Day vs Night Pollinators

National Park Service
U.S. Department of the Interior

Urban Ecology Research Learning Alliance
Washington DC

Pollinators

What are They?

Pollinators are organisms that transport pollen from the male anther of a flower to a female stigma. This process results in the production of seeds and allows the flowers to reproduce.

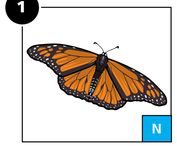
Major pollinators in Kenilworth Park and Aquatic Gardens include ants, bats, bees, beetles, birds, butterflies, flies, moths, wasps, and more.

Why are They Important?

Since they are vital for plant reproduction, pollinators therefore play a huge role in the ecosystem. This relationship isn't one-sided- it has benefits for all parties involved. While the plants get to spread their pollen with the help of the pollinators, the pollinators in return get to drink the nectar from the plants as a food source.

Pollinators affect humans as well, as many of the resources and products we use daily are a result of the pollination process, including the food we eat, medicines that come from plants, cotton materials, and much more.

Iconic Pollinators of Kenilworth

1 
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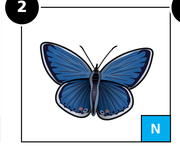
Eastern Monarch Butterfly
Danaus plexippus

2 
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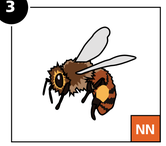
Eastern Tailed Blue Butterfly
Cupido comyntas

3 
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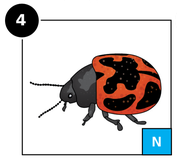
Common Western Honey Bee
Apis mellifera

4 
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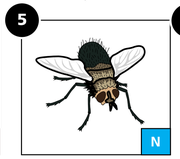
Milkweed Beetle
Lygaeidae

5 
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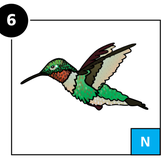
Black Fly
Tachinidae

6 
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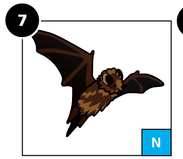
Ruby Throated Hummingbird
Archilochus colubris

7 
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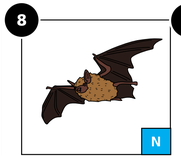
Eastern Red Bat
Lasiurus borealis

8 
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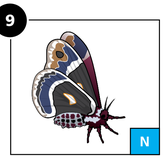
Big Brown Bat
Eptesicus fuscus

9 
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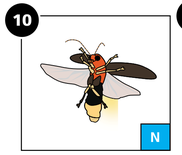
Cecropia Moth
Hyalophora cecropia

10 
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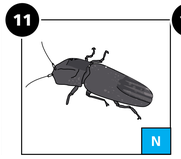
Firefly
Lampyridae

11 
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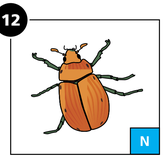
Click Beetle
Elateridae

12 
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Grapevine Beetle
Pelidnota punctata

Types of Pollinators at Kenilworth

Day (Diurnal)

Night (Nocturnal)

Day Pollinators

Day pollinators— like honey bees and butterflies— pollinate plants that bloom during the day. The majority of pollinators are day pollinators, and typically visit plants on warm, sunny days.

Night Pollinators

Moths and bats are two examples of night pollinators, dubbed by many as 'night shift employees'. These pollinators are generally attracted to pale or white nocturnal flowers (i.e., those that bloom during the night).

They typically pollinate plants that are skipped over during the day by other pollinators. [2] Nighttime pollinators are negatively affected by artificial lighting, especially in concentrated urban areas like D.C.

N **Native Species**

NN **Non-Native Species**

Disappearance of Pollinators

Pollinators are highly impacted by environmental forces, including

- Pesticides
- Habitat Loss
- Predators
- Climate Change
- Disease
- Decreasing Food Availability
- Competition from non-native species
- Parasites

Climate Change Impacts on Pollinators

Increasing temperatures

Increasing temperatures, especially during the spring season in this region, will lead to plants blooming sooner than usual.

Not all species of pollinators will be able to change their internal biology fast enough to correspond with the early blooming season. Therefore, many species of organisms, including pollinators, may have limited food availability from plants.

Drought

In periods of drought, which couples warming temperatures along with periods of no precipitation, flowers produce less nectar to conserve energy. Less nectar means pollinators are not getting the amount of calories and sugar that they need, which can lead to smaller colonies of pollinators, and less offspring produced.[1]

Droughts are expected to increase globally as a result of climate change, making this a major concern for ecosystems like those found at KEPA.

Impact on Monarchs

Since monarchs are sensitive to temperature and climate, climate change is affecting the biological processes of the monarch.

Changing temperatures affects their ability to know when to reproduce and migrate; when spring comes early, monarchs may head north before the milkweed has developed enough. If they arrive before the milkweed has developed, they do not have a place to lay their eggs.

Additionally, extreme weather events, which are exacerbated by climate change, play a role in their survival. Storm surges from tropical storms and hurricanes affect not only the butterflies, but also the survival of milkweed

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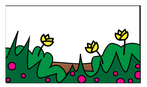
GEORGE MASON UNIVERSITY
CENTER for CLIMATE CHANGE COMMUNICATION

https://www.nps.gov/rlc/urbanecology/index.htm

Ways to Help Pollinators

Turn off lights at night to protect night pollinators

Support the pollination process by planting a garden in your own yard



Support land conservation by helping to maintain community gardens and green spaces

Reduce or eliminate the use of pesticides in your yard

For More Information, please visit:

nps.gov/keaq

iNaturalist.com

kenaqgardens.org