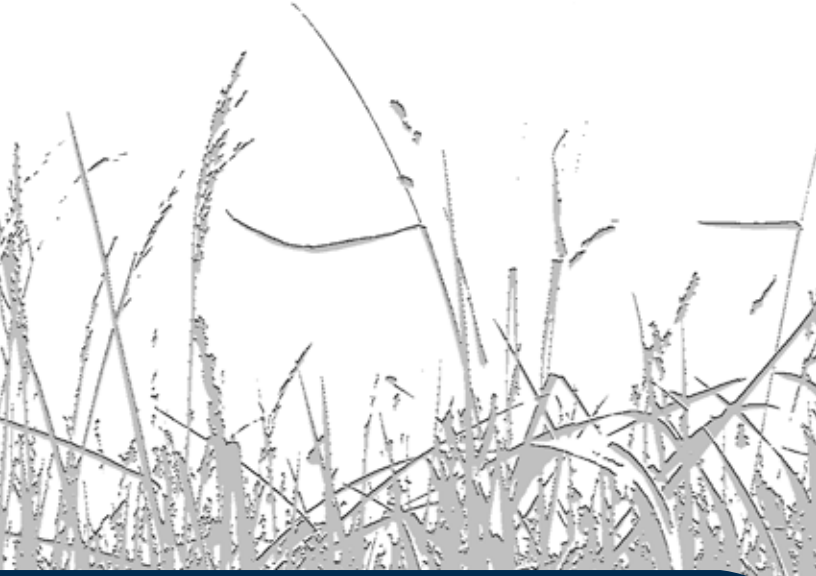
Common Weeds of the Yard and Garden

a guidebook



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Utah State University
COOPERATIVE EXTENSION

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Contents

Introduction

This guide is meant to serve as a means of identifying common weeds in the home landscape and supplying enough information for readers to make educated decisions about their properties. It is not an exhaustive guide to the 50 plants contained herein, nor is it a comprehensive summary of all weeds that may be present on readers' properties.

Some weeds are toxic, invasive and/or noxious. Some weeds are not aesthetically pleasing, but are otherwise benign. Once weeds are identified, decisions must be made as to what action, if any, should be taken regarding them. Readers must bear in mind that weeds are not respecters of property lines, and that individuals' properties are part of a wider ecological community. What happens on one property may affect land outside of it, and vice versa.

Using This Book:
Each of the 50 common weeds mentioned in this book occupies one full spread of the publication, with written information on the left side and photos of the weed on the right. Although the common name appears first on the page, the 50 weeds are listed in alphabetical order by scientific family names, and within families by scientific generic and specific names (both scientific and common names are those officially accepted by the Weed Science Society of America, as of September 2009). Listed underneath the names are the following:

Location: The location in the landscape where the weed is commonly found.

Occurrence: The time of year when seed germination,

seedling emergence, flowering, and seed production may occur, if known.

Description: Mention of the weed's life cycle and a description of its physical appearance.

This book should be used with the companion online guide (extension.usu.edu/weedguides), which includes the following additional information about each weed:

Origin: The place of origin of the weed, if known.

Weedy Characteristics: Attributes of the plant that cause it to be undesirable.

Control: Mention of control tactics that generally do not change over time, namely preventative, cultural, or mechanical methods. Not all weed control tactics are noted or described. Because herbicide recommendations can change often and become quickly outdated, information on currently accepted chemical control can be obtained through consultation with county or other local weed control experts. Local experts can also provide information on any available biological controls.

General Facts: Interesting or important facts about the weed, such as properties that make it beneficial or detrimental to humans, animals, or other plants. Status of the weed as noxious or invasive in the United States and Canadian provinces is also mentioned.

Other Common Names: Other local names by which the weed might be known.

Redroot pigweed

Amaranthus retroflexus L.

Amaranthaceae (Pigweed family)

Location: gardens, waterways, roadsides, waste areas, orchards, and cropland

Occurrence: Redroot pigweed grows best in warm temperatures. Seed germination and seedling emergence begin in late spring and continue throughout the season, unless daytime temperatures exceed 95°F. Plants flower and produce seed from mid-summer until frost.

Description: An upright summer annual, generally growing between 1 and 6 feet in height. The common name 'redroot' refers to the pinkish-red color at the base of the stem (sometimes the whole stem) and the taproot. Vertical white veins are often visible down the length of the stem. The stem is often branched above, and the primary stem and branches are somewhat hairy, especially at the upper ends. Leaves are oval with a tapering point, have conspicuous veins and generally measure 1/3 inch - 3 inches long. Borne on stalks commonly as long as the leaves themselves, leaves are arranged alternately along the stem and branches and are occasionally tinted red. Small, light green flowers subtended by bristly bracts occur in dense, branching spikes in leaf axils and at the ends of branches. Flower spikes often have a pinkish tint. Each female flower produces a single tiny seed encased in a small bladder that splits open at maturity. The seed is round, flat, shiny and black.

Bristly flower spikes

Weed with conspicuous veins

Mature plant

Red root and stem

Common yarrow

Achillea millefolium L. (western yarrow: Achillea millefolium L. var occidentalis DC, Achillea lanulosa Nutt., Achillea millefolium ssp. lanulosa (Nutt.) Piper)

Asteraceae (Sunflower family)

Location: turfgrass, roadsides, waste areas, public parks, dry hillsides, overgrazed rangeland, open woodland, and grassland

Occurrence: Yarrow is dormant in the winter months, although leaves can remain green. Rhizomes resume growth in spring. Flower stalks develop by mid-summer, and flowers are generally produced from mid-summer through early fall, followed by mid-autumn seed maturation. Seeds can germinate immediately, especially if temperatures are between 65°F and 75° F. Flower stalks subsequently dry out and become brittle.

Description: A low-growing, spreading perennial with upright flower stalks that can reach 3 feet in height. Each plant produces one to several flower stalks, which are often branched and covered by fine hairs. Leaves are featherlike, with tiny, fine leaflets lining each side of the leaf stem. Leaves are arranged along the stem at even intervals. Leaves grow between 1 and 6 inches long and 1/4 - 1 inch wide. Flower heads are borne in flattened or umbrella-shaped clusters at stem tops. Each individual flower head consists usually of five, 1/8 inch long, white to pinkish-white ray flowers surrounding 10-20 pale yellow disk flowers.

Feather-like leaves

Flowering plant

Umbrella-shaped flower clusters

Canada thistle

Cirsium arvense (L.) Scop.
Asteraceae (Sunflower family)

Location: gardens, waste areas, roadsides, cropland, pastures, rangeland, waterways, and native plant communities

Occurrence: Germination takes place mainly in the spring, but some germination also occurs in the autumn. Autumn seedlings form a rosette and overwinter in that stage. Spring seedlings start emerging when temperatures average 40°F. In late spring, rosettes produce a flowering stalk, and approximately 2 months after seedling emergence, flower buds develop. Flowering occurs from mid-to-late summer, and seeds mature 8-10 days after flowers open. Shoots are also produced from the roots throughout the season. Aboveground vegetation dies with hard frost.

Description: An upright creeping perennial. Mature leaves are strongly serrated or have deep, irregular lobes with stiff, spiny tips. Stems are occasionally sparsely hairy, grow 1 - 4 feet tall, are branched above, and bear leaves in an alternate arrangement. Leaves are 1 - 6 inches long, 1/4 - 2 inches wide, and clasp the stem with no stalk. Small, faded purple to pink (rarely white) flower heads, which are 1/2 - 3/4 inch in diameter, develop at branch tips, often in clusters of one to five flower heads. Flower heads give rise to seed heads that contain many 1/8 inch long, golden-brown, single-seeded fruits with fluffy, tan hairs loosely attached to the top of each fruit.

Flowering plant

Flower head

Rosette

Bull thistle

Cirsium vulgare (Savi) Tenore
Asteraceae (Sunflower family)

Location: lawns, roadsides, waste areas, waterways, cropland, pastures, overgrazed rangeland, woodland, and grassland

Occurrence: The majority of bull thistle seeds germinate in late summer or early autumn, although occasionally seeds will germinate in spring. Seedlings form a rosette which often grows slowly throughout winter and develops a sturdy tap root. In the second year, a flowering stalk is produced by early summer. Flowering generally occurs from mid-to-late summer, followed closely by seed production. The plant then dies and turns brown and brittle.

Description: An upright biennial. Young seedling leaves are oblong in shape, but mature rosette leaves are saw-toothed and spiny with cottony hairs on the undersurface. Rosette leaves generally grow 2 - 12 inches long and 3/4 - 4 inches wide. Leaves are dark green and are arranged alternately along the rigid flower stalk, that grows 1 - 5 feet tall and can be highly branched. Stem leaves have distinctly pointed, spine-tipped lobes, with bases that clasp the stem to form spiny wings. Purplish/pink flower heads, 1 to 2 inches diameter, are borne on branch tips, and are subtended by an egg-shaped cluster of spiny bracts. Flower heads give rise to seed heads that contain many single-seeded fruits, each topped by a plume of feathery white hairs.

Flowering plant

Rosette

Mature leaf

Flower Head

Feathery seed head

Curlycup gumweed

Grindelia squarrosa (Pursh) Dunal
Asteraceae (Sunflower family)

Location: waste areas, roadsides, overgrazed rangeland, and cropland

Occurrence: Most curlycup gumweed seeds germinate and begin growth in late spring, when daytime temperatures are between 62° and 77°F. Spring-germinating plants form a rosette the first year and remain in the rosette stage until the second year when stems and flowers are produced. Some seeds germinate in the fall, however, and behave like winter annuals, completing their life cycle the following season. Flowering takes place from mid-summer to early fall, and average length of bloom time is 41 days. Seed ripening takes place by mid-fall.

Description: An erect biennial or short-lived perennial with one to several green, reddish, or whitish branching stems. Stems grow 1-3 feet tall. Leaves are borne alternately along the stem, and typically clasp the stem, with no stalk. Leaves have an oval or linear shape with serrated margins, are 1/2 - 2 1/2 inches long, and are covered with glands that exude a sticky resin. Bright yellow flower heads are borne at the tip of each branch, held in bright green cups of tiny, resinous bracts that curl in hooks away from the flowers. Flower heads grow up to 1 inch across and are sticky with resin. As the plant matures, flowers are replaced by tiny, ridged, four-sided, off-white seeds, to which two to three bristles are attached at the tip.

Pre-flowering plant

Reddish stems

Flower Heads

Sticky resinous bracts

Prickly lettuce

Lactuca serriola L. (Lactuca scariola L.)
Asteraceae (Sunflower family)

Location: roadsides, waste areas, gardens, orchards, cropland, overgrazed pastures, and nurseries

Occurrence: Most prickly lettuce seedlings emerge in the fall, developing a rosette with a long taproot. The rosette overwinters and is visible as soon as snow melts (a small percentage of seedlings do not overwinter, but emerge in early spring). A flower stalk develops from the rosette, and flowering occurs from mid-summer to late fall. Plants die following flowering.

Description: An upright winter annual or biennial with a stalk that grows 1- 5 1/2 feet tall, the lower third of which occasionally is covered in small spines. In the rosette stage, leaves are light-green, oval-shaped, with slightly wavy margins (quite similar to dandelion leaves). Leaves on the stalk have no stem, are twisted at the base and are 2-10 inches long and 1/2 - 3 inches wide. The leaves are arranged alternately, being generally deeply lobed with prickly edges, although lower leaves are sometimes not lobed. A row of spines runs along the underside of the leaf midrib. Many 1/2 to 3/4 inch diameter yellow flower heads are borne on branching stems at the top of the stalk. Each flower head produces approximately 20 flattened, tan seeds that are each attached to a silky parachute, enabling the seed to travel by wind.

Mature plant

Rosette

Spiny leaf midrib

Flower head

Seed head

Pineappleweed

Matricaria discoidea DC (Chamomilla suaveolens Pursh Rydb., Matricaria matricarioides (Less.) Porter)

Asteraceae (Sunflower family)

Location: lawns, gardens, walkways, pavement cracks, roadsides, waste areas, waterways, and cropland

Occurrence: Pineappleweed seeds begin germinating in early spring and continue germination throughout the growing season. Flowering occurs all season as well, beginning in late spring.

Description: A summer annual that grows 3-16 inches tall, but is most commonly shorter than 6 inches. Seedlings form a feathery rosette and become bushy and highly branched with maturity. Branches are 1/2 - 4 inches long. Finely dissected leaves, growing 3/8 - 2 1/2 inches long and 1/16 - 3/4 inches wide, are arranged alternately on branches. At mature branch tips, many greenish-yellow flowers form dome- or cone-shaped heads, 3/16 - 3/8 inch in diameter, with no petals. Flower heads are cradled by a cup of bracts with dry, papery margins. Each flower in the head is replaced by a light-brown, single-seeded fruit.

Plant with flower buds

Flower head with papery bract margins

Rosette

Common groundsel

Senecio vulgaris L.
Asteraceae (Sunflower family)

Location: lawns, gardens, roadsides, waste areas, plant nurseries, cropland, and pastures

Occurrence: The majority of common groundsel seeds germinate in early to mid-spring and in autumn, although germination can take place throughout the growing season. Flowering begins 5-6 weeks after seedling emergence. Seeds ripen within 5-11 days of flowering, and most are able to germinate immediately. It is possible for several generations of common groundsel to be produced in one season.

Description: An erect winter annual, occasionally biennial, that grows 6-18 inches tall. Stems are fleshy, ribbed, and hollow, with some cottony hairs. Stems are often purplish, especially at the lower end. Leaves are arranged alternately along the stem, lower leaves resting on a short stalk, upper leaves clasping the stem. Mature leaves, 3/4 - 4 inches long and 1/4 - 1 3/4 inches wide, are fleshy and deeply lobed with notched margins. Veins on the underside of leaves are usually cottony-hairy. Upper stems branch and terminate in flower heads, which each consist of a tight, 1/4 - 1/2 inch diameter cluster of many tiny tubular disk flowers. The tips of the flowers are just visible above a 1/4 - 1/3 inch long, green, cylindrical cup of bracts with black tips. At maturity, the cup peels back, revealing many single-seeded, 3/4 inch-long brown fruits with soft white hairs at the tip, which collectively form a dandelion-like globe.

Flowering plant

Flower heads and seed head

Annual sowthistle

Sonchus oleraceus L.
Asteraceae (Sunflower family)

Location: gardens, roadsides, cropland, waste areas, waterways, and native plant communities

Occurrence: Annual sowthistle seeds germinate from spring to autumn, but mostly in late spring. As early as 6 weeks after germination, seedlings form a rosette. In spring, flower stalks follow soon after rosette formation, and by 9 weeks after germination flowering can take place. Flower heads can bloom between mid-summer and mid-fall. Flowers open for 2 consecutive days, and seeds are produced 1 week after flowering.

Description: An erect summer annual that grows from 1-4 feet, usually with a single, hollow, sometimes purplish stem, branching near the top. Leaves are dark green to bluish green, with toothed, slightly prickly margins, and are alternately arranged along the stem. Lower leaves have one to three pointed lobes on either side of the mid vein and clasp the stem with a pair of pointed lobes. Upper leaves are smaller and also clasp the stem, but are not as deeply lobed as lower leaves. Leaves are 1 1/2 - 8 inches long, and 1/4- 4 inches wide. Yellow, flat-topped flower heads occur in clusters at branch tips. Each flower head is 1/4 - 3/4 inch in diameter and is held in a 1/2 inch-tall cup of green bracts. Each fruit is 1/8 inch long and golden brown with white feathery hairs at the tip. Seed heads collectively form a dandelion-like globe.

Flower head

Mature plant

Seed head

Lower leaf

Rosette

Dandelion

Taraxacum officinale G.H. Weber ex Wiggers (Taraxacum vulgare Lam.)
Asteraceae (Sunflower family)

Location: lawns, gardens, roadsides, waste areas, parks, cropland, orchards, overgrazed rangeland, pastures, and woodland

Occurrence: Seedlings emerge throughout the growing season. In the first year of growth dandelions generally form a rosette, but the plant does not flower. Flowers are produced in all subsequent years. Flowering begins in mid-spring and continues throughout the growing season, with most occurring at temperatures between 60° and 70°F. Flower heads bloom for 3-4 days, and are open in sunny, warm conditions and close up in rainy or cold conditions. Seed heads develop within 2 weeks of flowering. Seeds are able to germinate immediately.

Description: A simple herbaceous perennial, which generally grows between 1 inch and 2 feet tall. Leaves are arranged in a low-growing rosette, and are 2-12 inches long and 1/2 - 4 inches wide. Leaf shape varies, from having wavy or toothed margins to having deep, pointed lobes. The rosette produces one or more hollow flower stalks that grow 2 - 24 inches tall, depending on conditions. A single, bright-yellow flower head develops at the apex of each stalk, and is 3/4 - 2 inches in diameter. The seed head is composed of many 1/8 inch-long rough, brown, oblong fruits with white hairs attached at the tip, collectively forming a globe shape.

Rosette

Flowering plant in typical setting

Flower Head

Seed head

Western salsify

Tragopogon dubius Scop. (Tragopogon major Jacq.)
Asteraceae (Sunflower family)

Location: gardens, roadsides, waste areas, cropland, field edges, rangeland, open woodland, and natural plant communities

Occurrence: In the first year of growth, seedlings form a rosette which looks like a tuft of grass that dies back to the root with frost. The following spring a flowering stalk forms, which can produce blooms from mid-spring through early fall. Flower heads are open on sunny mornings and close up in the afternoon.

Description: An upright biennial. Sometimes bluish-green, the linear leaves grow between 2 and 12 inches long, and not more than 1/4 inch wide. Young rosette leaves are often somewhat woolly. The flowering stalk grows 1-3 feet tall, is hollow, and sometimes branched, with smooth leaves arranged alternately on the stem. Each stem has one flower head at the top—made up of many yellow ray flowers—that is 1 - 2 1/2 inches in diameter. Stems are enlarged immediately below the flower head, and 8-13 linear bracts extend outward beyond the flowers. Each flower produces a 3/4 inch-long tan seedpod. The seed pod has a narrow, elongated tip with hairy off-white bristles that form a parachute shape. The collective seed pods form a globed-shaped seed head that can be up to 4 inches in diameter.

Plant with closed seed heads and flower heads

Seed head

Rosette

Flower head

Houndstongue

Cynoglossum officinale L.
Boraginaceae (Borage family)

Location: gardens, roadsides, waste areas, rangeland, pastures, cropland, and public lands

Occurrence: Houndstongue seeds germinate from early to late spring. In the first year of growth seedlings form a rosette. The rosette dies back with hard winter frost, but new leaves are regenerated the following spring from the root. A flowering stalk is then produced and flowers appear from early to mid-summer. Flowers are succeeded by seeds encased in burs. The plant dies and turns brown after producing seed.

Description: An upright biennial. Flower stalks grow between 8 inches and 4 feet tall, with leaves arranged alternately up the stem. Leaves are rough and hairy, and lower leaves are borne on short stalks and grow up to 12 inches long and 3 inches wide. Upper leaves are smaller, narrower, and stalkless. The entire plant is covered with short soft hairs. Flowers are dark red and bell-shaped, with five petals. Borne on 3/16- 3/8 inch-long stalks, flowers grow along the ends of nodding stems that branch off from the upper leaf axils on the primary stalk and elongate as flowers are produced. Flowers measure approximately 3/8 inch across and are subtended by five sepals. Each flower produces four flattened, tear drop-shaped burs, arranged in a pyramidal pattern. Burs are single-seeded, 1/4 inch long and have a hard casing covered with short barbs.

Rosette

Flowers

Desiccated plant

Burs with short barbs

Shepherd's-purse

Capsella bursa-pastoris (L.) Medik.
Brassicaceae (Mustard family)

Location: gardens, lawns, pastures, cropland, roadsides, and waste areas

Occurrence: Seeds may germinate throughout the growing season, although most germinate in spring or autumn, between 41°F and 86°F. Flowering begins in mid-spring and takes place all season. Spring seedlings produce seeds within the same growing season, but later plants overwinter as rosettes and produce seeds the following year. Mature seeds are often dormant, and remain so at least until the following spring.

Description: A summer or winter annual with erect stems 4 - 20 inches tall. Rosette leaves are 1-6 inches long and 1/4 -1 inch wide, are borne on short stalks, and are usually deeply lobed. Leaves on the stem are narrow—no more than 4 inches long and 1/2 inch wide—with toothed margins. Stem leaves occur infrequently, are arranged alternately on the stem, and clasp the stem with a pair of pointed lobes at the base. Sparse hairs cover stems and leaves. Flowers are produced at stem tips and are borne on stalks attached to the central stem. Flowers are white, four-petaled and measure 3/8 inch across. Flowers are initially clustered, but as flowers mature stalks elongate, and seedpods develop with generous space between them. Each seedpod is a 3/8 inch long flattened, heart-shaped bladder with a purplish tinge, containing about 20 minute, orange-brown, oblong seeds.

Rosette

Mature plant

Heart-shaped seed pods

Hoary cress

Cardaria draba (L.) Desv.
Brassicaceae (Mustard family)

Location: gardens, roadsides, waste areas, waterways, cropland, and rangeland

Occurrence: Hoary cress begins growth in early spring as a rosette. A flower stalk follows, which produces flowers by late spring. Seeds mature by mid-summer. Plants can bloom and produce seed a second time in late summer. As long as adequate moisture is available, plants can continue to grow vigorously until frost.

Description: A rhizomatous, creeping perennial that grows up to 2 feet tall. The slightly hairy stem is usually erect, but can fall prostrate as it matures. Leaves are oblong to lance-shaped, have a bluish-green cast, and grow up to 4 inches long and 1 1/2 inches wide. Leaves on the stalk have no stem. Flowers are white, 1/4 inch in diameter, and borne in dense clusters at the tops of stems. The seedpod is an inflated, upside-down, heart-shaped bladder up to 1/8 inch long and 1/4 inch wide, divided into two chambers. Each seedpod chamber contains one or two brown, oblong seeds that are approximately 1/16 inch long.

Flowers

Inflated seed pods

Flowering plant

Blue mustard

Chorispora tenella (Pallas) DC.
Brassicaceae (Mustard family)

Location: roadsides, waste areas, fields, pastures, dry meadows, and hillsides

Occurrence: Most blue mustard seeds germinate in late summer and autumn, but some will also germinate in early spring. Fall germinating plants overwinter as rosettes, which produce stems in early spring. Flowering occurs shortly thereafter, succeeded by seed development as early as 10 days after flowering. Flowering and seed production continue until early summer, and the plant dies back by mid-summer.

Description: A winter annual that grows 4-18 inches tall, with one to several stems. Most plant parts are covered with tiny gland-tipped hairs. Apart from those of the rosette, leaves are arranged alternately up the stem, are oblong or lance-shaped, and are 3/4 - 3 1/2 inches long and 1/8 - 1 inch wide. Leaves have slightly toothed, to wavy, to deeply lobed margins. Lower leaves are borne on a short stalk, while upper leaves are generally smaller and stalkless. Flowers are borne singly on short stalks along the stem. Flowers have four 1/2 inch long, light purple petals which emerge from a 1/4 inch long purple tube and form the shape of a cross. The fruit is a long, upward-curving cylindrical pod that grows 1- 1 3/4 inches long and tapers to a point. At maturity, the pod splits apart transversely into two-seeded segments that retain the seeds. Seeds are rounded, reddish-brown and about 1/16 inch in diameter.

Flowers

Glands on seed pod

Mature plant

Common chickweed

Stellaria media (L) Vill.
Caryophyllaceae (Pink family)

Location: lawns, gardens, greenhouses, fields, and pastures

Occurrence: Most common chickweed germination takes place during the fall and early spring, although in shady, moist conditions chickweed can germinate and grow throughout the season. The plant does best in temperatures between 53° and 68°F. Seeds will often germinate immediately following maturation, and seedlings grow vigorously, flowering and setting seed within 5 weeks of emergence.

Description: A summer or winter annual. Stems are highly branched, slender, 4-20 inches long and typically prostrate, with ascending tips. A single line of hairs runs along the stem, alternating sides between stem joints. Roots often form at stem joints, and each joint bears two opposite, fleshy leaves that have an elliptical shape with a pointed tip and a hairy base. Leaves are 3/16 -1 1/4 inches long and half as wide. White, star-shaped flowers are produced singly or in clusters on fine, hairy stalks that develop in leaf axils or at stem tips. Flowers are 1/4 inch across and have five deeply cleft petals, with a whorl of five hairy, lance-shaped sepals visible between the petals. Flowers are replaced by straw-colored oval capsules that are 3/16 inch long. Capsules break into five sections when mature, revealing tiny warty, reddish-brown seeds that are flattened and circular.

Flowering plant

Hairy line on stem

Star-shaped flower

Joseph M. DiTomaso, University of California - Davis, bugwood.org

Common lambsquarters

Chenopodium album L.
Chenopodiaceae (Goosefoot family)

Location: gardens, lawns, roadsides, waste areas, cropland, and pastures

Occurrence: The majority of common lambsquarters seeds germinate in late spring to early summer, although germination can take place throughout the growing season. Plants grow vigorously, and flowering occurs from late summer to early fall, followed by seed production. Mature seeds fall to the ground or stay on the mother plant, and a small percentage of those that fall germinate immediately. The plant dies with frost.

Description: An upright, branched, summer annual that grows 4 inches to 6 feet tall. Branches generally arch upward, and stems are grooved, often purplish or with red stripes. Leaves are arranged alternately along branches, and are covered with tiny, white, granular scales. Leaf undersides and margins are sometimes purplish. Lower leaves are borne on stalks, have coarsely toothed margins or shallow lobes, and often resemble a goose's foot. Upper leaves do not have stalks and are narrow and linear. Leaves are 1/2 - 3 inches long and up to 1 1/4 inches wide. Tiny, petal-less, gray-green flowers occur in tightly clustered spikes at the ends of branches. Flowers are globular and are enveloped almost entirely by a cup of five green sepals. Flowers produce minute, smooth, circular black or brown seeds, covered with a thin, papery casing.

Pre-flowering plant

Seedling

Flower spikes

Annual kochia

Kochia scoparia (L.) Schrad.
Chenopodiaceae (Goosefoot family)

Location: gardens, roadsides, waste areas, waterways, fence rows, cropland, pastures, and rangeland

Occurrence: Seeds can germinate at any temperature above 40°F, and do so throughout the growing season. Kochia seedlings first appear in early spring, grow rapidly and mature by mid-summer. Plants flower and produce seed from mid-summer until the first hard frost.

Description: A summer annual that grows between 1 and 6 feet tall. Plants are highly branched and typically form a pyramidal shape. Stems may be green or reddish, sometimes striped, and young stems may be hairy. Leaves are linear, 1/2 to 2 inches long, pointed at the tip, and have three to five highly visible veins. Leaves are arranged alternately on stems, and leaf undersides and margins are occasionally hairy. Minute, petal-less, yellow or greenish-yellow flowers occur in spikes of varying lengths, which are covered with soft hairs. Small, linear bracts—about 1/2 inch long—protrude outward from the flower spikes, giving them a prickly appearance. Flower spikes are found at the tips of the stems and in leaf axils. Each flower produces a flattened bladder that contains a single seed. Seeds are teardrop shaped, rough, brown, flat and 1/16 inch long. Much of the plant turns red in autumn.

Mature plant

Minute flowers and red stem

Seedling

Tumbleweed

Russian thistle

Salsola tragus L. (Salsola iberica (Sennen & Pau) Botch. ex Czerepanov, Salsola kali ssp. ruthenica (Iljin) Soo, Salsola kali ssp. tenuifolia Moq., Salsola pestifer A. Nels.)

Chenopodiaceae (Goosefoot family)

Location: open, abandoned gardens, waste areas, roadsides, fence rows, rangeland, cropland, and waterways

Occurrence: Seeds germinate from mid-spring through summer, generally within a temperature range of 52°-90°F. Flowering takes place from early to late summer. Flowers produce seeds which are mature by late fall. When frost kills the plant, the brittle upper portion breaks off at the base and tumbles in the wind.

Description: An upright summer annual that grows between 4 inches and 3 feet tall, and usually not as wide. The plant is highly branched from the base upward and forms a rounded to pyramidal shape. Most branches arch upward. Stems are round and rigid with vertical, reddish-purple stripes, turning grayish-brown at death. Young leaves are succulent, linear and 1 inch long. Mature leaves are arranged alternately on the stem, are stiff, short and wider at the base, with a spiny tip. Inconspicuous pink to greenish-white flowers are borne singly in leaf axils, sitting in a cavity created by the leaf and two small, spiny bracts. Flowers measure 3/16 - 1/2 inch in diameter. As they mature, the flower parts dry to produce papery wings surrounding a conical fruit. The fruit houses one brown, coiled seed.

Flowering plant

Striped stems

Inconspicuous flowers

Field bindweed

Convolvulus arvensis L.
Convolvulaceae (Morningglory family)

Location: gardens, lawns, roadsides, waste areas, cropland, pastures, fence rows, and waterways

Occurrence: Though most field bindweed seeds germinate by early summer, seeds can germinate anytime between early spring and late fall. Seedlings appear and vigorous growth of field bindweed begins when daytime temperatures reach 57°F. Flowers last only 1 day, and are produced throughout the summer. Freezing temperatures in autumn cause shoots to die back, although most roots remain intact.

Description: A creeping perennial vine. When unimpeded, wiry stems often grow more than 3 feet long and intertwine to form prostrate web-like mats or climb any nearby plant or structure. Leaves are most commonly arrow-shaped, 1/2 - 1 1/4 inches long, and are arranged alternately along the stem. Funnel-shaped, white or pinkish flowers, approximately 1 inch in diameter, are borne on stalks that grow in leaf axils. Several pink stripes are sometimes present on the underside of the flower, extending from the base of the flower to the tip of the petal. The flower stalk also bears two tiny bracts 1 inch below the flower. Each flower gives rise to a teardrop-shaped, light brown fruit capsule, 3/8 inch in diameter, that contains one to four rough, dark brown, three-sided seeds.

Immature plant

Flower

Teardrop-shaped fruit

Plant climbing fence

Russian-olive

Elaeagnus angustifolia L.
Elaeagnaceae (Oleaster family)

Location: gardens, roadsides, pastures, waterways, cropland, meadows, and seasonally moist open areas

Occurrence: Russian-olive plants can flower and fruit as early as 3 years following germination. Flowering occurs from late spring to mid-summer, and fruits mature from late summer to mid-fall. Russian-olive seed germination takes place 2-3 months after maturation, from fall to spring.

Description: A perennial deciduous tree or shrub that grows 15-35 feet tall and 10-20 feet wide, with an open, irregular growth habit. Young branches are covered with scales and appear silvery, while older branches are red-brown, and mature bark is ridged and dusty brown. Stems and branches bear 1 - 2 inch thorns. Narrow, oval or lance-shaped leaves are borne on short stalks and are arranged alternately along the branches. Leaf undersides appear silvery-gray, due to the dense scales that cover them. Upper leaf surfaces have fewer scales and are faded green. Leaves are 3/4 - 3 1/2 inches long and 3/16 - 1 1/2 inches wide. Small fragrant flowers on short stalks develop in clusters in the leaf axils of young branches. Flowers are funnel-shaped when open, with four lobes, their outer surfaces scaly silver, their inner surfaces yellow. Each flower produces a 1/2-inch long, egg-shaped fruit, that is silvery when immature, and brown with age. Each fruit contains a single, hard brown seed, about 3/8 inch long.

Egg-shaped fruit

Mature tree

Seedling

Thorny branch

Spotted spurge

Chamaesyce maculata (L.) Small (Chamaesyce supina (Raf.) Moldenke, Euphorbia maculata L., Euphorbia supina Raf. ex Boiss.)

Euphorbiaceae (Spurge family)

Location: gardens, pavement cracks, driveways, roadsides, turf, cropland, nurseries, and waste areas

Occurrence: Spotted spurge seed germination occurs within a temperature range of 60°-100°F. Seedlings emerge from early summer to early fall, with most occurring from mid-to-late summer. Spotted spurge grows very quickly in warm temperatures. Plants can flower and produce seeds within 5 weeks of germination and are able to produce two to three generations per season. Blooming occurs mid-summer to autumn, followed by seed production, which occurs until frost kills the plant.

Description: A warm season, typically prostrate annual. Many slender, pinkish-red stems radiate out from a central tap root, and plants may reach 2 feet in diameter. Leaves grow on almost imperceptible stalks, attached opposite each other along the stem. Leaves commonly bear a central, irregular purple spot, are elliptical, 1/8 to 1/2 inch long and about 1/8 inch wide, and have smooth or slightly toothed margins. Stems and leaves are covered with short, soft hairs. Inconspicuous, pinkish-white, cuplike flowers are found in small clusters at branch tips and in leaf axils. Flowers produce hairy, three-seeded fruit capsules, which are approximately 1/16 inch long. Seeds are golden brown, wrinkled and about 1/25 inch long.

Prostrate plant

Fruit capsules and hairy stem

Inconspicuous flowers

Myrtle spurge

Euphorbia myrsinites L.
Euphorbiaceae (Spurge family)

Location: gardens, dry natural hillsides, waste areas, and public lands

Occurrence: Myrtle spurge seeds germinate in waves throughout the growing season. New stems are produced each year from a woody taproot in early spring. Flower and fruit production begins in the second year, and occurs from early to late spring each year thereafter. Stems die back to the root crown with hard frost.

Description: A short-lived perennial, with 8 inch tall fleshy stems. The stems are sometimes upright, sometimes trailing, and form a clump with a spread up to 18 inches in diameter. Thick, waxy, and grayish blue leaves are arranged in tight spirals around the stem. Leaves are oval to wedge-shaped with pointed tips and are 5/8 - 1 1/4 inches long and 1/4 - 1 inch wide. Multiple flowers are borne in umbrella-like clusters at stem tips. Each tiny yellow-green flower is cupped inside petal-like, yellow bracts that form a bell shape around the flower, but spread open as the fruit matures. Each flower produces one bluish-green seed capsule containing three 3/8 inch long seeds. Seeds have a texture resembling that of a peach pit, are dusty brown, and often have a fleshy appendage attached to the tip.

Flowering plant

Clump-forming plant

Waxy leaves

Black medic

Medicago lupulina L.
Fabaceae (Pea family)

Location: lawns, gardens, waste areas, roadsides, pastures, and cropland

Occurrence: Black medic seeds generally germinate at temperatures between 50° and 75°F, both in spring and fall. Flowering can occur within 6 weeks after seedlings emerge in the spring, and along with seed production, continues throughout the growing season. Seedlings that emerge later than mid-summer may overwinter, but may not survive harsh conditions.

Description: A low-growing, spreading annual or short-lived perennial, with stems that grow between 4 inches and 2 feet long, and are often four-angled. Stems branch outward from the base, which arises from a central taproot. Leaves are arranged alternately on stems, and are each made up of three round to oval leaflets, one central and two lateral. Leaflets are up to 5/8 inch long and 1/2 inch wide. Leaflet margins are finely serrated at the top. Bright yellow, 1/8 inch long flowers develop in globe-shaped clusters on the tips of stalks borne in leaf axils. Flower head clusters are 1/2 - 3/4 inch in diameter and consist of as many as 50 flowers. Seed pods in 1 inch-long clusters replace flower heads. Each seed pod is 1/8 inch long and contains one seed. Seed pods are kidney-shaped, slightly coiled, prominently veined and turn black at maturity. Leaves, stems and seedpods are often covered with inconspicuous, very fine, soft hairs.

In typical turf setting

Globe-shaped flower head

Mature seed pods

White clover

Trifolium repens L.
Fabaceae (Pea family)

Location: lawns, waste areas, public parks, waterways, pastures, orchards, meadows, and woodland

Occurrence: White clover seeds germinate in the spring when soil temperatures reach 50°F. The plant grows most vigorously at temperatures between 64° and 86°F. Flowers develop by mid-spring and can be produced throughout the growing season, but rarely during hot, dry periods. After blooming, flowers turn brown and droop downward. Seeds ripen and drop to the ground 3-4 weeks following flowering.

Description: A cool season perennial with creeping stems 3-14 inches long. Leaf and flower stalks grow from the stems, with a single leaf forming at each joint. Roots also form at stem joints. Two membranous, leaf-like appendages are found at the base of each leaf stalk. Leaf stalks grow 3/4 - 9 1/2 inches tall, and bear three hairless leaflets at the tip. The leaflets are round to oval, with lightly serrated margins, and a white v-shaped mark on the upper surface. Each leaflet is 1/4 - 3/4 inch long. Globe-shaped flower heads are borne at the tip of flower stalks that grow above the leaves. Flower heads are 3/4 inch in diameter, and consist of 20-40 white to pinkish white flowers. Each flower dries and is replaced by a 1/4 inch-long seedpod that is covered by the brown husk of the flower. Seedpods contain one to four tiny smooth, yellow to brown, heart-shaped seeds.

Flowering plant

Globe-shaped flower head

V-Shaped mark on leaflets

Redstem filaree

Erodium cicutarium (L.) L'Hér. ex Ait.
Geraniaceae (Geranium family)

Location: gardens, lawns, roadsides, fields, and open woodland

Occurrence: Germination of redstem filaree seeds occurs in moist soil at temperatures between 40°F and 70° F from spring to fall. Following germination, seedlings emerge, form a rosette and subsequently produce flowering stalks. Seedlings that emerge late in the year remain as dormant rosettes during winter months. Growth resumes in early spring, flowering stalks develop and plants generally flower from midspring to midsummer, followed by seed production.

Description: A winter annual or biennial. Young plants commonly form a rosette that is often prostrate, but can also have a more upright habit. The entire plant is covered with fine hairs. Leaves have reddish stems that grow between 1 inch and 2 feet long. Each leaf is made up of three to nine individual fernlike leaflets that sit opposite each other along the stem. Two to 12 pinkish-purple flowers are produced on 4 inch stalks. The flowers are five-petalled and are approximately 1/2 inch in diameter. Each flower is succeeded by a fruit with a long, beak-like projection, to which the common names 'cranesbill,' 'heronsbill,' and 'storksbill' refer. When mature, the fruit splits open to reveal five seeds, each of which has a 1 - 1 1/2 inch long tail that coils into a spiral upon drying.

Flowering plant

Flowers

Beak-like fruit

Henbit

Lamium amplexicaule L.
Lamiaceae (Mint family)

Location: gardens, lawns, roadsides, cropland, waterways, waste areas

Occurrence: Henbit seeds generally germinate in the fall, although a minority of seeds will germinate in early spring. Seedlings appear in early spring, and flowers are produced from mid-spring to early summer and also may occur in fall. Henbit dies with the onset of hot summer temperatures.

Description: A winter annual that grows between 4 and 12 inches tall. The plant is covered sparsely with fine hairs. Stems are square, often purplish, and branch at the base. Leaves are arranged in opposite pairs. Lower-leaf pairs are farther apart from each other than upper-leaf pairs. Leaves are round or heart-shaped, are 3/8 - 3/4 inch long, and leaf margins have rounded teeth. Veins of the upper leaf surface are recessed, giving it a somewhat un-ironed look. Lower leaves grow on short stalks, and upper leaves clasp the stem (thus the Latin name, *amplexicaule*, which means clasp or encircle). Tiny, dark pink flowers occur in rings in the upper leaf axils. Open flowers appear orchid-like, with a white face and dark red spots. Each flower produces a four-seeded fruit. Seeds are triangular, brown, with white speckles.

Pre-flowering plant

Orchid-like flowers

Square stem

Clasping upper leaves

Purple deadnettle

Lamium purpureum L.
Lamiaceae (Mint family)

Location: lawns, gardens, cropland, pastures, and waterways

Occurrence: Purple deadnettle seeds generally germinate in the fall, although a small minority will germinate in the spring. Plants complete their life cycle in the spring before temperatures rise significantly. Seeds have the ability to germinate immediately following maturation, although they will not germinate under hot summer conditions.

Description: A winter annual that grows between 4 and 16 inches tall. Characteristic of the Mint family, purple deadnettle stems are square. Stems are branched at the base and may have a purple tinge. Leaves are arrow-shaped and are arranged opposite each other on the stem, each with a short stalk. Leaf margins are toothed, and the veins of the upper leaf surface are recessed. Leaves can grow up to 1 inch long, but are progressively smaller toward the top. Most leaves are clustered at the top of the stem, and the uppermost leaves are reddish-purple. The arrangement of the leaves causes the stalks to look like hooded figures standing in a group. Small, purple, orchid-like flowers occur in rings in the upper leaf axils. The flower interior is white with purple speckles. Both flowers and leaves are covered by tiny hairs. Each flower produces a four-seeded, light-brown fruit. Seeds are triangular and light brown with white speckles.

Clustered purplish leaves and square stems

Orchid-like flowers

Catnip

Nepeta cataria L.
Lamiaceae (Mint family)

Location: gardens, waste areas, roadsides, waterways, pastures, woodland, and natural hillsides

Occurrence: Catnip seeds begin germinating in late spring. The plant's most vigorous growth occurs soon after germination, between 45° and 66°F. With higher temperatures, vegetative growth slows and plants bloom and set seed from mid-summer to mid-fall. The foliage dies back to the roots in winter.

Description: An upright perennial with branched stems that grow 1-3 feet high. Stems are pale green and square. Leaves are heart-shaped or arrow-shaped with serrated margins, and are 1 - 2 1/2 inches long and 1/2 - 2 inches wide. Borne on long stalks, 1/2 - 1 1/2 inches long, leaves are arranged opposite each other along the stem. Leaves and stems are covered with soft, white hairs that are especially dense on the leaf underside. The hairs give the plant a grayish appearance. Flowers occur in short, dense clusters near the tips of branches. Flowers are orchid-like, 1/3- 1/2 inch long, and white or pinkish with dark purple spots. Each flower is subtended by a hairy, toothed, 1/8 inch-long, tube-like cup of sepals. Each flower gives rise to a four-seeded capsule inside the flower cup. Seeds are tiny, oval and reddish-brown, with two highly visible white spots near the base.

Arrow-shaped leaves

Mature plant

Square stem

Orchid-like flowers

Star of Bethlehem

Ornithogalum umbellatum L.
Liliaceae (Lily family)

Location: moist gardens, lawns, cropland, pastures, and waterways

Occurrence: Small clumps of leaves appear mid-spring, and continue to elongate into late spring when flowers are produced. The blooming period lasts about 2 weeks, with flowers opening late on sunny mornings and closing by sunset. Flowering is followed by seed set, and subsequently, stems and leaves die back to the bulb by mid-summer.

Description: A perennial, that grows from a fleshy, egg-shaped, 1/2 - 1 1/2 inch-long bulb. Leaves appear as a tuft of shiny, thick grass, initially growing erect, but falling to the ground as they elongate. Leaves are hollow and dark green with a white midvein and grow up to 1 foot long and 1/5 inch wide. Flowering stalks are usually 6-9 inches tall, and arise singly from the center of the leaves. Leafless, smooth and erect, flowering stalks branch above, and one flower is produced at each branch tip, creating a spreading cluster of 4-20 flowers. Flowers are star-shaped, with six white petals and a yellow-green center, and measure 1 inch across. Petals are oval, with a pointed tip, and petal undersides display a wide green stripe down the middle. Each flower produces a three-celled, oblong seed capsule that contains several black seeds.

Flowering plant

Fleshy bulbs and bulbets

Flower bud

Star-shaped flower

Common mallow

Malva neglecta Wallr. (Malva rotundifolia auct. non L.)
Malvaceae (Mallow family)

Location: lawns, gardens, roadsides, waste areas, and cropland

Occurrence: Common mallow seeds will germinate throughout the growing season, and seedlings emerge from mid-spring to early autumn when adequate moisture is available. Flower and fruit production can take place from early summer to mid-fall. Mature plants are very hardy and often remain green throughout the winter.

Description: A low-growing, spreading annual, biennial or perennial, depending on conditions. Plants grow 4 - 24 inches tall on slightly hairy stems. The leaves are 1/2 -1 1/2 inches across, somewhat hairy, and are borne at the end of long stalks that are arranged alternately along the stems. Mature leaves are circular with wavy margins and five to seven shallow lobes and have a crinkled appearance. Flowers form singly or in clusters in leaf axils. The five-petalled flowers are pale pink or purple to white, funnel-shaped, and are 1/2 -1 inch wide when fully open. Flowers are subtended by five sepals, which are inconspicuously covered in soft hairs. Common names 'cheeseweed' and 'cheeseplant' refer to the round, flattened fruits which appear following flowering. Each fruit contains 10-12 wedge-shaped seeds and are enveloped by the sepals. Seeds break apart at maturity.

Funnel-shaped flower

Round, flattened fruits

Immature plant

Creeping woodsorrel

Oxalis corniculata L. (Oxalis repens Thunb.)
Oxalidaceae (Woodsorrel family)

Location: lawns, gardens, greenhouses, and waste areas

Occurrence: Seeds germinate at the soil surface whenever temperatures are between 60° and 80°F. Seedlings grow vigorously, and plants can flower and produce immediately viable seed throughout the growing season.

Description: A creeping perennial that is typically about 4 inches tall, though stems can grow up to 20 inches long. The green or reddish stems are slender and hairy, and stems that trail on the ground will root at stem joints. Leaves are often purplish and are borne alternately along the stem at the end of long stalks (up to 4 inches). Leaves consist of three heart-shaped leaflets with hairy undersides. Leaflets are 3/16 inch long and 1/2 inch wide. Leaves will fold down around the stem at night or when the plant is stressed. One to five bright yellow, five-petalled flowers occur in clusters at the tips of 1 - 3 1/3 inch-long stalks. Flowers are 3/16 - 5/16 inch in diameter. Flowers produce elongated, lantern-shaped seedpods, which are 3/4 inch long, green, hairy and five-angled. Each seedpod holds 10-50 seeds. As seeds mature flower stalks turn downward, and at maturity, dry pods forcefully discharge the seeds. Seeds are 1/16 inch long, oval, reddish, sticky and ridged widthwise.

In typical turf setting

Bright yellow flowers and lantern-shaped seed pods

Broadleaf plantain

Plantago major L.
Plantaginaceae (Plantain family)

Location: lawns, gardens, roadsides, cropland, waste areas, meadows, and pastures

Occurrence: Broadleaf plantain seeds will germinate one growing season after ripening. Germination begins when soil temperatures reach 50°F, and continues throughout the growing season. Flowering begins on new plants 8-15 weeks after germination. The roots of established plants generate a new rosette of leaves annually, and flowers and seeds are produced from late spring to early fall. Rosettes die back to the roots with frost.

Description: A low-growing, simple herbaceous perennial. Dark green, egg-shaped leaves form a rosette. Leaves are generally smooth, or slightly hairy, with wavy margins and three or more clearly-defined, tough and fibrous parallel veins. Leaves are 3-7 inches long and 1-2 inches wide and are borne on long leaf stalks. Inconspicuous greenish or yellowish flowers occur in dense, narrow cylindrical spikes on the upper end of thin, wiry, leafless stalks that are 4-15 inches long. Individual flowers are cupped by several bracts with papery margins. Flowers dry and turn brown with age, and a 1/4 inch-long, acorn-like capsule is produced below each flower. At maturity, the seed capsule opens transversely around the middle, revealing 6-30 tiny, ridged, black or brown seeds.

Mature plant

Conspicuous parallel veins

Acorn-like seed capsules

Creeping bentgrass

Agrostis stolonifera L. (Agrostis palustris Huds., Agrostis stolonifera var. palustris (Huds.) Farw.)

Poaceae (Grass family)

Location: lawns, waterways, pastures, meadows, and natural plant communities

Occurrence: Creeping bentgrass starts growth in early spring and grows rapidly until early summer, when vegetative growth slows and flowering begins. Flowering continues until late summer and seed is produced by early fall. Seedlings can mature and set seed within the first growing season. With cool autumn temperatures, plants resume vigorous growth until freezing temperatures cause dormancy.

Description: A perennial, cool season grass with stems that can be 2 to over 36 inches long. Stems creep along the ground and root at the nodes, abruptly ascending to between 8 and 24 inches tall. Young leaves are rolled in a protective sheath. Leaves that have emerged from the sheath are 1 inch wide and 3/4 - 4 inches long, with pointed tips. Leaves have a smooth upper surface with a ridged underside. The ligule is membranous, tapered toward the top, and commonly has irregularly toothed margins. Flower spikes are borne at the ends of stems, are usually red-purplish or sometimes straw-colored, and are 1 1/2 - 8 inches long. Flower spikes remain closed on the stem until the plant blooms. Flowers give rise to many minute, golden-brown seeds.

Flowering plant

Mature seed heads

Joseph M. DiTomaso, University of California-Davis, bugwood.org

Downy brome

Bromus tectorum L.
Poaceae (Grass family)

Location: roadsides, waste areas, waterways, cropland, overgrazed pastures, and natural plant communities

Occurrence: The majority of downy brome seeds germinate in autumn, but germination can occur in early spring or whenever moisture is adequate. Seedlings are semi-dormant in the winter and develop an extensive root system in temperatures just above freezing. Plants grow quickly in early spring and produce flowers by mid-spring. Seeds are produced by late spring, and downy brome finishes its life cycle by early summer, when conditions start to get hot and dry. Seeds usually germinate within a year of maturity.

Description: An early summer or winter annual grass that grows upright from 2 to over 24 inches tall. Young leaves are rolled in a protective hairy sheath. When they emerge, leaves are hairy on both sides and are flat or have inward-rolling edges. Leaves are 2 - 6 inches long and up to 1/4 inch wide, with a membranous ragged ligule that is 1/8 inch long. Loose clusters of drooping flower/seed heads are borne at the ends of stems. Long, straight, bristle-like appendages extend 3/8 - 3/4 inch beyond the florets, giving the plant a soft, feather-like appearance. The plant changes from green to purple to light brown as it matures and as available moisture declines.

Drooping seed heads

Single plant

Soft, feather-like appearance

Large crabgrass

Digitaria sanguinalis (L.) Scop.
Poaceae (Grass family)

Location: lawns, gardens, cropland, and waste areas

Occurrence: Large crabgrass seeds begin germinating when temperatures reach about 55° F consistently and continue to germinate throughout the growing season. Flower and seed production occurs from mid-summer until the first frost, when plants die.

Description: A clump-forming, warm season summer annual grass that grows prostrate when mowed and up to 2 feet high otherwise. Young leaves that are rolled inside a hairy, protective sheath unroll and flatten as they emerge. Leaf blades are coarse and hairy, and are 2 - 6 inches long and 1/8 - 1/2 inch wide. Leaves and sheaths are commonly tinged with purple, and the ligule is membranous, very short, and jagged. Elliptical flowers are borne in pairs on 2-16 spikes that are attached to the main flower stalk. The arrangement looks like fingers radiating from a hand. Each spike is 2 - 6 inches in length. Flowers are each approximately 1/8 long and 1/16 inch wide, and often have some purple coloring. Each flower is replaced by a straw-colored seed.

Clump-forming plant

Mature plant

Finger-like flower spikes

Barnyardgrass

Echinochloa crus-galli (L.) Beauv.
Poaceae (Grass family)

Location: gardens, lawns, roadsides, waterways, waste areas, and cropland

Occurrence: Barnyardgrass seeds germinate primarily in late spring, but can germinate throughout the season between temperatures of 50°-104°F. New shoots and branches are produced continuously from 10 days following emergence until seed maturation. Flowering occurs from mid-summer to early fall, and seeds mature from early fall until the plant dies about mid-fall. Newly matured seeds remain dormant until at least the following spring.

Description: A highly variable, warm season annual grass with stems that grow from 1 to 5 feet tall. Barnyardgrass generally has an erect habit, but will sometimes grow low to the ground. Stems occasionally branch and root at the base, and stem bases are often purplish. Leaves measure 4 - 20 inches long and 1/8 -1 inch wide. Leaves are moderately rough and flat, with a conspicuous white midvein, a pointed tip, and a purplish base, with no ligule. Flower clusters are often purple, and are borne on 1-4 inch-long crowded branches at stem tips. Flowers typically have a bristly appearance, caused by whiskery hairs that grow from the flower tips. Each flower produces a tan, relatively large, oval grain, which is 1/8 inch long. Stems often nod from the weight of the seed heads.

Mature plant

Purplish stem base

Bristly flower clusters

Quackgrass

Elymus repens (L.) Gould (Elytrigia repens (L.) Desv. ex B.D. Jackson, Agropyron repens (L.) Beauv.)

Poaceae (Grass family)

Location: gardens, lawns, cropland, rangeland, pastures, roadsides, and waterways

Occurrence: Germination of quackgrass seeds occurs in autumn and spring. Rhizome growth begins in mid-spring, slows in summer, and resumes in autumn, when daytime temperatures are between 68° and 77°F. Flowers and seeds are produced from early to late summer, and seeds can be produced more than once a year.

Description: A perennial, cool-season grass that can grow between 1 and 3 feet tall, but commonly grows low to the ground with stem tips ascending. Leaf blades are 1/4 - 1/2 inch wide, often with a constriction near the pointed tip. Leaf blades and protective sheaths at the lower part of the leaf are sometimes softly hairy. Small, claw-like appendages clasp the stem where the sheath meets the leaf blade, and the ligule is very short and membranous. Flowers are borne on slender, 1 1/2 -7 1/2 inch spikes, which consist of smaller, flattened spikelets, arranged alternately in two rows along the stem. Spikelets usually have four to six flowers each, and sometimes bear bristles up to 3/8 inch long. When mature, flower scales contain grains that are narrow, yellow-brown, and approximately 1/4 inch long. Rhizomes are yellowish-white with coarse, brown sheaths at the joints and pointed tips.

Rhizomes

Flattened spikelets

Creeping plant

Mature Spikes

Constricted tips

Stinkgrass

Eragrostis cilianensis (All.) Vign. ex Janchen (Eragrostis megastachya (Koel.) Link)

Poaceae (Grass family)

Location: lawns, gardens, roadsides, waste areas, and cropland

Occurrence: The majority of stinkgrass seeds germinate in late spring when temperatures remain consistently at 65°F or above for several weeks. Seedlings mature quickly and flowering and seed production occur from mid-summer to early fall. The plant dies with the onset of freezing temperatures.

Description: A warm season summer annual bunch grass that grows 6 - 24 inches tall. Stems are typically hollow and sometimes branch at the lower joints, and a ring of glands is often found below stem joints. Young leaves are rolled in a protective sheath. Leaf sheaths bear occasional glands and are hairy at the tip. Leaves that have emerged from the sheath are flat or rolled inward, and measure 1 - 6 inches long and up to 3/16 inch wide. Leaf blades are smooth below and rough on the upper surface, and also bear glands that are especially noticeable on the leaf margins. The ligule is a ring of stiff hairs. Flower clusters have a grayish hue, are borne at the ends of stems, and are usually dotted with glands. The clusters are made up of smaller, flattened, lance-shaped clusters arranged in a triangular shape that is 1/2 - 6 inches long and 1/2 - 2 inches wide. Flowers give rise to many minute, golden brown, rounded to egg-shaped seeds.

Mature Plants

Lance-shaped floral clusters

Single clump

Annual Bluegrass

Poa annua L.
Poaceae (Grass family)

Location: gardens, lawns, walkways, pavement cracks, waterways, cropland, and pastures

Occurrence: Annual bluegrass seed germinates in late summer, early fall or early spring, when temperatures are below 70°F. Plants can flower within 8 weeks of germination, and continue flowering and producing seed until hot temperatures cause them to die or go dormant. Dormant plants regenerate from the roots with cooler fall temperatures.

Description: A tufted, cool-season winter annual or short-lived perennial grass. Annual types usually have an upright habit, whereas perennial types generally grow more prostrate. Stems are often flattened and can grow up to 1 foot tall. Roots sometimes form at the base of stems, especially in perennial types. Leaves arise from a protective sheath with a pointed, tissue-like ligule. When young leaves emerge from the sheath, they often look somewhat crinkled. Leaves are 1 - 4 inches long, 1/16 - 3/16 inch wide, with tips that resemble the bow of a boat. Leaves and stems are light green. Branching flowering stalks reach 1 - 4 inches in length, and small clusters of three to six whitish-green flowers occur at the end of each branch, collectively forming a triangular shape when fully open. Flowers give rise to orange-yellow grains that are 1/16 - 1/8 inch long.

Clump-forming plant

Boat-shaped leaf tip

Floral clusters

Green foxtail

Setaria viridis (L.) Beauv.
Poaceae (Grass family)

Location: lawns, gardens, roadsides, cropland, pastures, waterways, and waste areas

Occurrence: Most green foxtail seeds begin germinating following heavy spring rains, but can germinate anytime throughout the season when temperatures are between 59° and 95°F. Flowers occur from mid-summer through early fall. Grains mature 2 weeks following flowering, and can fall easily from the plant when mature. Seeds are generally able to germinate 2-4 months after maturing.

Description: A clump-forming, warm season summer annual grass that grows between 4 inches and 3 feet tall. Stems are mostly erect, often branch at the base of the plant, and are occasionally purplish at the base. Leaf buds are rolled lengthwise inside a protective sheath, with a short, fringed ligule. After emergence, leaves are flat and rough, occasionally with tiny hairs along the margins at the leaf base. Leaves usually grow 6 inches long, and up to 1/2 inch wide, tapering to a point at the tip. Cylindrical, 3/4 - 31/2 inch long flower heads form at stem tips. Flower heads are composed of many tiny, inconspicuous, densely clustered florets, each with one to three green or purple bristles at its base that project out at an upward angle. Full flower/seed heads often nod. Each floret matures into a 1/16 inch-long green to brown grain, which is oval and flattened on one side.

Mature plants

Bristly flower head

Single clump-forming plant

Prostrate knotweed

Polygonum aviculare L.
Polygonaceae (Buckwheat family)

Location: gardens, cropland, waste areas, turfgrass, roadsides, walkways, parking lots, and pavement cracks

Occurrence: The majority of seeds germinate very early in the spring, although a small percentage will germinate throughout the season. Seedlings grow slowly. Flowering and seed production begin in mid-spring, and occur until hard frost, when the plant dies.

Description: A summer annual. Young seedlings grow upright, and appear at first glance to be grass seedlings because of their narrow leaves. With maturity, most plants grow prostrate, especially with traffic or mowing. Stems can grow up to 2 feet long. Stems are branched, wiry and thin, but the leaf base and joints are enlarged and knot-like (thus the common name, 'knotweed'), with a paper-like, membranous covering. The narrow, pointed leaves are arranged alternately on the stem. Leaves grow 1/4 - 1 1/2 inches long and 1/8 - 3/8 inch wide, and can have a bluish-green cast. Tiny, five-petalled flowers are borne in groups of one to five in leaf axils. Flowers have a green center with white or pink edges and are often partly closed. Light or dark brown, three-sided seeds are 3/16 inch long.

Prostrate habit

Grass-like young plant

Tiny flowers and paper-like sheaths at joints

Wild buckwheat

Polygonum convolvulus L.
Polygonaceae (Buckwheat family)

Location: gardens, fencerows, waste areas, and cropland

Occurrence: Wild buckwheat seeds are able to germinate at temperatures between 35° and 86°F. Seedlings emerge throughout the growing season, although most appear in late spring and early summer. Seedling growth is rapid, and blooming occurs from mid-to-late summer, and sometimes into fall. Wild buckwheat begins shedding its seeds in late summer. Mature seeds do not immediately germinate, but remain dormant at least until the following growing season.

Description: A summer annual with tough, slender, sometimes reddish stems that grow up to 8 1/2 feet long. Young seedlings grow upright, branching from the root crown. Stems soon develop a trailing, twining habit as they mature. Leaves are arrowhead-shaped, occur on stalks and are arranged alternately on the stem. Leaves measure between 1 and 2 1/2 inches long, and 1/2 - 1 inch wide. An inconspicuous, thin, papery sheath covers the base of the leaf stalk. Flowers are very small, at most 1/4 inch long, are greenish-white to pinkish, and have no petals. Clusters of flowers are borne on stalks in leaf axils and at stem tips. Each flower produces a single black, one-seeded fruit, which is enclosed in the outer portion of the flower. The fruit is hard, three-sided, oblong and 3/16 inch long.

Mature plant climbing fence

Reddish stem

Three-sided fruits

Common purslane

Portulaca oleracea L.
Portulacaceae (Purslane family)

Location: gardens, ornamental beds, pavement cracks, waste areas, plant nurseries, and cropland

Occurrence: Purslane generally appears in late spring, when soil temperatures are about 60° F. Inconspicuous yellow flowers are produced on sunny days, several weeks after the plant appears, and mature seeds are produced within 3 weeks after flowering begins. Flowering and seed production takes place throughout the growing season, until frost.

Description: A succulent summer annual with a prostrate habit in sunny conditions, and a somewhat upright habit in shady conditions. Its shiny, fleshy leaves have red margins, and are teardrop or wedge-shaped. Leaves are between 1/4 inch and 1 inch long, and 1/16 - 1/2 inch wide. Leaves are attached to stems without a stalk, and at the lower ends of stems, leaves are arranged alternately, but are produced in clusters at stem tips. Stems are smooth, branched and often pinkish or reddish. Stems radiate up to 20 inches outward from a central root. Bright yellow flowers are produced in the axils of the leaves or at stem tips. Flowers are five-petalled, and are 3/16 - 3/8 inch in diameter. Flowers produce small green, egg or pear-shaped seed capsules with tops that split open to allow clusters of tiny black seeds to fall and disperse.

Prostrate plant

Seedling

Five-petalled flower

Open seed capsule

Bur buttercup

Ceratocephala testiculata (Crantz) Bess (Ranunculus testiculatus Crantz)

Ranunculaceae (Buttercup family)

Location: lawns, gardens, roadsides, driveways, waste areas, pastures, cropland, and rangeland

Occurrence: Bur buttercup seeds germinate in early spring, when temperatures reach about 41°F, and seedlings emerge soon thereafter. The plant blooms within 3 weeks of emergence, and the flowers develop into spiny burs. By early summer, the entire plant dries out and turns brown and brittle.

Description: A low-growing summer annual, ranging from 1/2 inch to 5 inches in height. The light green leaves, which are covered with short, white hairs, grow 1-4 inches long. Leaves are all attached at the base of the plant, and many bear a resemblance to antlers, being parted into three distinct, narrow segments, which are themselves often two, three or four-lobed. Flowers are borne singly at the tips of leafless stalks, which extend above the leaves. The tiny, bright yellow, five-petalled flowers are cupped by five egg-shaped sepals. Flowers give rise to oval-shaped, spiny burs that are 1/2 - 3/4 inch long. Each bur contains 5-80 hard, dry seeds.

Mature plant

Tiny, bright yellow flowet

Spiny bur

Persian speedwell

Veronica persica Poir.
Scrophulariaceae (Figwort family)

Location: gardens, lawns, roadsides, waste areas, cropland, and nurseries

Occurrence: Persian speedwell seeds can germinate from early spring to fall, with most germination occurring in spring. Plants progress quickly through all growth stages. Early plants typically start producing seed by mid-spring, and two generations per year are possible. Seeds are able to germinate immediately upon maturity.

Description: A summer or winter annual with stems 4-16 inches long, mostly with a prostrate habit, with some ascending tips. Stems often branch apart at the base of the plant. Most of the plant is covered by tiny hairs. Leaves are up to 3/4 inch long and 1/2 inch wide, and rounded to oval with toothed margins. Lower leaves occur on short stalks and are arranged opposite each other. Upper leaves have no stalk and are arranged alternately along the stem, with a cluster of leaves at each stem tip. Flowers are borne singly on 3/8 - 1 inch stalks that occur in leaf axils. Flowers are between 1/4 and 1/2 inch in diameter, are four-petalled and blue with a white center and dark stripes that run the length of the petals. Flowers each rest on four bracts, which project out just beyond the petals. Each flower produces a flattened, heart-shaped, hairy fruit, cupped by the bracts. Fruit is no wider than 1/4 inch and 3/16 inch tall. The two sections of the fruit each house 5-11 tiny, creamy white seeds.

Prostrate plant

Four-petalled flower

Heart-shaped fruit

Bittersweet nightshade

Solanum dulcamara L.
Solanaceae (Nightshade family)

Location: gardens, waste areas, waterways, and orchards

Occurrence: Seedlings begin appearing in early spring. Trailing stems produce flowers from late spring through early fall that are replaced asynchronously by berries from late summer to late fall. Stems die back to the woody base with hard frost.

Description: A trailing perennial vine, with stems that grow up to 10 feet per year from a woody base. Young stems are green or purple. Leaves are dark green, sometimes tinged purple, are lance-shaped or heart-shaped, with or without two small, opposite lobes or leaflets at the base. The leaves are alternately arranged on the stem, and grow between 2 and 4 1/2 inches long. Flowers are star-shaped, with five purple petals arching away from a bright yellow, upright, conical center. Flowers grow 1/2 - 3/4 inch in diameter. Flowers are succeeded by shiny, oval berries, which are 1/4 - 1/2 inch long. As berries mature, their color progresses from green to yellow to orange to vibrant red. Since berries do not all mature at the same time, it is common to see flowers and all stages of the berry represented simultaneously on the same plant. Each berry contains approximately 30 flat, round yellow seeds, which are 1/16 inch in diameter.

Berries at various ,maturity stages

Small lobes at leaf bases

Star-shaped flower

Steven A. Dewey, Utah State University, bugwood.org

Hairy nightshade

Solanum physalifolium Rusby (Solanum sarrachoides auct. non Sendtner; Solanum villosum auct. non (L.) P. Mill.)

Solanaceae (Nightshade family)

Location: gardens, roadsides, cropland, and rangeland

Occurrence: Hairy nightshade seeds can germinate throughout the growing season, but most optimally at temperatures between 68° and 95°F. Seedlings first appear in late spring or early summer, and flower within 5-7 weeks thereafter. Plants will bloom and produce seed until hard frost.

Description: A branching, spreading summer annual, up to 2 feet tall. The entire plant is covered with short, soft, sticky hairs. Oval-shaped leaves are arranged alternately on the stem and have wavy or smooth margins. The leaves grow between 1 and 2 1/2 inches long, and are attached to the stem by a 1/2 inch stalk. Flowers occur in short-stemmed clusters on stalks that branch off the main stem. The five petals of each star-shaped, white flower are fused together, and each flower has a bright yellow center. Flowers grow up to 1/4 inch in diameter. As plants mature, round, green berries, approximately 1/4 inch in diameter, replace the flowers in a drooping cluster. The bottom half of the berry is covered by a cup of five sepals. Berries remain green or turn yellowish at maturity, and contain numerous flattened seeds.

Pre-flowering plant

Star-shaped flower cluster

Berries

Seedling

Siberian elm

Ulmus pumila L.
Ulmaceae (Elm family)

Location: gardens, pavement cracks, roadsides, waste areas, waterways, pastures, and natural plant communities

Occurrence: Siberian elm flowers from early to mid-spring, usually before leaves appear on the tree. Fruit is produced shortly thereafter, and seeds are ripe by late spring. Seeds can germinate immediately following maturation, and seedlings sprout readily and grow vigorously throughout the season. Leaf color in the fall is yellow.

Description: A perennial deciduous tree or shrub with an open, rounded habit that grows 50-70 feet tall. New branches are thin, gray, sometimes hairy, and droop somewhat as they elongate. The mature bark of the trunk is gray and furrowed. Reddish-brown, egg-shaped buds sit directly on branches and produce tight clusters of 6-15 green, bell-shaped flowers with red tips, but no petals. Flowers are 3/16 inch long. Each flower produces a single-seeded, flattened, circular fruit that is notched at the top, with a papery wing. The fruit is 1/2 inch across, and is green when new, but dries to a straw color. Dark green leaves are arranged alternately along branches, and are borne on short, 1/8 inch-long stalks. Leaves are 1- 2 1/2 inches long and half as wide, and are elliptical in shape, with serrated margins and pointed tips. Leaves have conspicuous, grooved veins in a fishbone pattern.

Buds and flowers

Flattened fruits

Conspicuously grooved leaf

Mature tree

Seedling

Puncturevine

Tribulus terrestris L.
Zygophyllaceae (Caltrop family)

Location: roadsides, walkways, gardens, playgrounds, cropland, pastures, and waste areas

Occurrence: The majority of puncturevine seeds germinate in late spring, although seeds can germinate throughout the growing season. Young plants emerge in late spring to early summer and produce flowers within 3-4 weeks, with seed following within 2 more weeks. Flowers are open only in the morning. Flowering and seed production continue until frost. Mature seeds remain dormant at least until the following growing season.

Description: A mat-forming summer annual, with 1 1/2-5 foot long stems radiating out in all directions from the root crown. Stems are green to orange-brown, with leaves arranged opposite each other on the stem. Each leaf consists of four to eight pairs of oval-shaped leaflets, also arranged opposite each other on the leaf stalk. Leaflets typically measure 1/2 inch long and 3/16 inch wide. Stems and leaves are covered with tiny hairs. Single, bright yellow flowers are borne on short stalks in leaf axils. Flowers have five petals and are 1/3 - 1/2 inch in diameter. Each flower produces a green, spiny five-rayed fruit that turns brown and woody with maturity, splitting into five separate, wedge-shaped seedpods. Each seedpod contains two to five seeds, and has two prominent, sharp spines about 1/3 inch long, which protrude outward at wide angles from each other.

Prostrate plant

Bright yellow flower

Spiny, five-rayed fruit

Glossary

Annual—life cycle completed in 1 year or less (seed to seed), reproduce by seed only.

Winter annuals: germinate in fall or winter, finish in spring or summer.

Summer annuals: germinate in spring, mature and die by summer or autumn.

Biennial—a plant that lives longer than one season but fewer than 2 years. A rosette is produced the first year. Following a cold period there is floral initiation, fruit set and death.

Bract— a modified leaf that occurs beneath a flower.

Compact soil— soil that is compressed by foot or vehicle traffic, causing a restriction of the movement of water, air, and plant roots.

Cool season grasses—actively grow during the cool weather of spring and autumn, and are dormant when moisture is inadequate and temperatures are high.

Crown— point at which the base of the plant and the top of the root come together, usually at soil level.

Dormancy—temporary lack of growth or development.

Germination—the emergence of a seedling from a seed.

Herbaceous—pertaining to a plant that dies back to the ground each year.

Leaf axil—the upper angle formed between the leaf and the stem where they join together.

Leaflet—one of two or more similar segments of a compound leaf.

Ligule—membranous or hairy projection at the point where the grass leaf blade grows out of the sheath.

Lobe—a segment of a plant part, such as a leaf.

Margin— the edge of a leaf.

Perennials—plants that live for more than 2 years, and renew growth year to year from the same root system.

Simple Herbaceous Perennials— reproduce by seed, usually not vegetative parts. However, a cut piece can regenerate.

Creeping Herbaceous Perennials—reproduce by seed and by vegetative parts: roots, stolons, rhizomes.

Rhizome—an underground stem.

Rosette—a circular cluster of leaves, usually at soil level.

Sepal— a segment of the outermost, leaf-like whorl of the flower; serves as protection for the flower in the bud.

Taproot—the large, central, primary root of a plant that grows vertically downward, into the soil.

Toothed—saw-like.

Warm season grasses—actively grow during the hot, dryperiods of the year and go dormant with freezing temperatures.

Index

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