Alaska Natural Heritage Program
Alaska Center for Conservation Science
University of Alaska Anchorage

Alaska Natural Heritage Program Conservation Status Report

Halictus rubicundus – (Christ, 1791)

Synonyms: Apis rubicunda Christ, 1791; *Halictus nesiotis* R.C.L. Perkins, 1922; *Halictus nidulans* Walckenaer, 1817; *Halictus quadrifasciatus* Smith, 1870

Common Name: Polymorphic sweat bee

ELCODE: IIHYM75050

Taxonomic Serial No.: 757831

Report last updated – August 22, 2023

Conservation Status

G5 S4

Occurrences, Range

Number of Occurrences: 36 occurrences, 258 voucher records (University of Alaska Anchorage Entomology Collection; University of Alaska Museum Insect Collection), 2 observation records (iNaturalist)

AK Range Extent: 398,710 km^2

Occupancy 4 km^2 grid cells: 41 occupied grids

Nowacki Ecoregions: Intermontane boreal, Alaska Range transition

North American Distribution: Holarctic species. This is a common and widespread species throughout much of North America, and future collecting efforts will likely expand its known range in Alaska.

In North America, this species ranges from Alaska eastwards across Canada (Figure *1*) to Newfoundland, and also throughout the lower United States (Ascher and Pickering 2023).

Ecology

Habitat: Occurs in a variety of habitat types in Alaska including sand dunes, steppe bluffs, meadows, grasslands, agricultural fields, shrublands, and forests.

Host Plants: *Erigeron glabellus, Eurybia sibirica, Heracleum maximum, Prunus padus, Rosa acicularis, Solidago, Taraxacum*

Life History: This is a social ground-nesting bee throughout much of its range, but at high latitudes and altitudes it reverts to solitary behavior (Gibbs et al. 2017).

Trends

Short-term: N/A, insufficient data

Long-term: N/A, insufficient data. Half of the records for this species were collected prior to 1970.

Threats

Scope and Severity: Some of the occurrences are in protected areas (e.g., Arctic National Wildlife Refuge and Kobuk Valley National Park) but there are many occurrences in anthropogenic and agricultural settings (e.g., Bettles, Fairbanks, Palmer) that could be exposed to physical disturbance of nest sites or pesticides. 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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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.

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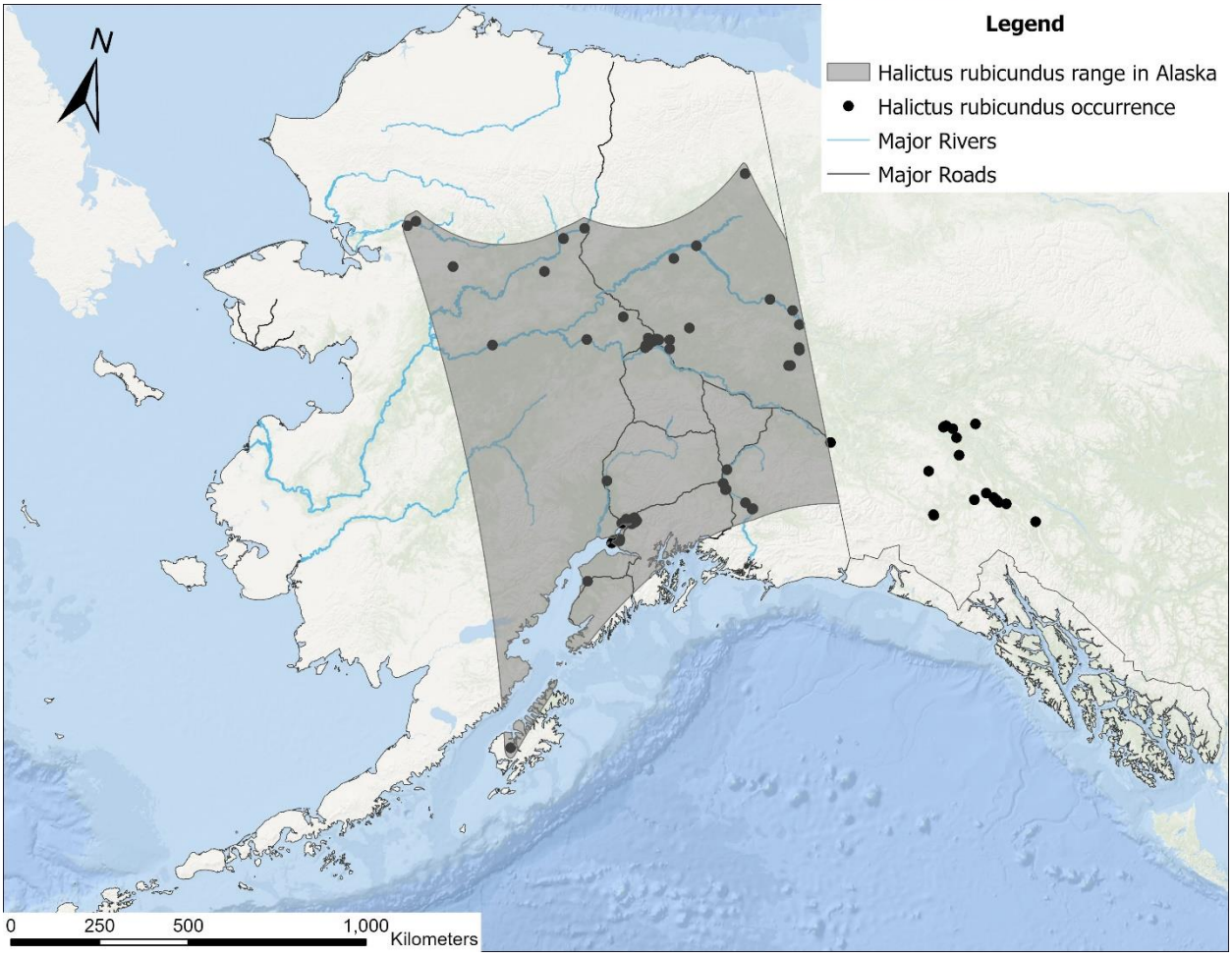

Figure 1 Range and occurrence of Halictus rubicundus in Alaska

Photo Reference

Figure 2 © Copyright Laurence Packer 2014

Figure 3 © Copyright Malcolm Storey 2011-2118