

# Glossary

**Abundance** Population density or number of individuals of a species, related to their habitat

**Anthropogenic** Everything caused, produced, or influenced by humans, e.g., man-made environmental problems

**Arthropods** The phylum of the arthropods includes animals such as insects, crustaceans (e.g., barnacles or crabs), centipedes, millipedes, and arachnids (e.g., spiders, mites, or scorpions)

**Autochthonous** Native, indigenous

**Biodiversity** Biological diversity includes three areas: the diversity of all species (e.g., plants, animals, fungi, and microorganisms), all ecosystems (i.e., habitats and the interactions of the species with their environment), and the genetic diversity within species. Biodiversity therefore covers much more than the term species diversity

**Biome** Large habitat; the entire predominant ecosystem of an extensive area of the Earth's surface

**Bivoltine** Two generations per year

**Boreal** Northern. Belonging to the northern climate of Europe, Asia, and USA

**Endemic** The occurrence of plants and animals in a specific, clearly defined area. Relating to diseases: numerous occurrences in a limited region or population

**Entomology** The study of insects

**Epidemic** Local and temporal cluster of an infectious disease within a population of people

**Eutrophication** Overfertilization with nutrients

**Epizooty** Local and temporal cluster of an infectious disease within a population of animals

**Herbivorous** Plant-eating; for animals: animals that live on a plant diet

**Insects** Insects are the most species-rich class of animals and belong to the phylum of the arthropods (*Arthropoda*). The phylum of the arthropods includes crabs, arachnids, sea spiders, centipedes as well as other classes that are less known. With almost one million described species, the insects represent 60% of the total of all described animal species. The Latin word insectum means “cut up” or “divided into segments,” because of the animals’ different distinct body parts: head, thorax with three pairs of legs, abdomen, and chitin shell. This distinguishes them from the class of the arachnids, which always have four pairs of legs at the front. The most well-known insect orders include the *Hymenoptera* (e.g., ants, bees, wasps), grasshoppers, beetles, dragonflies, net-winged insects, earwigs, plant lice, cockroaches, butterflies and moths, bugs, cicadas, and diptera (e.g., housefly). Most insects are one to 20 millimeters in size. Because of their diversity, they have occupied almost every ecological niche today

**Coprophage** Feeding on feces

**Lethality** The mortality associated with a disease, i.e., the ratio of fatalities to the number of infections

**Mangrove** A mangrove ecosystem consists of forests of salt-tolerant mangrove trees in the tidal area of tropical coasts with water temperatures above 20°

**Phenological** Refers to biological processes that are affected by regular natural development phenomena, e.g., the seasons

**Parasite** Organism that takes resources (e.g., body fluids such as blood) from another, larger organism (host), causing it damage

**Pheromone** Messenger substance for communication between individuals of the same species, e.g., sexual pheromones to attract sexual partners or aggregation pheromones, used by the bark beetle to congregate and infest a plant

**Phytophage** Plant-eaters from the animal kingdom. Larger animals are referred to as herbivores, and for smaller animals, phytophages

**Predator** Carnivores, flesh-eating organisms

**Resilience** Resistance of a system to disruptions or change

**Solitary** Animals that live alone, in contrast to social organisms (gregarious)

**Trivoltine** Three generations per year

**Trophic level** Position of an organism in the food chain

**Trophic** Refers to the diet of organisms

**Univoltine** One generation per year

**Vector-borne diseases** In biology and medical science, a vector is a disease-transmitting organism. It transports a pathogen from the host to another organism, without falling ill itself. Such vector-transmitted (borne) diseases include, e.g., illnesses transmitted by various tiger mosquito such as dengue, chikungunya, West Nile, and yellow fever

**Xenogamy** Cross-pollination can take place through water, wind, and animals

**Zoonosis** Zoonoses are infectious diseases that are transmitted from animals to humans or from humans to animals. For example, the so-called Q fever is mainly transmitted from sheep to humans

# Why Insects Deserve more Respect

It is high time that we show insects some respect—especially because we sometimes have to control them. Not only did insects already populate Earth millions of years before humans did, they also perform many valuable functions. Edward Wilson, the renowned American entomologist, calculated that we would only be able to survive for a few months without insects.

## Ten good reasons to respect insects

1. Resilience: Insects give nature more resistance.
2. Pollination: Insects keep the plant kingdom alive.
3. Ecosystem: Insects are an important part of the food chain.
4. Food and feed: Insects ensure global food security.
5. Hygiene: Insects get rid of “waste”.
6. Soils: Insects make our soil fertile.
7. Clothing: Insects are indispensable for textile production.
8. Industry: Insects produce chemicals.
9. Medical science: Insects heal.
10. Research: Insects are of great scientific value.

In four minutes, the animated film “Little Giants” illustrates why insects deserve respect from humanity.

<http://www.insect-respect.org/index.php?id=78&L=1>.

## List of Insects

Latin name	Classification
<i>Acarus siro</i>	Flour mite
<i>Acrida exaltata</i>	Grasshopper species from the field grasshopper family
<i>Aedes aegypti</i> , also <i>Stegomyia aegypti</i>	Yellow fever mosquito, dengue mosquito
<i>Aedes albopictus</i> , also <i>Stegomyia albopicta</i>	Asian tiger mosquito

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Latin name	Classification
<i>Agrilus auroguttatus</i>	Goldspotted oak borer
<i>Aleyrodidae</i>	Whitefly family
<i>Anagyrus lopezi</i>	Parasitic wasp species from the chalcid wasp family
<i>Anaphe panda</i>	Moth from the silk moth family
<i>Anisopteromalus calandrae</i>	Parasitoid wasp from the chalcid wasp family
<i>Anopheles</i>	Genus of mosquitoes from the Culicidae family
<i>Anoplophora glabripennis</i>	Asian long-horned beetle
<i>Aphidoletes aphidimyza</i>	Midge species
<i>Apis mellifera</i>	Honey Bee
<i>Aproceros leucopoda</i>	East Asian sawfly
<i>Aricia agestis</i>	Brown argus
<i>Aricia artaxerxes</i>	Northern brown argus
<i>Aromia bungii</i>	Red-necked longhorn beetle
<i>Auchenorrhyncha</i>	Suborder of the cicadas
<i>Batrocera invadens</i>	Fruit fly species from the Tephritidae family
<i>Bemisia tabaci</i>	Silverleaf whitefly
<i>Bombus affinis</i>	Rusty patch bumble bee
<i>Bombus franklini</i>	Franklin's bumble bee
<i>Bombus occidentalis</i>	Western bumble bee
<i>Bombyx mori</i>	Domesticated silkworm
<i>Brachycera</i>	Flies
<i>Capnia lacustris</i>	Tahoe stonefly
<i>Ceratitis capitata</i>	Mediterranean fruit fly
<i>Ceratopogonidae</i>	Family of the biting midges
<i>Chilo partellus</i>	Spotted stalk borer
<i>Chrysolina quadrigemina</i>	Beetle species from the leaf beetle family
<i>Chrysoperla carnea</i>	Common green lacewing
<i>Cicadellidae</i>	Leafhopper family
<i>Cinara cupressivora</i>	Cypress aphid
<i>Coccinella septempunctata</i>	Seven-spot ladybug
<i>Cochliomyia hominivorax</i>	New World screw-worm fly
<i>Comptosia concinnata</i>	Fly species from the tachinid family
<i>Cryptolestes ferrugineus</i>	Rusty grain beetle
<i>Culex pipiens</i>	Common mosquito or northern house mosquito
<i>Culex tritaeniorhynchus</i>	Rice paddy mosquito
<i>Culicidae</i>	Mosquito family
<i>Culicoides obsoletus</i>	Midge species from the biting midge family

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Latin name	Classification
<i>Culicoides pulicaris</i>	Midge species from the biting midge family
<i>Curculionidae</i>	Weevil family
<i>Cydia pomonella</i>	Codling moth
<i>Dactylopius coccus</i>	Cochineal scale insect
<i>Dendroctonus ponderosae</i>	Mountain pine beetle
<i>Dermacentor reticulatus</i>	Ornate cow tick
<i>Diabrotica virgifera virgifera</i>	Western corn rootworm
<i>Diptera</i>	Order of the true flies
<i>Drosophila melanogaster</i>	Species from the Drosophilidae
<i>Elateridae</i>	Click beetle family
<i>Ephestia elutella</i>	Cacao moth, tobacco moth, warehouse moth
<i>Episyrphus balteatus</i>	Marmalade hoverfly
<i>Erebia aethiops</i>	Scotch argus
<i>Erebia epiphron</i>	Small mountain ringlet
<i>Eulachnus rileyi</i>	Pine needle aphid
<i>Euphydryas editha</i>	Butterfly from the Melitaeinae subfamily
<i>Glaucopsyche xerces</i>	Xerces blue butterfly
<i>Glossina</i>	Tsetse flies, genus from the tik-tik fly family
<i>Glossina palpalis</i>	Tsetse fly species
<i>Habrobracon hebetor</i>	Meal-moth parasitic wasp
<i>Hermetia illucens</i>	Soldier fly
<i>Hexagenia</i>	Genus from the mayfly family
<i>Hyalomma marginatum</i>	Tick species from the hard tick family
<i>Hylaeus anomalus</i>	Anomalous yellow-faced bee
<i>Icerya purchasi</i>	Cottony cushion scale
<i>Ichneumonidae</i>	Parasitic wasp family
<i>Ixodiphagus hookeri</i>	Species from the chalcid wasp family
<i>Ixodes demacantor</i>	Rocky mountain wood tick
<i>Ixodes pacificus</i>	Western black-legged tick
<i>Ixodes persulcatus</i>	Taiga tick
<i>Ixodes ricinus</i>	Castor bean tick
<i>Ixodes scapularis</i>	Deer tick
<i>Kermes vermilio</i>	Kermes scale insect
<i>Laccifer lacca</i>	Indian lac insect
<i>Laelius pedatus</i>	Parasitoid wasp species
<i>Lampyridae</i>	Firefly family
<i>Lariophagus distinguendus</i>	Chalcid wasp species
<i>Lepidoptera</i>	Order of the butterflies and moths

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Latin name	Classification
<i>Lucilia caesar</i>	Common greenbottle
<i>Lucilia sericata</i>	Common greenbottle
<i>Lymantria dispar</i>	Gypsy moth
<i>Miscophus eatoni</i>	Digger wasp species
<i>Mononychellus tanajoa</i>	Cassava green mite
<i>Musca domestica</i>	Housefly
<i>Nemapogon granellus</i>	European grain moth
Neuroptera	Order of the net-winged insects
Noctuidae	Family of the owlet moths
<i>Oecophylla smaragdina</i>	Asian weaver ant
<i>Ornithodoros savignyi</i>	Tick species from the soft tick family
<i>Oryzaephilus surinamensis</i>	Saw-toothed grain beetle
<i>Ostrinia nubilalis</i>	European corn borer
<i>Oxya fuscovittata</i>	Grasshopper species from the field grasshopper family
<i>Parnassius apollo</i>	Mountain Apollo butterfly
<i>Pediculus capitis</i>	Head louse
<i>Phenacoccus manihoti</i>	Cassava mealybug
<i>Philonthus coronatus</i>	Digger wasp species
<i>Phlebotomus mascittii</i>	Sand fly species from the moth fly family
<i>Pineus boernerii</i>	Aphid species
<i>Pison atrum</i>	Digger wasp species
<i>Plodia interpunctella</i>	Indian meal moth
<i>Prostephanus truncatus</i>	Larger grain borer
Psocoptera	Order of the booklice
<i>Pulex irritans</i>	Human flea
<i>Rhipicephalus saugineus</i>	Brown dog tick
<i>Rodolia cardinalis</i>	Ladybug species
<i>Sarcoptes scabiei</i>	Mange mite
Scarabaeidae	Family of the scarab beetles
<i>Sceliphron curvatum</i>	Oriental mud dauber
<i>Schistocerca gregaria</i>	Desert locust
<i>Scolia sexmaculata</i>	Scoliid wasp species
<i>Sesamia nonagrioides</i>	Mediterranean corn borer
<i>Sitophilus granarius</i>	Grain weevil
<i>Solenopsis invicta</i>	Red imported fire ant
<i>Sphex funerarius</i>	Golden digger wasp
<i>Stegobium paniceum</i>	Drugstore beetle
<i>Stegomyia albopicta</i> , also <i>Aedes aegypti</i>	Asian tiger mosquito
<i>Strauzia longipennis</i>	Sunflower maggot fly

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Latin name	Classification
<i>Syrphidae</i>	Family of the hoverflies
<i>Tenebrio molitor</i>	Mealworm
<i>Tephritidae</i>	Family of the fruit flies or peacock
<i>Thaumastocoris peregrinus</i>	True bug species
<i>Thaumetopoea processionea</i>	Oak processionary caterpillar
<i>Thysanoptera</i>	Order of the thrips
<i>Tribolium confusum</i>	Confused flour beetle
<i>Trichogramma evanescens</i>	Parasitic wasp species
<i>Trogoderma granarium</i>	Khapra beetle
<i>Urophora quadrifasciata</i>	Fly species from the fruit fly family
<i>Urophora affinis</i>	Fly species from the fruit fly



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