

# Alaska Natural Heritage Program

## Conservation Status Report

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*Bombus bifarius* Cresson, 1878

**Common Name:** Two Form Bumble Bee

<b>ELCODE:</b> IHHYM24070	<b>Taxonomic Serial No.:</b> 714787
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*Synonyms:* *Pyrobombus bifarius* Cresson 1878

*Taxonomy Notes:* Williams et al. (2014) report that DNA barcode data indicate this species has two lineages. However, the Barcode of Life Data System (BOLD) has all samples of this species (n=163) grouped in a single BIN (BOLD:AAB4830).

**Report last updated** – June 8, 2017

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### Conservation Status

G5 S3	ASRS: not yet ranked
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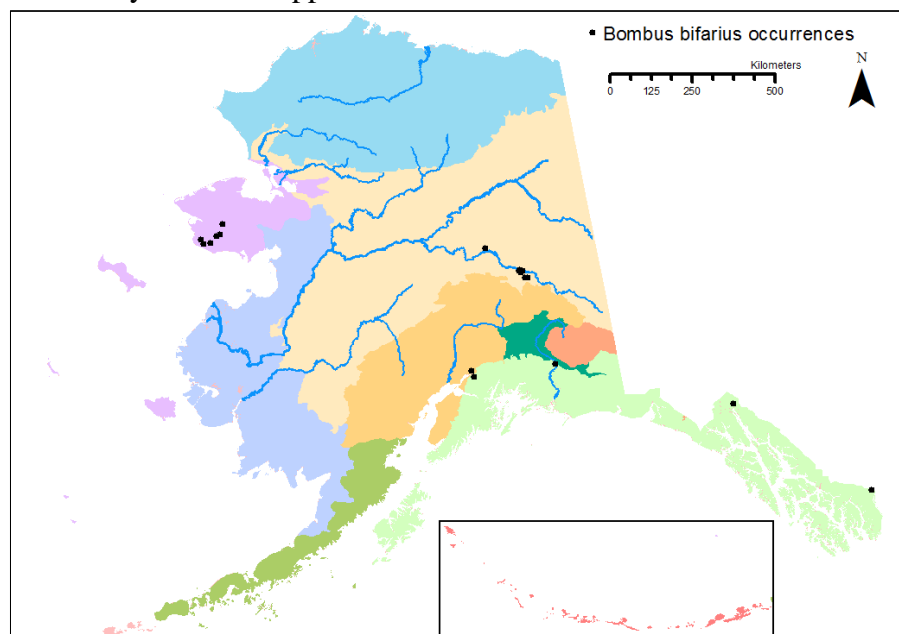
### Occurrences, Range

*Number of Occurrences:* 20, number of museum records: 3,646 (Canadian National Collection, Illinois Natural History Survey, University of Alaska Museum Insect Collection, University of Alberta Museums, Koch et al. 2015).

*AK Range Extent:* 359,987 km<sup>2</sup>; 4-km<sup>2</sup> grid cells: 19. Found on the Seward Peninsula, and in Interior Alaska, the Matanuska Valley and the Copper River Basin. Also in Haines and Alaska-Canada Border at Stewart.

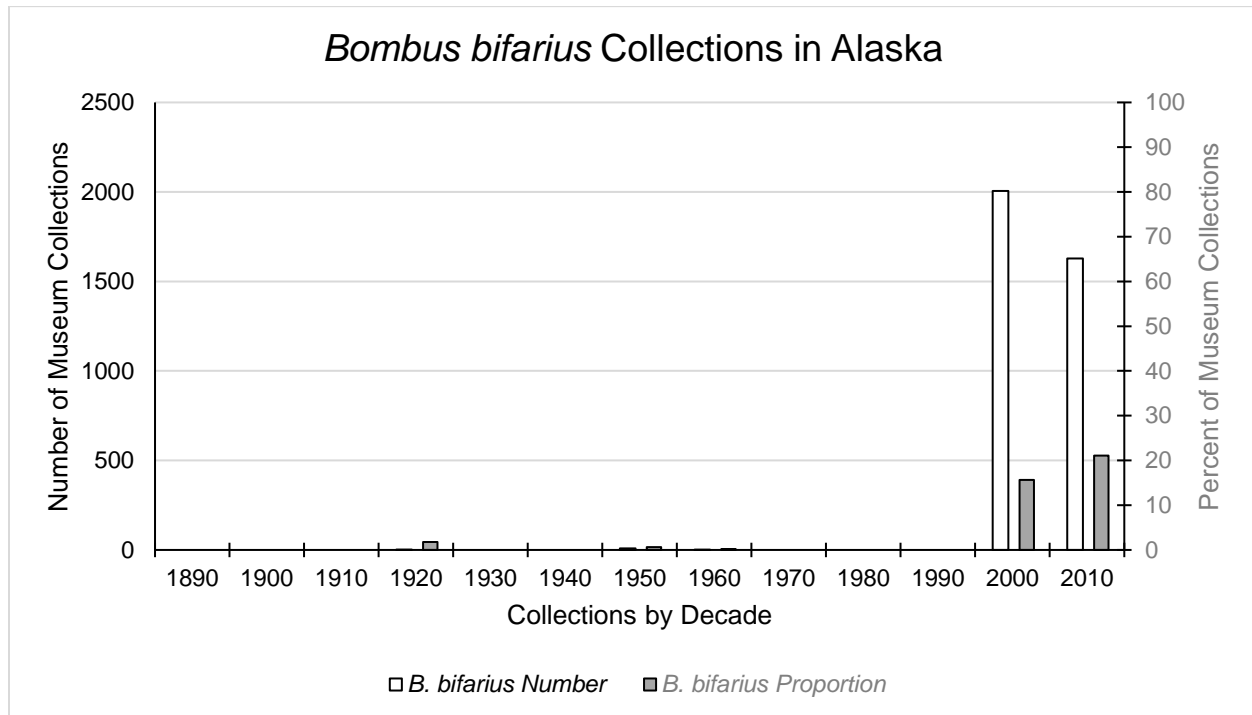
#### *North American*

*Distribution:* Alaska and south west Yukon Territory to British Columbia to the Pacific Northwest. In the Great Basin, Rocky Mountains, Arizona, New Mexico, Sierra Mountains and California Coast.



## Trends

Trends are based on museum voucher collections of all *Bombus* species. Short-term trends are focus the past two decades (2000's and 2010s), whereas long-term trends are based on all years. Data originate from museum voucher collections only and are summarized by decade. White bars indicate the number of voucher collections for the species. Grey bars indicate the percent of *Bombus bifarius* to all *Bombus* species.



*Short-term:* There is a significant (>10% change) increase in proportion of *B. bifarius* collection in Alaska in the last two decades.

*Long-term:* There is a significant (>10% change) increase in proportion of *B. bifarius* collection in Alaska since the 1920s.

## Threats

*Scope and Severity:* Unknown.

*Comments:* Unknown.

## Ecology

*Habitat:* Urban parks and gardens, shrublands, mountain meadows.

*Known Alaskan Floral Resources:* *Epilobium parviflorum*, *Melilotus albus*\*, *Vicia* spp.

\*denotes non-native species

*Nesting behavior:* underground but sometimes found on the surface.

*Parasitism*: unknown.

## Literature

GBIF.org (7th April 2017) GBIF Occurrence Download <http://doi.org/10.15468/dl.nvc9vf>

idigbio.org. (2017), 43395 records, accessed on 2017-03-01T21:39:42.991495, contributed by 10 Recordsets, Recordset identifiers:

<http://www.idigbio.org/portal/recordsets/a6eee223-cf3b-4079-8bb2-b77dad8cae9d> (43165 records); <http://www.idigbio.org/portal/recordsets/271a9ce9-c6d3-4b63-a722-cb0adc48863f> (56 records); <http://www.idigbio.org/portal/recordsets/4f436daa-01d5-4be6-b5c3-fdd255677536> (51 records); <http://www.idigbio.org/portal/recordsets/ea5f19e-ff6f-4d09-8b55-4a6810e77a6c> (37 records); <http://www.idigbio.org/portal/recordsets/5e893602-84ca-4c8c-bac1-99111c777582> (27 records); <http://www.idigbio.org/portal/recordsets/da67ebd9-52de-444d-b114-e23c03111ac6> (27 records); <http://www.idigbio.org/portal/recordsets/69037495-438d-4dba-bf0f-4878073766f1> (12 records); <http://www.idigbio.org/portal/recordsets/6539877e-82dc-485c-ad3d-038f383d5431> (9 records); <http://www.idigbio.org/portal/recordsets/db4bb0df-8539-4617-ab5f-eb118aa3126b> (6 records); <http://www.idigbio.org/portal/recordsets/fc628e53-5fdf-4436-9782-bf637d812b48> (5 records)

Koch JB, Cordes N, Solter LF, Griswold TL, Ikerd HW, Cameron SA, Lozier JD, Strange JP, Stewart I (2015): US *Bombus*, contemporary survey data of North American bumble bees (Hymenoptera, Apidae, *Bombus*) distributed in the United States. v2.4. ZooKeys. Dataset/Occurrence. <http://ipt.pensoft.net/resource?r=usbombus&v=2.4>

Pampell, R., Sikes, D., Pantoja, A., Holloway, P., Knight, C., Ranft, R. 2015. Bumble Bees (Hymenoptera: Apidae: *Bombus* spp.) of interior Alaska: Species composition, distribution, seasonal biology, and parasites. Biodiversity Data Journal 3: e5085. doi: 10.3897/BDJ.3.e5085

Williams, P. H., Thorp, R. W., Richardson, L. L., & Colla, S. R. (2014). *Bumble bees of North America: an identification guide*. Princeton University Press.

Woodard, H. (Feb. 28, 2017). Personal communication, email of collection data.

University of Alaska Museum Insect Collection. <http://dx.doi.org/doi:10.7299/X75D8S0H>. (Records Accessed 24<sup>th</sup> February 2017).