

Alaska Natural Heritage Program

Conservation Status Report

Bombus vancouverensis Cresson, 1878

Common Name: Two Form Bumble Bee

ELCODE: IIHYM24070	Taxonomic Serial No.: 714787
---------------------------	-------------------------------------

Synonyms: *Pyrobombus bifarius* Cresson, 1878; *Bombus 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). Ghisbain et al. (2020) concluded that *B. bifarius* sensu stricto does not occur in Alaska, and therefore all specimens are now *B. vancouverensis* and Sikes & Rykken (2020) concurred.

Report last updated – November 2, 2020

Conservation Status

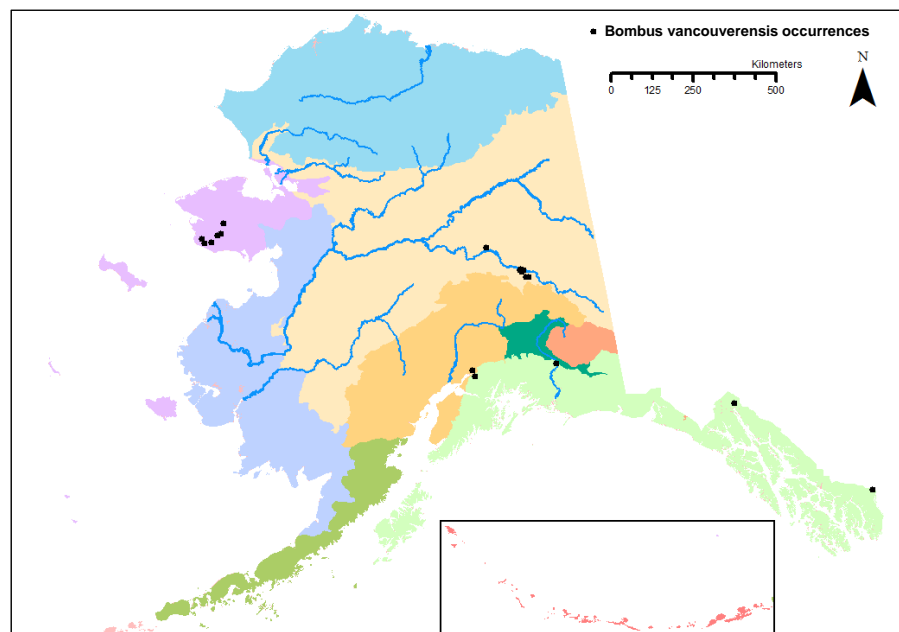
G5 S3

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 km²; 4-km² 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

Sikes, D., and J. Rykken. 2020. Update to the identification guide to female Alaskan bumble bees and a summary of recent changes to the Alaskan bumble bee fauna. AKES Newsletter 13: 31-38. doi:10.7299/X7GH9J8D.

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.



Alaska Natural Heritage Program
Alaska Center for Conservation Science
UNIVERSITY of ALASKA ANCHORAGE

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