

Alaska Natural Heritage Program

Conservation Status Report

Bombus johanseni Sladen, 1919

Common Name: none

Synonyms: *Bombus sylvicola* var. *johanseni* Sladen, 1919; *Bombus interacti* Martinet, Brasero, & Rasmont 2019

ELCODE: IIHYM24590	Taxonomic Serial No.: 1131382
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Taxonomy Notes: This species was originally described by Sladen as a melanistic variety of *Bombus sylvicola* from a specimen from what is now Nunavut. The taxon did not receive much attention in subsequent treatments for western North America, but recent genetic and taxonomic work by Sheffield et al. (2020) indicate it is distinct from *B. lapponicus sylvicola*, being more closely related to the Eurasian taxon, *B. glacialis*. The name *B. interacti* was proposed in 2019 for specimens from northern Alaska originally identified as “*B. sylvicola*” that were shown by genetic analysis of *COI*, *PEPCK* genes, and chemical analysis to be distinct (Martinet et al. 2019). Sikes & Rykken (2020) concurred that this is a distinct species for Alaska. Since subsequent work has shown what was described as *B. interacti* is genetically and morphologically indistinguishable from the taxon previously described by Sladen, the original epithet elevated to the species level is the valid name (*Bombus johanseni*) (Sheffield et al. 2020).

Report last updated – November 2, 2020

Conservation Status

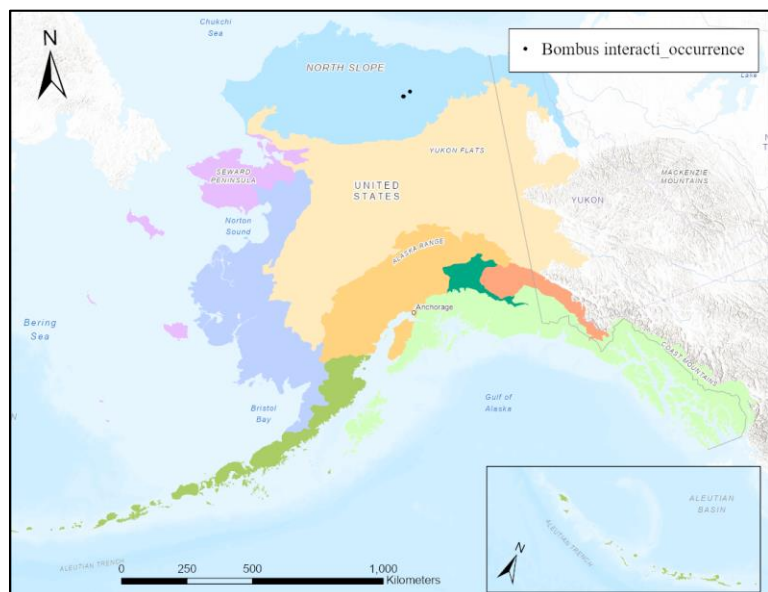
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Occurrences, Range

Number of Occurrences: Sheffield et al. (2020) show 2 known occurrences in Alaska and 15 occurrences globally.

AK Range Extent: Unknown. Described from a single location (two nearby sites) in northern Alaska.

North American Distribution: Seward Peninsula and Brooks Range Foothills in Alaska to northern Yukon, Northwest Territories, and Nunavut to



southern Baffin Island. It is possible that specimens originally determined to be “*B. gelidus*” in the Pribilof Islands, Aleutians and across south-coastal may in fact be *B. johanseni* (Sheffield et al. 2020). More dedicated survey and research is necessary to understand its distribution and abundance.

Trends

Unknown.

Threats

Scope and Severity: Unknown.

Comments: Unknown.

Ecology

Habitat: Shrub-graminoid and barren fellfield tundra.

Known Alaskan Floral Resources: *Epilobium latifolium*, *Oxytropis nigrescens* (see Martinet et al. 2019 original description, but misidentified the *Epilobium* species they collected the bee from; and see Fig. 3. in Sheffield et al. 2020).

Nesting behavior: Unknown.

Parasitism: Unknown.

Literature

Martinet, B., T. Lecocq, N. Braserio, M. Gerard, K. Urbanová, I. Valterová, J. O. Gjershaug, D. Michez, P. Rasmont. 2019. Integrative taxonomy of an arctic bumblebee species complex highlights a new cryptic species (Apidae: *Bombus*), Zoological Journal of the Linnean Society, Volume 187: 599–621. doi.org/10.1093/zoolinlean/zlz041.

Sheffield, C.S., R. Oram, J.M. Heron. 2020. *Bombus (Pyrobombus) johanseni* Sladen, 1919, a valid North American bumble bee species, with a new synonym and comparisons to other “red-banded” bumble bee species in North America (Hymenoptera, Apidae, Bombini). ZooKeys 984: 59–81. <https://doi.org/10.3897/zookeys.984.55816>.

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.