The Native Bee Society of BC and the BC Bee Atlas Project



AGENDA



- Who is the Native Bee Society of BC (NBSBC)?
- Why do we need a Bee Atlas?
- How does the Bee atlas work?
- What have we found?



NATIVE BEE SOCIETY OF BC

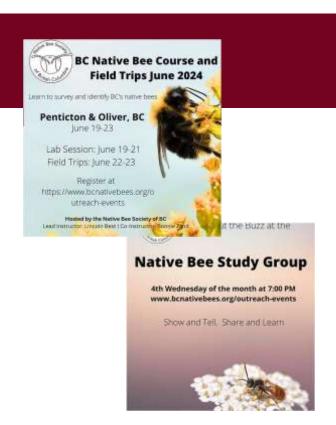
A collective of scientists, artists, land managers, and enthusiasts working to promote the conservation of native bees in British Columbia.

WWW.BCNATIVEBEES.ORG









https://www.bcnativebees.org/outreach-events

Tabling Events & Local Member Presentations

40+ events in 2024!
36 events in 2025 (and counting)

Seedy Saturdays, Farmer's Markets, Festivals

Kamloops, Coombs, Denman Island, Sunshine Coast, Tsawwassen Farm School, Fanny Bay, Shuswap, Vancouver, Campbell River, Victoria, Salmon Arm, Similkameen Valley, North Vancouver, Galiano Island, Nanaimo, Langley ...



BC Native Bee Courses

1-5 days
Nanaimo May 10-11
Penticton June 11-15
Prince George Aug 2-3
Victoria Sept 21
Burnaby Oct 4

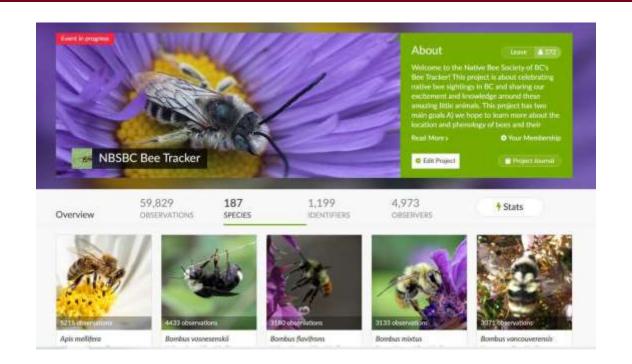






iNaturalist – BC Bee Tracker Project





BC BEE ATLAS



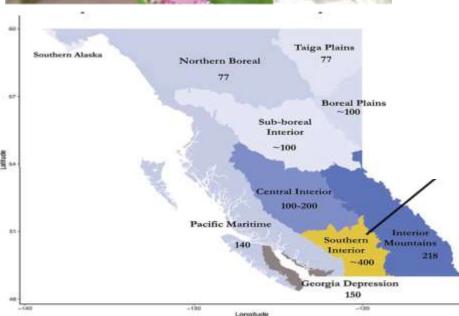


Mission: to document the distribution and floral hosts of all the bees in BC!

WHY DO WE NEED A BEE ATLAS?







BC has the most bees of any Canadian province

BC's Southern Interior has the highest bee diversity in Canada

How many bees are there?

- 20,000 species of bees worldwide
- 5,000 species in US, Canada & Mexico
- 2,000 species in the US & Canada
- 500+ species in BC

THE BEES OF BRITISH COLUMBIA

Family	# of Genera	#species	British Co
Apidae	14	112	
Megachilidae	14	162	
Andrenidae	5	118	
Halictidae	6	81	
Colletidae	2	26	
Melittidae	1	1	
Total	42	500	

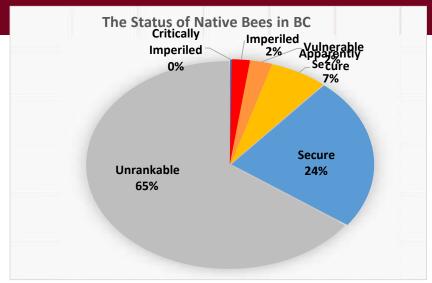
Data from "Wild Species Canada 2020": https://search.wildspecies.ca

(6 out of 7 families worldwide)



KNOWLEDGE GAPS





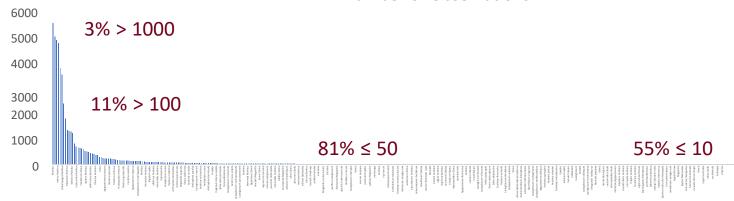
BC: 490 species!

PUBLIC DATA - GBIF









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

HOW DOES A BEE ATLAS WORK?





















Beaty Biodiversity Museum







Slide: Oregon Bee Atlas

WORKFLOW



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

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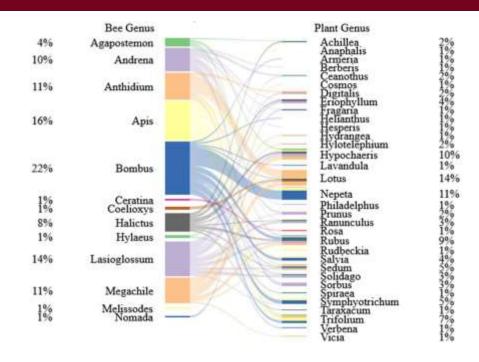
Print location labels and mail to volunteers

Slide: Oregon Bee Atlas

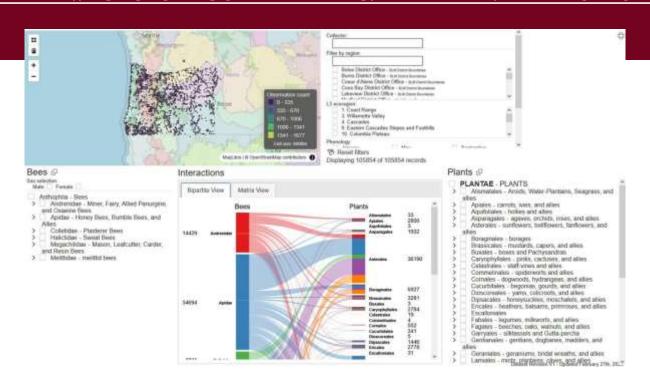
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BEE PLANT NETWORK



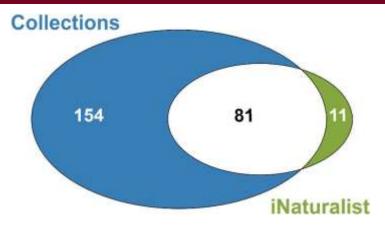


HTTPS://AGSCI.OREGONSTATE.EDU/BEE-ATLAS/MELITTOFLORA



WHY DO WE NEED TO COLLECT SPECIMENS?





Turley et al., 2024. Bee monitoring by community scientists: comparing a collections-based program with iNaturalist

FIG. 4. VENN DIAGRAM SHOWING THE NUMBER OF BEE SPECIES THAT ARE UNIQUE TO OUR COLLECTIONS DATASET (LEFT), FOUND IN BOTH DATASETS (CENTER), AND FOUND JUST IN THE INATURALIST DATA (RIGHT). SIZE OF OVALS ARE SCALED BY THE NUMBERS. COLLECTIONS HAD A TOTAL OF 235 SPECIES COMPARED TO 92 SPECIES WITH INATURALIST.

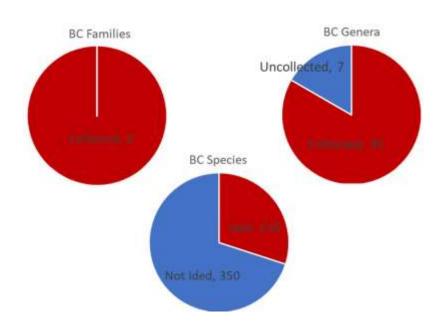
Ann Entomol Soc Am, Volume 117, Issue 4, July 2024, Pages 220–233, https://doi.org/10.1093/aesa/saae014



WHAT HAVE WE FOUND?







- 2024 Samples: 2610 specimens
- 100% of BC Bee Families
- 83% of BC Genera
- 30% of known BC species

INTRODUCED SPECIES





OSMIA CORNUTA







Getz, M. P., Best, L. R., Melathopoulos, A. P., & Warren, T. L. (2024). <u>The establishment and potential spread of Osmia cornuta</u> (Hymenoptera: Megachilidae) in North America. *Environmental Entomology*. https://doi.org/10.1093/ee/nvae100

Images: B. Zand

RARE SPECIES









MACROPIS NUDA ON LYSIMACHIA CILIATA





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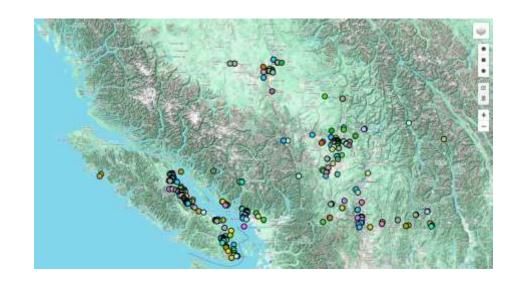
PUBLIC DATA - Ecdysis



Our BC Bee Atlas data is now up on Ecdysis!

The website includes a searchable map of all our observations.

Using the advanced search function, you can pull out species lists and maps for specific regions, genera, years or collectors. You can also search by host plant.



HOW CAN YOU BE INVOLVED?



- Support NBSBC through memberships and donations
- Join the OSU Master Melittologist Program
- Take a course!
- Record and ID bees on iNaturalist













