

| Glossary of Dragonfly and Damselfly. Terms and Abbreviations | |
|---|--|
| Abdomen | The last, and the usually largest, of the three portions of a Dragonfly/damselfly body. It begins after the thorax. It usually is made up of 10 segments |
| Abdominal segments | The ten separate parts making up the abdomen . Joints between the segments allow the dragonfly to bend easily, this is important when dragonflies mate and lay their eggs. Usually numbered from S1 through S10 from the thorax to the tip. These segments usually show varied patterns of coloration crucial in the identification of certain species. |
| Al | Anterior lamina |
| Anal crossing | Cross-vein which links the anal vein and the cubital vein near base of wing Abbr. Cux or Ac |
| Anal loop | A group of cells enclosed by a thicker vein in the hindwing near the base; not present in all species; the extent of its development and shape useful in the identification of some group, especially gomphids |
| Anal margin | Margin of hindwing of Anisoptera , closest to abdomen |
| Anal pyramid | Cluster of posterior appendages forming a spiny armature around anus of Anisoptera larvae |
| Anal triangle | Found in a few species, a triangle of one or more cells at base of hindwing just below the point where the wing joins the body. |
| Anal appendages | Appendages at the tip of male abdomen. (Claspers) (Superior/inferior Appendages) (Cerci/epiproct Anisoptera) (cerci/paraproct Zygoptera) |
| Anal vein | The most posterior (ninth) main longitudinal vein of the wing |
| Andromorph | Female form which is similar to the male of the species |
| Anteclypeus | Forward-facing area of the face above the labrum and below the postclypeus : in most species it can only be seen when the face is viewed from the front, and not when viewed from above |
| Antihumeral stripe | Name given to the pale lateral stripe along the upperside of thorax . |
| Antennae | Refers to a pair of feelers on the head which carry sensory organs; poorly develop in dragonflies. It is thought to aid in the capturing of prey at low light and may also serve as airspeed indicators |
| Antenodal area | Area of the wing before the nodus between the first (costa) and third (radius) main veins, containing the antenodal Cross-veins (Ax). |
| Antenodal Cross-veins | Cross-veins of the leading edge of the wing before the nodus . Abbr. Ax (veins) |
| Anterior | towards the front of the Odonata |
| Anterior lamina | Protruding lower margin of abdominal segment 2 of true dragonflies (Anisoptera), which forms a lip at the anterior end of the secondary genitalia |
| Anisoptera | The group of species that are all true dragonflies . |
| Appendages | Backwards-pointing spear- or hook-shaped projections at the tip of the abdomen (there are two pairs: an upper or superior pair (superior appendages) (cerci) and a lower or inferior pair (inferior appendages) (epiproct/Anisoptera or paraproct/Zygoptera) |
| Arculus | A major Cross-vein close to the wing base that forms the proximal margin of the discoidal cell , and which joins the radius vein |
| Arthropod | An arthropod is an invertebrate animal having an exoskeleton (external skeleton), a segmented body, and jointed appendages (paired appendages). |
| A.s.l | Above sea level |
| Auricles (oreillets) | Small, lateral, leaf-like ears on the second abdominal segment of some dragonflies: they may assist in flight behaviour. |
| Ax. Antenodal cross-vein(s) | Area of the wing before the nodus between the first (costa) and third (radius) main veins, containing the antenodal Cross-veins (Ax). |
| Brace vein | The vein of the wing immediately posterior to and in line with the inner margin of the pterostigma . |
| Bivoltine | (adjective) referring to organisms having two broods or generations per year (Voltism) |
| Carina (carinae) | The sharp ridge running longitudinally along the dorsal midline of the synthorax . Also defined as raised ridges found in some species on thorax , abdomen and legs . |
| Caudal | Toward the end or posterior end of an organism |
| Cauda/lamellae | Terminal gill filaments, leaf-like projections or of the damselfly larvae (Zygoptera) which are usually flat and broad at the tip of the abdomen of Zygoptera larvae |
| Cerci | A pair of blade-like or leaf-like structures at the termination of the abdomen of true dragonflies . Also referred to as superior appendage . |
| Chin | Casual term for the labium, the lip behind the mandibles which is only visible from below |
| Claspers | Male anal appendages (Superior/inferior Appendages) (Cerci/epiproct in Anisoptera) (cerci/paraproct in Zygoptera) |
| Clypeus | The area of the face between labrum and frons , made up of the lower anteclypeus and the upper postclypeus (see epitome) |
| Collar | Anterior, upturned lip of the prothorax ; a ring of hairs around neck |

| | |
|------------------------------|---|
| Complete (Ax vein) | To be complete the Ax vein start at the costa through the subcosta to the radial (R1) vein. To incomplete the distal Ax vein does not complete from the subcosta to the radial (R1) |
| Compound eyes | Each compound eye is comprised of several thousand elements known as facets or ommatidia . These ommatidia contain light sensitive opsin proteins, thereby functioning as the visual sensing element in the compound eye. But unlike humans, day-flying dragonfly species have four or five different opsins, allowing them to see colours that are beyond human visual capabilities, such as ultraviolet (UV) light. Together, these thousands of ommatidia produce a mosaic of "pictures" but how this visual mosaic is integrated in the insect brain is still not known. |
| Costa | Main wing vein that is the leading edge of both the forewings and the hindwings |
| Costal region | The area along the leading edge of the wings |
| Cross-veins | Small veins bridging the gap between the main longitudinal veins, which give the wing its net-like appearance; important diagnostic Cross-veins include the antenodal Cross-veins and the arculus . The term complete means that the vein runs right across either side of the 1st radial vein. Abbr. Cux or Ac |
| Cubital vein (Cux) | The second to last posterior (eighth) main longitudinal vein of the wing Same as (Ac, anal crossing) |
| cuticle | The invertebrate cuticle or cuticula is a multi-layered structure outside the epidermis of many invertebrates and arthropods, in which it forms an exoskeleton |
| Cu2 | Second cubital vein |
| Cux | cubital cross-vein(s) also known as Ac, anal crossing |
| Coxs or Hip | This part connects the leg to the body. |
| Damselfly | Insects of the suborder Zygoptera in the order Odonata . |
| DC | Discoidal Cell (also called the triangle) |
| Denticles | Tooth-like spines |
| DF | Discoidal field |
| Dichromatic/dimorphic | Having two colour/shape forms e.g. 'sexual dimorphic' refers to differences in male ♂ and female ♀ |
| Discoidal cell | Triangular or quadrangular cell near the base of the wing , the inner side of which is formed in part by the arculus |
| Distal | Furthest away from the body |
| Dorsal | Upperside of body (opposite to ventral) |
| Dragonfly | Insect belonging to the order Odonata , infraorder Anisoptera (from Greek "uneven" and " wing ", because the hindwing is broader than the forewing) |
| Endemic | With a specified and often restricted geographical range |
| Endoskeleton | An endoskeleton is a skeleton that is on the inside of a body. The endoskeleton develops within the skin or in the deeper body tissues. The vertebrate endoskeleton is basically made up of two types of tissues (bone and cartilage). |
| Ephemeral rivers | An ephemeral waterbody is a wetland, spring, stream, river, pond or lake that only exists for a short period following precipitation or snowmelt. They are not the same as intermittent or seasonal waterbodies, which exist for longer periods, but not all year round. |
| Epiproct | A triangular, pointed process at the termination of the abdomen in , lying between and below the cerci (superior appendages) Epiproct is also called inferior appendage (Anisoptera) |
| Epistome | Middle part of the face between the labrum and frons [i.e. clypeus) which is very prominent in Chlorocyphidae |
| Exophytic oviposition | Laying eggs onto water or land |
| Exoskeleton | Is the external skeleton that supports and protects an animal's body, in contrast to the internal skeleton (endoskeleton) of, for example, a human. In usage, some of the larger kinds of exoskeletons are known as " shells ". Examples of animals with exoskeletons include insects such as grasshoppers and cockroaches and Dragonflies . |
| Exuvia (Exuviae) | Empty larval shuck left behind on vegetation or rocks after the adult has emerged and flown away (plural: exuviae). (technically, the shell left behind from any molt stage) |
| Eyes | The main eyes (compound eyes) are the large round structures dominating the head: they are so large because the dragonfly needs good sight as it is a hunter of smaller insects. These eyes are made up of hundreds of small facets, so making the eyes compound. The head also bears 3 tiny, simple eyes (ocelli) on top, arranged in a triangle between the antennae which possibly function as night/day receptors. |
| Face | A casual term for the whole frontal area of the head |
| Female | Female shown with symbol ♀ |
| Femur | The largest and uppermost section of the leg. It is the heaviest and is similar to the human thigh. It is hairy or spiny for better gripping (the 'thigh') |
| Flares (of base of | Basal wing patches, usually with jogged outer edges |

| | |
|-------------------------------------|---|
| wings) | |
| Foliations | Flattened, lateral, leaf-like extensions at the tip of the abdomen of some adult Clubtails (Gomphidae) and, females of some other species |
| Forehead | Casual term for the front, top of the head, and made up variously of part of frons and part of vertex |
| Forewing(s) Fw | First pair of wings. (front wings) Abbr. Fw |
| Frons | Upward-facing area (in damselflies) or angular (in dragonflies) at the front of the face above the postclypeus and in front of the vertex (top of head) and between lower part of the eyes |
| Frontal bond | Forward-facing part of the frons of damselflies, which may be important in the identification of some species e.g. Wisps (Agriocnemis) |
| Genae | Areas of face between the eyes and the labrum and mandibles |
| Genus | Members of a family related in structures and heredity that can be further divided into species |
| Gills | A respiratory structure through which oxygen is obtained |
| Globular | Rounded in shape |
| Hamule | Hook like projections that are found under abdominal S2 on the male dragonfly. Its function is to hold the females genitalia in place during mating. Hamule also same as posterior hamule in Macromiidae, Libellulidae |
| Head | The first of three sections (the other two being thorax and abdomen) bearing important sensory organs, especially the large eyes and the mouth |
| Hindwing(s) | Second pair of wings |
| Hip or cox | This part connects the leg to the body. |
| Humeral stripe | Name given to the pale lateral stripe below the Antihumeral stripe along the upper side of thorax . |
| Hyaline | Means clear or transparent and is used to describe the wings of a dragonfly |
| Incomplete | Refers to the distal Ax vein that does not complete from the subcosta to the radial To be complete the Ax vein start at the costa through the subcosta to the radial (R1) vein. |
| Inferior appendages | " Epiproct ". Lower, terminal, appendages on segment 10 of male damselflies |
| Instar | A molting or shedding of the larvae exoskeleton. (Larval stage) |
| Intersegmental membrane | Soft, moveable joints between the segments , especially of the abdomen |
| Invertebrate | Animals that neither possess nor develop a vertebral column (commonly known as a <i>backbone</i> or <i>spine</i>). Includes almost all animals Familiar examples of invertebrates include insects; (Dragonflies). |
| IR | Inter-radial veins, numbered 1, 2, 3 |
| Labial mask | On Odonata the part of the labium that covers part of the head |
| Labium | Lower lip, casually referred to as the chin, lying behind the mandibles and only visible from below |
| Labrum | The conspicuous plate, or front 'lip', running across the lower region of the face when viewed from the front |
| Larva | Immature stage of Odonata, larva, nymph, naiad are often used interchangeably to describe the intermediate stage of the dragonflies life (between eggs and adult) |
| Lateral | The side of the Odonata |
| Lip | The labrum : the bottom part of the face when viewed from the front |
| Legs | Dragonflies and Damselflies have 3 pairs of legs. Fore-, Mid-, and Hindlegs. Each leg has 3 segments. Femur (upper segment), Tibia (mid segment), and Tarsus (final segment). The tarsus ends in the Tarsal claw. |
| Male | Male shown with symbol ♂ |
| Mandibles | Pair of pincer-like jaws |
| Median vein | Starts at the base of the wing and continue as upper side of the triangle and ends below the Rspl loop. Abbr. M |
| Melanic | Dark or blackish form |
| Membranule | A narrow, triangular area on the inside of the hindwing of true dragonflies : characteristically coloured in some species |
| Mesanepisternum | In Odonata, the anepisternum. |
| Mesepimeron | In Odonata, the area between the humeral and first lateral suture. |
| Mesepisternum (Mesepisterna) | 1. The area of the mesopleuron anterior to the mesopleural suture ; sometimes divided into an upper mesanepisternum and a lower meskatepisternum ; the episternum of the mesothorax |
| Meskatepimeron (Mesepimera) | The lower division of the mesepimeron |
| Mesopleuron (mesopleura) | The pleuron of the mesothorax ; in winged insects , composed of basalare, subalare, mesepisternum , mesepimeron and mesotrochantin |
| Mesostigmal lamina | The ridge or flange on the mesostigmal plate of the anterior region of the synthorax |
| Mesostigmal plate | The small plate or sclerite forming the anterior and Dorsal edge of the synthorax , and |

| | |
|--|---|
| | may bear a ridge or flange (mesostigmal lamina); in the female , this plate is modified in accordance with the mole appendages as this is the contact point for tandem linkage in Zygotera |
| Mesothorax | The middle of the thoracic divisions. |
| Metepimeral carina | A keel-shaped anatomical part, ridge, or process at the bottom of the thorax side (often marked with a thin black line along the ridge line). On the Epimeron of the Metathorax (the lower rear of the thorax) |
| Moustache | A dark bond running across middle of front of face in Wisps (<i>Agriocnemis</i> spp) (see diagram p.26) |
| Multivoltine. | A multivoltine species is a species that has two or more broods of offspring per year. Multivoltine species are often short lived insects such as mosquitoes. They have a short adult lifespan and often die soon after mating. The larvae then develop quickly and multiple generations occur within a year. |
| Naiad | Immature stage of Odonata , larva , nymph , naiad are often used interchangeably to describe the intermediate stage of the dragonflies life (between eggs and adult) |
| Neck | Casual term for the prothorax |
| Nodus | The small kink more or less midway along the anterior, leading edge of the wing , and where the subcosta turns forward to meet the costa |
| Obelisking | In some perching dragonflies, the raising of the abdomen high in the air, sometimes on almost vertical position, to keep cool by presenting minimum area to the sun's rays, sometimes while still maintaining a territorial position |
| Ocelli | Three, simple eyes , arranged in a triangle on the Dorsal surface of the head |
| Occiput | Top, back of head: often diagnostic in damselflies as it bears the postocular spots |
| Odonata | The insect order made up of the true dragonflies (Anisoptera) and the damselflies (Zygotera): the term means 'toothed' referring to the strong mandibles of the adult |
| Ommatidium (ommatidia) | Compound eyes are composed of units called ommatidia (singular: ommatidium). An ommatidium contains a cluster of photoreceptor cells surrounded by support cells and pigment cells. The outer part of the ommatidium is overlaid with a transparent cornea. Each ommatidium is innervated by one axon bundle (usually consisting of 6-9 axons, depending on the number of rhabdomeres) and provides the brain with one picture element. The brain forms an image from these independent picture elements. The number of ommatidia in the eye depends upon the type of insect and ranges from just a handful to around 30 thousand in larger Anisoptera . |
| Ovipositor | Egg-laying apparatus in Zygotera and some Anisoptera |
| Peaks | Pair of cone-shapes on the upper surface of front of top of head (vertex) in some true dragonflies : diagnostic in some Skimmers (<i>Orthetrum</i>) |
| Pilosity | A covering of fine 'hairs' or setae |
| Pleural suture (mesopleural suture) | A suture on a thoracic pleuron extending from the base of the wing to the base of the coxa , separating the episternum and epimeron ; referred to as pro-, meso-, or meta pleural ridge . |
| Polymorphism | Two or more forms within the some species |
| Postclypeus | Upward-facing area (top of 'nose') (in damselflies) or forward-facing area of the face above the anteclypeus and below the frons |
| Postnodal | Beyond the nodus . Usually referring to cross-vein(s) Abbr. Px. |
| Postnodal cross-vein(s) | Cross-vein(s) beyond the nodus Abbr. Px. |
| Postocular spots | Light-coloured spots on top of the head in some damselflies: diagnostic in Sprites (Pseudagrion) |
| Prothorax | Small, first segment of thorax bearing first pair of legs but no wings , casually referred to as the ' neck ' (the anterior segment of the thorax of an insect) |
| Pruinescence | Waxy, whitish bloom on the body of many adult (especially male) dragonflies; in some species it may cover almost the whole body, and often increases in intensity and extent with age so that some old individuals appear powdery. In insects, a "bloom" caused by wax particles on top of an insect's cuticle that covers up the underlying coloration, giving a dusty or frosted appearance. The pruinescence is commonly white to pale blue in colour, but can also be grey, pink, purple, or red; these colours may be produced by Tyndall scattering of light. When pale in colour, pruinescence often strongly reflects ultraviolet . |
| Pruinose | Having pruinescence |
| Pterostigma(s) | Pigmented cell near the tip and at the leading edge of all four wings : it is thicker and stronger than the surrounding wing , and influences movement of the wing during flight. Abbr. Pt. |
| Px | Abbreviation for the cross-vein(s) beyond the nodus |
| Radial veins | Veins radiating out below the costal- and subcostal vein. Abbreviated 'R' and referred to as R2, R3, R4 and R5 in sequence from the costal- and subcostal vein. |
| Radial Supplement | Abbr. Rspl |
| Radius | Third main vein from the anterior edge of the wing |
| Saddle | Light- or bright-coloured patch on the upper part of the base of the abdomen : diagnostic feature in some Hawkets (<i>Aeshnidae</i>). Also a term used more widely for a dorsal , saddle- |

| | |
|----------------------------|--|
| | shaped patch anywhere on the body |
| Sclerites | Exoskeleton body plates |
| Secondary genitalia | Accessory genitalia of male damselflies and dragonflies on segments 2 and 3 of the abdomen : important in the identification of many male dragonflies |
| S(egment)s | An Abbreviation for abdominal segments . There are ten, with S 1 being adjacent to the abdomen end S 10 being the last and bearing the appendages . Abbr. S |
| Setae | Fine 'hairs' |
| Semivoltine | (adjective) referring to organisms whose generation time is more than one year (Voltism) |
| Setose | With many fine 'hair'; downy |
| Shoulder | Upper, dorsal area of thorax |
| Smoky | When wings are yellowish or brownish, especially with increasing age |
| Spectacled | Having the shape of spectacles or glasses: important diagnostic feature of the frons in Skimmers (Orthetrum) |
| Sternite | One of the plates on the underside of the thorax or abdomen |
| Subcosta | Second main vein from the anterior edge of the wing , running from wing base to nodus |
| Subnodus | The veins running towards the back of the wing immediately behind the nodus |
| Superior appendages | Terminal, upper appendages of the primary genitalia (appendages) (cerci) on the last abdominal segment: they are important in the identification of many damselflies in particular Found on Anisoptera and Zygoptera |
| Suturallines | Sutures highlighted in a dark colour against a light background |
| Sutures | Lines of fusion of the skeletal plates of the thorax |
| Sympatric | Living in the same habitat in the same geographical area |
| Synoptic | As pertaining to keys, a summary of all characters, rather than a selection of characters used in the more familiar binary keys |
| Synthorax | Bulk of the thorax , made up of the last two thoracic segments , bearing both pairs of wings and the last two pairs of legs |
| Tandem linkage | Clasping of the female by the male's appendages but the pair are not in genital contact |
| Tarsus (tarsal) | Terminal segment of the leg |
| Tarsal claw | Claw carried on the final tarsal segment of an insect. There may be more than one claw on each tarsus . |
| Taxonomy | The classification of organisms |
| Teneral | Freshly-emerged young adult that has a still-soft body. Males in particular have not yet developed the characteristic colours of the mature adult and are often very similar to females in colour patterning. Tenerals often move away from the water to mature. |
| Thorax | Thick, middle section of the body consisting principally of large muscles for the wings and legs: it is composed of a small, anterior prothorax , and a much larger synthorax |
| Thorax front | Dorsal , flattish area of the synthorax between the neck and the wing bases |
| Tibia | Middle segment of leg, between the tarsus and the femur . |
| Tornus | Pointed, back and inside area of the hindwing in some Anisoptera |
| Triangle | Discoidal cell of Anisoptera |
| True dragonfly | A general term for a dragonfly (Anisoptera) (Order ODONATA (Fabricius, 1793), Suborder ANISOPTERA (Selys, 1854). Damselflies (Suborder ZYGOPTERA (Selys, 1854)) are not regarded as true dragonflies . |
| Uncrossed | Opposite of 'crossed'; refers to a character state where there is no cross-vein in the discordial cell |
| Univoltine | (adjective) referring to organisms having one brood or generation per year (Multivoltism) |
| Vertex | Frontal, top of head: casually referred to, at least in part, as the 'forehead' |
| Vertebrate | An animal of a large group distinguished by the possession of a backbone or spinal column, including mammals, birds, reptiles, amphibians, and fishes. |
| Voltinism | Voltinism is a term used in biology to indicate the number of broods or generations of an organism in a year. The term is most often applied to insects, and is particularly in use in Odonata where species vary in their voltinism. Univoltine – (adjective) referring to organisms having one brood or generation per year Bivoltine – (adjective) referring to organisms having two broods or generations per year Multivoltine – (adjective) referring to organisms having more than two broods or generations per year Semivoltine – (adjective) referring to organisms whose generation time is more than one year |
| Vulvar scale | Modified posterior margin of eighth sternite of the female |
| Wings | Large structures enabling dispersal and prey capture in adults: there are two pairs, the first pair being the forewings and the second pair the hindwings |
| Waist | Narrowing of the abdomen at segment 3 in some true dragonflies |
| Zygoptera | The group of species comprising the damselflies |