Alaska Plant Materials Center

Field Guide

Terrestrial Weed Identification

2nd Edition 2014

ALASKA
PLANT MATERIALS CENTER
STATE OF ALASKA - DEPARTMENT OF NATURAL RESOURCES - DIVISION OF AGRICULTURE

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The Alaska Division of Agriculture, Plant Materials Center supports the Agricultural Industry by providing testing, production, development, and distribution of seed and other plant materials. To learn more about the Alaska Plant Materials Center programs and regulations, please visit http://plants.alaska.gov/.

Cover Photo:

Alaska Plant Materials Center

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Table of Contents

Introduction

Invasive weeds are introduced plant species whose presence does, or is likely to, cause harm to the economy, environment, or human health. Invasive plants are capable of reproducing in large numbers and are difficult to control.

Alaska has long been considered isolated from many of the invasive weed challenges faced elsewhere in North America. Our relatively cool climate and remote location have kept many invaders out, but in recent years, land managers in Alaska have become acutely aware of the increasing populations of invasive weeds in our urban areas, on our roadsides, and even in our waterways.

The Alaska Department of Natural Resources, Division of Agriculture, maintains programs and regulations aimed at managing invasive weeds through inventory, control, coordination, and outreach efforts statewide. The Plant Health and Quarantine Regulations (11 AAC 34) identify noxious weeds that are prohibited or restricted based on their use in the state of Alaska. You will see this 'noxious' designation throughout the book for plants that can be found in the regulations. Please refer to http://plants.alaska.gov/pdf/SOA-seed-regs.pdf for the full and current regulations.

This guide is intended to be a resource for the identification and management of some of Alaska's invasive and common weeds throughout the state. This is not a fully comprehensive breakdown of all non-native plants that occur in Alaska, but a selection of the most abundant, or highest priority invasive weeds as well as some of the more commonly occurring, less aggressive weedy species.

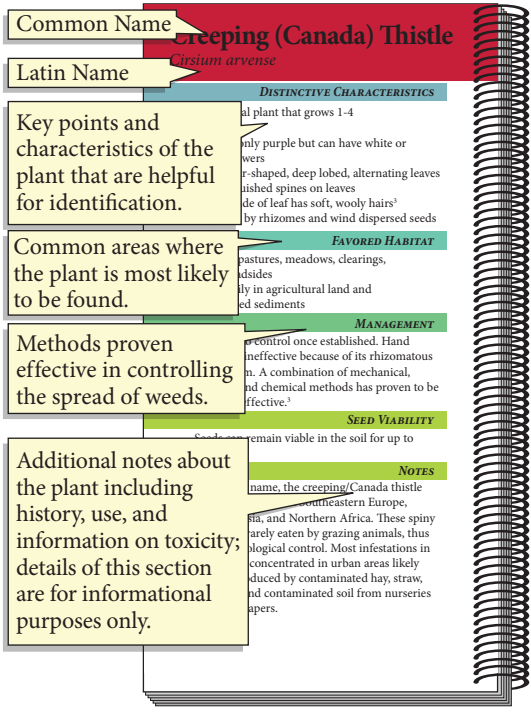
Throughout this guide the following terms are used to describe and categorize plants:

• **Noxious:** A species of plant that is considered a threat to natural resources of the state and therefore has regulatory restrictions which may include restrictions on sale, transportation, or planting in Alaska. A noxious plant has the capacity to become destructive and difficult to control once it is established.

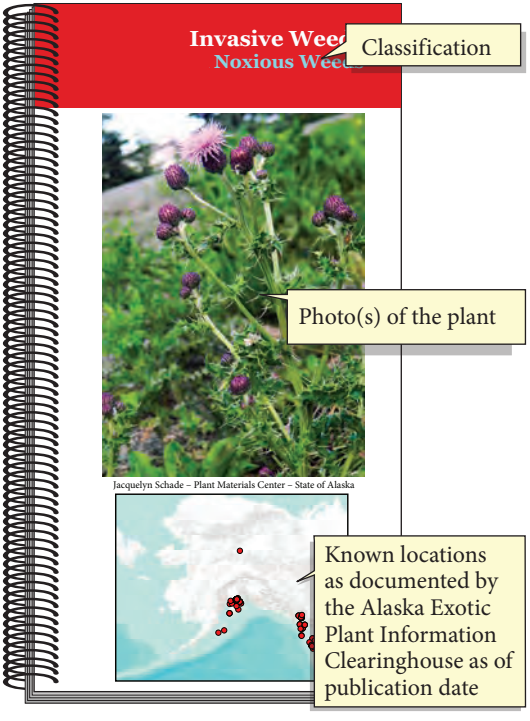
• **EDRR (Early Detection Rapid Response):** A species of invasive plant that is not widespread in Alaska and is a high priority for identification and eradication. This is due to damage or aggressive behavior caused by the species in other states, or biological conditions which may allow the escape and survival of this species in Alaska.

• **Common**: Non-regulated, less aggressive weed species that are widespread in Alaska and often warrant management in some settings.

How to Use This Guide



All species are in alphabetical order by **Latin Name.**


Invasive Weed
Noxious Weed
Classification
Photo(s) of the plant
Jacquelyn Schade – Plant Materials Center – State of Alaska
Known locations as documented by the Alaska Exotic Plant Information Clearinghouse as of publication date

Glossary

Alternate: Leaves occurring one at a node.[4]

Annual: A plant that produces seed and dies within one year of germinating from seed.[4]

Auricle: Having small ear-shaped lobe or appendage.[3]

Awn: A slender, usually terminal bristle.[3]

Axil: The angle found between any two organs or structures and the stem.

Basal: Situated at, or pertaining to, the base.[4]

Biennial: A plant that flowers and takes two years to complete its biological life.

Bract: A small leaf-like structure below a flower.[3]

Calyx: The outer parts of a flower composed of usually leaf-like parts called sepals.[3]

Corolla: The petals of a flower surrounding the stamens and pistil.[3]

Cotyledon: The first leaf or leaves of a seed plant.[4]

Germination: The development of a seed into a plant.[4]

Glandular: Having or bearing secreting organs or glands.[4]

Elliptic: Oval or oblong with rounded ends and more than twice as long as broad.[3]

Entire: Leaf margins that are not cut or toothed[2] or having a margin devoid of any indentations, teeth, or lobes.[4]

Herbaceous: Having the characteristics of an herb,[4] non-woody.

Inflorescence: The flowering part of the plant.[3]

Invasive: An alien species whose introduction does, or is likely, to cause economic, environmental harm, or harm to human health (Presidential Executive Order 13112, 1999).

Involucral: A whorl of distinct or united leaves or bracts just below a flower or inflorescence.[4]

Lanceolate: Shaped like a lance; broadest toward the base and narrowed to the apex, several times longer than wide.[4]

Leaf-nodes: A knob or joint of a stem from which leaves may arise. A node will contain one or more buds.[4]

Leaflet: A subdivision of a compound leaf.[4]

Ligule: A thin, membranous outgrowth or fringe of hairs from the base of the blade of most grasses.[3]

Lobe: A rounded projecting segment, forming part of a larger structure. A lobed leaf is one whose indentations are large.[4]

Margin (of a leaf): The edge of a leaf. They can be smooth, serrated, or toothed, as well as lobed or entire.

Midrib: The main or central rib of a leaf.[4]

Noxious: A regulatory term used to describe a plant that is prohibited to import, transport,

buy, sell, offer for sale, or distribute plants or plant parts of the regulated species within the state of Alaska.

Oblanceolate: Having a rounded apex and a tapering base.

Obovate: Inversely ovate; having the shape of the longitudinal section of an egg, with the broad end at the top.[4]

Opposite: Arranged on the same node at the opposite side of the stem.[3]

Panicle: A branched racemose inflorescence and often applied more widely to any branched inflorescence.[4]

Perennial: A plant that lives for more than two years. Usually flowers each year.

Petiole: The slender stalk or stem of a leaf, also called a leaf stalk.[4]

Pinnate: Arising from several different points along the sides of an axis.[3]

Pistil: The female reproductive unit of a flower.[4]

Raceme: An inflorescence with flowers borne along an elongated axis with the younger flowers nearest the top.[4]

Rhizomatous: Having rhizomes.[3]

Rhizome: Underground stem, usually lateral, sending out shoots above ground and roots below.[3]

Rootstock: See rhizome.[4]

Rosette: Compact cluster of leaves arranged in

an often basal circle.[3]

Scarification: Process of breaking, scratching, or altering the seed coat through chemical or thermal methods to make it permeable to water and gas.

Sheath: A protective covering; lower part of leaf enveloping the stem.[4]

Simple: Of only one part, not completely divided into separate segments.[4]

Spike: A long flower cluster attached directly to the stalk.[4]

Spikelet: A small spike of a large one; a subdivision of a spike; as the spikelets of grasses.[4]

Stamen: The pollen bearing organ of a flowering plant.[3] The male reproductive organ in a flower.[4]

Stolon: A stem which grows horizontally along the surface of the soil; it can take root at the tip and ultimately develop a new plant.[4]

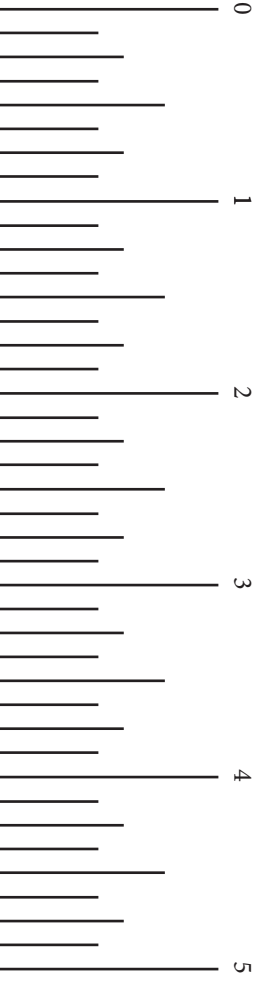
Taproot: The primary root continuing the axis of the plant downward. Such roots may be thick or thin.[4]

Toothed: Sawteeth-like projections on the margins of the blade.[3]

Weed: A plant species that is, or may become, destructive and difficult to control.

Whorled: When three or more leaves are arranged at the same level on a stem.[4]

INCHES



U.S. to Metric Conversion

Length

1 in. = 2.54 cm
1 ft. = 0.3048 m
1 yd. = 0.914 m
1 mi. = 1.69 km

Area

1 sq. ft. = 929 cm^2
1 ac. = 4,046 m^2
1 sq. mi. = 2.59 km^2

Weight

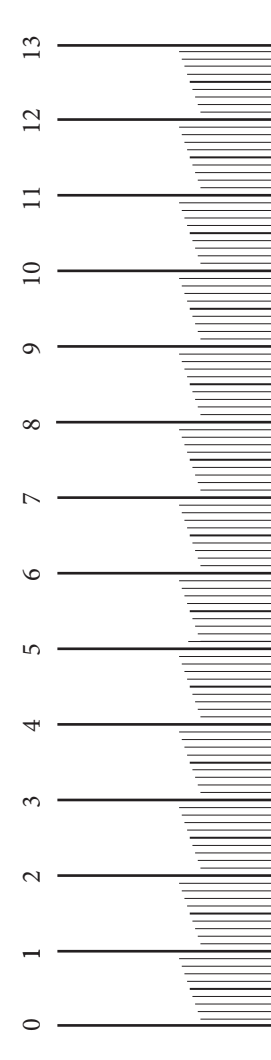
1 lb. = 0.454 kg
1 oz. = 28.349 gm

Volume

1 qt. = 0.946 l
1 gal. =3.785 l

Temperature

°F to °C: (F-32) (0.555)
°C to °F: (C x 1.8) + 32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Garlic Mustard

Alliaria petiolata

Distinctive Characteristics

- Taprooted, herbaceous biennial
- Can grow up to 18 inches tall
- Strong garlic odor when crushed[4]

First Year of Growth

- Dark green rosettes
- Kidney bean-shaped leaves, 4 inches in diameter, distinct leaf veins, scalloped edges

Second Year of Growth

- Kidney bean-shaped basal leaves
- Stem leaves are 2½-4 inches wide, heart-shaped, alternate, gradually reduce in size
- Branched stems, sparsely hairy at the base

Favored Habitat

- Understory of forested areas/undisturbed forests
- Sandy, loamy, and clay soil
- Commonly found in calcareous soils
- Intolerant of highly acidic soil
- Roadsides, yards, gardens, abandoned fields, river flood plains, and wet meadows[4]

Management

Hand pulling, cutting, burning, and herbicides have all been successfully used to control this plant.[4] Hand pulling can be effective early in the growing season and only if entire root is removed.

Seed Viability

Individual plants can produce up to 8,000 seeds. Seeds remain viable for up to 4-5 years.[4]

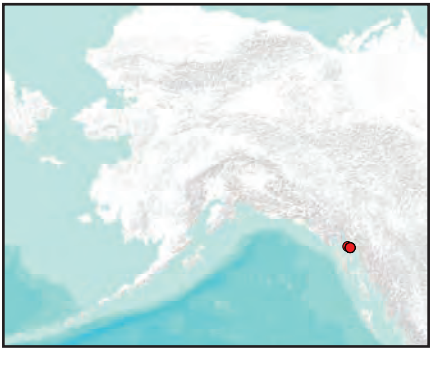
Notes

Garlic mustard is native to Europe and was first recorded in North America in 1868.[4] It often dominates forest understories, and outcompetes native species for light, moisture, and nutrients.

Invasive Weeds

Chris Evans, Illinois Wildlife Action Plan, Bugwood.org

David Cappaert, Michigan State University, Bugwood.org



Wild Oats

Avena fatua

Distinctive Characteristics

- Grows 1-4 feet tall
- Erect, hollow stems
- Leaf blades are ⅛-⅝ inch wide with cotyledons twisting counterclockwise
- Open sheaths have membranous ligules
- Inflorescence is an open panicle
- Spikelets contain 2-3 florets
- Seeds are yellow to black, narrow oval, and ¼-½ inch long
- Distinguished from domestic oats by their twisted awn which bends at right angles; it also has a horseshoe-shaped scar at the seed base[3]

Favored Habitat

- Roadsides and pastures
- Waste areas
- Grows in most grasslands
- Likes poor, sandy soils[8]

Management

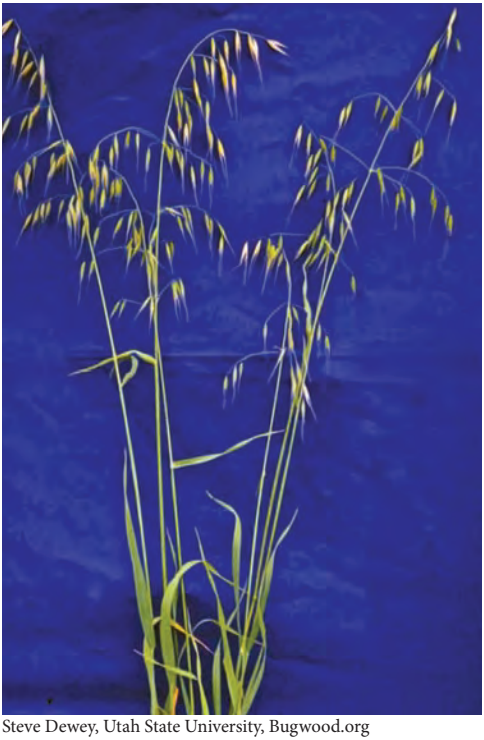
Mow or pull up plants before they go to seed because it is an annual plant.

Seed Viability

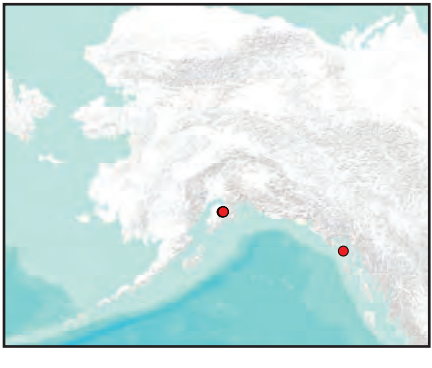
Seeds can remain viable for as long as 10 years.[3]

Notes

A member of the grass family, wild oats are also known as flaxgrass, oatgrass, wheat oats, or wild oats. This species of oats are highly competitive and when left uncontrolled, can reduce wheat fields up to 80%.[4]



Steve Dewey, Utah State University, Bugwood.org



Cheatgrass

Bromus tectorum

Distinctive Characteristics

- Annual grass that can grow in the winter
- Stems are smooth, slender, and erect
- Grows in solitary clumps/tufts
- Grows 2-28 inches tall
- Fibrous root system
- Leaf blades have white hairs that give a fuzzy appearance
- As plant reaches maturity, the leaves turn purplish tan
- Panicle is often purple with seed heads 5-15 inches long[4] with several branches dropping to 1 side

Favored Habitat

- Grazed areas and croplands
- Roadsides and waste areas[3]
- Rocky slopes
- Dry open forest

Management

Mechanical methods (fallows, tillage, mowing) are effective in reducing seed production but do not eradicate the plant. Herbicides are effective in management.

Notes

Cheatgrass forms dominant stands and displaces native vegetation; outcompeting for soil moisture. The sharp spikelets and rough awns can damage the mouth and eyes of livestock. It can also increase frequency and timing of wildfires.[4]

Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Spotted Knapweed

Centaurea stoebe

Distinctive Characteristics

- Biennial to short-lived perennial with taproot
- Rosette leaves are deeply divided; stem leaves alternate and are increasingly smaller towards the top
- Stems are extensively branched with an urn-shape, solitary purplish pink flower at the end of each branch
- Flowers grow up to 1 inch wide and are composed of purple disc florets
- Dark comb-like fringe on the tips of the bracts, just below the flower petals, giving a 'spotted' appearance

Favored Habitat

- Cultivated fields and pastures
- Roadsides and railways[3]
- Pipelines

Management

A combination of mowing, herbicide, and reseeding with native plant species has proven to be effective.

Seed Viability

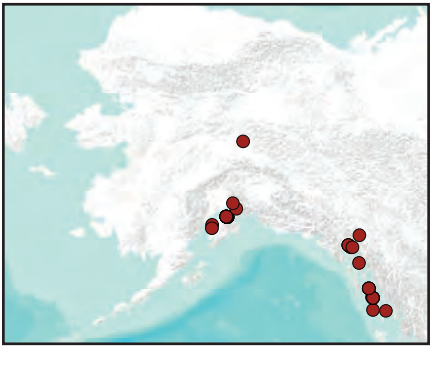
Produces 50-500 seeds per individual plant. Seeds are only viable for 2-3 years in the soil.[5]

Notes

Commonly confused with the native diffuse knapweed (*C. diffusa*), it can be differentiated from spotted knapweed by its spine-tipped floral bracts. Knapweeds are allelopathic, inhibiting the establishment and growth of surrounding vegetation.[4]

Brianne Blackburn, Plant Materials Center, State of Alaska

Steve Dewey, Utah State University, Bugwood.org



Creeping (Canada) Thistle

Cirsium arvense

Distinctive Characteristics

- Perennial plant that grows 1-4 feet tall
- Commonly purple but can have white or pink flowers
- Irregular-shaped, deep lobed, alternating leaves
- Distinguished spines on leaves
- Underside of leaf has soft, wooly hairs[4]
- Spreads by rhizomes and wind dispersed seeds

Favored Habitat

- Fields, pastures, meadows, clearings, and roadsides
- Primarily in agricultural land and disturbed sediments

Management

Difficult to control once established. Hand pulling is ineffective because of its rhizomatous root system. A combination of mechanical, cultural, and chemical methods has proven to be the most effective.[4]

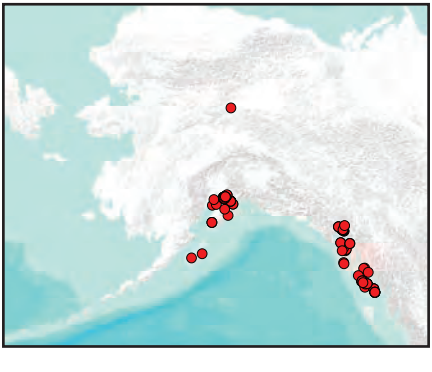
Seed Viability

Seeds can remain viable in the soil for up to 20 years.[4]

Notes

Despite its name, the creeping/Canada thistle orginally came from Southeastern Europe, Western Asia, and Northern Africa. These spiny plants are rarely eaten by grazing animals, thus have no biological control. Most infestations in Alaska are concentrated in urban areas and likely introduced by contaminated hay, straw, forage, and soil containing its seeds from nurseries and landscapers.

Jacquelyn Schade, Plant Materials Center, State of Alaska



Bull Thistle

Cirsium vulgare

Distinctive Characteristics

- Biennial plant with deep, fleshy taproot
- Green to brown conspicuously winged stem with slightly hairy, spreading branches
- Leaves are pinnately lobed, hairy and prickly on the upper side, and soft underneath
- Dark purple flowers grow up to 1½-2 inches wide
- Involucral bracts are narrow and tipped

Favored Habitat

- Pastures, fields, ditches, and roadsides
- Disturbed sites[3]
- Undisturbed grasslands, meadows, and forest openings[4]

Management

Hand pulling and mowing for 4 consecutive years has been proven effective. Applying herbicides while the plant is in the rosette stage has also proven effective.[4]

Seed Viability

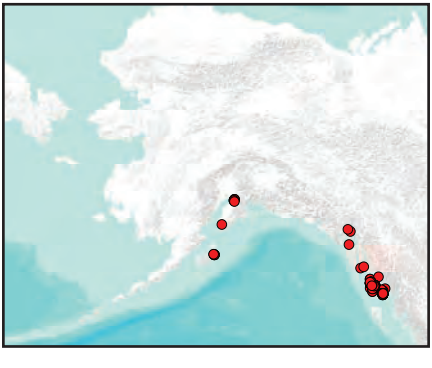
Reproduces only by seed. Seeds have no innate dormancy. Individual plant produces up to 4,000 seeds with up to a 90% germination rate.[4]

Notes

First introduced to the United States as a seed contaminant, it is originally native to Eurasia. This species competes with native vegetation for soil moisture and nutrients. It displaces native plant species, decreasing forage for grazing animals.

Shu Suehiro, botanic.jp

Shu Suehiro, botanic.jp



Narrowleaf Hawksbeard

Crepis tectorum

Distinctive Characteristics

- Annual plant that grows up to 3 feet tall
- Single stem that is branched, erect, hairless, and mostly basal leaves
- Taprooted
- Basal leaves are stalked, lance-shaped, 4-6 inches long, and 1½ inches wide
- Stem leaves are alternate, less than ½ inch wide, and clasp at the stem
- Leaf margins roll underneath the midrib
- Involucral bracts are smooth and hairless
- Flowers grow ½-¾ inch wide and have 30-40 yellow ray florets[4]

Favored Habitat

- Forage crops, pastures, and cultivated fields
- Roadsides
- Waste areas

Management

Manual, mechanical, and chemical methods are all effective. Herbicides should be applied to large or persistent (not reduced after 1 year of hand pulling) populations. It is critical to recheck the site for a few years to make sure no plants have reemerged.[4]

Seed Viability

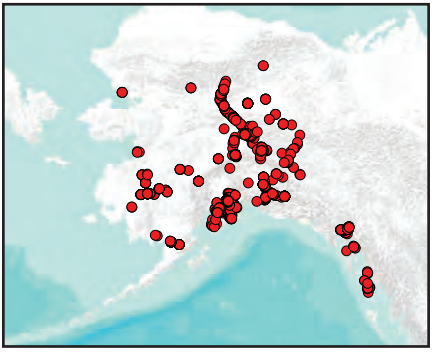
Individual plants can produce up to 49,000 seeds per season.[3] Over 90% of seeds are non-dormant.[4]

Notes

Also known as annual hawksbeard and yellow hawksbeard,[4] this species typically establishes itself in dense stands. In Alaska, 7% of recorded infestations occur at 50% ground cover. In Denali National Park it has displaced native vegetation.[4]

Michael Shephard,USDA Forest Service, Bugwood.org

Caleb Slemmons, University of Wisconsin, Stevens Point, Bugwood.org



Scotch Broom

Cytisus scoparius

Distinctive Characteristics

- Woody shrub that grows up to 10 feet tall
- Erect, angled, dark green branches
- Leaves are 3 parted with entire leaflet
- Leaflets are obovate to oblanceolate, ¼-½ inch long
- Flowers are yellow, many or alone, on axils
- Pods grow flat, brown or black, with white hairs on the margins,[3] and legume-like

Favored Habitat

- Pastures
- Forests
- Waste places[3]
- Natural meadows and thickets

Management

Hand pulling, cutting, mowing, and herbicides are all effective. This plant will resprout from root segments.[4]

Seed Viability

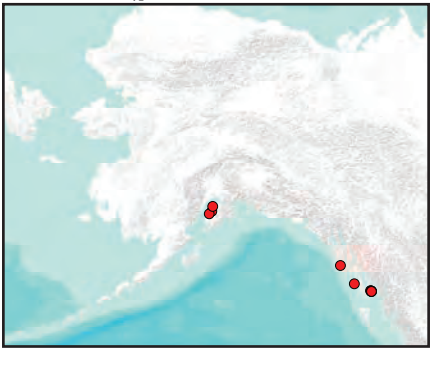
Seeds remain viable in the soil for many years.[3]

Notes

This species was first introduced to British Columbia in 1850 by Captain Walter Colquhoun, an immigrant from Scotland.[4] In Scotland, branches were cut and used as brooms, hence its name.[25] Although its seeds have been used as a coffee substitute, it contains several toxic alkaloids that can depress the heart and nervous system. Infestations prevent reforestation and increase the risk of fires.

Eric Coombs, Oregon Department of Agriculture, Bugwood.org

Shu Suehiro, botanic.jp



Quackgrass

Elymus repens

Distinctive Characteristics

- Perennial grass
- Strongly rhizomatous and can spread up to 10 feet per year with 200 new shoots per year
- Rhizomes are yellow white, fleshy, and end in a sharp point
- Leaf blades are ¼-½ inch wide, flat, pointed with small auricles, and often have slight constrictions near the tip of the leaf
- Spikelets have two long rows, borne flatwise to the stem, and have none or short, straight awns
- Spreads by seeds or rhizomes[3]

Favored Habitat

- Moist soils with cool temperatures
- Crops, fields, and rangelands
- Pastures and gardens[3]
- Disturbed sites at low elevations
- Scattered, but widely distributed

Management

Difficult to control because a segment of rhizome can produce a new plant.[3] Burning, tilling, herbicide treatments, and the combination of all 3 have been effective. Area must be checked for at least the next 2 years for regrowth.[4]

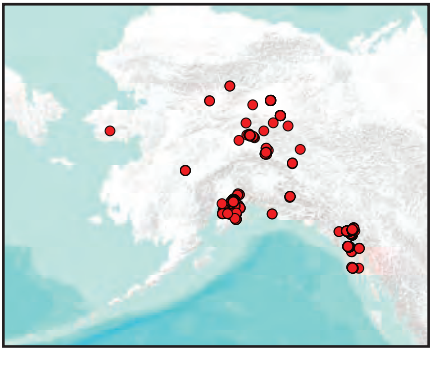
Seed Viability

Each individual plant can produce up to 400 seeds. Seeds remain viable for up to 2-3 years.[4]

Notes

This is a European species that has become established in settled portions of Alaska as a vigorous, persistent weed.[4] 'Quack' derives from the Anglo-Saxon word meaning 'vivacious.'

Steve Dewey, Utah State University, Bugwood.org



Leafy Spurge
Euphorbia esula

Distinctive Characteristics

- Long-lived, deeply rooted perennial
- Vigorous rhizomes
- Stems are hairless and pale green
- Grows 16-32 inches tall
- Leaves alternate, are narrow, and 1-4 inches long
- Flowers are small, grow in clusters, and are yellowish green
- The flowers are backdropped by paired, heart-shaped, yellow green bracts[4]

Favored Habitat

- Pastures and rangelands
- Waste areas and abandoned croplands
- Roadsides
- Areas with human development
- Meadows and woodlands[4]

Management

Extremely difficult to control due to extensive root system that has abundant nutrients allowing it to recover from control attempts.[3] Cultivation can be used if done 2-4 weeks prior to plant emergence. Herbicide application can also be effective. Mowing and burning does not work to control leafy spurge.[4]

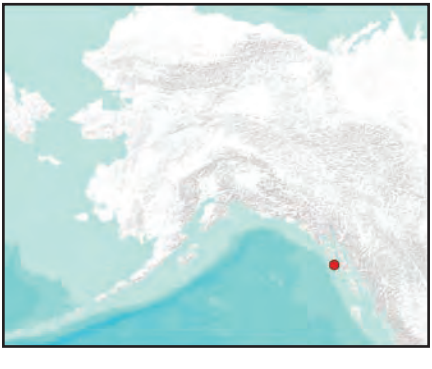
Seed Viability

Seeds remain viable up to 8 years.[3]

Notes

Leafy Spurge was found in 2012 in Sitka, but has since been eradicated. An Eurasian perennial,[3] the leafy spurge is in the same family as the *Poinsettia*.[4] It was first introduced to the United States as a contaminant in seed in 1827.[4] It can reduce rangeland for livestock by 50%-75%. It is also known as wolf's milk, euphorobia, spurge, and faitours grass.[4]

William M Ciesla, Forest Health Management International, Bugwood.org



Hempnettles

Galeopsis bifida, Galeopsis tetrahit

Distinctive Characteristics

- Annual plants that grow ½-3 feet tall from taproots
- Leaves are opposite, petiolated, lanceolate to ovate, and have stiff, downward pointing hairs
- Flowers are in dense clusters in leaf axils near the ends of stems
- Corollas consist of 5 fused petals and are the distinguishing feature for determining the hempnettle species

Splitlip hempnettle (*Galeopsis bifida*):

- Corollas have a notched lip on central lobe of lower tip, are longer than they are broad, and grow ¾-1 inch long
- Triangular leaf bases

Brittlestem hempnettle (*Galeopsis tetrahit*):

- Corollas lack notches, are square and grow less than ¾ inch long with round leaf bases
- Stems are hairy, and mainly on the nodes

Favored Habitat

- Disturbed habitats and roadsides
- Barnyards and gardens
- Wooded areas and forest margins
- Infests grain fields, canola, and pastures[13]

Management

Clip or weedwhack before seeds set. Some herbicides have also proven effective.[13]

Seed Viability

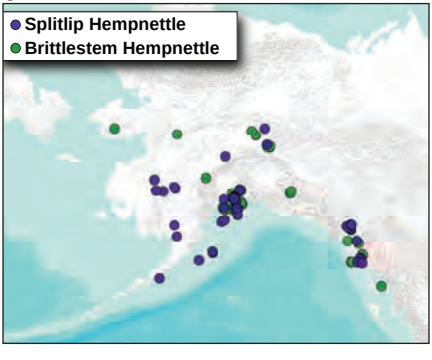
A single plant can produce 400 seeds. Seeds remain viable for several years.

Notes

Originally from Eurasia, it was introduced through contaminated crop seed and livestock feed.[26] In Alaska, they have been documented growing in riparian areas, lakeshores, sloughs, and the upper portions of coastal marsh. *Galeopsis bifidia* is highly toxic.[7] Also known as splitlip nettle, dog nettle, and brittlestem nettle.[13]

Tom Heutte, USDA Forest-Service, Bugwood.org

Jamie Nielsen, University of Alaska Fairbanks,
Cooperative Extension Service



Giant Hogweed

Heracleum mantegazzianum

Distinctive Characteristics

- Grows 10-15 feet high
- Large, compound, dissected leaves measuring 3-5 feet wide.
- Umbel inflorescence grows up to 2½ feet across
- Stems are hollow
- Closely resembles native cow parsnip (*Heracleum maximum)* but can be distinguished by larger inflorescence and leaf size, deep leaf dissection, and overall plant height
- Stems have dark red or purple spots and bristles[4]

Favored Habitat

- Riparian areas, river banks, and streams
- Damp places and roadsides
- Waste areas[4]

Management

Always wear protective equipment when handling this plant. Manually remove by cutting roots at least 3-4 inches below the surface. Mowing repeatedly will also control it. Systemic herbicides may be effective.[4]

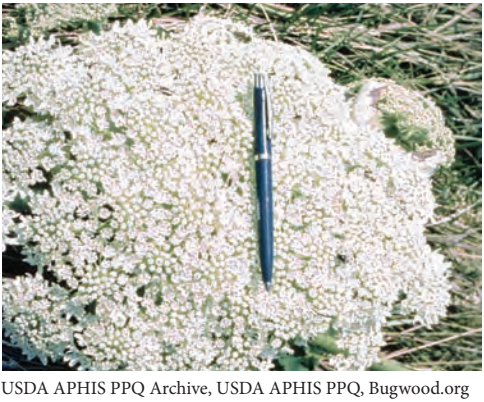
Seed Viability

Giant hogweed has a 91% germination rate in the first season and a seed viability of ~3 years.[24]

Notes

Also known as giant cow parsnip, it produces a watery sap that can cause severe dermal injury to humans, birds, and other animals.[4] Native to the Caucasus Mountains and Southwestern Asia, it has been documented in Kake, Alaska.

Thomas B. Denholm, New Jersey Department of Agriculture, Bugwood.org



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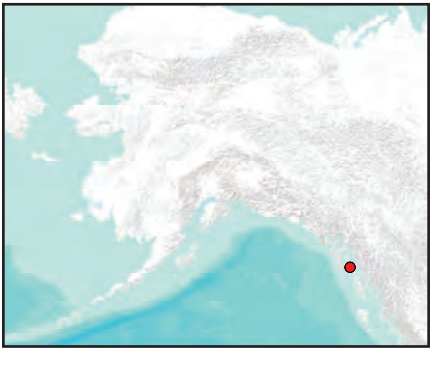


Orange Hawkweed

Hieracium aurantiacum

Distinctive Characteristics

- Shallow, fibrous roots with stolons
- Well developed basal rosettes
- Leaves are oblanceolate to narrowly elliptic, grow up to 5 inches, have soft white hairs, and are completely basal
- Stems are covered in dark hairs
- Stems and leaves exude milky latex when cut or broken
- Grows up to 12 inches tall[2]
- Showy orange flowers consist of ray florets with several to many heads on a flat topped cluster
- Individual plants send out 4-8 new stolons per season[4]

Favored Habitat

- Cleared areas in forests and urban areas (often escapes from ornamental planting)
- Well drained soils
- Nutrient poor, uncultivated, or disturbed soils[4]
- Roadsides, gravel pits, pastures

Management

Herbicides have been the most effective and should be treated as rosettes. Mechanical methods will not eliminate orange hawkweed as it can resprout from any fragments left in the soil. However, for small infestations, hand pulling can be effective if care is taken to get all the roots.[4]

Seed Viability

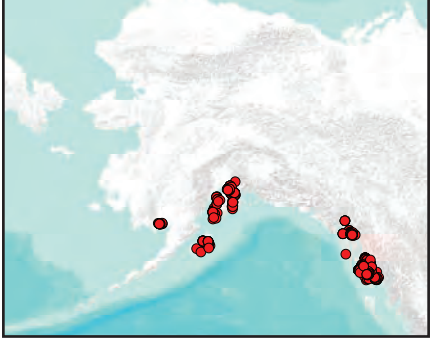
Individual plants produce 50-600 seeds per plant per season. Seeds are viable for 7 years.[4]

Notes

First brought to the United States in 1818 as an ornamental plant. It is also known as devil's paintbrush and king devil.[4]

Michael Shephard, USDA Forest Service, Bugwood.org

Michael Shephard, USDA Forest Service, Bugwood.org



Yellow-Flowered Hawkweeds

Hieracium caespitosum, H. umbellatum

Distinctive Characteristics

- Yellow flower heads consisting of only ray flowers in clusters
- Plants contain milky juice
- Short, woody, or stiff rhizomes
- Simple of stiff hairy leaves

Meadow hawkweed *(Hieracium caespitosum)*:

- Long leafy stolons, erect stems with glandular, star-like hairs
- Stems can have up to 30 flower heads and grow greater than ½ inch wide
- Basal leaves are oblanceolate to spoon-shaped and toothed

Narrowleaf hawkweed *(Hieracium umbellatum):*

- Few basal leaves (does not form a rosette), middles leaves are lance-shaped
- Does not produce stolons

Favored Habitat

- Meadow: Meadows, rangelands, pastures, forest borders, roadsides, disturbed areas[15]
- Narrowleaf: Partially disturbed sites, roadsides, forest edges, and in openings. Grows best in sunny areas, but can tolerate semi-shade[15]

Management

Mechanical methods alone will not eradicate hawkweeds. Herbicide treatment is the most effective.[15]

Seed Viability

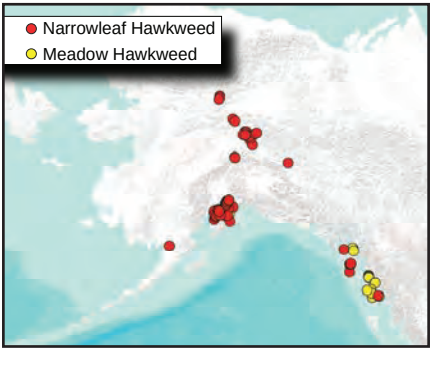
Meadow hawkweed produces ~ 50-600 seeds per season per plant.[15] Narrowleaf hawkweed reproduces by seed and rhizomes.[16]

Notes

There are 3 native yellow hawkweeds in Alaska that can be distinguished from the exotic species by their smaller flowerheads (less than ⅜ inch wide).

Tom Heutte, USDA Forest Service, Bugwood.org

Tom Heutte, USDA Forest Service, Bugwood.org



Ornamental Jewelweed

Impatiens glandulifera

Distinctive Characteristics

- Grows 3-6 feet tall
- Stems grow erect, are smooth, hollow, hairless, reddish, multibranched, with large, swollen nodes
- Leaves are 6 inches long, 3 inches wide, and are sharply toothed
- Flowers form in sparse clusters from leaf axils, have 5 petals (2 of which are fused), and can be pink, purple, red, or white[4]

Favored Habitat

- Moist and nutrient rich areas such as meadows, moist forests, seashores, along rivers, and brooks
- Found on roadsides, hedges, grasslands, shrubberies, and ditches[11]

Management

Small infestations can be managed by hand pulling. Mechanically managing the plant before seed development has been successful. The plant will regrow if cut above the lowest node.[4]

Seed Viability

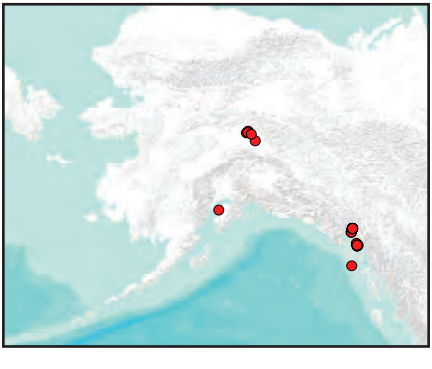
Ornamental jewelweed reproduces entirely by seed and can produce 800-2,500 seeds per season. Seeds are viable for up to 18 months and they can germinate under water.[4]

Notes

If a mature fruit capsule is disturbed, it will eject the seeds up to 23 feet away.[11] It is also known as Himalayan balsam. At high densities, it can alter water flow, increase soil erosion, and cause flooding.[4]

Jan Samanek, State Phytosanitary Administration, Bugwood.org

Jan Samanek, State Phytosanitary Administration, Bugwood.org



Oxeye Daisy

Leucanthemum vulgare

Distinctive Characteristics

- Shallow rhizomatous roots
- Numerous stems
- Grows 1-3 feet tall
- Basal leaves are spatula-shaped, broad, irregularly lobed, 2-5 inches long, and 2 inches wide
- Stem leaves alternate, smooth, glossy, and become smaller as they move towards flower
- Petioles are short and clasp the stem
- Flowers are 1-2 inches in diameter and composed of white ray florets and yellow disc florets

Favored Habitat

- Beach meadows,[4] meadows, and pastures
- Roadsides and native grasslands
- Waste places[3]

Management

Hand pulling and mowing over several years can be effective to eradicate the plant for small infestations if done before seeds are produced. Herbicides can also work to control oxeye daisy.

Seed Viability

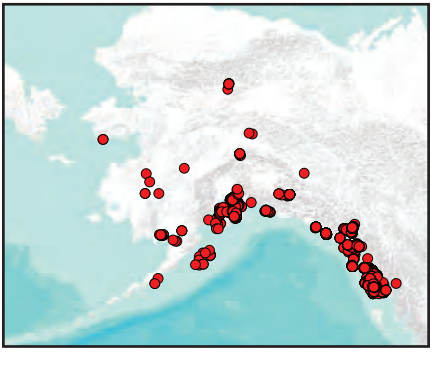
Seeds can remain viable in the soil for 20 years. An individual plant can produce 1,300-4,000 seeds per season.[4]

Notes

The oxeye daisy was first introduced to North America from Europe as an ornamental plant. Heavy infestations decrease overall plant diversity and quickly replaces grass species in pastures. The entire plant has an unpleasant odor, and grazing animals avoid it.

Shu Suehiro, botanic.jp

Ohio State Weed Lab Archive, The Ohio State University, Bugwood.org



Yellow Toadflax

Linaria vulgaris

Distinctive Characteristics

- Grows up to 2½ feet high and generally in clumps
- Numerous alternating, pale green, narrow, lance-shaped leaves
- Leaves are pointed at both ends and can grow up to 2½ inches long
- Flowers are yellow with a bearded orange center, snapdragon-like with a long, straight spur at the base, grow in spike-like clusters, and are first compact, then elongate
- Seeds are dark brown to black[3]
- Fruit is 2 celled and globe-shaped
- Reproduces by seeds and rhizomes

Favored Habitat

- Sandy and gravel rich soils
- Roadsides, pastures, and gardens[4]
- Lake and beach shores
- Cultivated fields and meadows
- Wet or dark areas in exposed fertile soils[3]

Management

Creeping rhizomes make this plant difficult to control.[2] However, a combination of cutting, mowing, and tilling are effective when used together. Repeated hand pulling with removal of all roots can be used against small infestations. Using herbicide as a follow up to other management techniques can greatly reduce an infestation.[4]

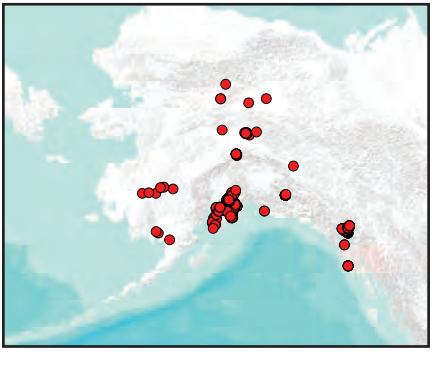
Seed Viability

Seeds remain viable up to 10 years. One plant can produce up to 500,000 seeds per year.

Notes

Also known as 'butter and eggs,' it was introduced to North America in the late 17th century as an ornamental herb.

Michael Shephard, USDA Forest Service, Bugwood.org



Purple Loosestrife

Lythrum salicaria

Distinctive Characteristics

- Erect, square stem with soft hairs
- Grows 6-8 feet tall
- Leaves are simple, entire, opposite or whorled, stalkless, lance-shaped, and slightly hairy
- Flowers are rose to purple in color and are arranged in long vertical racemes
- Can be distinguished from native fireweed by the late blooming flowers
- Each flower has 5-7 petals surrounding a small yellow center
- Can reproduce from root or stem fragments[4]

Favored Habitat

- Moist or marshy sites[3]
- Streambanks, shorelines, and shallow ponds
- Favors clay, sand, and silt
- Can survive in 50% shade[4]

Management

Small infestations can be controlled by manually pulling out the plant and all its roots. Large infestations are more difficult to manage because mechanical management is ineffective and herbicides are non-selective.[4]

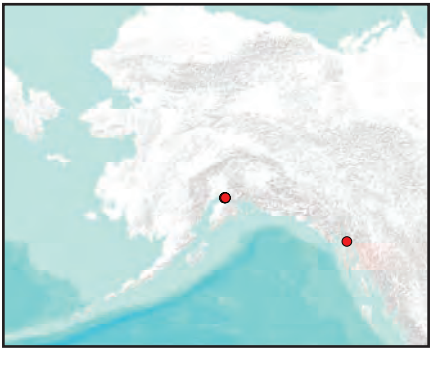
Seed Viability

Individual plants produce 108,000 seeds per season.[4]

Notes

Purple loosestrife was originally introduced to North America as an ornamental plant and is native to Europe. It clogs streams and canals and slows water flow, displacing or shading out native vegetation, and degrading nesting and foraging sites for native animals.

Eric Coombs, Oregon Department of Agriculture, Bugwood.org



White & Yellow Sweetclover

Melilotus alba, M. officinalis

Distinctive Characteristics

- Sweet smelling annual
- Grows 2-6 feet tall
- Stems erect and branched
- Leaves are compound trifoliate, alternate, and lance-shaped to oblong
- Flowers are white and yellow, ⅛-¼ inch long, forming axillary racemes in spike-like clusters
- Yellow sweetclover has wider, oblong, leaflets and pads, but less common in Alaska
- Flower and die in second year of growth
- Yellow sweetclover (*M. officinalis)* differs by white sweetclover (*M. alba*) by having wider oblong leaflets and pods, and yellow flowers.

Favored Habitat

- Roadsides and waste areas
- Disturbed sites[3]
- Riparian areas, woodlands, and prairies[4]

Management

Manual or mechanical means are effective if efforts are repeated until the seed bank is exhausted.[4]

Seed Viability

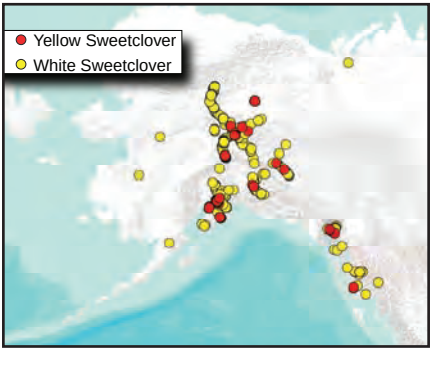
Individual plants are capable of producing 350,000 seeds per season. The seeds can remain viable for up to 81 years.[4]

Notes

The sweet fragrance of sweetclover comes from coumarin. If allowed to degrade (e.g. through rotting of hay), the coumarin can break down into compounds that prevent blood from clotting, leading to death of hay fed animals even from minor injuries.[4]

Shu Suehiro, botanic.jp

Karan A. Rawlins, University of Georgia, Bugwood.org



Reed Canarygrass

Phalaris arundinacea

Distinctive Characteristics

- Robust perennial with stout, scaly, pinkish creeping rhizomes
- Forms hollow stems and grows ½-5 feet tall
- Blades are rough, flat, 2-6 inches long, ¼-½ inch wide, with clasping, transparent ligule
- Flowers form in dense, branched panicles, 2¼-7 inches long
- Has a single flower per spikelet and an open, branched inflorescence
- Reddish purple at base

Favored Habitat

- Wet grounds and along streams
- Marshes and canals
- Disturbed sites including clearings and ditches

Management

Mechanical methods are effective, but labor intensive, to remove all rhizomes. Herbicides can be effective but are not selective enough to be used in wetlands without damaging native species.[3] No biological control methods are known for use in natural areas.

Seed Viability

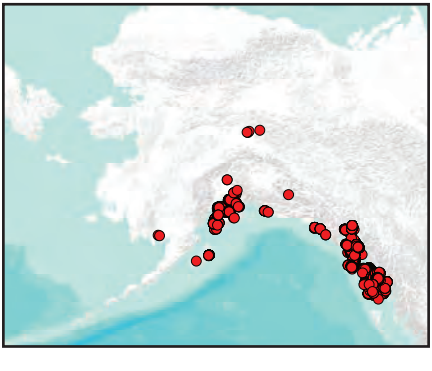
Reproduces from seed and creeping rhizomes. Seeds remain viable in soil up to 1 year.

Notes

Reed canarygrass has historically been used on roadsides for soil stabilization. When forming monotypic stands in wetlands, it grows too densely to provide adequate cover for small mammals and waterfowl. When in flower, may cause hay fever and allergies.[4]

Shu Suehiro, botanic.jp

Shu Suehiro, botanic.jp



Wild Buckwheat

Polygonum convolvulus

Distinctive Characteristics

- Annual plant with climbing or trailing growth habit
- Grows ½-1¾ inches long by the time the seeds are fully formed
- Leaves are heart-shaped, taper to a point, and alternate around the stem
- Tiny, greenish white flowers in clusters both at leaf axils and at the tip end of the stem
- Paper-like leaf sheath[3]
- Thin, deep roots
- Seeds are triangular, dull black, slightly roughened, and ~3/16th inch long[3]

Favored Habitat

- Cultivated fields and gardens
- Orchards[3]
- Disturbed sites
- Roadsides
- Sunny areas

Management

Hand pulling can be effective if continued year after year. Herbicides have also proven effective.[4] Prevention of an infestation by purchasing clean, weed free crop seed is the best management practice.

Seed Viability

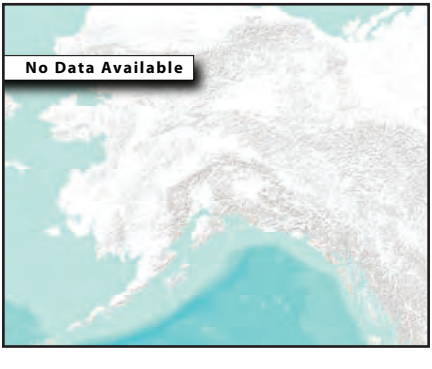
Seeds can remain dormant for up to 5 years.

Notes

A native to Eurasia, wild buckwheat has been introduced through grain transport. The genus name *Polygonum* is Latin for 'many knees,' referring to the large number of nodes that form on the long vines, and the species name *convolvulus* means 'to turn around,' describing the twining stem.

Richard Old, XID Services Inc., Bugwood.org

Oregonstate.edu



Japanese Knotweed

Polygonum cuspidatum

Distinctive Characteristics

- Herbaceous perennial
- Grows up to 10 feet tall
- Stems are hollow, rigid with thick nodes, jointed, and reddish in color
- Thin paper-like sheaths
- Leaves are flat based with an acutely tapering tip
- Broad oval leaves have a satiny texture, short petiole, and grow up to 6 inches long
- Inflorescences are branched sprays of small whitish green flowers

Favored Habitat

- Roadsides, disturbed, and waste areas
- Pastures[3]
- Riverbanks and wetlands

Management

Hand pulling is only effective for small, young populations. Herbicides are effective but must be repeated 4 or more times per season for several years to eradicate infestations.

Seed Viability

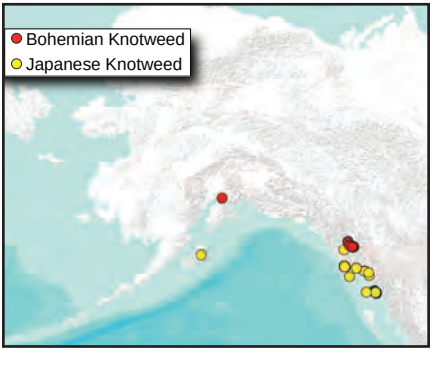
Seed production and viability is unknown. It can generate a new plant from $\frac{1}{40}^{th}$ ounce of rhizome.[4]

Notes

Originally native to the Himalayan area, it was introduced into Japan during the Meiji period about 120 years ago.[19] It clogs waterways, lowering the quality of habitat for wildlife, and reducing food supply for juvenile salmon in the spring.[4] It has since been introduced in Juneau, where there is an infestation over 400 feet long along the road system.

Tom Heutte, USDA Forest Service, Bugwood.org

Tom Heutte, USDA Forest Service, Bugwood.org



Tansy Ragwort

Senecio jacobaea

Distinctive Characteristics

- Biennial or short-lived perennial herb
- One or several stems grow 1-4 feet tall
- Stem leaves are deeply cut, alternate, and generally 2-3 times pinnately lobed
- Basal leaves are 2-8 inches long and have stalks
- Flowers grow in terminal clusters of 20-60
- Taprooted
- Flowers consist of 10-13 yellow rays and disc flowers for each ¼-½ inch long floret

Favored Habitat

- Rangelands and pastures[3]
- Disturbed areas
- Forest clear cuts
- Roadsides

Management

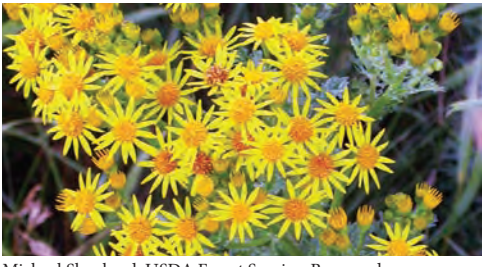
For small infestations, hand pulling before plant seeds can be effective. Plowing, mowing, and burning often intensify infestations. Herbicide with sodium chlorate can be effective in controlling infestations but is not very selective.

Seed Viability

Individual plants can produce up to 150,000 seeds per season. Seeds are still viable up to 15 years.[4]

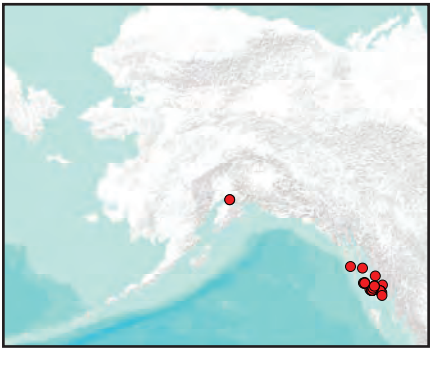
Notes

Tansy ragwort is also known as common ragwort and staggerwort. It is native to Europe and Western Asia. It can be differentiated from 17 other *Senecio* species that grow in Alaska by the presence of leaves that are 2-3 times pinnatifid (rather than triangular, narrowly linear, or divided into linear segments).[4]



Michael Shephard, USDA Forest Service, Bugwood.org

USDA PLANTS Database, USDA NRCS PLANTS Database, Bugwood.org



Perennial Sowthistle

Sonchus arvensis

Distinctive Characteristics

- Grows 2-4 feet tall with extensive root system up to 10 feet deep
- All parts contain a milky white juice
- Leaves are alternate, lanceolate, with a clasping base, and prickly margins
- Flower is bright yellow and 1-2 inches wide
- Floral bracts are green with white margins
- Involucral bracts and flower stalks are covered with yellow tipped hairs

Favored Habitat

- Gardens and cultivated crops
- Ditchbanks and roadsides
- Disturbed areas
- Meadows, stream banks, lake shores[4]

Management

Manual, mechanical, and chemical means have all been used to control this plant. It is resistant to most broadleaf herbicides, but mechanical and manual efforts repeated over a number of years have proven effective.[4]

Seed Viability

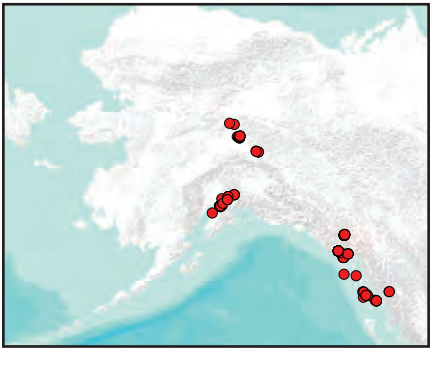
Individual plants can produce 4,000-13,000 seeds. Seeds can remain viable in the soil up to 6 years.[4]

Notes

Sowthistles can be separated from true thistles by breaking their stems. Sowthistles have milky latex, true thistles do not. The milky juice has been an explored source of oil for manufacturing plastic, and pharmaceuticals because of its high hydrocarbon content.[4]

Michael Rasy, University of Alaska, Bugwood.org

Tom Heutte, USDA Forest Service, Bugwood.org



Common Tansy

Tanacetum vulgare

Distinctive Characteristics

- Rhizomatous perennial
- Grows up to 6 feet tall
- Stems are purplish red at base, erect, and branched
- Leaves are alternate, 2-10 inches long, 1½-3 inches wide with coarsely toothed margins
- Flower heads lack ray florets and are in compact clusters of 2-200 at the end of stems
- Strong odor, similar to creosote
- Flowers are button-like, ¼-½ inch wide[4]
- Reproduces by seeds and rootstock[3]

Favored Habitat

- Roadsides, waste areas
- Streambanks
- Pastures[3]
- Shade intolerant[4]

Management

Small populations can be removed by hand pulling or digging all fragments and rhizomes. Gloves are recommended, as this species can cause dermatitis.[4] Herbicides are most effective when applied in spring.

Seed Viability

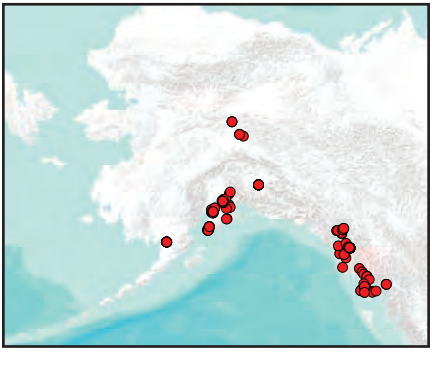
Individual plants can produce around 50,000 seeds per season and are viable for 1 year.

Notes

The common tansy is also known as golden buttons, garden tansy, bitter buttons, hind-head, parsley fern, and ginger plant.[3] It was sold in the 16th century apothecaries for repelling rodents. It is unpalatable and toxic to livestock if consumed in large quantities.

Shu Suehiro, botanic.jp

Shu Suehiro, botanic.jp



Western Salsify

Tragopogon dubius

Distinctive Characteristics

- Large, taprooted biennial
- Grows 1-3 feet tall
- All parts contain a milky white juice
- Leaves are 12 inches long, clasping, alternate, narrow, grass-like, somewhat fleshy, hairless, and light green to bluish
- Flower heads form at the end of a long, hollow peduncle and have 10-14 yellow ray flowers with bracts extending beyond the ray
- Leaves from previous year generally can be found at the base of the plant
- Only reproduces by seeds[4]

Favored Habitat

- Roadsides and disturbed sites
- Waste sites[3] and grazed prairies
- Steep slopes and landslides
- Shade intolerant[4]

Management

Hand pulling and mechanical methods are recommended for plant control.

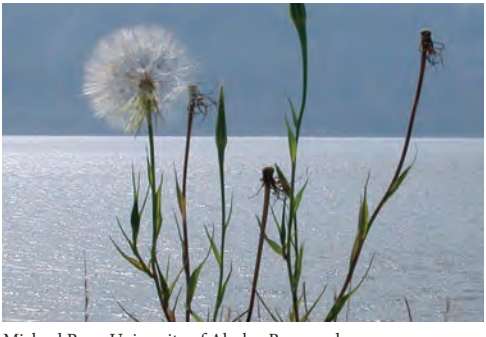
Seed Viability

Individual plants can produce up to 500 seeds per season and are viable up to 13 months.

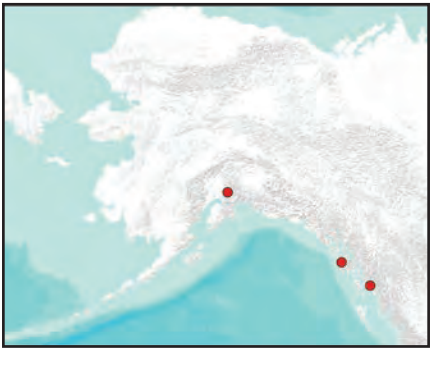
Notes

Introduced from Europe, it is also known as yellow salsify or 'Jack-go-to-bed-at-noon.' It earns this name by its behavior to close up at midday or in cloudy weather. High density infestations are likely to inhibit the growth and establishment of native forbs and grasses.

Brother Alfred Brousseau, USDA-NRCS PLANTS Database



Michael Rasy, University of Alaska, Bugwood.org



Bird Vetch

Vicia cracca

Distinctive Characteristics

- Climbing, perennial plant with weak, angled stems growing up to 6½ feet long
- Leaves are compound, 16-24 leaflets and a branched, terminal tendril
- Blue to purple flowers can grow to ½ inch in dense, 1 sided racemes of 20-50 florets
- Seeds are similar to peas in hairless pods 1 inch long

Favored Habitat

- Waste places and scrubby grasslands
- Roadsides[4] and fences
- Hedgerows and wood borders
- Rivers and canal banks
- Pastures and hay meadows
- Avoids permanently wet sites[23]

Management

Highly tolerant to fire, drought, and calcium carbonate. Small infestations can be managed by hand pulling over several years. For larger infestations, mowing is suggested followed by an application of herbicide.[4]

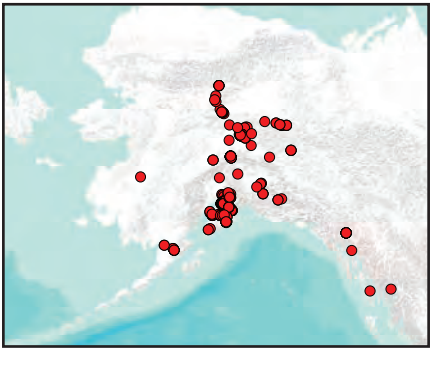
Seed Viability

Seed banks are large and remain viable for 4-6 years.[4]

Notes

First introduced as a forage crop[4] to Fairbanks and Palmer, it is native to Europe. It can alter soil conditions by fixing atmospheric nitrogen.[4] It also overgrows native and herbaceous vegetation, including alder and willow, with its tendrils.

Michael Rasy, University of Alaska, Bugwood.org



Shepherd's Purse

Capsella bursa-pastoris

Distinctive Characteristics

- Annual plant that can grow in the winter from a taproot
- Small white flowers ½ inch across appear in terminal clusters
- Flowers are composed of 4 green sepals, 4 white petals, 6 stamens, and 1 pistil
- Grows 4-20 inches tall with slender, elongated, fruiting stem
- Basal leaves deeply lobed and arranged in a rosette with few clasping stem leaves
- Pods are strongly flattened, triangular, and ½ inch long

Favored Habitat

- Cultivated fields and gardens
- Waste areas and poorly maintained pastures
- Roadsides[3]

Management

Plants are easily maintained by hand pulling. Unless repeatedly disturbed, plants will not persist over 5 years.[4]

Notes

The seeds of shepherds purse can stay viable in soil for up to 20 years. The distinctive fruits are the only mustard with triangular fruit and are responsible for both the scientific and common names; *Capsella* in Latin for 'little box,' *bursa* for 'purse,' and *pastor* for 'shepherd.'

Mary Ellen (Mel) Harte, Bugwood.org

USDA, NRCS. 2013. The PLANTS Database
(http://plants.usda.gov, 19 August 2013)
National Plant Data Team, Greensboro, NC 27401-4901 USA

Lambsquarters
Chenopodium album

Distinctive Characteristics

- Grows 2 inches-3½ feet tall
- Stems are bluish green, red, or purple
- Leaves are triangular, diamond-shaped, or lance-shaped, lobed or irregular toothed, greyish green, and covered with mealy particles
- New leaves often have grainy white powder on upper surface
- Flowers are tiny, greenish dense clusters or spikes, in the leaf axils and at stem tips

Favored Habitat

- Cultivated fields and gardens
- Waste areas[3]
- Disturbed areas
- Overgrazed rangelands
- Eroded areas

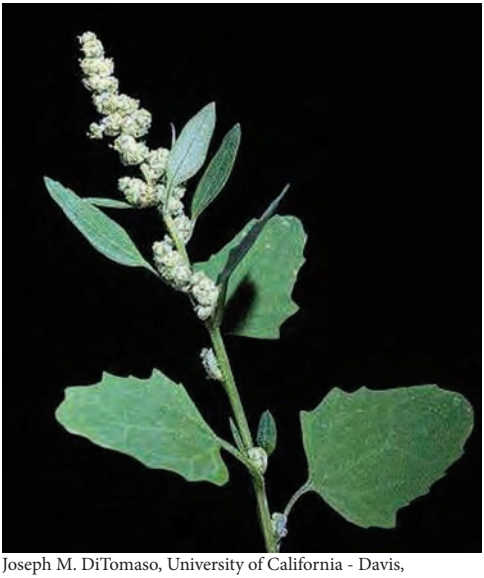
Management

Mechanical and chemical methods are effective. This plant does not normally stay at a site that is constantly disturbed.[4]

Notes

Lambsquarters has not been observed in undisturbed areas in Alaska. In other areas, it has little or no effect on native plant communities. It was first introduced to North America as an herb from Eurasia but is poisonous to sheep and pigs.

John D. Byrd, Mississippi State University, Bugwood.org



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

Field Bindweed

Convolvulus arvensis

Distinctive Characteristics

- Perennial
- Rhizomes grow up to 3 feet long
- Stems grow laterally up to 23 feet long
- Leaves are mostly arrowhead shaped to triangular
- Leaves can also be round, ovate, oblong or linear
- Flowers are funnel shaped and white or pink-purple
- Flowers bloom for a single day only

Favored Habitat

- Bare ground under open conditions
- Roadsides, ditches, stream banks and lakeshores
- Commonly found in cereal crops, orchards and vineyards

Management

Field bindweed reproduces by a persistent seed bank that can remain viable for up to 50 years, and vegetatively by rhizomes. Mechanical control is not effective because of the extensive rhizomes. Herbicides are generally the most effective control method.

Notes

Field bindweed is cold tolerant. Freezing temperatures kill shoots, but roots can withstand temperatures as low as -6^{oC}. Other common names include creeping jenny, European bindweed, and morningglory.

Patrick J. Alexander, USDA-NRCS PLANTS Database

Britton, N.L., and A. Brown, USDA-NRCS PLANTS Database

Foxtail Barley

Hordeum jubatum

Distinctive Characteristics

- Grows 1-2 feet tall
- Produces a nodding pale green to reddish spike ½-2½ inches long
- Non-rhizomatous annual to perennial
- Flat leaf blades grow ⅛-¼ inch wide with sheaths that range from smooth to densely hairy

Favored Habitat

- Wet or alkaline soils
- Meadows and pastures[3]
- Roadsides
- Waste areas
- Soils with high water tables and salinity

Management

Revegetating disturbed areas with native plants and controlling water levels of new vegetation is effective in reducing populations. This species can also be controlled with herbicides.

Notes

This grass is palatable to livestock when young. However, once the plant reaches maturity, the barbed awns can cause serious injury to animals' eyes, nose, throat, and ears. It can be distinguished by the native meadow barley (*Hordeum brachyantherum*) by the length of its awns growing up to 3 inches.

Elaine Haug, USDA-NRCS PLANTS Database

Michael Shephard, USDA Forest Service, Bugwood.org

Hawkbit/Fall Dandelion

Leontodon autumnalis

Distinctive Characteristics

- Winter annual or perennial
- Grows up to 2½ feet tall
- Stems are single or few and slightly hairy towards the flower heads
- Leaves are basal, oblanceolate, and deeply lobed
- Leaves grow up to 14 inches long
- Flowers are yellow, ligulate and have 5 teeth at the tips
- Seeds are ¼ to ½ inch long with a pappus of feathery long bristles

Favored Habitat

- Disturbed areas
- Pastures and cultivated areas
- Roadsides and open fields
- Strongly competitive in Alaska hayfields

Management

This species spreads by rhizomes and seeds, but rarely resprouts following the removal of the aboveground growth. Combined management strategies of herbicides and manual methods have successfully controlled infestations in agricultural fields.

Notes

In Alaska, 81% of recorded populations are associated with fill importation. All other infestations area associated with other types of disturbances or located along roadsides near populated areas.[2]

Miroslav Deml, www.Biolib.cz

Hermann Schachner, Wikimedia Commons

Common Peppergrass

Lepidium densiflorum

Distinctive Characteristics

- Annual herb that grows up to 20 inches tall
- Stems are erect, branched, and have fine hairs
- Basal leaves are arranged as rosettes and toothed or deeply lobed
- Stem leaves are alternate with no stalks
- Flowers grow on elongated racemes, are small, composed of 4 green sepals, and lack petals
- Can be distinguished from native *Lepidium* by having reduced or absent petals

Favored Habitat

- Dry soils, arable land
- Meadows and pastures
- Waste places
- Disturbed areas
- Roadsides

Management

Managed easily by hand pulling for several years. The plant will also respond to multiple herbicide applications.

Notes

'Peppergrass' is derived from pepper-wort, the name given to *L. latifolium* because of the acrid taste of the immature seed pods. No impacts on native populations have been documented.

Max Licher, Arizona State University

USDA, NRCS. 2013. The PLANTS Database
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National Plant Data Team, Greensboro, NC 27401-4901 USA

Bigleaf Lupine

Lupinus polyphyllus

Distinctive Characteristics

- Perennial plant that grows 1-3 feet tall with erect stems growing from a woody base
- Bluish purple, pink, or pale flowers arranged on 2½-10 inch racemes in dense clusters
- Seed pods are 1½-2 inches long and distinctively hairy[4]
- Leaves have a long stalk with 10 or more linear leaflets extending from a single point with a distinctive palmate arrangement

Favored Habitat

- Open areas[22]
- Moist to wet areas, streamsides, wet meadows
- Disturbed sites

Management

Small populations can be eradicated by digging up all the rhizomes. However, many manual treatments will be necessary to eliminate resprouting. Mowing twice per year for 3-5 years before plants flower, prevents the population from spreading and may eradicate it.

Notes

Although the nativity of big leaf lupine is not completely known, it was first cultivated as an ornamental plant. In Alaska, it has invaded riparian and wetland communities, and replaces the native lupine. It can be distinguished by the native species by having 10 or more leaflets per leaf and the size of each leaf is much larger. The native species typically only have 7 leaflets per leaf.

Al Schneider, USDA-NRCS PLANTS Database

Gary A. Monroe, USDA-NRCS PLANTS Database

Pineapple Weed

Matricaria discoidea

Distinctive Characteristics

- Low branching annual plant
- Grows 2-16 inches tall
- Stems have many leaves; basal leaves are usually withered by flowering time, stem leaves alternate, divide 1-3 times into short, narrow segments, 2 inches long
- Flowers are cone-shaped and made up of yellow disc florets lacking ray flowers, that bloom all summer
- Plant gives off sweet, chamomile scent when crushed

Favored Habitat

- Roadsides and gardens
- Croplands[3]
- Waste places
- Compact or trampled soils

Management

Is easily hand pulled, although it will take several pullings to eliminate plant. Herbicides are also effective,[4] but it is resistant to a number of standard herbicides.

Notes

The pineapple weed reproduces by seeds only. When wet, the seeds are gelatinous and can be transported by sticking to wheels, shoes, or the feet or fur of animals. Like other *Matricaria* species, pineapple weed has been used in a variety of ways, from insect repellent to soothing the discomforts of menstruation and pregnancy.[4]

K. Chayka, MinnesotaWildflowers.info

John D. Byrd, Mississippi State University, Bugwood.org

Common Plantain

Plantago major

Distinctive Characteristics

- Grows 6-8 inches tall from thick rootstalk
- Fibrous roots can grow up to 3 feet wide and deep
- Basal rosette of stalked, ovate to cordate leaves, with 3-5 strong ribs
- Flowering stalks can grow up to 7½ inches tall
- Flowers are numerous, small, ¼ inch, and greenish white

Favored Habitat

- Roadsides and disturbed sites
- Lawns and cultivated fields
- Valleys to midmontane sites[3]
- Waste areas
- Highly disturbed sites

Management

Easily controlled by hand pulling multiple times or herbicides.[4]

Notes

The Alaskan plantain is easily distinguishable from the common plantain by its large, unopening capsules and lance-shaped leaves. Infestations of common plantain are typically in highly disturbed habitats that have low interspecific competition, and may alter successional regimes. A single plant can produce up to 14,000 seeds that potentially remain viable for 60 years.

James H. Miller, USDA-NRCS PLANTS Database

Prostrate Knotweed

Polygonum aviculare

Distinctive Characteristics

- Prostrate or mat-like growth with stems up to 3 feet long
- Stems are tough and wiry with a sheath surrounding stem nodes
- Leaves are oval with apex point and hairless
- 1-5 small, pink flowers in axillary clusters,[4] and usually closed or semi-closed
- Plants are green or bluish green and sometimes have a white, powdery mildew

Favored Habitat

- Croplands
- Horticulture production sites
- Ornamental production sites[3]
- Disturbed sites
- Roadsides and sidewalks

Management

Mechanical control coupled with chemical treatments are effective in eliminating infestations.

Notes

Alaskan knotweed (*P. humifusum* sp. *caurianun*) can be distinguished from prostrate knotweed by the presence of opposite leaves at proximal nodes.[2] It is capable of colonizing quickly, thus hindering native species revegetation. It can provide a habitat and food source for many farmland birds and mammals.[4]

Robin R. Buckallew, USDA-NRCS PLANTS Database

Creeping Buttercup

Ranunculus repens

Distinctive Characteristics

- Herbaceous perennial plant
- Slightly hollow stems, up to 3 feet long, that root freely at their nodes
- Basal leaves grow up to 4 inches wide and are triangular with toothed margins.
- Stem leaves transition upward to simple bracts
- Yellow flowers are borne on long, erect stems, and can have between 5 and 9 petals
- Overwinters as small, green leaved rosette

Favored Habitat

- Moist locations
- Pastures[3] and croplands
- Lawns[4] and gardens
- Disturbed areas
- Semi-aquatic communities[3]

Management

Herbicides are generally recommended for control on buttercups. Plants may be weakened by cultivation, but may regenerate from the stolon and caudex.

Notes

Creeping buttercup can be distinguished by other buttercup species by its horizontal growth habit, spherical seed heads, and long petals.[3] The *Ranunculus* species readily occupy open areas and hinder colonization of native species.

Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Leslie J. Mehrhoff, University of Connecticut, Bugwood.org

Corn Spurry

Spegula arvensis

Distinctive Characteristics

- Annual that forms a small taproot
- Stems are branched at the base and somewhat sticky
- Leaves are thread-like, fleshy, grow up to 2 inches long and arranged in whorls of 6
- Flowers are small and white with 5 petals, 5 septals, and 5 to 10 stamens

Favored Habitat

- Cultivated fields
- Roadsides and seashores
- Typically found in open habitats

Management

Mechanical methods such as hand pulling and mowing before seeds develop successfully control infestations. Control actions must be repeated because soil disturbances promote seed germination. Herbicides may be used, but this species is resistant to several chemicals.

Notes

Corn spurry is native to Eurasia and grows throughout Europe, Asia, Africa, North America, South America, Australia and New Zealand. Plants can withstand extreme drought and moderate amounts of frost, and has been recorded to be growing above the Arctic circle.[1]

www.wikimedia.com, creative commons

www.smmflowers.org

Common Chickweed

Stellaria media

Distinctive Characteristics

- Annual plant with creeping stems that root at the nodes
- Conspicuous line of hairs on 1 side
- Can be distinguished from native chickweeds by having lower leaves with stalks and a line of hairs along the internodes
- Egg-shaped to elliptic leaves up to 1½ inches long
- Flowers are small, white, star-shaped with 5 petals but appear to have 10 because they are deeply cleft

Favored Habitat

- Fields and gardens
- Lawns and cultivated pastures
- Ornamental plantings[3]

Management

Small infestations are easily managed by hand pulling. Large infestations can be treated with herbicide before seedlings emerge or during active growth for control.[4] Strong perennials can be used to prevent chickweed re-establishment.

Notes

External application of common chickweed salve relieves itching and inflammation.[4] Chickweed is native to Europe, found on coastal cliffs and banks, especially in and around the breeding colonies of sea birds and seals. However, in Alaska it is found to create dense mats, shading young seelings of other plants.[3]

Patrick J. Alexander, USDA-NRCS PLANTS Database

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

Common Dandelion

Taraxacum officinale

Distinctive Characteristics

- Perennial herb
- Grows 2-20 inches high
- Basal rosette of pinnately lobed leaves that are 2-16 inches long and up to 4 inches broad
- Yellow ray florets make up 1-2 inch flowerheads at the end of a hollow stalk
- Whole plant contains milky white juice

Favored Habitat

- Moist sites
- Lawns, meadows, and pastures
- Overgrazed areas[3]
- Disturbed sites

Management

Can be controlled by hand pulling with a prong-shaped tool to remove several inches of the root. Easily controlled with herbicides and spring burning.[4]

Notes

The common dandelion is eaten by moose, bears, sharp tailed grouse, pocket gophers, deer, elk, and bighorn sheep. Some native populations benefit from increased population of common dandelion;[3] however, its displacement of native forage vegetation and ability to rapidly colonize can change the density of herbaceous layers.[3]

Lynn Sosnoskie, University of Georgia, Bugwood.org

Dave Powell, USDA Forest Service, Bugwood.org

Alsike Clover

Trifolium hybridum

Distinctive Characteristics

- Grows 6-20 inches tall
- Stems are ascending to erect and do not root at nodes
- Leaves are palmate trifoliate and ¾ inch long
- White to pink flowers found in Alaska
- Flower heads are composed of 10-50 flowers

Favored Habitat

- Disturbed sites
- Roadsides
- Revegetated areas
- Lawns

Management

Hand pulling will control small infestations. Herbicide applications can be effective.

Notes

Alsike clover can be confused with 8 other *Trifolium* species in Alaska; red clover (*Trifolium pratense*) can be differentiated by height (up to 3 feet tall) and the presence of distinctive 'chevron' and reddish flower heads; and white clover (*Trifolium repens*) has a white flower and root stems up to 2 feet long.

Margaret Williams, USDA-NRCS PLANTS Database

Bruce Ackley, The Ohio State University, Bugwood.org

Works Cited

1. **AKEPIC.** (2013) "Alaska Exotic Plant Information Clearinghouse Database." Alaska Natural Heritage Program, University of Alaska, Anchorage. Retrieved from (http://aknhp.uaa.alaska.edu/maps/akepic/).

2. **Alex, J. F., and S.E. Robinson.** (1989) "Poisoning of Livestock by Plants." Ontario Ministry of Agriculture; Food and Rural Affairs. Retrieved from (http://2w.omafra.gov.on.ca/english/livestock/dairy/facts/87-016.htm).

3. **Ball, D., S. Dewey, C. Elmore, R. Lym, D. Morishita, and R. Zollinger.** (2006) *Weeds of the West (9th ed.).* Jackson, Wyoming; Grand Teton Lithography.

4. **Bauder, P., E. Bella, T. Heutte, I. Lapina, and C. McKee.** (2005) *Invasive Plants of Alaska*. Anchorage, AK: Alaska Association of Conservation Districts Publication.

5. **Beck, K. G.** (2008) "Fact Sheet: Russian Knapweed." Colorado State University Extension. Retrieved from (http://2w.ext.colostate.edu/pubs/natres/03111.pdf).

6. **Belliston, N., S. Burningham, S. Dewey, J. Merritt, and R. Whitesides.** (2009) *Noxious Weed Field Guide for Utah.* Utah: Utah State University Publication, Design, and Production.

7. **Boenn.** (2012) "*Galeopsis bifida*. Plants for a Future." Retrieved from (http://www.pfaf.org/user/Plant.aspx?LatinName=Galeopsis+bifida).

8. California Invasive Plant Council. (2013) "*Avena Fatua* (Wild Oat)." Retrieved from (http://2w.cal-ipc.org/ip/management/plant_profiles/Avena_fatua.php#proc).

9. Carpenedo, S. M., and L.A. Saul. (2010) *Common Native and Invasive Wetland Plants in Montana.* Helena, MT: Montana Department of Environmental Quality, Wetland Program.

10. DiTomaso, J. M., G.B. Kyser, W.T. Lanini, C.D. Thomsen, and T.S. Prather. (2012) "YELLOW STARTHISTLE: Integrated Pest Management for Home Gardeners and Landscape Professional." Retrieved from (http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7402.html).

11. Fewless, Gary. (2013) "Invasive Plants of Wisconsin: *Galeopsis tetrahit*." Herbarium Cofrin Center for Biodiversity University of Wisconsin. Retrieved from (http://2w.uwgb.edu/biodiversity/herbarium/invasive_species/galtet01.htm).

12. Garry Oak Ecosystems Recovery Team. (2005) "*Hypochaeris radicata*." Retrieved from (http://www.goert.ca/documents/InvFS_hairycats.pdf).

13. A Guide to Weeds in British Columbia. (2013) "Hempnettle." Retrieved from (http://www.agf.gov.bc.ca/weedsbc/pdf/hemp_nettle.pdf).

14. Helmisaari, Harry. (2010) "Invasive

Species Fact Sheet: *Impatiens glandulifera*." NOBANIS. Retrieved from (http://2w.nobanis.org/files/factsheets/impatiens_glandulifera.pdf).

15. **Howard, Michael.** (1987) "Traditional Herbal Remedies." Random House Adult Trade Publishing Group.

16. **Klein, Helen.** (2007) "Orange Hawkeed (*Hieracium aurantiacum*) & Meadow Hawkweed (*Hieracium caespitosum*)." Alaska Natural Heritage Program: University of Alaska Anchorage. Retrieved from (http://aknhp.uaa.alaska.edu/services/aknhp/aknhp.cfc?method=downloadDocumentByUsdaCode&documentType=species_bio&usdaCode=HICA10).

17. **Klein, Helen.** (2007) "Narrowleaf Hawkweed: *Hieracium umbellatum*." Alaska Natural Heritage Program: University of Alaska Anchorage. Retrieved from (http://aknhp.uaa.alaska.edu/services/aknhp/aknhp.cfc?method=downloadDocumentByUsdaCode&documentType=species_bio&usdaCode=HIUM).

18. **Klein, Helen.** (2011) "Creeping bellflower: *Campanula rapunculoides*." Alaska Natural Heritage Program: University of Alaska Anchorage. Retrieved from (http://aknhp.uaa.alaska.edu/services/aknhp/aknhp.cfc?method=downloadDocumentByUsdaCode&documentType=species_bio&usdaCode=CARA).

19. Kohlhauff, Tim. (2007) "Creeping Bellflower: *Campanula rapunculoides*." Washington State University: Spokane County Extension. Retrieved from (http://2w.spokane-county.wsu.edu/spokane/eastside/Weed_Information/weed_text/Creeping%20Bellflower.pdf).

20. Marsh, Holly. (2008) "Why Do Dogs Eat Grass?" London Dog Tails. Retrieved from (http://2w.hollymashvet.com/files/LondonDogTailsWinter2008.pdf).

21. Montana Plant Life. (2013) "Canada Thistle: *Cirsium arvense*." Retrieved from (http://montana.plant-life.org/index.html).

22. Northern Rockies Natural History Guide. (2013) "*Lupinus polyphyllus*: Bigleaf Lupine." The University of Montana – Missoula. Retrieved from (http://nhguide.dbs.umt.edu/index.php?c=plants&m=desc&id=210).

23. Online Atlas of the British & Irish Flora. (2013) "*Vicia cracca* (Tufted Vetch)." Retrieved from (http://2w.brc.ac.uk/plantatlas/index.php?q=plant/vicia-cracca).

24. Pysek, P., M. J. Cock, W. Nentwig, and H.P. Ravn. (2007) *Ecology & Management of Giant Hogweed (Heacleum mantegazzianum)*. Gateshead, UK: Athenaeum Press.

25. Suehiro, Shu. (2001) "Botanic Garden." Retrieved from (http://2w.botanic.jp/index.htm).

Works Cited

26. Texas Invasives Database. (2007) "*Convolvuvus arvensis*: Field Bindweed." Retrieved from (http://2w.texasinvasives.org/plant_database/detail.php?symbol=COAR4).

27. Thurston County Noxious Weed Program. (2013) "Noxious Weed Fact Sheet: Perennial Sowthistle." Retrieved from (http://www.co.thurston.wa.us/health/ehipm/pdf/Sowthistle.pdf).

28. USDA. (2013) "*Avena fatua L.*: Wild Oat." Retrieved from (http://plants.usda.gov/java/profile?symbol=AVFA).

29. Zouhar, Kris. (2004) "*Convolvulus arvensis.*" USDA Forest Service: Fire Effects Information System. Retrieved from (http://2w.fs.fed.us/database/feis/plants/vine/conarv/all.html).

Notes

Notes

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