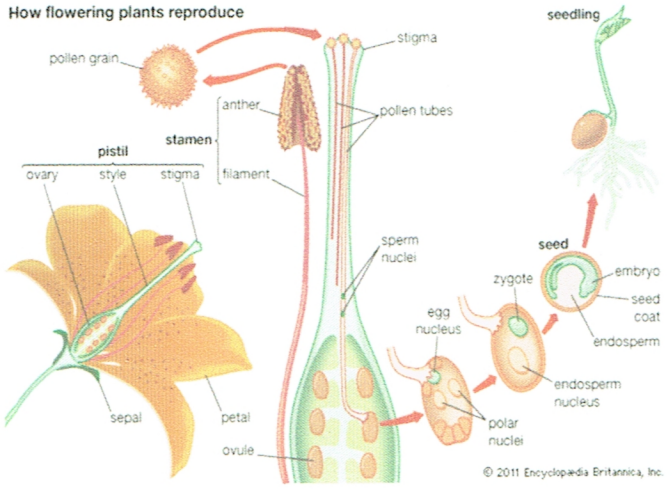
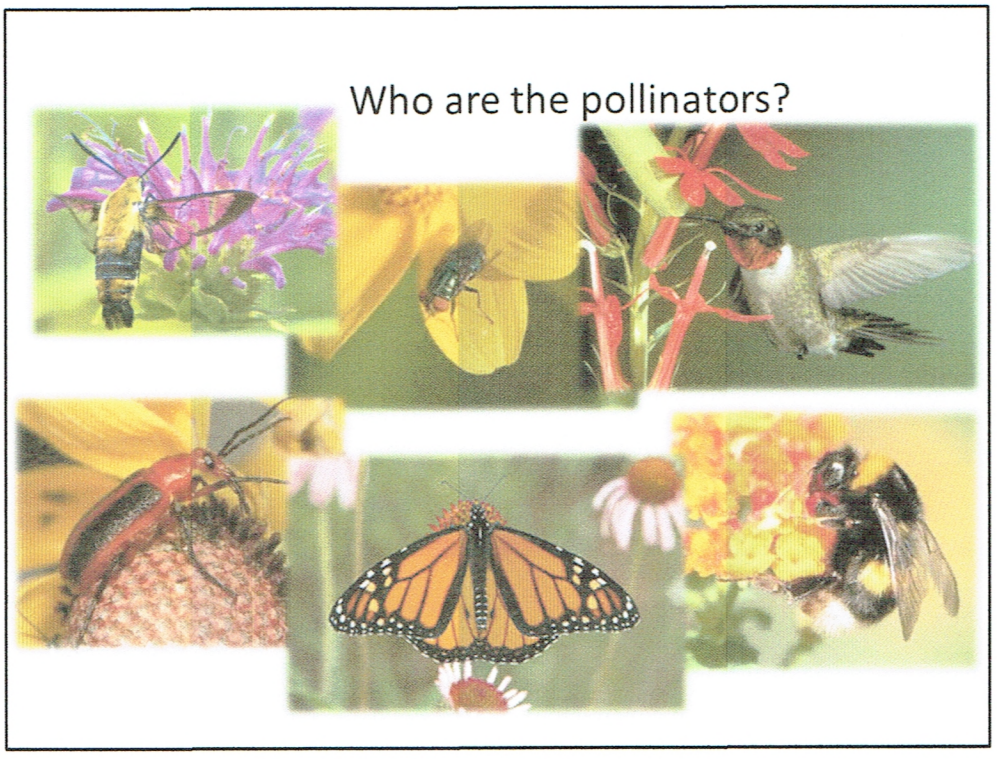
Pollinator Conservation

What does "conservation" mean? The dictionary defines it as "the action of conserving something, in particular, the preservation, protection, or restoration of the natural environment, natural ecosystems, vegetation, and wildlife." I know that you have been studying Georgia's habitats, how change or pollution might affect the plants and animals that comprise those habitats, and how to conserve (or protect) these natural resources. Reduce, reuse, recycle, and biodegradable are some words that may come to mind but creating or restoring habitat for pollinators is another way that you can conserve (protect) them.

What is pollination?

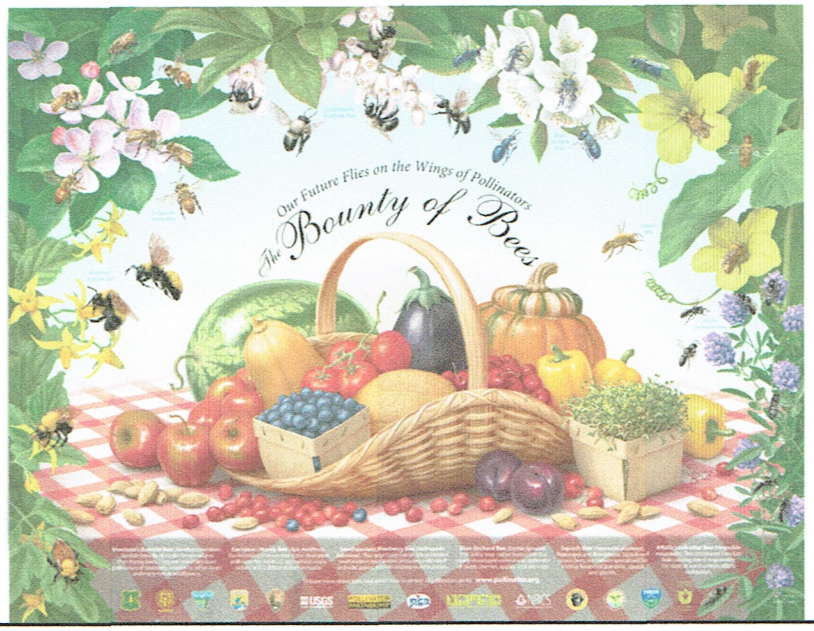


In cross-pollination, pollinators move pollen from the stamens of one flower to the pistil of another flower of the same species. This can lead to fertilization and the formation of seeds and fruits.



Besides honey bees, can you name five other animal pollinators? List them in your booklet.

Why are pollinators important?



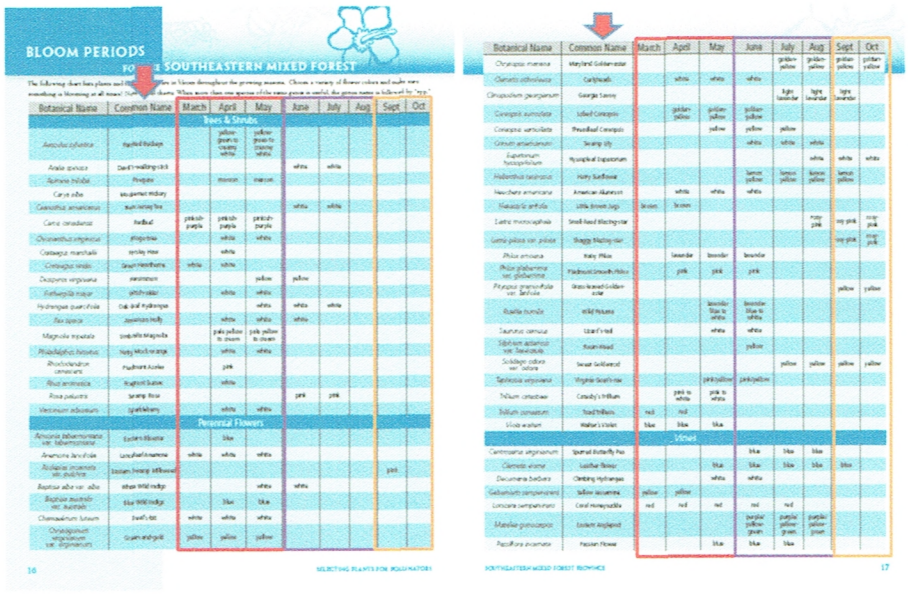
More than 80% of all flowering plants rely on animal pollinators making it possible for fertilization, seed and fruit formation, and the continuation of the species.

Pollinators are essential components of the habitats and ecosystems that many wild animals rely on for food and shelter.

We derive medicine, dyes, fiber, wax, resins, and ornamentals from the plants that depend on these animal pollinators.

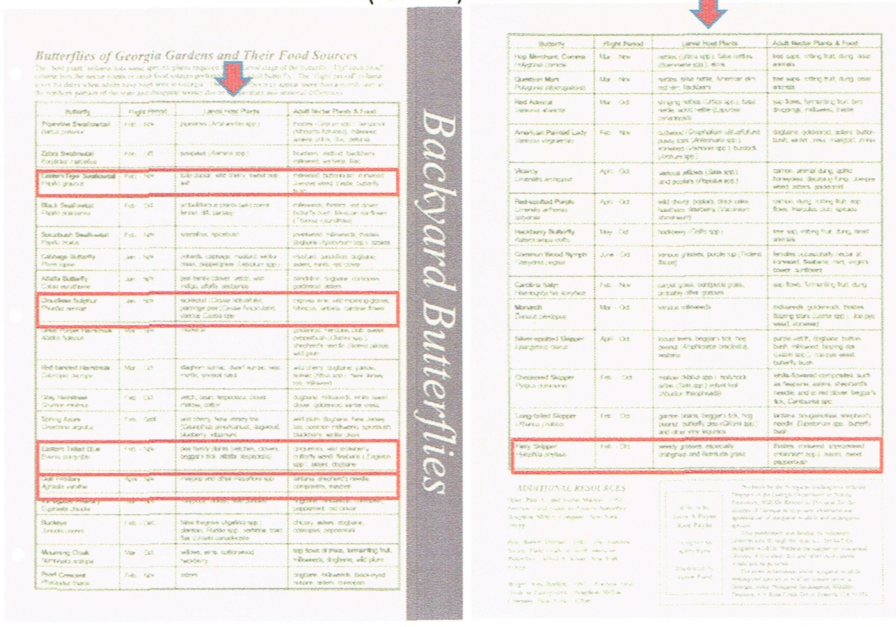
- **75% of our crop plants are pollinated by animals.**
- **In the United States, pollination by honeybees and other insects produces $40 billion worth of products annually.** Foods and beverages produced with the help of pollinators include: apples, bananas, blueberries, chocolate, coffee, melons, peaches, potatoes, pumpkins, vanilla, almonds, etc.

Pollinators need flowers that bloom in Spring, Summer and Fall.



Pollinators need flowers that bloom in Spring, Summer, and Fall. Use these resource pages to find two plants that bloom in each of these seasons. The columns have the months of the year…remember that Spring months are March-April-May, etc…
You can write the COMMON NAME in your booklet. When buying seeds or plants, ask for the species you want using the SCIENTIFIC NAME as it is more precise.

Butterflies require specific host plants on which their caterpillars (larvae) feed.



Butterflies use specific host plants on which their caterpillars feed. Use these resource pages to find the name of a LARVAL HOST PLANT for each butterfly listed in your booklet.

Not all bees live in hives!

Key Words for Ground-nesting
- Soil, ground
- Burrows
- Banks, cliffs

HABITAT AND NESTING REQUIREMENTS:

Bumble Bees:
Abandoned mouse nests, other rodent burrows, upside down flower pots, under boards, and other human-made cavities. Colonies are founded by a queen in the spring and don't die out in the fall. New queens mate then just overwinter in a sort of hibernation. Bumble bees are usually active during the morning hours and forage at colder temperatures than honey bees, even flying in light rain.

Large Carpenter Bees:
Soft dead wood, poplar, cottonwood or willow trunks and limbs, structural timbers including redwood. Depending on the species, there may be one or two brood cycles per year. These bees can be active all day even in the coldest weather.

Digger Bees:
Sandy soil, compacted soils, bank sides. Anthophorid bees (now in the Apidae) are usually active in the morning hours, but can be seen at other times.

Small Carpenter Bees:
Pithy stems including roses and blackberry canes, these bees are more active in the morning but can be found at other times.

Squash and Gourd Bees:
Sandy soil, may nest in gardens between pumpkins, squash and gourds are grown or pathways. These bees are early risers and can be found in pumpkin patches before dawn. Males often sleep in the wilted flowers.

Leafcutter Bees:
Pre-existing circular tunnels of various diameters in dead but sound wood created by emerging beetles, some nest in the ground. Leave dead limbs and trees to support not just pollinators but other wildlife. Leafcutter bees can be seen foraging throughout the day even in hot weather.

Mason Bees:
Pre-existing tunnels, various diameters in dead wood made by emerging beetles, or human-made nesting substrates, drilled wood boards, paper soda straws inserted into cans attached to buildings. Mason bees are generally more active in the morning hours.

Sweat Bees:
Bare ground, compacted soil, sunny areas not covered by vegetation. Like most bees, sweat bees forage for pollen earlier in the morning and then for nectar later.

Plasterer or Colletgkane Bees:
Bare ground, banks or cliffs. Colletid bees can be active in the morning or later in the day.

Yellow-faced Bees:
In dead stems. These bees are more active during morning hours.

Andrenid Bees:
Sunny, bare ground, sand soil, under leaf litter or in soil in banksides and cliffs. These generally spring active bees are most commonly seen on flowers during the morning when pollen and nectar resources are abundant.

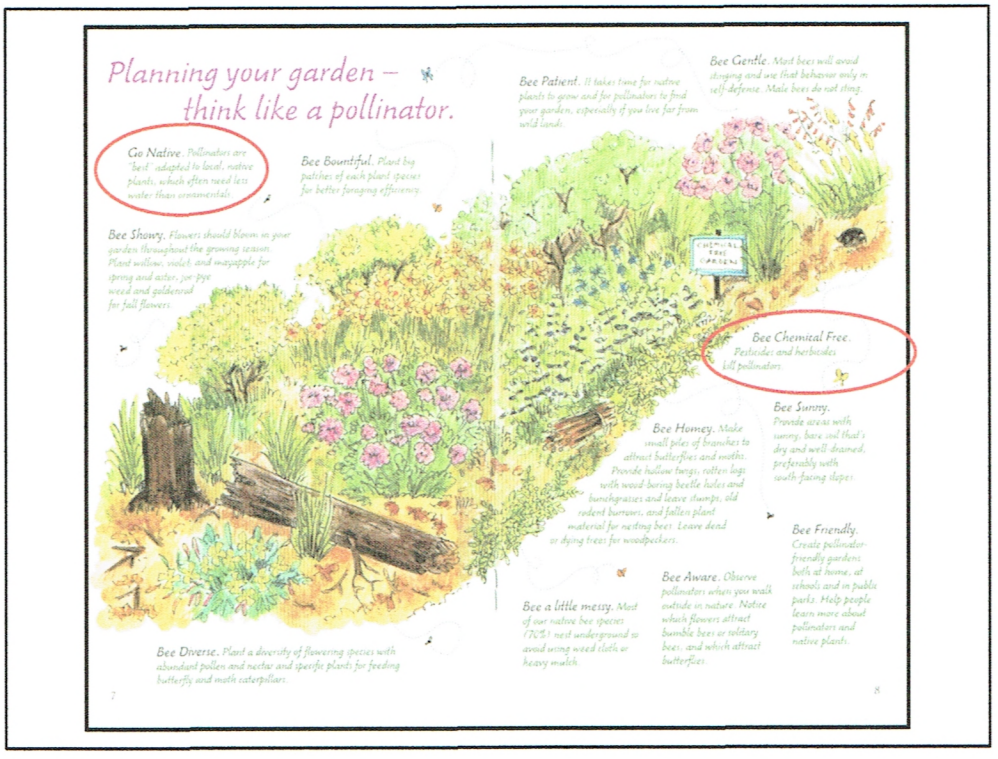
"MONARCH BUTTERFLIES NEVER FAIL TO CATCH THE VISITOR'S EYE AND ALWAYS LEAD TO A TEACHABLE MOMENT."

– LOGAN LEE, PRAIRIE SUPERVISOR, MIDEWIN NATIONAL TALLGRASS PRAIRIE

SOUTHEASTERN MIXED FOREST PROVINCE 21

Key Words for Tunnel-nesting
- Wood, timber
- Stems, straws
- Tunnels

Not all bees use hives! Some bees nest in the ground and others in tunnels. Look at this resource page and using these key words, find the names of two ground-nesting and two tunnel-nesting bee species.



The rest of your Pollinator Conservation booklet has pages for you to explore later. You can go outside, observe and record pollinators with The Great Sunflower Project or design and create your own pollinator habitat. A few more ideas to keep in mind are using native plants in your habitat as native pollinators are best adapted to these…and keeping chemicals out as pesticides and herbicides can kill pollinators.