

# **BOTANY DEFINITIONS**

## **actinomorphic**

Refers to flowers that can be divided into symmetrical halves along any diameter. See also: zygomorphic.

## **alternate**

Describes leaves that are not opposite to each other on the axis, but arranged singly at different heights.

## **ament**

A catkin, or scaly spike.

## **anatropous**

An ovule that is inverted and straight, with the micropyle next to the hilum and the radicle consequently inferior.

## **androecium**

Refers collectively to the stamens of one particular flower.

## **annular**

In the form of a ring.

## **anther**

The polliniferous part of a stamen.

## **apical (adj. apically)**

1. Borne at the tip of an organ, farthest from the point of attachment, e.g., a bud which terminates a stem.
2. Describes the cells composing the apex of the leaf. They are often broader and shorter than the cells of the middle of the leaf.

## **aril**

A fleshy appendage growing at or about the hilum of a seed.

## **axil**

The angle formed by a leaf or branch with the stem.

## **axile**

Belonging to, or found in, the axil.

## **axillary**

Situated in an axil.

## **bisexual**

A flower having both stamens and pistils. See also: synoicous.

## **bract**

A modified leaf subtending a flower or belonging to an inflorescence, or sometimes cauline.

## **bractlet (syn. bracteole)**

A secondary bract, as one upon the pedicel of a flower.

## **bud**

A growing point enclosed by closely overlaid rudimentary leaves. Besides foliage, the bud may also contain the rudimentary flower.

## **calyx**

The outer part (perianth) of the flower, usually green and formed of several divisions called sepals, that protects the bud.

## **campanulate**

Bell-shaped or cup-shaped with a broad base.

## **capsule**

A dry dehiscent fruit composed of more than one carpel that splits partly open at maturity.

## **carpel**

A simple pistil or one member of a compound pistil.

## **catkin**

A compact and often drooping cluster of reduced, stalkless, and usually unisexual flowers; an ament.

## **caudicle**

The thread-like or strap-shaped stalk of a pollinium.

## **cauline**

Of, having, or growing on a stem. Used especially of leaves arising from the upper part of a stem.

## **comose**

Furnished with or resembling a tuft of hairs.

## **compound**

Composed of two or more similar parts united into one whole.

**cone**

A conical fruit consisting of seed-bearing, overlapping scales surrounding a central axis.

**connate**

United with others of the same kind.

**connivent**

Coming into contact; converging, but not fused.

**conspicuous**

Easily visible without a lens, often extended to mean showy or prominent.

**convergent**

Coming in contact, but not fused.

**corolla**

The petals of a flower; the inner perianth of distinct or connate petals.

**corolla lobe**

The portion of the corolla which is apical, or remains free, in a fused corolla.

**cupular**

shaped like (or supporting) a cupule.

**cupule**

A cup-shaped anatomical structure, like that holding an acorn, which is made of hardened, joined bracts.

**cyme**

A usually broad and flattish determinate inflorescence, i.e., with its central or terminal flowers blooming earliest.

**cymose**

Bearing a cyme; composed of cymes; pertaining to or resembling a cyme.

**dehiscence (adj. dehiscent)**

1. Breaking open at maturity to discharge seeds or spores.
2. Opening regularly to let seeds or spores escape by valves, slits, etc., as a capsule or anther. See also: indehiscent.

**determinate**

Terminating in a flower and blooming in a sequence beginning with the uppermost or central flower; cymose.

**dichasium**

A cyme with opposite branching below the terminating flower.

**dicotyledon**

A plant that produces a newly emerged seedling with two seed leaves before it produces mature leaves.

**didynamous**

Refers to stamens found in two pairs of unequal length.

**dioecious (alt. diecious)**

Unisexual, with male and female flowers on separate plants.

**domatium (pl. domatia)**

A small structure located in the axils of the primary veins on the lower surface of leaves in some woody dicotyledons, usually consisting of depressions and being partly enclosed by leaf tissue or hairs.

**drupe**

A fleshy or pulpy fruit with the inner portion of the pericarp (1-celled and 1-seeded, or sometimes several-celled) hard or stony.

A fruit in which an outer fleshy part (exocarp, or skin; and mesocarp, or flesh) surrounds a shell (the *pit* or *stone*) of hardened endocarp with a seed inside. These fruits develop from a single carpel, and mostly from flowers with superior ovaries. The definitive characteristic of a drupe is that the hard, lignified *stone* (or pit) is derived from the ovary wall of the flower.

**endosperm**

The nutritive tissue in a seed of a flowering plant that surrounds the embryo.

**epigynous**

Growing on the summit of the ovary, or apparently so.

**exstipulate**

Having no stipules.

**fruit**

The mature ovary of a seed plant.

**gamopetalous**

Having or characterizing a corolla with partially or wholly fused petals.

**gamosepalous**

Having the sepals united.

**gynoecium**

The pistil or pistils considered as a group.

**helicoid**

Having the shape of a flattened coil, often describing a cyme.

**hilum**

The scar or point of attachment of the seed.

**hypogynous**

Situated on the receptacle beneath the ovary and free from it and from the calyx; having the petals and stamens so situated.

**indehiscent**

Not opening by valves, etc.; remaining persistently closed.

**inflorescence**

The flowering part of a plant, and especially the mode of its arrangement.

**invaginated**

Inside a sheath.

**lactifer (alt. lacticifer)**

A latex duct which may or may not produce the milky sap.

**loculicidal**

Longitudinally dehiscent between the partitions of the locule, as in Liliaceae. See also: septicidal.

**locule (alt. loculus, pl. loculi)**

Compartment or cavity of an ovary, anther, or fruit.

**-merous**

A suffix preceded by an Arabic number or numeric prefix such as tri-, indicating how many of each part a flower possesses; 5-merous would be a flower with 5 sepals, 5 petals, etc., while trimerous would have three of each part.

**median**

Refers to the central crosswise area of a leaf, as 'median width' would be the broadest width at midpoint.

**micropyle (adj. micropylar)**

1. A minute opening on the ovule through which the pollen tube usually enters. 2. The point upon the seed at which was the orifice of the ovule.

**monoecious (alt. monoicous)**

Having stamens and pistils in separate flowers on the same plant.

**nectary**

Any place or organ where nectar is secreted.

**ovary**

The part of the pistil that contains the ovules.

**ovule**

The body which, after fertilization, becomes the seed.

**palmate (adj. palmately)**

Describes a leaf that is radially lobed or divided.

**palmately compound**

Having veins or leaflets arranged like the fingers on a hand.

**panicled (alt. paniculate)**

Borne in a panicle; resembling a panicle.

**pedicel**

A tiny stalk; the support of a single flower.

**perianth**

The floral envelope, consisting of the calyx and corolla (when present), whatever their form.

**petiole (syn. leafstalk)**

The stalk of a leaf that attaches to the stem.

**petiolate**

Having a petiole.

**pinnate**

Consisting of several leaflets arranged on each side of a common petiole or rachis on a compound leaf or frond. 2. The feather vein pattern of simple leaves.

**pinnately compound**

With leaflets arranged in two rows along an axis.

**pistil**

The female or ovule-bearing organ of a flower. A complete pistil consists of three parts: ovary, style (when present), and stigma.

**polliniferous**

Bearing pollen.

**pollinium (pl. pollinia)**

A mass of waxy pollen or of coherent pollen grains, as found in Asclepias and Orchidaceae.

**raceme**

A simple inflorescence of pediceled flowers upon a common more or less elongated axis.

**radicle**

The portion of the embryo below the cotyledons that will form the roots, more properly called the caudicle.

**receptacle**

The more or less expanded or produced portion of an axis which bears the organs of a flower (the torus) or the collected flowers of a head, and in roses, enfolds the developing ovaries to form a hip.

**sepal**

A division of a calyx; one of the outermost circles of modified leaves surrounding the reproductive organs.

**septicidal**

Describes a capsule that is dehiscing through the partitions and between the cells.

**simple**

Of one piece; not compound.

**simple leaf**

A leaf with an undivided blade.

**spike**

An elongated, stemlike prominence upon which multiple flowers are borne.

**stamen**

The male reproductive, pollen-bearing organ of flowering plants, consisting of the filament and the anther.

**staminode (syn. staminodium, syn. staminoide)**

A sterile stamen, or any structure without anther corresponding to a stamen.

**stipule**

An appendage at the base of a petiole, often appearing in pairs, one on each side, as found on roses.

**stylate**

Having a style.

**style**

The usually attenuated portion of the pistil connecting the stigma and ovary.

**superior ovary**

With the flower parts growing from below the ovary.

**sympetalous**

Gamopetalous; with petals joined at the margins or at the base, often forming a tube or funnel.

**synconium**

A very particular inflorescence, typical of all fig trees. It consists of a flat and wide floral receptacle with tens to hundreds of tiny, sessile flowers. This receptacle closes itself in a fruit-like structure, with an orifice on the top. Inside lay the flowers, and, after fertilization, the fruits.

All figs are synconia.

**synoicous (alt. synaecious)**

Having the male and the female organs mixed together in the same cluster.

**synsepalous**

Gamosepalous; with sepals joined at their margins.

**terminal**

Apical.

**torus**

The receptacle of a flower.

**unisexual**

A flower of one sex only, either pistillate (female) or staminate (male).

**valve**

One of the pieces into which a dehiscing capsule splits.

**zygomorphic**

Capable of division by only one plane of symmetry.