

# Pollinator Steward Certification



A PROGRAM OF  
POLLINATOR PARTNERSHIP

## Module 3:

Butterflies, Bats, and Overlooked  
Pollinators

Tuesday, February 25<sup>th</sup>, 2025

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Protect their lives. Preserve ours.

# Housekeeping:

- Tonight's recording will be shared by Friday of this week, and all recordings will be available to view until December 31<sup>st</sup>, 2025
- Closed captioning is available – enable in your controls.
- Please put questions in the Q&A box; UPVOTE questions you like!
- Questions for panelists will be answered at the end of the session.
- Contact [stewards@pollinator.org](mailto:stewards@pollinator.org) for registration issues, questions, etc.
- Engage in respect and kindness with each other in the chat.
- We suggest that you write down in point form or 1-2 sentences the key takeaways from each training while you are attending live.
- **Tonight – Award for favorite question!**



# Meet Your PSC Guest Speakers!



**Steve Sass**  
Indiana Nature LLC



**Amanda Smith**  
Indiana Nature LLC



**Kristen Lear, Ph.D.**  
Bat Conservation International



# Who are the Pollinators?

- Bees
- Beetles
- Flies (syrphid flies, bee flies)
- Mosquitoes?
- Moths
- Wasps
- Butterflies
- Bats
- Birds
- Ants
- Mammals
- Reptiles



Artwork by Fiorella Ikeue

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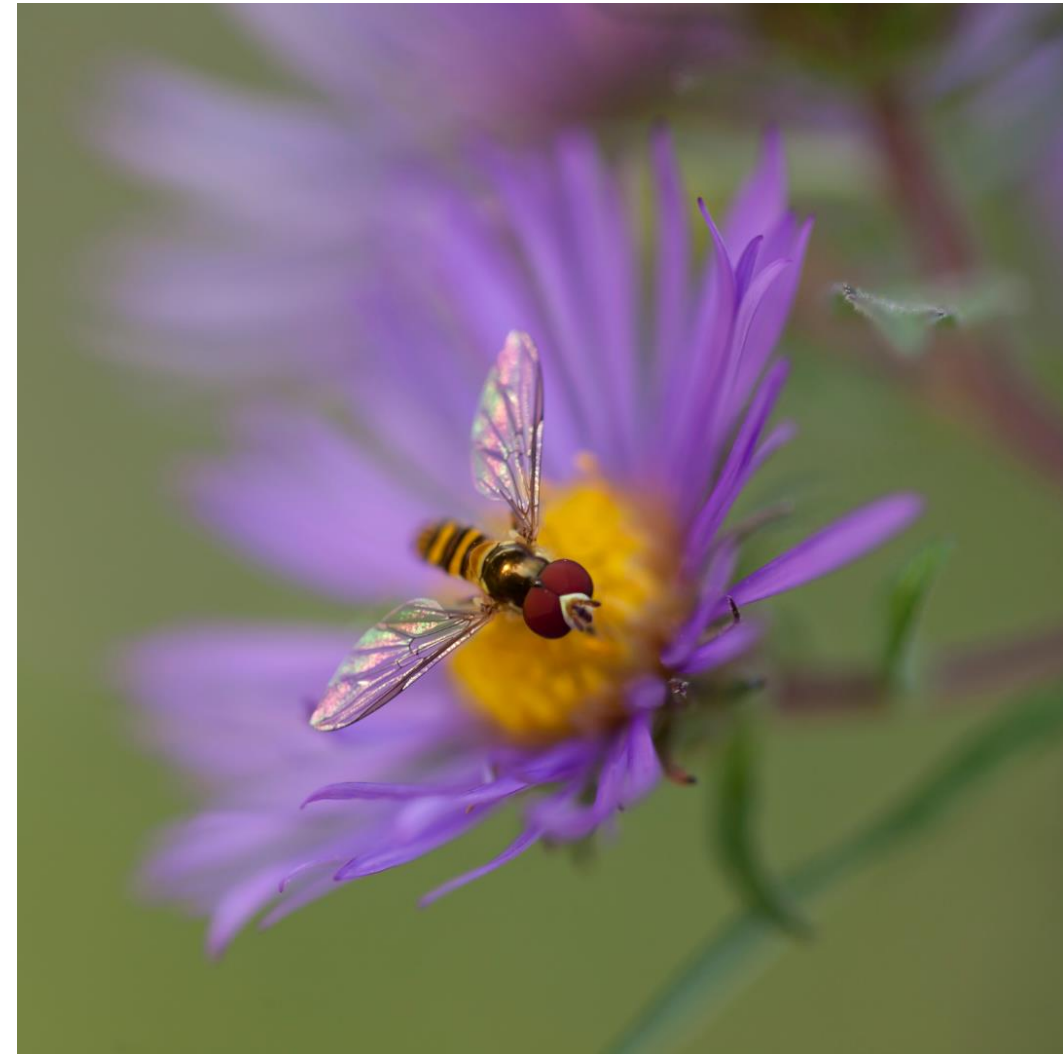
# Beetles

- Nearly 350,000 known species worldwide
- One of the first pollinators
- Over 9000 species in Canada; 30,000 in US
- The sub-family Dasytinae are commonly found on flowers
- Congregational feeding
- Economically important pollinated species include cultivars of *Frugaria* species and *Melilotus* species
- Suffer from bad press and lack of known relationships



# Flies

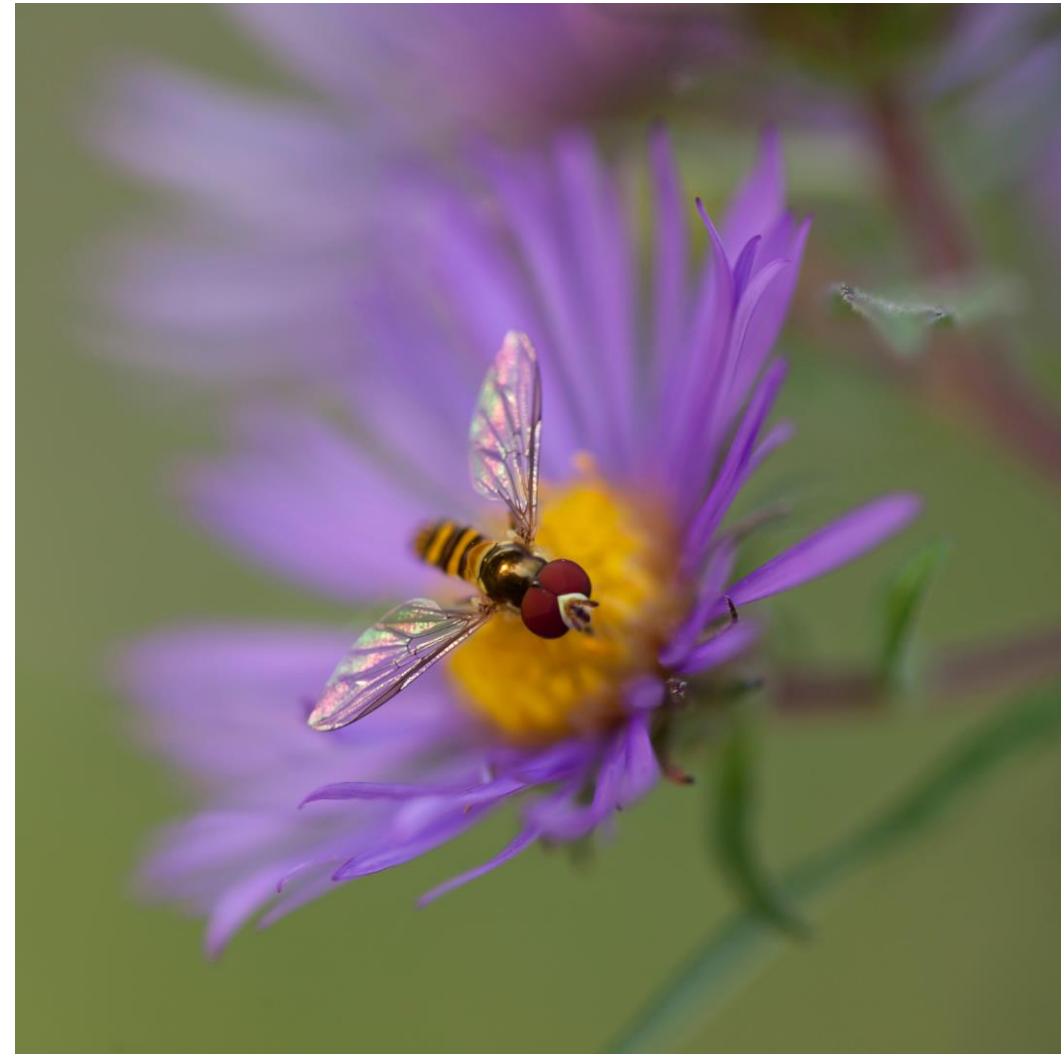
- 125,000 described species globally
- Two wings instead of four – a more evolved flight
- Not as temperature or distance sensitive as bees
- Often mimic bees and wasps in their coloration
- Bad smell on a flower? It's for the flies!





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# Birds

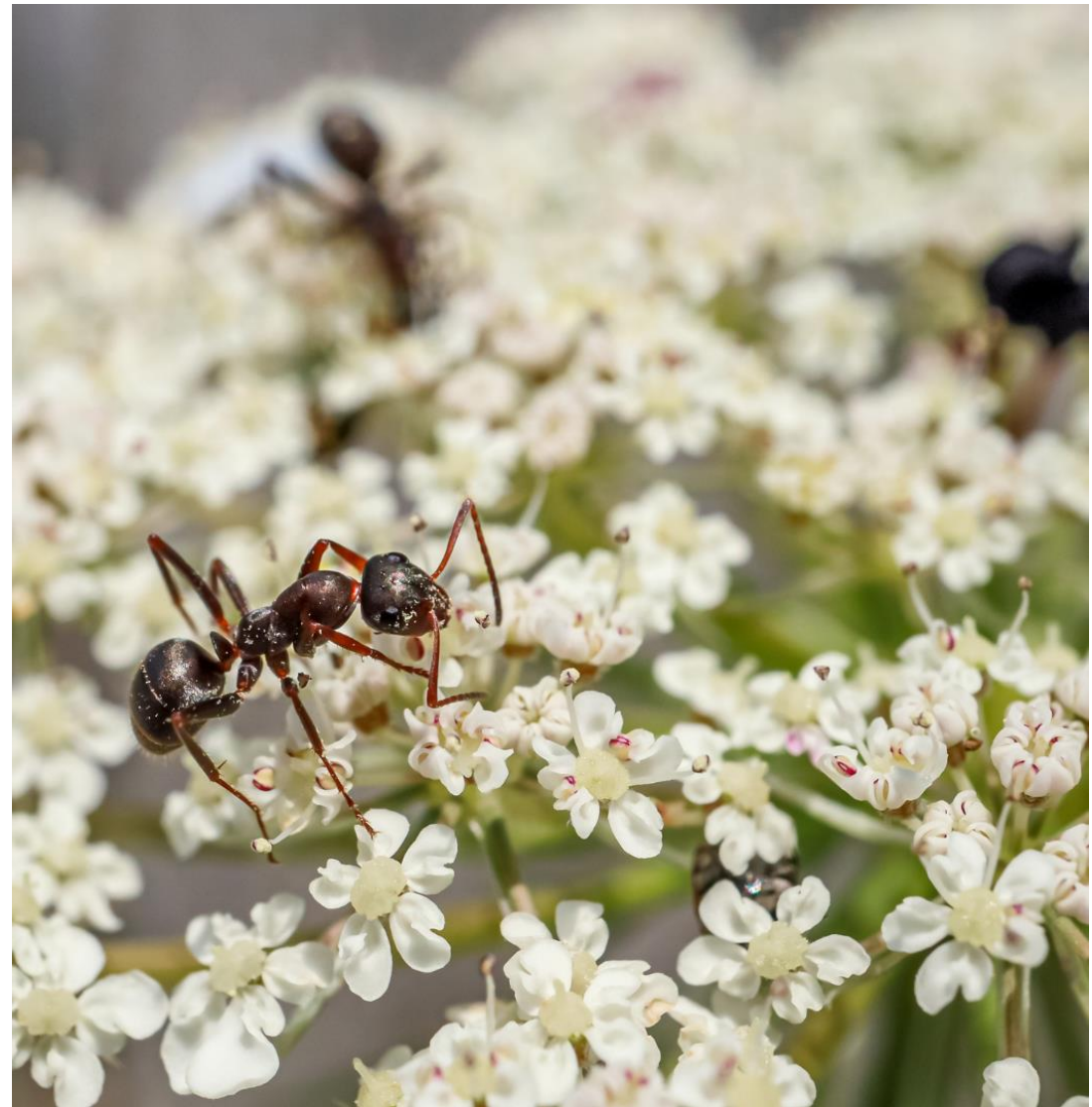
- Roughly 2,000 species of pollinating birds worldwide
- Bird pollination occurs in over 500 genera of plants
- Increased paternal diversity
- Select plants with tube/cup/funnel flower shapes native to your region.
- Red, yellow, orange, are extremely appealing colors.



Photo by Anthony Colangelo

# Ants

- Only about 12,000 species known globally
- Help with pollination? Not really...
- Help with plant reproduction? Yes!
- They aren't built for pollination
- Soil tilling, seed transport, scarification



# Mammalia – Honey Possums and Lemurs!

Photo: Honey Possum by Bo Janmaat, courtesy of iNaturalist Australia (CC BY-NC 4.0)



Photo: Black-and-White Ruffed Lemur, ©Thierry Cordenos, courtesy of iNaturalist (CC BY-NC 4.0)





An Ethiopian wolf (*C. simensis*) licks nectar from an Ethiopian red hot poker flower (*K. foliosa*) (left), and its muzzle is covered in pollen after feeding on the nectar (right). Adrien Lesaffre

# Lizards

- Primary pollinators on oceanic island
- Carry pollen on their snouts
- Research points to an underestimation of their pollinating benefits
- Also help in seed dispersal, much like ants
- None in North America



Blue-Tailed Day Gecko, by Klaus Bohn courtesy of iNaturalist (CC BY-NC 4.0)

# Wasps

- Wasps look like bees, but are generally not covered with hair
- Need key resources such as pollen and nectar from flowers
- Commonly found on flowers such as species of goldenrod
- Fig wasps are responsible for pollinating different types of figs!



*Strangler Fig*  
*Ficus aurea*  
Pollinated By:  
Fig Wasp *Pegoscapus mexicanus*



# Mosquitoes?!

- Female mosquitoes must provide eggs with a source of protein...blood
- Adults feed on plant nectars to fuel their flight when they aren't blood feeding to support the development of healthy eggs
- *Aedes communis* is an important pollinator of *Platanthera obtusata*, the blunt-leaf orchid



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To most people, the word "pollinator" suggests bees. And though most of the world's nearly 20,000 species of bees are champion pollinators, many other animals make the reproduction of flowering plants possible. The flower offers the animal a floral reward—usually nectar or pollen—and the animal inadvertently moves the pollen within a flower or from flower to flower. This often unseen and generally underappreciated ecosystem service is responsible for the reproduction of nearly 80% of all flowering plants and brings us an estimated 1 out of every 3 bites of food we consume. You live in A World of Pollinators. Conserve and celebrate them!



# A WORLD OF POLLINATORS

# POLLINATORS

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# Course Information Page:

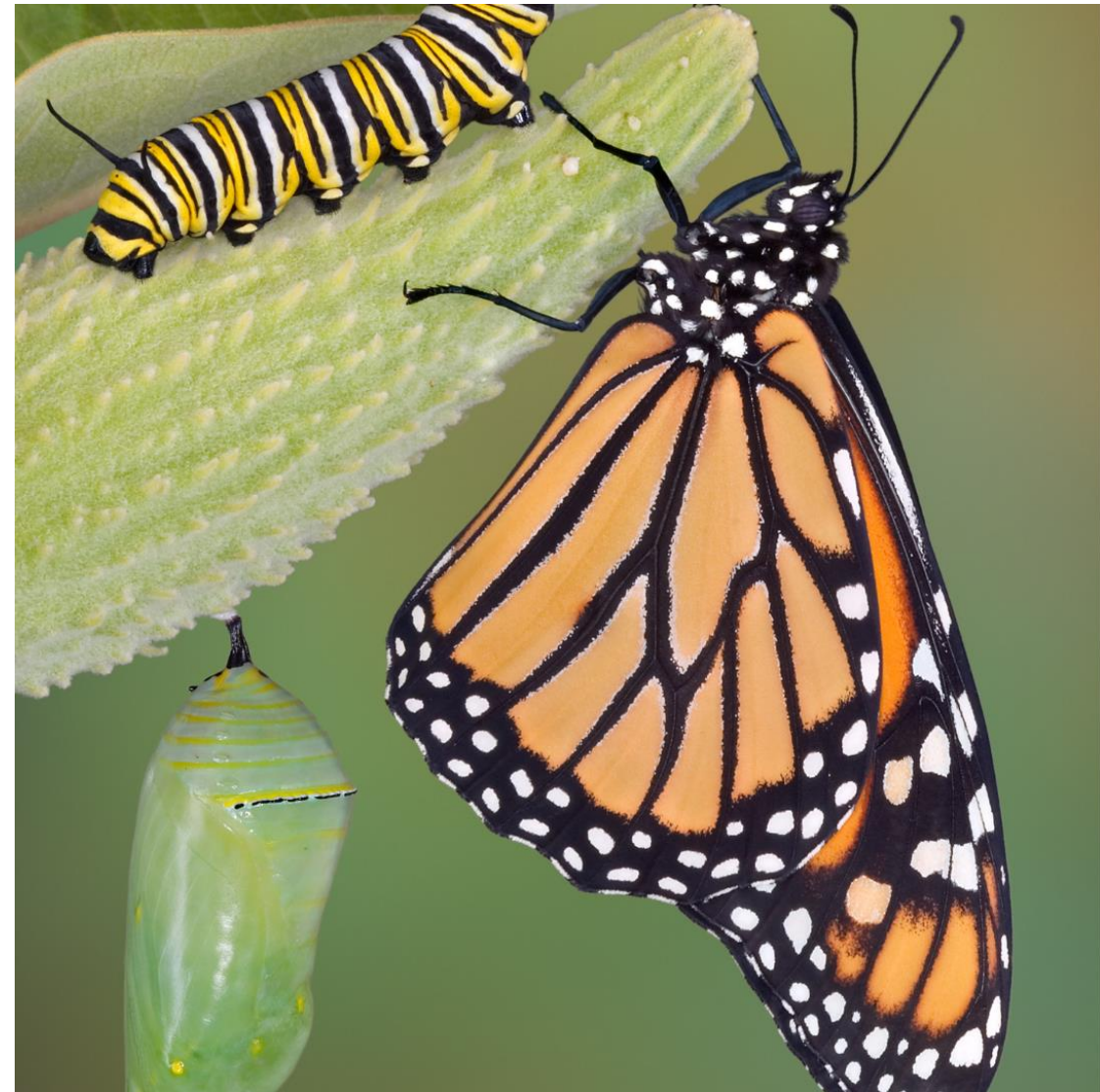
The Course Information page will be your homebase for module recordings, updates, and program resources. Login to the Course Information page using the following username and password:

**website:** <https://www.pollinator.org/psc/course-info>

**username:** PollinatorSteward

**password:** psc2025

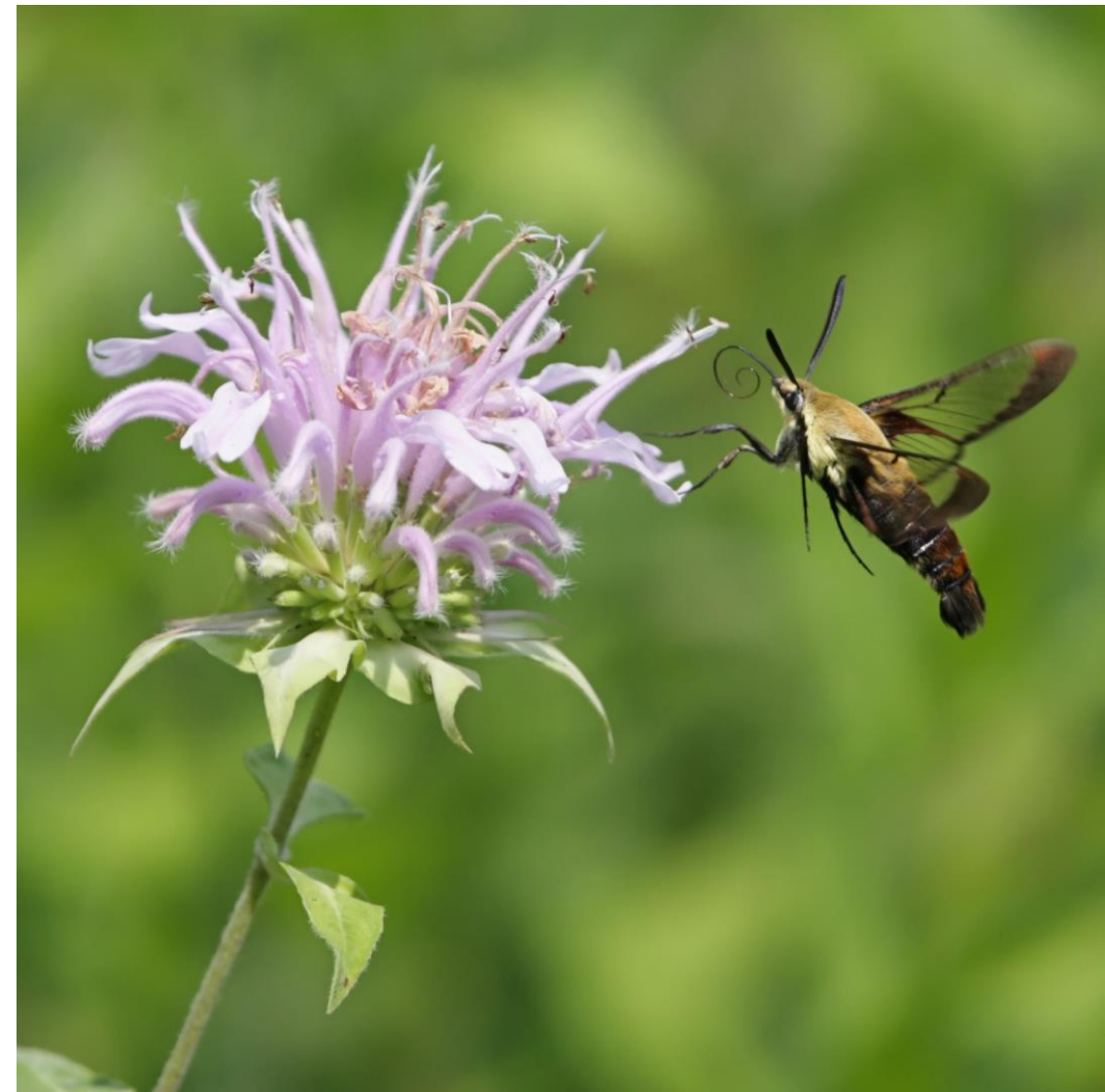
Please do not share the username and password as this page is only for registered participants of the 2025 Pollinator Steward Certification program.



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# Wrap Up and Next Session:

- Tonight's recording and resources will be shared on the Course Information page by Friday.
- **Tuesday, March 4<sup>th</sup>, 4pm PST/7pm EST**
  - Module 4: Creating Habitat for Pollinators Overview
  - Use the same Zoom link that you used today to join future modules. Zoom will also send a reminder email with the link one hour before each module.



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