

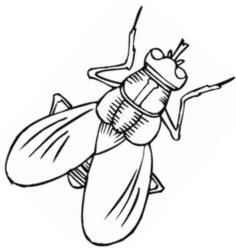
What's pollinating crops in BC's Central Interior?

A first of its kind project in Bulkley-Nechako and Fraser-Fort George is collecting information on the types of pollinators present in agricultural crops and how these pollinators are being affected by climate change.

The project is working with local producers over 2 years (2021, 2022) to collect pollinators on farms from Smithers to the Robson Valley and is using DNA barcoding to identify them. This research is being compiled into a “baseline dataset” of pollinator species present in the region. This dataset will support future research into how climate change is affecting the health and distribution of regional pollinators, and into farm practices that support pollinator health and resilience.

Over 200 arthropods (insects and spiders) that are likely pollinators are present in agricultural areas of Bulkley-Nechako and Fraser-Fort George.

We're still counting, but on farmland across the region you can find at least:



63 pollinating bee species: including 13 different bumblebee species, 14 species of mining bee (Andrenidae), and 16 species of mason and orchard bee (Megachilidae)

102 pollinating fly species: including 63 species of hoverfly

30 species of butterflies and moths, 9 beetle species, 3 spider species

Many of these species (particularly the hoverflies and the spiders) have additional benefits for crop production, because they are also predators and can help control common crop pest species. Some groups (particularly mason bees, important pollinators of alfalfa) are more abundant and/or diverse near forests.

The most common pollinators in this region are:



Perplexing bumblebee
Bombus perplexus

(USGS, Public domain <https://www.usgs.gov/media/images/bombus-perplexus-f-left-side-centre-co-pa>)



Fuzzy-horned bumblebee
Bombus mixtus

(Lawrence Packer, www.discoverlife.org, for non-commercial use)



White-banded Sweat bee
Lasioglossum leucozonium

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Yellow-fronted bumblebee
Bombus flavifrons

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Vancouver bumblebee
Bombus vancouverensis nearcticus

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How is climate change affecting pollinators in the region?

Climate change can affect pollinators directly (e.g., heat causes mortality in species with low thermal tolerance) or indirectly, by altering plant growth and physiology (which may alter nectar rewards, pollen quality, timing of flowering, etc.).

High pollinator biodiversity can buffer systems against pollination declines induced by many of the stressors that are exacerbated by climate change. Managing landscapes to maintain high pollinator biodiversity is likely the best way to protect against future pollination deficits associated with climate change.

How your farm (and farm practices) can support pollinators:

Preserve what you have: identify areas with native plants that are currently used by pollinators, and forest-adjacent areas with sandy soils (often used for nesting). Limit disturbances in these areas (i.e., don't mow, till, or compact soil).

Allow native plants to bloom in field margins and non-productive areas.

Retain forest patches within and adjacent to agricultural areas.

Consider selecting cover crops that can provide nectar and/or pollen (see this [cover cropping guidebook](#) for details).

Create new pollinator habitat: if you are considering planting for pollinator habitat enhancement, Pollinator Partnership Canada has planting guides for each ecoregion of Canada and an interactive tool to help in selecting plants:

<https://pollinatorpartnership.ca/en/find-your-roots>

View the full project report from the first year of pollinator/climate change research.

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