



Alaska Natural Heritage Program

Conservation Status Report

Megachile melanophaea – Smith, 1853

Synonyms: *Megachile wootoni* Cockerell, 1898; *Megachile femorata* Provancher, 1882; *Megachile pseudolatimanus* Strand, 1917; *Megachile tuala* Strand, 1917; *Megachile canadensis* Friese, 1903; *Megachile wootoni rohweri* Cockerell, 1906; *Megachile calogaster* Cockerell, 1898

Common Name: Black-and-gray leafcutter bee

ELCODE: IIHYMA9070

Taxonomic Serial No.: 761776

Report last updated – June 2, 2023

Conservation Status

G5 S4

Occurrences, Range

Number of Occurrences: 17 occurrences, 49 voucher records (University of Alaska Anchorage Entomology Collection; University of Alaska Museum Insect Collection; USDA-ARS Bee Biology and Systematics Laboratory)

AK Range Extent: 215,527 km²

Occupancy 4 km² grid cells: 18 occupied grids

Nowacki Ecoregions: Intermontane boreal, Alaska Range transition, Coast mountains transition

North American Distribution: This species has a wide distribution in Alaska (*Figure 1*). Widespread across Canada and northern United States, south to New England in the eastern U.S. and south to California and Texas in the western U.S. (Ascher and Pickering 2014).

Ecology

Habitat: In Alaska, this species occurs in a variety of habitats, including steppe bluffs, weedy disturbed areas, and black spruce bogs.

Host Plants: *Hedysarum alpinum*, *H. boreale*, *Oxytropis campestris*, *Penstemon gormanii*. Fowler (2020) lists this species as a pollen specialist on Fabaceae.

Life History: This is a solitary bee species, with individual females nesting in the soil. Females line their nests with circular discs of plant leaves which they cut with their mandibles. Thus, females have three habitat requirements for successful reproduction: nesting substrate, nest lining materials, and enough suitable food plants for nectar and pollen (Sheffield et al. 2011).

Trends

Short-term: N/A, insufficient data

Long-term: N/A, insufficient data

Threats

Scope and Severity: Almost half the occurrences are in steppe bluff habitat. Steppe bluff habitat faces threats of encroachment from invasive and native plant species (Flagstad et al. 2019). Climate change is likely to decrease the habitat size and range of the steppe bluff in Interior Alaska (Boucher et al. 2016). Many occurrences are in anthropogenic and agricultural areas that could be exposed to physical disturbance of nest sites or pesticides.

References

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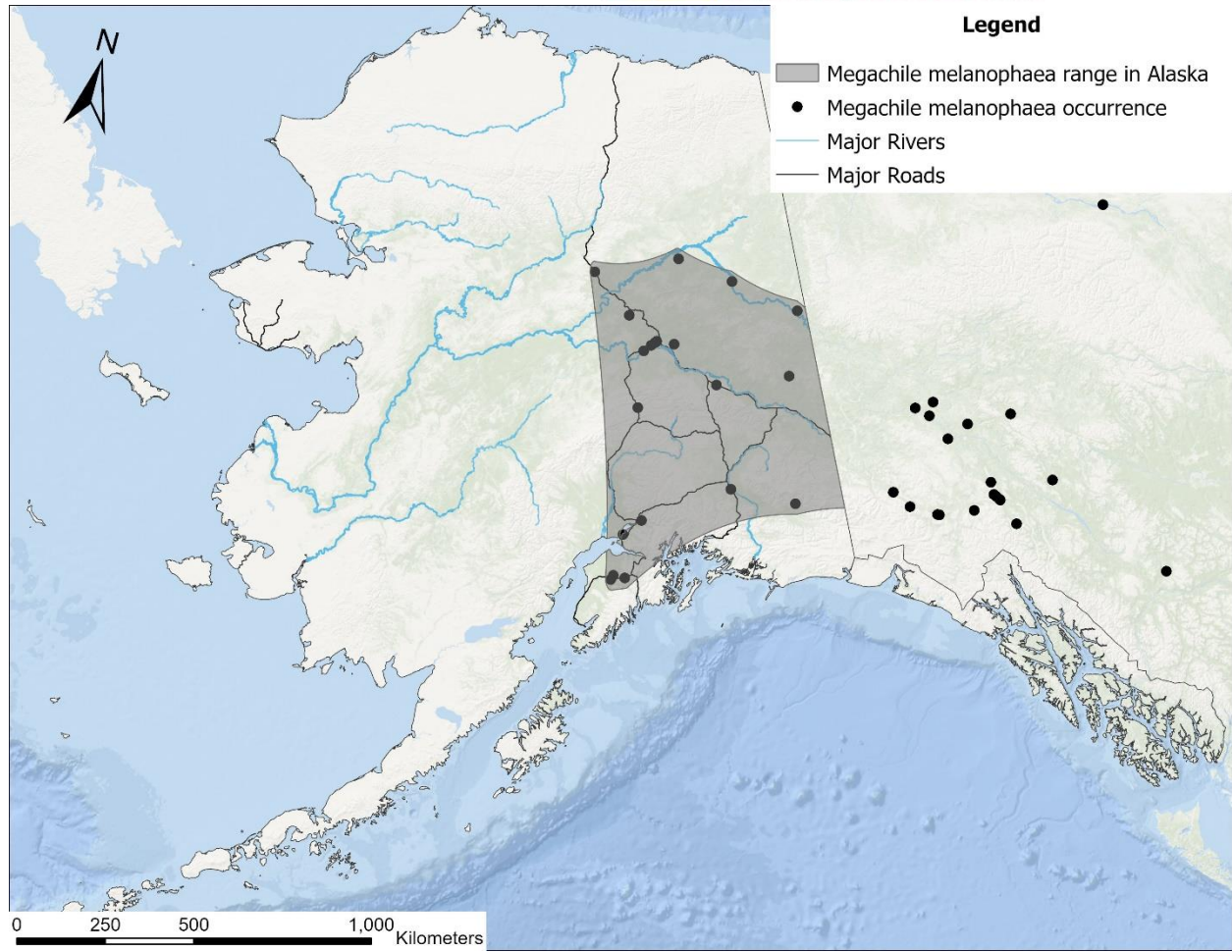


Figure 1 Range and occurrence of *Megachile melanophaea* in Alaska

Photo Reference



Figure 2 © Copyright source/photographer

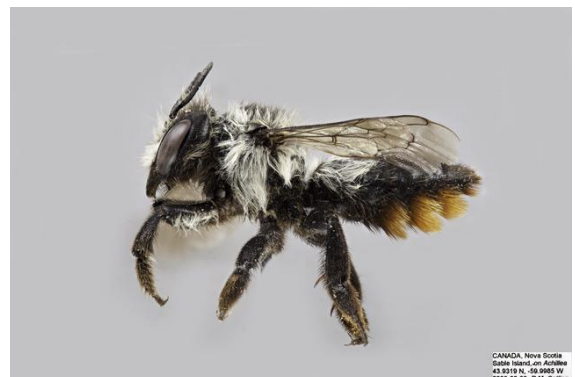


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