

Wild Bee Surveys in Prairie-Grassland Habitats



Leafcutter bee (*Megachile* sp.) on blazing star.
Photo by Randy Schindle, MNDNR



Brown-belted bumble bee (*Bombus griseocollis*) on butterflyweed. Photo by Mike Halverson



Green metallic bee (*Agapostemon virescens*)
Photo by Sam Droege, US Geological Survey

Why are wild bees important?

Wild bees provide vital pollination services and are an integral component of species diversity in prairie-grasslands. The Minnesota Prairie Conservation Plan seeks to restore functioning prairie systems with stable or increasing native plant diversity. Wild bee pollinators play a major role in prairie restoration efforts. Enhanced prairie condition provides food and cover for wildlife, prevents soil erosion, and promotes animal and plant diversity.

Are our wild bees in peril?

The health of our wild bee population is uncertain. We know very little about the diversity and distribution of wild bees in Minnesota. Research elsewhere suggests that wild bees have suffered serious declines as habitat loss and pesticide use have accelerated. Successful enhancement of pollinator habitat depends on baseline data about our wild bees.

This project will

- **Compile existing information about wild bees in Minnesota**
- **Conduct surveys of wild bees on native prairies in Minnesota**
- **Compare wild bee fauna on native versus restored prairie-grasslands**

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Activity 1. Checklist of wild bees in Minnesota

- Collect specimen data on Minnesota wild bees from museums
- Compile literature and reports on wild bees in Minnesota
- Develop a wild bee database
- Prepare a checklist of wild bees in Minnesota

Activity 2. Wild bees associated with native prairie

- Conduct surveys of wild bees in high-quality native prairie sites identified by the Minnesota Biological Survey
- Compare wild bee diversity with native plant species diversity
- Incorporate new findings into the Minnesota wild bee database

Activity 3. Comparison of wild bee fauna in prairie-grasslands

- Compare wild bee fauna between native prairie and restored prairie-grasslands
- Associate wild bee diversity with flowering resources
- Recommend best management practices to enhance pollinator habitat



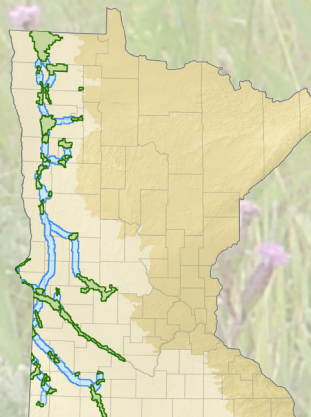
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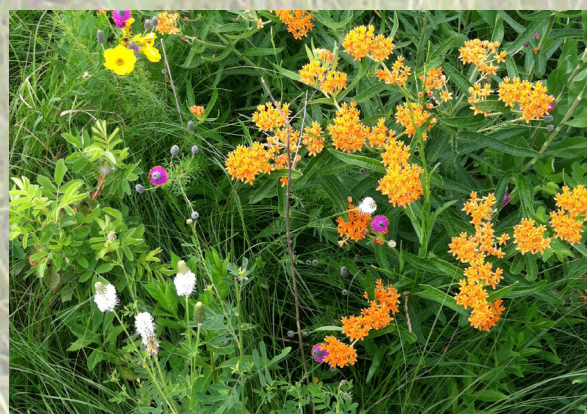
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There is a clear need for “the publication of good faunal lists...[of] the native bee fauna of Minnesota.”
- Sam Droege, USGS Bee Inventory and Monitoring Lab



Under the Minnesota Prairie Conservation Plan “large areas of prairie, grassland, and associated habitats will be protected and restored to create functioning prairie systems...”



HF No. 976, adopted May 2013, directs the DNR commissioner to: “...develop best management practices and habitat restoration guidelines for pollinator habitat enhancement.”

This project will provide foundational natural resource data to address the priorities of state agencies and other partners in pollinator, prairie, and grassland conservation in Minnesota.