Wildflowers and Other Plants

of the Larimer County Foothills Region

Credits

This guide was developed primarily by volunteers and staff of Larimer County Department of Natural Resources. Thanks also to reviewers and support from the Friends of Larimer County Parks and Open Lands, Colorado Native Plant Society and City of Fort Collins Natural Areas Department.

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About This Guide

This guide focuses on the most common, showy, native plants growing in parks and open spaces in Larimer County, Colorado, between 5,000 - 8,000 feet in elevation. Key traits for identification, comparisons between similar species, and fun facts help you identify and learn about these interesting plants.

In addition, notes on ecology, habitat, bloom time, and references to specific Larimer County Parks and Open Space areas will help you discover when and where to look for individual species.

Larimer County Parks and Open Space areas are lands protected for recreation and conservation by the citizens of Larimer County, through the ¼-cent, citizen-initiated "Help Preserve Open Space" sales taxes started in 1996.

Most areas were originally ranches or homesteads that landowners wished to preserve in perpetuity as public lands. Some of these areas have been restored as wild examples of grasslands, riparian areas or forests that once dominated the landscape in Larimer County.

Ecology of the Larimer County Foothills Region

Climate: In Larimer County, moisture is the most important factor in determining where plants grow. *West- to south-facing slopes* are exposed to the hot afternoon sun; these are the driest and most extreme sites for plant growth. Plants adapted to drought and sun stress (e.g., plains prickly pear cactus) and thick-leaved woody shrubs (e.g., mountain mahogany) commonly grow here. *North- to east-facing slopes*, by contrast, are shaded during the hot afternoon, so plants have more access to moisture. As a result, a larger number of plant species grow on these slopes, as well as the largest trees and densest thickets of vegetation. Differences in climate also explain differences between ecological zones and habitats (Fig. 1).

Geology: *Riparian areas* (streamsides) have some of the greatest diversity of wildflowers and shrubs due to complex and rich soils, especially when the soils are formed from floodwater sediment. *Shale* or *mudstones* also develop deep, nutrient-rich soils for a wide diversity of plants. Fewer plant species grow in *acid rocks* (e.g., granite), which form thin, poorly developed soils that retain little water and have few nutrients. *Limestone* also has low water-holding capacity, but can support unique species adapted to salts (alkalinity) and drought.

Human and Natural Disturbance: Disturbances recycle and release nutrients for plant growth, so are essential to the long-term health of native ecosystems.

- *Fire* stimulates seeds to germinate and plants to re-sprout and send up new shoots. Lodgepole pine, ponderosa pine, grasses, and many wildflowers depend on fire for reproduction.
- *Flooding* creates a variety of habitats and delivers nutrients to riparian areas, supporting more plant species than any other habitat in the Rockies. Flooding is essential to establish cottonwood and willow seedlings.
- *Grazing* by deer and elk, and burrowing by wildlife such as prairie dogs, are essential to maintaining the long-term health and diversity of grasslands.
- *Livestock grazing* can imitate natural patterns and promote native wildflowers.
- *Plowing*, by contrast, diminishes the availability of nutrients in grasslands, changing the dominant plant species for 50 years or more. Smooth brome and other non-native grasses generally dominate after plowing.

Ecological Zones

This guide focuses on the foothills ecological zone in Larimer County, with some overlap with the plains and montane zones, from 5,000 - 8,000 feet (Fig. 1).

Plains: This zone occurs at the lowest elevations and includes grasslands, cottonwood forests along streams, disturbed areas, and old agricultural fields.

Foothills: This zone occurs on small hills or the lower portions of mountains, usually with a mixture of grasslands, shrublands (mountain mahogany and three-leaf sumac), open rocky areas, and ponderosa pine woodlands.

Montane: At the highest elevations covered by this guide, this zone occurs especially on cool east- or north-facing slopes. Shady montane forests predominate, including mixtures of ponderosa pine, Douglas fir and juniper.

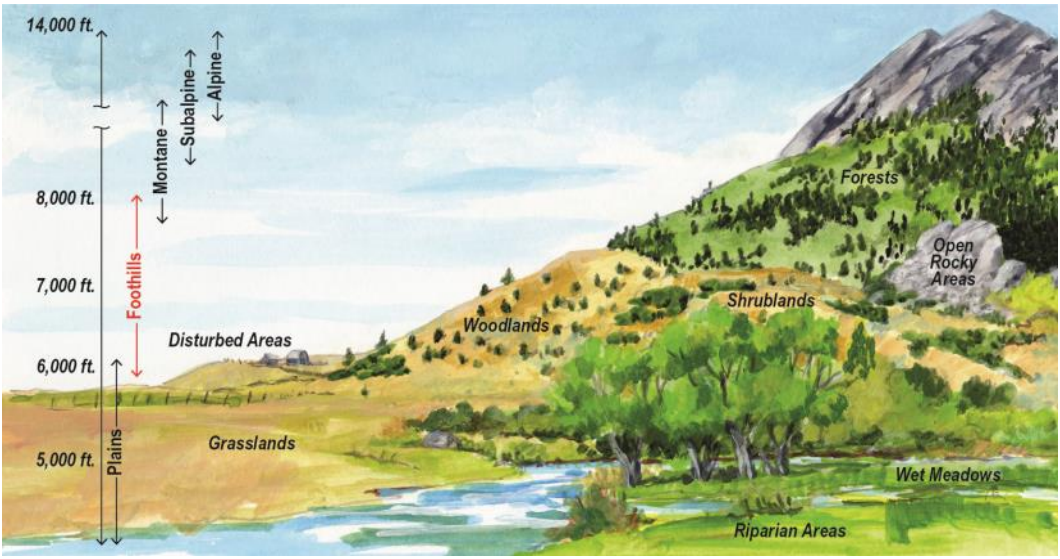


Fig. 1: Ecological zones and habitats in Larimer County

Habitats

This guide organizes plants into 8 habitats from 5,000 - 8,000 feet in Larimer County: grasslands, disturbed areas, riparian areas, shrublands, open rocky areas, woodlands, forests, and wet meadows (Fig. 1).

Grasslands: This habitat dominates the plains and occurs in smaller patches in the foothills and montane zones. Grasslands grow on fine-textured soils such as clay or silt. This habitat generally has grasses in distinct bunches or patches (e.g., blue grama, needlegrass and fescue) and wildflowers (e.g., blanketflower and scarlet gaura). Look for native grasslands at the Cathy Fromme Prairie Natural Area, Eagle's Nest Open Space and Soapstone Prairie Natural Area. Smaller patches of grasslands grow at Horsetooth Mountain Open Space and Devil's Backbone Open Space.

Disturbed grasslands are also common in our area, reflecting a long history of agriculture and human use. Non-native grasses from Central Asia and northern Europe (e.g., crested wheatgrass, smooth brome and tall wheatgrass) usually dominate disturbed grasslands.

Disturbed Areas: This habitat is most common in the plains, but can occur locally in other zones as well. Disturbed areas occur along major trails or following construction activity, and also reflect historical disturbances such as logging, fire, grazing, old homesteads, or mining. Human disturbance generally favors non-native species such as smooth brome, dandelion, Kentucky bluegrass, storksbill, and many mustard species.

Riparian Areas: This habitat can occur at all elevations, but is most common in the plains and foothills zones. Riparian areas occur along streams and river floodplains, and in moist spots along seasonal creeks, wetlands or seepages. Willows, cottonwoods and a wide variety of shrubs occur in riparian areas, along with buttercups, asters, and arnicas. Look for unusual species next to fallen trees, in moist pockets and in overflow areas. The Big Thompson and Cache la Poudre Rivers have excellent examples of riparian areas.

Shrublands: This habitat is most common in the foothills zone, but can occur also on dry south- or west-facing slopes in the montane zone. Shrubs dominate here due to the coarse nature

of soils as contrasted with the silty or clay dominated soils of the grasslands. Shrublands in places such as Devil's Backbone Open Space and Horsetooth Mountain Open Space support three-leaf sumac, mountain mahogany, pea family wildflowers, and many members of the mustard family.

Open Rocky Areas: This habitat is common in both foothills and montane zones. Loose rocks or rock outcrops create a complex and diverse habitat for plants. Drought tolerant plants (e.g., many members of the pea and mustard families) grow on ridgetops along Horsetooth Mountain Open Space and Devil's Backbone Open Space. Rocks can also dominate narrow gullies and canyons, where they act like mulch, providing habitat for moisture-loving plants. Many shrubs (e.g., American plum, chokecherry and hawthorn) occur in these areas.

Woodlands: This habitat is transitional between grasslands and forests in the foothills and montane zones. These open forests have widely spaced ponderosa pines and junipers with grasses and showy wildflowers (e.g., pasqueflowers and sunflowers) growing below. Forests, by contrast, provide heavy shade and generally have understory with a greater abundance of herbs and shrubs. Look for woodlands at lower to middle elevations in Hermit Park Open Space and Horsetooth Mountain Open Space.

Forests: This habitat is common in the montane zone, but also occurs on cool, wet, north- or east-facing slopes in the upper reaches of the foothills zone. Forests create dense shade habitat for shrubs and wildflowers (e.g., aster, clematis and arnica). Ponderosa pine forests generally occur in the driest forest habitats, where fire is most common. Douglas fir forests dominate on north-facing slopes, near streams or in higher elevations, where more moisture is available. Hermit Park Open Space and Horsetooth Mountain Open Space have excellent examples of native forests at higher elevations.

Wet Meadows: This habitat is most common in the montane zone in forest openings, but can occur locally along rivers and other wetlands in the foothills and plains. Similar to grasslands, this habitat is dominated by grass-like plants, but it has abundant moisture at least seasonally, usually from snowmelt. Columbines, asters and lilies are common in this habitat.

Open Space Conservation

Larimer County Open Space areas provide some of the best remaining examples of nearly wild habitats for plants and animals in the county. Open spaces are also popular places for hiking, mountain biking, running, and other outdoor activities, and can be in danger of being "loved to death" by heavy recreational use.

Native grasslands and riparian habitats are particularly important places for conservation. They provide critical habitat for many plant and animal species, but they have been highly impacted by people as the Front Range has developed. Flat grasslands with good soils support agriculture. Riparian areas, with their abundant water, attract human settlement. Larimer County Open Space areas preserve good quality native grasslands and riparian habitats.

Enjoy these special places as you look for the rich assortment of wildflowers, trees, shrubs, and grasses that grow here, but **please be careful not to pick flowers or disturb these sites!** This allows all of us, and future generations, to continue to appreciate these special species and the heritage of wild places in Larimer County.

How to Use This Guide

This guide includes the most common, showy species of plants found in Larimer County at elevations between 5,000 - 8,000 feet. To use this guide, turn to the appropriate section using the colored headers and tabs:

Wildflowers: White, orange/yellow, pink/red, blue/purple
Wildflower species are further organized alphabetically by scientific family, and then genus and species.

Grasses: Green
Grasses are further organized alphabetically by genus and species.

Woody Plants: Brown
Woody plants are further organized alphabetically by scientific family, and then genus and species.

Similar species that people might confuse are compared side-by-side for easier identification.

Look at the photographs, read the descriptions and use the ID Hints for the key characteristics that differentiate each species. Note, however, much variation exists in nature and the descriptions serve only as a guideline. In some cases, plants bloom at a different time, grow to a different height, or have different colored flowers.

If you do not find what you are looking for, look in a different colored section. However, if you still do not find the plant you are looking for, you might need to consult another reference, as this guide only covers a limited number of the over 1000 species native to this area. See the section on *Further Reading and Reference* for more information (pp. 214 -215).

Common names vary widely across plant guides. This guide uses common names (in **bold**) and scientific names (in *italics*) from *Colorado Flora*: *Eastern Slope* 3rd ed. (Weber & Wittmann, 1996).

Note

All plants in this guide are native perennials with simple leaves, unless otherwise specified.

A note about plant families: As you become more familiar with identifying plants, note the family groupings. Most plants within a family possess some similar characteristics. For example, plants in the pea family (Fabaceae) generally have alternate, compound leaves, pod fruits and irregular flowers with 5 petals. Recognizing families is a great way to improve your botanical skills, which is why this guide is organized by family within each color group.

Warning

Many plant species are poisonous if ingested, and some may cause a negative reaction with the slightest touch. While we have attempted to point out the extremely poisonous species in this guide, it is by no means comprehensive, and thus great care should be taken. No plants or plant parts should be consumed or handled without the proper knowledge or guidance.

Lisa Matthews

Jane Thomson

Prairie Wild Onion

Allium textile

Bloom: Late Spring, Summer

Family: Onion (Alliaceae)

General: Erect, up to 12" tall

Flowers/Fruit: Small, white, erect flowers, to ¼" long, clustered in terminal umbels; see also Pink Onion Group

Leaves: Basal, linear, up to 10" long, green and grass-like

Habitat: Grasslands, open rocky areas

ID Hints: Prairie wild onion emits a strong onion-like odor. It typically has 2 basal leaves per flower stalk, and up to 40 flowers per umbel. When not in flower, this and other *Allium* species closely resemble death camas (*Toxicoscordion venenosum)*, which is highly poisonous.

Did You Know? The genus name *Allium* means garlic and the species name *textile* refers to the fibers that surround the underground bulb.

Janet Sitas

Lisa Matthews

Whiskbroom Parsley & Musineon

Harbouria trachypleura & Musineon divaricatum **Bloom:** Spring

Family: Carrot (Apiaceae)

General: Erect; whiskbroom parsley up to 24" tall; musineon up to 12" tall

Flowers/Fruit: Tiny yellow flowers clustered into compound umbels

Leaves: Basal, pinnately divided. Whiskbroom parsley: linear, stiff leaf segments. Musineon: flexible leaf segments, wider in the middle or base.

Habitat: Open rocky areas, grasslands, shrublands, woodlands, canyons

ID Hints: Musineon has much smaller umbels (to 1" wide) and is shorter in stature than whiskbroom parsley (umbels to 4" wide). Also, musineon only has basal leaves while whiskbroom parsley often has one to several alternate stem leaves.

Did You Know? Both of these species bloom very early in the spring and have long-lasting flowers. Musineon also goes by the common names leafy and slender wild parsley.

Janet Sitas

Red Paintbrush Group

Castilleja spp. **Bloom:** Summer

Family: Figwort (Scrophulariaceae)

General: Erect cluster of short leafy stems up to 2' tall

Flowers/Fruit: Pink-red bracts with long narrow lobes; red-green flowers in dense spikes mostly hidden by bracts

Leaves: Lance-shaped to linear, often lobed with rounded tips; sometimes hairy

Habitat: Grasslands, wet meadows, open rocky areas, woodlands

ID Hints: Paintbrushes form a wide range of colors and leaf shapes. Most common reddish species include *C. linariifolia*, with linear leaves and narrowly lobed bracts and *C. miniata*, which grows near forests and has broader bracts and broad leaves often entire or shallowly lobed.

Did You Know? Paintbrushes are root parasites; they tap onto roots of shrubs and grasses to get extra nutrients. *C. linariifolia* is the Wyoming state flower.

Janet Sitas

Colorado Columbine, Blue Columbine

Aquilegia coerulea

Bloom: Summer

Family: Hellebore (Helleboraceae)

General: Erect, up to 3' tall

Flowers/Fruit: 5 showy bluish-white sepals, white to blue spurred petals, up to 3" across

Leaves: Alternate, palmately compound, divided 2-3 times into threes, each leaflet ¾-2" long

Habitat: Wet meadows, riparian, woodlands, forest openings

ID Hints: Very distinctive flowers that mature into clusters of 1" long, hairy seed pods. Light blue-green leaves are mostly basal; stem leaves, when present, are much smaller, which distinguishes this species from meadow rue.

Did You Know? This is the Colorado state flower. The long, backward pointing spurs contain nectar that only hummingbirds and insects with long tongues can reach.

Lisa Matthews, Jane Thomson (inset)

Smooth Brome
Bromopsis inermis **Bloom:** Summer

General: Erect non-native; 2-4' tall in loose clumps

Inflorescence: 2-8" long panicle; spikelets held on narrow to open branches

Leaves: Alternate, flat, up to 15" long and ½" wide, smooth to hairy

Habitat: Wet meadows, open rocky areas, grasslands, disturbed areas, pastures, roadsides

ID Hints: Brome grasses have a "W" across the leaf blade. Smooth brome has long, rounded, drooping spikelets and forms dense patches.

Did You Know? Smooth brome is planted for forage grass and soil stability, but once established excludes other native species. Also known as *Bromus inermis*.

Jane Thomson, Lisa Matthews (inset)

Blue Grama
Chondrosum gracile **Bloom:** Summer

General: Erect, clumped to mat-forming, 8-24" tall

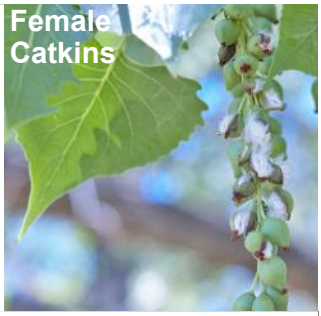
Inflorescence: Spikes with 1-6 densely flowered branches, often 1-sided

Leaves: Mostly basal, up to 10" long and 1/5" wide, flat to loosely rolled inward

Habitat: Grasslands, shrublands, disturbed areas

ID Hints: Each branch on a blue grama spike resembles a dense eyelash.

Did You Know? Blue grama is one of the dominant grass species of the short-grass prairie and is used for waterwise lawns. It is the state grass of Colorado. Also known as *Bouteloua gracilis*.



Jane Thomson, Lisa Matthews (insets)

Plains Cottonwood

Populus deltoides

Bloom: Spring

Family: Willow (Salicaceae)

General: Large erect tree (up to 90' tall and 6' in diameter); gray, deeply furrowed bark; broad rounded canopy

Flowers/Fruit: Female catkins (up to 4" long) have green oval capsules; male catkins (up to 3" long) have many tiny purple-red anthers

Leaves: Alternate, triangular, dark green above, light green underneath

Habitat: Riparian, canyons

ID Hints: Small trees can be confused with narrow-leaf cottonwood (*P. angustifolia*), which has long, linear leaves with a short stem (1/3 of blade).

Did You Know? Plains cottonwood trees are either male or female. Fruit capsules split open and release seeds attached to glossy, cotton filaments, hence the name cottonwood. These ecologically-important trees provide shady, insect-rich habitat for birds and other wildlife in riparian areas. Also known as *P. sargentii*.

Further Reading and References

Books

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Weber, W. A., & Wittmann, R. C. (2001). *Colorado flora: Eastern slope* (3rd ed.). Boulder, CO: University Press of Colorado.

Websites

Colorado Native Plant Society: www.easterncoloradowildflowers.com

Southern Colorado Wildflowers: www.swcoloradowildflowers.com

Montana Natural History Guide: nhguide.dbs.umt.edu

Dr. Mary L. Dubler, DVM: www.wildflowersofcolorado.com

Mobile Apps

Colorado Rocky Mountain Wildflowers: www.highcountryapps.com

Glossary

Achene Small, dry, one-seeded fruit. Common in the sunflower family (Fig. 2).

Fig. 2

Alternate Leaves, leaflets or branches that attach to a stem in an alternating pattern, one per node, not in pairs (Fig. 3).

Annual Plant that completes at least 1 life cycle (produces leaves, flowers, sets seed, dies) per year.

Fig. 3

Fig. 5

Anther Top portion of a stamen where pollen is stored (Fig. 4).

Awn Stiff, bristle-like extension. Common in grasses (Fig. 5).

Basal Situated at the base of a plant (Fig. 6).

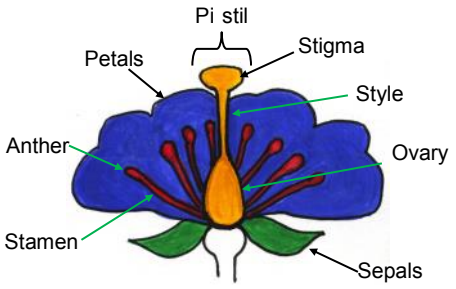

Fig. 4

Basal rosette Dense cluster of leaves arranged in a circular pattern at or near ground level (Fig. 7).

Fig. 6

Fig. 7

Berry Fleshy fruit with multiple seeds (Fig. 8).

Fig. 8

Biennial Plant with a 2-year life cycle; produces leaves in 1st year; flowers, sets seed and dies in 2nd year.

Bract Leaf-like part directly below a flower or group of flowers. Can be brightly colored (Fig. 9).

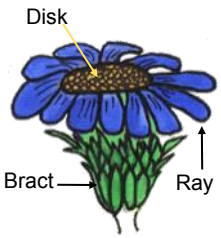

Fig. 9

Bristle Stiff hair-like structure.

Bunchgrass Grass that grows in distinct clumps; does not spread by rhizomes.

Capsule Dry, multi-seeded fruit with 2 or more sections that split open when mature (Fig. 10).

Fig. 10

Fig. 11

Catkin Dense spike or cone-like structure of unisexual flowers, usually without petals or sepals. Common in the willow and birch families (Fig. 11).

Clasping Wholly or partly surrounding a plant structure, e.g., a leaf clasping a stem (Fig. 12).

Fig. 12

Composite Multiple small flowers in dense heads that resemble single flowers. Found only in in the sunflower family. Composites can have only ray flowers (e.g., dandelions), only disk flowers (e.g., thistles), or both ray and disk flowers (e.g., daisies) (Fig. 9).

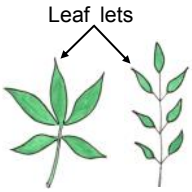

Fig. 13

Compound Divided into 2 or more similar segments, e.g., leaves divided into leaflets (Fig. 13).

Cone Mass of scales bearing seeds or pollen. Cones are "cone-shaped" in the pine family and "berry-shaped" in the juniper family.

Diamond-shaped (rhomboid) Leaf shape that is widest in the middle and tapering at both ends. Much wider and more sharply angled than elliptical (Fig. 14).

Disk flower Small tubular flower of the sunflower family, e.g., multiple disk flowers make up the dark center of the black-eyed Susan. Each disk flower has its own reproductive organs (Fig. 9).

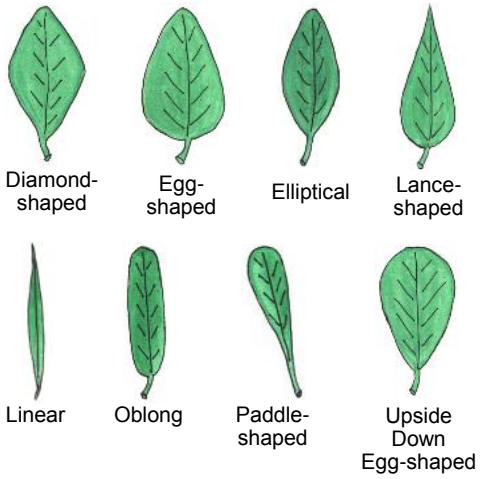

Fig. 14. Leaf Shapes

Dissected Leaf that is separated into multiple narrow segments (Fig. 15).

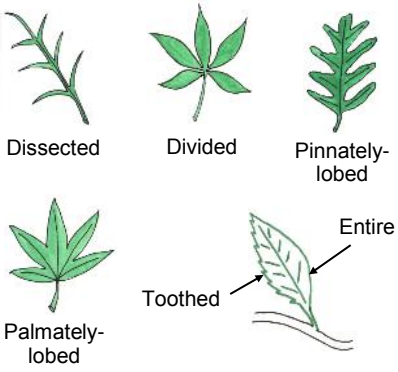

Fig. 15. Leaf Margins

Divided Leaf that is separated into lobes or segments to the base or mid-rib (Fig. 15).

Egg-shaped (ovate) Leaf shape that is widest at the base and tapering gently toward the tip (Fig. 14).

Elliptical Leaf shape that is narrow to oval, broadest in the middle and symmetrically narrowed at the ends (Fig. 14).

Entire Leaf margin without lobes or teeth (Fig. 15).

Fruit Ripened ovary containing the seeds of the plant.

Gland Small structure that secretes a sticky or oily substance.

Head Dense cluster of flowers at the end of a branch or stem. Common in the sunflower and mint families (Fig. 9).

Hip Multi-seeded, berry-like fruit of the rose family (Fig. 16).

Fig. 16

Inflorescence The entire flowering portion of one plant; flower cluster.

Keel Rib or ridge; 2 fused lower petals of the pea family (Fig. 17).

Fig. 17

Lance-shaped (lanceolate) Leaf shape that is widest near base, length clearly longer than width, tapering to a narrow point. Leaf narrower and more sharply pointed than egg-shaped (Fig. 14).

Leaf axil Located in the upper angle between a leaf and stem (Fig. 18).

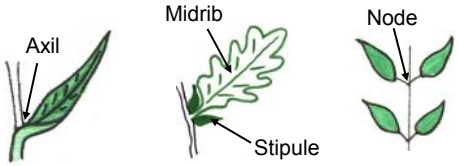

Fig. 18. Leaf Parts

Leaflet One segment of a compound leaf (Fig. 13).

Legume Dry fruit that splits along 2 sides; typical fruit of the pea family (Fig. 19).


Fig. 19

Linear Leaf shape that is long and narrow; grass-like (Fig. 14).

Lobe Rounded segment of a leaf or flower part (Fig. 15).

Margin The edge, e.g., of a leaf.

Midrib Central vein or rib of a leaf (Fig. 18).

Node Point on a stem where leaves, buds or branches are attached (Fig. 18).

Nutlet Small, single-seeded fruit with a hard, dry outer shell (Fig. 20).


Fig. 20

Oblong Leaf shape that is rectangular with rounded corners (Fig. 14).

Opposite Leaves, leaflets or branches that attach to a stem in pairs at the same node (Fig. 21).


Fig. 21

Ovary Basal portion of a pistil; contains the seeds (Fig. 4).

Paddle-shaped (spatulate) Leaf shape that is wide and rounded toward the outer end, distinctly narrowing near base (Fig. 14).


Fig. 22

Palmate Compound leaf shape that is separated into leaflets radiating from a single point, similar to fingers from the palm of a hand (Fig. 22).

Panicle Inflorescence that is branched 2 or more times, maturing from the bottom upwards (Fig. 23).

Perennial Plant that lives 3 or more years; some do not flower in 1st year.

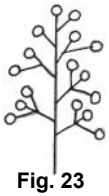
Fig. 23

Petal Modified leaf surrounding the pistil(s) and/or stamens; can be any color (Fig. 4).

Pinnate Leaf shape that has leaflets or lobes arranged in 2 rows on opposite sides of a central axis; feather-like (Fig. 15).

Pistil Innermost flower part made up of a stigma, style and ovary; the female part of the flower (Fig. 4).

Pod Dry fruit that splits at maturity. Common in the legume, mustard and evening primrose families.

Pore A small opening allowing the movement of gasses in a plant.

Prickle Small, sharp outgrowth with a broad base growing from the epidermis or bark, e.g., prickles on ponderosa pine cones and rose stems.

Prow A pointed, projecting front part, similar to the bow of a ship.

Raceme Inflorescence with each flower on a single stalk; the stalks are attached to a central, unbranched axis (Fig. 24).

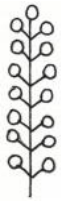

Fig. 24

Ray flower Strap-shaped flower of the sunflower family, e.g., multiple ray flowers make up the outer circle of petals on a daisy. Each ray flower has its own reproductive organs (Fig. 9).

Reflexed Plant part this is bent backward or downward.

Root parasite Plant that attaches to roots of other plants or fungi to gather nutrients. May have green or colored leaves, e.g., Indian paintbrush.

Scale Overlapping flat, flakey or woody structures, e.g., juniper leaves and cones.

Sepal Small leaf-like parts under the petals, usually green; the outermost whorl of a flower (Fig. 4).

Sheath Portion of a leaf that surrounds the stem. Common in grasses (Fig. 25).

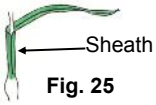

Fig. 25

Shrub Woody perennial with multiple stems growing from ground level.

Simple Leaf that is not divided into distinct leaflets, but can have lobes that almost reach to the midrib, e.g., pinnately-lobed (Fig. 15).

Smooth Not rough; hairless.

Spike Long, unbranched inflorescence with flowers attached directly (without a stalk) to the axis (Fig. 26).

Spikelet Smallest unbranched flower cluster in grasses and sedges.

Fig. 26

Spine Sharp, slender, stiff modified leaf, e.g., cactus spine.

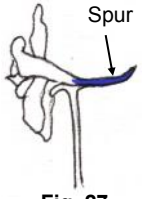

Fig. 27

Spur Hollow extension of a petal or sepal. Common in the pea and buttercup families (Fig. 27).

Stamen Male, pollen-producing part of a flower, made up of a filament and anther (Fig. 4).

Stigma Top of the pistil where pollen collects (Fig. 4).

Stipule Small leaf-like or papery structure at the base of the leaf stalk; usually in pairs (Fig. 18).

Style Narrow part of the pistil that connects stigma to ovary (Fig. 4).

Taproot Large, central root stem from which multiple smaller roots grow.

Tendril Slender clasping or twining growth used for support or climbing.

Tepals Petals and sepals that are the same color and nearly equal in size.

Terminal At the tip; farthest from point of attachment.

Thorn Sharp, woody, stiff modified stem, e.g., thorns on a wild plum.

Toothed Having small lobes or points along the margin; can be rounded or pointed (Fig. 15).

Tree Long-lived, woody perennial with a single dominant stem.

Two-lipped Type of irregular flower; petals fused at the base form a tube and split into 2" "lips" at the end, e.g., penstemon flowers (Fig. 28).

Fig. 28

Fig. 29

Umbel Flat-topped or convex inflorescence with all flower stalks attaching to the same point, similar to an umbrella (Fig. 29).

Upside down egg-shaped (obovate, oblanceolate) Leaf shape that is narrowest at base, broadening toward the tip (Fig. 14).

Vine Plant that trails or climbs by attaching to plants or other objects, e.g., clematis.

Whorl Circle or ring of like parts, such as leaves or flower parts, with three or more per node (Fig. 30).

Fig. 30

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