



Alaska Natural Heritage Program

Conservation Status Report

Anthidium tenuiflorae – Cockerell, 1907

Synonyms: *Anthidium tenuiflorae yukonense* Cockerell, 1926

Common Name: Wool-carder bee

ELCODE: IIHYMA3050

Taxonomic Serial No.: 699679

Report last updated – August 31, 2023

Conservation Status

G5 S2

Occurrences, Range

Number of Occurrences: 7 occurrences, 15 voucher records (University of Alaska Anchorage Entomology Collection; University of Alaska Museum Insect Collection)

AK Range Extent: 56,594 km²

Occupancy 4 km² grid cells: 8 occupied grids

Nowacki Ecoregions: Intermontane boreal, Alaska Range transition

North American Distribution: Alaska eastwards across Canada (Figure 1) to Manitoba. In the lower United States, across most of the western states to North Dakota, Nebraska, Colorado, and New Mexico, one record from Baja California in Mexico, also in the Great Lakes region (Ascher and Pickering 2023).

Ecology

Habitat: Occurrences are almost exclusively from sandy steppe bluff habitats on Nenana, Yukon, and Copper Rivers. In Alaska, the relatively few known occurrences are almost exclusively associated with steppe bluff habitat, suggesting that sandy substrate is required for nesting. Thus, the distribution of this species is likely patchy across other regions. More intensive surveys in sandy habitats, especially along river systems and in relict sand dunes will likely expand the known range of this and other sand-nesting species.

Host Plants: *Rubus idaeus*

Life History: This is a solitary species. Females construct nests in pre-existing burrows in the soil (i.e., tunnels created by other insects). Like other *Anthidium* they line their nests with trichomes scraped from “fuzzy” plants. These trichomes are also used to construct the brood cells which are

lined up in a row, with males at the bottom of the tunnel in the older cells. The upper portion of the nest tunnel is plugged with pebbles once all brood cells are complete (Gonzalez and Griswold 2013).

Trends

Short-term: N/A, insufficient data

Long-term: N/A, insufficient data

Threats

Scope and Severity: 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).

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 31, 2023)
- Boucher, T.V., J. R. Fulkerson, B. Bernard, L. Flagstad, T. Nawrocki, M. L. Carlson, N. Fresco. 2016. Terrestrial Coarse-filter Conservation Elements. In: Trammell, E.J., T. Boucher, M.L. Carlson, N. Fresco, J.R. Fulkerson, M.L. McTeague, J. Reimer, and J. Schmidt, eds. 2016. Central Yukon Rapid Ecoregional Assessment. Prepared for the Bureau of Land Management.
- Flagstad, L.A., K.W. Boggs, T.V. Boucher, M.L. Carlson, M.A. Steer, B. Bernard, M. Aisu, P. Lema, and T. Kuo. 2019. Assessing the gap between conservation need and protection status for select rare ecosystems in Alaska. *Conservation Science and Practice* 1:e47.
- Global Biodiversity Information Facility. <https://www.gbif.org>. GBIF occurrence download <https://doi.org/10.15468/dl.qdbe6u> (accessed April 20, 2021)
- Gonzalez, V.H. and T.L. Griswold. 2013. Wool carder bees of the genus *Anthidium* in the Western Hemisphere (Hymenoptera: Megachilidae): diversity, host plant associations, phylogeny, and biogeography. *Zoological Journal of the Linnean Society* 168:221-425.
- Integrated Taxonomic Information System (ITIS). Available online: <https://www.itis.gov> (accessed August 31, 2023)
- NatureServe Explorer. Available online: <https://explorer.natureserve.org/> (accessed August 31, 2023)
- University of Alaska Museum Insect Collection. <http://dx.doi.org/doi:10.7299/X75D8S0H> (records accessed March 8, 2023)

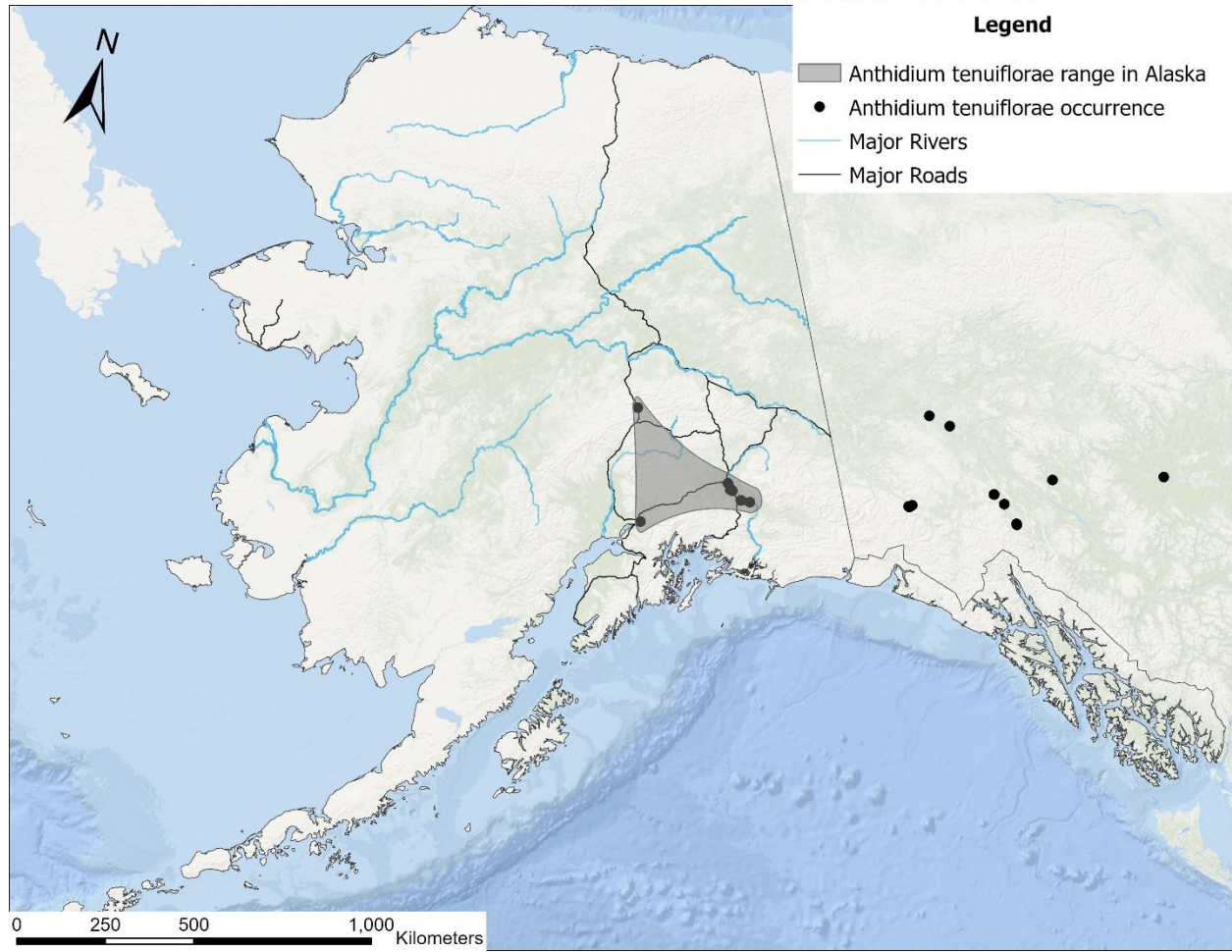


Figure 1 Range and occurrence of *Anthidium tenuiflorae* in Alaska

Photo Reference



Figure 2 © Copyright Laurence Packer 2014