Connecticut Department of Energy and Environmental Protection

Connecticut Department of
ENERGY & ENVIRONMENTAL PROTECTION

Backyard Exploration Series

Bees and Butterflies

Connecticut Department of Energy and Environmental Protection

Pollinators are:

- The movement of pollen from the anther to the stigma of a flower.
- Responsible for **pollination** of flowers to produce fruit.
- Attracted to the flower by the pollen and nectar, which are food sources.

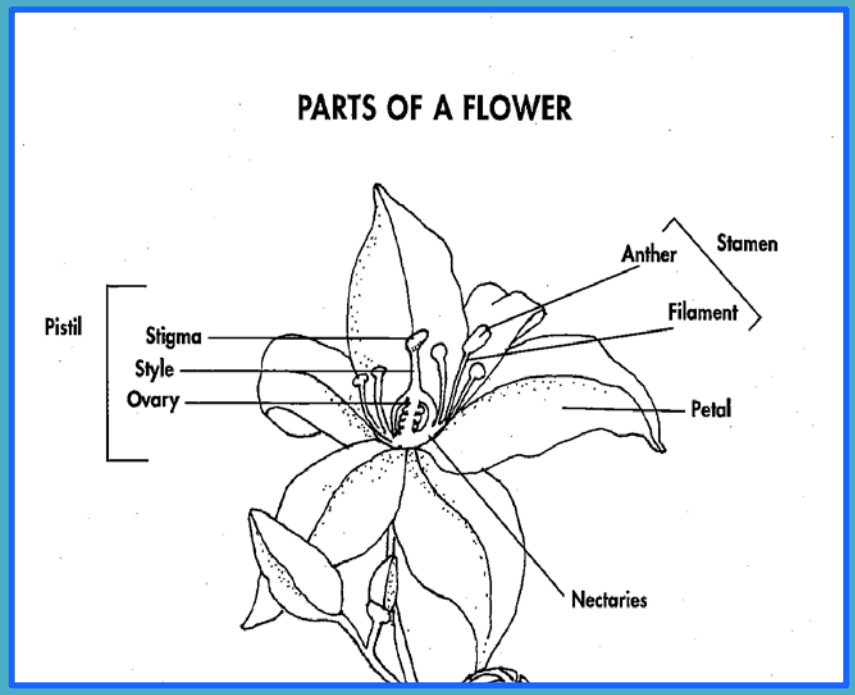

Image: Project Food, Land, & People, Buzzy, Buzzy Bee 2015

Pollinators – More Than Bees and Butterflies

- Wind and water can also pollinate flowers.
- Bats, ants, beetles, rodents, reptiles, birds and mammals are some of the lesser known and more unusual pollinators.
- Find out more about animal pollination with the US Forest Service

Locust borer beetle on goldenrod. Photo by Beatriz Moisset 2002.

Mexican Long-Tongued Bat (Choeronycteris mexicana).Mexican Long-Tongued Bat (Choeronycteris mexicana). Photo by Steve Buchmann

Honey possums. Photo by Milamba, 1998-2002

Pollinators are Specialized

Do you think pollinators adapted to the flower or the flower adapted to the pollinator?

When exploring outside, take a close look at flowers to see how they are different in size, shape, and coloration. Why do you think they are different?

Bees - the most productive pollinators

- Bee survival is challenged by:
  - climate change
  - pesticides
  - loss of flower diversity and habitat

- Wild bees are more at risk than honey bees.
- 1/3 of our food comes from bee pollination.
- CT has over 300 species of bees.

Bee or Wasp?

Bees

- Large eyes on the side of the head
- Hairy (some bees)
- Carry loads of pollen
- Stripes can be on abdomen, but not other parts

Photo by Paul Fuscoe

Wasps

- Narrower bodies and sometimes a very pinched abdomen
- Faces often have shiny or metallic hairs
- Very few hairs
- Don't carry pollen loads though they can have pollen stuck to them
- Have patterns or designs on various parts of exoskeleton

Photo courtesy Sunflower Project

Bee or Fly?

Bees

- Longer, thinner antennae
- Large eyes on the side of the head
- Four wings and mostly fold them against or over their body
- Hairy (some bees)
- Carry loads of pollen

Do not hover

Flies

- Short, thick antennae
- Large eyes in the front of the head
- Two wings do not fold over body
- Have hairs but aren't "hairy"
- Pollen stuck to body but not in loads
- Can hover over a flower

Photo by John Maxwell from www.njaudubon.org/centers/Rancocas

CT Native Bees Differ from Honey Bees

Mostly solitary bees, not producing honey for a hive.

More active pollinators than honey bees.

CT native bees burrow into the ground or live in plant stems.

Photos from CAES, New Haven

- Plant flowers for three seasons. List of Plants for seasons
- Use Native Plant Species!
- Don’t mulch flower beds - some native bees burrow underground & mulch prohibits digging.
- Use less pesticide
- Provide water source

Helping bees also helps butterflies!

Butterflies and Moths

Butterflies

- Wings fold up when they land
- Thin bodies
- Long, thin antennae
- Generally feed during the day
- Forms a hard chrysalis without silk

Moths

- Wings fold out or down when they land
- Thick bodies
- Fuzzy bodies
- Thicker antennae
- Generally feed at night
- Form a fuzzy cocoon from silk

Become a Lepidopterist . . .

. . . start learning these common butterflies:

American Painted Lady

Mourning Cloak

Orange Sulfur

Tiger Swallow Tail

Monarch

Butterflies are Late Risers

- Watching butterflies is better once the day has warmed up.
- Spring weather begins 10-12 days sooner than previous decades, so migratory butterflies have shifted their timings too.
- Help protect butterflies by **not collecting** eggs or caterpillars and raising them in your homes.

Instead -watch them in their environment!

More about Bees, Butterflies & Other Pollinators

- Facts and helpful hints: Pollinators in CT
- Common Butterflies and their host plants:

  CT Audubon Handout
- Help with research, join Citizen Science Projects:

  The Great Sunflower Project

  Bumblebee Watch

  Monarch Waystation Project

  Journey North- Monarchs