



Wisconsin Bumble Bee Brigade

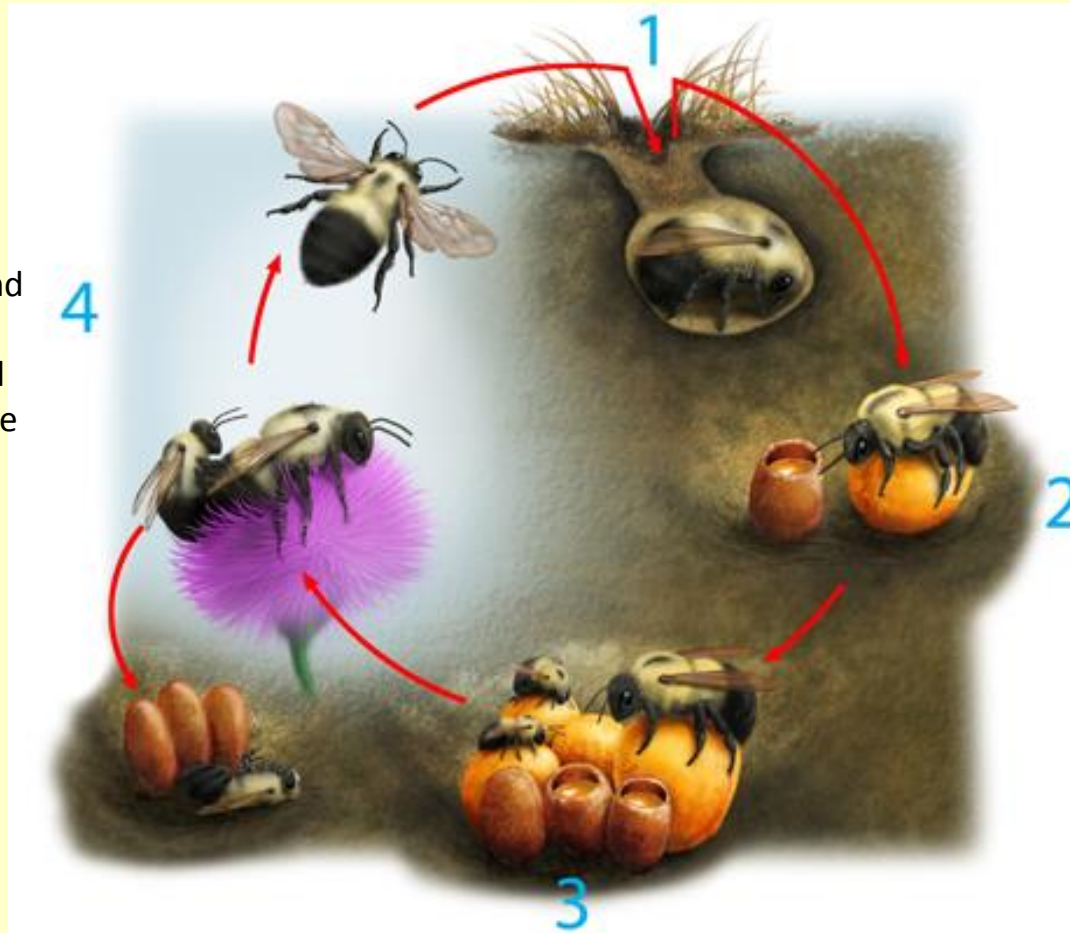
Eva Lewandowski, PhD

Wisconsin Department of Natural Resources



Bumble Bee Life Cycle

A queen emerges from hibernation in spring and finds a nest site, such as an abandoned rodent burrow.



She creates wax pots to hold nectar and pollen, in which she lays and incubates her eggs.

When her daughters emerge as adults, they take over foraging and other duties

In autumn the colony produces new queens and male bees, who leave to find mates. Newly mated queens hibernate and the rest of the bees die.

Bumble Bees in Decline

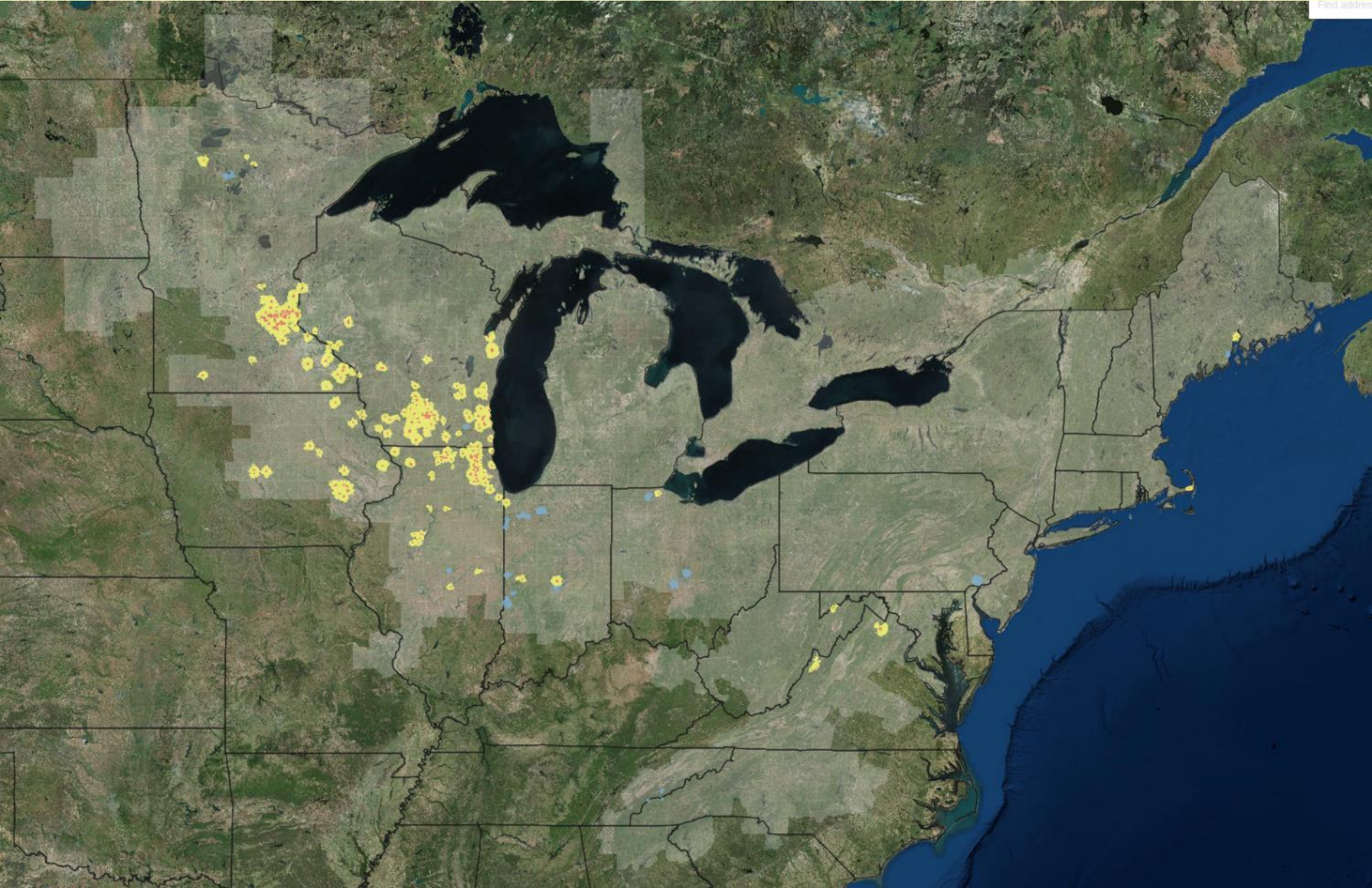


Rusty Patched Bumble Bee

- Declined by at least 87% in last 20 years
- Most remaining populations are in Wisconsin



Rusty Patched Bumble Bee Range



WI Bumble Bees Need Our Help



rufocinctus



ternarius



frigidus



affinis



griseocollis



impatiens



bimactulatus



fervidus



borealis



perplexus



vagans



sandersoni



pennsylvanicus



auricomus



terricola



bohemicus



citrinus



variabilis



insularis



flavidus

Causes of Population Decline

- Habitat Loss
- Intensive Agriculture (pesticides, decreased floral diversity, disease and competition from commercial bees)
- Pesticides
- Disease
- Climate Change





BUMBLE BEE BRIGADE

wiatri.net/inventory/bbb

Mission

To improve our understanding, management, and conservation of Wisconsin bumble bees.



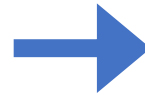
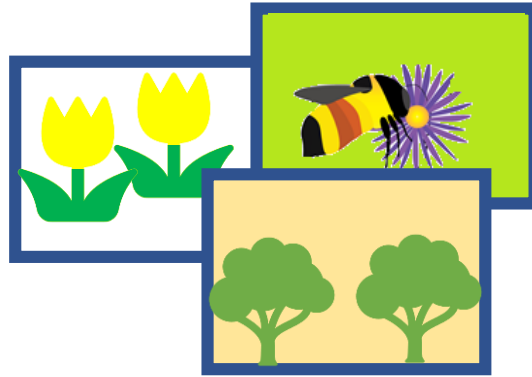
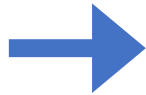
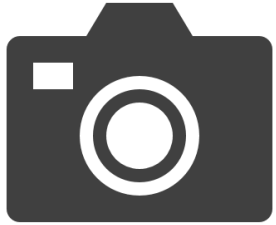
Long-Term Objectives

- Develop an accurate map of species distributions
- Identify species-habitat associations
- Assess habitat conditions and determine conservation threats
- Determine baseline population status and monitor trends over time

Photography-Based



Methods



SURVEY

CURATE

SUBMIT

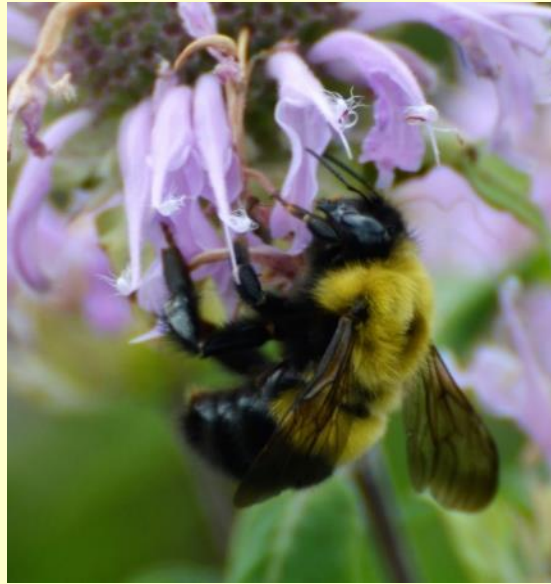
When and Where to Volunteer

- April/May-October
- Avoid rain, high winds, and severe weather
- Easier to photograph when cool
- Anywhere with flowering plants



Photography Tips

- Series of photos
 - dorsal (top), side & face views
- After taking photos of one bee, take a “spacer” photo
- Patience & practice



Confusing Bumble Bee (*Bombus perplexus*) - queen

Key Views to Photograph



Lemon Cuckoo (*Bombus citrinus*) - female

SUBMIT YOUR PHOTOS!!!!

wiatri.net/inventory/bbb



[Home](#) [Get Involved](#) [Resources](#) [Submit Data](#) [Explore Data](#)

WI Bumble Bee Brigade Log In

The Wisconsin Bumble Bee Brigade allows volunteers from the public and professionals to report observations of bumble bees seen in Wisconsin. The information you provide will be used by the Wisconsin Department of Natural Resources and its partners to study, manage, and conserve Wisconsin's bumble bees. Data on rare species will be used to supplement the Wisconsin Natural Heritage Inventory database. Personal information collected on this form will be used to process your request, and may be used to contact you if DNR staff require additional information or for project updates; it may also be made available to requesters under Wisconsin's Open Records law [ss. 19.31-19.39, Wis. Stats]. The photos and observation data that you submit, generalized to the township level, will be displayed on the Wisconsin Bumble Bee Brigade website, under the display name of your choice or as anonymous.

Email:

Password:

Forget your password? Enter your email address in the space above and automatically [retrieve your password](#) if the email matches the one listed in your account.

LOG IN

Don't have an account yet? [Create a new account here](#).



This site is produced in conjunction with the [Wisconsin Aquatic and Terrestrial Resources Inventory](#) and sponsored by the [Wisconsin Department of Natural Resources](#). The information presented on this site is subject to the Wisconsin Department of Natural Resources' [Legal Notices](#), [Disclaimers](#), and [Terms of Use](#).



2018 Results

Statewide

- 102 volunteers
- 1165 observations
- 16 of our 20 species
- 78 new sites for Species of Greatest Conservation Need
- 3 new county records for rusty patched bumble bee

Kenosha, Racine, Walworth, & Waukesha

- 15 volunteers
- 250 observations
- 9 species

2019 Trainings

wiatri.net/inventory/bbb



June 18th, 9am-1:30pm
Hawthorn Hollow Nature Sanctuary and Arboretum
880 Green Bay Rd, Kenosha

June 24th, 9am-1:30pm
Schmeekle Reserve
2419 North Point Drive, Stevens Point

June 27th, 9am-1:30pm
Belmont School
646 E. Liberty Street, Belmont



June 29th, 9am-1:30pm
Wehr Nature Center
9701 W College Ave, Franklin

July 2nd, 9am-1:30pm
St. Croix River Visitor Center
401 N. Hamilton Street, St. Croix Falls

July 11th, 9am-1:30pm
Northern Great Lakes Visitor Center
29270 County Highway G, Ashland

DNR.WI.GOV Keyword "ER"



**TAX
CHECK
OFF**

**DIRECT
GIFTS**

**EAGLE
PLATE**



**STAND UP
FOR ENDANGERED SPECIES**

Bombus impatiens
common eastern bumble bee



Bombus bimaculatus
twospotted bumble bee



Bombus griseocollis
brownbelted bumble bee



Bombus auricomus
black and gold bumble bee



Bombus vagans
half black bumble bee



Bombus affinis
rusty patched bumble bee



Bombus rufocinctus
redbelted bumble bee



Bombus ternarius
tricolored bumble bee



Cuckoo Bumble Bees

- 5 species in WI
- Social parasite, no corbicula on hind tibia
- Parasitize nests of other species



Lemon Cuckoo



Fernald Cuckoo



Indiscriminate Cuckoo

**Rusty Patched Bumble Bee
WI Counties with Observations**

- Current (2000-2018)
- Current (2018 B3 Observation)
- Historic (<2000)
- No Observations

