



# Alaska Natural Heritage Program

## Conservation Status Report

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### *Megachile circumcincta* – (Kirby, 1802)

*Synonyms:* *Megachile giliae* Cockerell, 1906; *Apis circumcincta* Kirby, 1802; *Megachile circumcincta chinensis* Wu, 2006; *Megachile circumcincta etnaensis* van der Zanden, 1989; *Megachile circumcincta lactescens* Cockerell, 1928; *Megachile circumcincta numidica* Tkalcu, 1988; *Megachile circumcincta ozbeke* Tkalcu, 1977; *Megachile circumcincta insidiosa* Benoist, 1940; *Megachile circumcincta griseohirta* Alfken, 1929

*Taxonomy Notes:* Sheffield et al. (2011) synonymized *Megachile giliae* with the Palearctic *M. circumcincta*, now Holarctic.

**Common Name:** Black-headed leafcutter bee

**ELCODE:** IIHYMA9410

**Taxonomic Serial No.:** 761238

**Report last updated – May 31, 2023**

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### Conservation Status

G5 S4

### Occurrences, Range

*Number of Occurrences:* 35 occurrences, 141 voucher records (University of Alaska Anchorage Entomology Collection; University of Alaska Museum Insect Collection; Denali National Park and Preserve Natural History Collection; Gates of the Arctic, Anaktuvuk Pass Ranger Station), 1 observation record (iNaturalist)

*AK Range Extent:* 503,288 km<sup>2</sup>

*Occupancy 4 km<sup>2</sup> grid cells:* 40 occupied grids

*Nowacki Ecoregions:* Arctic tundra, Intermontane boreal, Alaska Range transition

*North American Distribution:* Holarctic species. This species has a wide distribution in Alaska (**Error! Reference source not found.**). In North America, it ranges from Alaska eastwards a cross western Canada (Sheffield et al. 2011), with a few records south to Colorado (Ascher and Pickering 2014).

### Ecology

*Habitat:* The majority of occurrences are in sandy areas, including steppe bluffs and dunes. Appears to be strongly associated with sandy habitats which are patchy in distribution. This species nests in soil and lines their nest with leaf fragments.

*Host Plants:* *Astragalus alpinus*, *A. eucosmus*, *Chamerion angustifolium*, *Hedysarum alpinum*, *H. boreale*, *Mertensia paniculata*, *Oxytropis campestris*, *O. kobukensis*, *Taraxacum*

*Life History:* This is a solitary bee species, with individual females nesting in sandy soil. Females line their nests with circular discs of plant leaves which they cut with their mandibles. Thus, females have three habitat requirements for successful reproduction: nesting substrate, nest lining materials, and enough suitable food plants for nectar and pollen (Sheffield et al. 2011).

## Trends

*Short-term:* N/A, insufficient data

*Long-term:* N/A, insufficient data

## Threats

*Scope and Severity:* Many of the occurrences are in protected areas (national parks and wildlife refuges). There are several occurrences in anthropogenic and agricultural settings (Fairbanks and Palmer) that could be exposed to physical disturbance of nest sites or pesticides. Overall, the threat scope and severity appear to be low.

## References

Ascher J.S. and J. Pickering. 2014. Discover Life bee species guide and world checklist (Hymenoptera: Apoidea: Anthophila). Available online: <https://www.discoverlife.org/> (accessed May 31, 2023)

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

Integrated Taxonomic Information System (ITIS). Available online: <https://www.itis.gov> (accessed May 31, 2023)

NatureServe Explorer. Available online: <https://explorer.natureserve.org/> (accessed May 31, 2023)

Sheffield, C. S., C. Ratti, L. Packer, and T. Griswold. 2011. Leafcutter and mason bees of the Genus *Megachile* Latreille (Hymenoptera: Megachilidae) in Canada and Alaska. Canadian Journal of Arthropod Identification No. 18, 29 November 2011.

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

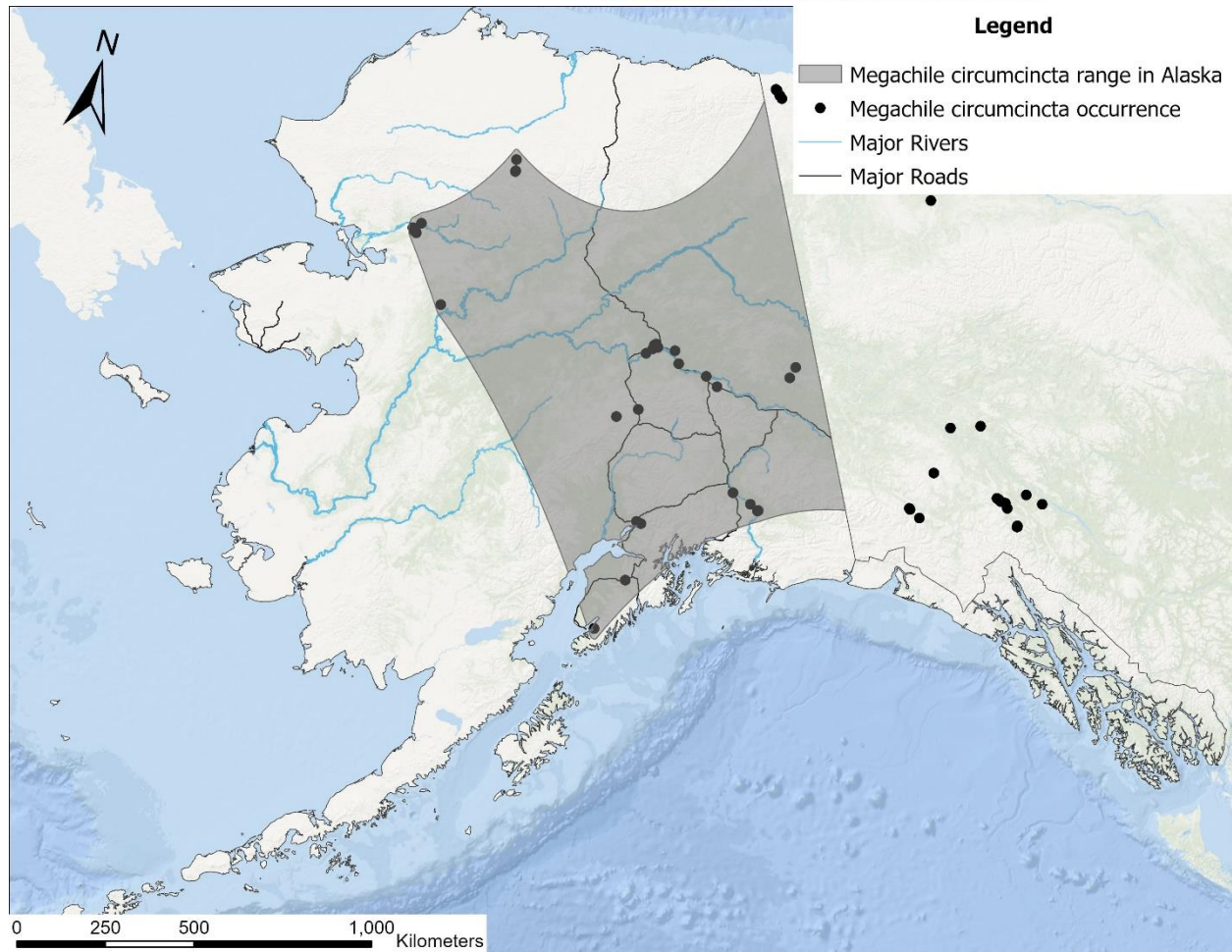


Figure 1 Range and occurrence of *Megachile circumcincta* in Alaska