

Scientific Name	<b>Species:</b> <i>Artemisia pycnocephala</i>	<b>Index Result:</b> <b>Highly Vulnerable</b>
Common Name	<b>Coastal sagewort</b>	<b>Confidence</b> <b>Moderate</b>
Taxonomic Group	Vascular Plant	(based on entered data)
Geographic Area	Western (coastal) Oregon	Date Assessed    1/7/2020
Cave/Ground Water Obligate: No		GRank                G4G5
Migratory area included in assessment:	No	SRank                S1
		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	0	
	-0.096	100	
	-0.073	0	
	-0.05	0	
	>-0.028	0	
Sea level rise	B1	GI	All occurrences along the coast; dune or headland; inundation and flooding not as likely threat as storm surges and frequency causing changes in landscape and habitat Restricted to dunes and vertical surfaces but should be able to shift within its range
Natural barriers	B2a	Inc	
Anthropogenic barriers	B2b	N	
Climate Change mitigation	B3	U	
Dispersal/Movement	C1	U	Temperature variation: high 28.248, low 24.157  Hydrologic variation: high 75.3176; low 69.4228
Historical thermal niche	C2ai	GI	
Physiological thermal niche	C2aii	N	
Historical hydrological niche	C2bi	Inc	
Physiol. hydrological niche	C2bii	N	
Disturbance dependence	C2c	N	
Ice/snow dependence	C2d	N	
Physical habitat restrictions	C3	N	
Other spp create habitat	C4a	N	
Dietary Versatility	C4b	U	
Pollinator Versatility	C4c	U	
Other spp for dispersal	C4d	N	
Pathogen sensitivity	C4e	N	
Competition sensitivity	C4f	N	
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 convex hull on Oregon occurrences, then edited to match more closely the coast line.

**References:****Data sources and notes:**

Range map created using ArcMap Minimum 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:**

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

**Index Scores:**

<b>Extremely Vulnerable:</b> Abundance and/or range extent within geographical area assessed extremely likely to substantially decrease or disappear by 2050.
<b>Highly Vulnerable:</b> Abundance and/or range extent within geographical area assessed likely to decrease significantly by 2050.
<b>Moderately Vulnerable:</b> Abundance and/or range extent within geographical area assessed likely to decrease by 2050.
<b>Less Vulnerable:</b> 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.
<b>Insufficient Evidence:</b> 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 Coastal sagewort (*Artemisia pycnocephala*). Institute for Natural Resources, Portland State University, Portland, OR.