Glossary

Some terms are used in a combined form. In those cases, refer to each of the two individual terms. A combination term may indicate that both characteristics are evident; a leaf which is cordate-clasping has heart-shaped leaves (cordate) with leaf bases that nearly encircle the stem (clasping). Some combination terms indicate a range between two characteristics; ovate-deltoid leaves may range from oval in outline (ovate) to triangular in outline (deltoid).

Modifiers are used on some terms. In each such case, refer to the root word. For example, suborbicular leaves are nearly round in outline (orbicular), but may be slightly flattened or otherwise fall short of a perfect roundness. Also note that some terms may be used as either a noun or an adjective. Thus, an inflorescence which is a cyme or a raceme may be referred to as a cymose or racemose inflorescence.

**Achene**  Dry indehiscent fruit consisting of one seed with a tightly appressed fruit wall

**Acorn**  Dry indehiscent fruit (a nut) with a hard fruit wall subtended by an involucre or “cup” of scales, as in Quercus

**Acuminate**  Tapers to extended point (Fig. 7)

**Acute**  As in acute angle; apex formed by two straight sides at an angle less than 90º

**Adherent**  Closely attached

**Anther**  The portion of the stamen which contains the pollen in flowers (Fig. 2)

**Anthesis**  The period when anthers mature and release pollen; often the stigma is also receptive to pollen

**Appressed**  Pressed flat against a surface

**Aril**  A fleshy outgrowth of the seed

**Ascending**  Growth habit in which stems or branches grow upward and outward

**Auricle**  Lobe which has rounded ends; “ear-shaped”, as in auriculate leaf bases (Fig. 7)

**Awn**  A long bristle, often part of a leaf, bract, or fruit

**Axil**  The angle immediately above the leaf attachment to the stem (Fig. 4 shows the axillary bud)
Banner  Large, often showy upper petal in flowers of the Leguminosae (Fig. 23)
Beak  An elongated, pointed appendage of fruits or other structures
Beard  A stripe or island of hairs on petals
Bell-shaped  Flower with the corolla fused in the shape of a bell (Fig. 39)
Berry  Fleshy fruit with few to many seeds; may have several compartments, as in the tomato
Bipinnate  Twice-pinnately compound leaf in which leaflets are themselves pinnately compound (Fig. 5)
Blade  The flat, broad portion of a leaf; modified or absent in some plants (Fig. 4)
Bract  Leaflike structures associated with flowers and inflorescences; they may be reduced, brightly colored, or otherwise modified
Calyx  The outer whorl of leaf-like structures (sepals) in the flower; green or occasionally colored
Capitate  Head-like, often with a rounded end as in a capitate stigma
Capsule  Dry dehiscent fruit, with one to several compartments and often many seeds; splits along several lines at maturity
Carpel  A unit of ovule-bearing tissue within the ovary (pistil). An ovary may consist of one to many carpels, often visible in cross-section.
Catkin  Inflorescence which is a spike or raceme of unisexual reduced flowers; typical of several families of woody plants (Fig. 3)
Cauline  Attached to the stem
Chaff  Small bracts subtending individual flowers in the Composite, often dry and hard or membranous (Fig. 41)
Ciliate  With fine marginal hairs
Clasping  Leaf base which partially surrounds the stem (Fig. 7)
Cleistogamous  Flowers which do not open for pollination and are self-fertilized; sometimes near the ground, underground, or produced late in season
Column  A structure formed by the adhesion of the stamens to the style in the Orchidaceae
Cone  Woody or fleshy structure consisting of whorls of scales bearing naked seeds in gymnosperms
Connate  Joined or fused with parts of the same kind (Fig. 40, connate stamens)
Cordate  Heart-shaped (Fig. 6, cordate leaf; Fig. 7, cordate leaf base)
Corolla  The inner whorl of leaf-like organs (petals) in the flower; frequently colored, sometimes absent
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Corona</td>
<td>A tissue projection between the petals and stamens, often seen as a “crown” near the throat of the corolla tube (Figs. 18, 34); or, as in the Asclepiadaceae, a colored structure surrounding each anther (Fig. 30)</td>
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<tr>
<td>Corymb</td>
<td>Flat-topped or convex inflorescence in which flower pedicels are inserted at different points and are of different lengths (Fig. 3)</td>
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<tr>
<td>Crenate</td>
<td>Leaf margins with rounded medium coarse teeth (Fig. 8)</td>
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<tr>
<td>Crenulate</td>
<td>Leaf margins with rounded fine teeth (Fig. 8)</td>
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<td>Crisped</td>
<td>Crimped or ruffled leaf margins</td>
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<td>Cuspidate</td>
<td>Apex which is a sharp, abrupt point (Fig. 7)</td>
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<td>Cyme</td>
<td>A branched inflorescence in which the central or terminal flower opens first (Fig. 3). A helicoid cyme branches only to one side (Fig. 34)</td>
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<tr>
<td>Decumbent</td>
<td>Growth habit in which stems trail on the ground, but tips become erect</td>
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<tr>
<td>Decurrent</td>
<td>Extending downward, as when leaf bases extend down along the stem (Fig. 7)</td>
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<tr>
<td>Dehiscent</td>
<td>The (dry) fruit wall splits or breaks to release seeds</td>
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<tr>
<td>Deltoid</td>
<td>Triangular in outline (Fig. 6)</td>
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<tr>
<td>Dentate</td>
<td>Leaf margins with medium coarse teeth (Fig. 8)</td>
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<tr>
<td>Dichotomous</td>
<td>Divided into two equal portions; dichotomous branching often results in Y-shaped branches</td>
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<tr>
<td>Dioecious</td>
<td>Imperfect (staminate and pistillate) flowers on separate male and female plants</td>
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<tr>
<td>Discoid</td>
<td>Inflorescence type in the Compositae consisting only of disk flowers; also, any structure shaped like a disk</td>
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<tr>
<td>Disk</td>
<td>Nectariferous tissue at the base of the ovary or among the stamens in some flowers</td>
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<tr>
<td>Disk flower</td>
<td>Perfect or sometimes unisexual flowers in the Compositae, with a short tubular corolla (Fig. 43)</td>
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<tr>
<td>Dissected</td>
<td>Finely divided leaf blade (Fig. 8)</td>
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<td>Divided</td>
<td>A leaf in which lobes are formed from cuts three-quarters or more of the distance from the margin to the midrib; extremely fine divisions with a feathery appearance are dissected</td>
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<tr>
<td>Drupe</td>
<td>Fleshy fruit with a single seed enclosed by a thick fruit wall, as in the plum</td>
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<td>Drupelet</td>
<td>A small drupe; sometimes part of an aggregate fruit as in raspberries</td>
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<tr>
<td>Elliptic</td>
<td>Elongate form with rounded edges</td>
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<tr>
<td>Emergent</td>
<td>Foliage of an aquatic plant which is held above the water</td>
</tr>
<tr>
<td>Entire</td>
<td>Margin lacks teeth or lobes (Fig. 8)</td>
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</table>
Exserted  Thrust out, not enclosed, as when stamens protrude from the flower

Fascicle  A small cluster or bundle, as of leaves or flowers

Filament  The stalk which bears an anther (Fig. 2)

Filiform  Threadlike

Floret  Small individual flower, usually as part of a compact inflorescence

Follicle  Dry fruit opening along single seam (Fig. 32)

Funnelform  Flower with fused petals which open out gradually, resembling a funnel

Gamopetalous  Flowers in which the petals are fused to one another

Glabrous  A hairless surface

Glandular  Leaf, stem, or floral surfaces with small glands visible

Glaucous  Waxy, often whitened or bluish

Globose  Globe-shaped

Glume  Bract at the base of the grass spikelet (Fig. 9)

Hastate  Leaf base in which the lobes flare outwards (Fig. 7)

Head  Inflorescence in which numerous flowers, often small and usually sessile, are clustered tightly on a flat or discoid axis (Fig. 3)

Helicoid  Coiled; see cyme

Hemiparasitic  Parasitic plants which produce some nutrients via photosynthesis, but obtain some nutrients from other plants

Herbaceous  Non-woody; also refers to green tissue such as leaves

Heterophyllous  Plants with more than one size and/or shape of leaf, as in the Polygonaceae

Hirsute  Surface with rough hairs

Hispid  Surface with stiff, sometimes bristly, hairs

Homophyllous  Plants with leaves of one size and shape, in contrast to heterophyllous, as in the Polygonaceae

Hood  Part of the corona surrounding the anthers in Asclepias (Fig. 30)

Horn  A pointed protrusion arising within the hood in Asclepias (Fig. 30)

Hypanthium  Cup-like structure formed by the fused bases of the sepals, petals, and stamens which often surrounds, but is not attached to the ovary

Imperfect  Flowers which do not have both male and female organs (stamen and pistil). They are either staminate (male) or pistillate (female).

Indehiscent  The fruit wall does not open at maturity

Inflorescence  The flowering structure of the plant, including a peduncle (stalk), one or more flowers and their pedicels, with any associated bracts (Fig. 3)
Internode
The portion of the stem between leaf attachments (nodes)

Inferior ovary
Floral type in which the ovary is fused to the hypanthium and the sepals, petals, and stamens are attached above the ovary (Fig. 2)

Involucre
A whorl of bracts, often closely appressed, which subtends an inflorescence, as in the Compositae (Figs. 41, 44)

Irregular
Flowers in which one or more parts of a whorl differ in size or shape

Keel
A ridge along an axis, as in leaves or floral parts; also the two lower, united petals of a leguminous flower (Fig. 23)

Lanceolate
A long narrow oval with a tapered apex (Fig. 6)

Leaflet
One part of the blade of a compound leaf (Fig. 5)

Legume
A dry fruit opening by two seams, typical of the Leguminosae

Lemma
The outer bract surrounding a grass floret (Fig. 9)

Ligulate
A perfect flower in the Compositae with the corolla prolonged into a strap-shaped lobe with 5 apical teeth (Fig. 43); a ligulate head consists only of these flowers

Ligule
A distinct ridge at the top of the sheath (petiole) of grasses and sedges (Fig. 4)

Lip
One of (often two) segments of an unequally divided corolla, as in the Labiatae (Fig. 35). In some flowers, only one highly modified lip is present, as in the Orchidaceae

Lobe
A protuberance, as in a lobed leaf (Fig. 8); the free tips of a fused corolla or calyx.

Mericarp
Segment of a schizocarp (Geraniaceae, Umbelliferae) (Fig. 28)

Midrib
The major vein through the center of the blade of the leaf (Fig. 4)

Monoecious
Imperfect (staminate and pistillate) flowers on the same plant

Mucronate
Apex with a hard, short point (Fig. 7)

Nerve
A prominent vein other than the midrib (Fig. 4, 9)

Net-veined
Leaf venation where primary veins branch from the midrib or converge near the base of the blade (Fig. 4)

Node
The location on the stem where one or more leaves attach

Nut
A dry indehiscent fruit with a hard, even woody, fruit wall surrounding a single seed; smaller fruits are called nutlets (Fig. 33)

Obcordate
Narrow at the base and cordate at the apex (Fig. 6)

Oblanceolate
Tapers from a narrow base to a rounded apex (Fig. 6)

Oblong
A long narrow oval with slightly flattened sides

Oblique
Leaf base in which one side of the blade is attached above the other (Fig. 7)
Obovate: Narrow at the base but otherwise oval (Fig. 6)
Ocrea: Modified, sheath-like stipules at the base of leaves in the Polygonaceae (Fig. 16)
Orbicular: Circular in outline (Fig. 6)
Ovary: The portion of the pistil which encloses the ovule and later the seed (Fig. 2).
Ovate: Shape with a broad base, tapering to an angle at the apex (Fig. 6)
Ovoid: Egg-shaped
Palea: The inner bract surrounding the grass floret (Fig. 9)
Palmate: Arrangement in which several axes converge to one point, such as palmate venation (Fig. 4) or palmately compound leaves (Fig. 5)
Panicle: Inflorescence where flowers occur along branches arising from a central unbranched axis; branching is often loose, producing an “open” inflorescence (Fig. 3)
Pappus: Plumose (featherlike) bristles, scales, or hairs derived from the sepals of individual flowers in the Compositae, and best seen on the ripe fruit (Fig. 42)
Parallel-veined: Leaf venation where primary veins are parallel to the midrib (Fig. 4)
Parasite: Plants which derive nutrients from other plants
Pedicel: The stalk which bears the receptacle and thus the flower (Fig. 2)
Peduncle: The stalk bearing an entire inflorescence (Fig. 3)
Peltate: Leaf with the petiole attached at or near the center of the blade (Fig. 6)
Perfect: Flowers which have both male and female organs (stamen and pistil).
Perfoliate: Describes a leaf in which the base surrounds the stem, so that the stem appears to pierce the blade (Fig. 7)
Perianth: The leaflike organs in the two outer whorls of the flower (sepals and petals, called tepals when not clearly different) (Fig. 2)
Perigynium: A saclike structure (bract) which encloses the pistil of Carex (Cyperaceae) (Fig. 11)
Petal: A member of the inner whorl of leaflike organs of the flower; frequently colored or sometimes absent (Fig. 2)
Petaloid: Structures such as stamens, sepals, or bracts, which are colored and shaped to resemble petals
Petiole: The part of the leaf attached to the stem; may be modified (see sheath), or absent (sessile leaves) (Fig. 4)
Pilose: Covered with fine, soft hairs
Pinnate: Arrangement in which two or more parallel axes arise from...
a central axis, such as pinnate venation (Fig. 4) or pinnately compound leaves (Fig. 5)

**Pistil**
The female organ of the flower, composed of ovary, style, and stigma (Fig. 2); formed from one or more ovule-bearing carpels

**Pistillate**
Flowers lacking functional stamens; female flowers

**Pome**
Fruit in which the receptacle enclosing the ovary swells to form an accessory fruit wall, as in the apple.

**Prickle**
Sharp epidermal outgrowth (Fig. 14)

**Prostrate**
Growth habit in which stems are flat on the ground

**Pubescence**
Hairs on a surface

**Punctate**
Describes a surface with many small impressions resembling shallow punctures

**Raceme**
Inflorescence in which individual pedicellate flowers are arranged along an unbranched central axis (Fig. 3)

**Rachilla**
The axis in a spikelet of the Gramineae (Fig. 9) and the Cyperaceae

**Radiate**
Inflorescence type in the Compositae consisting of disk flowers surrounded by ray flowers (Fig. 41)

**Ray flower**
Pistillate or sterile flowers in the Compositae with the corolla prolonged into a broad strap-shaped lobe with 1–3 apical teeth; they are typically the outer row of flowers in a radiate head (Fig. 41)

**Receptacle**
The end of a pedicel (stalk) to which the flower is attached (Fig. 2); it may be fleshy or enlarged with numerous flowers or floral parts attached to its surface (Figs. 22, 41)

**Recurved**
Curved outward or downward

**Reflexed**
Bent downward

**Regular**
Flowers in which all parts of a whorl are the same size and shape

**Reniform**
Kidney-shaped, as in a reniform leaf (Fig. 6)

**Resinous**
Has a sticky surface

**Retrorse**
Backward-pointing, as in hairs which point down or toward the axis

**Rhizome**
Thick fleshy stem at or under the soil surface

**Rosette**
Plant form in which the internodes are extremely short and leaves form a circle around a short crown close to the ground

**Salverform**
Flower with a fused corolla which is tubular at the base, then flattens to a plate-like top (Fig. 34)

**Samara**
Dry indehiscent fruit with a wing, as in *Acer* and *Fraxinus*

**Saucer-shaped**
Flower with a fused corolla which spreads out to form a flat dish

**Scale**
Small, thin, seldom green, leaflike structures such as those
covering woody plant buds or reduced leaves in some plants

**Scape**  A leafless stalk of an inflorescence, often originating in a rosette of leaves (*Fig. 3*)

**Schizocarp**  Dry dehiscent fruit which splits into segments (mericarps) at maturity (Geraniaceae, Umbelliferae)(*Fig. 28*)

**Sepal**  A member of the outermost whorl of leaflike organs of the flower; often green, but may be colored (*Fig. 2*)

**Serrate**  Leaf margins with medium coarse, acutely angled teeth (*Fig. 8*)

**Serrulate**  Leaf margins with fine, acutely angled teeth (*Fig. 8*)

**Sessile**  Structure attached at the base without a stalk, as in a sessile leaf (*Fig. 7*) or stigma (*Fig. 13*)

**Sheath**  A tubular, modified petiole which encircles the stem as in the Gramineae (*Fig. 4*)

**Silicle**  Dry fruit characteristic of certain Cruciferae; splits at two seams, leaving a membranous center; less than twice as long as wide (*Fig. 19*)

**Silique**  Dry fruit characteristic of certain Cruciferae; splits at two seams, leaving a membranous center; at least twice as long as wide (*Fig. 20*)

**Silky**  With long, thin, smooth hairs

**Sinus**  Area between two lobes of a leaf (*Fig. 8*)

**Solitary**  Inflorescence with a single flower, sometimes occurring on a scape arising from a rosette of leaves (*Fig. 3*)

**Spathe**  A large bract which subtends a spadix, the typical inflorescence of the Araceae (*Fig. 3*)

**Spathulate**  Long and narrow, tapering from the apex to the base (*Fig. 6*)

**Spike**  Inflorescence in which sessile flowers occur along a central axis (*Figs. 3, 38*)

**Spikelet**  Reduced flowers in small spikes as part of an inflorescence characteristic of the Gramineae (*Figs 9, 10*) and the Cyperaceae (*Fig. 11*)

**Spreading**  Growth habit in which branches are held off the ground and are more or less horizontal

**Spur**  A hollow protuberance of one or more sepals or petals of some flowers (*Fig. 37*)

**Stamen**  The pollen-bearing (male) organ of the flower, composed of filament and anther (*Fig. 2*)

**Staminate**  Flowers lacking functional pistils; male flowers

**Staminode**  A stamen without a functional anther; when present, they often differ in appearance from fertile stamens in the same flower
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<tr>
<td>Stellate</td>
<td>Star-shaped</td>
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<tr>
<td>Sterile</td>
<td>Flowers lacking functional sexual organs, or stamens lacking functional anthers</td>
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<tr>
<td>Stigma</td>
<td>The receptive surface (for pollen) of the pistil <em>(Fig. 2)</em></td>
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<tr>
<td>Stipule</td>
<td>Appendages, usually paired, present at the base of the petiole. They can be spines, scales, glands, or resemble leaves <em>(Figs. 4, 22)</em></td>
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<tr>
<td>Stolon</td>
<td>Stems at or under the surface of the soil, usually budding to produce new above-ground stems</td>
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<tr>
<td>Striate</td>
<td>With thin lines over the surface</td>
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<tr>
<td>Style</td>
<td>The portion of the pistil which bears the stigma <em>(Fig. 2)</em></td>
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<tr>
<td>Sub-</td>
<td>Prefix indicating that a characteristic is minimally expressed; e.g. “subcordate”, only vaguely heart-shaped</td>
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<tr>
<td>Subulate</td>
<td>Long and narrow, tapering from the base to the apex; awl-like <em>(Fig. 6)</em></td>
</tr>
<tr>
<td>Superior ovary</td>
<td>Flower type in which the ovary sits on top of the receptacle and sepals, petals, and stamens are attached below the ovary <em>(Figs. 2, 12)</em></td>
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<tr>
<td>Tendril</td>
<td>A portion of a leaf or stem modified for attachment or twining <em>(Fig. 14)</em></td>
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<tr>
<td>Tepal</td>
<td>Perianth segments which cannot be distinguished as petals and sepals</td>
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<tr>
<td>Ternate</td>
<td>Segments in 3’s; a ternately compound leaf, often based on palmate venation, has one or more sets of leaflets, each in groups of three <em>(Fig. 5)</em></td>
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<tr>
<td>Thorn</td>
<td>A hard, sharp, shortened branch</td>
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<tr>
<td>Tomentose</td>
<td>Densely hairy</td>
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<tr>
<td>Trifoliolate</td>
<td>Compound leaf with three leaflets, often based on pinnate venation <em>(Fig. 5)</em></td>
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<tr>
<td>Truncate</td>
<td>Abrupt square or broad end, as in truncate leaf base <em>(Fig. 7)</em></td>
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<td>Tubercle</td>
<td>A small bump or protrusion</td>
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<td>Tuberculate</td>
<td>Describes a surface bearing tubercles</td>
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<tr>
<td>Tubular</td>
<td>Flower with a fused corolla which forms a tube without flaring outward</td>
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<tr>
<td>Twining</td>
<td>Twisting around an axis, as in the stems of some vines twisting around another plant stem</td>
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<tr>
<td>Umbel</td>
<td>Flat-topped or convex inflorescence in which flower pedicels are inserted at the same central point and are of the same length <em>(Fig. 3)</em>; compound umbels <em>(Fig. 28)</em> have secondary umbellets originating at the ends of the first set of peduncles.</td>
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<tr>
<td>Urn-shaped</td>
<td>Flower in which the fused petals (corolla) converge, forming a small narrow opening</td>
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<tr>
<td>Term</td>
<td>Definition</td>
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<tr>
<td>Utricle</td>
<td>One-seeded, dry indehiscent fruit with a thin papery wall</td>
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<td>Valve</td>
<td>One section of the fruit wall in dehiscent dry fruits; also, persistent tepals enclosing the fruit (achene) in the Polygonaceae (<em>Fig. 15</em>).</td>
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<tr>
<td>Venation</td>
<td>The pattern of veins in leaf blades (<em>Fig. 4</em>)</td>
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<tr>
<td>Viscid</td>
<td>Sticky to the touch</td>
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<tr>
<td>Whorled</td>
<td>More than two branches or leaves arising from a node (<em>Fig. 5</em>)</td>
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