

Alaska Natural Heritage Program

Conservation Status Report

Osmia aquilonaria – Rightmyer, Griswold, and Arduser, 2010

Common Name: Northern mason bee

ELCODE: IIHYMA2510

Taxonomic Serial No.: 1160764

Report last updated – August 29, 2023

Conservation Status

G4 S2

Occurrences, Range

Number of Occurrences: 8 occurrences, 28 voucher records (University of Alaska Anchorage Entomology Collection; University of Alaska Museum Insect Collection; USDA-ARS Bee Biology and Systematics Laboratory)

AK Range Extent: 819,537 km²

Occupancy 4 km² grid cells: 8 occupied grids

Nowacki Ecoregions: Arctic tundra, Intermontane boreal, Aleutian mountains

North American Distribution: The majority of Alaskan occurrences for this species come from Denali National Park and Preserve and Taylor River/Yukon River area. Two outlying records, collected by B.S. Heming in 1961, are from Cape Thompson in the North Slope Borough, and somewhere in the vicinity of Sand Point on Popof Island in the Shumagin Islands (*Figure 1*) (rough coordinates to nearest whole number degrees). Determinations for the latter two specimens were made by M. Rightmyer in 2009 thus locations are presumed to be valid.

Alaska eastwards across the Yukon, British Columbia, Northwest Territories, Nunavut, Ontario, Quebec, to Nova Scotia. In the lower United States, it has been documented in Wyoming (Ascher and Pickering 2023).

Ecology

Habitat: Although relatively few specimens have been collected thus far, they occur in various habitats across a large geographic range. In Alaska, this species has been documented in various habitat types including sandy steppe bluffs, dwarf shrub tundra, rocky alpine, open mixed forest, open needle forest, and dry herbaceous.

Host Plants: *Arnica alpina*, *Lupinus arcticus*, *Oxytropis*

Life History: This is a solitary bee species. Nesting substrate for females has not yet been documented.

Trends

Short-term: N/A, insufficient data

Long-term: N/A, insufficient data

Threats

Scope and Severity: Three (of eight) known Alaskan occurrences lie within Denali National Park and Preserve.

References

Ascher J.S. and J. Pickering. 2023. Discover Life bee species guide and world checklist (Hymenoptera: Apoidea: Anthophila). <https://www.discoverlife.org/> (accessed August 29, 2023)

Global Biodiversity Information Facility. <https://www.gbif.org>. GBIF occurrence download <https://doi.org/10.15468/dl.qdbe6u> (accessed April 20, 2021)

Integrated Taxonomic Information System (ITIS). <https://www.itis.gov> (accessed August 29, 2023)

NatureServe Explorer. <https://explorer.natureserve.org/> (accessed August 29, 2023)

Rightmyer, M.G., T. Griswold, and M.S. Arduser. 2010. A review of the non-metallic *Osmia* (*Melanosmia*) found in North America, with additional notes on palearctic *Melansomia* (Hymenoptera, Megachilidae). ZooKeys 60:27-77.

University of Alaska Museum Insect Collection. <http://dx.doi.org/doi:10.7299/X75D8S0H> (records accessed March 8, 2023)

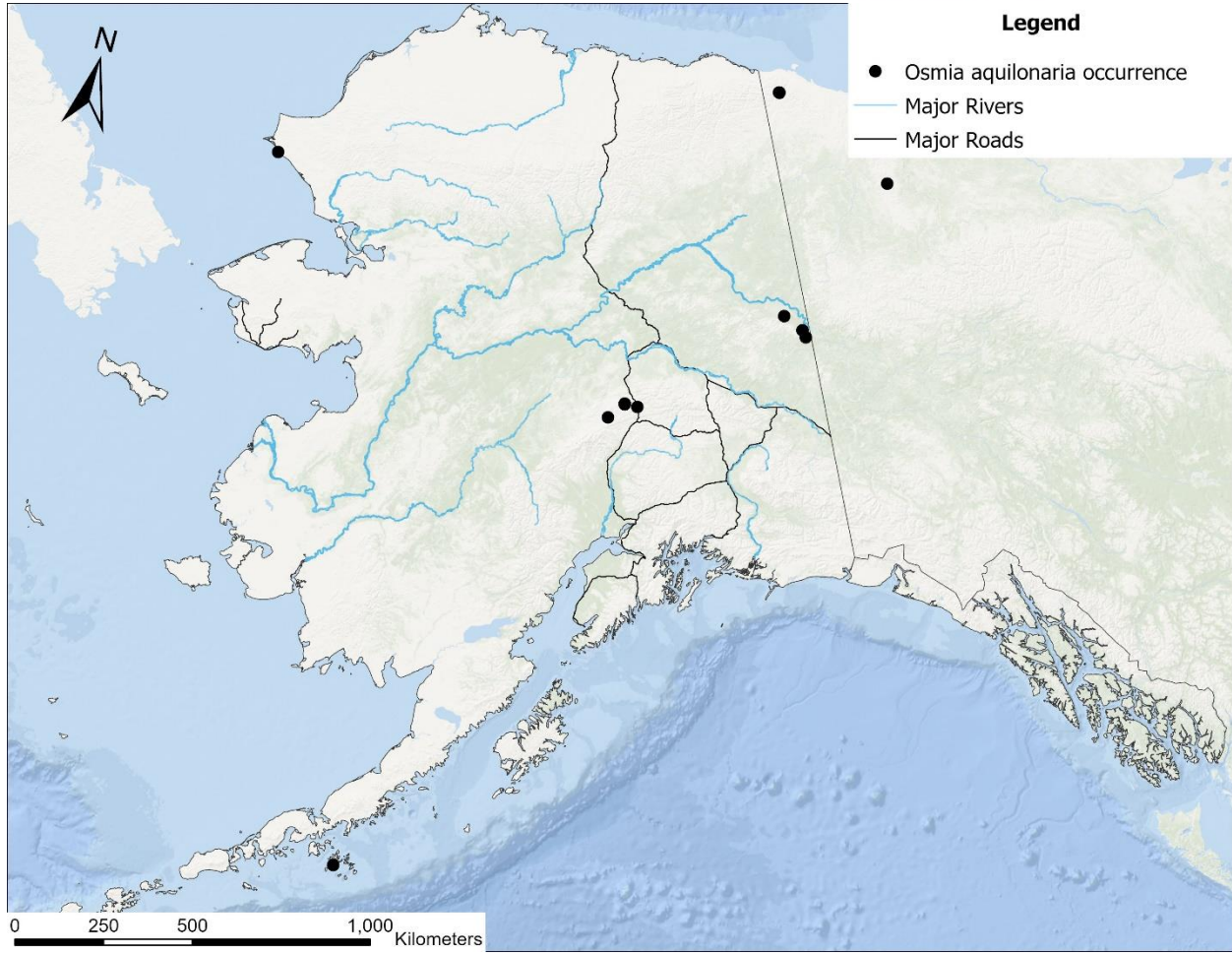


Figure 1 Occurrence of *Osmia aquilonaria* in Alaska

Photo Reference



Figure 2 © [Copyright Laurence Packer 2014](#)