or most (71-100%) of the total population or occurrences or extent	Extreme - moderate	High: Continuing	Subalpine/alpine habitat vulnerable to change.
7	Natural system modifications	BC = High - medium	Large: Affects most (31-70%) of the total population or occurrences or extent	Extreme - moderate	High: Continuing	
7.1	Fire & fire suppression	BC = High - medium	Large: Affects most (31-70%) of the total population or occurrences or extent	Extreme - moderate	High: Continuing	
7.1.1	Increase in fire frequency/intensity	BC = High - medium	Large: Affects most (31-70%) of the total population or occurrences or extent	Extreme - moderate	High: Continuing	

Calculated Overall Threat Impact AC = Very high - medium

Assigned Overall Threat Impact B = High

Overall Threat Impact Comments

Mountain townsendia is threatened by fires including in the Wallowa Whitman National Forest where past wildfires including the 2015 Falls Creek Fire, the 2014 Hurricane Creek Fire, and 2014 West Fork Fire have come close to populations (CalTopo 2023, OregonFlora 2023). Subalpine and alpine systems that are occupied by Mountain townsendia in the Blue Mountains are predicted to be vulnerable to replacement by grasses, and pines by the end of the 21st century (Kerns et al. 2018).

TRENDS

Short-Term Trend

Rating U = Unknown

Long-Term Trend

Rating G = Relatively Stable (<=10% change)

OTHER FACTORS

Intrinsic Vulnerability Rating

Comments

Environmental Specificity Rating Narrow. Specialist or community with key requirements common.

Comments

Alpine and subalpine meadows, slopes, ridges

ADDITIONAL SPECIES INFORMATION

Oregon Habitat Comments

Sandy or gravelly open places and among rocks on exposed cliffs and ridges, 7500 to about 9800 feet.

RANKING REFERENCES

Short Citation Author	Year	Full Citation
CalTopo	2023	CalTopo. 2023. CalTopo Backcountry Mapping. Website: https://caltopo.com/map.html#ll=38.78835,-98.39355&z=5&b=mbt [accessed February 2023].
Campbell & Robinson	2024	Campbell, Gabriel and Neal Robinson. 2024. Townsendia montana species account for potential Species of Conservation Concern, Blue Mountains National Forests. Developed by ORBIC for USDA Forest Service, Pacific Northwest Region. Institute for Natural Resources - Portland State University, Portland, OR.
Gene Yates		Yates, Gene. Retired. Previously botanist for Malheur National Forest, 1990s, and Wallowa-Whitman National Forest, 2010-2020s.
Kerns et al.	2018	Kerns B.K., D.C. Powell, S. Mellmann-Brown, G. Carnwath, and J.B. Kim. 2018. Effects of projected climate change on vegetation in the Blue Mountains ecoregion, USA. Climate Services 10:33-43. Available at: https://doi.org/10.1016/j.cliser.2017.07.002
OregonFlora	2023	OregonFlora. 2023. OregonFlora website, including atlas, specimen and observation dataset, and plant descriptions. oregonflora.org

RESOURCES

Oregon Biodiversity Information Center, Institute for Natural Resources
Portland State University, Mail Stop: INR, PO Box 751, Portland, OR 97207-0751 Phone: 503-725-9950

Additional ORBIC species ranking forms posted at
https://inr.oregonstate.edu/orbic/rare-species/ranking-documentation

Information on Natural Heritage ranking methodology is available at
http://www.natureserve.org/biodiversity-science/publications/natureserve-conservation-status-assessments-methodology-assigning

The Conservation Rank Calculator is developed and maintained by NatureServe and is available from
http://www.natureserve.org/conservation-tools/conservation-rank-calculator

ASSESSMENT CITATION

Lindsey Wise. 2024. Oregon state rank assessment for Mountain townsendia (Townsendia montana). Oregon Biodiversity Information Center. Institute for Natural Resources, Portland State University, Portland, OR.