

Scientific Name	Species: <i>Romanzoffia thompsonii</i>	Index Result: Moderately Vulnerable
Common Name	Thompson mistmaiden	Confidence Moderate
Taxonomic Group	Vascular Plant	(based on entered data)
Geographic Area	Western Oregon	Date Assessed 1/9/2020
Cave/Ground Water Obligate:	No	GRank G3
Migratory area included in assessment:	No	SRank S3
		Assessor Sue Vrillakas

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	30	
	-0.096	67	
	-0.073	3	
	-0.05	0	
	>-0.028	0	
Sea level rise Natural barriers Anthropogenic barriers Climate Change mitigation	B1	N	
	B2a	N	
	B2b	N	
	B3	N	
Dispersal/Movement	C1	SI	Patchy scattered distribution; appears to have somewhat high site fidelity
Historical thermal niche	C2ai	Inc	About 50% falls within "increase vulnerability" category; 50% in "somewhat increase"
Physiological thermal niche	C2aii	N	Grows on rocky cliff faces, seeps and under overhangs; affected by hydrological changes (see 2b)
Historical hydrological niche	C2bi	N	Highest reading: 109.8149; lowest 38.707; difference= 71.1079
Physiol. hydrological niche	C2bii	GI	Grows in seasonally wet, usually open rocky, sunny sites. Requires saturated or unundated soil during the early part of its growing season. Sites then experience late summer drought. Facultative if not obligate wetland species (Martalla 1996)
Disturbance dependence	C2c	SI	May be negatively impacted by increased fire frequency and intensity; also negatively impacted from succession from open to closed forests.
Ice/snow dependence	C2d	N	
Physical habitat restrictions	C3	N	Habitat not uncommon in western Oregon
Other spp create habitat	C4a	N	
Dietary Versatility	C4b	U	
Pollinator Versatility	C4c	SI	Assumed to be somewhat to neutral
Other spp for dispersal	C4d	N	Assumed to be none

Pathogen sensitivity	C4e	N	Assumed to be none
Competition sensitivity	C4f	N	None known
Interspecific Relationship	C4g	N	
Measured genetic variation	C5a	U	
Bottlenecks	C5b	N	
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).

References:

Martalla, Vernon M. 1996. *Romanzoffia thompsonii* (Hydrophyllaceae), a new species from Oregon. *Madrono* (43) 3: 404-414.

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 Thompson mistmaiden (*Romanzoffia thompsonii*). Institute for Natural Resources, Portland State University, Portland, OR.