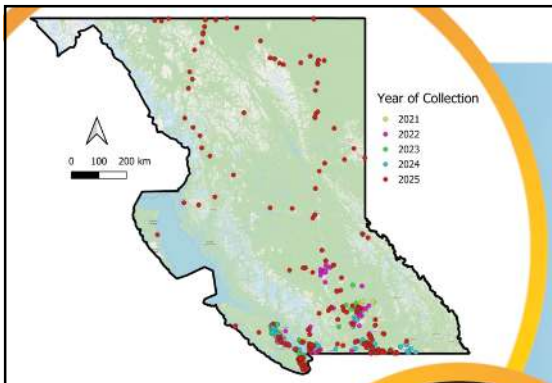
BC Bee Atlas

Documenting the Richness of BC's Native Bees

Diversity - Distribution - Floral Partners

Oregon State University
Extension Service
Master Melittologist

Native Bee Society of British Columbia



BRITISH COLUMBIA BEE ATLAS

Agenda

-Welcome

-Introduction to the BC Bee Atlas and the Master Melittologist Program: Bonnie Zand

-Important dates and training opportunities: Jade Lee

-Participant Experience: Monica Zeiper and Mandy Brown

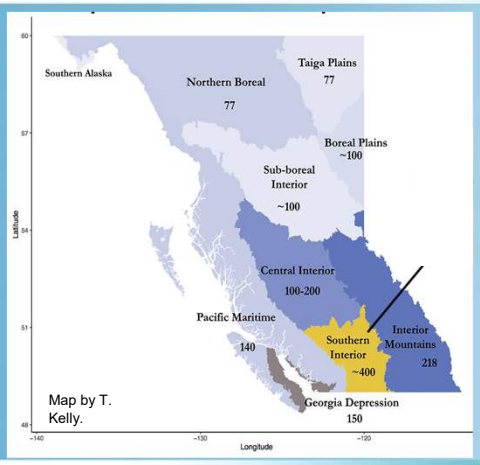
-Questions

BC Bee Atlas

Introduction to the BC Bee Atlas and the Master Melittologist Program: Bonnie Zand

BC Bee Atlas

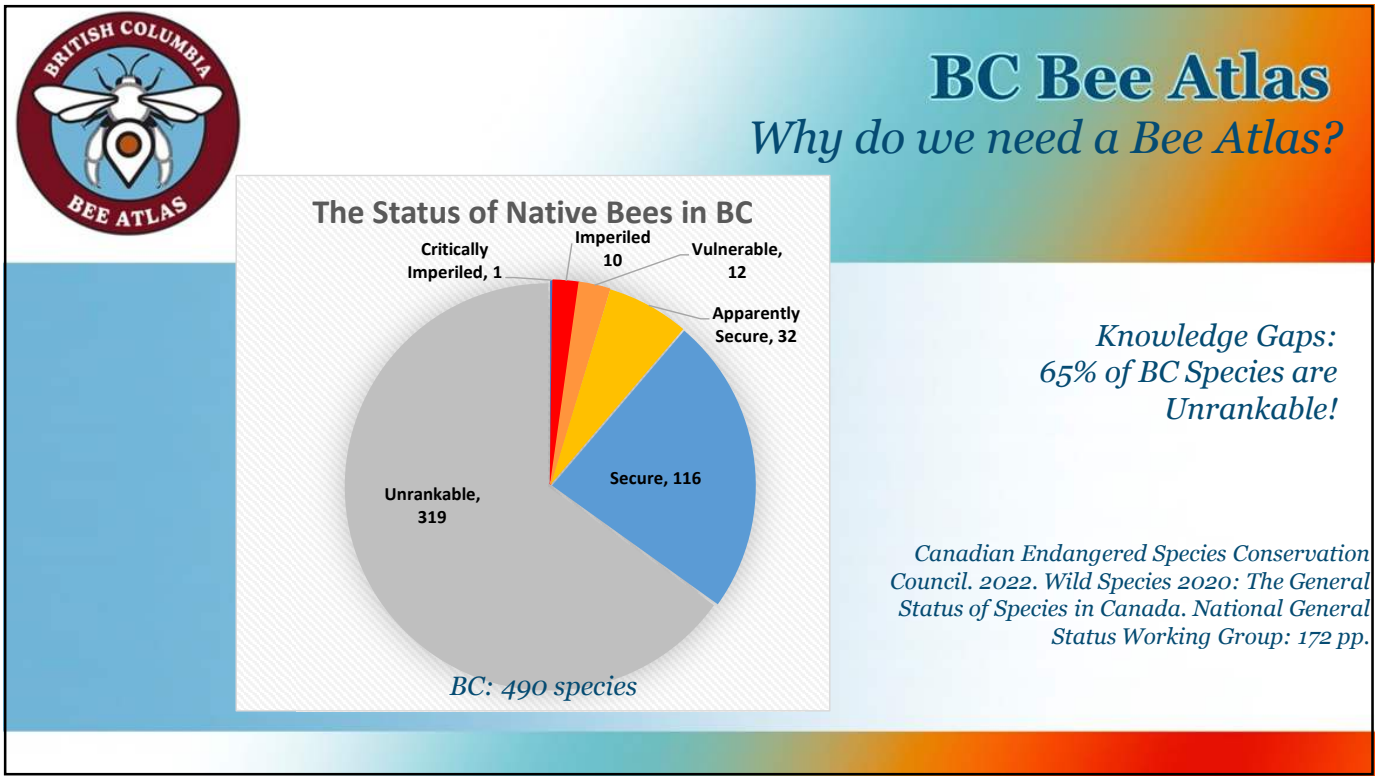
Why do we need a Bee Atlas?



Map by T. Kelly.

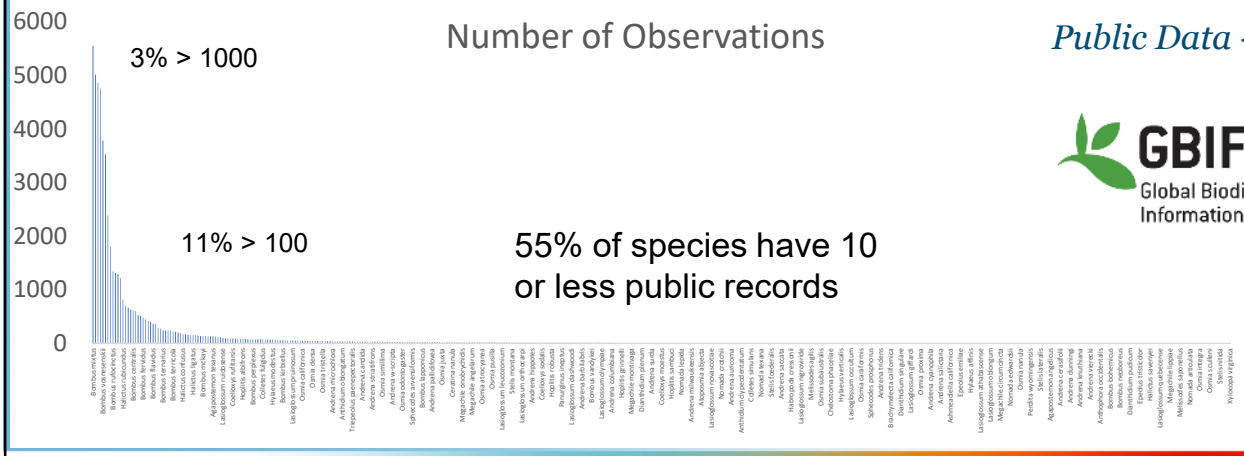
BC has more than 500 bee species, the highest bee diversity in Canada


BC Bee Atlas
Pugnacious Leaf-cutter Bee
Digger Bee
Small Carpenter Bee
Cuckoo-leaf-cutter Bee
Images: Thomas Shahan , Joshua Dunlop (Oregon Department of Agriculture)


BC Bee Atlas
Why do we need a Bee Atlas?
The Status of Native Bees in BC
Critically Imperiled, 1
Imperiled 10
Vulnerable, 12
Apparently Secure, 32
Secure, 116
Unrankable, 319
BC: 490 species
Knowledge Gaps:
65% of BC Species are Unrankable!
Canadian Endangered Species Conservation Council. 2022. Wild Species 2020: The General Status of Species in Canada. National General Status Working Group: 172 pp.

BC Bee Atlas

Why do we need a Bee Atlas?



55% of species have 10 or less public records

Public Data -GBIF

GBIF Global Biodiversity Information Facility

GBIF.org (28 January 2025) GBIF Occurrence Download https://doi.org/10.15468/dl.r39nd8

BC Bee Atlas

OSU Master Melittologist Program

Master Gardener Style Program:
Apprentice, Journey and Master Levels
Focus on bee surveys and identification training

81 BC Participants
Online and in-person components (Can be completed 100% online for remote participants)

Oregon State University
Extension Service
Master Melittologist

BC Bee Atlas

OSU Master Melittologist Program

6 Modules of self-paced online content
Online graded assignments
Monthly group zoom meetings
Collecting kit (net, pins, box, vials)
Access to all in person events in BC, Washington, Oregon, Idaho

Oregon State University
Extension Service
Master Melittologist

Photo by Jade Lee - *Melissodes rivalis*

BC Bee Atlas

BC Field Trainings

4 Field Trainings
Cowichan (VI), Vancouver, Kamloops, Okanagan

Volunteer led Collection Events

In Person Microscope Training

Oregon State University
Extension Service
Master Melittologist

BC Bee Atlas

Workflow: Photo-voucher plants in iNaturalist, output to database, print labels

iNaturalist

Photo of plant bee caught on

Print location labels and mail to volunteers

Oregon State University Extension Service Master Melittologist

Native Bee Society of BC Bee Atlas Collection (NBSBC:BCBA)

Toggle Record Search Form | Batch Update Tool

| 1-1000 of 4693 records | >> >| * Click on the Symbiota identifier in the first column to open the editor.

Symbiota ID	Catalog Number	Family	ID Qualifier	Scientific Name	Author	Collector
6076788	BCBA_2404406	Apidae		*Bombus sitkensis*	Nylander, 1848	Jane Lakes
6076789	BCBA_2404407	Apidae		*Bombus mixtus*	Cresson, 1878	Jane Lakes
6076790	BCBA_2404408	Apidae		*Bombus sitkensis*	Nylander, 1848	Jane Lakes
6076791	BCBA_2404409	Megachilidae		*Osmia*	Panzer, 1806	Jane Lakes
6076792	BCBA_2404410	Megachilidae		*Osmia*	Panzer, 1806	Jane Lakes
6076793	BCBA_2405297	Andrenidae		*Andrena prunorum*	Cockerell, 1896	AC Quinn
6076794	BCBA_2405298	Andrenidae		*Andrena miserabilis*	Cresson, 1872	AC Quinn
6076795	BCBA_2405299	Andrenidae		*Andrena miserabilis*	Cresson, 1872	AC Quinn
6076796	BCBA_2406428	Andrenidae		*Andrena miserabilis*	Cresson, 1872	Christine Bickson
6076797	BCBA_2406429	Apidae		*Bombus mixtus*	Cresson, 1878	Christine Bickson
6076798	BCBA_2406430	Apidae		*Bombus vosnesenskii*	Radoszkowski, 1862	Christine Bickson
6076799	BCBA_2406431	Apidae		*Bombus melanopygus*	Nylander, 1848	Christine Bickson
6076800	BCBA_2406955	Apidae		*Nomada*	Scopoli, 1770	Emily Carmichael
6076801	BCBA_2406956	Apidae		*Nomada*	Scopoli, 1770	Emily Carmichael
6076802	BCBA_2406957	Halictidae		*Halictus tripartitus*	Cockerell, 1895	Emily Carmichael
6076803	BCBA_2406958	Apidae		*Bombus melanopygus*	Nylander, 1848	Emily Carmichael
6076804	BCBA_2406959	Apidae		*Bombus mixtus*	Cresson, 1878	Emily Carmichael

Database with Location, Date, Collector ID, Plant Association

BC Bee Atlas

Processing and Identifications

-Volunteers pin, label and sort bees

-Volunteer determinations captured

-Bees donated to the BC Bee Atlas

-Expert determinations applied

-Feedback for volunteers

BC Bee Atlas

Volunteer Outreach

-Tabling Events

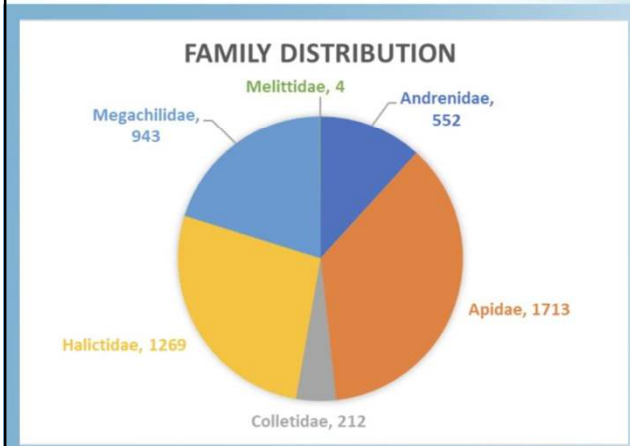
-Bee Walks and Talks

-Presentation

-Personal Projects

BC Bee Atlas

2024 Data - Our First Full Year!



2467 Bee Specimens brought in (4693 for all years combined)

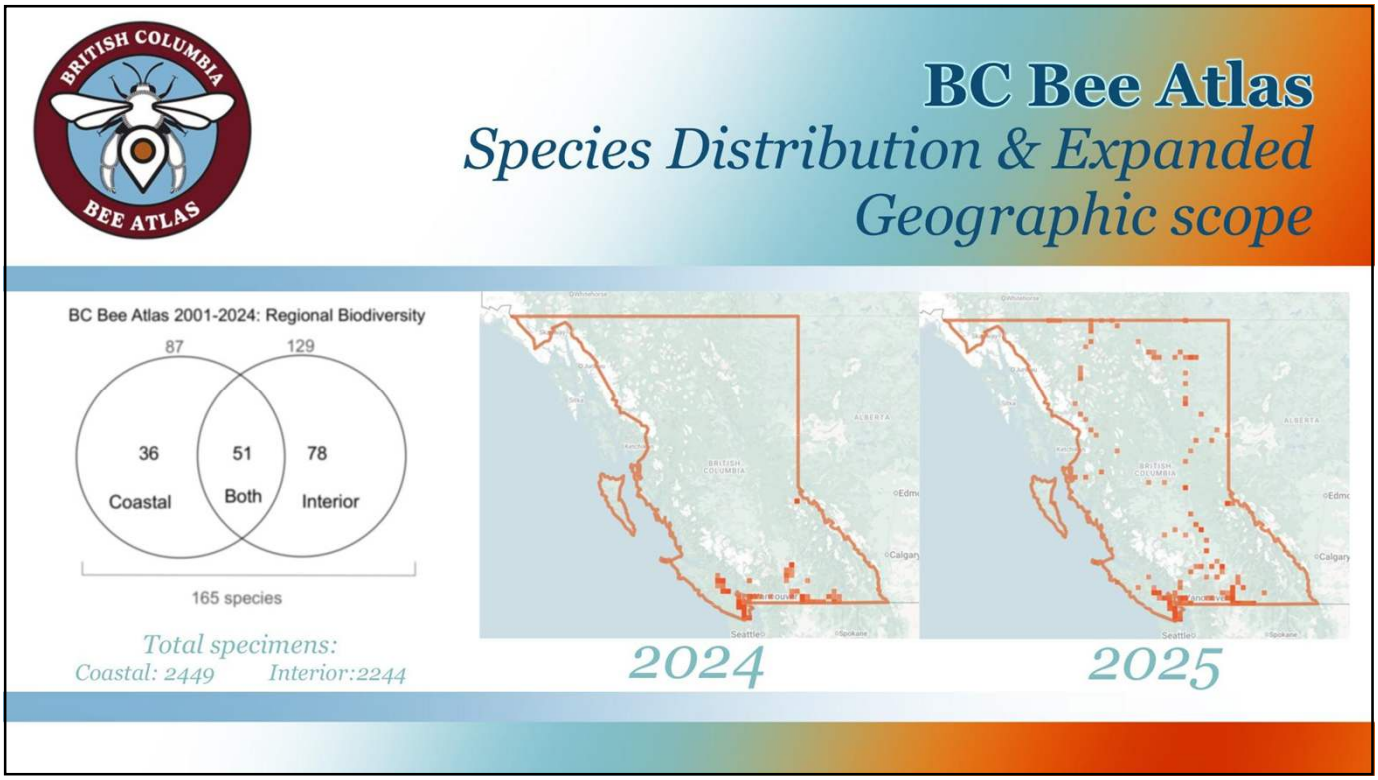
100% of BC's known Bee Families (6)

86% of BC's known Genera (36)

136 Species (165 for all years combined) = 33% of BC's known Species

80% of 2024 Specimens fully Identified


Bee Genera
Plant Families
BC Bee Atlas
Sampling Data
Photo by Jakob Dulisse
Macropis Nuda
Photo by Jakob Dulisse
Diadasia diminuta
2024
681 Sampling Events
200 Plant Species
27 Volunteers
2025
1106 Sampling Events
274 Plant Species
Expecting 4000-5000 specimens!


BRITISH COLUMBIA
BEE ATLAS
BC Bee Atlas
Species Distribution & Expanded Geographic scope
BC Bee Atlas 2001-2024: Regional Biodiversity
87
129
36
Coastal
51
Both
78
Interior
165 species
Total specimens:
Coastal: 2449
Interior:2244
2024
2025

BC Bee Atlas

Exciting Finds

- *Chelostoma florisomne*
- *Osmia cornuta*
- *Perdita near zonalis*
- *Andrena sulcata*

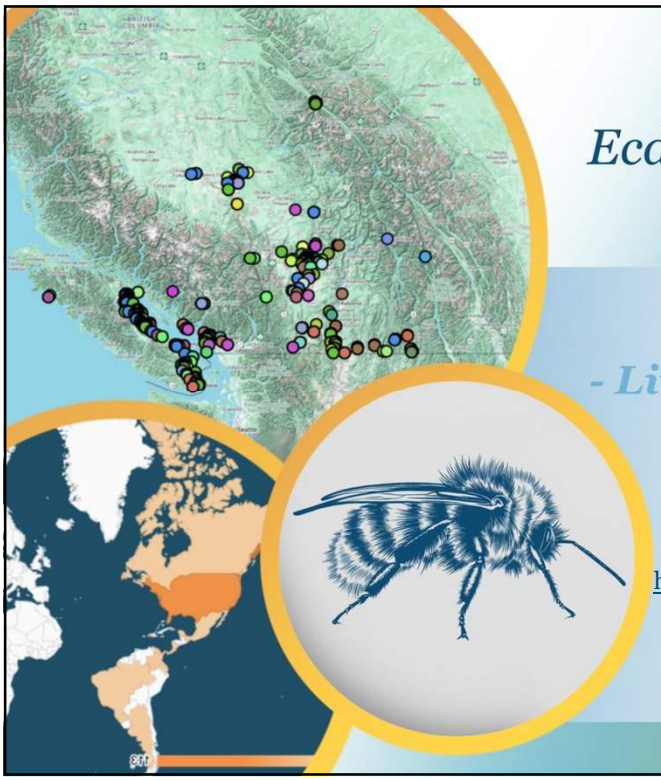
BC Bee Atlas

Partnership with City of North Vancouver

- Sampled bees in modified habitat areas in 2024 & 2025
- Increased known species from 13 to 43
- Collected 175 specimens from 36 plant species
- Observed 1 species at risk (*Bombus flavidus*) and 9 Introduced species

city of north vancouver

https://www.bcnativebees.org/projects/cnv-bcba24



BC Bee Atlas

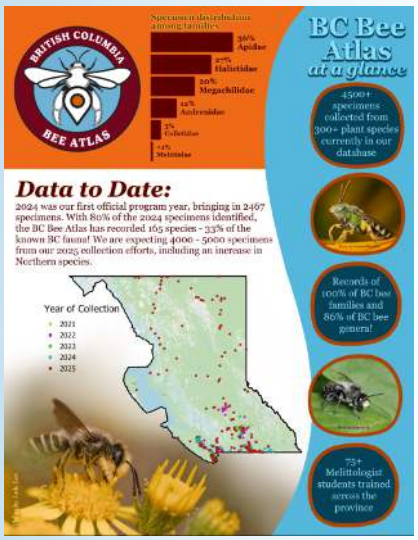
Ecdysis - Arthropod occurrence-data management portal

- Publicly accessible data
- Live managing of our Collection
- Explore our data, maps, species, and plant associations!

https://ecdysis.org/collections/misc/collprofiles.php?collid=196

Data will be shared to GBIF annually for greater findability

2024-2025 Annual Report



https://www.bcnativebees.org/projects/2024-25-bcba-annual-report

BC Bee Atlas

Important dates and training opportunities: Jade Lee

BC Bee Atlas

How to Contribute: Join the OSU Master Melittologist Program

Oregon State University
Extension Service
Master Melittologist

Sign up at
extension.oregonstate.edu/master-melittologist

Program Cost
$325 USD to enroll.
$30 USD annually to maintain active status

NBSBC has subsides for available for those in remote / northern regions!

BC Bee Atlas

Important Dates

Oregon State University
Extension Service
Master Melittologist

Master Melittologist Annual Conference
March 14th (Zoom)

Field Training
May 9th – North Vancouver
May 23rd – Kamloops
June 13-14 – Okanagan (Camping Trip)
July 16th – Cowichan (VI)

BC Bee Atlas

Participant Experience

Monica Zeiper

McBride BC

Mandy Brown

Summerland

Questions?

Oregon State University
Extension Service
Master Melittologist

Master Melittologist Program Coordinator: Oregon
Jen Larsen - Jen.Larsen@oregonstate.edu

NBSBC Admin
Jade Lee – BCNativeBees@gmail.com

BC Bee Atlas
Bonnie Zand – BeeAtlas@BCnativebees.org