

Other Families to Watch

Boraginaceae
(Borage Family)

Caryophyllaceae
(Pink Family)

Chenopodiaceae
(Goosefoot Family)

Clusiaceae
(Mangosteen Family)

Convolvulaceae
(Morning-glory Family)

Plantaginaceae
(Plantain Family)

Ranunculaceae
(Buttercup Family)

Bluebur

Lappula squarrosa (Retz.) Dumort.

Alternate Names

stick-tights, beggar-ticks, stickseed, sheepbur, European sticktight, bur forget-me-not, European stickweed

Synonyms

Lappula echinata Gilib.;
Lappula myosotis Moench

Description

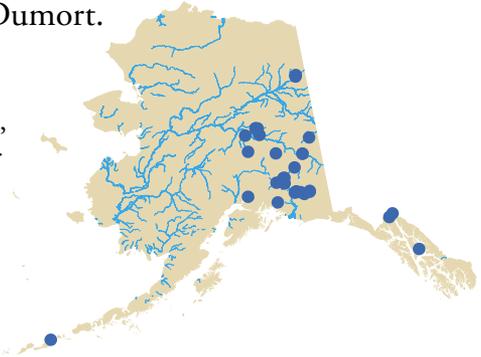
Bluebur is an annual plant that is profusely branched with stems up to 2 feet tall. The entire plant is covered with stiff, white hairs and has a mousy odor. The hairs usually lie flat against the stems and leaves. Leaves are alternate, 3/4 to 4 inches long, and covered with stiff white hairs on both surfaces. The lower leaves are oblong, stalked, and blunt-tipped, whereas the upper leaves are stalkless. Flowers are blue with a yellow throat, resembling forget-me-not flowers but smaller, about 1/8 of an inch across. They appear near the ends of stems in leafy clusters. Each flower produces 4 small nuts with 2 rows of hooked prickles that have star-shaped tips. Fruit stalks are straight and erect.



Photo by Alexander Mrkvicka

Similar Species

Western bluebur (*L. occidentalis* (S. Wats.) Greene) is a weedy annual plant, native to Alaska, that can be distinguished from bluebur by its nuts. Western bluebur nuts have 1 row of hooked prickles, while the exotic bluebur nuts have 2 rows. Stick-seed (*Hackelia floribunda* (Lehm.) I.M. Johnson) is native to British Columbia and resembles



Family: Boraginaceae

Bluebur

both bluebur species, but the fruiting stalk of stick-seed is curved or bent downwards.

Management

Bluebur plants can easily be pulled up by hand, though several weedings and 5 years of monitoring are necessary to ensure control of plants germinating from buried seed. Diligent care must be taken to remove and dispose of nuts that attach to clothing or gear during control efforts, for this species is commonly introduced to new areas by animal and human dispersal (Densmore et al. 2001).

Notes

Bluebur was introduced into the United States from the eastern Mediterranean region before 1700. Now common throughout the northern hemisphere in disturbed areas, it has reached far-flung locations in Alaska since its first documentation in the Matanuska Valley in 1931, likely due to its tendency to hitchhike. It is listed as a restricted noxious weed in Alaska (Alaska Administrative Code 1987).



USDA Forest Service photo by Elizabeth Bella



USDA Forest Service photo by Michael Shephard

Marsh Forget-me-not

Myosotis scorpioides L.

Synonyms

Myosotis palustris (L.) Nath.

Description

Marsh forget-me-not is a rhizomatous, aquatic, creeping perennial plant with a fibrous root system, often forming adventitious roots where the stem meets the soil. Flowers are small, blue, and lobed with the petals fused basally into a bright yellow tube.

Similar Species

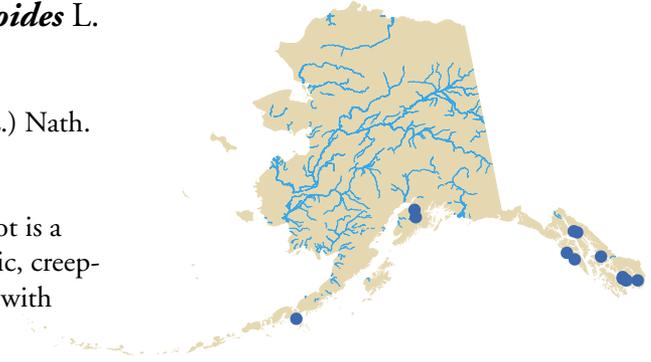
The Alaska state flower is the closely related native forget-me-not (*Myosotis asiatica* (Vesterg.) Schischkin & Sergievskaja), which can be differentiated by the teeth of the calyx that are much longer than broad, rather than equally long and broad as for the marsh forget-me-not. Another similar non-native species is the woodland forget-me-not (*Myosotis sylvatica* Ehrh. ex Hoffmann), which is commonly grown in Alaska gardens, can escape cultivation, and can be distinguished by its spreading, hooked calyx hairs.

Management

Control options for marsh forget-me-not have not been investigated.

Notes

Folklore says that a concoction made of parts of the forget-me-not will harden steel.



USDA Forest Service photo by Tom Heutte

Family: Boraginaceae

Marsh Forget-me-not



KULAK photo by Paul Busselen

Bouncingbet

Saponaria officinalis L.

Alternate Names

none

Synonyms

Lychnis saponaria Jessen

Description

Bouncingbet is an herbaceous perennial plant that grows 12 to 35 inches high and produces strong runners. Stems are straight and stiff. Plants are hairless or have few small hairs. Leaves are ovate and entire with 3 prominent veins. Flowers are white to pink and about 1 1/4 inches across.

Similar Species

Bouncingbet is unique among Alaskan Caryophyllaceae in having sepals connate for half their length and only 2 stigmas, rather than 3 to 5 as in *Silene* and *Lychnis* species. It has broader leaves than the native boreal carnation (*Dianthus repens* Willd.), a rare plant in the North American arctic.

Ecological Impact

Bouncingbet can form very large populations and dominate plant communities. Roots and seeds are slightly poisonous to human and animals (Russell 1997), and animals typically avoid eating this plant.

Biology and Invasive Potential

Bouncingbet has high fruit and seed abundance and moderate vegetative spread capability (OPBWG 2004). It produces an average of 50 seeds per fruit and 30 fruits



XID Services photo by Richard Old

per plant for a potential of 1,500 seeds per plant. It can resprout when cut or grazed. Hay and other feeds can be contaminated by its seeds or other plants parts, and it can also be a component in wildflower seed mixes. Bouncingbet is adapted to coarse and medium textured soils with pH levels ranging from 5.0 to 7.0, is intolerant of saline soils, and no cold-stratification is required. It is highly drought- and fire-tolerant, withstands temperatures to -18°F, and requires 130 frost-free days for reproduction (GRIN 2004). It is listed as a noxious weed in Colorado, an exotic pest in California, and a weed in Kentucky.



XID Services photo by Richard Old

Distribution and Abundance

Bouncingbet has been planted along roadsides in south-central Alaska and has spread into waste areas. The species is native to central and southern Europe but has spread throughout western and northern Europe (Faarlund & Sunding 1992) and become naturalized in northern Europe, originating from ballast and escaped ornamentals (Lid & Lid 1994). It is now present in every state in the United States.

Management

Hand-pulling or cutting young plants can discourage bouncingbet from growing. The use of chemical and biological control methods has not been reported.

Notes

Bouncingbet was brought to the United States from



Photo from KULAK (Katholieke Universiteit Leuven, Campus Kortrijk)

Family: Caryophyllaceae

Bouncingbet

Europe by early colonists. A lather can be produced from the foliage of this plant, because of the saponins in the sap. Even white linens can be washed in the green soap suds. The common name is an old fashion name for a wash-woman.

Night-blooming Cockle

Silene noctiflora L.

Alternate Names

sticky cockle, night-flowering silene, night-flowering catchfly, clammy cockle

Description

Night-blooming cockle is an annual plant that is hairy throughout with sticky hairs on the upper stems. One to 3 woody stems rise up to 3 feet high from the root. Stem nodes are swollen where the leaves attach. Leaves are opposite and covered with sticky hairs. Basal leaves are stalked, oblong, and 1 1/2 to 5 inches long. Stem leaves are stalkless, 3/4 to 3 1/4 inches long, and up to 1 1/2 inches wide. Ascending the plant, leaves become reduced in size and may be alternate near the top of the stem. Flowers are fragrant and occur in terminal clusters of 3 to 8 that open at night. The calyx has 10 prominent, dark green veins and is sticky-haired and about 5/8 of an inch long when the flowers are open. The 5 deeply notched petals, 3/4 to 1 3/8 inches long, are white to pink. There are 10 stamens and 3 styles. The fruit is a capsule with 3 compartments, each containing up to 185 seeds, and 10 distinct green veins.

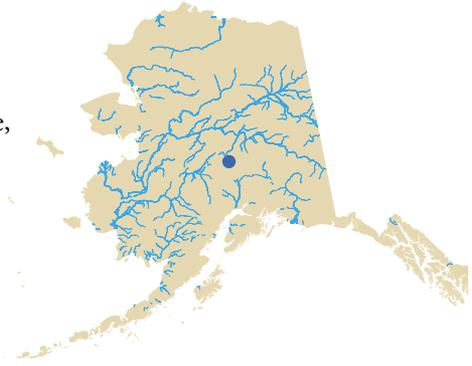


Photo by British Columbia Ministry of Agriculture, Food, and Fisheries

Night-blooming cockle, *Silene Noctiflora*.

Similar Species

A number of native *Silene* species and two other exotic species occur in Alaska. White cockle (*S. pratensis* (Rafn) Godron & Gren.) is often confused with night-blooming cockle but can be distinguished by the presence of separate

Family: Caryophyllaceae

Night-blooming Cockle

male and female plants. Bladder campion (*S. vulgaris* (Moench) Garcke) is similar to night-blooming cockle, but it has flowers in branched clusters of 5 to 30 and a calyx with pinkish-white veins. Unlike any other *Silene* species in Alaska, it is hairless.

Management

Stubble burning and early plowing of grainfields has been shown to cause a decline in the numbers of night-blooming cockle (Perring 1974). Both it and bladder campion have been shown to be resistant to certain herbicides and susceptible to others (McNeil 1980, Stewart 1969).

Notes

Night-blooming cockle was initially reported in North America in Ontario, Canada in 1862 and spread to the Canadian prairies by 1883. It is often an impurity in clover and forage seed. *Silene* probably comes from the Greek word sialon, "saliva," referring to a gummy substance on the stems or from Silenus, the intoxicated foster-father of Bacchus, god of wine, who was often covered with foam like the glandular secretions of many species of this genus.



USDA Forest Service photo by Elizabeth Bella

Night-blooming cockle, *Silene noctiflora*.



X1D Services photo by Dan Tengaglia

Bladder campion, *Silene vulgaris*.

Corn Spurry

Spergula arvensis L.

Alternate Names

stickwort, starwort, devil's-guts, sandweed, pickpurse, yarr, pine-cheat, poverty-weed, cow-quake

Description

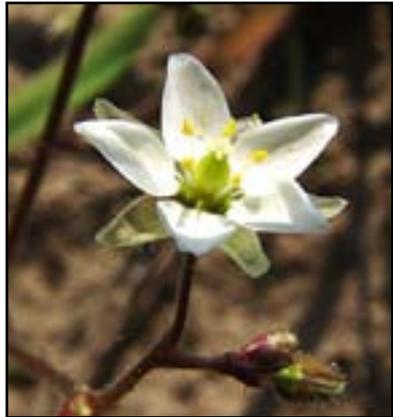
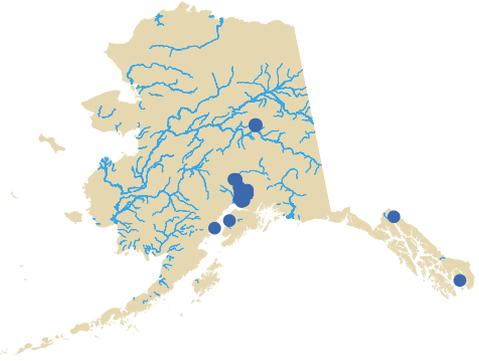
Corn spurry is an annual plant that is much branched at the base, with 1/2 to 2 foot long branches that are erect or spreading and yellowish-green in color. Thread-like leaves occur in whorls of 6 at the nodes with long upper internodes between them. Flowers are less than 1/4 of an inch wide, white, and grouped in loose clusters at the ends of branches.

Similar Species

Knawel (*Scleranthus annuus* L.) is often confused with corn spurry because of its growth habit. Present in British Columbia but not yet in Alaska, it is distinguished by awl-shaped leaves that appear in pairs at stem nodes. The seedling of Russian thistle (*Salsola kali* L.), the introduced tumbleweed of the American West, is often mistaken for the seedling of corn spurry. However, in Russian thistle, the leaves are spine-tipped.

Management

Hand-pulling should provide effective control for corn spurry if undertaken prior to seed production and repeated until the seedbank is exhausted, due to its annual habit. Application of a selective herbicide can also be effective.



KULAK photo by Paul Busselen

Family: Caryophyllaceae

Corn Spurry

Notes

Corn spurry is considered an invasive species in New Zealand. It is a troublesome agricultural weed on Kodiak Island and the Kenai Peninsula and was recently found in Anchorage gardens. The seed can be dried and ground into a meal and then used with flour for making bread, but only as a famine food. The seeds contain saponins, which are mildly toxic unless cooked.



XID Services photo by Dan Tenaglia

Common Chickweed

Stellaria media (L.) Vill.

Alternate Names

chickwhirtles, cluckenweed, mischievous Jack, skirt buttons, tongue-grass, star-weed, winter seed, satin flower, cyrillo, starwort, bindweed, white bird's-eye.

Synonyms

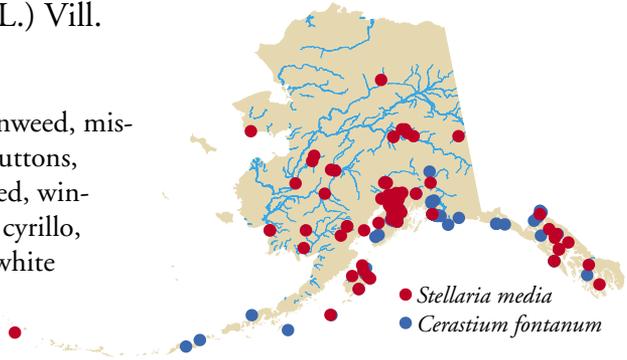
none

Description

Common chickweed is an annual plant with creeping stems that root at the nodes on one side. Stems have a conspicuous line of hairs on one side. Leaves are up to 1 1/2 inches long, and upper leaves lack stalks while lower leaves are hairy toward the base. Flowers are white and measure 1/4 of an inch across.

Similar Species

There are several native species of *Stellaria* in Alaska, including northern starwort (*Stellaria calycantha* (Ledeb.) Bong.) and curled starwort (*Stellaria crispa* Cham. & Schlecht.), but only common chickweed has lower leaves with stalks. Mouse-ear chickweed (*Cerastium fontanum* Baumg.) is another exotic species that is similar in appearance to common chickweed, but its flowers have notched petals.



XID Services photo by Dan Tenaglia

Common chickweed, *Stellaria media*.



XID Services photo by Richard Old

Common chickweed, *Stellaria media*.

Family: Caryophyllaceae

Common Chickweed

Management

Hand-pulling can be effective for small populations of either species. Herbicide treatments are effective when applied before seedlings emerge or during active growth.

Notes

Externally, salves of common chickweed relieve itching and inflammation and are generally soothing and moisturizing. It can be used for minor skin infection or irritation and is an ingredient in a number of commercial skin care products. This plant probably originated in Europe but is now found across the world.



KULAK photo by Paul Busselen

*Mouse-ear chickweed, **Cerastium fontanum.***



KULAK photo by Paul Busselen

*Mouse-ear chickweed, **Cerastium fontanum.***

Lambsquarters

Chenopodium album L.

Alternate Names

Pigweed, white goosefoot

Synonyms

Chenopodium album L. var. *lanceolatum* (Muhl. Ex Willd.)

Coss & Germ., *Chenopodium album* L. var. *polymorphum* Aellen,

Chenopodium amaranticolor Coste & Reyn., *Chenopodium gigantum* D. Don, *Chenopodium lanceolatum* Muhl. Ex Willd., *Chenopodium suecicum* J. Murr.

Description

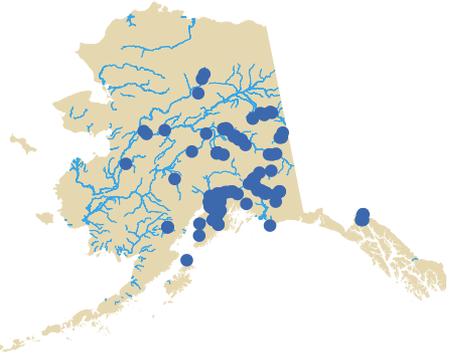
Common lambsquarters is an extremely variable plant that ranges in height from 2 inches to 3 1/2 feet tall. It is an annual plant with bluish green stems that are branched, grooved, and sometimes blotched with red or purple. Its leaves are alternate, simple, green above, and mealy-white below. Leaf shape may be triangular, diamond-shaped, or lance-shaped. Flowers are minute and clustered into dense panicles. It blooms from June to September.

Similar Species

Common lambsquarters is distinct from other native and exotic Alaskan *Chenopodium* species in having a combination of smooth seeds and broad, green leaves.

Management

Common lambsquarters can be controlled by mechanical and chemical methods. It is resistant to some common herbicides and susceptible to others, although it does not nor-



USDA Forest Service photo by Elizabeth Bella

Family: Chenopodiaceae

Lambsquarters

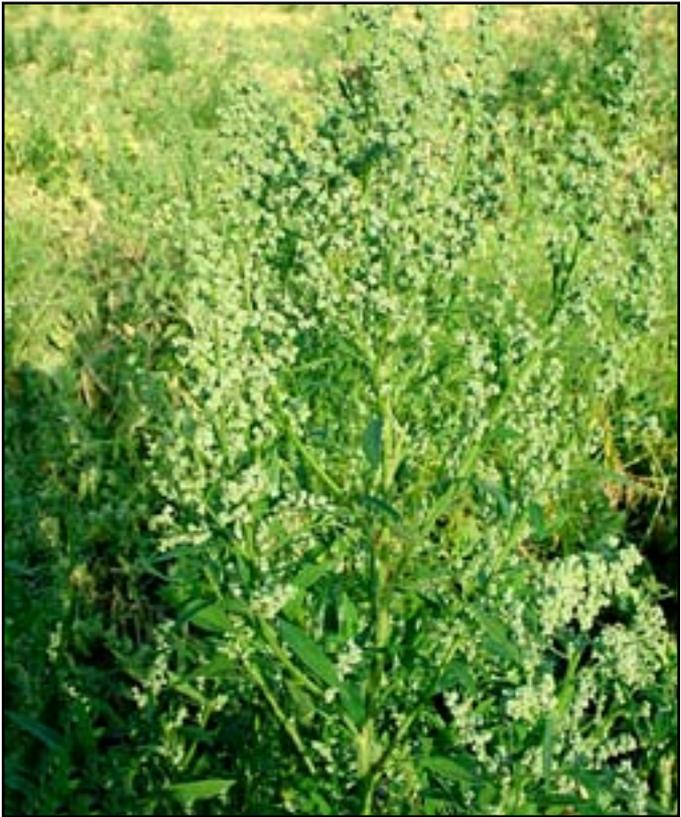
mally persist at a site without repeated disturbance.

Notes

Common lambsquarters was introduced from Europe as an edible herb and is still grown and gathered as a salad green.



XID Services photo by Richard Old



XID Services photo by Richard Old

Common St. Johnswort

Hypericum perforatum L.

Alternate Names

Klamath weed

Description

Common St. Johnswort is a perennial plant with numerous erect stems growing from a stout taproot. Leaves are opposite, up to 1 inch long, and lack stalks. Tiny transparent dots are visible when the leaves are held up to a bright light. Flowers have 5 bright yellow petals, each 1/2 of an inch long, with deep purple dots along the petal margins and showy yellow stamens with purple tips.

Similar Species

Many species of St. Johnswort are found in the United States, but none are native to Alaska.

Management

Tillage may be employed to eliminate common St. Johnswort and biological control by beetles of the genus *Chrysolina* has also been successful. Application of herbicides is most effective before blossoms open, preferably on new seedlings just after germination.

Notes

Common St. Johnswort is used medicinally to relieve nervous



UAF Cooperative Extension Service
photo by Jamie Snyder



XID Services photo by Richard Old

Family: Clusiaceae

Common St. Johnswort

disorders, but it also contains a phototoxin that causes sensitive persons to become susceptible to skin burns, especially after exposure to sunlight. The Latin species name perforatum means holes, which refers to the transparent dots on the leaves.



UAF Cooperative Extension Service photo by Jamie Snyder

Field Bindweed

Convolvulus arvensis L.

Alternate Names

Perennial morning-glory, creeping jenny, small-flowered morning glory.

Synonyms

Convolvulus ambigens
House, *Convolvulus incanus* auct. non Vahl,
Strophocaulos arvensis (L.) Small

Description

Field bindweed is a perennial, weak-stemmed vine growing from extensive underground roots and rhizomes. This species forms prostrate mats or is supported by other plants and objects such as fence posts or utility poles. Leaves are highly variable, 3/4 to 2 1/2 inches long, and arrowhead-shaped to round, ovate, and sometimes linear.

The veins on a mature leaf are pale green, depressed on the upper surface, and raised on the lower surface. Flowers have 5 fused petals forming a 1 inch long funnel-like corolla, white to pale pink.

Similar Species

Black bindweed (*Polygonum convolvulus* L., included in this book) has similar habit and vegetative features, but its arrowhead-shaped leaves are less variable than field bindweed, and it lacks the distinct, large funnel-shaped flowers of field bindweed.



KULAK photo by Paul Busselen



KULAK photo by Paul Busselen

Family: Convolvulaceae

Field Bindweed

Out of flower, black bindweed has a papery sheath surrounding each leaf node.

Management

Field bindweed is best managed by a combination of above-ground biomass removal and competition from desirable vegetation. Field bindweed will not grow under dense shade.

Strategies that focus on exhausting biomass stored in belowground root systems are advised. Extensive use of tillage is effective in agricultural settings. Drought decreases the effectiveness of herbicide treatments (Lyons 1998).



KULAK photo by Paul Busselen

Notes

Field bindweed is listed as a prohibited noxious weed in Alaska (Alaska Administrative Code 1987) and is found at a number of sites across the Kenai Peninsula (E. Bella, pers. comm. 2005). The genus name is derived from the Latin *convolvere*, to entwine. A closely related genus is *Ipomoea*, the sweet potato. Because of its wide distribution and economic impact, field bindweed has been considered one of the “world’s 10 worst weeds” (Holm et al. 1977).

Plantain

Plantago major L.

Alternate Names

common plantain

Description

Plantain is an annual, biennial, or perennial plant with a thick rootstalk and extensive fibrous roots, up to 3 feet deep and wide.

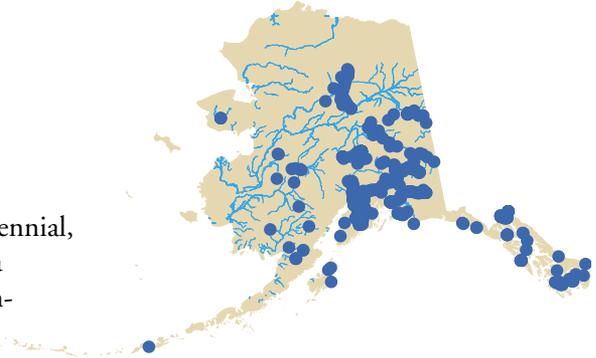
Flowering stalks can grow to 2 feet tall but are generally 6 to 8 inches tall. Plantain is hairless except for a few hairs on the undersides of leaves. It has a basal rosette of stalked, ovate to cordate leaves with smooth margins. The leaves are 2 to 12 inches long and up to 4 inches wide and are strongly 3 to 5-ribbed. The

flowers are borne on 1 to many spikes from a leafless stalk.

It has numerous small, greenish-white flowers that fade to brown. Flowers are wind- and fly-pollinated and self-compatible, and the fruit is an ovate capsule that splits around the middle and contains 5 to 30 seeds. The seeds are brownish-black, small, and elliptic to 4-sided. Plantain is very morphologically variable, and many subspecific forms have been recognized.

Similar Species

Six other *Plantago* species are known from Alaska, 4 of which are native. Plantain can be distinguished from these species by the presence of broad, nearly hairless leaves and more than 6 seeds per capsule.



National Park Service photo by Jeff Heys

Management

Plantain can be pulled with relative ease, although several weedings may be necessary to eliminate plants germinating from buried seeds and root fragments (Densmore et al. 2001). It is easily controlled through herbicide application.

Notes

Dried plantain leaves are used in anti-smoking herbal tonics. This plant is originally from Europe, and Native Americans observing its spread named it “white man’s footprint” or “Englishman’s foot.” Europeans saw the same resemblance to feet or affinity for paths; the genus name *Plantago* is a Latin word meaning “sole of the foot.” Plantain is now naturalized throughout the United States.



US Geological Survey photo by Chris McKee

Creeping Buttercup

Ranunculus repens L.

Alternate Names

buttercup, creeping crowfoot
meadow buttercup

Synonyms

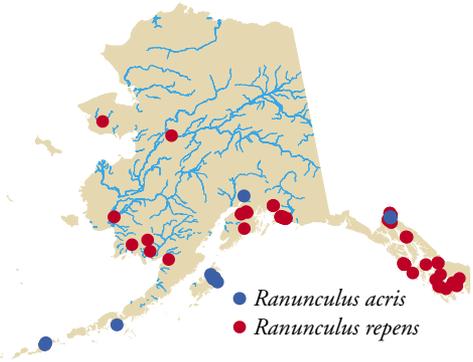
Ranunculus repens L. var. *degeneratus* Schur, *Ranunculus repens* L. var. *erectus* DC., *Ranunculus repens* L. var. *glabratus* DC., *Ranunculus repens* L. var. *linearilobus* DC., *Ranunculus repens* L. var. *pleniflorus* Fern., *Ranunculus repens* L. var. *typicus* G. Beck, *Ranunculus repens* L. var. *villosus* Lamotte

Related Species

Tall Buttercup
Ranunculus acris L.

Description

Creeping buttercup is an herbaceous perennial plant with stems up to 3 feet long and slender fibrous roots. Decumbent stems root freely at their nodes and are often slightly hollow with long spreading hairs. Basal leaves are 1/2 to 3 1/2 inches long, up to 4 inches wide, egg-shaped to triangular, and trifoliate with toothed margins. Stem leaves are alternate and the lower long-stalked leaves transition upward to simple to 5-parted bracts. Flower stems are long and erect, and flowers are few and showy with 5 yellow petals. Spherical seedheads contain about 12 flattened and rounded fruits, each with a short backward-turned beak. The plant overwinters as a rosette with small green leaves.



Leaves and flowers of creeping buttercup, *Ranunculus repens*.



Tall buttercup, *Ranunculus acris*.

XID Services photo by Richard Old

KULAK photo by Paul Busselen

Family: Ranunculaceae

Creeping Buttercup

Tall buttercup is an herbaceous biennial or short-lived perennial plant that grows from a cluster of fibrous roots. Erect stems are up to 3 feet tall, smooth, hollow, leafy below, and branched above. Basal leaves are long-stalked, divided deeply into 3 to 7 coarsely lobed segments, and persistent. Stem and basal leaves have soft hairs on both sides. Long-stalked flowers are composed of 5 shiny golden-yellow petals and 5 sepals. Seeds are disc-shaped and reddish brown with a short hook.



Norwegian Botanical Association
photo by Norman Hagen

*Close-up of leaf of tall buttercup, **Ranunculus acris**.*

Similar Species

Creeping buttercup can be distinguished from native buttercup species by its horizontal growth habit, creeping stems that root at the nodes, spherical head of achenes, and markedly long petals (1/4 to 3/8 of an inch). Tall buttercup can be distinguished from native buttercup species by its upright growth habit and deeply lobed and toothed leaves.



Norwegian Botanical Association
photo by Norman Hagen

*Tall buttercup, **Ranunculus acris**.*

Management

If hand-pulling is used for control of creeping buttercup, all of the rooted branches must be tracked down and removed (Densmore et al. 2001). This species is very resistant to certain herbicides, but herbicide application is generally recommended as the best control method for buttercups.

Notes

Tall buttercup was introduced from Europe and is poisonous to cattle. Creeping buttercup, also from Europe, was introduced to North America as an ornamental. It is a very common lawn weed in southeast Alaska. In some cases it is the lawn.