

# Alaska Natural Heritage Program Conservation Status Report

## Panurginus ineptus - Cockerell, 1922

Synonyms: Panurginus bakeri Crawford, 1926; Panurginus rohweri Crawford, 1932

Common Name: Inept miner bee

#### ELCODE: IIHYMJ1040

**Taxonomic Serial Number:** 715829

Report last updated – August 30, 2023

Conservation Status

G5 S4

Occurrences, Range

*Number of Occurrences:* 16 occurrences, 114 voucher records (University of Alaska Anchorage Entomology Collection; University of Alaska Museum Insect Collection; University of Kansas Biodiversity Institute and Natural History Museum)

AK Range Extent: 182,843 km<sup>2</sup>

Occupancy 4 km<sup>2</sup> grid cells: 21 occupied grids

Nowacki Ecoregions: Arctic tundra, Intermontane boreal, Alaska Range Transition

*North American Distribution:* The known distribution for this species is primarily across interior Alaska, with an isolated occurrence in the Brooks Range (Figure 1). Alaska east across Canada to Saskatchewan. In the lower United States across much of the interior west from Washington (including northwestern coastal), Oregon, and Nevada east to Wyoming and Colorado (Ascher and Pickering 2023).

#### Ecology

*Habitat*: In Alaska, this species has been documented in various natural habitat types including steppe bluff, shrub, deciduous and needle forests, and dry graminoid/forb herbaceous. It has also been documented in human-disturbed locations such as powerline rights-of-way, trail sides, and along roads and highways.

*Host Plants: Rosa acicularis, Taraxacum officinale.* This species is reported to be oligolectic on plants in the Rosaceae family, so it may be patchier in distribution that other more generalist mining bees, however, host plant data in Alaska are limited.



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*Comments*: Fowler (2020) reports that this species specializes on pollen from *Fragaria* and *Potentilla* in the Rosaceae family. There are a number of additional host plant families and genera reported on the DiscoverLife website (Ascher and Pickering 2023).

*Life History:* This is a solitary bee species. Females each construct their own nests by burrowing in the soil.

<u>Trends</u> Short-term: N/A, insufficient data

Long-term: N/A, insufficient data

### <u>Threats</u>

*Scope and Severity:* There are many occurrences in disturbed open areas such as powerline rights-of-way, trail sides, and along roads (including within Denali National Park and Preserve). These sites are presumably good for nesting but may be vulnerable to physical disturbance such as mowing, traffic, and trampling. However, there are also many occurrences in natural habitats. 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). <u>https://www.discoverlife.org/</u> (accessed August 30, 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.

Fowler, J. 2020. Pollen specialist bees of the western United States. <u>https://jarrodfowler.com/pollen\_specialist.html</u> (accessed August 30, 2023)

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

Integrated Taxonomic Information System (ITIS). <u>https://www.itis.gov</u> (accessed August 30, 2023)

NatureServe Explorer. https://explorer.natureserve.org/ (accessed August 30, 2023)

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



Figure 1 Range and occurrence of Panurginus ineptus in Alaska

## Photo Reference



Figure 2 <a href="http://www.discoverlife.org"> Laurence Packer / Discover Life </a>