



Alaska Natural Heritage Program

Conservation Status Report

Hylaeus annulatus – (Linnaeus, 1758)

Synonyms: *Apis annulata* Linnaeus, 1758; *Apis xanthometopa* Preyssler, 1793; *Prosopis elliptica* Kirby, 1837; *Hylaeus borealis* Nylander, 1852; *Prosopis patellata* Eversmann, 1852; *Prosopis varifrons* Cresson, 1869; *Prosopis antennata* Cresson, 1869; *Hylaeus barbatus* Förster, 1871; *Prosopis tamanukii* Yasumatsu, 1939; *Hylaeus ellipticus* (Kirby, 1837)

Common Name: Ringed yellow-faced bee

ELCODE: IIHYM95230

Taxonomic Serial No.: 655706

Report last updated – August 23, 2023

Conservation Status

G5 S4

Occurrences, Range

Number of Occurrences: 51 occurrences, 438 voucher records (University of Alaska Anchorage Entomology Collection; University of Alaska Museum Insect Collection; USDA-ARS Bee Biology and Systematics Laboratory; Gates of the Arctic NPP, Anaktuvuk Pass Ranger Station)

AK Range Extent: 623,966 km²

Occupancy 4 km² grid cells: 64 occupied grids

Nowacki Ecoregions: Arctic tundra, Intermontane boreal, Alaska Range transition, Coast mountains transition, Coastal rainforests

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

In North America, this species ranges from Alaska eastwards across Canada (Figure 1) to Newfoundland, and in the lower United States from Washington and California east to Montana, Wyoming, Colorado, and New Mexico, across the northern plains to the northeastern states and south along the Appalachian Mountains (Ascher and Pickering 2023).

Ecology

Habitat: Occurs in a variety of habitat types in Alaska including sand dunes, steppe bluffs, meadows, grasslands, shrublands, and forests. Of note, it has often been found in open disturbed

areas (e.g., trail and road sides and powerline rights-of-way) within protected areas. They can be collected in high numbers in pan traps.

Host Plants: *Achillea millefolium*, *Arnica alpina*, *Castilleja pallida*, *Chamerion angustifolium*, *Dryas integrifolia*, *Hedysarum alpinum*, *H. boreale*, *Minuartia*, *Potentilla*, *Solidago canadensis*, *Spiraea stevenii*, *Taraxacum*.

Life History: *Hylaeus* species are reported to nest in pithy stems of shrubs, but may also nest in abandoned cavities made by other bees and insects (Scott 1994). They are solitary bees with each female tending her own nest.

Trends

Short-term: N/A, insufficient data

Long-term: N/A, insufficient data

Threats

Scope and Severity: More than half of the voucher records are collected from protected areas (national parks and wildlife refuges) throughout Alaska. There are relatively few occurrences in anthropogenic or agricultural settings that could be exposed to physical disturbance 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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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.

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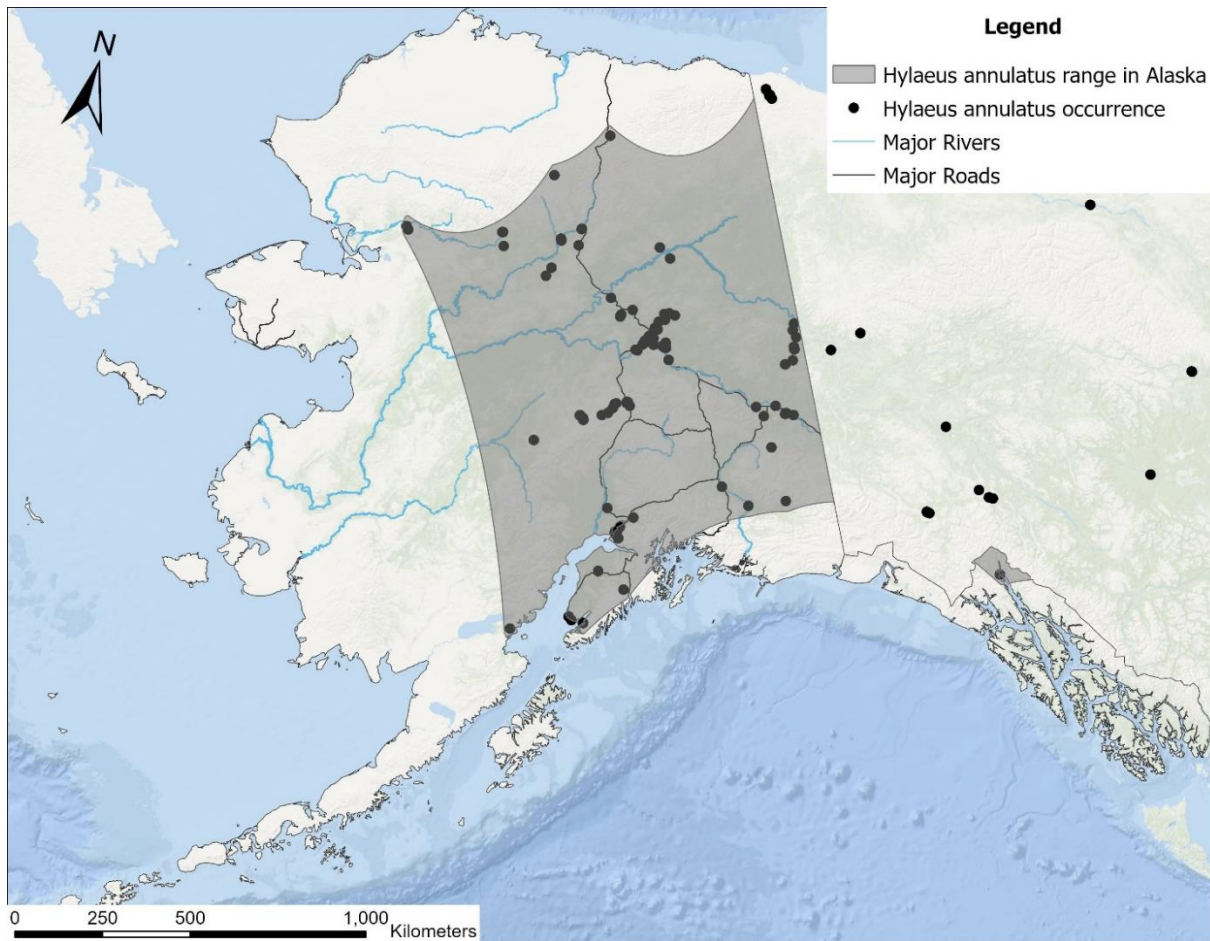


Figure 1 Range and occurrence of *Hylaeus annulatus* in Alaska

Photo Reference



Figure 2 © Copyright Laurence Packer 2014