



Alaska Natural Heritage Program

Conservation Status Report

Anthidium palliventre – Cresson, 1878

Synonyms: *Anthidium californicum* Cresson, 1879; *Anthidium pallidiventre* Dalla Torre, 1896; *Anthidium palliventre vanduzeei* Cockerell, 1937

Common Name: Wool-carder bee

ELCODE: IHHYMA3130

Taxonomic Serial No.: 699669

Report last updated – August 31, 2023

Conservation Status

G2 S2

Occurrences, Range

Number of Occurrences: 4 occurrences, 7 voucher records (University of Alaska Museum Insect Collection).

AK Range Extent: 2,974 km²

Occupancy 4 km² grid cells: 4 occupied grids

Nowacki Ecoregions: Intermontane boreal

North American Distribution: Alaska records are disjunct from occurrences in British Columbia (Figure 1), Oregon, California, and Baja California (Ascher and Pickering 2023). GBIF (2023) distribution map also shows two occurrences in Michigan, but these specimens are tagged as “likely misidentified.”

Ecology

Habitat: In Alaska, the few known occurrences are exclusively associated with sandy habitats: steppe bluff and relict sand dunes. This species should be targeted in future surveys in sandy habitats to get a better sense of its distribution across the state. The literature suggests it is strongly associated with coastal sand dunes and deep sandy habitats throughout its North American range. Thus far it has not been documented in coastal dunes in Alaska, but this may be another habitat to prioritize.

Host Plants: *Erigeron glabellus*, *Silene williamsii*

Life History: This is a solitary species. Females are unique among *Anthidium* species in digging out their own nests in the sand, rather than using pre-existing tunnels made 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. Most of the records are from the 1980’s, the most recent occurrence is from the Nogahabara Dunes in 2010 (the species was not documented in the Kobuk Valley Sand Dunes surveyed in 2017, 2019).

Threats

Scope and Severity: Known occurrences, though almost 40 years old, should be under no particular threat, other than natural erosion. The more recently documented population in the Nogahabara Dunes is protected within the Koyukuk National Wildlife Refuge.

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

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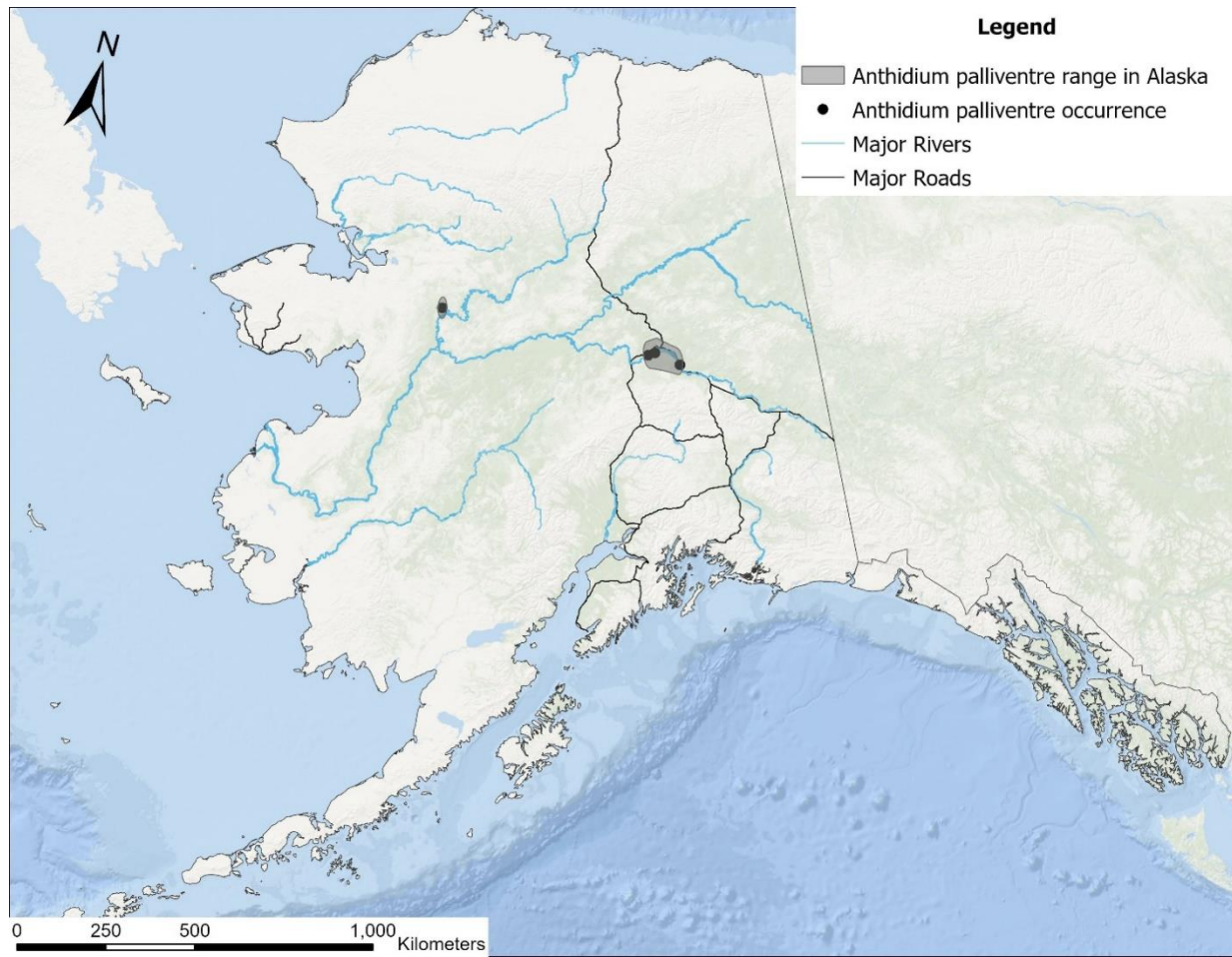


Figure 1 Range and occurrence of *Anthidium palliventre* in Alaska

Photo Reference



Figure 2 © Copyright Laurence Packer 2014