

Portland State University

PDXScholar

---

Institute for Natural Resources Publications

Institute for Natural Resources - Portland

---

6-28-2010

# Oregon State Ranking Assessment for Clustered Lady Slipper (*Cypripedium fasciculatum*)

Sue Vrilakas

*Oregon Biodiversity Information Center, sue.vrilakas@pdx.edu*

Follow this and additional works at: [https://pdxscholar.library.pdx.edu/naturalresources\\_pub](https://pdxscholar.library.pdx.edu/naturalresources_pub)



Part of the [Botany Commons](#)

Let us know how access to this document benefits you.

---

## Citation Details

Vrilakas, Sue, "Oregon State Ranking Assessment for Clustered Lady Slipper (*Cypripedium fasciculatum*)" (2010). *Institute for Natural Resources Publications*. 73.

[https://pdxscholar.library.pdx.edu/naturalresources\\_pub/73](https://pdxscholar.library.pdx.edu/naturalresources_pub/73)

This Report is brought to you for free and open access. It has been accepted for inclusion in Institute for Natural Resources Publications by an authorized administrator of PDXScholar. Please contact us if we can make this document more accessible: [pdxscholar@pdx.edu](mailto:pdxscholar@pdx.edu).

# Natural Heritage Ranking Form - Oregon State Rank

Oregon Ranking Form    **Clustered lady's-slipper (Cypripedium fasciculatum)**

Oregon Biodiversity Information Center

## SPECIES ASSESSED

**Scientific Name**    *Cypripedium fasciculatum*

**ELCODE**    PMORC0Q060

**Common Name**    **Clustered lady's-slipper**

**Element ID**    9309

### Species Concept Reference Citation

Kartesz, J.T. 1994. A synonymized checklist of the vascular flora of the United States, Canada, and Greenland. 2nd edition. 2 vols. Timber Press, Portland, OR.

## CONSERVATION STATUS RANK

**Assigned Rank**    **S2**

**Rank Assignment Author**    Vrilakas, Sue

**Rank Review Date**    6/28/2010

**Rank Factors Author**    Vrilakas, Sue

**Rank Factors Date**    06/28/2010

**Calculated Rank**    S1

**Rank Change Date**    01/15/2003

**Rank Methodology Used**    Legacy Rank calculation - Excel v3.1x

### Assigned Rank Reasons

Large number of occurrences but restricted to SW Oregon. Recent studies showing that this metapopulation is declining with probability of extinction increasing for any given occurrence as 14% after 1 year, 31% after 10 years, 58% after 20 and 75% after 27 years (Massatti et al. 2009)

## RANGE/DISTRIBUTION

### Range Extent

**Rating**    1000-5000 square km (about 400-2000 square miles)

**Comments**    4880 sq. miles, convex hull ORBIC eos; Baker County site not included, not seen 1957 and no other populations found in the intervening years or in areas between this site and the known extant sites in SW Oregon.

### Area of Occupancy

#### Grid Cell Size

**Rating (as Number of 4 km<sup>2</sup> Grid Cells)**    G = 501-2,500

**Comments**    1182-1206 grid cells

## ABUNDANCE AND CONDITION

### Number of Occurrences

**Rating**    > 300

#### Comments

App. 304-378 extant occurrences. 508 total occurrences with 60% survival

### Population Size

**Rating**    2500 - 10,000 individuals

#### Comments

About 7800 plants

### Good Viability/Ecological Integrity

#### Number of Occurrences with Good Viability/Ecological Integrity

**Rating**    Some (13-40)

### Number of Protected and Managed Occurrences

A = None. No occurrences appropriately protected and managed

**Number of Protected and Managed Occurrences Comments**

Only 1 EO within a protected area (Kalmiopsis WA) but with rather vague data--no population info, no date--appears in a plant species list.

**THREATS**

<u>Threat Category Code</u>	<u>Threat Category</u>	<u>Calculated Impact</u>	<u>Scope</u>	<u>Severity</u>	<u>Timing</u>	<u>Comments</u>
5	Biological resource use	A = Very high	Pervasive: Affects all or most (71-100%) of the total population or occurrences or extent	Extreme: Likely to destroy or eliminate occurrences or habitat, or reduce population 71-100%		
5.3	Logging & wood harvesting	A = Very high	Pervasive: Affects all or most (71-100%) of the total population or occurrences or extent	Extreme: Likely to destroy or eliminate occurrences or habitat, or reduce population 71-100%		Species is very vulnerable to disturbance; rhizomes only about 3-5 cm below surface (Harrod 1994 pers. comm.)

**Calculated Overall Threat Impact**

**Assigned Overall Threat Impact**      A = Very high  
**Overall Threat Impact Comments**

Species is very vulnerable to disturbance; rhizomes only about 3-5 cm below surface (Harrod 1994 pers. comm)

**TRENDS****Short-Term Trend**

**Rating**      C = Decline of 70-80%

**Comments**

Extinction rate of population 75% after 27 years (Massatti et al. 2009). Recruitment rate unknown but appears to be extremely low (Mousseaux 2010 pers. comm.)

**Long-Term Trend**

**Rating**      C = Decline of 70-80%

**ADDITIONAL SPECIES INFORMATION****Oregon Habitat Comments**

Undisturbed mixed conifer/hardwood forest with filtered sunlight. Douglas fir is almost always present. In southwestern Oregon, madrone and Pacific dogwood can be indicators. In northeastern Oregon, Ponderosa pine can be important. Parent material and moisture requirements vary widely. Shade varies from 60 to 100 %. In Washington, populations found mostly in association with *Abies grandis*. Harris hypothesizes that a fungus associated with deer or elk feces is required for seed germination, given frequency with which populations are found near game trails.

<b>RANKING REFERENCES</b>
---------------------------

<u>Short Citation</u>	<u>Author</u>	<u>Year</u>	<u>Full Citation</u>
Harrod		1994	Harrod, Richy. 1994. District Botanist, Leavenworth Ranger District, Wenatchee National Forest, Leavenworth, WA.
Kagan		1990	Kagan, J. S. 1990. <i>Cypripedium fasciculatum</i> Draft Species Management Guide for Southwestern Oregon: Klamath NF (in Oregon), Rogue River NF, Siskiyou NF, Umpqua NF, and Medford BLM. Unpublished report, Oregon Natural Heritage Program, Portland, OR. 19 pp. plus maps.
Massatti et al.		2009	Massatti, R.T., A.S. Thorpe, and T.N. Kaye. 2009. Population viability analysis for the clustered lady's-slipper ( <i>Cypripedium fasciculatum</i> ). A Cooperative Challenge Cost Share Project funded jointly by Bureau of Land Management, Medford District and Institute for Applied Ecology, Corvallis, OR. 10 pp.
Mousseaux		2010	Mousseaux, Mark. 2010. District Botanists, Medford District BLM, Medford, OR.

<b>RESOURCES</b>
------------------

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>

<b>ASSESSMENT CITATION</b>
----------------------------

Vrilakas, Sue. 2010. Oregon state rank assessment for Clustered lady's-slipper (*Cypripedium fasciculatum*). Oregon Biodiversity Information Center. Institute for Natural Resources, Portland State University, Portland, OR.