

Glossary

Abdomen: The posterior of the three main body divisions in insecta (see head and thorax).

Amphibian:

Arista: A large bristle, usually dorsally located, on the apical antenna segment in Diptera. Forms are:

Aristate: last segment usually enlarged with a bristle dorsally topped.

Clubbed: Segments towards the tip increase in diameter.

Filiform: Threadlike.

Geniculate: Elbowed.

Moniliform: Arranged like a string of beads.

Pectinate: Comblike.

Plumose: Feathery.

Serrate: Sawlike.

Setaceous: Bristlelike.

Stylet: Last segment bearing an elongated terminal stylet.

Anal Cell: A cell in the anal area of the wing in Diptera.

Antenna: A pair of segmented appendages located above the mouth parts; usually sensory in function.

Anus: Posterior opening of the alimentary tract.

Apterous: wingless.

Caput:

Cardo: The basal segment or division of a maxilla.

Cephalic: On or attached to the head; anterior.

Eucephal:

Hemicephal:

Acephal:

Cercus: One of the pair of appendages at the end of the abdomen.

Chitin: A N-polysaccharide with the formula $C_{32}H_{54}N_4O_{21}$, occurring in the cuticula of Arthropoda.

Clavus: The oblong or triangular anal portion of the front wing in Hemiptera.

Clypeus: A sclerite on the lower part of the face, between the front and the labium.

Coleoptera: (Gr. coleo, sheet ptera, wing) 4-winged beetle, front wings thickened (elytron) covering hind wgs.

Compound Eye: An eye composed of many individual elements or ommatida, each of which is represented externally by a facet.

Compressed: Flattened from side to side (see also depress).

Corium: The elongate, usually thickened, basal portion of the front wing in Hemiptera.

Costa: A longitudinal wing vein, usually forming the anterior margin of the wing in Insecta.

Costal area: The portion of the wing immediately behind the anterior margin in Insecta.

Corium: The elongate, usually thickened, basal portion of the front wing in Hemiptera.

Coxa: The basal segment of the leg.

Cubitus: The longitudinal vein immediately posterior to the media.

Cuneus: A more or less triangular apical piece of corium, set off from the rest of the corium by a suture in Hemiptera.

Depressed: Flattened dorso-ventrally (see also compress).

Diptera: (gr. di, two; ptera, wing) Real flies; only 1 pair of wings, hind wings reduced to halteres; flexible head capsule; many blood-sucking species (vectors of diseases); mostly oviparous; larval stage capable of paedogenesis; pupal stage (obtecta).

Distal: Near or toward the free end of an appendage; that part of a segment / appendage farthest from the body.

Diurnal: Active during daytime.

Dorsal: Top or uppermost; pertaining to the back or upper side.

Elytron: Thickened, leathery, or horny, front wing in Insecta.

Empodium: A padlike or bristlelike structure at the apex of the last tarsal segment, between the claws in Diptera.

Ephemeroptera: (Gk. Ephemero, for a day, short-lived; ptera, wings) Short-lived adult insects; reduced abdomen (almost no intestinal tract, seldomly feed); may appear in huge numbers; front wings dominant, hind wings reduced; usually long cerci; many larval stages (no pupa stage, sub-imago).

Epiproct: A process or appendage situated above the anus and appearing to arise from the 10th abdominal segment; actually the dorsal part of the 11th abdominal segment in Insecta.

Esophagus: The narrow portion of the alimentary canal immediately posterior to the pharynx.

Femur: The 3rd leg segment, located between the trochanter and the tibia.

- Freulum:** Spine, group of spines arising at humeral angle of the hind wing to be coupled with the front wing in lepidoptera.
- Furca:** A fork or forked structure; a forked apodeme arising from the thoracic sternum.
- Galea:** The outer lobe of the maxilla, borne by the stipes in Insecta.
- Glossa:** One pair of lobes at the apex of the labium between the paraglossae in Insecta.
- Gnatha:**
- Gonopod:** A modified leg that forms a part of the external genitalia.
- Gonopore:** The external opening of the reproductive organs.
- Haltere:** A small knobbed structure on each side of the metathorax representing the hind wings in Diptera.
- Head:** The anterior body region, which bears the eyes, antennae, and mouth parts (see abdomen, thorax).
- Hemiptera:** (Gr. hemi, half; ptera, wing) Bugs; Basal part of front wings sclerotized, apical part of front wings and hind wings membranous; wings lie flat on the abdomen when insect is at rest, with tips overlapping.
- Heteroptera:** (Gr. hetero, dislike; ptera, wing) Hemiptera can be subdivided into Hetero- and Homoptera.
- Homoptera:** (Gr. homo, alike, uniform; ptera, wing) Cicads, hoppers, whiteflies, aphids; front wings homogeneous (either uniform in texture, leathery or membranous), wings do not overlap when insect is at rest (lateral and pendent); acoustical sense organ at the hind leg pairs; hind legs dominant.
- Humeral:** Pertaining to the shoulder; located in the anterior basal portion of the wing; in Insecta.
- Hymenoptera:** (Gr. hymeno, membrane; ptera, wing) Sawflies, chalcids, ants, ichneumans, wasps, bees; 4 membranous wings; hind wings are attached to the front wings by means of tegula; very flexible head. Fertilized eggs become females, unfertilized become males.
- Imago:** The adult reproductive stage of an insect.
- Integument:** The outer covering of the body in Insecta.
- Johnston's Organ:** An acoustical sense organ similar to a chordodontal organ, located in the 4th antennal segment of most insects.
- Jugum:** A lobelike process at the base of the front wing, which overlaps the hind wing driving the hind wing; in Lepidoptera.
- Labial Palpus:** One of the pair of small feederlike structures arising from the labium in Insecta.
- Labium:** One of the mouth-part structures; the lower lip in Insecta.
- Labrum:** The upper lip, lying just below the clypeus in Insecta.
- Lepidoptera:** (Gr. lepto, scale; ptera, wing) Butterflies, moths; larva is phytophagous; pupa obteata; some nocturnal adults possess tympanum, adults with colored scaled wings, front and hind wings connected via frenulum or jugum; proboscis, if present coiled.
- Clypeus:** A sclerite on the lower part of the face, between the front and the labium in Insecta.
- Lacina:** The inner lobe of the maxilla, borne by the stipes in Insecta.
- Larva:** The immature stages, between the egg and pupa, of an insect having complete metamorphosis.
- Lateral:** On or pertaining on the side, the right or left side of the organism.
- Ligula:** The terminal lobes of the labium, the glossae and paraglossae in Insecta.
- Malpighian Tubule:** Fine, thin-walled excretory tubule of many arthropods that discharges into the gut.
- Mandible:** Jaw; one of the anterior pair of the paired mouth-part structures in Insecta.
- Maxilla:** One of the paired mouth-part structures immediately posterior to the mandibles in Insecta.
- Mecoptera:** (Gr. meco, long; ptera, wing) Scorpionflies; 4-winged insects producing a long beaklike structure; gonopore formed like a scorpions' tail; long antenna.
- Media:** The longitudinal vein between the radius and the cubitus.
- Mentum:** The distal part of the labium, which bears the palpi and ligula in Insecta.
- Mesal:** At or near the middle of the body.
- Metabolism**
- Holometabolism:
- Hypermetabolism:
- Metamorphosis:** Change in form during development in Insecta.
- Metathorax:** The middle of the three thoracic segments.
- Molt:** A process of shedding the exoskeleton in Insecta.
- Mollusca:** Phylum of bilateral symmetrical invertebrates, including snails, clams, octopuses, squids, and others; soft-bodied animals, most with a calcium carbonate shell secreted by the mantle, a muscular foot for locomotion, and gills.
- Morphology:** The science of form or structure.
- Neuropteroidea:** (Gr. neuro, nerve, wing, vein; ptera, wing) Nerve-winged insects; wing structure rich in venation; pupal and larval stage; flexible head as a larva; predatorous adults.
- Notopleuron:** An area on the thoracic dorsum, at the lateral end of the transverse suture in Diptera.
- Notum:** The dorsal surface of a body segment.
- Nocturnal:** Active at night.

- Nymph:** An immature stage (following hatching) of an insect that does not have a pupal stage.
- Obtect Pupa:** A pupa in which the appendages are more or less glued to the body surface, as in Lepidoptera.
- Occiput:** The dorsal posterior part of the head, between the occipetal and postoccipetal sutures.
- Ocellus:** A simple eye of an insect or other arthropod.
- Operculum:** Lid or cover in Mollusca.
- Odonata:** (Gk. Odonata, tooth) Dragon- and damselflies; 4 similarly veined membranous wings, capable of hovering, show tandem-flight when mating; no pupa stage; sub-imago; small prothorax, pleural sclerites, short antenna, very long abdominal segment; pure predators.
- Oral:** Pertaining to the mouth.
- Orthopteroid**
- Oviduct:** The tube leading away from the ovary through which eggs pass in Insecta.
- Oviparous:** Laying eggs.
- Ovipositor:** The egg-laying apparatus; the external genitalia of female in Insecta.
- Paedogenesis:** The production of eggs or young by an immature or larval stage on an animal.
- Palpus:** A segmented process borne by the maxillae or labium in Insecta.
- Paraglossa:** One of a pair of lobes at the apex of the labium. Later of the glossae in Insecta.
- Paraproct:** One of a pair of lobes bordering the anus latero-ventrally.
- Parthogenesis:** Reproducing of eggs that develop without being fertilized.
- Pectinate:** With branches or processes like the teeth of a comb in Insecta.
- Pedipalps:** The 2nd pair of appendages of an arachnid.
- Peristome:** The ventral margin of the head, bordering the mouth.
- Pharynx:** The anterior part of the foregut, between the mouth and the esophagus.
- Plecoptera:** (Gr. pleco folded, plaited; ptera, wing) Stoneflies; poor fliers, elongated front wings, hind wings slightly larger but shorter, reduced or even absent; long antenna and cerci; larval stage aquatic, no pupal stage.
- Pleuron:** The lateral area of a thoracic segment.
- Posterior:** At the hind or rear.
- Postmentum:** The basal portion of the labium; proximated of the labial suture in Insecta.
- Postnotum:** A notal plate behind the scutellum, often present in wing-bearing segments in Insecta.
- Postocciput:** The extreme posterior rim of the head, between the postoccipital suture and the foramen magnum.
- Praetarsus:**
- Prementum:** The distal part of the labium / labial suture on which all the labial muscles have their insertions.
- Proboscis:** The extendible beaklike mouthparts
- Pronotum:** The dorsal sclerite of the prothorax.
- Prothorax:** The anterior of the three thoracic segments.
- Pubescent:** Downy, covered with short fine hairs.
- Pulvilliform:** Lobelike or padlike; shaped like a pulvillus;
- Pulvillus:** A pad or lobe beneath each tarsal claw in Diptera.
- Pupa:** The stage between the larva and the adult in insects with complete metamorphosis; a non-feeding and usually an inactive stage but tissues are reorganized within.
- P. Obtecta:** A pupa in which the appendages are more or less glued to the body surface, as in Lepidoptera.
- Pupiparous:** Giving birth to larvae that are fully grown and ready to pupate.
- Pygidium:** The last dorsal segment of the abdomen.
- Radius:** The longitudinal vein connecting the R₁ and the branch of the radius immediately behind it in Insecta.
- Rectum:** The posterior region of the hindgut in Insecta.
- Reptile:**
- Rostrum:** Beak or snout.
- Sclerite:** A hardened body wall plate bounded by sutures or membranous areas.
- Sclerotization:** The hardening of the chitinous cuticula.
- Scutellum:** A sclerite of a thoracic notum; the mesoscutleum, appearing as a more or less triangular sclerite behind the pronotum in Insecta.
- Scutum:** The middle division of a thoracic notum, just anterior to the scutellum in Insecta.
- Seta:** A bristle.
- Sternite:** A sclerite on the ventral side of the body; the ventral sclerite of an abdominal segment in Insecta.
- Stigma:** A thickening of the wing membrane along the costal margin of the wing.
- Stipes:** A longitudinal color marking.
- Stylet:** A needlelike structure; one of the piercing structures on a sucking mouth parts in Insecta.
- Subapical:** Located just proximad of the apex.
- Subcosta:** The longitudinal vein between the costa and the radius.

- Subimago:** The first of the two winged instars of a mayfly after it emerges from the water.
- Submentum:** The basal part of the labium in Insecta.
- Suture:** An external linelike groove in the body wall; a narrow membranous area between sclerites in insects, giving them more flexibility.
- Tarsal Claw:** A claw at the apex of the tarsus.
- Tarsal formula:** The number of tarsal segments on the front, middle, and hind tarsi, respectively in Insecta.
- Tarsus:** The part of the leg beyond the tibia, consisting of one or more segments or subdivisions.
- Tegula:** A small saclike structure overlying the base of the front wing; hind wing clutches onto when flying.
- Telson:** The posterior part of the last abdominal segment in Crustacea.
- Tergite:** A sclerite of the tergum; the dorsal surface of an abdominal segment in Insecta.
- Tergum:** The dorsal surface of any body segment.
- Terminal:** At the end; at the posterior end (of the abdomen), the last of a series.
- Tibia:** The 4th segment of the leg, between the femur and the tarsus.
- Thorax:** The bodyregion behind the head, which bears the legs and the wings (see abdomen, head).
- Transverse:** Across, at right angles to the longitudinal axis.
- Trichoptera:** (Gr. tricho, hair; ptera, wing) Caddisflies; show similarities with lepidoptera; weak fliers with hairy wings; long antenna; pupa dectica; larvae aquatic; build case and catching nets like spiders.
- Trochanter:** The 2nd segment of the leg, between the coxa and the femur.
- Tympanum:** Auditory (membrane) organ, eardrum in nocturnal lepidoptera; used in detecting the bat's sonar.
- Uropod:** One of the terminal pair of abdominal appendages, usually lobelike in Crustacea.
- Veine:** A thickened line in the wing of Insecta.
Longitudinal V.: Costa, subcosta, radius, radial sector, media, cubitus, anal vein.
Cross-V.: Humeral, radial, sectorial, radio-medial, medial, mediocubital, cubito-anal.
- Venter:** The ventral side.
- Ventral:** Lower or underneath; pertaining to the under side of the body.
- Vertex:** The top of the head, between eyes and anterior to the occipital suture.
- Vestigial:** Small, poorly developed, degenerate, nonfunctional.
- Viviparous:** Giving birth to living young, not egg-laying.