



**Fig. 348.** Large leaf form of *Pilea microphylla* (L.) Liebm. (Picture by Geoff R. Nichols)

## 7. Glossary (from Lawrence, 1951; Beentje, 2010)

**abaxial:** applied to the side or surface facing away from the stem or axis (compare adaxial).

**acaulescent:** without an evident stem above ground level.

**accrescent:** increasing in size, e.g. the calyx of some plants in the fruiting stage.

**achene:** small dry fruit, not splitting when ripe, containing a single seed, with the seed coat free from the fruit wall.

**acicular:** needle-shaped, thin, cylindrical with a sharp point, meaning either a solid 3-dimensional shape, or a 2-dimensional shape.

**actinomorphic:** (of flowers) radially symmetrical, regular (compare zygomorphic).

**acuminate:** tapering gradually or abruptly from inwardly curved sides into a narrow point.

**acute:** pointed, the margins forming an angle of < 90°.

**adaxial:** applied to the side facing the stem or axis (compare abaxial).

**adnate:** fused with an organ of another kind.

**adpressed:** lying close to and flat along the surface.

**alternate:** applied to leaves and other organs inserted singly at different levels along the axis.

**amplexicaul:** stem-clasping, as when the base of the leaf is dilated and embraces the stem.

**anatropous:** (of ovule) reversed, bent so that the micropyle is close to the point of attachment of the funicle.

**anisophyllous:** with two opposite leaves very unequal in size.

**annual:** plant whose life span ends within one year after germination.

**annular:** arranged in a circle.

**anther:** the part of a stamen which contains the pollen.

**antherode:** remnant of anther, in a staminode.

**anthesis:** period during which the flower is open.

**apical:** at the apex.

**apiculate:** bearing a short point.

**areole:** (of Cactaceae) raised or sometimes sunken cushion that represents a condensed shoot system (brachyblast) of axillary origin, bearing modified leaves (bristles, spines and/or glochidia), flowers or shoots.

**aril:** appendage covering or partly enclosing the seed and arising from the funicle.

**arillate:** bearing an aril.

**arista:** long bristle-like point.

**aristate:** bearing an arista.

**ascending:** growing erect after an oblique or horizontal beginning.

**asperous:** rough, harsh to the touch.

**attenuate:** tapering gradually.

**axil:** the angle between a leaf or bract and the axis bearing it (usually the stem).

**axile:** (of placentation), with ovules attached to the axis of the ovary.

**axillary:** arising from the axil (e.g. branches).

**baccate:** berry-like.

**basifixed:** (of anthers) attached to the filament by the base (compare dorsifixed).

**berry:** indehiscent simple fruit with 1–many seeds immersed in a fleshy pulp.

**biennial:** taking two years from seedling stage to maturity, seed-set and death.

**bifid:** divided at the tip in two (usually equal) parts by a median cleft, for about half the length.

**bifurcate:** forked or divided into two sharp branches or prongs.

**bisexual:** having both sexes in the same flower or inflorescence.

**bladder cells:** (of Aizoaceae) cells for water-storage.

**brachyblast:** short shoot of limited growth usually borne on a main axis.

**bract:** leaf-like structure, different in form from the foliage leaves and without an axillary bud, associated with an inflorescence or a flower.

**bracteate:** possessing or bearing bracts.

**bracteole:** small bract borne on the pedicel or calyx of a flower.

**bristle:** stiff strong hair, slender and cylindrical.

**bulbiferous:** bearing or producing bulbils.

**bulbil:** small deciduous bulb (or tuber) usually axillary, formed around the mother bulb or in the axil of a leaf, and functioning to propagate the plant vegetatively.

**caducous:** non-persistent, falling off early.

**calyptra:** cap or lid-like covering of flowers or fruits.

**calyx:** outer envelope of the flower, consisting of free or united sepals.

**campanulate:** bell-shaped, with a tube about as long as wide.

**campylotropous:** (of an ovule) orientated transversely (i.e. with its axis at right angles to its stalk and with a curved embryo sac).

**capitate:** head-like; like the head of a pin (e.g. as for stigma).

**capsule:** dry fruit composed of two or more united carpels and either splitting when ripe into flaps called valves or opening by slits or pores.

**carpel:** the basic unit of the female sexual organ in a flower, comprising the ovary with its ovules, the style and the stigma.

**caruncle:** outgrowth of the outer seed integument, near the hilum; usually small and fleshy and associated with animal dispersal.

**carunculate:** with a caruncle.

**cataphyll:** small scale leaf, e.g. on rhizomes of flowering plants.

**caudex** (*pl.* caudices): enlarged storage organ at soil level, composed of the swollen stem or root, or both.

**caudiciform:** formed like a caudex, enlarged or swollen.

**caulescent:** with an evident stem above ground.

**chartaceous:** papery in texture, opaque and thin.

**chasmogamous:** pollinated when the flower is open (compare cleistogamous)

**ciliate:** with a fringe of hairs along the margin.

**circumscissile:** opening as if cut circularly around the upper part or equator, which then comes off like a lid.

**cladode:** segment of a jointed, flattened stem, with the function of a leaf.

**clavate:** club-shaped or thickened towards the end.

**cleistogamous:** (self) pollination occurring when the flower is closed (compare chasmogamous).

**coccus** (*pl.* cocci): one of the separate parts of a lobed capsule or of a schizocarp.

**cochleate:** spiral, like the shell of a snail.

**columella:** persistent central axis around which the fruit locules are arranged.

**conical:** cone-shaped.

**connate:** united, with structures or organs of the same kind (e.g. filaments) are joined margin to margin.

**connective:** the part of a stamen that connects the anther locules.

**connivent:** applied to parts converging so as to be nearer together above than below.

**cordate:** applied to the base of a leaf when it is more or less deeply notched.

**corolla:** the inner envelope of the flower, consisting of free or united petals. This whorl is inside or above the calyx and outside the stamens.

**corymb:** more or less flat-topped, racemose (indeterminate) inflorescence in which the branches or the pedicels start from different points but all reach to about the same level.

**crenate:** the margin notched with regular blunt or rounded teeth (crenations).

**cuneate:** wedge-shaped and attached at the point.

**cupular:** cup-shaped.

**cuspidate:** abruptly tipped with a sharp rigid point.

**cyathium** (*pl.* cyathia): (of Euphorbiaceae) inflorescence resembling a single flower but consisting of an involucre of modified leaves enclosing a female flower and several male flowers.

**cymbiform:** boat-shaped.

**cyme:** determinate inflorescence in which each flower, in turn, is formed at the tip of a growing axis, and further flowers are formed on branches arising below it.

**cymose:** with a cyme.

**cymule:** small cyme or portion of one, usually few-flowered.

**cystolith:** process from the cell wall impregnated with calcium carbonate.

**deciduous:** with leaves falling off at the end of the season of growth, not evergreen.

**decumbent:** lying prostrate but having the tip growing upwards.

**decurrent:** as when the edges of the leaf are continued down the stem or petiole as raised lines or narrow wings.

**decussate:** in opposite pairs, with each pair at right angles to the one above and below it.

**deflexed:** bent abruptly downwards or outwards (compare inflexed).

**dehiscent:** opening spontaneously when ripe as in capsules and anthers.

**deltoid:** shaped  $\pm$  like an equal-sided triangle.

**dentate:** the margin prominently toothed, the teeth pointing outwards.

**dichasia:** determinate type of cymose inflorescence having a central, older flower which develops first and a pair of opposite lateral branches bearing younger flowers.

**didynamous:** (of stamens) in pairs of unequal length.

**dimorphic:** having two distinct forms or sizes.

**dioecious:** with unisexual flowers, the male and female flowers on separate plants.

**discoid:** like a plate or disc.

**distal:** farther from the point of attachment or origin (compare proximal).

**distichous:** regularly arranged one above the other in two opposite rows, one on each side of the stem.

**diurnal:** flowering during the day rather than at night.

**divaricate:** spreading wide.

**dorsal:** the back or outer surface, in this work referring to the upper surface of the lamina.

**dorsifixed:** attached at or by its back, said e.g. of an anther to the filament.

**drupaceous:** drupe-like, or producing fruit like a drupe.

**drupe:** indehiscent, fleshy fruit with the seed(s) enclosed in a stony endocarp (e.g. plum).

**elaiosome:** oily appendage on seeds, serving as a food-body for ants and other animals which then disperse the seed (see also strophiole).

**ellipsoid:** 3-dimensional shape that is elliptical in the vertical plane.

**elliptic:** broadest at the middle, with two equal rounded ends.

**emarginate:** with a distinct sharp notch at the apex.

**embryotega:** lid-like thickening in seed coat becoming detached on germination.

**emetic:** bringing on or causing the act of vomiting.

**endemic:** confined to a particular region or country and not native anywhere else.

**endosperm:** the nutritive material stored within the seed and often surrounding the embryo.

**entire:** with an even margin, without teeth or notches.

**ephemeral:** plant that completes its life cycle in less than one year, usually less than six months

**epidermis:** the outermost layer of cells of an organ, usually only one cell thick.

**epidermal:** having to do with the outermost layer of cells.

**epigynous:** (of flower) when sepals, petals and stamens are apparently borne above the ovary, the latter being enclosed in an adnate receptacle or calyx tube (compare hypogynous, perigynous).

**epilithic:** living on rocks.

**epipetalous:** borne on the petals.

**epiphyte** (*adj.* epiphytic): plant that grows on another plant but without deriving nourishment from it, i.e. not parasitic, as some ferns and orchids growing on trees.

**erose:** (of a margin) appearing to have been gnawed.

**exserted:** projecting beyond, as the stamens from the tube of the corolla (i.e. not included).

**fascicle:** tuft of leaves, branches, flowers etc. arising from about the same place.

**fasciculate:** bearing fascicles.

**filament:** the stalk of a stamen supporting the anther.

**filiform:** slender, thread-like.

**fimbriate:** with the margin bordered by long slender processes.

**flexuose:** zig-zag or bent alternately in opposite directions.

**foliaceous:** leaf-like.

**foliolate:** with leaflets, e.g. 3-foliate with 3 leaflets, 5-foliate with 5 leaflets etc.

**follicle:** fruit (pod) formed from a single carpel opening usually only along the inner (i.e. ventral) suture to which the seeds are attached.

**funicular:** deriving from the funicle (the stalk of the ovule or seed attaching it to the placenta).

**fusiform:** spindle-shaped, thick, but tapering towards each end.

**gamopetalous:** with the petals united, either entirely or at the base into a tube, cup or ring.

**gamosepalous:** with united sepals.

**gibbous:** with a pouch-like swelling or hump.

**girdle:** funicular girdle, the scar left on the seed at the point of attachment of the funicle.

**glabrate:** glabrous, but obviously having previously had an indumentum.

**glabrescent:** becoming glabrous or nearly so.

**glabrous:** without hairs or scales.

**glaucouscent:** becoming glaucous with age.

**glaucous:** covered with a waxy bloom, usually bluish grey or sea green, which rubs off easily.

**globose:** rounded, spherical.

**glochid** (*pl.* glochidia): (of Cactaceae) minutely barbed spinule (bristle) produced in the areole.

**granulate:** finely covered with very small granules.

**gynodioecious:** having bisexual flowers and female flowers on separate plants.

**gynobasic:** (of style) arising from the base of the ovary.

**hemispheric:** with the shape of half a sphere.

**hilum:** the scar left on the seed from its attachment point to the placenta.

**hilum-micropylar region:** (of Cactoideae) complex formed by hilum and micropyle on the seed surface.

**hirsute:** with rather coarse, stiff hairs.

**hygrochastic:** applied to plants in which opening of the fruit and dispersion of the spores or seeds are caused by absorption of water.

**hypanthium:** often cup-shaped extension of the receptacle formed by fusion with calyx, corolla and androecium, in some cases extended into a tube.

**hypogynous:** (of flower) with flower parts attached below the base of the ovary and free from it; flowers with this arrangement have a superior ovary (compare epigynous, perigynous).

**imparipinnate:** having an uneven number of pinnae, by virtue of having one terminal pinna.

**included:** (of stamens) not projecting beyond the tube of the corolla (compare exserted).

**indehiscent:** not opening when ripe.

**indumentum:** any covering to a surface, such as hairs, wool, scales, etc.

**inferior:** (of ovary) when calyx is inserted above ovary.

**inflexed:** bent sharply inwards, upwards or forwards (compare deflexed).

**inflorescence:** the part of the plant that bears the flowers.

**infraspecific:** (of taxa or variation) below the rank of species (e.g. subspecies, variety).

**inserted:** included.

**internode:** the portion of a stem between two nodes (compare node).

**introrse:** (of an anther) opening towards the centre of the flower.

**involucral:** having to do with the involucre.

**involucre:** a number of bracts surrounding the base of a head of flowers.

**involute:** having the edges of the leaves rolled towards the adaxial surface (compare revolute).

**iridescent:** many-coloured, with rainbow sheen.

**keeled:** ridged along the middle of a flat or convex surface.

**lacrimiform:** tear-shaped.

**lamina:** the expanded part of leaves or petals; same as blade.

**lanceolate:** lance-shaped, a lamina shape widest below the middle, tapering to the apex, with a length to width ratio of 3:1 or more.

**latex:** milky juice, often sticky.

**leaflet:** one expanded part of a compound leaf.

**lenticular:** shaped like a biconvex lens.

**liana:** woody climbing plant, mainly of tropical forests.

**ligulate:** strap-shaped, narrow and with parallel sides.

**lithophytic:** of a plant growing on rock.

**lobate:** with lobes.

**locular:** having chambers.

**locule** (*pl.* loculi): a chamber or compartment of an ovary or fruit or anther.

**loculicidal:** referring to the dehiscence of a fruit which splits down the middle of the cells or locules, along the midrib or dorsal suture.

**lorate:** strap-shaped; moderately long with parallel sides.

**lunate:** shaped like the waxing moon.

**mamillate:** having small nipple-like projections.

**marcescent:** withering without falling off.

**-merous:** referring to parts or their number (e.g. 3-merous).

**mesophytic:** adapted to normal conditions, avoiding very wet and arid conditions.

**micropyle:** opening in the teguments of the ovule, through which the pollen tube enters, and from which radicle emerges in seed.

**midrib:** the principal, usually central nerve of a leaf or leaf-like part.

**moniliform:** like a string of beads.

**monocarpic:** flowering (and possibly fruiting) only once, then dying.

**monochasium** (*pl.* monochasia): cyme reduced to single flowers on each axis (the laterals of the dichasium having been lost by reduction).

**monoecious:** with male and female flowers separate but borne on the same individual plant.

**mucilage** (*adj.* mucilaginous): gelatinous substance which absorbs water and increases in bulk.

**multifid:** divided into many lobes or segments.

**nectary gland** (nectary scale): gland-like organ, located outside or within a flower, that secretes nectar.

**nocturnal:** having flowers that open during the night.

**node:** the place on a stem at which a leaf or leaves and accompanying organs arise.

**nut:** one-seeded indehiscent fruit, with a hard dry shell (pericarp).

**nutlet:** little nut.

**ob-** (prefix): usually indicating the other way round from the usual (e.g. obconical being inversely conical, with the point of attachment at the small end).

**oblate:** transversely broadly elliptic.

**oblong:** 2-dimensional shape, much longer than broad, with nearly parallel sides.

**obtuse:** blunt or rounded at the end, the margins forming an angle of 90°–180°.

**operculate:** with a cap or lid.

**operculum:** lid, cap or cover.

**opposite:** pertaining to leaves or branches when two are borne at the same node on opposite sides of the stem.

**orbicular:** flat with a ± circular outline.

**orthotropous:** (of ovule) with a straight axis, the micropyle being distal.

**ovary:** that part of the pistil (the usually enlarged base) which contains the ovules and eventually becomes the fruit.

**ovate:** 2-dimensional shape with the outline of an egg, scarcely twice as long as broad, with

the broader end below the middle.

**ovoid:** 3-dimensional shape that is ovate in the vertical plan.

**ovule:** the immature seed in the ovary before fertilisation.

**pachycaul:** plant with disproportionately thick stem for its length.

**palmatilobed:** (of a leaf) palmately divided to about halfway to the midrib.

**panicle:** compound raceme; an indeterminate inflorescence in which the flowers are borne on branches of the main axis or on further branches of these.

**paniculate:** with the inflorescence a panicle.

**papilla** (*pl.* papillae): soft, small, often nipple-shaped protuberance.

**papillate:** having papillae.

**papillose:** bearing many small, soft, nipple-like protuberances.

**parietal:** (of placentation) with the ovules borne on the inner surface of the wall of the ovary or on intrusions of the wall that form incomplete partitions.

**partite:** divided but not quite to the base.

**pectinate:** like a comb.

**pedicel:** the stalk of an individual flower.

**pedicellate:** (of flower) stalked, with a pedicel.

**peduncle:** the stalk of an inflorescence.

**pedunculate:** (of inflorescence) with a peduncle.

**peltate:** of a leaf or other plant organ of which the stalk is attached to its under surface instead of to its edge.

**pendulous:** hanging down from; (of ovules) arising on and hanging down from an apical placenta.

**penicillate:** brush or pencil-shaped, long and narrow with a tuft of hairs at the end.

**pentagonal:** 5-angled or 5-merous.

**perennial:** plant whose life span extends over more than two growing seasons.

**perianth:** the floral envelope, consisting of calyx or corolla or both.

**pericarpel:** the receptacle that encloses the ovary up to below a point (ovary apex) where it extends into an epigynous hypanthium; interpreted as a short shoot, of peduncular nature.

**perigynous:** (of flower) when the sepals, petals and stamens arise on an open receptacle surrounding the ovary but are not adnate to it (compare epigynous, hypogynous).

**persistent:** remaining attached to the plant beyond the expected time of falling.

**petal:** single, usually free, unit of a completely divided corolla or second floral whorl.

**petaloid:** formed or coloured like a petal.

**petiolate:** (of a leaf) having a petiole.

**petiole:** leaf stalk.

**phloem pole:** side of a vascular bundle closest to the phloem found in genera such as *Agave*.

**pilose:** hairy with rather long, soft, simple hairs.

**pinnate:** (of a leaf) divided into a central axis and lateral leaflets.

**pinnatifid:** (of a leaf) incompletely divided, not forming distinct leaflets but incised more than 1/2 way to the midrib.

**pinnatisect:** (of a leaf) pinnately divided down to the midrib.

**pistil:** the female organ of a flower, consisting when complete of ovary, style and stigma.

**pistillode:** rudimentary sterile pistil.

**placenta:** the part of the ovary where ovules are attached.

**placentation:** disposition of the placenta within the ovary.

**planate:** flat, uniform, level, horizontal.

**plicate:** folded or plaited; having parallel folds like a folding fan.

**porrect:** pointing upwards at a slight angle from the vertical.

**procumbent:** said of a stem or rhizome that lies on the ground for all or most of its length, without rooting at the nodes.

**proliferous:** with adventitious buds on the leaves or on the flowers, such buds being capable of rooting and forming separate plants.

**prophyll:** leaf formed at the base of a shoot, usually smaller than those formed subsequently.

**prostrate:** lying flat.

**proximal:** the closest to the point of attachment (compare distal).

**pruinose:** having a whitish, waxy, powdery bloom on the surface.

**puberulent:** minutely pubescent.

**pubescent:** covered with soft, short, erect hairs.

**pyrene:** (of fruit) stone; seed plus a hard layer of endocarp surrounding it.

**pyriform:** pear-shaped.

**pyxidium** (*pl.* pyxidia): capsular fruit with circumscissile dehiscence.

**quadrate:** almost square in form.

**raceme:** indeterminate inflorescence in which all the flowers are borne on pedicels along an unbranched axis or peduncle, the terminal flowers being the youngest and the last to open.

**reflexed:** bent downwards or backwards.

**reniform:** kidney-shaped.

**reticulate:** forming a network or lattice.

**revolute:** rolled back from the margin (compare with involute).

**rhizomatous:** possessing an underground stem.

**rhizome:** rootstock or root-like stem prostrate on or under the ground, sending rootlets downwards and leaves upwards; always distinguished from a true root by the presence of buds.

**rhomboid:** (of leaves) rhombic-like,  $\pm$  diamond-shaped, having straight margins and being widest in the middle, with the petiole attached at one of the acute angles.

**rosette:** a circle of tightly packed leaves or other organs, if of leaves then usually at ground level (a basal rosette).

**rosulate:** with the leaves in a circle at the basis of the stem; with a rosette.

**rugose:** wrinkled; covered with coarse reticulate lines with the spaces in between convex.

**rugulose:** finely wrinkled.

**runner:** slender, prostrate or trailing stem which produces roots.

**saccate:** pouch-shaped.

**scandent:** climbing (usually without aid of tendrils).

**scabrid:** rough to the touch due to minute stiff hairs.

**scape:** naked flower stalk arising from the ground with radical or rosulate leaves.

**scarious:** thin and dry, not green.

**schizocarp** (*adj.* schizocarpic): dry dehiscent fruit which splits into its carpellary constituents at maturity.

**scorpioid:** (of a cymose inflorescence) with the main axis coiled in bud, the flowers being usually 2-ranked, i.e. with single flowers alternately right and left.

**sepal:** a single part of the outermost whorl of floral organs, the calyx; usually green, protecting the corolla in bud.

**sepaloid:** resembling a sepal, sometimes said of tepals.

**septal nectaries:** occurring in the partitions of the ovary where the carpel walls are incompletely fused, especially seen in monocotyledons.

**septicidal:** when a ripe capsule splits along the lines of junction of the carpels, i.e. along the septa, the fruit valves remaining attached and not falling off.

**serrate:** toothed like a saw, with regular acute and angled teeth pointing towards the apex.

**sessile:** of a leaf, without a petiole, the leaf being joined directly onto the stem.

**sigmoid:** S-shaped.

**sinuate:** with the margin uneven, with rather deep undulations (compare undulate).

**spathaceous:** resembling a spathe (a large bract surrounding the inflorescence).

**spathulate:** shaped like a small spatula or spoon, oblong, with an extended basal part.

**spicate:** arranged in a spike.

**spike:** racemose (unbranched) inflorescence with sessile flowers.

**spinescence:** spininess.

**spiniform:** shaped like a spine.

**spreading:** loose, not erect, said of petals and other plant organs.

**stamen:** the male organ of a flower, consisting of a filament, and the anthers that bear the pollen.

**staminode:** abortive or vestigial stamen without a perfect anther.

**stellate:** star-shaped, with numerous arms radiating outwards (as in the pattern on seeds, or a type of hair).

**stigma:** the pollen receptor on the gynoecium, which may be either sessile on the ovary or on top of the style or its arms.

**stipule:** leaf-like or scale-like appendages of a leaf, usually at the base of the petiole.

**stipuliform:** shaped like a stipule.

**stolon:** runner (vegetative shoot that spreads along the surface of the ground) which roots at the nodes.

**striolate:** marked with fine lines or ridges.

**strophiolate:** with strophioles.

**strophiole:** an aril or outgrowth of the outer seed integument near the hilum, serving as a food-body for animals which then disperse the seed (see also elaiosome).

**style:** narrow upper part of an ovary supporting the stigma; sometimes lacking when the stigma sits on the ovary.

**sub-** (prefix): nearly, almost.

**subradical:** (of leaves) appearing so close to the stem base that they appear to come from the root.

**subtending:** standing below and close to another organ.

**subulate:** awl-shaped.

**sucker:** shoot arising below ground from the roots some distance from the main stem.

**suckering:** producing suckers.

**sulcate:** grooved, furrowed.

**superior:** (of ovary) when sepals, petals and stamens are inserted below ovary.

**surculose:** producing suckers or runners from the base.

**syncarpous:** (of a flower) with two or more united carpels.

**taproot:** the main, descending root of a plant that has a single dominant root axis.

**taxon** (*pl.* taxa): a group or category, at any level, in a system for classifying organisms.

**tepal:** any of the members of a perianth that is not clearly differentiated into calyx and corolla.

**terete:** cylindrical, so circular in cross section and lacking grooves or ridges.

**terminal:** at apex of part under discussion.

**ternate:** arranged in a whorl or cluster of three.

**testa:** the outer coat of the seed (the inner coat is the tegument).

**tetrasporangiate:** (of anthers) four-locular.

**thyrsse:** panicle with the secondary and ultimate axes cymose, i.e. the main axis is indeterminate and the lateral branches are determinate in their growth.

**tomentose:** densely covered in short, soft hairs.

**trapeziform:** having four edges, those which are opposite not being parallel.

**trichome:** epidermal outgrowth, such as a hair or scale.

**trigonous:** triangular in cross section and with obtuse angles (compare triquetrous).

**triquetrous:** triangular in cross section and with acute angles, therefore with three distinct longitudinal ridges (compare trigonous).

**trullate:** trowel-shaped; having its widest axis below the middle and with straight margins.

**truncate:** cut off  $\pm$  squarely at the end.

**tuber:** thickened branch of an underground stem, serving as a storage organ (this bears leaf scars and axillary buds).

**tuberous:** swollen; (of roots) tuber-like.

**tuberculate:** with tubercles (rounded protuberances).

**umbel:** inflorescence (racemose or indefinite) with branches arising from the same point on a common peduncle.

**undulate:** said of a margin that is wavy.

**urceolate:** urn-shaped, with a short swollen

tube contracted near the top and then slightly expanded in a narrow rim.

**utricle:** bladder-shaped fruit.

**variegated:** having streaks, marks, or patches of a different colour or colours; varicoloured.

**vascular bundle:** a strand of specialised tissue that conducts water or nutrients within the plant.

**verrucose:** warty.

**versatile:** (of an anther) swinging freely about the point of attachment to the filament which is in the middle of the back (compare basifixed, dorsifixed).

**verticillate:** (of leaves) in a whorl, i.e. several arising at the same node, arranged regularly around the stem.

**villous:** set with long weak hairs.

**viviparous:** bearing living young, when the seeds germinate on the parent plant, or where plantlets are produced from the edges of leaves.

**whorled:** the arrangement of similar parts (usually leaves) in a circle at the same level.

**xeromorphic:** having characteristics that serve as protection against excessive loss of moisture.

**xerophytic:** adapted to dry or arid habitats.

**zoophilous:** adapted for pollination by animals.

**zygomorphic:** with bilateral symmetry, i.e. either side of an imaginary line being a mirror image of the other (compare with actinomorphic).

## 8. References

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