

Bee Fact Sheet

Bees can be categorized in several ways: **native** or **non-native**, **social** or **solitary**, **generalists** or **specialists**.

Although the **European Honey Bee** is the type of bee we usually think of first, it is the only bee that is not native to America. However, it is not the only bee that lives in a colony where the responsibilities for building a nest, caring for off-spring, and gathering food is shared by all members of the colony. About 45 species of **Bumble Bees** are also social bees.

Of the approximately 4,000 species of native bees found in the United States most are **solitary bees**. They take care of the work of building a nest, gathering food, and caring for offspring independently. Even though they may live close together if a good nesting area is found they do not cooperate with each other as social bees do. Solitary bees are important pollinators of native plants as well as agricultural crops.

All bees pass through four stages during their one-year life span. The first three stages -- egg, larva, and pupa -- take up the first 11 months of life. The adult stage may last only 3 or 4 weeks. To learn more about the life cycle of the bee and its activities during the adult stage check the resource list for great books and Internet sites.

Bees can also be classified as generalists or specialists depending on their foraging habits. Bees that gather nectar and pollen from a wide variety of flowers are **generalists**. Bumble bees and honey bees are good examples of generalists. Bees that depend on a single plant or a small number of plants for pollen and nectar are categorized as **specialists**. These bees are most likely to suffer when native plants and habitat is disturbed or destroyed. It is easier for generalists to survive changes in their environment

Social Bees

Honey Bee

- ◆ Social, lives in colonies in hollow trees or hives
- ◆ Used for honey production and agricultural pollination
- ◆ Hairy, color is tan with varying degrees of orange or brown
- ◆ Carries pollen in pollen baskets on their hind legs and it sticks to the hairs on their bodies
- ◆ Antennae very sensitive to touch and odor
- ◆ Two compound eyes detect color, shape and movement
- ◆ Three simple eyes detect light
- ◆ Sees colors in the spectrum from ultraviolet to orange (don't see red)
- ◆ Stings only once (dies once stinger is detached from body)
- ◆ Drinks nectar, honey, and water through a long hairy tube called a proboscis that folds when not in use
- ◆ The whole colony can live through the winter

Bumble Bees

- ◆ Only social bee native to North America
- ◆ Make nests close to or in the ground; likes abandoned rodent holes
- ◆ Large and very furry

- ◆ Yellow and black
- ◆ Wings are clear with black veins
- ◆ Slow and unsteady when flying
- ◆ Because of its size and strength it can collect nectar and pollen from hard-to-get-into flowers such as snapdragons
- ◆ Can sting more than once
- ◆ Generalist feeders; often the first bee active in early spring and the last active in the fall
- ◆ Only the queen survives through the winter

Examples of Solitary Bees

Leafcutter bee

- ◆ Cuts neat circles in leaves and uses the pieces to line their nests
- ◆ Builds nest in hollow twigs or other openings about the diameter of a pencil
- ◆ Usually will not sting unless trapped
- ◆ Helps pollinate alfalfa

Carpenter bees

- ◆ Hairy
- ◆ Females are bluish-black in color and can sting
- ◆ Males are blond or tan in color and can't sting
- ◆ Over 1 inch long and as wide as your thumb
- ◆ Nests in wood such as dead tree trunks, firewood, or exposed wood on structures
- ◆ Nest consists of a tunnel about 10 inches long
- ◆ Female gathers nectar and pollen which she rolls into a ball. She pushes the ball to the back of the tunnel, where she lays an egg and seals it in a chamber about 1 inch long. She repeats this process until the tunnel is filled with chambers of growing bees.

Alkali Bees

- ◆ Pollinate alfalfa better than honey bees