

GLOSSARY OF TERMS

- aborted.** With development terminated before becoming functional
- abscising.** Becoming detached from the plant by means of a clean separation (abscission); caduceus = early abscission seemingly prematurely, i.e., before maturation of the larger structure
- acaulous.** Lacking an obvious stem on the vegetative part of the aboveground plant, i.e., essentially stemless. Acauly is characteristic of rosette plants (before flowering begins), wherein leaves are initially crowded at ground level because the stem does not form conspicuous internodes. Syn. acaulescent. Some authors only treat a plant as acaulous if the inflorescence produced near the ground lacks bracts along the peduncle (scapose), and bracts produced along the peduncle are considered instead to be cauline leaves grading into bracts.
- achene.** General name for a one-chambered, one-seeded, indehiscent dry fruit with a firm to hard fruit wall. In the narrowest sense, an achene must be derived from a superior ovary with one carpel in which the fruit wall and seed coat are not fused, but many authors now include caryopsis (Poaceae), a one-chambered dry fruit in which the fruit wall and seed coat are tightly fused. Many authors now recognize cypsela as a special indehiscent dry fruit for Asteraceae, which has a one-chambered, one-seeded, inferior ovary of two units (carpels), in which the fruit wall and seed coat are not fused and where perianth (pappus) is attached at the top of the fruit.
- achlorophyllous.** Completely lacking green pigmentation, i.e., having no chlorophyll
- acorn.** In oaks (*Quercus*), a fruit, more properly termed a glans, with a one-seeded, tough-shelled nut subtended by a caplike involucre having small, shinglelike bracts
- acuminate.** Tapered to a long tip with somewhat concave sides, generally less than 30°. A tip with a longer taper = attenuate.
- acute.** Sharply angled, less than 90° and greater than 30° and with more or less straight sides
- adventitious roots.** Roots that originate de novo from stem or leaf tissue, not as a branch from another root
- aggregate fruit.** A fruit comprised of two or more pistils from a single flower, remaining together either by tissue of the receptacle or floral tube. Syn. ± compound fruit
- alternate.** Having only one structure present along an axis at a given point (node), e.g., a leaf or bract single and attached at different levels along an axis; having successive branches of an inflorescence, or lobes or leaflets on a leaf appearing staggered, not paired and symmetric
- ament.** An elongate, unisexual inflorescence with diminutive perianths and having a design for wind pollination. Syn. catkin
- androdioecious.** Some plants producing bisexual flowers and other plants producing staminate flowers
- andromonoecious.** All plants producing both bisexual flowers and staminate flowers
- anisophyllous.** Producing leaves of two different sizes or shapes at each node
- annual.** An individual plant (sporophyte) that germinates and completes its life in less than one growing season, dying after it forms seeds from flowers (angiosperms) or embryos (seedless vascular plants)
- anther.** The terminal portion of a stamen containing pollen
- anther sac.** A pouch containing pollen; usually two sacs per anther
- anthesis.** When a flower initially opens for pollination, either to release pollen or when the stigma is receptive or both
- anthocarp.** An achenelike, one-seeded fruit enclosed within a persistent part of the perianth; example, species of *Abronia* (Nyctaginaceae). Syn. diclesium
- antrorse.** Pointing forward and upwards towards the tip, as barbs on a bristle. Ant. retrorse
- appendaged.** Having a subordinate part arising from the structure
- appressed.** More or less flattened against an axis or plane, e.g., hairs flattened against a leaf or stem or a pedicel or elongate fruit pressing against and parallel with an inflorescence axis
- aquatic.** Growing in water, with its roots submersed during most or all of the growing season
- arborescent.** Resembling a tree, becoming treelike
- arching.** Curving outward and then generally downward but also upward or in any direction
- aril.** Fleshy or thick outgrowth of the funiculus covering the attachment portion of a seed, hence partially or completely hiding the seed coat and providing a reward for animals to disperse the seed
- arillate.** Describing any seed with a fleshy or thick outgrowth or covering, of which there are several different types of aril-like outgrowths based on origin (funiculus, hilum, or raphe)
- aromatic.** Having a stimulating, more or less pleasant odor; used mostly to identify compounds with carbon rings, e.g., culinary and medicinal odors, such as volatile oils
- ascending.** Curving or inclined upward generally greater than 45° forty-five degrees but somewhat less than perpendicular to a given plane or axis, intermediate between suberect and spreading
- asymmetric.** Of leaves or leaflike organs when folded along the midline, the two halves are noticeably unequal
- auricle.** A rounded or earlike lobe at the base of a leaf blade or planar structure, typically in a pair, e.g., in grasses (Poaceae) at the junction of sheath and blade or on clasping cauline leaves (Brassicaceae)

awl-shaped. Narrowly triangular, straight, and gradually tapered to a narrow point, like a leather awl; used to describe either a flat or three-dimensional structure

awn. A slender, stiff or hard, bristlelike or needlelike outgrowth terminal or subterminal of a midrib, often with either a perceived protective or dispersal function; found on leaflike structures such as lemmas (Poaceae), bracts (Cyperaceae), involucre (Polygonaceae), or sepals (Geraniaceae); awned = having awns. Leaves or bracts with terminal awns may also be described as aristate.

axil. The angle between an axis and its lateral organ, e.g., a leaf or bract

axillary. Arising in the angle between a stem and its lateral organ, e.g., an axillary bud

banded. Having one or more ringlike color patterns transverse to the main axis

banner. Of certain legume flowers (Fabaceae), the large, upper petal

barbed. Having short, stiff projections along the axis, mostly backward-pointing (retorse) but sometimes upward-pointing (antrorse). Syn. barbellate

bark. Protective, often corky layers of tissues cover an aging or old axis (stem or root) of a seed plant; usually = periderm

basifixed. Of an anther, having the filament at the base of connective

beaded. Of a surface, having conspicuously domed cells

beak. Of a developing or mature fruit (ovary), a straight or curved axis or point at the top, generally assumed to be mostly style

bearded. Internally on a corolla, having a dense field or tuft of long papillae or stiff hairs

berry. A fleshy fruit with a relatively thin skin (exocarp), soft or juicy pulp, and containing one to many seeds; generally indehiscent, but sometimes bursting or splitting if the fruit takes up excessive water from the plant

biennial. An individual plant (sporophyte) that germinates and completes its life within calendar two years, i.e., two growing seasons separated by winter, forming leaves both years and dying after it produces flowers and seeds only in year two. Biennials are treated as herbs, i.e., nonwoody, although the root and year two aboveground stem may form substantial amounts of woody tissue.

bilateral. A form of symmetry whereby only if folded or division results in two halves that are mirror images; in other treatments = zygomorphic

bisexual. Of a flower, having both fertile stamens (male) and one or more fertile pistils (female) within the same flower. Syn. hermaphroditic or perfect

bladderlike. Of a surface, having water-filled, balloonlike cells or hairs. Syn. vesicular

blade. Of a leaf or leaflike organ, the \pm thin and planar, expanded green portion, functioning as a photosynthetic structure. Some authors also use blade for the expanded portion of a petal or corolla (= limb), which is developmentally similar to a leaf.

blistered. Of a surface, having swollen cells or patches of cells resembling skin blisters.

blotched. Having irregular spots of color

bony. Very hard, bonelike

bract. A modified leaf of an inflorescence, typically sessile (occasionally petiolate); in this treatment, the structure subtending the peduncle or any lateral branch of an inflorescence

bracteate. Having either bracts subtending an inflorescence or bracts, bractlets, or bracteoles within the inflorescence

bracteole. A type of bract, in this treatment, the small structure at the top of a pedicel directly subtending the flower, or appearing to arise on the calyx and therefore resembling a sepal (e.g., Malvaceae). In certain families, e.g., Malvaceae, bracteoles are sometimes termed an epicalyx.

bractlet. A type of bract, in this treatment, the structure directly subtending a sessile flower or the pedicel of a flower, but here also used for any bract formed along the pedicel, although in this sense a bractlet may become a bract subtending a future branch. A palea of sunflowers (Asteraceae) here is considered to be a form of a bractlet.

branch. Leaf-bearing or flower-bearing shoot arising from an axillary bud on an older axis

bristle. A long, stiff (or aging stiff) hair or hairlike organ, usually with minute projections along the axis

bud. Initial, condensed stage of a shoot in a terminal or axillary position, containing a growing tip and the earliest organs, e.g., tiny leaves (leaf primordia) within a vegetative bud or immature flower organs within a flower bud

bud scale. Of a vegetative bud, the outermost (first-formed) leaflike structures thickened and often coated with features to limit desiccation or injury to the bud during dormancy

bulb. A modified vegetative shoot, consisting of a short stem bearing numerous, tightly arranged, often fleshy leaves, of which the outermost leaf may be thin and dry, e.g., onion (*Allium*); a storage organ, usually belowground, that also facilitates vegetative reproduction by forming new bulbs from axillary buds. On certain vascular plants, bulbs or diminutive bulblets are produced instead aboveground from axillary buds (*Lithophragma* or *Calochortus*).

burr. A fruit-containing structure covered with bristlelike or prickly projections that facilitate transport by clinging to an animal (clothing); example cocklebur (*Xanthium*)

callus. Of the grass family (Poaceae), the horny, usually pointed base of a spikelet or floret, just above where the unit separates

calyculus. Of the sunflower family (Asteraceae), a set of two or more bracts at the top of a peduncle subtending the involucre of the head; in other treatments often alternatively interpreted as outer phyllaries

calyx. Of a flower, the outermost perianth whorl, consisting either of individual sepals or formed as a tube with lobes; most often green, but in some families differently colored or reduced to highly modified (e.g., pappus of Asteraceae). In most cases, the immature calyx is the cover of the flower bud.

canescent. Densely grayish pubescent, having short, soft, straight hairs that are erect to appressed to the surface

capillary. Hairlike

capitate. Headlike, i.e., having an expanded top and narrower stalk

capsule. The general term for a dry fruit that splits open to expose or release seeds within two or more units (carpels) of the ovary, i.e., of a compound ovary

caruncle. On certain seeds, an outgrowth near the hilum next to the micropyle, for animal dispersal

caryopsis. Of the fruit of the grass family (Poaceae) and its closest relatives, a one-seeded, dry indehiscent fruit in which the fruit wall and seed coat are tightly fused; here treated as a type of achene

catkin. A unisexual inflorescence of certain wind-pollinated woody angiosperms, spikelike or racemelike and generally consisting of a flexible axis with many flowers, having diminutive perianth and bracts and conspicuous stigmatic surfaces (pistillate) or producing abundant, dry pollen (staminate). Syn. ament

caudex. Condensed, perennial stem of a perennial herb or shrub from which annual branches are produced from axillary buds; generally belowground or at ground level in perennial herbs and aboveground in shrubs, and not clearly distinguishable from the taproot

cauline. Referring to leaves present on aboveground, elongated stems above leaves of a basal rosette

cespitose. Growing with many branches highly condensed at ground level, thereby producing a dense or tufted growth form, either having a common root system or each having its own system of adventitious roots; used to describe clumped to cushionlike plants

chamber. An open area within an ovary or fruit containing future seeds (ovules in the ovary) or mature and aborted seeds (in the fruit). Syn. locule

channeled. Grooved or furrowed on the upper side of an axis, e.g., a petiole or rachis

chasmogamous. A flower form in which the perianth opens and exposes anthers or stigmas for pollination

ciliate. Having a fringe of short to long straight hairs along the margin of a flattened structure (e.g., blade or petal) and in the plane of that structure; in this treatment, used only in cases where the flattened organ has no other nonglandular hairs, i.e., the two surfaces are otherwise glabrous

circumscissile. Opening of a capsule by splitting transversely around its entire circumference, forming a cap or lid that falls off; in other treatments, capsules of this type = pyxis or pyxidium

cladode. A green, flattened stem that functions as a photosynthetic organ and lacks obvious leaves

clasping. Of a leaf or bract, having basal portion partially or wholly surrounding the supporting axis or structure

claw. The slender, generally erect lower portion of a perianth organ, especially petals and then often erect (e.g., Brassicaceae)

clawed. Of especially petals, having a slender, generally erect lower portion and a much wider, generally spreading upper portion (limb)

cleistogamous. A flower form in which the perianth never opens for cross pollination

clonal. Producing new individuals by asexual reproduction, generally via multiplication, subdivision of belowground shoots, or formation of adventitious roots from buried or creeping horizontal stems

club-shaped. Resembling a stick expanding to a broad, blunt tip. Syn. clavate

cobwebby. Having long, soft, tangled fine hairs that en masse resembles spider cobwebs

coiled. Having a springlike form by initially wrapping or being wrapped around an axis or itself, such as the stem of a vine, the sensitive tip of a tendril, or a young, unfurled fern leaf (fiddlehead)

collar. The junction between the blade and sheath of a leaf, especially noticeable in monocotyledons above the ligule, hence treated as basal tissue of the blade

compound. A structure divided one or more times into distinct, smaller units, e.g., a compound leaf with leaflets or a compound umbel of umbellets

compressed. Somewhat flattened parallel to the long axis, either front-to-back or side-to-side, therefore producing a bilateral, rather than a radial, three-dimensional form

concave. Hollowed with an inwardly rounded surface like the inside of a bowl. Ant. convex

connective. Tissue of a stamen between the pollen-bearing anther sacs

convex. With an outwardly rounded surface. Ant. concave

cordate. Of a leaf or leaflike structure, having a base resembling the lobes of a heart. Many authors also describe heart-shaped structures as being cordate (lobes at base) or obcordate (lobes at tip).

corn. A type of modified vegetative shoot, superficially resembling a bulb and formed belowground, consisting of a solid stem and commonly covered with leaf remnants and fibers.

corolla. Of a flower, the inner perianth whorl, situated between the calyx and the stamens, consisting either of individual petals or formed as a tube with lobes. In most cases the corolla is the showy part of the flower designed to attract and accommodate access to suitable pollinators.

corona. Of certain flowers, a crownlike projection of the corolla (e.g., Apocynaceae) or stamens

corrugated. Having a series of lengthwise folds or wrinkles

cotyledon. An original leaf of the embryo of a seed plant; on a young plant cotyledons (mostly one or two) sometimes observed above the root or hypocotyl and defining the base of the initial shoot. Syn. seed leaf

crenate. Having rounded teeth on margin

crinkled. Resembling crepe paper

crisped. Densely and minutely wavy on the margin

crystalline. Glimmering or reflective like a crystal

culm. Of the grass family (Poaceae) and other monocotyledons, the commonly used name for the stem

cyathium. A specialized inflorescence of Euphorbiaceae, having a cup-shaped involucre containing staminate flowers (each reduced to one stamen) and a stalked pistillate flower

cyme. A type of inflorescence with the terminal flower the oldest, and subsequent flowers formed in a sequence from the axillary bud or buds at the base of each older flower

cypsela. A one-chambered, one-seeded, indehiscent dry fruit of the sunflower family (Asteraceae) and several related families with a firm to hard fruit wall, and derived from an inferior ovary of two carpels, in which the fruit wall and seed coat are not fused and where perianth (pappus) is attached at the top of the fruit; often treated as a type of achene

deciduous. Of a plant, lacking leaves during at least one season of the year, i.e., being seasonally leafless; of a structure, falling off after its major function has been completed

decumbent. More or less parallel with basal portion of shoots or lying on the ground but with tips turning

decurrent. Having tissue descending from an organ along an axis, such as blade tissue descending as leafy wings along the stem in some thistles (Asteraceae)

decussate. With successive pairs of organs radially oriented at right angles to one another

deflexed. Bent or turned backward or downward from point of reference. Syn. reflexed

dehiscent. Splitting open or forming one or more openings; used to describe fruits that open at maturity to release seeds or anthers to release pollen

deltate. More or less an equilateral triangle in outline

deltoid. Tetrahedral-shaped, i.e., triangular on lateral faces

dentate. Having sharp, symmetric teeth on the margin

depressed. Flattened perpendicular to the longitudinal axis or top to bottom

descending. Ascending at base but curving or inclined backward or downward at tip

diadelphous. Having stamens united into two sets by fusion of filaments, e.g., a sheet of nine filaments and the other set with one free stamen (Fabaceae)

dichasium. A type of cyme in which a pair of branches arises at the base of the terminal (older) flower

dichotomous. Forking into two equal branches

diffuse. Loosely spreading; scattered or spaced

dimorphic. Having two different forms

dioecious. Having unisexual reproductive structures on an individual plant exclusively either male or female; for successful sexual reproduction, the two forms must be present within a population

disc flower. In the sunflower family (Asteraceae), a radially symmetric type of flower on the inflorescence (head) and having a regularly lobed, tubular corolla. Disc flowers are either the only type of flower on the head or occupy the central zone surrounded by ray flowers or tubular pistillate flowers; they may be subtended by a bracteole (palea) and most often are bisexual but may be either unisexual or sterile. Syn. disc floret, disk flower, or disk floret

disciform. Of the sunflower family (Asteraceae), all flowers of the inflorescence (head) are radially symmetric, with the peripheral ones pistillate and the central ones being bisexual disc flowers

discoïd. 1 Of the sunflower family (Asteraceae), all flowers of the inflorescence (head) are radially symmetric, i.e., they are all disc flowers of just one form; 2 like a flat circular object

distichous. With successive leaves, organs, or branches radially arranged at 180° to one another, so that the structures are arranged in two vertical rows

dithecal. Of an anther, having two pollen-bearing sacs, the condition for most species of angiosperms

divergent. Spreading at different angles from a ± common point of origin, becoming wider apart

dorsifixed. Of an anther, having the filament attached somewhat above the base on the side of the connective

drupe. A fleshy fruit having one or sometimes more stones, i.e., central structures with very hard inner fruit wall tissue (endocarp) encasing the seed-bearing chamber or chambers; example, cherry (*Prunus*)

dull. Not shiny or reflective of light

ellipsoid. Like an ellipse in three dimensions. See elliptic

elliptic. Like an ellipse in outline, with the length greater than the width, the widest at the midpoint, and the margin symmetrically curved to the tip and base

emergent. Of an aquatic plant, projecting above the surface of the water

endocarp. Of a fleshy fruit, a differentiated inner wall of the fruit

endosperm. Of a seed of most angiosperms, food-storage tissue formed through the process of double fertilization, which is used by the embryo during development

entire. Smooth on the margin lacking projections or indentations; in this treatment, strictly applied

epidermis. The outermost cell layer of any young plant organ

epiphyte. A plant growing upon another plant or support, lacking roots in soil and not drawing nutrients from tissues of the support

erect. Upright and essentially perpendicular to a given plane or axis

evergreen. Having healthy photosynthetic leaves every day of the year

exserted. Projecting beyond or exceeding a surrounding structure. Ant. included

farinose. Covered with meal-like powder

filament. In a flower, the stalk of a stamen, which bears and positions the anther

fibrous-rooted. Having a system of adventitious roots

fleshy. Of a tissue or plant organ, juicy, somewhat thick, and fairly firm, although it may become softer, squeezable, and watery in time (e.g., fruit); having a relatively thick tissue of living, water-storing or carbohydrate-storing cells without hard cell walls

flexible. Bendable to a large degree without snapping or breaking

flexuous. Wavelike, usually in an unpredictable way

floret. In the grass family (Poaceae), a unit consisting of a highly reduced flower typically enclosed by a lemma (bractlet) and palea (bracteole). Florets may be fertile or sterile and bisexual or unisexual. In the sunflower family (Asteraceae), many authors treat each flower of a head as a floret

follicle. A type of dry fruit, with one chamber (one carpel) splitting open along the upper side (dorsal) and having one to many seeds

frond. Specific term for the leaf of a fern

fruit. General term for any seed-containing structure of an angiosperm, either being a mature ovary or the ovary or ovaries with fused or adherent bractlets, perianth, or receptacle

funiculus. Stalk attaching an ovule (developing seed) to a placenta within an ovary

fusiform. Ellipselike in three dimensions but relatively narrow and with an acute to acuminate tip and base

geophytic. Of an herbaceous perennial, surviving belowground during the dry or cold seasons, typically by means of a modified storage organ, e.g., bulb, corm, rhizome, or tuber

glabrate. Essentially hairless, having only widely scattered and generally inconspicuous hairs

glabrescent. Appearing to lack hairs at maturity after having shed them during development or aging of the organ

glabrous. Totally lacking hairs at any stage in development

glandular hair. A hair producing a secondary compound, e.g., a terpenoid or sulfur-containing chemical; glandular hairs typically manufacturing compounds in a head, or in certain cases a swollen base or exuded from tip

glans. A one-seeded indehiscent fruit having the base of the fruit subtended and partially enclosed by an involucre composed of axis and bract tissues; for our region illustrated by the acorn with the cup-shaped “cap” of oaks (*Quercus*)

glaucous. Having a surface coating of loose wax; where surface wax thick, organ appearing whitish, grayish, or bluish and the surface coating loose enough to be rubbed off

glome, glomerule. A headlike cyme, characteristic of Chenopodiaceae and Amaranthaceae

glossy. Shiny, polished, and reflective of light

glume. In the grass family (Poaceae), bract at the base of a spikelet; typically two in close alternate distichous arrangement, the lower glume (= first or primary glume) and the upper glume (= second or secondary glume). Both glumes are sterile (lacking a flower), and the lower glume, formed on the peduncle (“pedicel”), defines the base of the grass spikelet.

glutinous. Having a sticky coating on the surface; here used more specifically for a sugary coating

graded. Changing very gradually from one structure, form, or color to the next

groove. A channel-like depression generally lengthwise of a structure

gynodioecious. Plants within a population produce either bisexual flowers or pistillate flowers

gynomonoecious. All plants producing both bisexual flowers and pistillate flowers; examples, certain species of *Rumex* or many species of the sunflower family (Asteraceae) having pistillate ray flowers on a head

gynophore. A stalk formed between the base of an ovary and the receptacle, thereby elevating the pistil; in other treatments, the stalk in fruit termed carpophore

halophytic. Growing in salty water or soils, typically with high chloride concentration

hastate. Being somewhat arrow-shaped (halberd-shaped), having a pair of \pm triangular basal lobes divergent from the blade axis

haustoria. An anchoring and absorptive structure, a highly modified root, of a parasitic plant obtaining water and nutrition from within host tissue

head. A type of inflorescence characteristic, especially of the sunflower family (Asteraceae), in which the sessile flowers are tightly arranged in a dense, terminal cluster, with the oldest flowers on the outside and the youngest flower at the center. Syn. capitulum

helically alternate. Leaves, bracts, or flower parts arranged in a three-dimensional spiral around a real or imaginary axis along a curve, e.g., defined by the Fibonacci series; referred to by some authors as spirally arranged

hemi-inferior. Of an ovary, one of several conditions where the lower portion of the ovary is covered with hypanthium tissue (bearing perianth and stamens) while the upper portion of the ovary is exposed

hemiparasite. A plant attached to another plant (host) and which obtains water and minerals and sometimes nutrition from the host but also is green and photosynthetic; partially parasitic

herbaceous. Lacking significant wood, so that typical plant is comparatively soft and lacking a hard stem axis. Many herbaceous plants (dicotyledons) have some cambial secondary growth (= formation of true wood and inner bark); herbaceous monocotyledons lack cambial secondary growth but may have tough leaves and hard, fibrous stems (e.g., palms and certain types of yuccas).

heterostylous. Within a population, of species with bisexual flowers, a highly specialized outcrossing breeding condition involving two forms (distylous) or three forms (tristylous) of the pistil and the stamens; in a distylous species one form has a long style and short filaments (pin flower), other form has a short style and long filaments (thrum flower), only pollen from the other form results in fertilization

hilum. A scar on a seed where the seed was attached to a funiculus

hirsute. Having long, straight, more or less erect hairs that are stiff but not bristly

hispid. Having long, upright, straight, stiff to bristly hairs, often rough to the touch

homostylous. Within a population, the typical condition of species with bisexual flowers, having only one form of the pistil and the stamens

hooded. Having a pocket (hood) or conspicuously cupped above midpoint, within which other structures are concealed or hidden

hypanthium. Of certain flowers, a cup-shaped to tubular structure on which sepals, petals, and stamens are attached

included. Not protruding beyond the surrounding structure. Ant. exerted

inconspicuous. Difficult to observe except with careful examination and good optics

incurved. Having the upper portion curving toward the center

indehiscent. Never opening

indusium. On fern leaves, a thin flap or cover concealing sporangia of a sorus

inferior. Of an ovary, positioned beneath the other parts of the flower, although generally encased by tissues of calyx origin (Asteraceae), hypanthium (Onagraceae, Rosaceae), or the receptacle (Aizoaceae, Cactaceae)

inflorescence. A group of two or more flowers on a common stalk (including bracts). Opposite flowers solitary

inrolled. Having margins of a planar structure rolled inward, either toward the upper side (involute) or toward the lower side (revolute)

internode. The portion of a stem or inflorescence axis between two adjacent nodes

interrupted. Having gaps between tighter clusters of flowers or fruits

involucre. Of the carrot family (Apiaceae) having compound umbels, a set of bractlets (secondary involucre), blade-like or perianth-like, fused or free, subtending the pedicels of the secondary umbel

involucre. A set of bracts, blade-like or perianth-like, fused or free, spiny or not, subtending an inflorescence or part of an inflorescence and thereby defining a dense cluster of flowers (sometimes reduced to being one-flowered) or radiating axes (rays) of an inflorescence

involute. Having margins inrolled on the upper side of a blade or planar structure

jointed. Having one or more weak zones along a structure where parts easily break apart. Syn. articulated

keel. As on the bottom of a boat, a ridge along the midline where an elongate structure is sharply bent or folded; in many legume flowers (Fabaceae), a boat-like structure formed by partial fusion of the two lower petals, often resembling a canoe and within which the stamen and style are often concealed

keeled. Having a keel

labellum. In a flower of the orchid family (Orchidaceae), the largest of the three petals, which tends to be more complex and ornate than the other two. The labellum forms a landing platform for pollinators and appears to be the lowest petal, but actually is the uppermost petal of a flower that is twisted 180 degrees.

lamina. Syn. blade of a leaf, petal, or corolla where referring to an expanded portion or limb

lanceolate. Lance-shaped in outline, being the widest below the midpoint and tapered to the tip; in this treatment with the length two and a half to six times longer than the width

lanceoid. Lance-shaped in three dimensions, being the widest below the midpoint and tapered to the tip; in this treatment with the length two and a half to six times longer than the width

latex. A colloidal mixture, including hydrocarbons, produced within microscopic tubes (laticifers), opaque to transparent, commonly white or colorless but sometimes yellow, orange, pink, brownish, or red

leaflet. One of the leaf-like divisions of a compound leaf

legume. A type of fruit of the legume family (Fabaceae), one-chambered and dry at maturity, dehiscent or indehiscent, with one or more seeds attached to the upper side. Syn. pod

lemma. In the grass family (Poaceae), specialized term for the lower bract typically enclosing or partially enclosing the upper bract (palea), the two which subtend and enclose the flower and flower in a floret; the lemma forms on the side not facing the spikelet axis (rachilla)

lens-shaped. Roundish in face view and biconvex in side view, thin at margin to thickest at center. Syn. lenticular

lenticel. A structure of periderm on young branches and stems consisting of spongy tissue, functional in bark gas exchange

lepidote. Clothed with tiny scales

liana. A perennial climber with persistent woody stems

ligulate flower. In the sunflower family (Asteraceae), a type of flower with a bilateral corolla in which the limb (ligule) is strap-shaped. Syn. ligulate floret

ligule. In the grass family (Poaceae) and other monocotyledons, a thin projection at the junction of the sheath and blade

limb. Expanded upper portion of a petal or corolla above a narrow base, claw, or tube; used here more or less synonymous with blade, lamina, or ligule of a corolla

linear. Long and narrow, having more or less parallel sides, here defined as at least ten times longer than wide

lip. Upper or lower part of a two-parted corolla or calyx

loculicidal. Dehiscence of a capsule splitting lengthwise along the midline of each chamber. Opposite: septicidal

lodicule. In the grass family (Poaceae), highly specialized and reduced perianth segment

long shoot-short shoot organization. A architectural design where initial shoot growth has distinct internodes and subsequent growth of lateral shoots at nodes lack obvious internodes so that leaves appear tufted in clusters (fascicles)

margin. Strictly, an edge of a planar structure, but sometimes referring to a narrow strip of tissue along the edge and differentiated from the rest of the blade or limb

membranous. Thin, moist, pliable, and translucent to transparent tissue; when dry becoming scarios or papery

mericarp. Seed-bearing subunit of a schizocarp

mesocarp. Of a fleshy fruit, middle wall tissue of the fruit

micropyle. A chamber at the tip of an ovule involved in the fertilization process and often evident on the seed

microsporangium. In nonflowering plants, a sac containing microspores, products of meiosis

midrib. The principal and medial vein of a leaf or leaflet blade, i.e., an enlarged midvein, including structural tissues

monadelphous. Having all filaments fused into a column, as in the mallow family (Malvaceae) or certain legumes (Fabaceae)

monoecious. Having unisexual reproductive structures of both sexes present on the same individual, e.g., both staminate and pistillate flowers or microsporophyll and megasporophyllous cones

monomorphic. Having only one form

mottled. Having spots or blotches of different color than the general surface color

mucro. A short, abrupt tip on an organ, such as a leaf blade or a cone scale

native. Indigenous, i.e., occurring in an area without being brought there by humans

naturalized. Not native to the designated range but persisting and reproducing under natural conditions of the region. Syn. introduced

nectary. A tissue or structure secreting a sugary solution (nectar), generally as a reward to animals providing a service to the plant, such as pollination or defense

neuter. Of a flower, lacking both stamens and pistils, sexless

nitrogen-fixing. Of bacterial microorganisms (rhizobium) within host tissue, having the ability of converting atmospheric dinitrogen gas (N₂) into ammonia (NH₃)

nodding. Oriented downward but not vertically, drooping from an ascending or horizontal axis

node. Position on an axis where a single lateral primordium (e.g., leaf or bract) arises or a set of primordia (e.g., leaves, petals, or stamens) simultaneously arises

nodulated. Of roots, having tumorlike growths (nodules) housing nitrogen-fixing bacteria

notched. With a nick or V-shaped cut generally at the tip of a structure

nutlet. Of a schizocarp, a seed-bearing segment (mericarp) consisting of a unit (carpel) that has a hard covering and an attachment scar (not a hilum); the fruit characteristic of Lamiaceae, Boraginaceae, and most Verbenaceae, in which there are two two-lobed carpels, hence potentially forming a set of four nutlets. Because nutlet has been a badly misused term, some authors prefer microbasarium.

obconic. Inverted cone-shaped in three dimensions, with a circular top and ± straight sides to form at the attachment point

oblanceolate. Inversely lanceolate, i.e., attached instead at the narrowest end

oblanceoloid. Inversely lanceoloid, i.e., attached instead at the narrowest end

oblique. Slanted and asymmetric

oblong. Being longer than wide and having more or less parallel sides in outline

obovate. Inversely ovate, i.e., attached instead at the narrowest end

obovoid. Inversely ovoid, i.e., attached instead at the narrowest end

obscure. Hardly evident

obtuse. Bluntly angled (> 90°) with straight sides

opposite. Having paired leaves or bracts at each node, members of each pair 180° apart

ovary. In a flower, the basal portion of a pistil, containing one or more ovules in one or more chambers (locules)

ovate. Egg-shaped in outline, being the widest below the midpoint; in this treatment with the length up to 2.5 times longer than the width

ovoid. Egg-shaped in three dimensions, being the widest below the midpoint; in this treatment with the length up to 2.5 longer than the width

ovule. Of seed plants, that structure that becomes the seed, containing an egg to be fertilized and formed on a stalk (funiculus)

palea. 1 In the grass family (Poaceae), the special term for the upper bract of two enclosing each flower, typically enclosed or invested by the lemma. 2 In the sunflower family (Asteraceae), a bractlet subtending a sessile disc flower.

palmate. Divided or dissected at or near the base and appearing more or less handlike with radiating fingers

panicle. A type of compound inflorescence having one or more orders of lateral branches; in the strictest sense, composed of lateral racemes and having the oldest branches and flowers at the base and the youngest flowers at the tip (indeterminate)

papilionaceous. In flowers of many legumes (Fabaceae), a specialized type of corolla having a broad upper (posterior or adaxial) petal (the banner), two narrower lateral petals (wings), and two \pm fused lower petals (keel), which early botanists imagined resembling a butterfly (French = *papilion*)

papillate. Having minute, conic protuberances of cells or like diminutive, conic hairs. Syn. papillose

pappus. Of the sunflower family (Asteraceae), generally regarded as a highly modified calyx formed at the top of the ovary and consisting of bristles or scales of various shapes and sizes

parasitic. Obtaining its nutrients and water from the tissues of another living organism (host) of a different species

pedicel. The stalk beneath a flower, which positions the flower and subsequent fruit

pedicellate. Having a pedicel beneath each flower

peduncle. The stalk beneath an inflorescence. Sometimes what looks like a pedicel is termed a peduncle when evolutionary reduction produced a one-flowered inflorescence.

pedunculate. Having a peduncle beneath an inflorescence

peltate. Of a roundish, platelike structure, having its stalk attached more or less centrally on its lower side or surface; used to describe leaves, glands, fern indusia, etc. that resemble an umbrella

pendent. Hanging vertically and freely on a stalk. Syn. pendulous

pepo. A type of fleshy fruit characteristic of the gourd family (Cucurbitaceae), derived from an inferior ovary and in its idealized form having a firm to hard cover (exocarp)

perennial. An individual plant or clonal set of plants (sporophytes) surviving for more than two years

perennial herb. A perennial that does not produce persistent, aboveground axes with true wood. Most perennial herbs in range die back to belowground shoots, whereas certain long-lived monocotyledons are termed herbs because they never produce wood (e.g., palms and *Yucca rupicola*).

perianth. The outer, nonfertile parts of the flower consisting of calyx (outer set) and corolla (inner set), less commonly, only calyx or corolla, or calyx and corolla not clearly distinguished (tepals or perianth segments)

pericarp. Fruit wall developed from an ovary wall; in cross-section sometimes having distinct regions, outer (exocarp), middle (mesocarp), and inner (endocarp)

periderm. Cover of an axis replacing the original surface, i.e. bark

perigynium. In *Carex* (Cyperaceae), specialized term for a loose, papery, flasklike cover (sheath) of the ovary and subsequent fruit

perisperm. A type of storage tissue within a seed, formed from maternal tissue

persistent. Remaining attached long after its major function has been completed; if withered leaves persist on the plant, some authors use the term marcescent

petal. In a flower, an individual, leaflike element of the corolla, falling separately (free)

petiolate. Having petioles on leaves

petiole. The stalk of a leaf, located between the blade and the stem and which positions the blade

petiolule. The stalk of a leaflet, located between the leaflet blade and the rachis

phyllary. In the sunflower family (Asteraceae), the special term for a bract on the involucre

phyllode. A modified leaf appearing to be the blade but is a flattened petiole

pilose. Having soft, long, more or less erect, straight to weakly wavy hairs that do not intertwine

pinnate. Divided or dissected along an axis and appearing featherlike, having divisions or lobes on both sides of an axis.

pistil. In a flower, a female organ consisting of the ovary containing one or more chambers (locules) with one or more ovules, a stigma or stigmatic region, and usually a stalk (style) that determines the height and position of the stigma

pistillate. Of a flower, having one or more fertile pistils (female) but no fertile stamens (male), hence a functionally unisexual, female flower

pith. In most dicotyledons and gymnosperms, the central tissue of a stem, often composed mostly of soft-walled cells

pitted. Having circular to polygonal, shallow to deep depressions in a surface

placenta. Within an ovary chamber, the ovule-bearing surface

plagiotropic. Having shoots with leaves oriented essentially in one plane, i.e., horizontally two-dimensional. Ant. orthotropic (three-dimensional)

pleated. Having accordionlike folds. Syn. plicate

plumose. Feather-shaped, i.e., a planar structure having long, fine, closely set parallel branches or long hairs arising pinnately from a slender central axis

pod. A type of dry fruit, but more specifically used for a one-chambered fruit of the legume family (Fabaceae)

pollen. Of seed plants, tiny, light-weight, male reproductive structures, each consisting of a male gametophyte formed within a meiospore wall; a structure evolved to deliver future sperm to an ovule

pollinium. A solid or coherent mass of pollen derived from an anther sac

polygamous. Having staminate, pistillate, and bisexual flowers on the same plant

pome. In the rose family (Rosaceae), a type of fleshy fruit in which a ripened ovary is covered by a thick hypanthium; example, apple or pear (*Pyrus*)

prickle. A conspicuous, hard or woody, sharp-tipped, spinelike structure forming on the surface of an organ or axis, such as on stem internode or fruit walls or along a leaf blade midvein or rachis. A prickle most commonly forms from a hair, especially a glandular hair, but can also be an outgrowth of surface tissues

procumbent. Prostrate, lying on the ground and sometimes rooting along the stem

prophyll. A type of leaf formed at the base of a new shoot, commonly scalelike but in some species it may be leaflike or spinelike; most distinctive in certain monocotyledons, especially in the grass family (Poaceae) where it is two-keeled

prostrate. Lying flat on the ground or substrate along its length

protandrous. Of a flower, having anthers discharge pollen before the stigma is receptive

protogynous. Of a flower, having the stigma receptive before anthers discharge pollen

puberulent. Having extremely short, soft, straight hairs

pubescent. Having short, soft, nonglandular hairs; in many treatment having hairs of any form

pulvinus. A swelling or gland at the base of an axis, especially a petiole, petiolule, or branch within an inflorescence, using hydrostatic pressure as a mechanism to adjust the orientation of the organ or axis

raceme. A type of unbranched inflorescence having a pedicel for each flower, with the oldest flower at the base and the youngest at the tip

rachilla. The axis bearing the flowers of the spikelet of grasses (Poaceae) or sedges (Cyperaceae)

rachis. Principal, stemlike axis of an inflorescence above the peduncle or of a compound leaf above the petiole

radiate head. In the sunflower family (Asteraceae), an inflorescence having ray flowers formed on the outer rim and central disc flowers

radiating. Spreading outward from a central point or axis, either in a horizontal direction, like spokes on a wheel, or more or less equally in a hemispheric or spheric projection

radicle. Root of a embryo (within a seed) becoming the first root during germination of a seedling

raphe. A ridge along one edge of a seed, part of the outer layers on certain seeds and formed where a funiculus became fused (evolutionarily) to the developing seed

ray flower. In the sunflower family (Asteraceae), a bilaterally symmetric type of flower formed on the outer rim of the inflorescence (head) and positioned to the outside of radially symmetric disc flowers, with the exposed portion of the corolla strap-shaped, spreading, and often very showy. In many genera, each ray flower is subtended by an inner phyllary (bractlet), and, with few exceptions, is either pistillate or sterile.

receptacle. 1 The tip of a pedicel, often somewhat expanded, on which the parts of the flower are produced. 2 In the sunflower family (Asteraceae), the expanded baselike axis of the inflorescence (head) on which the flowers and bractlets are produced.

recurved. Curving or arching backward or downward

reflexed. Bent backward or downward. Syn. deflexed

replum. In the mustard family (Brassicaceae), a partition between two chambers of the fruit; in the poppy family (Papaveraceae), a framelike structure (placenta) revealed when valves separate

resin. Aromatic, liquid hydrocarbons produced in microscopic tubes

rhizomatous. Bearing rhizomes

rhizome. A belowground shoot having nodes, buds, and modified, scalelike leaves (cataphylls) and forming adventitious roots. A rhizome may be horizontal or vertical.

rhombic. Diamond-shaped in outline, with the widest at midpoint and straight sides converging on tip and base. Syn. rhombate

rhomboid. Diamond-shaped in three dimensions, with the widest at midpoint and more or less of two pyramidal halves

rosetted. Forming a dense cluster of leaves at the base of a plant, typically at the start of a growing season and highly condensed because stem internodes are not present. Basal leaf blades may be oriented strictly horizontally (= flat rosette) or at the other extreme radiating rigidly like a pincushion (= hemispheric rosette). In many plants, the basal rosette leaves wither or abscise before flowering occurs.

rotate. Of a corolla, having a short tub and a widely spreading, saucer-shaped limb

rounded. Of bases and tips, convex and \pm regularly curved

salverform. A corolla with a slender tube and an abruptly widened, flaring limb, trumpet-shaped

samara. A winged, one-seeded, indehiscent dry fruit

satiny. Having a soft, lustrous sheen but not polished or shiny

scabrous. Having short, upright, very hard and rigid hairs or short projections, feeling somewhat like sandpaper and rough to the touch. Syn. scabrid

scale. A more or less appressed, often dry, diminutive leaf

scandent. Climbing or spreading by resting on the surfaces of other plants or objects

scape. A leafless peduncle arising from the ground, found in acaulous plants

scapose. Having one or more inflorescences with leafless peduncles

scarious. thin, dry, and often translucent brownish or tan

schizocarp. A general type of fruit derived from one ovary that was united at pollination but subsequently splits between chambers into separate seed-bearing subunits at maturity (mericarps); mericarps are generally dry (*Apiaceae*) but sometimes fleshy (*Lantana*)

sclerophyllous. Having hard, usually tough or leathery leaves

scurfy. Having a cover of scales

self-compatible. Capable of fertilization with sex cells (gametes) from the same plant or clone

self-incompatible. Incapable of fertilization with sex cells (gametes) from the same plant or clone, thus requiring cross pollination (or swimming sperm) from a genetically different individual

semievergreen. Generally having photosynthetic leaves every day of the year, but becoming seasonally leafless under conditions of extreme dryness or cold

sepal. In a flower, an individual, leaflike element of the calyx

septicidal. Dehiscence of a capsule splitting lengthwise through the partition (septum) separating adjacent chambers.
Opposite loculicidal

septum. A partition within a compound ovary or fruit separating adjacent chambers

sericeous. Having long, soft and fine, appressed hairs oriented in the same direction

serrate. Having sawlike teeth on margin; short-serrate = serrulate

sessile. Lacking a stalk; the way to describe a leaf without a petiole, a flower or fruit without a pedicel, or a glandular hair with only a head and no axis

shaggy. Having relatively sparse, long, generally wavy hairs

sheath. Of a certain type of leaves or bracts, especially in monocotyledons, the basal portion of a certain type of leaf that partially or wholly encircles, and thereby ensheaths, the stem

shrub. A woody perennial, generally less than four meters tall and most commonly branched with several to many persistent woody stems at the plant base. Shrubs can be one-stemmed at the plant base and therefore appear like miniature trees.

silicle. A commonly recognized subtype of siliqua, being relatively short versus broad, e.g., round or heart-shaped in outline (less than three times longer than wide), as compared with a silique, which is long and slender. Some silicles are indehiscent, i.e., the valves never abscise.

siliqua. A capsulelike fruit with two chambers in which the two valves completely abscise, falling away and leaving a persistent partition (called a replum); the characteristic fruit type of Brassicaceae, derived from a superior ovary and not have seeds attached to the replum. If compressed, a siliqua may be flattened either parallel with or perpendicular to the replum.

silique. An alternative spelling of siliqua; in a more limited sense, a subtype of siliqua that is at least four times longer than wide (as opposed to a silicle)

simple. Describing a leaf not divided into leaflets. Ant. compound

sinus. Deep indentation on the margin of a leaf or leaflike structure

sinuate. Having curves regularly alternating in and out from the midrib, i.e., in a horizontal plane, resulting in lobes and sinuses along the edge of a planar structure

sorus. In ferns, cluster of sporangia on the lower side of leaf

spadix. A spike with unisexual flowers partially or deeply sunken in the fleshy or thickened axis; commonly subtended by a spathe

spathe. In certain monocotyledons, a bract subtending and surrounding a stalklike inflorescence (spadix)

spatulate. Spoon-shaped to shaped like a spatula

spheric, spheroid. Ball-like shape; spheroid and spheroidal = resembling a ball but not perfectly symmetric or regular. Syn. globose

spike. A type of unbranched inflorescence having sessile flowers, forming the oldest flower at the base and the youngest at the tip

spikelet. In the grass family (Poaceae) and sedge family (Cyperaceae), the ultimate, condensed, spikelike cluster of flowers (florets), bracts, and bractlets defined by one or two glumes

spine. A conspicuous, hard or woody, sharp-tipped structure formed as a modification of a plant organ or axis, such as a leaf spine, a stipular spine, or a stem spine

spinescent. Becoming spiny, therefore often difficult or painful to handle

spinose. Of leaves, spiny by having hard, sharp-tipped teeth or projections along the margin

spiny. Having armature of spines, prickles, or sharp teeth

sporangium. In land plants, a sac within which spores are produced via meiosis, e.g., producing pollen grains (microsporangia) and megaspores (megasporangium)

spore. In land plants, one of four haploid cells produced via meiosis of a diploid mother cell (within a sporangium), the cell starting the gametophyte phase of the life cycle. Syn. meiospore

spreading. Diverging from an axis or plane somewhat but generally 45° to 90°

spur. In certain flowers, a hollow, slender, tubular projection of the perianth within which nectar is produced at the tip

stamen. In a flower, a pollen-producing structure, most often with a stalk (filament) and anther

staminate. Of a flower, having one or more fertile stamens (male) but no fertile pistil or pistils (female), hence a functionally unisexual, male flower

staminode. In certain flowers, sterile or abortive stamen, which cannot produce viable pollen, present either as a vestigial or transitional structure (e.g., between a stamen and petal) or a device somehow involved in the process of pollination; in some groups functioning as a petal. Syn. staminodium

stellate. Starlike with three or more radiating arms from a central point

stigma. A region on the style of a pistil where pollen grains must land before they can germinate, generally papillate, dry or wet, and located at the tip or laterally on a style adjacent to the tip

stipe. A stalk subtending a pistil, e.g., a gynophore (of a flower) or carpophore (below a fruit)

stipule. An outgrowth of a young leaf (usually as a pair) formed at the base of a leaf petiole, attached to the petiole or to the petiole and the stem at the node, or wholly fused to the stem at the node

stolon. A type of aboveground, horizontal shoot, having long internodes and diminutive leaves and capable of cloning by forming plantlets and adventitious roots at certain nodes, e.g., strawberry (*Fragaria*). Syn. runner

stone. Within a drupe, a hard, seedlike, central pit defined by an extremely hard inner ovary wall (endocarp) and containing a seed within the ovary chamber, e.g., the pit of cherry (*Prunus*)

strigose. Having relatively long, rigid hairs that are evenly spaced and appressed, often in the same direction. Short-strigose = strigulose (less than 0.5 mm long)

strobilus. Of nonflowering plants, a conelike cluster of spore-bearing structures (microsporophylls and microsporangia or megasporophylls and megasporangia. Syn. cone

suberect. Oriented nearly erect, divergent to 15° from perpendicular

subopposite. Have two leaves or two branches that are nearly paired at a node but not perfectly so, resulting in one being slightly higher than the other

subshrub. A perennial that each year dies back to a short, aboveground stem

subspheric. Resembling a ball in three dimensions but compressed somewhat in one direction

subtend. Situated just below or at the base, e.g., of a leaf or leaflike structure relative to an adjacent axis, a vegetative or reproductive shoot, or a flower

succulent. Of a plant organ, having a thick tissue of living cells without hard cell walls for storing water; a plant strategy to survive drought for extended periods or in a dry habitat while remaining either physiologically or unharmed without any uptake of water from the soil

superior. Of an ovary, positioned above and formed therefore after the other parts of the flower

taproot. The central principal root of a dicotyledon or gymnosperm that arose from the radicle of the seed

tendrill. A specialized, long, slender extension of a shoot that coils rapidly around a support structure. A tendril can be a modified stem, leaf, prophyll, or part of a leaf, and is characteristic of certain climbing plants.

tepal. In a flower, an individual, leaflike element of the perianth in which the elements of the outer whorl (sepals) and inner whorl (petals) are essentially alike in size, shape, and color; in other treatments, where perianth lobes are essentially alike

terminal. At the end or tip; for stigma at tip of style, being the same width as the style

throat. 1 Of the corolla, the fused portion usually wider than the tube and commonly defined at its base by where staminal filaments arise (insertion). 2 Of monocotyledons, the upper portion of a leaf sheath

tomentose. Having a dense cover of short, soft, wavy to curly hairs

tomentum. A general term for any dense, feltlike cover of hair

trailing. Of shoot axes resting entirely on the ground or boulders, i.e., prostrate but not rooting

trifoliolate. three-foliolate, having three leaflets, including palmately and pinnately compound forms

tristichous. With successive leaves, organs, or branches radially arranged at 120° to one another, so that the structures are arranged in three vertical files

tree. A perennial, generally greater than four meters tall, that tends to have a woody trunk and a well-defined canopy. However, in palms the trunk has no true wood and lacks branches. Certain trees in our range have multiple stems at the plant base.

truncate. Appearing cut off at the tip, being ± flat-topped

trunk. The relatively straight and thick main stem at the base of a tree

tube. Of flower parts, the fused lower portion of a whorl of parts, e.g., calyx, corolla, or filaments of stamens

tubercle. A bumplike protrusion or swelling, as on the stem surface of certain Cactaceae

tufted. Growing in a dense cluster of axes, as with many stems at the base of a plant, developing leaves clustered in an axil, or a localized clump of straight hairs

twining. Wrapping of a stem or inflorescence axis around a support in a helical manner; having surface and internal features arranged helically along an axis by secondary contortion while the axis remains more or less straight

twisted. Achieving a helical form along its long axis usually by a type of secondary contortion of a straight shape

two-lipped (2-lipped). Of a bilaterally symmetric flower, having a corolla or calyx with lobes fused into two units, upper and lower, which typically are unequal in size and shape, if not also coloration. Syn. bilabiate

umbel. A type of inflorescence, typified by Apiaceae, that resembles an umbrella by having its branches radiating from a central point at the end of the peduncle. If a simple umbel, pedicels radiate from the central point; if a compound umbel, an array of radiating branches (primary rays) arise at the end of the peduncle and then a set of pedicels radiate from the end of each primary ray.

umbellet. Terminal (secondary) umbel of a compound umbel

unarmed. Lacking sharply pointed projections (i.e., spines or prickles). Ant. armed or spinescent

unisexual. Of a flower, having either fertile stamens (male) or a fertile pistil or pistils (female) within a flower, but not both; used to describe a male flower (staminate) or a female flower (pistillate). Syn. imperfect

utricle. A very small, one-chambered, one-seeded, bladderlike fruit with a papery wall that may or may not split or disintegrate while attached to the plant; basically a subtype of capsule that does not have a clean, predictable line of dehiscence and often drops from the plant before the seed is exposed or liberated

valve. One portion of a fruit that splits open or falls away during dehiscence. Often a valve is the outer wall of one segment of the ovary (carpel).

velutinous. Velvety; having a dense cover of spreading to ascending (patent) hairs that are not intertwined and are very soft to touch

versatile. Of an anther, having the filament attached to the connective in a manner permitting it to rotate freely

verticil. A \pm circular cluster of flowers or similar parts around the same node, e.g., flowers of the mint flower (Lamiaceae) = paired condensed cymes, sometimes misunderstood as being densely whorled. Syn. verticel

vesicular. Appearing like tiny blisters filled with liquid

vespertine. Having flowers that open during the evening

villous. Having upright, long, soft, somewhat wavy or crooked hairs, as opposed to pilose, where hairs are straight and erect. Also spelled villose

vine. An annual or perennial climber or trailing plant with aboveground stems that persist only for one growing season, hence an herbaceous climber

virgate. Wandlike, most often used to describe a plant having straight, green, seemingly leafless stems, e.g., a broomlike shoot design

viscid. Sticky

viscin threads. Very fine, elastic and sticky threads that connect pollen grains together (Onagraceae)

wavy. Wavelike or sinusoidal (not sinuate), alternating upward and downward from the plane of a structure

wedge-shaped. Like a very narrow, inverted triangle

whorl. On an axis, having three or more lateral organs produced in the same circle (cycle), such as at a node (leaves), branches of an inflorescence, or parts of a reproductive structure (all sepals produced in a whorl, all petals, etc., or sporangium-bearing structures as in *Equisetum*)

wing. 1 A thin, extended edge on the margin or axis of a structure, such as along a petiole or stem or on a fruit or seed. 2 In flowers of legumes (Fabaceae), one of two lateral petals, which often project forward and thereby more or less hide the fused keel

winged. Having one or more wings, i.e., flattened, thin ridges or margins

wiry. Wirelike, i.e., very slender, tough, and resiliently flexible

wispy. Slender, fine-stemmed, and flexible, easily moved by the slightest breeze

withered. Dried, especially in a shriveled and shrunken, often irregular manner

woolly. Densely covered with long, soft, intertwined hairs. Syn. lanate or lanose

x-section. A cut at right angles to the long axis. Syn. cross-section

zigzagged. Having angular bends altering side to side, generally in one plane, usually in reference to an axis