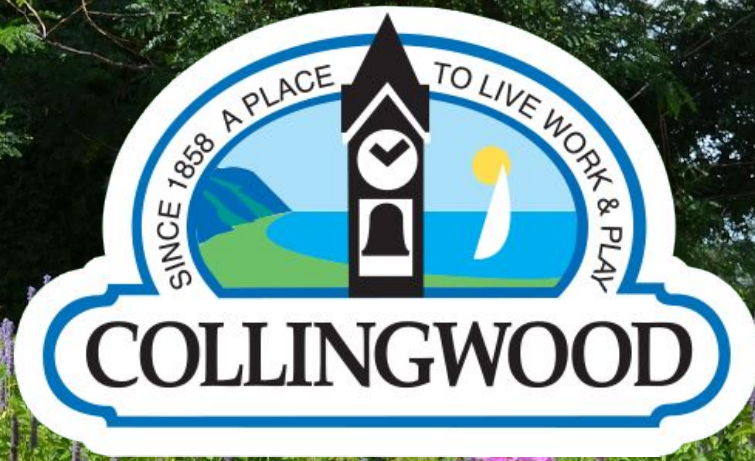




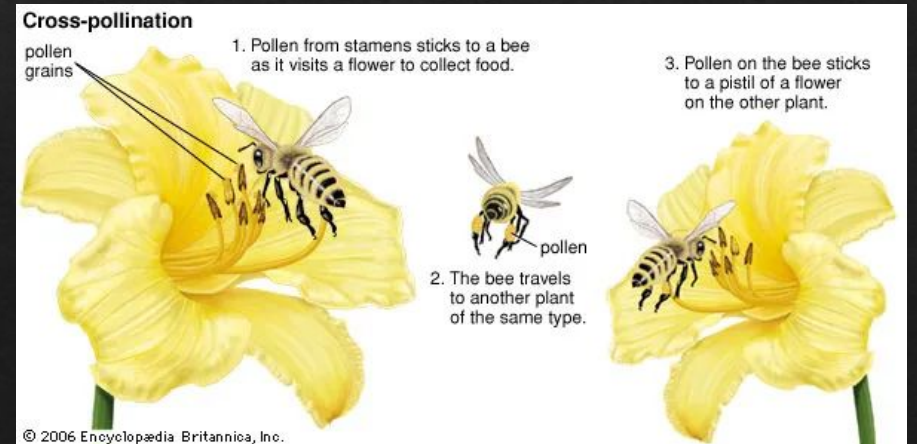
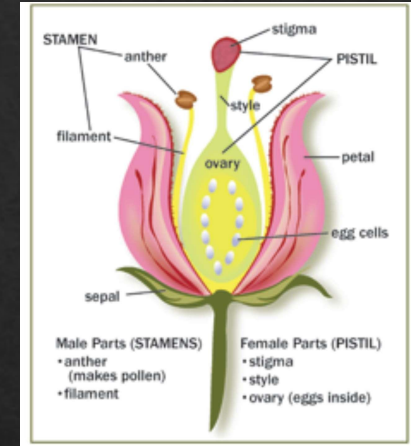
# Developing a pollinator protection plan for Collingwood

Jordan Phelps, Vicki Wojcik, Adèle Grenouilleau



# What are pollinators?

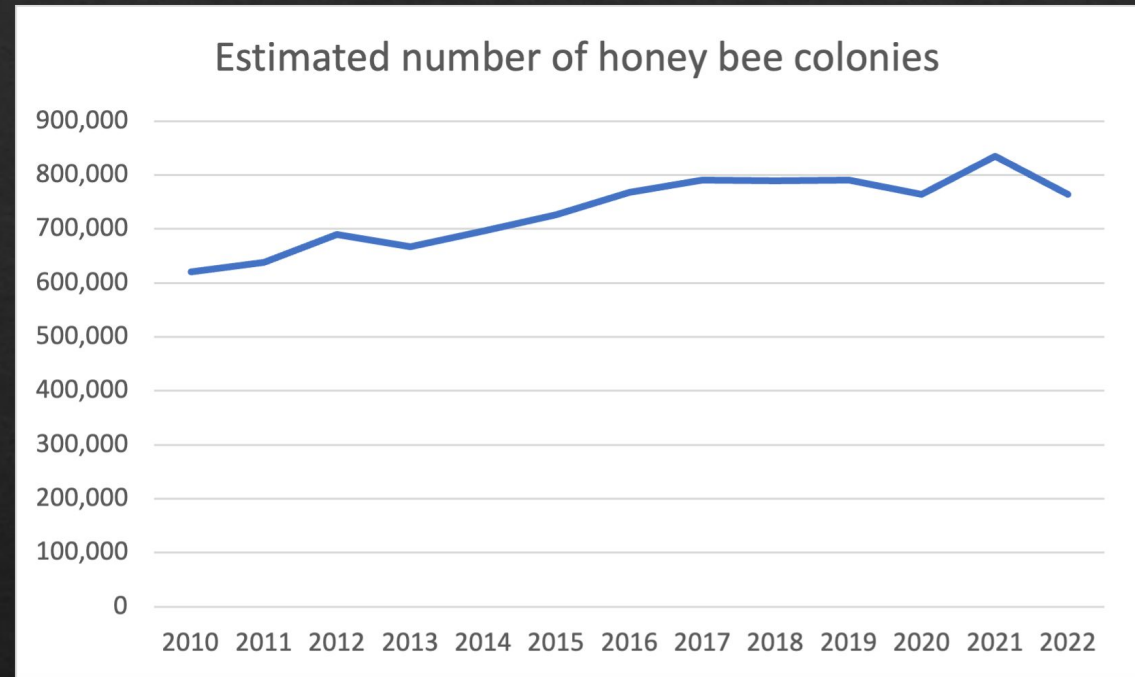
Animals that move pollen between the male and female reproductive parts of flowers, initiating a process that produces seeds, fruits, and the next generation of plants.



Who are pollinators?



# Who are pollinators?

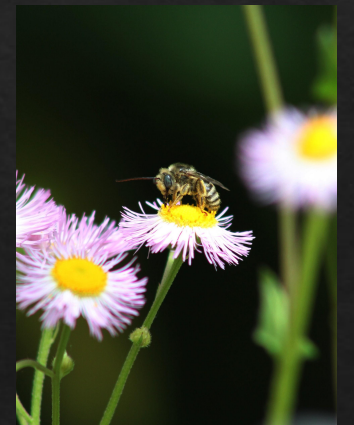
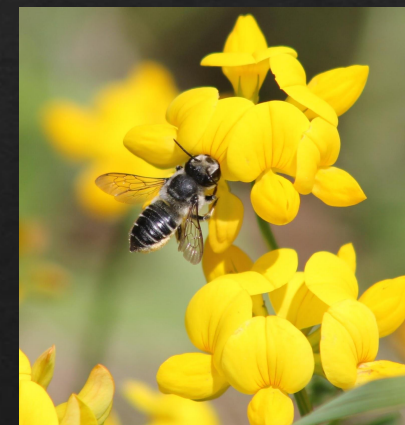
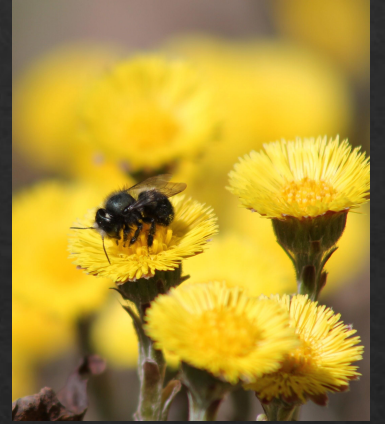
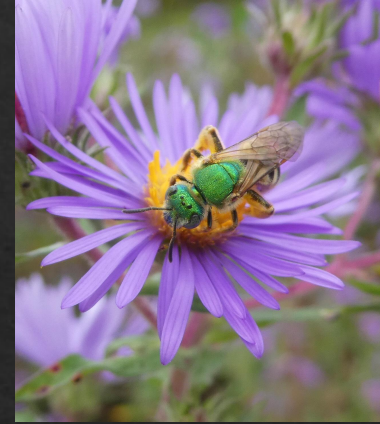
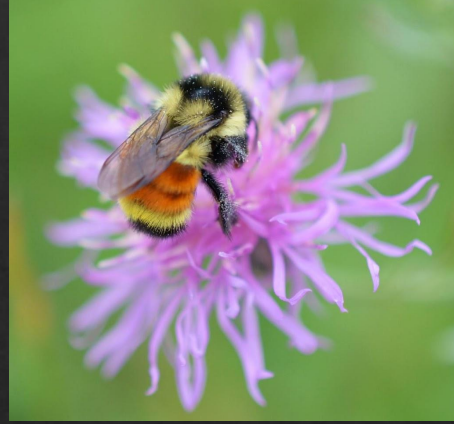


Statistics Canada: Production and value of honey

# Who are pollinators?



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800+ species in Canada, 20,000 worldwide

Who are pollinators?

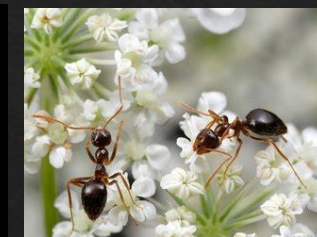


And that's just  
bees!

# Who are pollinators?



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# Why protect pollinators?



Ecosystem functioning



Food production



# Municipalities are taking action on pollinators



Habitat Restorations



Pollinator Gardens



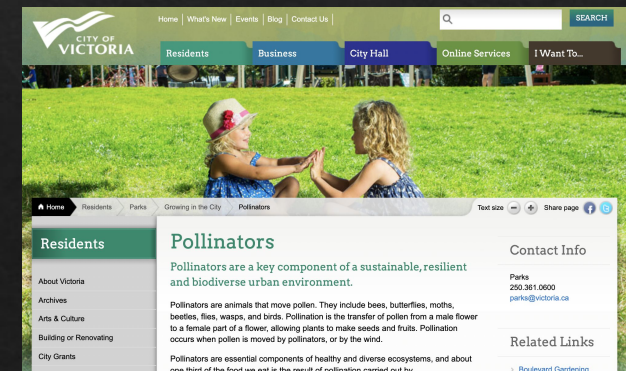
Invasive Species Removal



Pesticide Reduction



Seed Libraries



Community Outreach

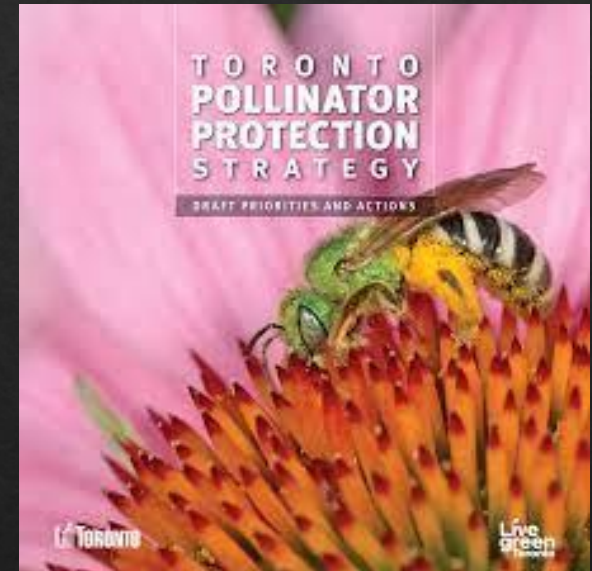
# Municipalities are taking action on pollinators



68 Bee Cities across Canada



Biodiversity Strategies



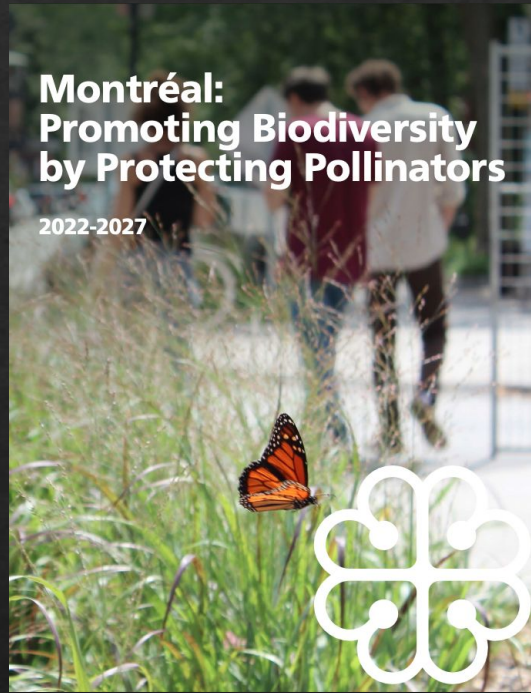
Pollinator Protection Strategies

# Pollinator protection strategies in Canada



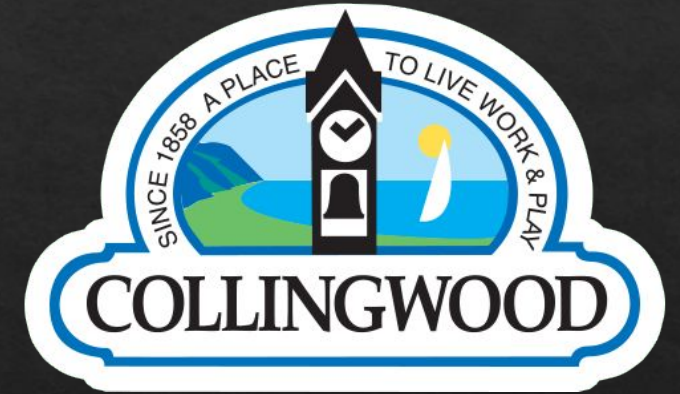
2018

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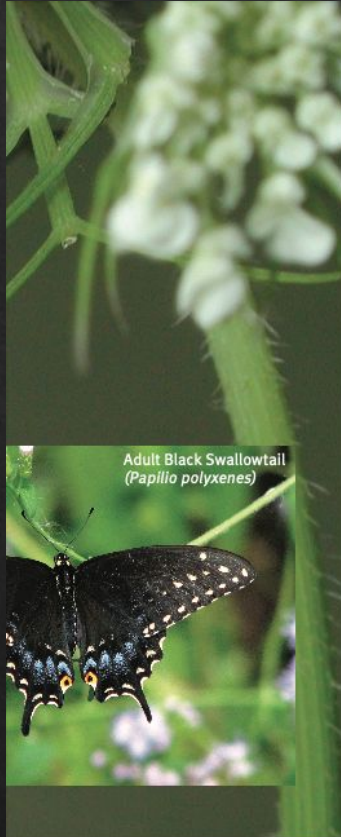


2022

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# Strategies contain guiding principles and explicit actions



Adult Black Swallowtail  
(*Papilio polyxenes*)

## POLLINATOR PROTECTION STRATEGY: VISION, PRIORITIES AND ACTIONS

Toronto's vision is to be home to diverse pollinator communities that contribute to resilient ecosystems and enhance urban biodiversity.

To achieve this vision, Toronto's Pollinator Protection Strategy identifies six priorities:

- 1) Create and enhance habitat
- 2) Design and connect green spaces
- 3) Partner and build relationships
- 4) Invest and incentivize
- 5) Educate and train
- 6) Celebrate and recognize achievements

For each priority, a series of actions have been developed that will help to achieve this vision. These actions will support native bees and butterflies, and will also be beneficial to all pollinators, including non-native honey bees. Habitat creation in particular will have a positive impact on all pollinators, and is the foundation of the Strategy.

Toronto

<b>Goals and orientations.....</b>	<b>11</b>
1. Conserve, create and connect pollinator-friendly habitats .....	11
1.1 Continue to protect and restore natural environments .....	11
1.2 Increase connectivity between habitat patches .....	12
1.3 Create habitats and developments based on pollinators' needs .....	12
1.4 Maintain open spaces in protected natural areas .....	13
1.5 Develop urban planning tools to promote greening .....	14
2. Improve pollinators' living conditions .....	14
2.1 Adapt green space management practices .....	14
2.2 Favour nectar plants, preferably native, with diverse flowering periods staggered over time .....	15
2.3 Strive to eliminate the use of pesticides .....	16
2.4 Improve cohabitation between honey bees and native pollinators.....	16
3. Recognize the importance of pollinators for biodiversity .....	17
3.1 Increase knowledge of pollinators and their habitats .....	17
3.2 Disseminate knowledge about pollinators .....	18
3.3 Recognize and celebrate pollinators.....	18

Montreal

# Actions are typically in three core areas

1. Habitat creation and management
2. Education and engagement
3. Celebrating pollinators



Bee City  
CANADA 

# 1. Habitat creation and management

## 1.1 Habitat planning and creation

- Create native plant pollinator gardens
- Create edible gardens, orchards and food forests
- Create habitat networks
- Naturalize large areas of habitat
- Dedicate resources to native plant propagation
- Develop habitat guides and tools



# 1. Habitat creation and management

## 1.2 Habitat management practices

- Develop integrated vegetation and pest management plans
- Set habitat standards and recommendations for development
- Promote pollinator-friendly practices in community gardens
- Complete a natural asset inventory
- Develop a pollinator habitat map
- Delay yard waste collection
- Reduce impacts of artificial nighttime light



# 1. Habitat creation and management

## 1.3 Empowering and incentivizing residents to create habitat

- Ensure that lawn bylaws are inclusive of naturalized yards
- Enable and encourage residents to plant on boulevards
- Provide pollinator habitat grants and rebates
- Offer native plant giveaways and subsidized sales
- Provide pollinator friendly garden consultations
- Promote pollinator garden certification programs
- Initiate seed libraries and encourage seed exchange
- Support farmers to protect pollinators on agricultural lands





# 2. Education and engagement

## 2.1 Media, education and materials

- Promote pollinator conservation through media channels
- Provide education and awareness materials about pollinators
- Use signage to educate residents about pollinators
- Provide pollinator-related training to municipal staff
- Educate youth about pollinators through schools and camps
- Use bee hotels to educate about native bees



# 2. Education and engagement

## 2.2 Engagement events and activities

- Feature pollinator talks and workshops
- Organize pollinator exhibits and day events
- Invite the community to pollinator habitat tours
- Encourage participation in community science
- Feature pollinators at broader community events, such as during Earth Day or at fall fairs
- Provide habitat creation and maintenance opportunities for volunteer engagement



# 3. Celebrate pollinators

- Host an annual Pollinator Week festival
- Recognize community efforts through garden contests
- Invite the community to habitat opening ceremonies
- Create pollinator-themed public art
- Launch pollinator photo contests on social media
- Present pollinator film screenings
- Provide pollinator-themed giveaways



# Current efforts in Collingwood



# Topics for discussion

- Where do you see pollinator efforts happening in Collingwood already?
- Which habitat creation & management actions would you like to see?
- Which education & engagement actions would you like to see?
- Which celebration actions would you like to see?

# Thoughts ?

Jordan Phelps: [jordan@pollinator.org](mailto:jordan@pollinator.org)

Vicki Wojcik: [vw@pollinator.org](mailto:vw@pollinator.org)

Adele Grenouilleau:  
[adele@pollinator.org](mailto:adele@pollinator.org)

Take the survey:

