

Alaska Natural Heritage Program

Conservation Status Report

Bombus polaris Curtis, 1835

Common Name: Polar Bumble Bee

ELCODE: IIHYM24300	Taxonomic Serial No.: 714831
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Synonyms: *Alpinobombus polaris* Curtis, 1835

Report last updated – June 12, 2017

Conservation Status

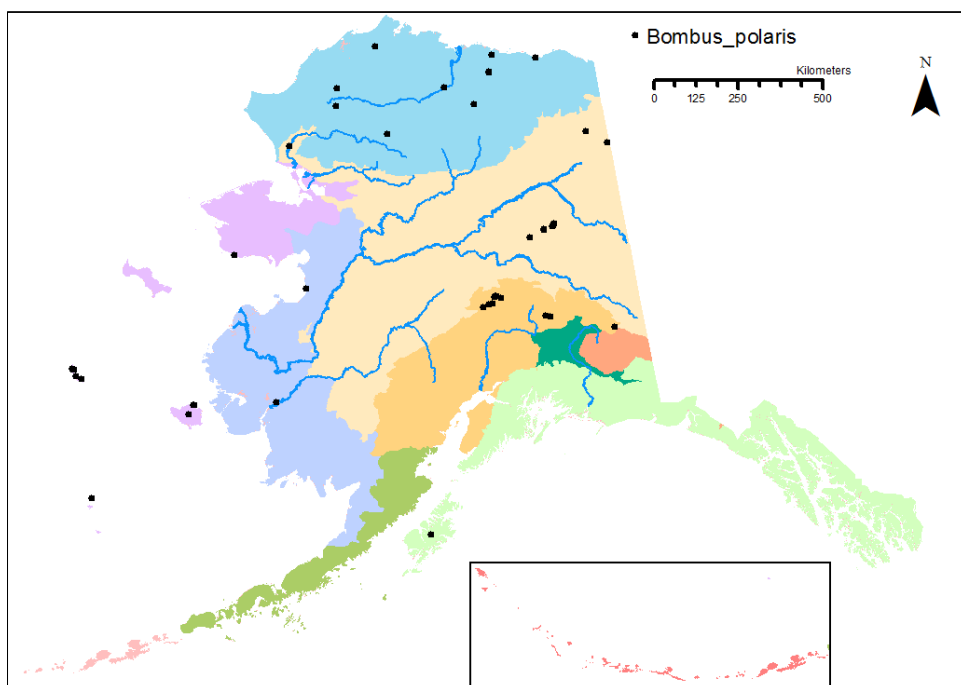
G5 S4	ASRS: not yet ranked
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Occurrences, Range

Number of Occurrences: 43; number of museum records: 226 (Canadian National Collection, U.C. Riverside, Illinois Natural History Survey, University of Alaska Museum Insect Collection).

AK Range Extent: 907,752 km² + Kodiak, St. Matthew, Nunivak, and Pribilof Islands; 4- km² grid cells: 44. Arctic influenced species, numerous collection in Bering Sea Islands and North Slope of Alaska. Also found in the Interior, Alaska Range Transition, and Copper River Basin. One occurrence on Kodiak Island.

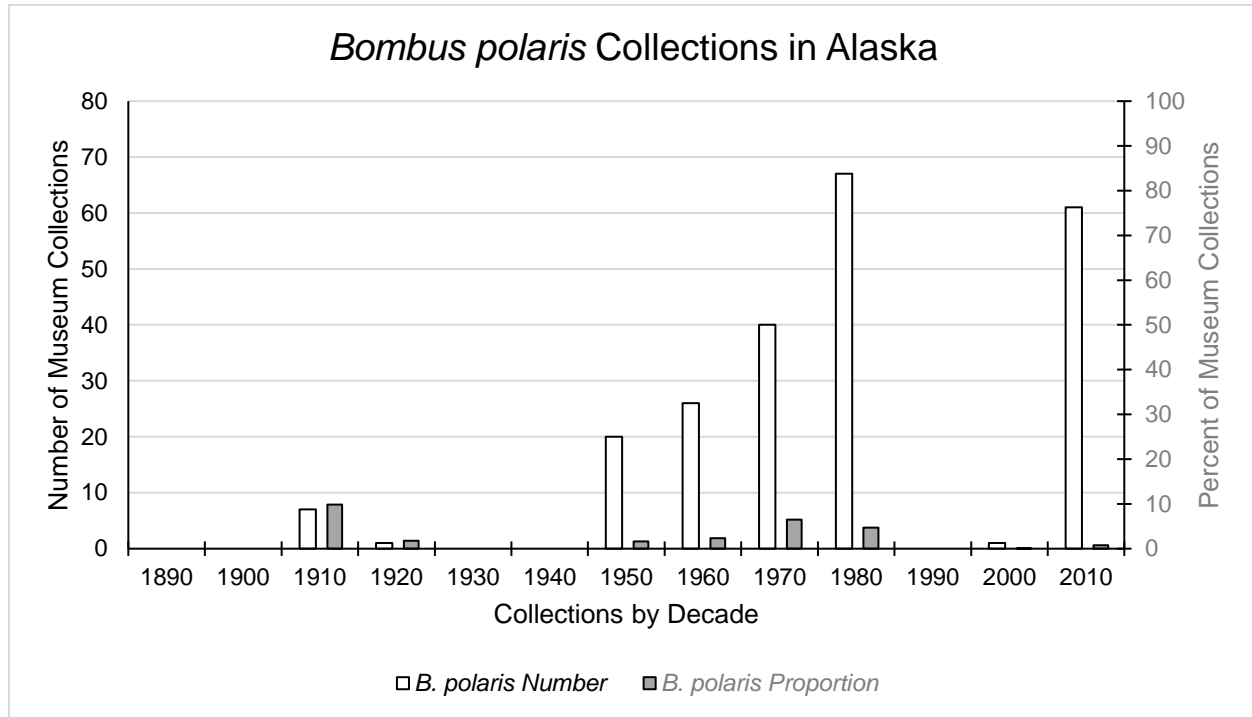
North American Distribution:
Arctic, Alaska and northern Arctic Canadian territories.



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 polaris* to all *Bombus* species.



Short-term: Remain stable (< 10% change) the past two decades.

Long-term: Significant (~10% change) in the proportion collected since the 1910s where the greatest proportion was collected.

Threats

Scope and Severity: Unknown.

Ecology

Habitat: Tundra.

Known Alaskan Floral Resources: *Arnica lessingii*, *Astragalus umbellatus*, *Hedysarum alpinum*, *Oxytropis* spp., *Pedicularis labradorica*, *Pedicularis* spp., *Pedicularis sudetica*, *Polygonum bistorta*, *Taraxacum officinale**
 *denotes non-native species

Nesting behavior: underground

Parasitism: host to *B. hyperboreus*

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.

Williams, P. H., A. M. Byvaltsev, B. Cederberg, et al. 2015. Genes Suggest Ancestral Colour Polymorphisms Are Shared across Morphologically Cryptic Species in Arctic Bumblebees. *PLOS ONE* 10:e0144544.

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 24th February 2017).