

Natural Heritage Ranking Form - Oregon State Rank

Oregon Ranking Form Obscure bumblebee (*Bombus caliginosus*)

Oregon Biodiversity Information Center

SPECIES ASSESSED

Scientific Name	<i>Bombus caliginosus</i>	ELCODE	IIHYM24380
Common Name	Obscure bumblebee	Element ID	13672

Species Concept Reference Citation

Williams, P. H. 2008a. *Bombus*, bumblebees of the world. Web pages based on Williams, P.H. 1998. An annotated checklist of bumblebees with an analysis of patterns of description (Hymenoptera: Apidae, Bombini). Bulletin of the Natural History Museum (Entomology) 67:79-152. Online. Available: <http://www.nhm.ac.uk/research-curation/research/projects/bombus/index.html>. Accessed 2008-Oct.

CONSERVATION STATUS RANK

Assigned Rank	S2?		
Rank Assignment Author	Gaines, E.	Rank Review Date	5/24/2019
Rank Factors Author	Gaines, E.	Rank Factors Date	06/28/2016
Calculated Rank	S3	Rank Change Date	05/24/2019
Rank Methodology Used	Rank calculator v.3.1x - 2011-2015 rank factors		

Assigned Rank Reasons

Substantial rangewide declines have been documented, but information on Oregon status is minimal. Collected recently at a few sites across the range in Oregon. More comprehensive surveys in Oregon are needed. Difficult to distinguish this bee from more common species (Hatfield et al. 2014).

RANGE/DISTRIBUTION

Range Extent

Rating	20,000-200,000 square km (about 8000-80,000 square miles)		
Estimate	80366	Unit Used for Estimate	Square Kilometer s
Comments	Range extent of Xerces records: 80,366 sq km		

Area of Occupancy

Grid Cell Size	4 km ² Grid Cells		
Rating (as Number of 4 km² Grid Cells)	G = 501-2,500		
Comments	257 collections sites (Xerces data), buffered to 5km yielded 2,134 4-km ² grid cells.		

ABUNDANCE AND CONDITION

Number of Occurrences

Rating	21 - 80
Estimate	52

Good Viability/Ecological Integrity

Number of Occurrences with Good Viability/Ecological Integrity

Rating	Few (4-12)
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Comments

Unknown, but only 8 sites with post-2000 records.

THREATS

Calculated Overall Threat Impact

Assigned Overall Threat Impact C = Medium
Overall Threat Impact Comments

Habitat loss to agricultural or urban development (McFrederick and LeBuhn 2006).

TRENDS**Short-Term Trend**

Rating U = Unknown

Comments

Hatfield et al. (2014) report average range wide declines of 64%, but information on declines in OR is unknown.

Long-Term Trend

Rating U = Unknown

RANKING REFERENCES

<u>Short Citation Author</u>	<u>Year</u>	<u>Full Citation</u>
Hatfield et al.	2014	Hatfield, R., Jepsen, S., Thorp, R., Richardson, L. & Colla, S. 2014. <i>Bombus caliginosus</i> . The IUCN Red List of Threatened Species 2014: e.T44937726A69000748. http://dx.doi.org/10.2305/IUCN.UK.2014-3.RLTS.T44937726A69000748.en . Downloaded on 28 June 2016.
McFrederick and LeBuhn	2006	McFrederick, Q. S., G. LeBuhn. 2006. Are urban parks refuges for bumble bees <i>Bombus</i> spp. (Hymenoptera: Apidae)? <i>Biological Conservation</i> , 129(3): 372-382. http://dx.doi.org/10.1016/j.biocon.2005.11.004 .
Xerces Society	2016	Xerces Society. 2016. Rare invertebrate dataset sent to ORBIC incl. multiple species with collection data.

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

Oregon Biodiversity Information Center. 2019. Oregon state rank assessment for Obscure bumblebee (*Bombus caliginosus*).
 Institute for Natural Resources, Portland State University, Portland, OR.