

Species:
Gentiana plurisetosa
Bristly gentian
 Vascular Plant
 SW Oregon

Index Result:
Highly Vulnerable
Confidence High
 (based on entered data)
 Date Assessed 1/13/2020
 GRank G2G3
 SRank S1
 Assessor Sue Vrillakas

Scientific Name
 Common Name
 Taxonomic Group
 Geographic Area
 Cave/Ground Water Obligate: No
 Migratory area included in assessment: No

Climate Change Vulnerability Index Values: (greatest score shown when range was selected)

Category	Factor	Score	Comments
Temperature Scope (predicted increase)	A >6.0F	0	
	A 5.5F	0	
	A 5.1F	0	
	A 4.5F	0	
	A 3.9F	0	
	A <3.9F	100	
Hamon AET:PET Moisture Metric Scope	< -0.119	0	
	-0.119	0	
	-0.096	100	
	-0.073	0	
	-0.05	0	
>-0.028	0		
Sea level rise	B1	N	Grows in mountain meadows, not affected by sea level rise Limited to mountain wet meadows; see "Dispersal and Movements"
Natural barriers	B2a	N	
Anthropogenic barriers	B2b	N	
Climate Change mitigation	B3	N	
Dispersal/Movement	C1	SI	Appears to have strong site fidelity; dispersal mechanism unknown
Historical thermal niche	C2ai	Inc	About 40% range in 37-47 deg mean variation
Physiological thermal niche	C2aii	GI	
Historical hydrological niche	C2bi	Inc	Highest value: 62.5115; lowest: 55.0652; difference 7.4463
Physiol. hydrological niche	C2bii	GI	
Disturbance dependence	C2c	SI	May be affected by increased fire frequency and intensity
Ice/snow dependence	C2d	N	
Physical habitat restrictions	C3	N	
Other spp create habitat	C4a	N	None known
Dietary Versatility	C4b	U	
Pollinator Versatility	C4c	N	None known
Other spp for dispersal	C4d	N	None known
Pathogen sensitivity	C4e	N	None known
Competition sensitivity	C4f	N	None known
Interspecific Relationship	C4g	U	
Measured genetic variation	C5a	U	
Bottlenecks	C5b	U	
Plant reproductive system	C5c	U	
Phenological response	C6	U	
Documented response	D1	U	

Modeled change	D2	U
Modeled overlap	D3	U
Modeled protected areas	D4	U

Additional Notes:

Range map created using ArcMap Miminum Mapping Boundary-Convex Hull on ORBIC element occurrence data. Climate and precipitation data from Climate Wizard using the A1B emissions scenario and ensemble average general circulation model: Historical = 1951-2006; Future = mid-century (2050s); Hamon AET:PET moisture metric (Hamon 1961).

Detailed definitions of criteria and methodology can be found in the documentation at <http://www.natureserve.org/conservation-tools/climate-change-vulnerability-index>

Legend and Definitions:

Affect to Vulnerability:
GI = Greatly increase
Inc = Increase
SI = Somewhat increase
N = Neutral
U = Unknown

Index Scores:

Extremely Vulnerable: Abundance and/or range extent within geographical area assessed extremely likely to substantially decrease or disappear by 2050.
Highly Vulnerable: Abundance and/or range extent within geographical area assessed likely to decrease significantly by 2050.
Moderately Vulnerable: Abundance and/or range extent within geographical area assessed likely to decrease by 2050.
Less Vulnerable: Available evidence does not suggest that abundance and/or range extent within the geographical area assessed will change (increase/decrease) substantially by 2050. Actual range boundaries may change.
Insufficient Evidence: Information entered about a species' vulnerability is inadequate to calculate an Index score.

Citation:

Oregon Biodiversity Information Center. 2020. Climate Change Vulnerability Index assessment for Bristly gentian (*Gentiana plurisetosa*). Institute for Natural Resources, Portland State University, Portland, OR.