

Alaska Natural Heritage Program

Conservation Status Report

Hoplitis robusta – (Nylander, 1848)

Synonyms: *Heriades robusta* Nylander, 1848; *Osmia rhinoceros* Giraud, 1861; *Heriades trinacria* Morawitz, 1869; *Formicapis clypeata* Sladen, 1916; *Hoplitis clypeata* (Sladen, 1916)

Common Name: Unicorn summer mason bee

ELCODE: IIHYMA6150

Taxonomic Serial No.: 715486

Report last updated – August 30, 2023

Conservation Status

G5 S2

Occurrences, Range

Number of Occurrences: 11 occurrences, 22 voucher records (University of Alaska Anchorage Entomology Collection; University of Alaska Museum Insect Collection; USDA-ARS Bee Biology and Systematics Laboratory)

AK Range Extent: 134,408 km²

Occupancy 4 km² grid cells: 11 occupied grids

Nowacki Ecoregions: Intermontane boreal, Alaska Range transition

North American Distribution: Holarctic species. This species is represented in Alaska by relatively few records collected from interior Alaska and one further south in Gakona (Figure 1). In North America, Alaska eastwards across Canada to Quebec. In the lower United States, across many of the western states, from Washington, Oregon, and California west to Montana, Wyoming, and Colorado (Ascher and Pickering 2023).

Ecology

Several of the occurrences are associated with steppe bluff habitat (although the species is not presumed to nest in sand or soil), and the species is reported to specialize on *Potentilla* both for pollen and leaves used in nest construction (Müller and Richter 2018).

Habitat: About half the occurrences found on steppe bluffs, others in dwarf tree scrub, open and closed forest, meadows, and disturbed open areas.

Host Plants: *Potentilla pensylvanica*. This species is reported to specialize on pollen from *Potentilla* (Müller and Richter 2018; Gibbs et al. 2023).

Life History: This is a solitary species. Gibbs et al. (2023) report that females construct their nests in pithy stems. In Switzerland, Müller and Richter (2018) discovered nests in a thin spruce branch, within old cerambycid beetle tunnels. Brood cell partitions and nest plugs were constructed with chewed leaves from *Potentilla*.

Trends

Short-term: N/A, insufficient data

Long-term: N/A, insufficient data

Threats

Scope and Severity: Collections occur on roadside. 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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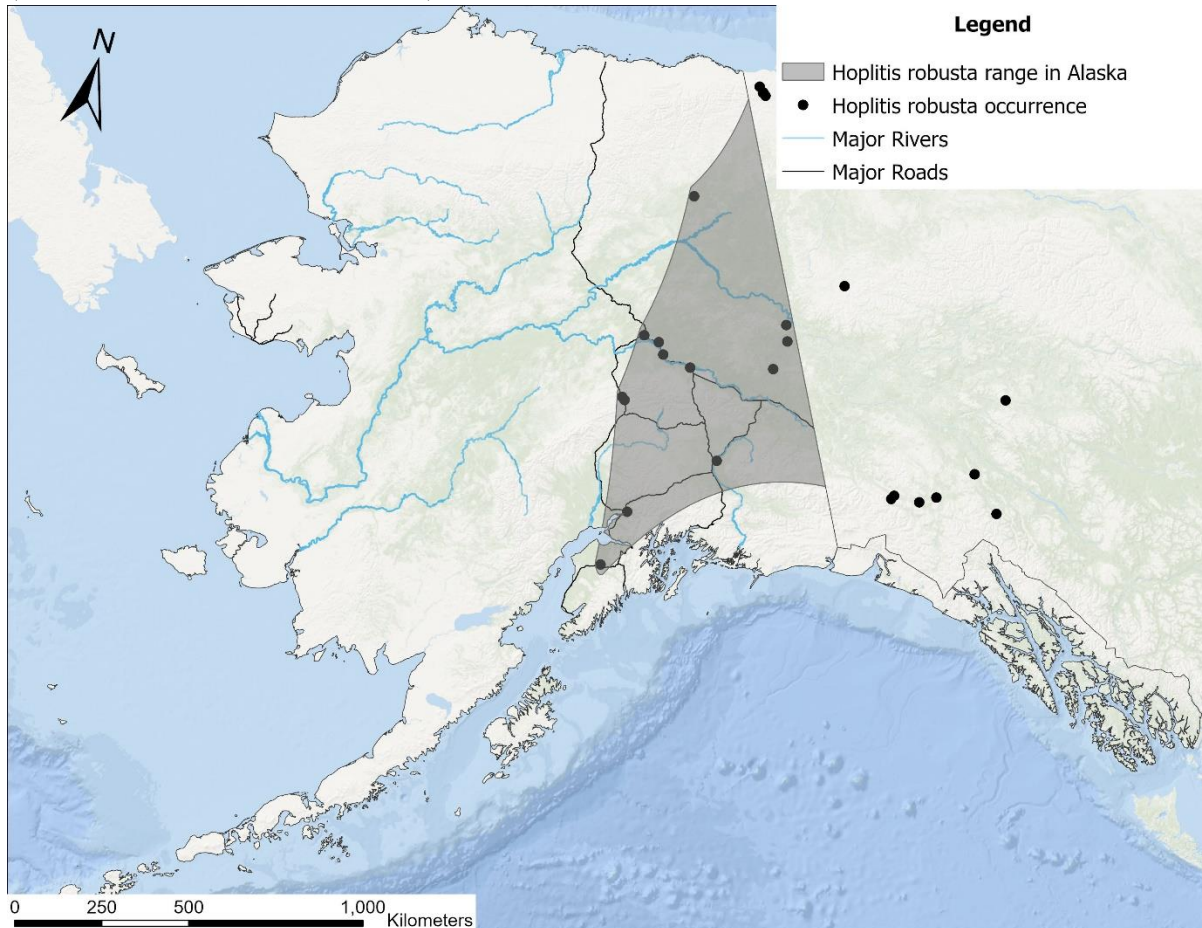


Figure 1 Range and occurrence of *Hoplitis robusta* in Alaska

Photo Reference

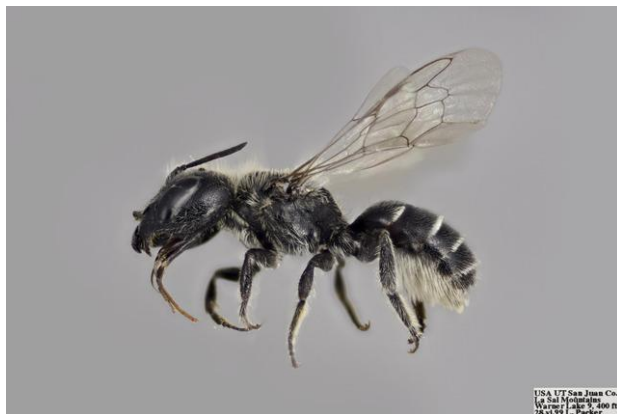


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