



Honey Bees – Biology

Glossary of Honey Bee Anatomical Characteristics

Abdomen — the rear body region of a honey bee composed of nine segments and contains many organs including those for digestion, reproduction and respiration.

Antenna(e) — the moveable, sensitive feelers on an insect's head which detect odor and movement.

Cocoon — the silk chamber a larva spins around itself just prior to the pupal stage of development.

Compound eye — an eye made up of thousands of tiny lenses that allow a honey bee to see ultraviolet light, which is invisible to the human eye, as well as visible light (except red).

Exoskeleton — the hard outer covering which forms a bee's body.

Head — the forward body region of the honey bee's three sections that contains the compound eyes, simple eyes, antennae, mandibles, and proboscis.

Honey sac — the stomach-like organ that is connected by a funnel shaped valve to the digestive tract. The nectar stored here will be unloaded into empty hive cells or passed on to house bees for food.

Legs — a honey bee has three pairs of segmented legs used not only for walking but also to dust off antennae, brush pollen out of the thousands of branched hairs that cover the body, and to store pollen.

Mandible — located on either side of the honey bee's head, these jaw-like structures are used to chew honey and pollen, and to knead wax.

Midgut or ventriculus — the stomach section in the abdomen which digests food.

Ocellus — simple eye with a thick lens that can sense changes in the brightness of daylight.

Proboscis or tongue — a straw-like structure used for sucking nectar or honey.

Pollen basket — a smooth, somewhat concave surface of the outer hind leg that is fringed with long, curved hairs that hold the pollen in place.

Stinger — found in a chamber at the end of the abdomen (in female honey bees only) and is used to defend against intruders.

Thorax — the middle section of the honey bee's three sections that contains the flight muscles, the wings and six legs.

Wax gland(s) — four pairs of glands that are specialized parts of the body wall. During the wax forming period in the life of a worker, they become greatly thickened and take on a glandular structure. The wax is discharged as a liquid and hardens to small flakes or scales.

Wing(s) — the honey bee has two sets of flat, thin, membranous wings, strengthened by various veins. The fore wings are larger than the hind wings.