

Bees

Order of Hymenoptera
Class Insecta



Introduction

Bees are well acknowledged for their role in pollination as well as honey and beeswax production. Bees have adapted for feeding on pollen (as a source of nutrients) for larval food and on nectar (primarily as their energy source) by using their long proboscis (complex tongue) that allows them to acquire nectar from flowers. Depending on what's in demand bees will either concentrate on gathering pollen or gathering nectar.

Approximately 1/3 of human food supply is dependent on insect pollination, most of which is achieved by bees, particularly the European honeybee. There are presumed to be 20,000 known species of bees.

Characteristics

Most bees are fuzzy which helps pollen from flowers stick to them. They have two pairs of wings with the hind pair being smallest and a long proboscis that aides in gathering nectar from flowering plants. Bees have antennae that are made of 12 segments in females and 13 in males. Bees range in size from tiny species only 2 mm (0.08 in) in length to rather large insects up to 4 cm (1.6 in) long. Many bees are yellow and black to reddish striped.

Behavior

The truly social bees live in large colonies consisting of females from two overlapping generations, the queen and her workers. Drones (male) do not partake in the organization of the colony and have only one job, to mate with the queen. Highly social bees, a few hundred species, form permanent colonies in which the queen and worker castes are markedly different in structure, each specialized for its own tasks and are unable to survive without the other. Individual bees may have highly specialized functions within the colony. The tasks of defense, food collection and storage, reproduction, and many other activities are regulated by the colony's response to environmental conditions inside and outside the hive. Individuals communicate by means of chemical messages, touch, sound, and, in the case of honeybees, a symbolic dance language. The nests of many bees are very elaborate and may be constructed partially of wax secreted by the bees.

Bee dance video

<http://youtu.be/-7ijl-g4jHg>