

Glossary

Terms in **bold print** within definitions are themselves defined in the glossary. Refer also to separate sections on *Leaf Terms* and *Flower Terms* at the end of the general section below.

Achene—a dry, non-fleshy fruit that contains a single seed and does not break open when ripe.

Adventitious roots—roots originating aboveground on a stem and growing into the ground.

Alkaloid—any of a large number of pharmacologically active, potentially toxic, nitrogen compounds produced by plants.

Allelopathic—producing substances (allelochemicals) that are toxic to or inhibit the growth of other plants.

Annual—a plant whose entire life cycle (**germination**, growth, flowering, setting seed, death) occurs within one year (contrast **biennial**, **perennial**).

Apomixis—production of viable seeds without fertilization having occurred; **asexual** production of seeds.

Asexual—occurring without sexual union, as in **apomixis** or, more commonly, **vegetative reproduction**.

Biennial—a plant that lives two years, flowering and setting seed in the second year (contrast **annual**, **perennial**).

Biomass—informally, a volume (not mass) of living or dead organic material (for the purposes of this book, all that “stuff” a weed worker must deal with).

Technically, *biomass* refers to the weight of all living matter per given unit area. Weight of dead organic material is most properly called *necromass*.

Bolting—rapid elongation of a shoot just before flowering.

Bract—reduced leaf-like structure at the base of a flower or **inflorescence**.

Bulb—fleshy underground shoot that stores carbohydrates and is capable of **vegetative reproduction**.

Bunchgrass—a **perennial** grass that cannot spread vegetatively; all of the buds are located at ground level, at the base of the stems.

Cambium—a layer of living tissue between the xylem (water-conducting tissue) and phloem (food-conducting tissue); in a tree, cambium is found in the current (outermost) year’s growth ring. It is the tissue that one severs when girdling a tree.

Chaparral—vegetation type dominated by evergreen shrubs, found beyond the zone of direct coastal influence.

Coastal scrub—vegetation type dominated by shrubs and found at the coast.

Containment—a control strategy short of **eradication** aimed at preventing or limiting the spread of an invasive species.

Eradication—complete elimination of a species, including seeds, from a given area; local extinction.

Foliar—pertaining to leaves (foliage). Foliar application of an herbicide means the herbicide is sprayed on the leaves.

Forb—any herbaceous plant that is not grass-like (i.e., not a grass, rush, or sedge).

Funicle—the stalk of an ovule or seed.

Germination—sprouting of a seed or spore.

Herbaceous—adjective describing non-woody plants, whether **annual**, **biennial**, or **perennial** (noun form: herb).

Hybridize—to interbreed with different species or sub-species.

Invasive plant—a successfully reproducing species of plant that is, or has the potential to become, unacceptably abundant in a particular plant community. Invasive plants in native ecosystems may alter plant community composition, structure, and function, and diminish habitat value.

Lateral roots—underground roots spreading outward rather than downward (contrast **taproot**).

Monospecific—single-species; e.g. a stand of a single plant species containing no other plant species (or, containing very few other plant species—the term is often used somewhat loosely, rather than strictly literally).

Native plant—a plant species or sub-species that evolved in its present location or dispersed to its present location unaided by humans.

Naturalized plant—a **non-native plant** species that reproduces successfully and is

thoroughly established in its introduced range. Plants considered “naturalized” are usually not considered “**invasive**.” They may have minimal ecological impact, or be restricted to disturbed habitats such as lawns and roadsides, rather than able to spread into relatively undisturbed habitat.

Nectar—sweet fluid, attractive to pollinators, secreted by many plants in glands at the base of the flower.

Nitrogen-fixing—incorporating nitrogen gas from air into inorganic nitrogen compounds usable by plants; carried out by soil bacteria, especially by bacteria associated with the roots of legumes (Fabaceae, pea-family plants).

Non-native plant—a plant found outside the evolved or historic range of its species; not all non-native plants are **invasive**. *Note:* plants and seeds may be dispersed to new locations over long distances by wind, water, and birds. Such newcomers could be considered non-native unless and until they survive, reproduce, and over generations, co-evolve with their new ecosystem. For the purposes of this book, non-native plants are those introduced by humans, whether deliberately or unintentionally.

Perennial—a plant that lives more than one year (contrast **annual**, **biennial**).

Phenolic compounds—secondary metabolic compounds produced by plants; these compounds may attract pollinators or seed dispersers, defend against predators, or be poisonous to competitors.

Photosynthesis—the process by which plants produce sugars (photosynthate) from water and carbon dioxide in the presence of chlorophyll using light energy.

Pollination—transfer of pollen from an anther to a stigma (receptive surface of a

flower); required for fertilization and **sexual reproduction** in plants.

Rhizome—a horizontal stem growing below the soil surface; may store carbohydrates or function in **vegetative reproduction** (compare **stolon**, **runner**).

Riparian—pertaining to or growing along watercourses.

Rootball—a non-technical term referring to the major bulk of a compact root system, (e.g., the dense mass of roots of *Cortaderia spp.* excluding the slender roots extending from the main mass).

Root crown—a non-technical term referring to the top portion of the underground root system.

Rosette—growth form characterized by a cluster of leaves radiating from a central point, usually close to the ground at the base of the stem (basal rosette); a common growth form of **biennial** plants in their first year.

Runner—a slender **stolon** that roots at the **nodes** or tip, effecting **vegetative reproduction**.

Seedbank—viable seeds in the soil.

Semi-shrub—a generally **herbaceous**, **perennial** plant capable of developing woody stems.

Senescence—late life stage of a plant (shortly after reproduction in **annuals**) characterized by loss of vigor and gradual death (from the Latin *senex*, old man).

Sensitive habitat—areas of special concern due to the presence of rare, threatened, or endangered species, or of vulnerable features such as watercourses.

Serpentine—soil derived from weathered serpentinite rock, which is low in the nutrients nitrogen, phosphorous, and calcium, and high in magnesium, nickel, and chromium; also refers to the unusual vegetation found on serpentine soils.

Sexual reproduction—process by which new plants arise from seeds which developed from ovules fertilized by pollen (contrast **vegetative reproduction**).

Shrub—a woody, usually multi-stemmed plant, generally smaller than a tree.

Stolon—a stem that creeps along the ground and produces roots at the **nodes** or tip, giving rise to a new plant through **vegetative reproduction**.

Sucker—a shoot originating from below ground, e.g., from a root.

Taproot—a larger, main root, usually vertical, from which smaller roots branch out; typically found in dicots and not in grasses.

Tiller—an erect shoot originating underground; (verb:) to reproduce vegetatively through tiller production.

Vegetative reproduction—process by which new plants arise without **sexual reproduction** occurring, e.g., from **bulbs**, **stolons**, **runners**, **tillers**, or **suckers**.

Viability—ability of a seed to germinate. *Note:* the length of time a seed remains viable varies widely between species and depends on environmental conditions affecting the seed. Plants producing seeds that remain viable for many years in the soil are said to have high **seedbank** longevity.

LEAF TERMS

Alternate—leaf arrangement in which a single leaf emerges from each **node** on alternating sides of the stem (compare **opposite**).

Bipinnate—twice **pinnate**; the primary pinnae (**leaflets**) are also pinnately **divided**.

Compound leaf—a leaf composed of multiple **leaflets** (compare **simple leaf**).

Divided—cut into distinct parts to the midrib or base.

Elliptic-ovate—leaf shape intermediate between elliptic (the shape of an ellipse, a narrow oval) and ovate (egg-shaped, wider at the stem end).

Lanceolate—lance-shaped leaf: longer than it is wide, with the widest point below the middle of the leaf.

Leaflet—single division of a **compound leaf**.

Lobe—rounded segment of a leaf; a leaf may be deeply lobed and yet not truly **divided**.

Node—a joint of a stem; a place where leaves and branches join a stem.

Opposite—leaf arrangement in which two leaves emerge from each **node** on opposite sides of the stem (compare **alternate**).

Pinnate—leaf arrangement of a **compound leaf** with **leaflets** (pinnae) opposite each other like a feather.

Serrate—saw-like leaf margin; having a sharply toothed leaf margin with teeth pointing forward (compare **toothed**).

Sheathed—partly surrounded by another organ, as a stem partly surrounded by the base of a leaf.

Simple leaf—undivided; not composed of multiple **leaflets** (compare **compound leaf**).

Toothed—leaf margin with teeth pointing outward rather than forward (compare **serrate**).

Triangular-ovate—leaf shape more sharply three-angled than strictly ovate (egg-shaped, wider at the stem end).

FLOWER TERMS

Awn—a slender bristle at the tip or on the dorsal (back) surface.

Floret—a small flower; an individual flower within a cluster (e.g., within a **spikelet** of a grass).

Inflorescence—a cluster of flowers on a plant; a reproductive structure with multiple flowers.

Panicle—an **inflorescence** structured as **racemes** that are themselves branched, extending from a central axis.

Plume—an **inflorescence** that appears feather-like.

Raceme—a branched **inflorescence** arranged with flowers attached individually by pedicels (stalks) to a central axis; lower flowers mature earliest.

Spike—an **inflorescence** arranged with flowers attached individually as in a **raceme**, but without pedicels (unstaked).

Spikelet—a small **spike**; the smallest flower cluster of a grass.

Terminal—at the tip, or terminus.

Umbel—an **inflorescence** structured as a condensed **raceme** with elongated pedicels; the flowers form a flat-topped or convex shape like an umbrella (characteristic of the family Apiaceae).