

Teaming With Insects

Glossaries

Level 1

Abdomen – The third division of the insect's body. There are no true legs on the abdomen.

Adaptation – A change that occurs in an animal's behavior or body that allows it to survive and reproduce in new conditions.

Antennae – Moveable structures found in pairs on the head of insects used to hear, taste, and smell.

Arthropod – A group in which animals have jointed legs, a hard outer covering, a body divided into rings, and both left and right sides the same.

Biodiversity – Variations of animals and plants in a habitat. It is often used to measure the health of biological systems.

Biocontrol – Control of pests using other organisms.

Bug – A term used to refer to insects in general. The term bug should be used only for members of the insect order Hemiptera, the true bugs.

Compound eye – An eye comprised of many smaller eyes, each with its own lens. Compound eyes are found in most insects.

Diversity – Differences or variety.

Ecosystem – includes all the plants, animals, and the physical, non-living things in an area. A healthy ecosystem has a balance between the living things.

Entomologist – A scientist who studies insects.

Entomology – The scientific study of insects.

Evolution – The gradual change over many generations in plant and animal species as they adapt to new conditions or new environments.

Facet – The outside surface of one lens of a compound eye.

Forensic entomology – The study of insect and arthropod biology to assist in police investigations.

Forewing – The first pair of wings; can be thin or thick, transparent or colored, scaly or smooth.

Gall – A growth in plant tissue often caused by insects or mites feeding or laying their eggs.

Habitat – The natural home of an animal or plant.

Head – The first of three insect body regions. The head contains mouthparts and antennae.

Integrated pest management – Also known as IPM. Management of insects using a variety of control measures based on economics and causing the least harm to the environment.

Insect – An arthropod with three body divisions, three pairs of legs, and often with one or two pairs of wings.

Invasive species – An insect, plant, or animal that is non-native and likely to cause economic or environmental harm or harm to human health when introduced.

Larva – A young animal that looks completely different from its parents. Some insect larvae (the plural form) change into adults by complete metamorphosis. A beetle larva is sometimes called a grub.

Metamorphosis – Change in shape or form during the immature to adult stages (caterpillar to butterfly for example).

Millipede – Not an insect. Sometimes called "thousand-leggers" because of the many legs, Millipedes are arthropods and closely related to centipedes. Each body segment of millipedes has two pairs of legs. They feed on decaying plant materials.

Ovipositor – An egg-laying structure located at the end of the female's abdomen.

Species – A group of similar living organisms that mates and produces young.

Specimen – A single insect representing a group.

Spider – Related to ticks and mites, spiders have four pairs of legs. Antennae are absent. Body is divided into two parts.

Stridulate – Making a sound by striking or rubbing two body parts together.

Thorax – The middle part of an insect's body between its head and abdomen, to which the legs and wings are attached.

Wings – An outgrowth of the body wall used for flight. Some wings may be thickened, membranous, or leathery.

Level 2

Abdomen – The part of an animal's body that contains the digestive system and the organs of reproduction. In insects and spiders, the abdomen makes up the rear of the body.

Adaptation – A change that occurs in an animal's behavior or body that allows it to survive and reproduce in new conditions.

Aerial net– Net used for collecting flying insects.

Aquatic net - Net used for collecting insects in water.

Biodiversity – Variations of animals and plants in a habitat. Often used to measure the health of a biological system.

Exoskeleton – A hard external skeleton or body case that protects and supports an animal's body. All arthropods are protected in this way.

Hemimetabolous development – Immatures or naiads in this type of development live in the water and adults on land, immatures look nothing like the adult and eat food different from the adult.

Hemolymph – Insect fluid (similar to human's blood)

Holometabolous development – Immatures do not look like the adults, usually have different mouth types between the immatures and adult, presence of a pupa or resting stage is found only in this type of development.

Larva – Immature stage of holometabolous insects such as beetles, ants, moths, flies.

Metamorphosis A change in form.

Motling – The shedding of an insect's exoskeleton that has been outgrown.

Naiad – Immature stage of paurometabolous insects such as dragonflies and mayflies.

Nymph – Immature stage of paurometabolous insects such as true bugs, aphids, cockroaches.

Paurometabolous development – Change in form with the immature nymphs having the same body shape and mouthparts of the adult, the nymphs have external wing buds.

Scientific Method – An organized way to investigate answers to problems and curiosities. IT is based on gathering data to test a hypothesis.

Spiracles – A round opening that leads into an insect's trachea, or breathing tube.

Sugaring – Attracting insects using a sweet bait.

Sweep net – Net used for collecting insects on plants. A heavy duty net usually made of canvas or other thick material used to collect insects from shrubs and trees.

Thorax – The middle part of an insect’s body, between its head and abdomen, to which the legs and wings are attached.

Level 3

Abdomen – The part of an animal’s body that contains the digestive system and the organs of reproduction. In insects and spiders, the abdomen makes up the rear of the body.

Adaptation – A change that occurs in an animal’s behavior or body that allows it to survive and reproduce in new conditions.

Aerial net – Net used for collecting flying insects.

Antenna – A slender organ on an animal’s head that it uses to sense its surroundings. Antennae is the plural form. Insects have two antennae, which are also known as “feelers.”

Aquatic net – Net used for collecting insects in water.

Arthropods – An animal with jointed legs and a hard exoskeleton. Arthropods make up the largest group of animals on Earth and include insects, spiders, crustaceans, centipedes, and millipedes.

Biocontrol – Control of pests using other organisms.

Biodiversity – Variations of animals and plants in a habitat. It is often used to measure the health of biological systems.

Borer – An insect that bores into a material, for example wood, leaving behind a tunnel. The Emerald Ash Borer is a wood boring insect.

Botanical insecticide – Insecticide extracted from plants.

Chrysalis – The pupa of certain kinds of insects, especially of moths and butterflies, that is inactive and enclosed in a firm case or cocoon from which the adult eventually emerges.

Coevolved – Closely associated species that have acted as agents of natural selection on one another.

Cold-blooded – Not able to keep the body at a stable, warm temperature by internal means. All arthropods are cold-blooded.

Complete metamorphosis – A way of growing in which a young insect first hatches from an egg in the form of a worm-like immature called a larva. From this stage it changes to a pupa (an intermediate stage) and then finally, an adult. A butterfly experiences complete metamorphosis.

Compound eye – An eye comprised of many smaller eyes, each with its own lens. Compound eyes are found in most insects.

Dichotomous key – A two-choice key that uses small differences in color, size, and shape to guide identification.

Entomologist A scientist who studies insects.

Entomology – The scientific study of insects.

Environmental Protection Agency – A federal government agency charged with protecting the environment. One of its responsibilities is to regulate the use of insecticides.

Evidence – Something that makes plain or clear; an indication or sign.

Evolution – The gradual change over many generations in plant and animal species as they adapt to new conditions or new environments.

Exoskeleton – A hard external skeleton or body case that protects and supports an animal’s body. All arthropods are protected in this way.

Exotic species – A species of foreign origin or character; that which is not native.

Forensic entomology – The study of insect and arthropod biology to assist in civil and criminal

investigations, determine time and cause of death, and to determine location.

Habitat – The natural home of an animal or plant.

Head – The first of three insect body regions. The head contains mouthparts and antennae.

Hemimetabolous development – Immatures or naiads in this type of development live in the water; adults live on land. Form changes between immature and adult are made in one radical move. Immatures look nothing like the adult and eat food different from the adult.

Hemolymph – Insect fluid (similar to human's blood).

Holometabolous development – Immatures do not look like the adults and usually have different mouth types. The presence of a pupa or resting stage is found only in this type of development. This is the most advanced type of metamorphosis found among the Insecta.

Identify – To recognize or establish as being a particular person or thing; to verify the identity of.

Imago – The technical term for an adult insect.

Incomplete metamorphosis – A way of developing in which a young insect hatches from an egg as a nymph and then develops gradually into an adult. A grasshopper has incomplete metamorphosis.

Infestation – To inhabit or overrun in numbers or quantities large enough to be harmful, threatening, or obnoxious; to live in or on as a parasite.

Insecticides – Any substance used to kill insects.

Instars – Time periods between molts. The immature insect between molts in incomplete metamorphosis. Note: Stadium refers to the amount of time between molts.

Integrated pest management – Also known as IPM. Management of insects using a variety of control measures based on economics and causing the least harm to the environment.

Invasive species – Any species (including its seeds, eggs, spores, or other biological material) that is not native to that ecosystem and whose introduction does or is likely to cause economic or environmental harm, or harm to human health.

Invertebrate – An animal without a backbone. Some invertebrates are soft-bodied but others, including insects, are protected by hard body cases.

Larva – A young animal that looks completely different from its parents. Some insect larvae (the plural form) change into adults by complete metamorphosis. A beetle larva is sometimes called a grub.

Mandibles – Parts of the mouth that are jaw-like.

Metamorphosis – A way of developing in which an animal's body changes shape. Insects that go directly from egg to adult without a worm-like immature stage are said to have incomplete metamorphosis. Other insects go through a worm-like immature stage followed by a stage when the developing insect is enclosed in a protective case called a pupa. Insects that go through a pupa stage are said to have complete metamorphosis.

Molting – The shedding of an insect's exoskeleton when it is outgrown.

Naiad – Immature stage of paurometabolous insects such as dragonflies and mayflies.

Natural enemy – A living organism that kills a pest. Examples are a fungus that kills wood-boring insects, a predatory beetle that feeds on wood borers below the surface of the bark of the tree, or a wasp that lays its eggs inside the body of a wood-boring larva.

Non-indigenous – Not originating or occurring naturally in an area or environment.

Nymph – Immature stage of paurometabolous insects such as true bugs, aphids, cockroaches.

Order – A major group used to classify living things.

Pathogen – Any disease-producing microorganism.

Paurometabolous development – Insect development in which the immatures look like adults, live in the same area, and feed on the same type of food. Sometimes called incomplete development.

Pupa – The intermediate stage between larva and adult stages in complete metamorphosis.

Scientific Method – An organized way to investigate answers to problems and curiosities. It is based on gathering data to test a hypothesis.

Species – A group of similar living things that mate and produce young.

Specimen – A single insect representing a group.

Spiracle – A round opening that leads into an insect's trachea, or breathing tube.

Sugaring – Attracting insects using a sweet bait.

Survey – To systematically search for and record the presence of an organism in an area.

Sweep net – A heavy duty net usually made of canvas or other thick material used to collect insects from shrubs and trees.

Thorax – The middle part of an insect's body, between its head and abdomen, to which the legs and wings are attached.

Transect – A path along which one records and counts occurrences of the phenomena of study (e.g., plants, noting each instance).

Vertebrate – An animal possessing a spine.

Warm-blooded – Able to keep the internal body temperature regulated by internal means.