Identification of Non-native Plants in Alaska

Alaska Natural Heritage Program
Alaska Center for Conservation Science
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Alaska Natural Heritage Program

Our mission is to provide the scientific basis for effective biological conservation in Alaska.

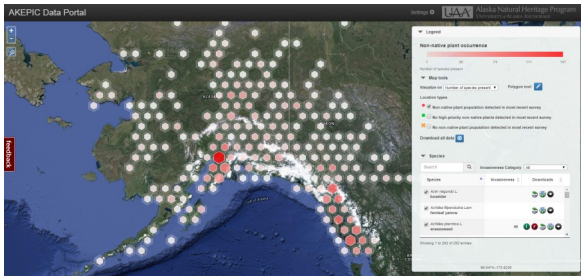
The Alaska Natural Heritage Program (AKNHP) collects, synthesizes and validates information on plant and animal and species of conservation or invasion concern, as well as their habitats. The AKNHP is part of a network of Heritage Programs in all 50 states and Conservation Data Centres in Canada and Latin America. The AKNHP was established in 1989 by The Nature Conservancy and in 1993 became part of the University of Alaska Anchorage (UAA), residing in the College of Arts of Sciences. Recently, the AKNHP was merged with other conservation science oriented units at UAA to become the Alaska Center for Conservation Science (ACCS).

https://accs.uaa.alaska.edu/

Alaska Exotic Plant Information Clearinghouse

The Alaska Exotic Plants Information Clearinghouse (AKEPIC: http://accs.uaa.alaska.edu/invasive-species/non-native-plants/) is a database and mapping application that provide geospatial information for non-native plant species in Alaska and neighboring Canadian Territories. These products are the result of an ongoing cooperation among the U.S. Forest Service, National Park Service, Bureau of Land Management, U.S. Fish and Wildlife Service, Department of Natural Resources Plant Material Center and AKNHP in support of the Alaska Committee for Noxious and Invasive Plants Management (CNIPM) and the Strategic Plan for Noxious and Invasive Plants Management in Alaska. AKNHP administers the mapping application, database and website associated with the project. These data are primarily intended to support the identification of problem species and infestations, thus promoting early detection and rapid response across Alaska.

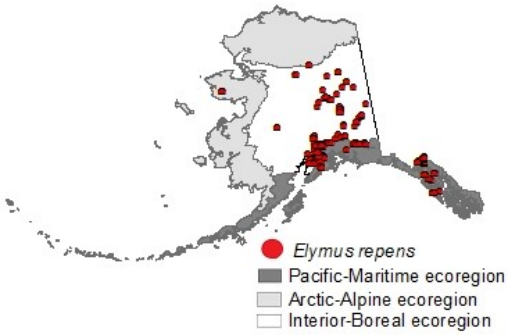
AKEPIC Data Portal



The records of non-native plants stored in AKEPIC can be queried by species or location and downloaded in text, tabular, spatial and open layers formats (http://aknhp.uaa.alaska.edu/apps/akepic/).

Species biographies and invasiveness rank documents have been developed for the more abundant or aggressive plant taxa currently tracked as non-native to Alaska. Species biographies profile the taxonomy, biology, ecological impacts, potential invasiveness, legal listings, distribution and feasibility of control of or for a given taxon; invasiveness rank documents quantify the potential invasiveness of a given species on natural areas.

Concepts of Invasiveness:



Second only to the direct loss of habitat, invasion of non-native species into intact ecosystems is the primary cause of biodiversity loss. The establishment of invasive non-native species can negatively impact ecosystem function, the economy and human health. However, not all non-native species are equally harmful. An invasiveness ranking system for non-native plants has been developed to evaluate the potential impacts of non-native plants to natural areas in Alaska so that the limited resources available for managing invasive species may be directed towards the most threatening species. The system evaluates the ecosystem impacts, biological attributes, distribution and feasibility of control of a given species. Species that are not known to occur in Alaska undergo a climate screening procedure, which evaluates the potential for a species to establish in the three ecoregions of Alaska: arctic-alpine, interior boreal and Pacific maritime (Nowacki et al. 2001). Species are then assigned a rank between zero and 100, where a rank of 100 indicates an extremely invasive species (Carlson et al. 2008).

Native	Plants that live or grow naturally in a particular region
Non-native, exotic, alien, non-indigenous	Plants whose presence in a given area is due to the accidental or intentional introduction by humans
Naturalized	Non-native plants that reproduce consistently in their new environment and sustain populations over many life cycles without direct intervention by humans
Invasive	Non-native plants that produce viable offspring in large numbers and have the potential to establish and spread in natural areas
Weed	Any plants, native or non-native, whose presence is undesirable to people at a particular time or place
Noxious weed	A plant species that has been legally defined as harmful and unwanted because of its potentially negative impacts to agriculture, fish and wildlife or public health

Integrated pest management:

Effective pest management may be achieved through a combination of methods that work better together than separately. Approaches for managing pests are often grouped in the following categories.

Prevention: develop procedures that minimize the introduction of non-native plants propagules to novel environments.

Inventory: learn how to correctly identify plant species and characterize their habitats. The information gathered can be used to document changes in a region's flora over time, and/or to develop informed and site-specific weed prevention, control and management programs.

Early Detection and Rapid Response (EDRR): enables land managers to identify incipient populations of invasive plants and eradicate them before they begin to spread, thus reducing environmental impacts and minimizing management costs.

Monitoring: monitor infestations to detect changes in population size and vigor, and prioritize infestations for control.

Control: control infestations by implementing one or a combination of the following methods:

- Manual (hand pulling)
- Mechanical (mowing, tilling)
- Cultural (prescribed fire, flooding)
- Barrier (tarping, mulching)
- Biological (intentional introduction of biological control agents)
- Chemical (herbicides)

How to Use this Guide

The species described in this guide are organized by family. While the focus is on non-native species, some native species that could be confused with non-natives are also described.

In this guide, non-native species are highlighted in red, native species are highlighted in green, and species whose nativity to Alaska is unclear are highlighted in orange. Common and scientific names for all species are listed in the index on page 216.

Modified keys for the Asteraceae and Poaceae are included at the end of their respective sections, and more specific keys for well-represented genera are sometimes included within the body of the text. However, please note that this document should not be used as the sole basis for plant identification or natural resource management decisions. A list of Alaska-specific field guides and technical flora is provided on page 211.

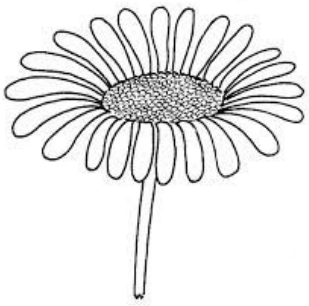
An example species' description is illustrated below:

COMMON FAMILY NAME (SCIENTIFIC FAMILY NAME)

Common Name • *Genus epithet*

syn. *Synonym synonym*

Invasiveness Rank: # points (see p 6) Species Code: USDA Plants Code



General Information:
Longevity (Annual, Perennial, etc)
Height in cm or m
Other general descriptions

Description:
Roots
- Relevant characteristics

Stems
- Relevant characteristics

Leaves
- Relevant characteristics

Inflorescence
- Relevant characteristics

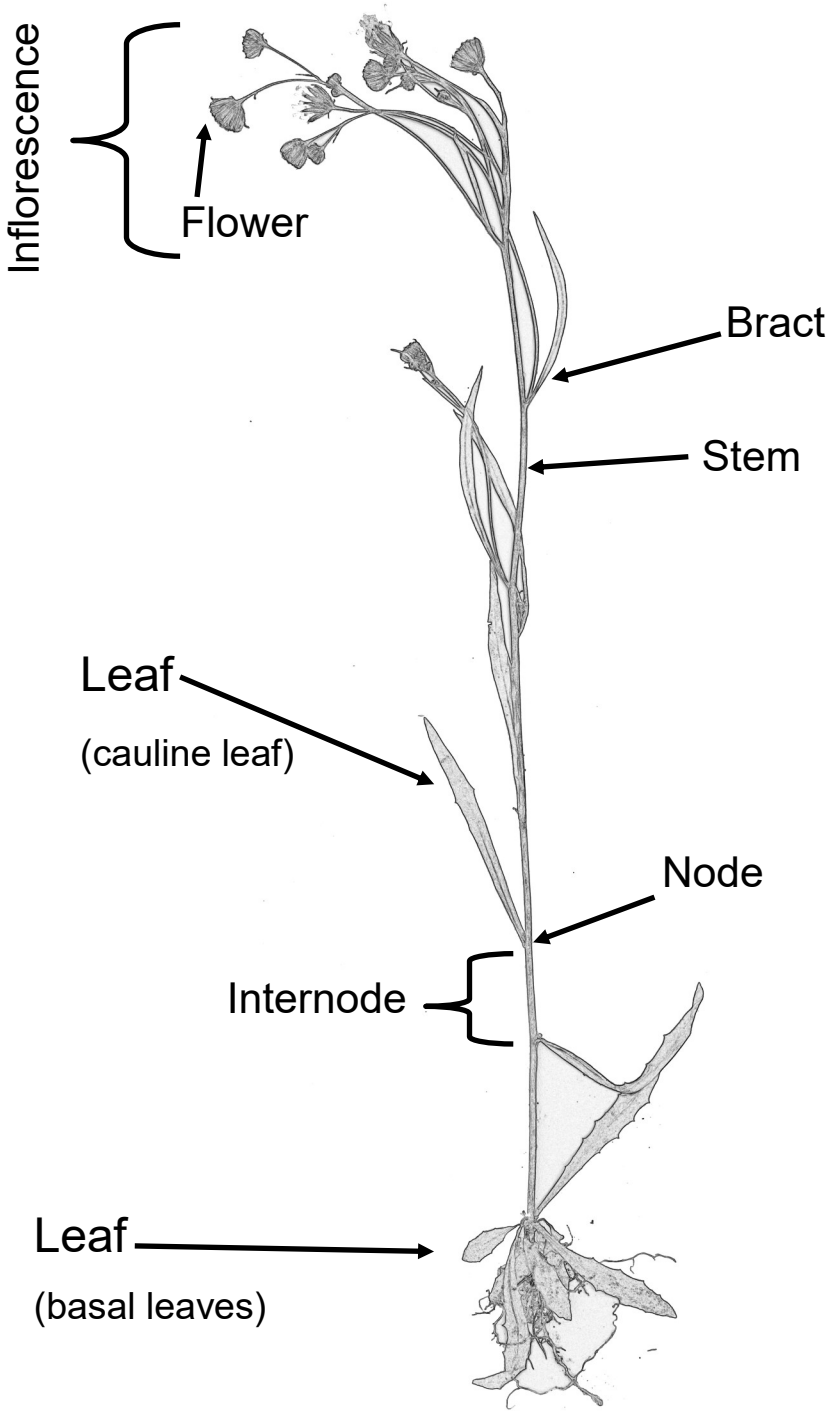
Fruits
- Relevant characteristics

Habitat: description of common habitats
Distribution: List of ecoregions; specific localities, if known
Remarks: any additional information, e.g., distinguishing features, similar **native species**, relevant subspecies, taxonomic disputes, etc.

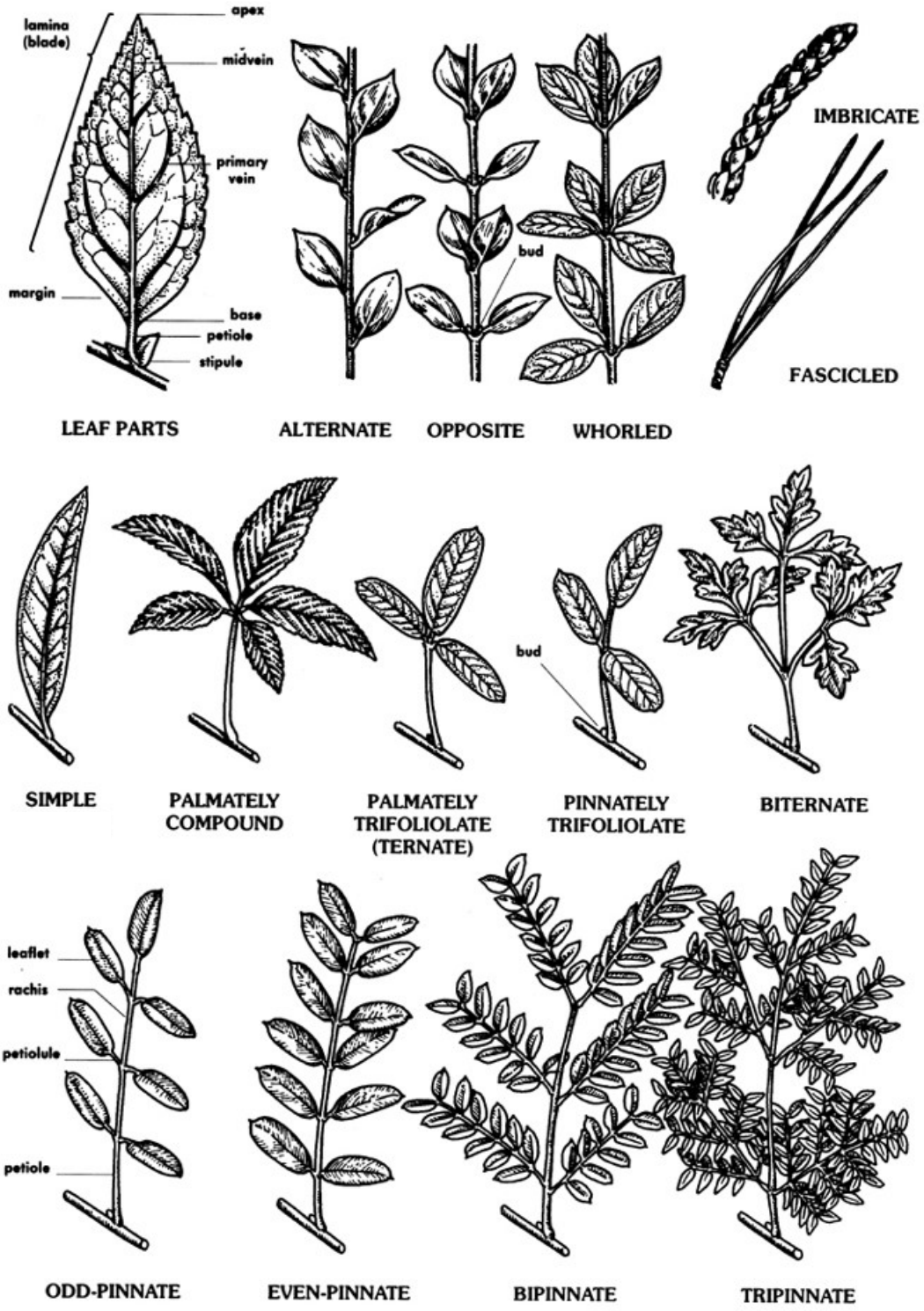
Page #

General Plant Morphology

Before identifying plants, it is important to understand basic plant morphology: the parts of a plant and their arrangement on the plant. A simple confusion between terminology can lead to incorrect identification. This section will serve as a reference for plant parts and help define terminology used throughout this guide.

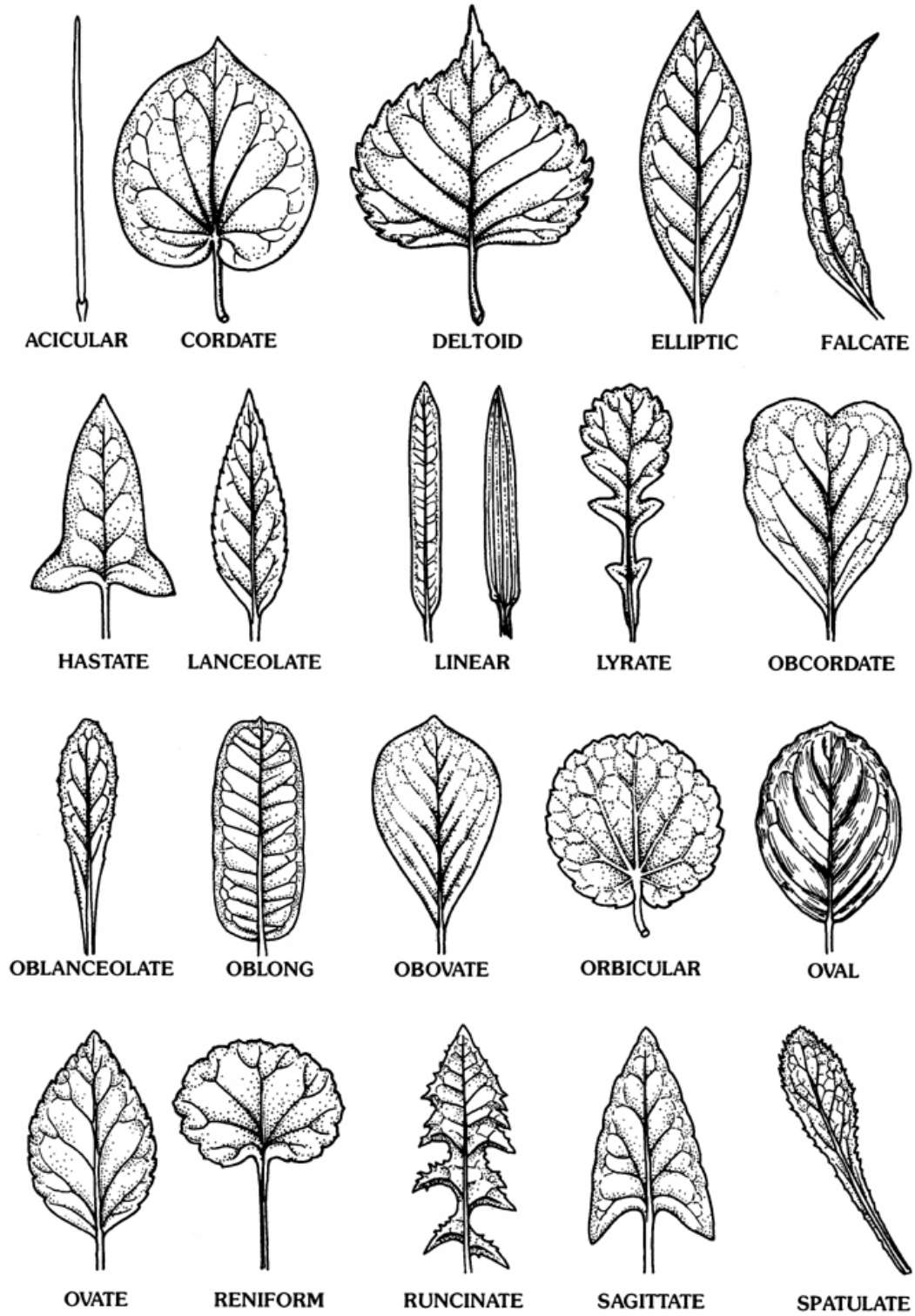


Leaf morphology and arrangement: *this is in reference to how a leaf is divided into multiple parts and arranged on a stem*



as published in Swink, F. and G. Wilhelm. 1994. *Plants of the Chicago region.* 4th ed. Indianapolis: Indiana Academy of Science.

Leaf shapes: *this is in reference to overall leaf shape*



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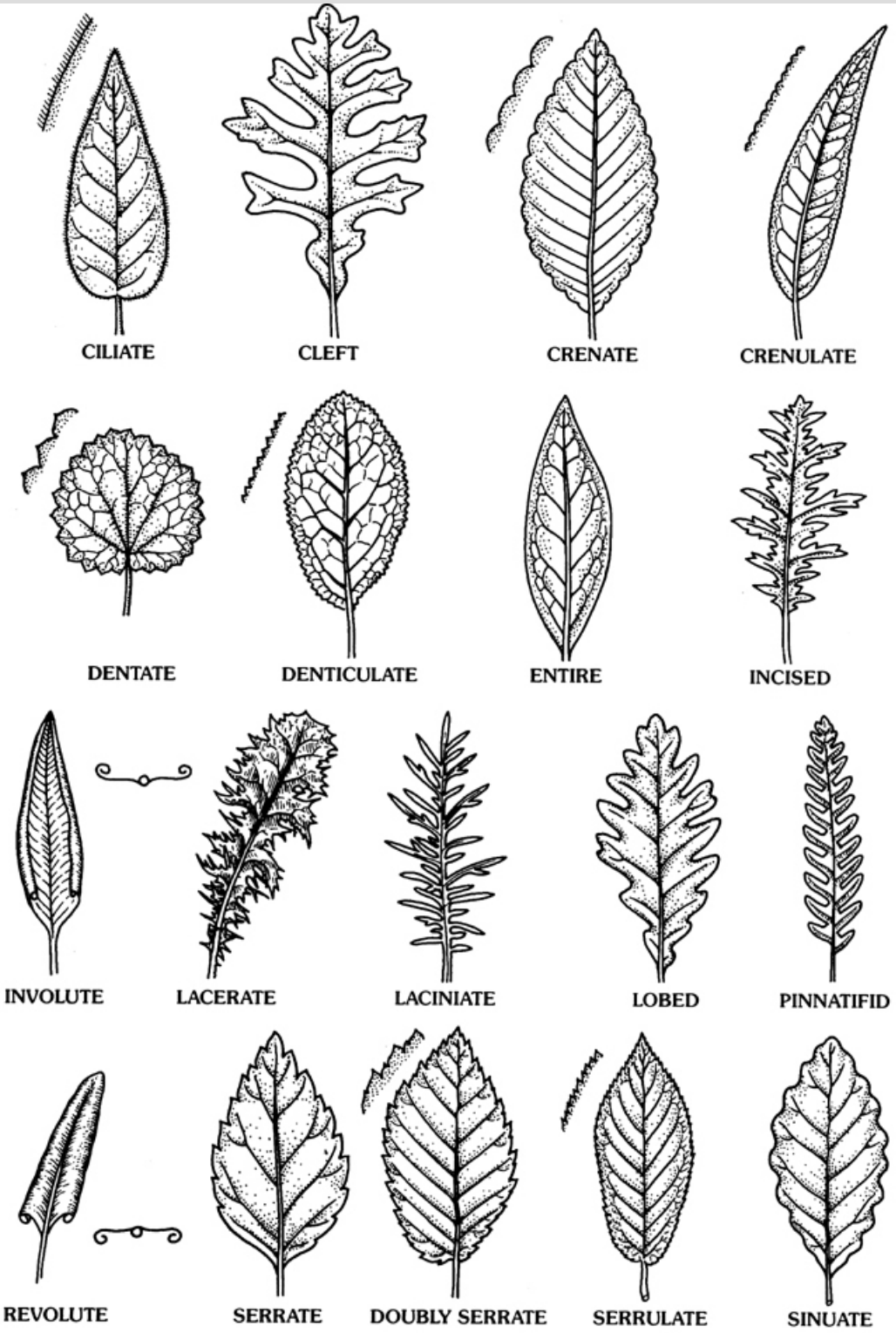
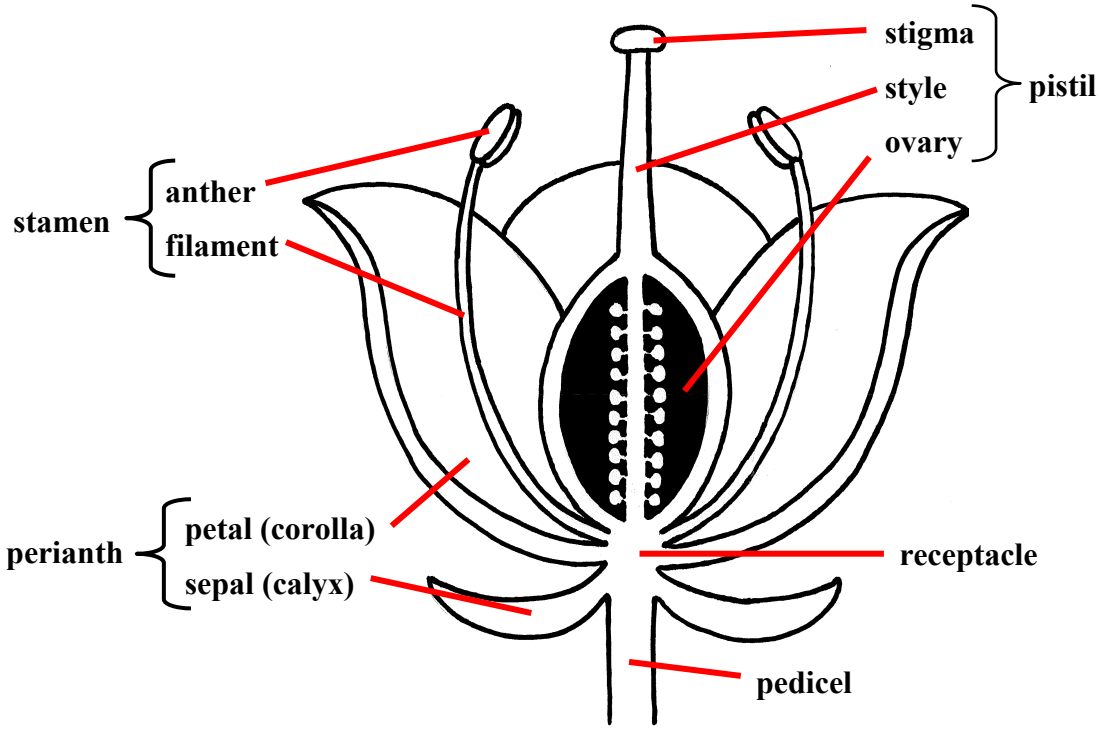
Leaf margins: *this in reference to the edges of a leaf*

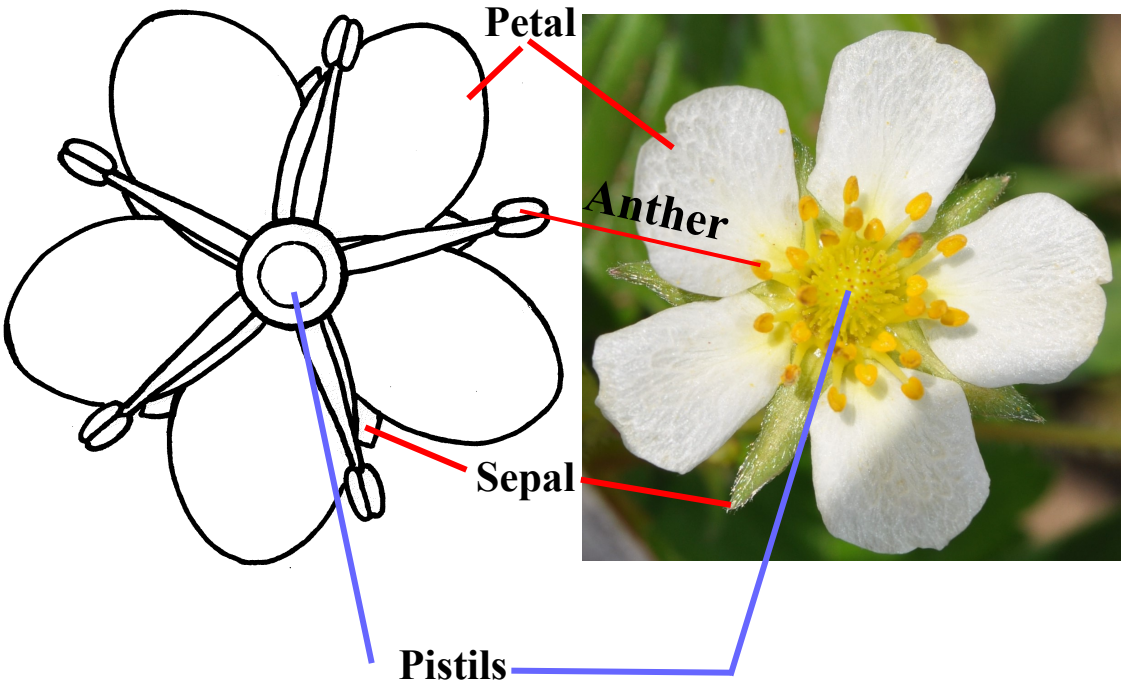


as published in Swink, F. and G. Wilhelm. 1994. *Plants of the Chicago region.* 4th ed. Indianapolis: Indiana Academy of Science.

General Flower Morphology:

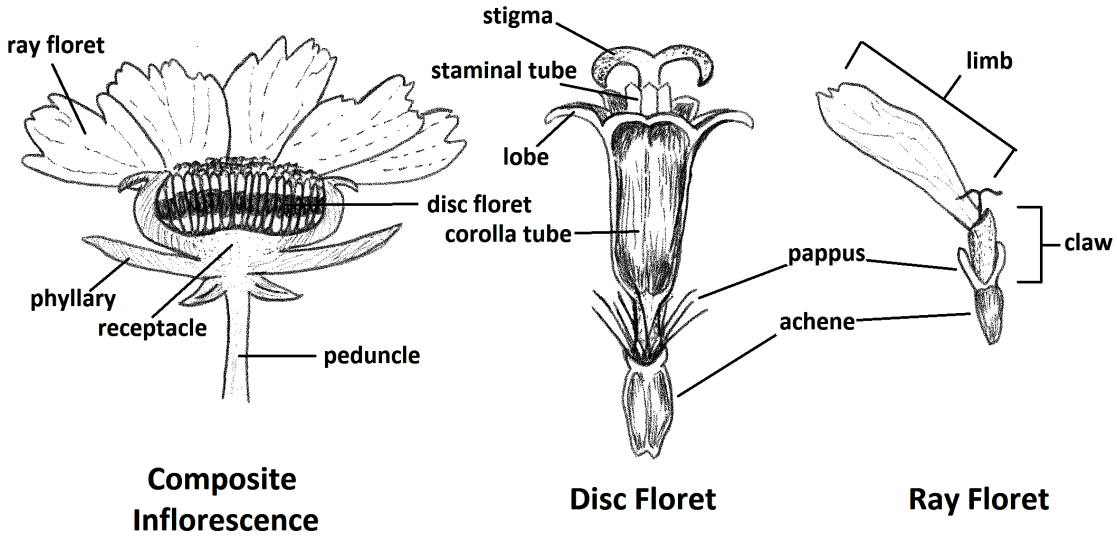
Simple flower:



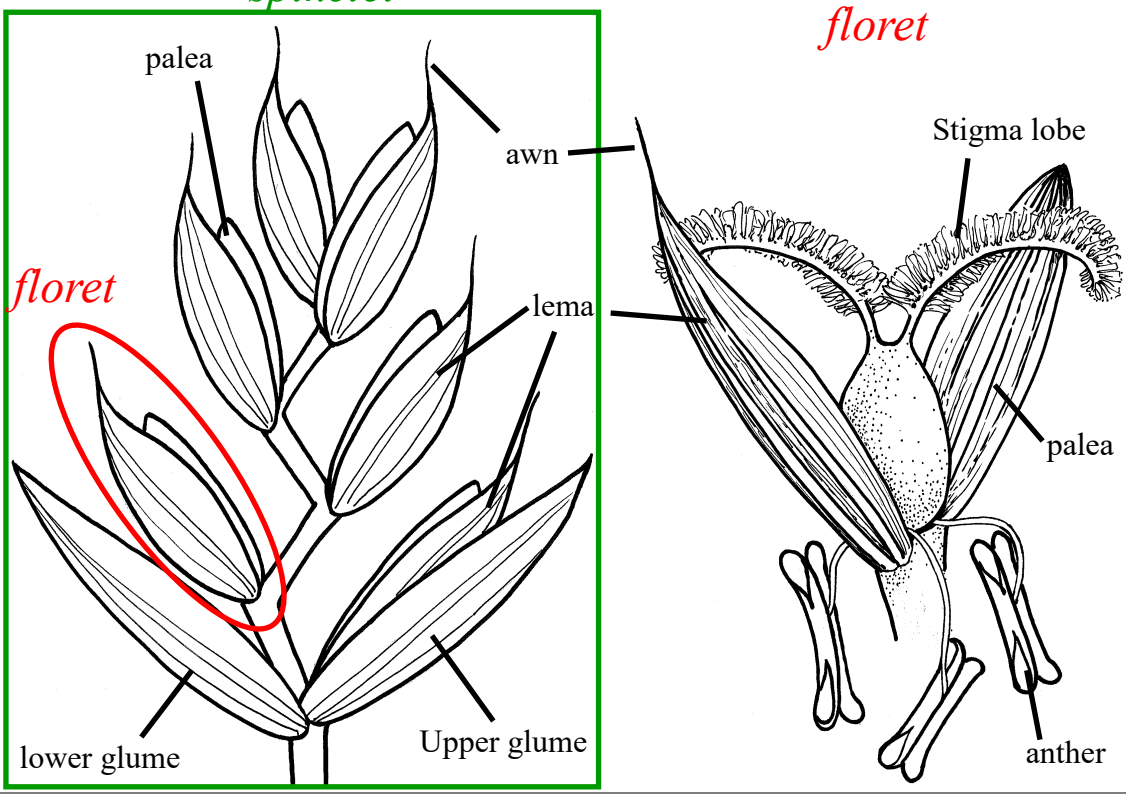


Complex Flower Morphology:

Sunflower:



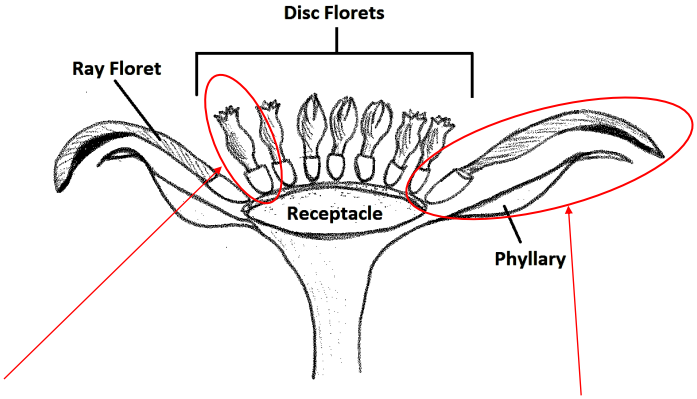
Grass florets: *spikelet*



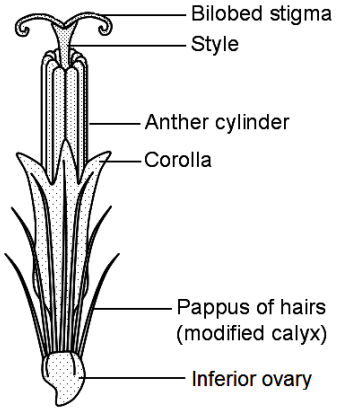
Sunflower Family (Asteraceae)

Sunflowers are easily recognized by their inflorescence (**flower head**), which is often confused as being a single flower. Closer inspection reveals that the flower head is actually composed of many small flowers (**florets**) attached to the flat top part of the stem (**receptacle**). They are sometimes called a "flower" of flowers.

There are two types of florets to be aware of: **disc florets** and **ray florets**

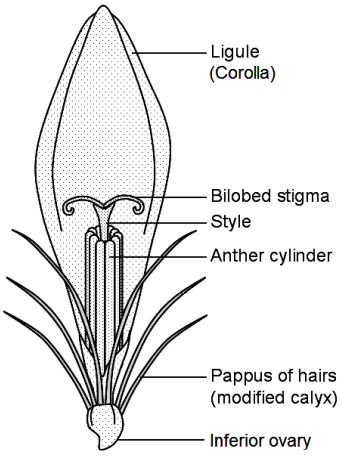


Disc floret:



- have regular symmetry
- have tubular, 5-lobed corollas

Ray floret:



- have irregular symmetry.
- have tubular corollas with long projections called **ligules**

Flowering head types

Sunflowers can be divided into three groups depending on the type of florets that make up the flowering head.

Ligulate Head

Flower head with only **ray florets:**

Crepis tectorum

Hieracium aurantiacum

Hieracium umbellatum

Discoid Head

Flower head with only **disc florets:**

Cirsium arvense

Matricaria discoidea

Tanacetum vulgare

Radiate Head

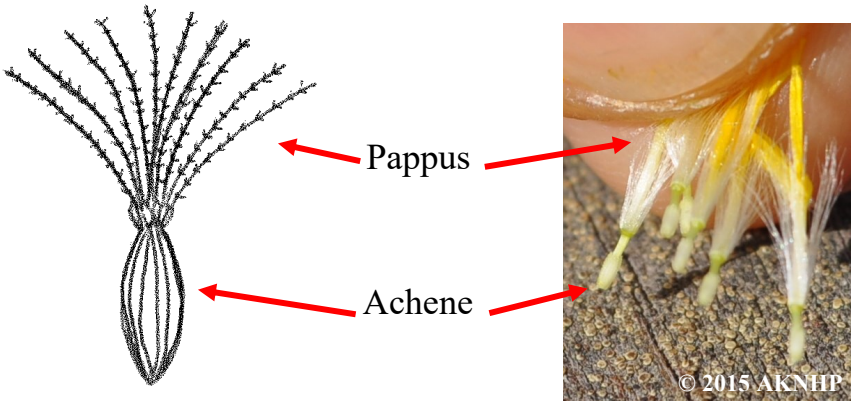
Flower head with both **ray** and **disc florets:**

Leucanthemum vulgare

Some helpful terminology for plant parts in the Sunflower Family:

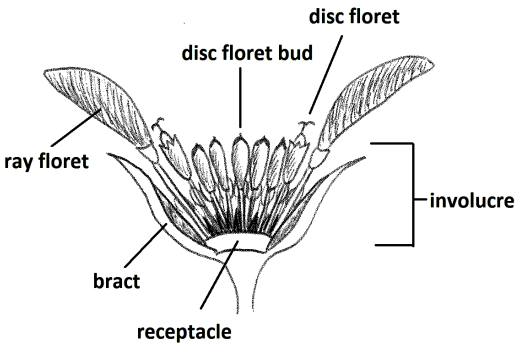
Pappus: A modified calyx forming a crown of awns, scales, hairs, or bristles at the summit of the achene; may be absent on some members of the family.

Achene: A small, dry, hard, single-seeded fruit, it may be flat or cylindrical.



Involucre: Whorls of bracts (small modified leaves) that enclose the flower; may be overlapping or not.

Receptacle: The expanded portion of the flower stalk that bears the organs of a flower; where the flowers attach. It may be flat, dome-shaped, or convex.



Common dandelion ●*Taraxacum officinale*

syn. *Taraxacum officinale* ssp. *officinale*

Invasiveness Rank: 58 points

Species Code: TAOF

General Information:
Perennial
5-50 cm tall

Description:
Stems
- Unbranched (unlike non-native *Leontodon* and *Hypochaeris*)
- Flowering stalks leafless and hollow

Leaves
- All leaves basal and lobed

Inflorescence
- Single (unlike *Leontodon* and *Hypochaeris*)
- Involucral bracts are:
  - not distinctly horned (unlike most native dandelions)
  - outer rows are reflexed or spreading (unlike most native dandelions)
  - not blackish-green (unlike some native dandelions)

Fruits
- Straw-colored achenes
- White pappus (unlike *Hypochaeris radicata*)

Habitat: disturbed areas
Distribution: widespread and abundant across the state; recorded in all three of Alaska's ecogeographic regions. The south-westernmost record is from Aniakchak National Monument and Preserve, the easternmost populations are on the Alaska-Canada border, and the north-westernmost populations are on the Dalton Hwy on the north side of Brooks Range

Rock dandelion • *Taraxacum erythrospermum*

syn. *Taraxacum erythrospermum*, *Taraxacum scanicum*

Invasiveness Rank: not yet ranked | Species Code: TAER3

General Information:
Perennial
5-50 cm tall

Description:

Stems
- Unbranched
- Flowering stalks leafless and hollow

Leaves
- All leaves basal with triangular lobes of relatively the same size

Inflorescence
- Involucral bracts with horns or tubercles (swelling/projection) below the tip

Fruits
- Brick-red achenes small (3 mm)

Habitat: roadsides, waste places, lawns
Distribution: only recorded in the Yukon Territory to date (along streets in Dawson and on the Alaska Highway east of Watson Lake)
Remarks: Non-native dandelions can grow side by side with native ones (*T.ceratophorum*). Pictured below: *Taraxacum officinale* grows among native

Horned dandelion • *Taraxacum ceratophorum*
syn. *Taraxacum officinale* ssp. *ceratophorum*

General Information:
Perennial
15-45 cm tall

Description:
Small plants
Stems
- Unbranched

Leaves
- All leaves basal

Inflorescence
- Involucral bracts mostly with horns or tubercles below the tip (unlike *T. officinale*)
- Outer rows of involucral bracts generally appressed (unlike *T. officinale*)

Habitat: meadows, moist places in the mountains, disturbed sites, roadsides

Other native dandelions • *T. alaskanum, T. kamtschaticum, T. phymatocarpum, T. trigonolobum,* etc.

General Information:
Perennial
Usually ≤ 15 cm

Description:
Small plants
Stems
- Unbranched

Leaves
- All leaves basal

Inflorescence
- Involucral bracts are blackish-green or horned (unlike *T. officinale*)

Fruits
- Brown to olivate, not brick-red like *T. erythrospermum*

Habitat: meadows and moist places in mountains (coastal

Hairy cat's ear • *Hypochaeris radicata*

Invasiveness Rank: 44 points | Species Code: HYRA3

General Information:
Perennial
15-30 cm tall

Description:
Stem
- Branched
- Lacking leaves but with scale-like bracts
- Milky juice

Leaves
- Perennial, basal rosette
- Deeply lobed, lobes rounded

Inflorescence
- Usually multiple
- Receptacle chaffy (with tiny scales or bracts)
- Involucral bracts not distinctly hairy
- White pappus

Fruits
- Achenes with long, slender beaks

Habitat: roadsides, lawns, pastures, waste places
Distribution:
- Pacific maritime: throughout southeast Alaska; within south-central Alaska it is only reported from Katmai and Kodiak
- Interior boreal: only recorded in Slana and Anchorage

Fall dandelion • *Leontodon autumnalis*

syn. *Leontodon autumnalis* var. *pratensis*

Invasiveness Rank: 51 points Species Code: LEAU2

General Information:
Perennial
10-40 cm tall

Description:
Stem
- Usually branched
- Milky juice

Leaves
- Perennial, basal rosette
- Deeply toothed with acute lobes, especially the terminal lobe (unlike *Hypochaeris radicata*)

Inflorescence
- Usually multiple
- Naked receptacle
- Hairy bracts
- Yellowish-white or tan pappus

Fruits
- Beakless achenes

Habitat: roadsides, pastures, disturbed sites in lowland and montane zones

Distribution:
- Pacific maritime: less common than *Hypochaeris radicata* in the southeast; found in Cordova
- Interior boreal: Kenai Peninsula; along the Parks Hwy; in the vicinity of Chena Hot Springs
- Arctic-alpine: sparsely distributed to the north; west to Dillingham and Bethel

Yellow salsify • *Tragopogon dubius*

Invasiveness Rank: 50 points | Species Code: TRDU

General Information:
Biennial or perennial
30-90 cm tall

Description:
Stem
- Hollow and swollen below the flower head
- Milky juice

Leaves
- Linear, about 9 cm long

Inflorescence
- Involucral bracts are longer than the flowers (about 3.8 cm)

Fruits
- Fruiting head is globe-shaped, (6.4 to 10.2 cm across)

Habitat: roadsides, waste areas, steep slopes prone to geomorphologic disturbance
Distribution:
- Pacific maritime: Knik Arm on the Glenn Hwy; Turnagain Arm; Soldotna (Kenai Peninsula); in southeast AK only on Prince of Wales and in Sitka
- Interior boreal: Yukon Territory on the road between Haines and Haines Jct and on the Alaska Hwy by Watson Lake

Field sowthistle • *Sonchus arvensis*

Invasiveness Rank: 73 points

Species Code: SOAR2

General Information:
Perennial
Woody stems
0.6-1.2 m tall

Description:
Roots
- Extensive rhizomes

Stem
- Glandular hairs on flower stalks and upper part of the stem
- Milky juice

Leaves
- Clasping at the base
- Basal lobes ear-shaped and small

Inflorescence
- Large (2.5-5 cm across)
- On each floret, the ligule is approximately equal in length to its closed tubular section
- Pappus mostly >1 cm long

Fruits
- 4-5 ribbed
- Dark brown

Habitat: roadsides, disturbed sites, old home sites, coves and beaches
Distribution:
- Pacific maritime: scattered throughout
- Interior boreal: northernmost records on the Dalton and Elliot Hwys near Livengood; also in vicinity of Delta

Remarks: There are two subspecies of *Sonchus arvensis:*
- ***S. arvensis* ssp. *arvensis*** has yellow, stalked, glandular hairs on stalks and stems below flower heads
- ***S. arvensis* ssp. *uliginosus*** has stalkless, glandular hairs

Common sowthistle • *Sonchus oleraceus*

Invasiveness Rank: 46 points Species Code: SOOL

General Information:
Annual or biennial
Soft, hollow stems
≤ 1.5 m

Description:
Stem
- Milky juice

Leaves
- Clasping stem
- Margin sparsely prickly
- Basal lobes pointed; terminal lobe sharply triangular
- Upper surface bluish-green

Inflorescence
- Small (<2.5 cm across)
- Yellow glandular hairs sometimes present on flower stalks and bracts
- On each floret, the ligule is approximately equal in length to its closed tubular section
- Pappus mostly <1 cm long

Fruits
- 2-4 ribbed
- Dark brown

Habitat: highly disturbed sites and roadsides
Distribution:
- Pacific maritime: discrete populations in southeast Alaska
- Interior boreal: Anchorage and in the vicinity of Houston; northernmost records in Denali National Park and along the Parks Hwy

Spiny sowthistle • *Sonchus asper*

Invasiveness Rank: 46 points Species Code: SOAS

General Information:
Annual or biennial
Soft, hollow stems
0.3-1.2 m tall

Description:
Stem
- Milky juice

Leaves
- Clasping stem
- Margin very prickly
- Often without lobes; if lobed, basal lobes are recurved and clasping the stem, and the terminal lobe is broadly triangular
- Upper surface dark green and glabrous

Inflorescence
- Small (<2.5 cm across)
- Yellow glandular hairs sometimes present on flower stalks and bracts
- Ligules of ray florets are shorter than their tubes
- On each floret, the ligule is shorter than its closed tubular section
- Pappus mostly <1 cm long

Fruits
- 3 ribbed
- Strongly compressed
- Straw to reddish-brown colored

Habitat: highly disturbed sites, roadsides, mining areas
Distribution:
- Pacific maritime: in and south of Kake; Kodiak
- Interior boreal: Anchorage and one unconfirmed infestation south of Cantwell on the Parks Hwy

Wall lettuce ● *Mycelis muralis*

Invasiveness Rank: 31 points Species Code: MYMU

General Information:
Annual or biennial
60-90 cm tall

Description:
Roots
- Fibrous

Stems
- Erect
- Branched toward the top
- Glabrous to glaucous
- Milky juice

Leaves
- Basal and lower stem leaves 6-18 cm long and 2-8 cm wide, smooth, pinnately lobed, clasping at base
- Middle and upper stems leaves are smaller and few

Inflorescence
- Consists of 5 yellow, strap-shaped ray florets

Fruit
- Achenes black or brown with white pappus

Habitat: associated with natural or anthropogenic disturbances
Distribution: Pacific maritime, widespread in southeast Alaska


http://www.nwnature.net


http://www.fungoceva.it


http://www.guenther-blaich.de

Distinguishing *Crepis* species from *Hieracium* species:

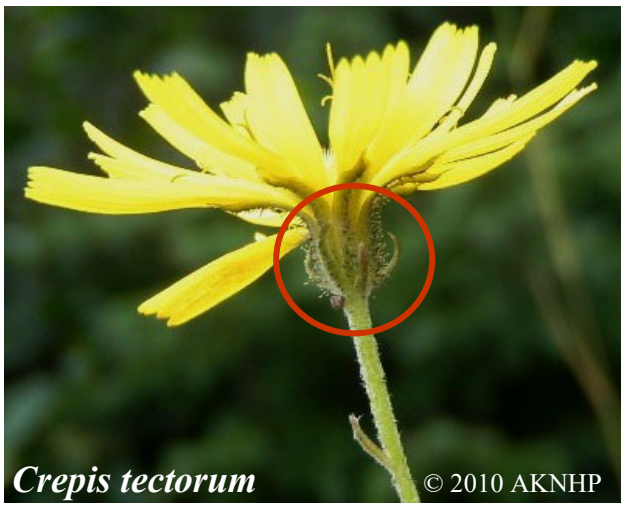
Similarities between *Crepis* species and *Hieracium* species in Alaska:

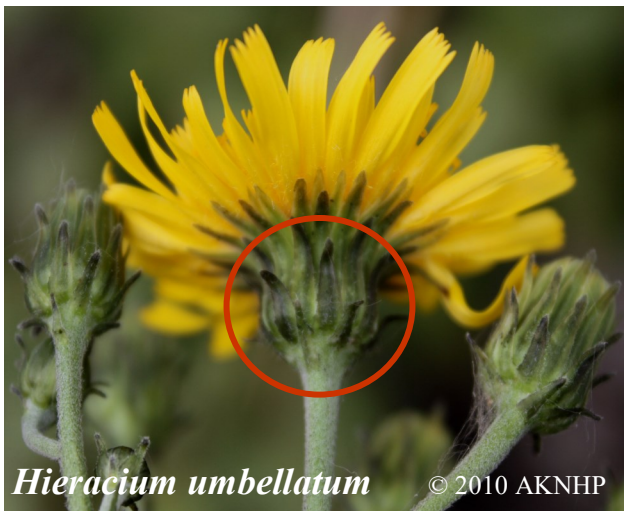
- Ray flowers only
- Leafy stems (unlike *Taraxacum* species)
- Leaves are not prickly (unlike *Sonchus* species)
- Flowers are yellow (unlike most native species with the aforementioned traits)

Differences between *Crepis* species and *Hieracium* species in Alaska:

- *Crepis* species with involucral bracts in two distinct rows that do not overlap
- *Hieracium* species with overlapping bracts of multiple lengths

Bract comparison





Narrowleaf hawksbeard ● *Crepis tectorum*

Invasiveness Rank: 56 points Species Code: CRTE3

General Information:
Winter annual
0.3-0.9 m tall

Description:
Stems
- Milky juice

Leaves
- Some form a basal rosette
- Stem leaves with extensions at the base that appear to clasp the stem = auricles
- Basal leaves toothed and curly edges, but become narrow, smaller, and entire as leaves are further up stem.

Inflorescence
- Involucral bracts arranged in two rows (see previous page)
- Involucral bracts densely hairy on the inside
- Usually many branches, though weak plants have relatively few branches (top left compared to bottom right).

Habitat: disturbed sites including forest clearings, abandoned fields, agricultural fields, pastures and roadsides
Distribution: widespread across the state;

Native hawksbeards ● *Crepis nana, Crepis elegans*

Description:

- Native *Crepis* species are much smaller and more slender than *Crepis tectorum*
- Involucral bracts are not hairy on the inside

Habitat: gravelly sites

Distribution:

- *Crepis elegans* is found at low to mid elevations in the Pacific maritime ecogeographic region (east and south of Anchorage), and in the interior boreal region (with emphasis on the eastern interior). There are a few collections from the Brooks Range.

- *Crepis nana* has a similar distribution as *C. elegans* but can grow at higher elevations and occurs in the arctic and in western Alaska. It has not been recorded in southeast Alaska.

Narrowleaf hawkweed • *Hieracium umbellatum*
syn. *Hieracium scabriusculum*

Invasiveness Rank: 51 points | Species Code: HIUM

General Information:
Perennial
≥ 30 cm tall

Description:
Roots
- No stolons

Stems
- Leafy
- Milky juice

Leaves
- Lacking basal rosette
- Ovate to lanceolate
- Not densely hairy

Inflorescence
- Large (1-2 cm)
- Few heads per stalk
- Involucral bracts:
  - Dark green to black
  - Multiple lengths (unlike *Crepis tectorum*)
  - Not densely hairy (unlike many native *Hieracium* species)

Habitat: roadsides, forest edges and openings
Distribution:
- Pacific maritime: common in southeast Alaska up to the vicinity of Gustavus, Kenai Peninsula and Anchorage
- Interior boreal: scattered populations along Knik Arm and north to Denali National Park; vicinity of Fairbanks to Prospect Creek; at the start of the Taylor Hwy, near Tetlin Jct.

Meadow hawkweed • *Hieracium caespitosum*

Invasiveness Rank: 79 points Species Code: HICA10

General Information:
Perennial
≥ 30 cm tall

Description:
Roots
- Stolons with short white hairs
- Rhizomes

Stems
- Leafless or sometimes with 1-2 leaves on stem
- Milky juice

Leaves
- Basal rosette
- Ovate to lanceolate

Inflorescence
- 7+ flowering heads
- Involucral bracts are hairy and glandular

Habitat and distribution: roadsides, forest edges and openings in Anchorage (Interior boreal) and in Valdez; also along Knik Arm and the Kenai Peninsula (Pacific maritime)

Mouseear hawkweed • *Hieracium pilosella*

Invasiveness Rank: 63 points Species Code: HIPI

General Information:
Perennial
≥ 30 cm tall

Description:
Roots
- Stolons

Stems
- Sticky hairs
- Unbranched and leafless
- Milky juice

Leaves
- Basal rosette
- Sticky hairs

Inflorescence
- Solitary or rarely 2-3 heads

Habitat and distribution: landscaped areas on the Kenai Peninsula and along roadsides on Prince of Wales Island; southeast Alaska

Native hawkweeds ● *Hieracium triste* and *Hieracium gracile*

General Information:
Generally ≥ 30 cm tall

Description:
Generally <30 cm tall
Roots
- No stolons (unlike *H. pilosella* and *H. caespitosum*)

Leaves
- Basal rosette of long stalked leaves
- Stems with 2-3 reduced linear leaves (unlike *H. umbellatum*)

Inflorescence
- Small (<1 cm, unlike *H. umbellatum*)
- 2-10 globular flower heads (rarely 1)
- Involucral bracts often densely hairy

Habitat: high elevations, rocky slopes, stream sides, subalpine meadows

Distribution:
- *H. triste*: predominantly recorded in the Pacific maritime ecogeographic region (southeast and south-central to the Aleutian Islands), but also known from western Alaska and the Alaska Range
- *H. gracile*: merged into *H. triste* by some authors, but otherwise distinguished by the presence of glandular hairs and by red (instead of black) achenes. Found in alpine environments, mainly in the Pacific maritime ecogeographic region, with some populations recorded in western Alaska.

Orange hawkweed • *Hieracium aurantiacum*

Invasiveness Rank: 79 points Species Code: HIAU

General Information:
Perennial
Up to 30 cm
Forms dense mats

Description:
Stem
- Dark-colored hairs
- Milky juice

Roots
- Rhizomes and stolons

Leaves
- Basal rosette
- No leaves on stems
- White hairs

Inflorescence
- Orange

Habitat: one of the few non-native plants able to establish in organic soils and/or in sub-alpine habitats; meadows, rangelands, pastures, forest borders, roadsides, dis-

Orange agroseris • *Agroseris aurantiaca*

The only other orange-flowered aster in Alaska

Similarities:
- Both with ray florets
- Both with orange florets (but turning purple in older *A. aurantiaca* plants)
- Stems leafless (occasional exceptions in *H. aurantiacum*)

Differences:
- *H. aurantiacum*: >1 flowering heads per stalk, distinct long black hairs along stem and runners
- *A. aurantiaca*: single flowering head per stalk, hairless or with few hairs, no runners, rare to Alaska

Habitat and distributions:
- *H. aurantiacum*: disturbed sites and adjacent areas; in other parts of the world this species invades alpine areas, so it could potentially co-occur with *A. aurantiaca* in southeast Alaska
- *A. aurantiaca*: alpine meadows, moist open woodlands, glacial till; only known from SE Alaska

Common tansy • *Tanacetum vulgare*
syn. *Chrysanthemum vulgare*

Invasiveness Rank: 60 points | Species Code: TAVU

General Information:
Perennial,
Up to 1.2 m tall

Description:
Stem
- Woody
- Purplish-red

Leaves
- Twice-divided into narrow, toothed segments
- Strong odor when crushed

Inflorescence
- Numerous, button-like flower heads

Habitat: roadsides, ditches, streams; beach meadows in Haines
Distribution: Pacific maritime and interior boreal; northernmost infestation is near Prospect Creek, south of Coldfoot; westernmost populations are in King Salmon and Kodiak; easternmost is in Glennallen
Remarks: For descriptions of yellow-flowered *Senecio sylvaticus* and *Senecio vulgaris*, which can resemble *Tanacetum vulgare*, see "Yellow ray and disc florets" section.

Pineappleweed • *Matricaria discoidea*
syn. *Matricaria matricarioides*

Invasiveness Rank: 32 points | Species Code: MADI6

General Information:
Annual
<30 cm tall

Description:
Leaves
- Divided several times into narrow segments
- Strong odor when crushed, similar to chamomile

Inflorescence
- Cone-shaped flowers
- Greenish-yellow

Habitat: compacted soils of roadsides, farmyards and waste areas
Distribution: all three ecogeographic regions
Remarks: For descriptions of yellow-flowered *Senecio sylvaticus* and *Senecio vulgaris*, which can resemble *Matricaria discoidea*, see "Yellow ray and disc floret" section.

Ragworts and Groundsels • *Senecio* species

Description:
Stems
- Leafy
- Hollow

Leaves
- Alternate

Inflorescence
- Generally have disc and ray florets; sometimes rays are greatly reduced
- Ray florets are yellow

Differences between *Senecio* spp. and similar-looking native genera:

Leafy stems; ray florets pink, purple, red, blue, or white
- Bracts in multiple rows .....*Aster*
- Bracts in a single row .....*Erigeron*

Leafy stems; ray florets yellow or orange
- At least basal stem leaves opposite .....*Arnica*
- All leaves alternate
  - Flower heads small and numerous; involucral bracts imbricate or in multiple overlapping rows .....*Solidago*
  - Flower heads large and few; involucral bracts in a single row .....*Senecio*

Differences between non-native *Senecio* species and similar-looking native *Senecio* species:

Most native *Senecio* spp. have a basal rosette of leaves. Only *S. pseudo-arnica, S. sheldonensis,* and *S. triangularis* lack basal leaves; these plants are restricted to south-coastal and southeast Alaska and are large, distinctive plants.
Most non-native *Senecio* species:
- Are annual plants with basal leaves withering before or soon after flowering so that they may appear to lack a basal rosette
- Have no ray florets, or if they are present, they are <2 mm long and often coiled

Stems and leaves are hairy:
1a. With viscid, sticky hairs .....*S. viscosus*
1b. Hairy but not with viscid, sticky hairs
2a. 2-6 involucral bracts with black tips.....*S. vulgaris*
2b. 0 or 1-5+ involucral bracts with green tips.....*S. sylvaticus*

Tansy ragwort ● *Senecio jacobaea*

Invasiveness Rank: 63 points Species Code: SEJA

General Information:
Biennial or short-lived perennial
1.2-1.8 m tall

Description:
Roots
- Taproot

Stems
- Short wooly hairs

Leaves
- Short wooly hairs
- Lower leaves wither soon after flowering (no distinct basal rosette)
- Pinnate, deeply dissected 1-3 times

Inflorescence
- 10-13 ray florets, 6-12 mm long
- Involucral bracts with black or green tips

Habitat: roadsides, disturbed places
Distribution:
- Pacific maritime: Kodiak, southeast Alaska
- Interior boreal: Anchorage

YELLOW RAY AND DISC FLORETS

Common groundsel ● *Senecio vulgaris*

Invasiveness Rank: 36 points Species Code: SEVU

General Information:
Annual
Up to 60 cm tall

Description:
Roots
- Taproot

Stems
- Glabrous or with sparse short hairs

Leaves
- Glabrous or with sparse short hairs
- Deeply lobed to toothed

Inflorescence
- 8-20 per stem
- 2-6+ involucral bracts with black tips
- Only yellow disc florets; no ray florets

Habitat: roadsides, disturbed sites
Distribution:
- Pacific maritime: predominantly southeast but also in Cordova, Kenai Peninsula and Kodiak
- Interior boreal: along the Richardson, Glenn and Parks Hwys; Anchorage, Mat-Su Valley, Delta Junction and Fairbanks
- Northern and westernmost infestation is near Unalakleet

YELLOW RAY AND DISC FLORETS

Woodland ragwort • *Senecio sylvaticus*

Invasiveness Rank: 41 points | Species Code: SESY

General Information:
Annual
Up to 0.8 m tall

Description:
Roots
- Fibrous taproot

Stems
- Abundant curly hairs (not glandular)

Leaves
- Abundant curly hairs
- Pinnately divided once or twice

Inflorescence
- 12-24 per stem
- Involucral bracts green-tipped or minutely black
- Ray florets absent or 1-8 and very short (1-2 mm)

Habitat: disturbed sites
Distribution: only recorded in Anchorage and along the Klondike Hwy

Sticky ragwort • *Senecio viscosus*

Invasiveness Rank: not yet ranked | Species Code: SEVI2

General Information:
Annual
Up to 0.5 m tall
Foul-smelling
Viscid, sticky hairs

Description:
Roots
- Taproot

Stems
- Glandular hairs

Leaves
- Pinnately dissected to pinnatifid
- Glandular hairs

Inflorescence
- 1-30 per stem
- Black-tipped bracts
- ±13 Ray florets, usually reflexed

Habitat: disturbed sites, especially in open sand or gravel sites
Distribution: only recorded near Haines and in Seward

Oxeye daisy • *Leucanthemum vulgare*
syn. *Chrysanthemum leucanthemum*

Invasiveness Rank: 61 points | Species Code: LEVU

General Information:
Perennial
0.3-1.2 m tall

Description:
Leaves
- <10 cm long
- Spoon-shaped
- Coarsely or irregularly toothed
- May be withered by flowering time
- Leaf base clasping stem

Inflorescence
- White ray florets
- Yellow disc florets

Habitat: roadsides, meadows, clear cuts, disturbed sites
Distribution: all three ecogeographic regions; north to Coldfoot, west to Nome.

Shasta daisy • *Leucanthemum xsuperbum*

Invasiveness Rank: not yet ranked | Species Code: LEMA8

General Information:
Annual
Up to 0.9 m tall
This is a hybrid of *Leucanthemum maximum* and *Leucanthemum lacustre,* cultivated as a garden plant

Description:
Stems
- Unbranched

Leaves
- Lance-shaped with shallow dentate margins
- Up to 20 cm long
- Leaf base clasping stem

Habitat and distribution: mainly in southeast Alaska, some records in Anchorage

Stinking chamomile ● *Anthemis cotula*

Invasiveness Rank: 41 points Species Code: ANCO2

General Information:
Annual
15-60 cm tall

Description:
Leaves
- Foul smelling when crushed
- Glandular-dotted

Inflorescence
- Receptacles papery or bristly at the middle

Habitat: waste areas, roadsides
Distribution:
- Pacific maritime: southeast, Kenai Peninsula
- Interior boreal: Anchorage

Remarks: May superficially resemble *Arcanthemum arcticum* and/or *Chrysanthemum integrifolium* — native species that differ in leaf shape.

WHITE RAY AND YELLOW DISC FLORETS

Arctic daisy • *Chrysanthemum integrifolium*
syn. *Hulteniella integrifolia* (Richardson) Tzvelev

General Information:
Perennial
Up to 20 cm tall
Cespitose

Description:
Stems
- Soft-pubescent

Leaves
- Linear
- Mostly basal

Inflorescence
- Heads solitary
- Involucral bracts white-pubescent

Habitat: Gravelly slopes, solifluction soil
Distribution:
- Arctic Alpine: Brooks Range and north to coast
- Interior boreal: Seward Peninsula, White Mountains

Arctic daisy • *Arctanthemum arcticum*
syn. *Chrysanthemum arcticum*

General Information:
Perennial
Up to 30 cm tall
Low growing

Description:
Leaves
- Triangular to wedge-shaped, densely hairy at the base
- Fleshy

Habitat and distribution: coastal marshes, rocky shores

Scentless chamomile • *Tripleurospermum inodorum*
syn. *Tripleurospermum perforata*

Invasiveness Rank: 48 points Species Code: TRIN11

General Information:
Annual
≥ 0.9 m tall

Description:
Leaves
- Narrowly dissected
- Odorless when crushed

Inflorescence
- Receptacles naked
- Involucral bracts with light brown, narrow, scarious margins

Habitat: roadsides, lawns, waste areas, irrigation ditches, shorelines, streams, pond edges
Distribution: all three ecogeographic regions; Seward Peninsula is the northern and western limit.

False mayweed • *Tripleurospermum maritimum*

General Information:
Annual, biennial, or perennial
0.1-0.6 m tall

Description:
Inflorescence
- White ray florets fall off early
- Receptacles naked
- Involucral bracts with dark brown, broad, scarious margins

Habitat and distribution: seashores in northwestern and arctic Alaska

Creeping thistle, Canada thistle • *Cirsium arvense*

Invasiveness Rank: 76 points

Species Code: CIAR4

General Information:
Perennial
0.3-1.2 m tall

Description:
Roots
- Extensive creeping rhizomes

Stem
- Not winged (unlike *C. vulgare*)

Leaves
- Lobes spiny
- Hairless above and hairless or hairy below

Inflorescence
- Narrow (1 cm), unlike native *Cirsium* species)
- Purplish-pink
- Involucral bracts with spiny points but no spines (unlike *C. vulgare)*

Habitat: roadsides, forest edges, forest openings

Distribution:
- Pacific maritime: primarily in this region; southeast Alaska, Kenai Peninsula, Kodiak
- Interior boreal: few records from Anchorage, Girdwood, near Portage and near Palmer

PURPLISH DISC FLORETS

Bull thistle • *Cirsium vulgare*

Invasiveness Rank: 61 points | Species Code: CIVU

General Information:
Biennial,
0.9-1.5 m tall

Description:
Roots
- Deep, fleshy taproot

Stems
- Spiny wings (unlike native *Cirsium* species)

Leaves
- Prickly hairs above, cottony below

Inflorescence
- Large heads, up to 3.8 cm across (unlike *C. arvense*)
- Involucral bracts spine-tipped
- Dark purple flowers

Habitat: roadsides, disturbed sites
Distribution: similar distribution to *C. arvense* but more restricted (primarily in the Pacific maritime region with only a minor presence in the interior boreal region)

Native thistles ● *Cirsium* species

Description:
Stems
- Not winged (unlike *C. vulgare*)

Inflorescence
- >1 cm across (unlike *C. arvense*)
- Involucral bracts with spiny points but no distinct spines (unlike *C. vulgare*)

Habitat and distributions:
- *C. kamtschaticum*: meadows; Aleutians
- *C. foliosum*: meadows; Yukon, potentially to Haines and Skagway, tip of southeast AK
- *C. edule*: wet meadows, woods; Yukon and potentially to Haines and Skagway, tip of southeast AK

Cirsium edule


Cirsium kamtschaticum


Cirsium foliosum

Spotted knapweed • *Centaurea stoebe*
syn. *C. biebersteinii, C. maculosa*

Invasiveness Rank: 86 points | Species Code: CEST8

General Information:
Biennial or short-lived perennial
0.3-1.2 m tall

Description:
Stem
- Sandpapery texture

Leaves
- Sandpapery texture
- Lower leaves are irregularly lobed
- Upper leaves are entire
- Leaves covered with translucent dots

Inflorescence
- Purple, occasionally white
- Involucral bracts are black-tipped and not spiny

Habitat: highways, waterways, railroads, pipelines
Distribution:
- Pacific maritime: southeast, Kenai, Kodiak, Turnagain Arm, Valdez
- Interior boreal: Anchorage

Remarks: Non-native *Centaurea* species in Alaska species lack spiny leaves unlike *Cirsium* species. There are no native species of knapweed in Alaska.

PURPLISH DISC FLORETS

Perennial cornflower • *Centaurea montana*

Invasiveness Rank: 46 points Species Code: CEMO

General Information:
Perennial
0.3-0.6 m tall

Description:
Roots
- Stolons, forms clumps

Leaves
- Entire, lanceolate

Inflorescence
- Outermost florets large and blue-purple

Habitat: garden escapee; roadsides, disturbed areas, woodlands
Distribution: Pacific maritime and interior boreal; similar distribution to *C. stoebe* but more restricted

Garden cornflower • *Centaurea cyanus*

Invasiveness Rank: not yet ranked | Species Code: CECY2

General Information:
Annual
0.2-1 m tall

Description:
Stems
- Usually a single erect stem
- Somewhat wooly

Leaves
- Loosely grey-wooly
- Basal leaves linear-lanceolate, 3-10 cm long, margins mostly entire
- Stem leaves are linear and entire

Inflorescence
- Usually blue, sometimes white or purple (1.0-2.5 cm across)

Habitat: garden escapee; grasslands, woodlands, forests, roadsides, disturbed sites
Distribution: only two known occurrences in Anchorage and Kodiak

PURPLISH DISC FLORETS

Remarks on *Saussurea* species in Alaska:

There are no native species of *Centaurea* in Alaska. However, *Centaurea* species resemble native *Saussurea* species (saw-worts).

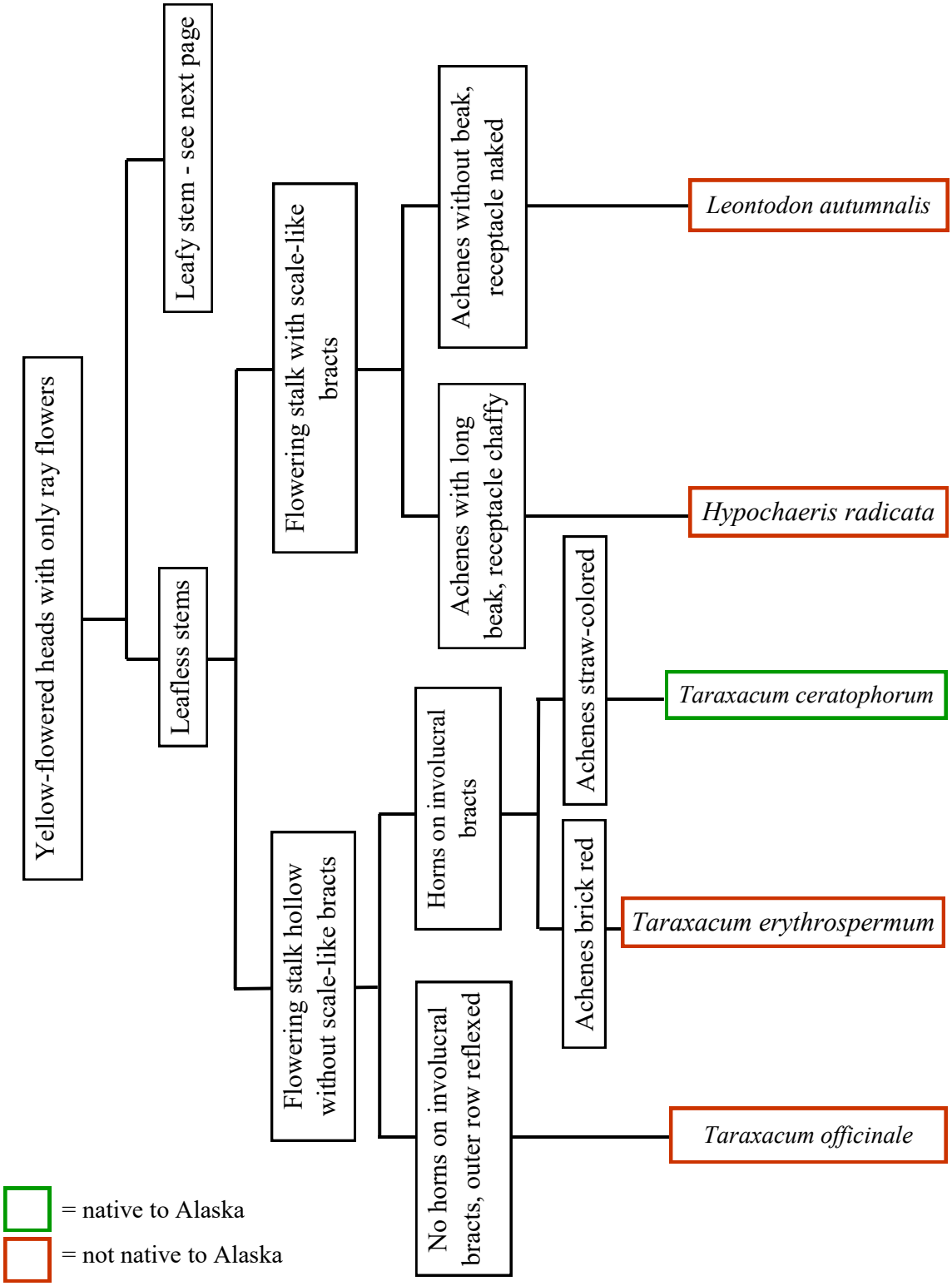
Saussurea species can be distinguished from *Centaurea* species by their:

- Unbranched stems(*C. montana* may also be unbranched or sparsely branched; *C. stoebe* is usually branched)
- Linear to lance-shaped leaves that are not lobed, toothed, or pinnately divided (although *Centaurea montana* leaves are ovate to lanceolate and are also not pinnately divided)
- Pappus is a long, feathery plume (Pappus of *Centaurea* spp. is comprised of stiff bristles)
- Heart shaped leaves in *S. americana*

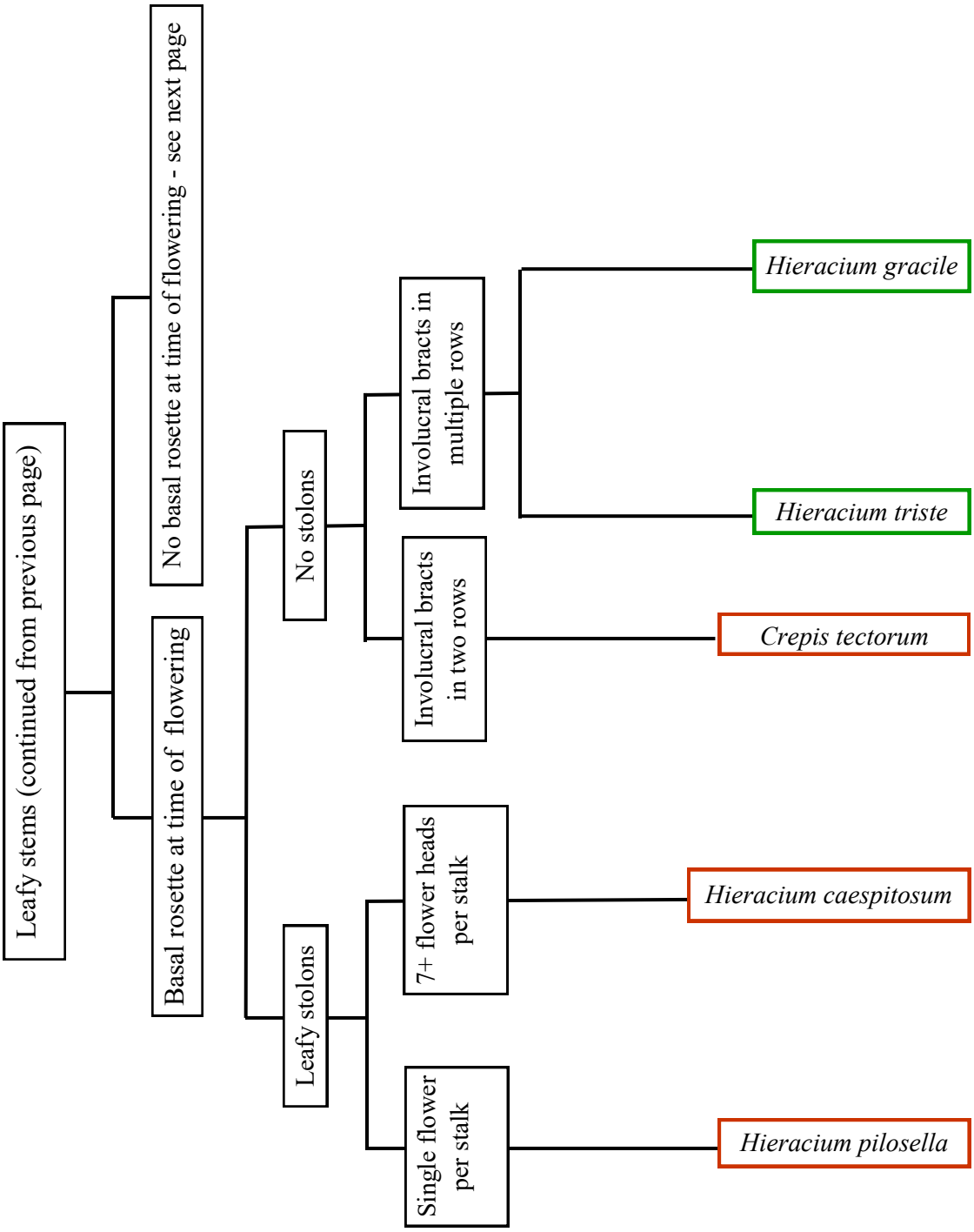
Habitat and distributions:

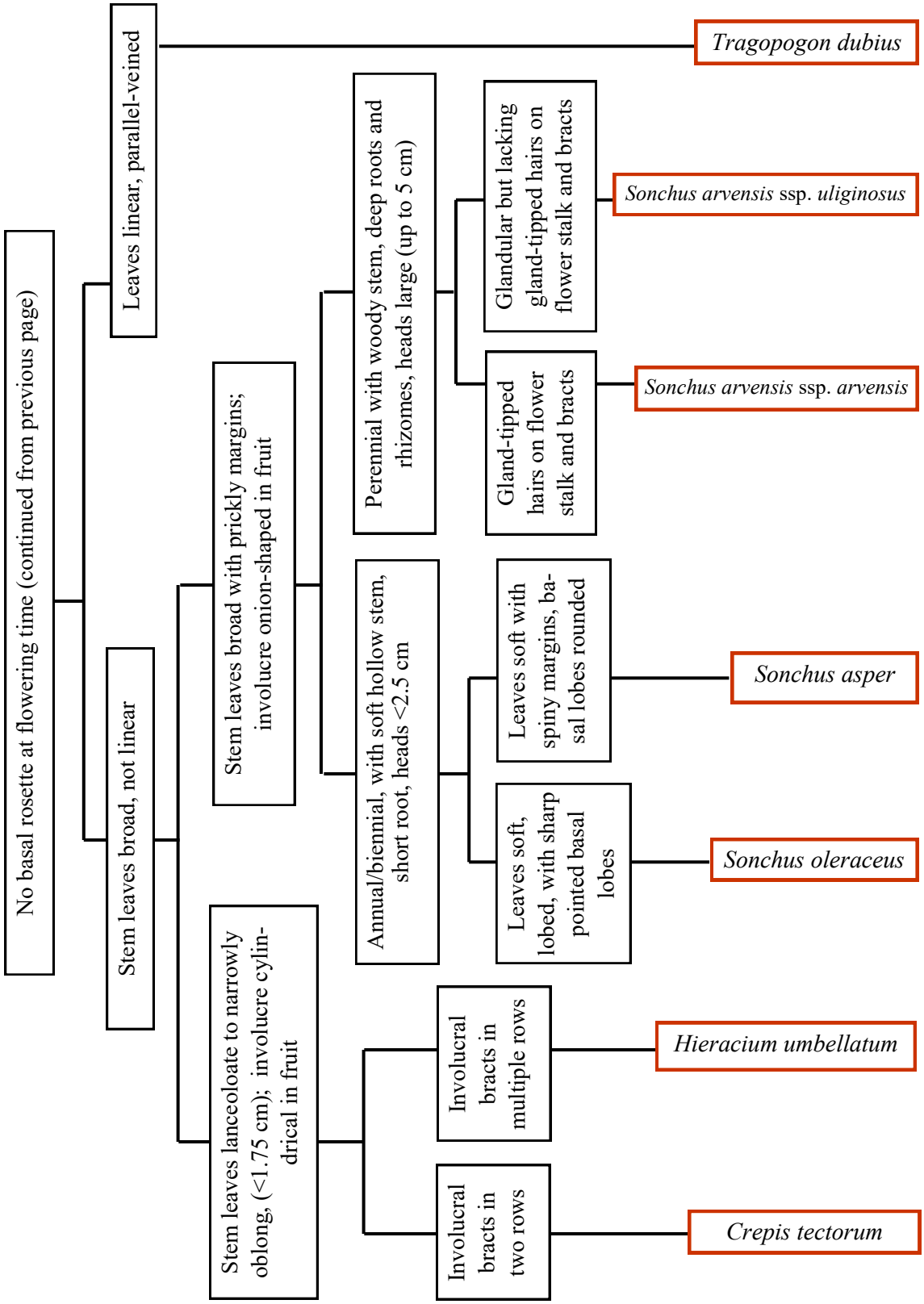
- *S. americana*: southeast Alaska
- *S. angustifolia*: dry places on tundra and in the mountains
- *S. nuda*: seashores, alpine meadows; western Alaska
- *S. viscida*: arctic-alpine and interior boreal

Saussurea angustifolia



KEY TO YELLOW-FLOWERED ASTERS OF DISTURBED HABITATS IN AK


Leafy stems (continued from previous page)
No basal rosette at time of flowering - see next page
Basal rosette at time of flowering
No stolons
Leafy stolons
Involucral bracts in multiple rows
Involucral bracts in two rows
7+ flower heads per stalk
Single flower per stalk
Hieracium gracile
Hieracium triste
Crepis tectorum
Hieracium caespitosum
Hieracium pilosella

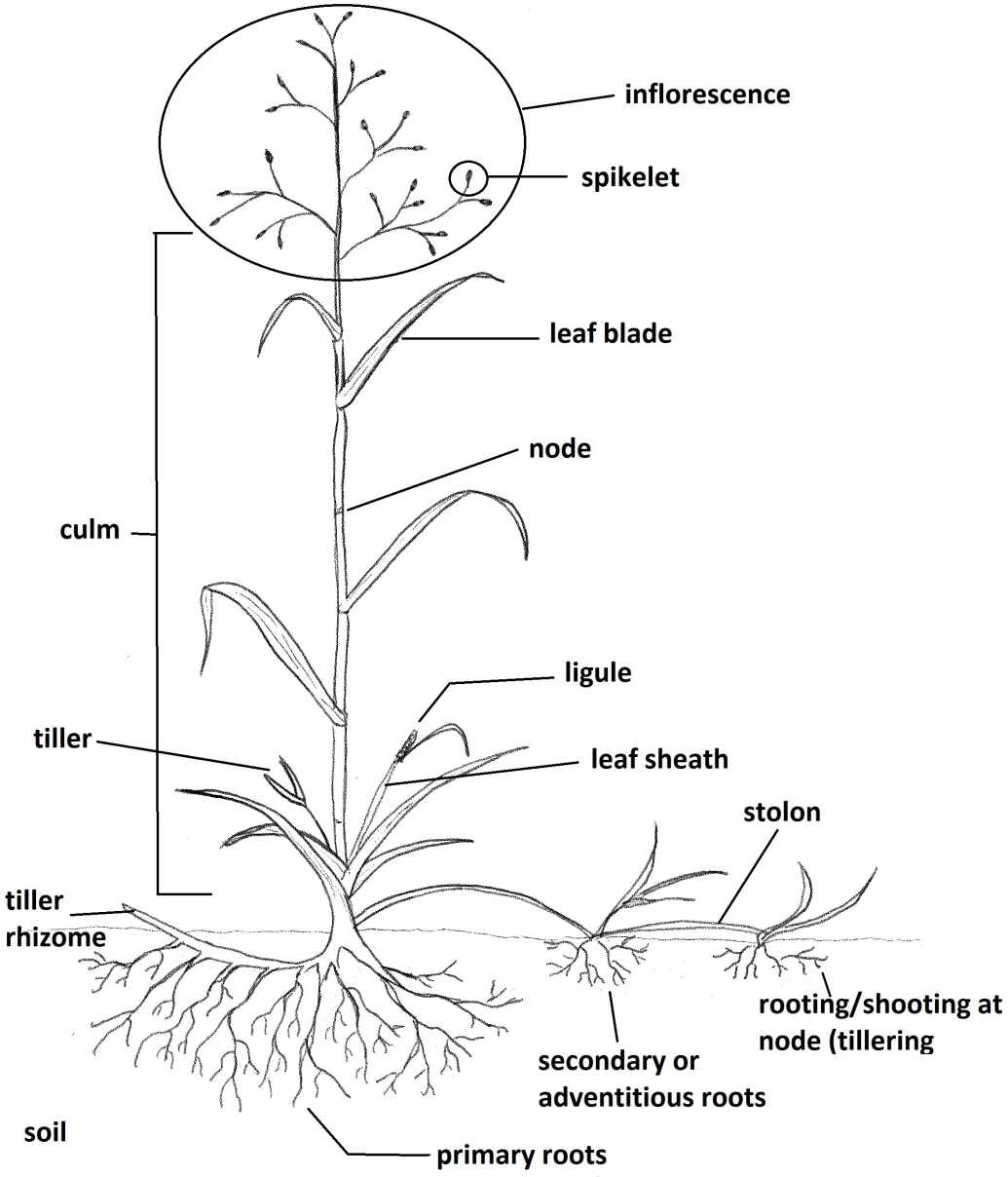

No basal rosette at flowering time (continued from previous page)
Leaves linear, parallel-veined
Tragopogon dubius
Stem leaves broad, not linear
Stem leaves broad with prickly margins; involucre onion-shaped in fruit
Perennial with woody stem, deep roots and rhizomes, heads large (up to 5 cm)
Glandular but lacking gland-tipped hairs on flower stalk and bracts
Sonchus arvensis ssp. uliginosus
Gland-tipped hairs on flower stalk and bracts
Sonchus arvensis ssp. arvensis
Annual/biennial, with soft hollow stem, short root, heads <2.5 cm
Leaves soft with spiny margins, basal lobes rounded
Sonchus asper
Leaves soft, lobed, with sharp pointed basal lobes
Sonchus oleraceus
Stem leaves lanceoloate to narrowly oblong, (<1.75 cm); involucre cylindrical in fruit
Involucral bracts in multiple rows
Hieracium umbellatum
Involucral bracts in two rows
Crepis tectorum

Grass Family (Poaceae)

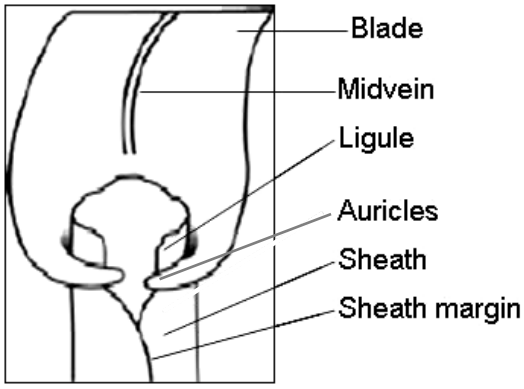
Grass morphology

Stems (culms)

- Mostly hollow and cylindrical
- Interrupted at intervals by swollen nodes
- Rarely branching
- Some with rhizomes (spreading below ground) or stolons (spreading along the soil surface) giving rise to new shoots (tillers)

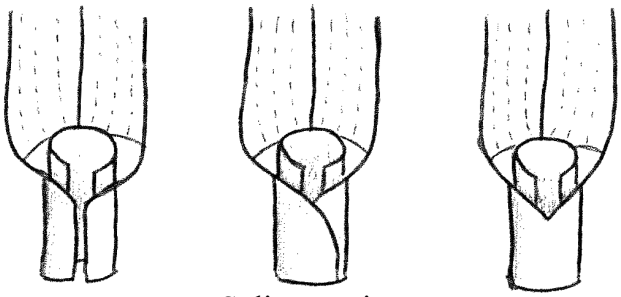


Leaves



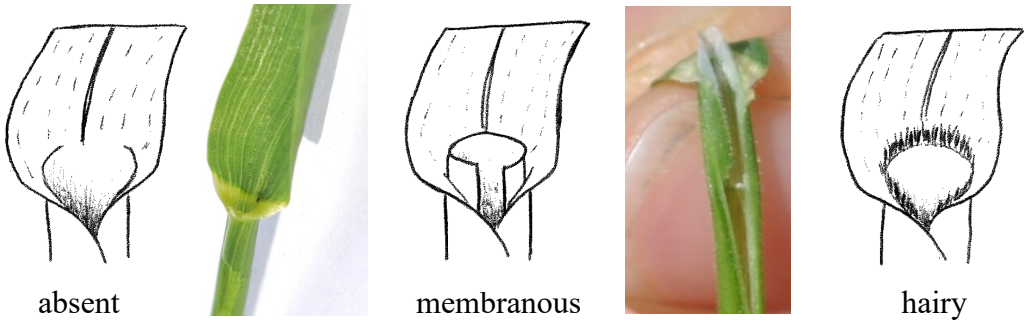
Blade: upper portion of the leaf that opens out, is flat, with parallel veins

Sheath: lower portion of the leaf that encloses and protects young shoots



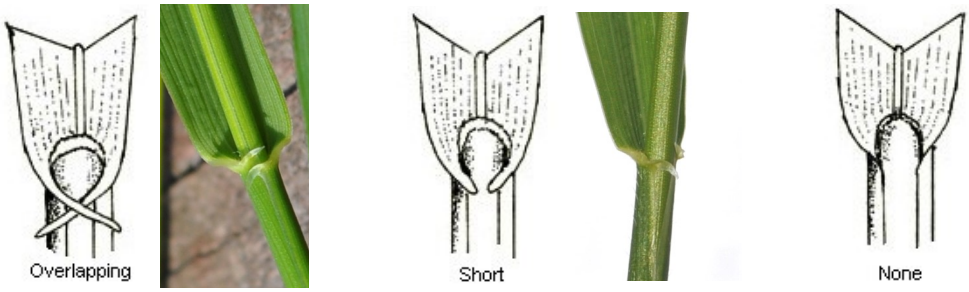
Split | Split, margins overlapping | Closed

Ligule: small membranous flap of tissue at the junction of the sheath and blade; sometimes just a fringe of hairs or absent



absent | membranous | hairy

Auricle: projections on either side of the ligule



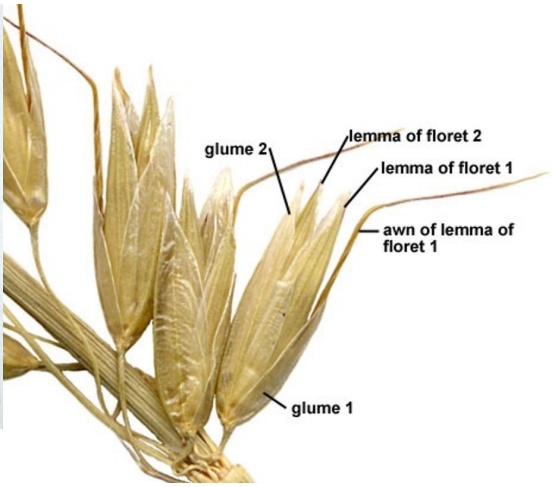
Flower parts of grasses

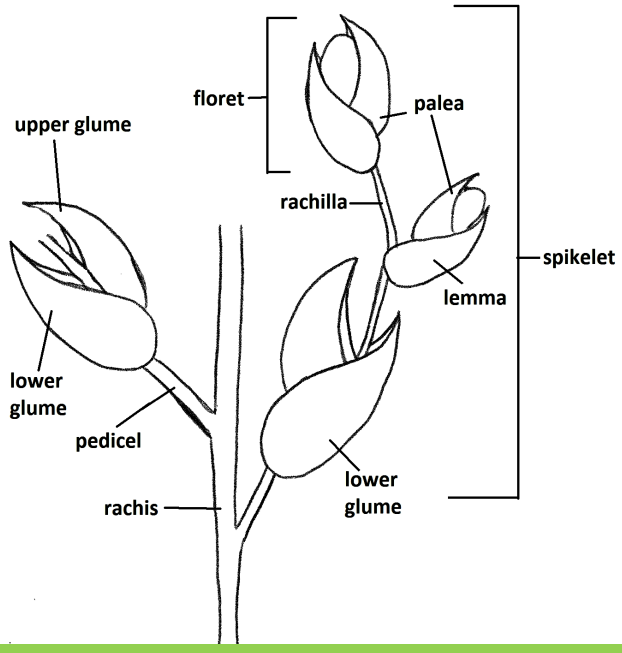
Spikelet: all of the florets above a pair of glumes. Single to several florets are inside the spikelet. Spikelets can be attached to the stem (sessile) or with pedicels that branch away from the central axis (stalked).

Glumes: the two bracts at the base of each spikelet. They are the outer part of the spikelet and enclose the florets and referred to as the upper and lower glume.

Floret: a single flower within the spikelet. It is subtended by two bracts, the lemma (outer) and palea (inner).

Awns: bristle-like or needle-like extension arising from lemmas or glumes. Not present on all species.





Inflorescence structure

The inflorescence of grasses can be broken down into three types depending on how the spikelets are attached to the stem. The spikelets are either attached directly or indirectly (stalked to the stem with a rachis) and if the rachis branches or not.

Raceme: the spikelets are stalked, attached to the central axis, and not branched.

Panicle: the spikelets are stalked and branching. Depending on the maturity or species the panicle can be an **open panicle** (left and center) or a **closed panicle** (right).

Spike: the spikelets are not stalked and are attached directly to the central axis.

How to distinguish grasses from sedges and rushes:

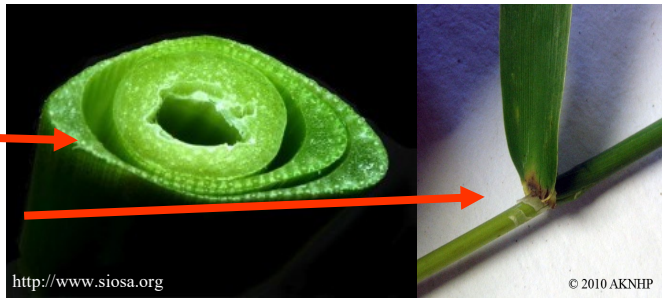
"Sedges have edges, rushes are round, grasses have nodes where the leaves are found"
Note that there are no non-native rushes in Alaska.

General morphology

- Stems with swollen nodes, hollow stems between nodes which are round in cross-section
- Leaves linear, simple, entire, and with parallel veins
- Leaves with an open sheath and a ligule (appendage) at the junction of the sheath and blade
- Inflorescence consist of florets arranged in a panicle or spike
- Flowers usually small and inconspicuous

Grasses (Poaceae)

- Stem hollow and round in cross-section
- Leaves 2-ranked
- Sheath open with a ligule

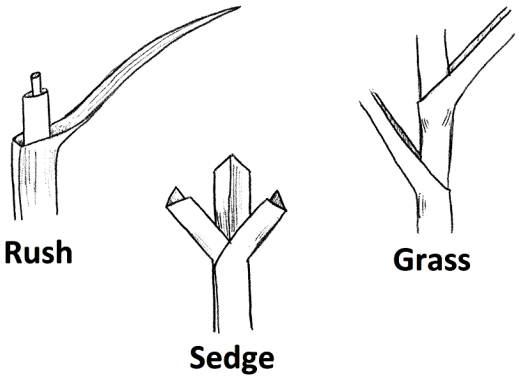


Sedges (Cyperaceae)

- Stem triangular in cross section
- Leaves 3-ranked
- Sheaths form a closed tube around the stem

Rushes (Juncaceae)

- Stems round and solid
- Leaves 3-ranked
- Sheaths closed



Reed canarygrass • *Phalaris arundinacea*

Invasiveness Rank: 83 points | Species Code: PHAR3

General Information:
Perennial
0.6-1.5 m tall

Description:
Roots
- Conspicuous creeping rhizomes

Leaves
- Broad, ≥1 cm wide
- Spread from stem at right angles

Inflorescence
- Dense
- 2+ florets per spikelet (2 sterile, 1 fertile; sterile florets may resemble tufts of hair at the base of the fertile floret)
- Glumes boat-shaped and with prominent nerve (unlike *Calamagrostis* glumes, which are not awned and are narrow)
- Lemmas without awns or a tuft of hairs at the base (unlike *Calamagrostis*)

Habitat: stream banks, wet meadows
Distribution: Pacific maritime and interior boreal; westernmost infestation is in Dillingham, northernmost infestation is in Fairbanks; outliers in Cordova and near Kennecott
Remarks: Native genotypes potentially exist at four hot springs in interior Alaska

INFLORESCENCE A PANICLE

Slough grass • *Beckmannia syzigachne*

General Information:
Perennial
Up to 1.2 m tall

Description:
Inflorescence
- Panicle
- More or less interrupted
- Spikelets flattened and arranged in two rows along one side of the stem
- Spikelets with one flower and forming distinct clusters

Habitat and Distribution: wet ground in all three ecogeographic regions

Bluejoint • *Calamagrostis canadensis*

General Information:
Perennial
Up to 1.8 m tall

Description:
Leaves
- Ligules 3-6 mm long

Inflorescence
- Nodding panicles
- 1 floret per spikelet
- Lemmas with short awns and diagnostics tuft of hairs at base

Habitat and Distribution: most open lowland habitats in all three ecogeographic regions
Remarks: This is the most common grass in Alaska.

Orchardgrass ● *Dactylis glomerata*

Invasiveness Rank: 53 points Species Code: DAGL

General Information:
Perennial
Grows in tufts
0.5-1 m tall

Description:
Inflorescence
- Panicle 3-15 cm long
- Spikelets in dense, one-sided clusters
- Spikelets 5-9 mm long with 3-6 flowers
- Glumes and lemmas both keeled
- Lemmas with a short, sharp, slender point or a short awn

Habitat: meadows, roadsides
Distribution: interior boreal, including few occurrences in Anchorage and one outlier in Glennallen

INFLORESCENCE A PANICLE

Traits of *Bromus* species in Alaska:

- Spikelets large and resembling a flattened cigar
- 2+ florets per spikelet
- Glumes shorter than the first floret
- Lemmas bifid (have two teeth at the tip), awnless, or with apical awn

Smooth brome • *Bromus inermis*

syn. *Bromus inermis* ssp. *inermis, Bromopsis inermis*

Invasiveness Rank: 62 points | Species Code: BRIN2

General Information:
Perennial
0.5-1.1 m tall

Description:
Roots

- Rhizomes

Leaves

- Sheath closed with a small v-shaped notch
- Ligules 1-2 mm long and brownish at the base (could be confused with *Calamagrostis canadensis* before flowering, but *C. canadensis* has ligules 3-6 mm long)

Inflorescence

- Lemmas smooth or very faintly hairy on nerves and at the base
- Lemmas may or may not have awns; if present are ≤3 mm long

Habitat: roadsides, meadows, open woods, forest clearcuts
Distribution: all three ecogeographic regions; west to the Seward Peninsula, north to Coldfoot, and south to the King Salmon area

Cheatgrass • *Bromus tectorum*

Invasiveness Rank: 78 points Species Code: BRTE

General Information:
Annual
Culms up to 0.6 m tall

Description:
Leaves
- Ligules 5-6 mm long

Inflorescence
- Lemmas pubescent
- Lemmas with long awns, ≥1 cm

Habitat: roadsides, dry slopes, river banks
Distribution:
- Pacific maritime: Juneau
- Interior boreal: along the Parks Hwy, Nenana, Chena Hot Springs, Anchorage, Elmendorf Air Force Base

INFLORESCENCE A PANICLE

Pumpelly's brome ● *Bromus pumpellianus* ssp. *pumpellianus*

syn. *Bromus pumpellianus, Bromopsis pumpelliana, Bromus inermis* ssp. *pumpellianus*

General Information:
Perennial
Culms 0.5-1.2 m tall

Description:
Inflorescence

- Lemmas with awns up to 7 mm; shorter than *Bromus tectorum*, longer than *Bromus inermis*
- Lemmas distinctly hairy (unlike *Bromus inermis*)

Habitat: open lowland habitats
Distribution: widespread across Alaska
Remarks: Native *Bromus. inermis* ssp. *pumpellianus* may hybridize with non-native *Bromus inermis*

INFLORESCENCE A PANICLE

***Poa* species in Alaska:**

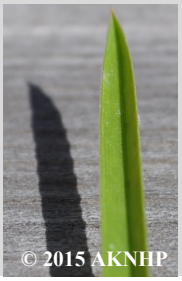
- There are many Alaska-native *Poa* species that can grow in disturbed sites alongside non-native counterparts
- All *Poa* species have leaves with a ***boat-shaped*** blade tip and are abruptly contracted at the tip
- This is a difficult group to key out

Distinguishing between native and non-native *Poa pratensis* species:
Native subspecies of *Poa pratensis* have smooth flower stalks:

- ***Poa pratensis* ssp. *alpigena***
- ***Poa pratensis* ssp. *colpodea***

Non-native subspecies have somewhat hairy (scabrous) flower stalks:

- ***P. pratensis* ssp. *pratensis***
- ***P. pratensis* ssp. *irrigata***



Kentucky bluegrass • *Poa pratensis* ssp. *pratensis*

syn. *Poa angustifolia*

Invasiveness Rank: 52 points | Species Code: POPR

General Information:
Perennial
30-100 cm tall
Grows in tufts

Description:
Roots

- Strongly rhizomatous, mat-forming

Stems

- Smooth, not glaucous

Leaves

- Not glaucous
- Soft, flat or folded

Inflorescence

- 3-5 branches per node, with the lowermost branches in whorls of 4-5
- Panicle 10-35 cm long
- Panicle branches are more or less scabrous
- Several to many spikelets per branch
- Spikelets crowded, each 3-6 mm long and with 3-5 flowers

Habitat: disturbed sites; lawns, waste areas; drier sites than *P. pratensis* ssp. *irrigata*
Distribution: widespread across Alaska; all three ecogeographic regions

Spreading bluegrass • *Poa pratensis* ssp. *irrigata*

Invasiveness Rank: 52 points | Species Code: POPR

General Information:
Perennial
8-30 cm tall (typically shorter than *P. pratensis* ssp. *pratensis*)
Grows in tufts

Description:
Roots
- Strongly rhizomatous, mat-forming

Stems
- Somewhat glaucous (unlike *P. pratensis* ssp. *pratensis*)

Leaves and stems
- Somewhat glaucous (unlike *P. pratensis* ssp. *pratensis*)
- Leaf blades are flat

Inflorescence
- 1-2 branches per node (less than *P. pratensis* ssp. *pratensis*)
- Panicles have 4-8 spikelets per branch (fewer than *P. pratensis ssp. pratensis)*
- Glumes are somewhat glaucous

Habitat: disturbed sites; lawns, waste areas; wet, sandy ground
Distribution: widespread across Alaska; all three ecogeographic regions

Rough bluegrass • *Poa trivialis*

Invasiveness Rank: 52 points | Species Code: POTR2

General Information:
Perennial
30-80+ cm tall
Grows in tufts

Description:
Roots
- Lacking rhizomes

Stems
- **Decumbent or bent abruptly at the nodes**

Leaves
- 3-5 together at the base
- Blades are flat, scabrous, 1.5-4 mm wide
- Ligules on upper leaves 3-5 mm long

Inflorescence
- Loose panicle with scabrous branches
- Spikelets have 2-3 flowers
- Glumes are narrow, the first glume is claw-like, short, and has one nerve; the second glume is longer with 3 nerves
- Lemmas have 5 nerves and a distinct tuft of cobweb hairs at the base
- Anthers 1-2 mm long

Habitat: waste areas, roadsides, yards
Distribution: Pacific maritime

Annual bluegrass ● *Poa annua*

Invasiveness Rank: 46 points | Species Code: POAN

General Information:
Annual
2-20 cm tall
Grows in tufts

Description:
Stems
- Ascending
- Smooth

Leaves
- Basal leaves light green or yellowish-green, soft, smooth, flat or folded, and much shorter than stems
- 1-2 stem leaves (most leaves basal)
- Sheaths are smooth and hyaline

Inflorescence
- Spikelets purple to green to yellowish-green
- Spikelets with 3-6 flowers
- Glumes narrow, acute, unequal, and boat-shaped
- Lower glumes with 1 nerve, upper glumes with 3 nerves
- Lemmas with 5 nerves
- Lacking tuft of hairs at the base of the lemma
- Anthers <1 mm long

Habitat: lawns, waste areas, roadsides
Distribution: widespread across Alaska; all three ecogeographic regions

Canada bluegrass ● *Poa compressa*

Invasiveness Rank: 39 points | Species Code: POCO

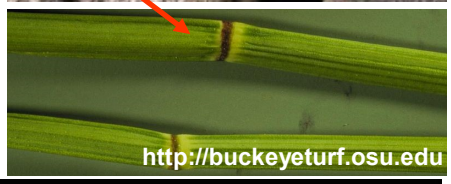
General Information:
Perennial
15-60 cm tall
Bluish-green

Description:
Roots
- Slender, creeping rhizomes

Stems
- Wiry, smooth and flattened
- Ascending or bent abruptly at the nodes

Leaves
- Short and 1-4 mm wide
- Ligules 1 mm long

Inflorescence
- Stiff panicle, 3-10 cm long
- Panicle often with short, paired branches
- Spikelets crowded, each with 3-6 flowers
- Glumes with rounded at the apex
- Lacking tuft of hairs at the base of the lemma
- Anthers 1-2 mm long



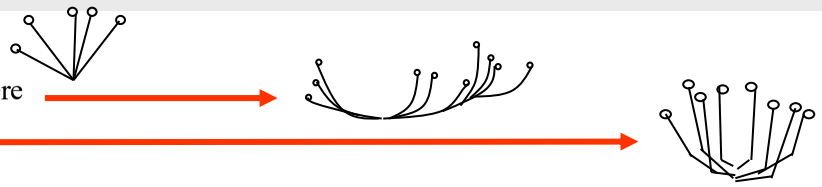
Habitat: roadsides, lawns, waste areas
Distribution: Pacific maritime and interior boreal; widespread in southern Alaska; reported but uncommon elsewhere

INFLORESCENCE A PANICLE

Comparison of select *Poa* species:

	Longevity	Height (cm)	Growth Form	Leaves / Stems	Panicle / Flowers
Poa pratensis ssp. *pratensis* (Kentucky bluegrass)	Perennial	30-100	Ascending to decumbent	• Not glaucous	• 3-5 branches per node • anthers 1-2 mm long; • tufts of hairs at base of lemmas
Poa pratensis ssp. *irrigata* (spreading bluegrass)	Perennial	8-30	Ascending to decumbent	• Somewhat glaucous	• 1-2 branches per node • anthers 1-2 mm long; • tufts of hairs at base of lemmas
Poa trivialis (rough bluegrass)	Perennial	30-80	Decumbent or geniculate	• Scabrous; • ligules on upper leaves 3-5 mm long	• Anthers 1-2 mm long • tuft of hairs at base of lowest lemma • first glume narrow, curved, acute; prominent nerve
Poa annua (annual bluegrass)	Annual or biennial	2-20	Ascending	• Light or yellowish green • soft and much shorter than stems; • mostly basal	• Anthers <1 mm long • Lacking tuft of hair at base of lemma • first glume claw-like and half as long as second, with distinct nerve
Poa compressa (Canada bluegrass)	Perennial	15-60	Ascending or geniculate	• Short; ligules 1 mm long • culms conspicuously flattened	• Anthers 1-2 mm long • Lacking hairs at base of lemma

Ascending: growing obliquely upward
Decumbent: lying down at the base, erect or ascending elsewhere
Geniculate: bent abruptly at the nodes, making a knee



Characteristics of *Elymus* species:
- 1-2 spikelets per node
- All spikelets with 2 glumes
- Spikelets with 2+ flowers

Quackgrass • *Elymus repens*
syn. *Agropyron repens*

Invasiveness Rank: 59 points | Species Code: ELRE4

General Information:
Perennial
15-60 cm tall
Bluish-green

Description:
Roots
- Extensive creeping rhizomes

Leaves
- Constricted at the tip
- Ligule short (<1 mm) and papery
- Auricles pointed, about 3 mm long

Inflorescences
- Glumes with narrow hyaline margin and abruptly awned
- Lemmas without awns, or awns are as long as the lemma (similar to some native *Elymus* species)
- Spikelets glabrous (not distinctly hairy)
- Anthers 4-5 mm long (unlike native *Elymus* spp.)

Habitat: disturbed bare ground, roadsides; able to invade undisturbed grassy habitats
Distribution: all three ecogeographic regions; northernmost occurrence is in Coldfoot, westernmost occurrence is on the Seward Peninsula

Siberian wildrye ● *Elymus sibiricus*

Invasiveness Rank: 53 points | Species Code: ELSI

General Information:
Perennial
70-120 cm tall
Grows in clumps or with runners (unlike *E. repens*)

Description:
Inflorescence

- Spikelets long (<30 cm) and drooping
- More than one spikelet per node (unlike *E. trachycaulus*)
- Lemmas with long awns, 1-3 cm (unlike *E. repens*)
- Lemmas spreading (upright in *E. glaucus*)

Habitat: eroding river banks, clearings, roadsides, waste places, sandy-gravelly soils
Distribution: limited distribution within the Pacific maritime and interior boreal ecogeographic regions; northernmost occurrence is on the Steese Hwy close to Chatanika

INFLORESCENCE A SPIKE

Alaskan wheatgrass ● *Elymus alaskanus*
Slender wheatgrass ● *Elymus trachycaulus*

Glumes very narrow ..... *E. trachycaulus*
Glumes rounded with very broad hyaline margin:
- Glumes 3/4 to the same length as the spikelet length ..... *E. trachycaulus*
- Glumes about 1/2 to 2/3 of spikelet length ..... *E. alaskanus*

General Information:
Perennial
70-120 cm tall
Grows in clumps or with runners (unlike *E. repens*)

Description:
Roots
- No rhizomes

Inflorescence
- Awns of lemmas shorter than the lemma body (similar to *E. repens*, when awned)
- Anthers 1-2 mm (unlike *E. repens*, in which they are longer)

Habitat: naturally or human disturbed sites, river bars, meadows, roadsides
Distribution: widespread across Alaska

Elymus alaskanus

Elymus trachycaulus

Traits of *Hordeum* species in Alaska:
- 3 spikelets per node but the two lateral ones are often reduced to awns
- Each spikelet with one flower
- All spikelets with 2 glumes

Foxtail barley • *Hordeum jubatum*

Invasiveness Rank: 63 points | Species Code: HOJU

General Information:
Perennial
0.2-0.8 m tall

Description:
Leaves
- No auricles (unlike *H. vulgare* and *H. murinum* ssp. *leporinum*)

Inflorescence
- Turn purple to tawny and disarticulate at maturity
- Awns of lemmas are 1-6 cm long

Habitat: waste places, roadsides, river banks, lake shores, wetlands
Distribution: widespread across Alaska in all three ecogeographic regions
Remarks: Nativity of this species. Foxtail barley is most likely to have been present in eastern interior Alaska prior to European contact. However, it appears to have spread dramatically in the last half century. Regardless of nativity, it is considered a nuisance weed due to the ability of awns to become lodged in animals' noses and mouths.

INFLORESCENCE A SPIKE

Common barley • *Hordeum vulgare*

Invasiveness Rank: 39 points Species Code: HOVU

General Information:
Annual
1.0-1.5 m tall

Description:
Leaves
- With well-developed auricles, <6 mm (unlike *H. jubatum* or *H. brachyantherum*)

Inflorescence
- Does not disarticulate at maturity (unlike *H. murinum* ssp. *leporinum* or *H. jubatum*)
- Awns absent on sterile florets
- Awns of lemmas, when present, are long, 3-18 cm (typically longer than *H. murinum* ssp. *leporinum* and *H. brachyantherum*)

Habitat: disturbed roadsides, agricultural fields; contaminant of straw
Distribution:
- Interior boreal: near Anchorage, Palmer, Healy, Delta, Fairbanks
- Arctic-alpine: western Alaska at checkpoints along the Iditarod Trail

Leporinum barley • *Hordeum murinum* ssp. *leporinum*

Invasiveness Rank: 60 points Species Code: HOMUL

General Information:
Annual
Up to 1.1m tall

Description:
Annual
Leaves
- With well-developed auricles, <8 mm (unlike *H. jubatum* and *H. brachyantherum*)

Inflorescence
- Spikelets disarticulate at maturity (unlike *H. vulgare*)
- Lemmas <2 mm wide (narrower than *H. vulgare*)
- Awns of lemmas are long, 2-4 cm (typically shorter than *H. vulgare*)

Habitat: associated with areas of human disturbance
Distribution: interior boreal only; restricted to locations in the Mat-Su Valley and Talkeetna area

INFLORESCENCE A SPIKE

Meadow barley ● *Hordeum brachyantherum*

General Information:
Perennial
Up to 95 cm tall

Description:
Leaves
- Lacking auricles (unlike *H. vulgare* and *H. murinum* ssp. *leporinum*)

Inflorescence
- Awns of lemmas <1 cm long (typically shorter than non-native species)

Habitat: meadows, upper shorelines; often weedy
Distribution: mainly Pacific maritime but sporadic in interior boreal regions

A comparison of some *Hordeum* species:

	Longevity	Auricles	Length of awns on lemmas	Awns disarticulate at maturity?
Hordeum jubatum (foxtail barley)	Perennial	None	1-6 cm	Yes
Hordeum vulgare (common barley)	Annual	<6 mm	Absent or 3-18 cm	No
Hordeum murinum* ssp. *leporinum (leporinum barley)	Annual	<8 mm	2-4 cm	Yes
Hordeum brachyantherum (meadow barley)	Perennial	None	<1 cm	Yes

Timothy grass • *Phleum pratense*

Invasiveness Rank: 54 points | Species Code: PHPR3

General Information:
Perennial
Up to 1.5 m tall

Description:
Leaves
- Sheath of the upper leaf on the stem not inflated (unlike native *P. alpinum*)

Inflorescence
- Long, cylindrical, spike-like panicle (unlike native *P. alpinum,* which has a shorter, ovoid panicle)
- Glumes with awns (unlike *Alopecurus* species)

Habitat: meadows and roadsides
Distribution: widespread across all three ecogeographic regions; northern and westernmost infestations are on the Seward Peninsula; also recorded near Dillingham and Fairbanks

INFLORESCENCE A SPIKE

Meadow foxtail ● *Alopecurus pratensis*

Invasiveness Rank: 52 points Species Code: ALPR3

General Information:
Perennial
30-50 cm tall

Description:
Stems
- Erect

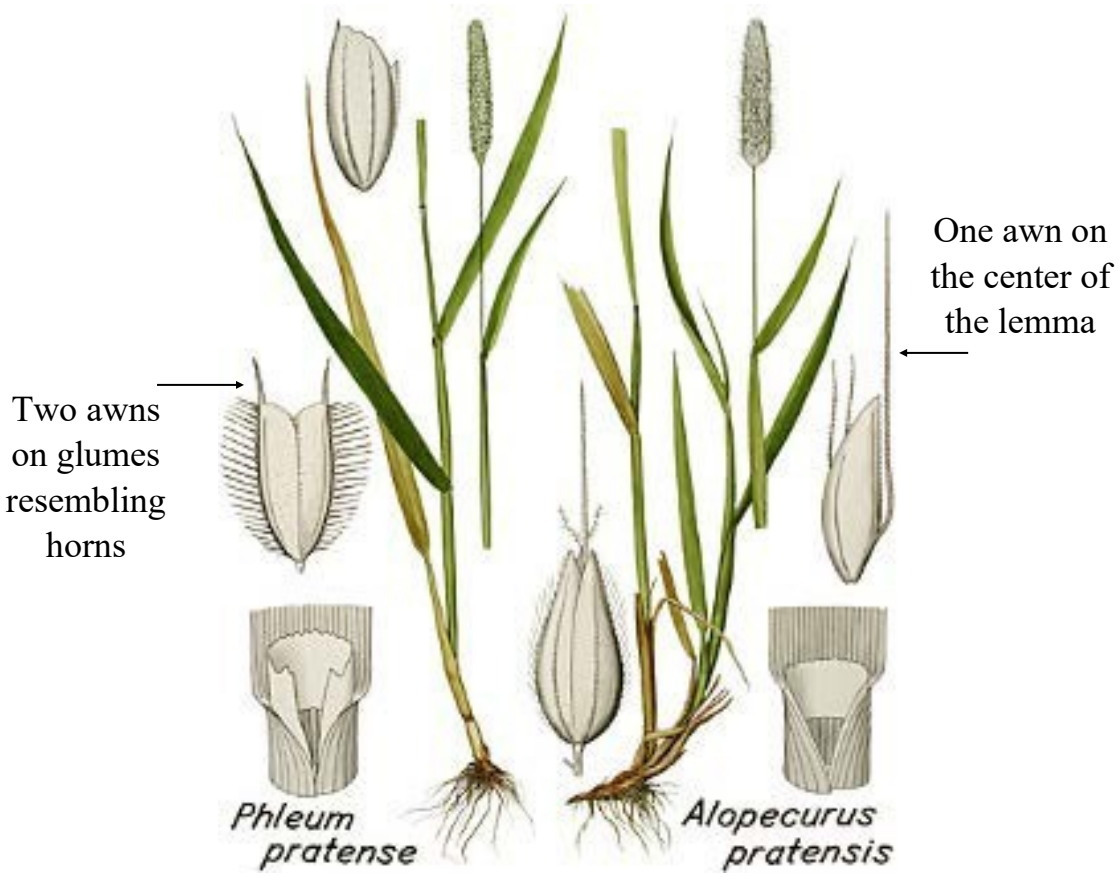
Inflorescence
- Long, cylindrical, spike-like panicle (unlike native *A. alpinus,* which is shorter and ovoid)
- Glumes not wooly, lacking awns (unlike *Phleum* species)
- Lemma is awned from the middle
- Anthers 2-4 mm long (unlike *A. aequalis* and *A. geniculatus,* which have anthers 1-1.5 mm long

Habitat: meadows and roadsides
Distribution: Pacific maritime and interior boreal ecogeographic regions; northernmost occurrence is in Coldfoot, westernmost occurrence is on the Kenai

Distinguishing *Alopecurus* species and *Phleum* species:

Similarities between *Alopecurus* and *Phleum* species:
- Spikelets stalked but stalks are so short that the inflorescence appears spike-like
- 1 floret per spikelet

Differences between *Alopecurus* and *Phleum* species:
- *Alopecurus*: glumes do not have awns; awn emerges from center of lemma, resembling a horn
- *Phleum*: glumes have awns, resembling two horns



Water foxtail • *Alopecurus geniculatus*

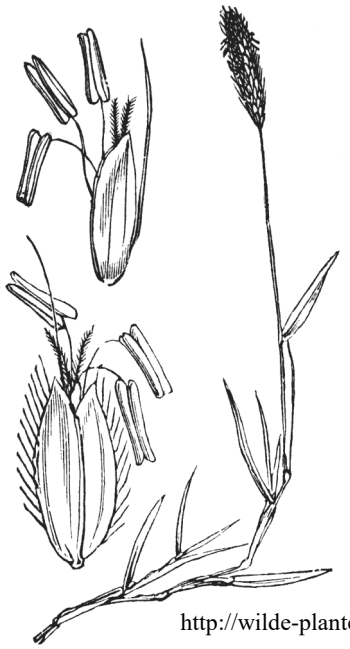
Invasiveness Rank: 49 points | Species Code: ALGE2

General Information:
Perennial
15-50 cm tall
Grows in tufts

Description:
Stems
- Decumbent (unlike *A. pratensis,* which is erect)

Inflorescence
- Short, cylindrical, spike-like panicle, <3 cm long
- Lemmas with bent or twisted awns that may exceed the lemma by 2-4 mm
- Glumes without no awns (unlike *Phleum* species)
- Glumes or lemmas pubescent
- Anthers 1-2 mm long and yellow-violet

Habitat: meadows, stream banks, shores, shallow water
Distribution: scattered throughout all three ecogeographic regions


http://wilde-planten.nl

Shortawn Foxtail • *Alopecurus aequalis*

General Information:
Perennial
15-60 cm tall
Grows in tufts

Description:
Stems
- Erect or decumbent

Inflorescence
- Slender, cylindrical, spike-like panicle 2-7 cm long
- Lemmas with straight or slightly geniculate awns
- Awns barely exceeding glumes (<1.5 mm)
- Glumes or lemmas pubescent
- Anthers up to 0.5 mm long

Habitat: riparian zones, shallow water, newly deposited sediment

Distribution:
- Pacific maritime – southwest to Amchitka Island and throughout
- Interior boreal - north to Fort Yukon and west to the Seward Peninsula

Remarks: *A. aequalis* can potentially co-occur with *A. geniculatus*, as it grows in similar habitats. Native *A. aequalis* can be distinguished by:
- Awns of lemmas not exceed the lemma tip, or exceed the tip only by < 1.5 mm (longer in *A. geniculatus*)
- Anthers are <1 mm long (longer in *A. geniculatus*)

INFLORESCENCE A SPIKE

Comparison of *Alopecurus pratensis* and *Alopecurus geniculatus:*

Alopecurus pratensis

Long, cylindrical inflorescence (>3 cm)

Lemma with a straight awn emerging from the middle

Erect to geniculate lower stems

Alopecurus geniculatus

Short, cylindrical inflorescence (<3 cm)

Lemma with bent or twisted awns

Decumbent lower stems

Perennial ryegrass • *Lolium perenne*

syn. *Lolium perenne* ssp. *perenne*

Invasiveness Rank: 52 points | Species Code: LOPEP

General Information:
Annual to perennial
Up to 0.9 m tall

Description:
Leaves
- Young shoots with folded leaf blades

Inflorescence
- **Spikelets directly attached to stem, edgewise**
- Lemmas lacking awns, or with very short awns, (<1 mm)
- **Upper glume missing!** Glumes equal to or shorter than spikelet
- ≤10 florets per spikelet

Habitat: roadsides, waste places
Distribution: scattered throughout the Pacific maritime and interior boreal regions
Remarks: There are no native *Lolium* species in Alaska.

INFLORESCENCE A SPIKE

Italian ryegrass ● *Lolium multiflorum*
syn. *Lolium perenne* ssp. *multiflorum*

Invasiveness Rank: 41 points | Species Code: LOPEM2

General Information:
Annual to short-lived perennial
Up to 1.2 m tall

Description:
Leaves
- Young shoots with rolled leaf blades

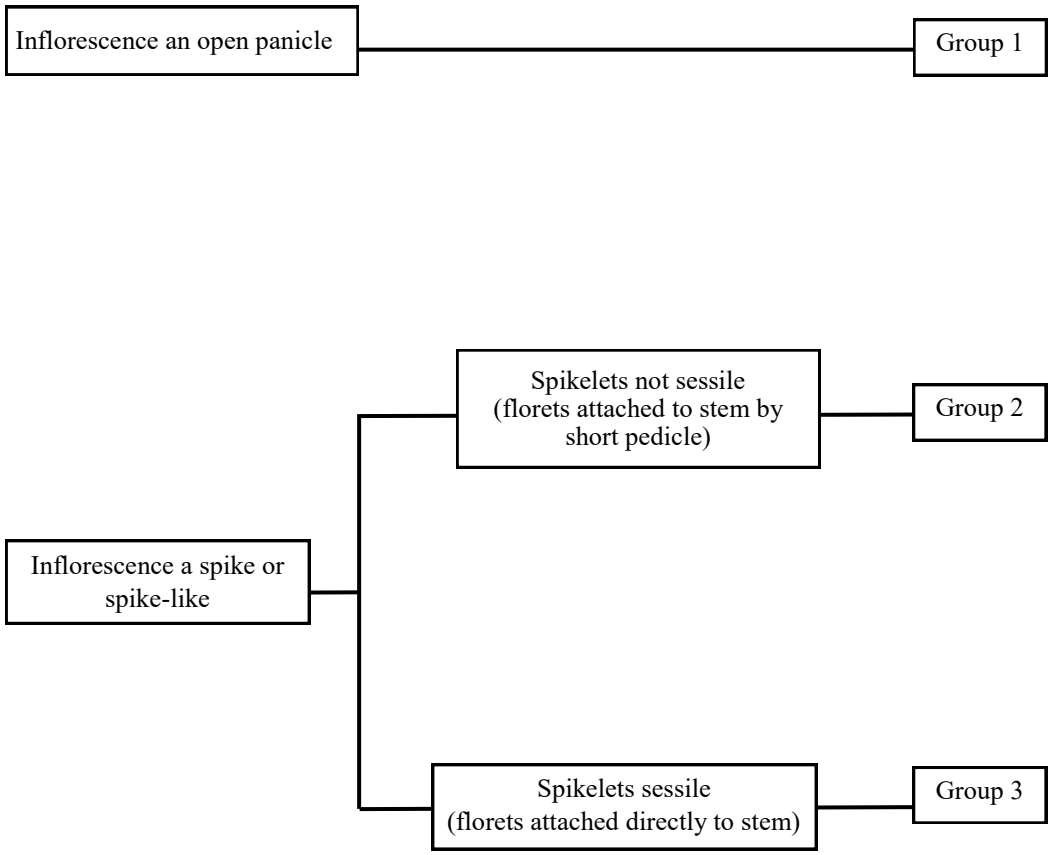
Inflorescence
- **Spikelets directly attached to stem, edgewise**
- Lemmas with awns >1 mm long
- **Upper glume missing!** Glumes equal to or shorter than spikelet
- 10-20 florets per spikelet

Habitat: roadsides, waste places
Distribution: scattered throughout Pacific maritime and interior boreal regions
Remarks: There are no native *Lolium* species in Alaska.

Lolium perenne readily hybridizes with *Lolium multiflorum* and hybrids may exhibit a range of characteristics from both species making identification difficult.

Common ryegrass (*Lolium* species) is a commercial mixture of ryegrass species frequently used in revegetation projects, which is comprised mostly of *Lolium multiflorum* but usually contains a substantial percentage of *Lolium perenne* and *Lolium multiflorum x perenne* hybrids.

INFLORESCENCE A SPIKE



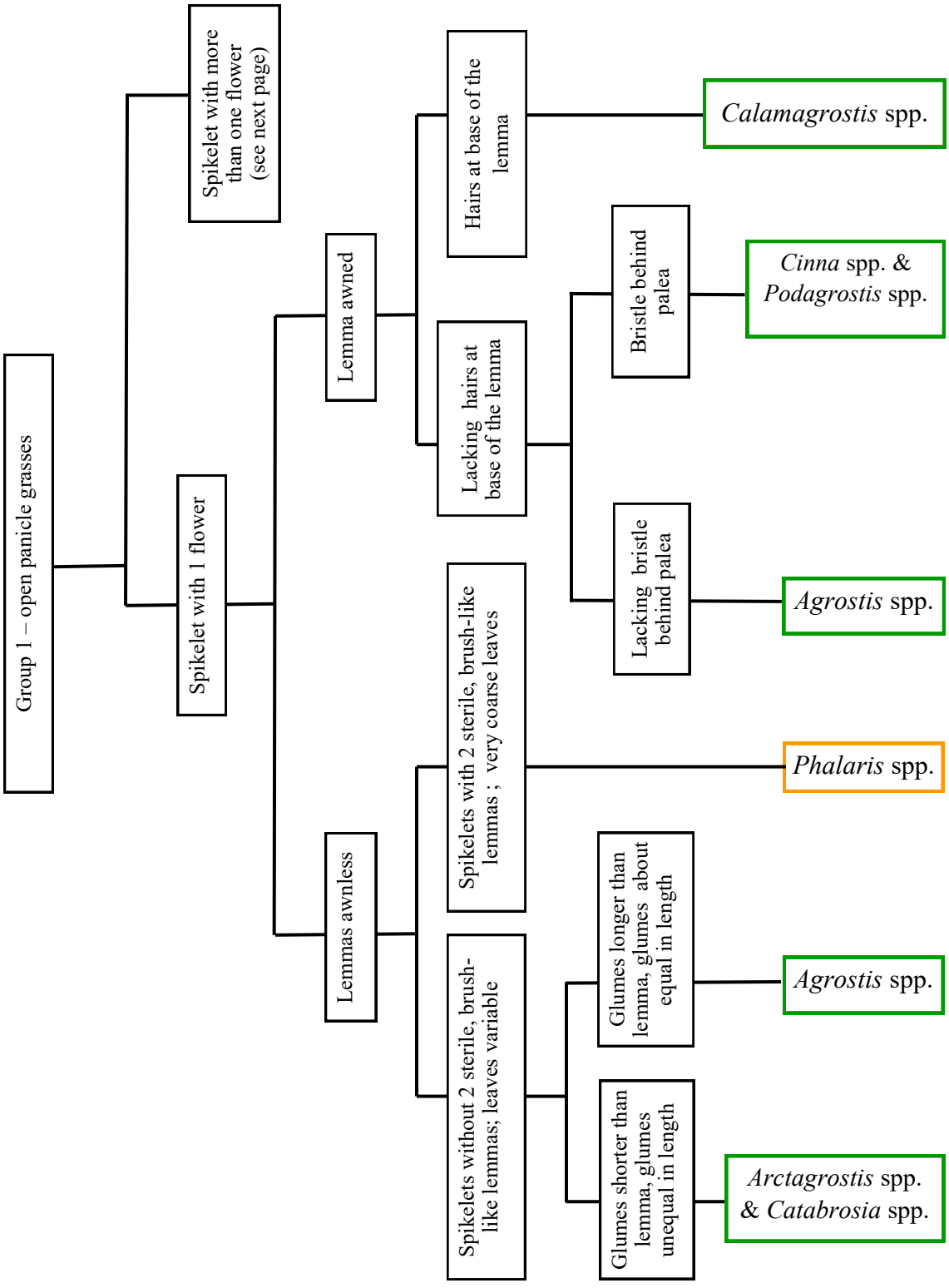
= native to Alaska

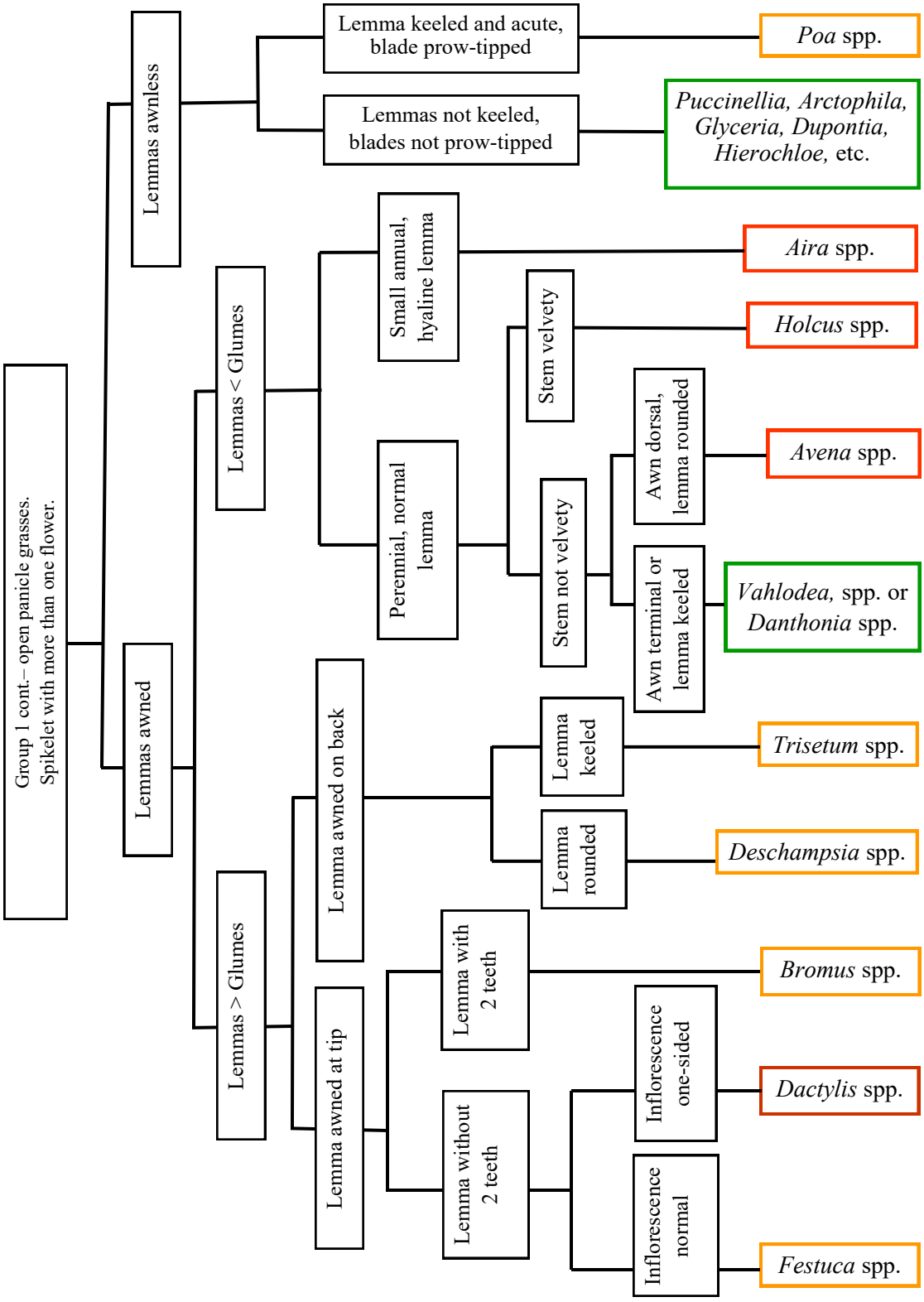
= not native to Alaska

= disputed native status OR large genus with some species native and some not native to Alaska

KEY TO GRASSES OF DISTURBED HABITATS IN ALASKA

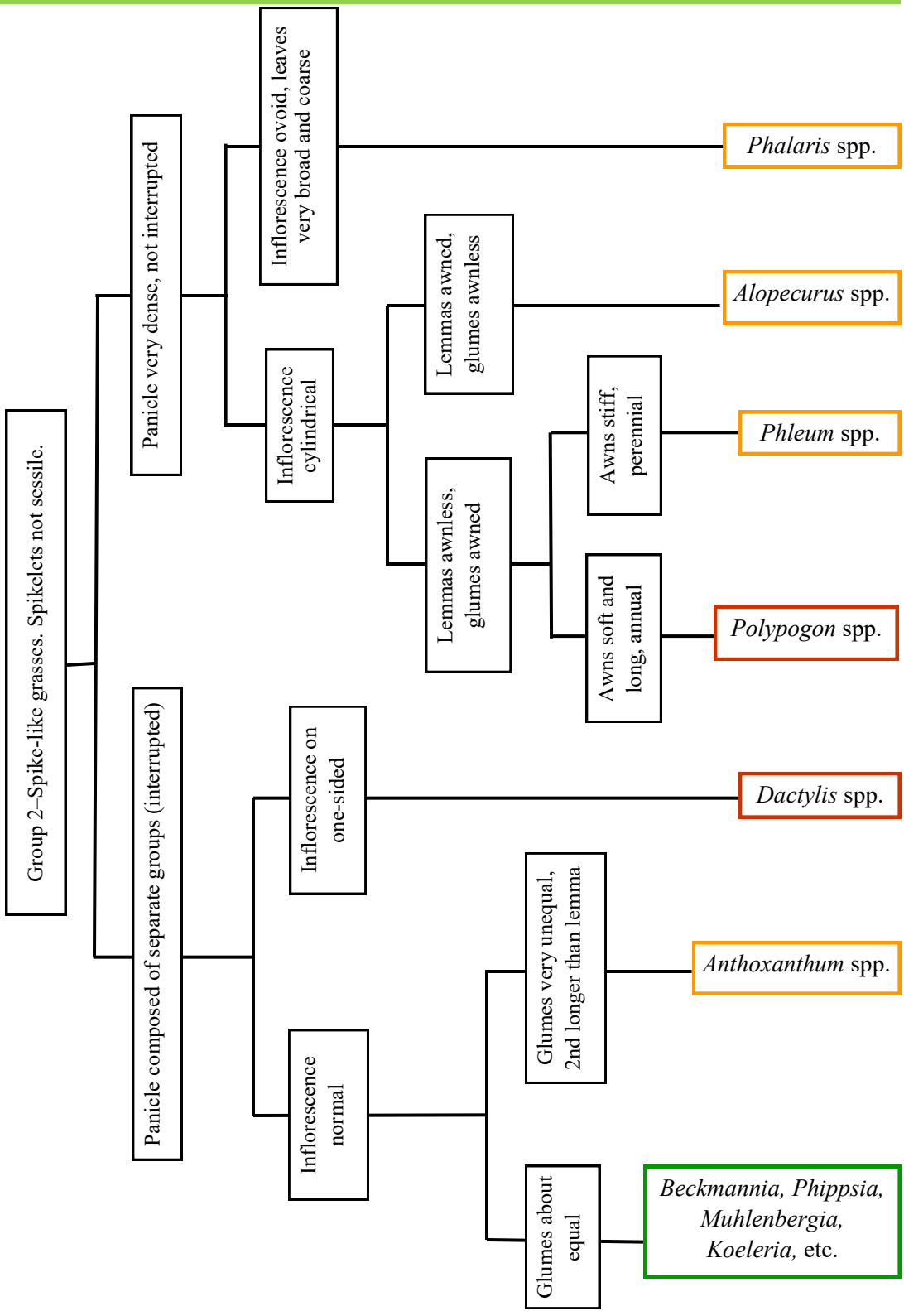
Adapted from Hultén 1968


Group 1 – open panicle grasses
Spikelet with more than one flower (see next page)
Spikelet with 1 flower
Lemma awned
Hairs at base of the lemma
Calamagrostis spp.
Lacking hairs at base of the lemma
Bristle behind palea
Cinna spp. & Podagrostis spp.
Lacking bristle behind palea
Agrostis spp.
Lemmas awnless
Spikelets with 2 sterile, brush-like lemmas ; very coarse leaves
Phalaris spp.
Spikelets without 2 sterile, brush-like lemmas; leaves variable
Glumes longer than lemma, glumes about equal in length
Agrostis spp.
Glumes shorter than lemma, glumes unequal in length
Arctagrostis spp. & Catabrosia spp.



KEY TO GRASSES OF DISTURBED HABITATS IN ALASKA

Partial key to Alaska grasses, part 2; consult Hultén (1968) or Welsh (1974) for more information



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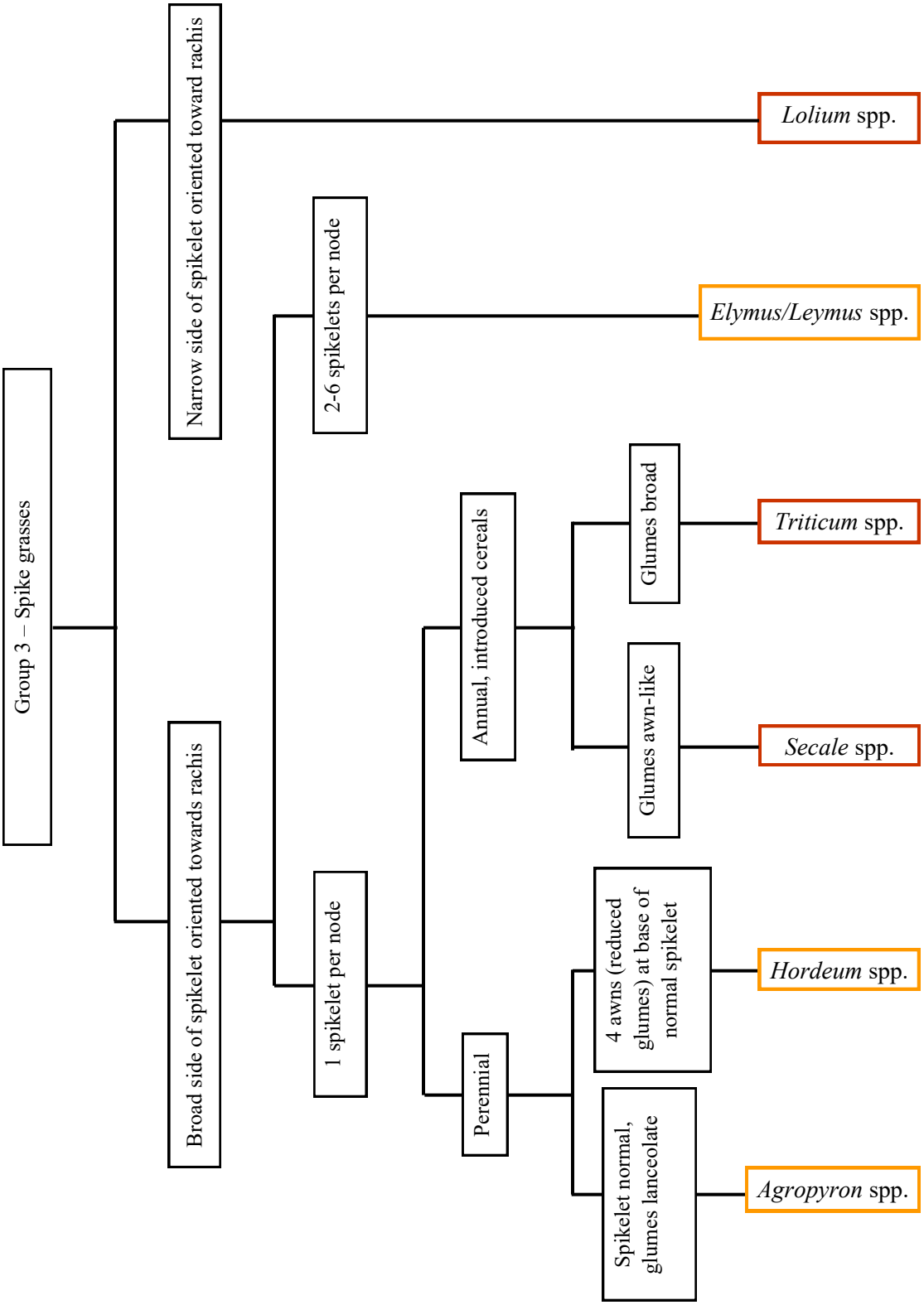


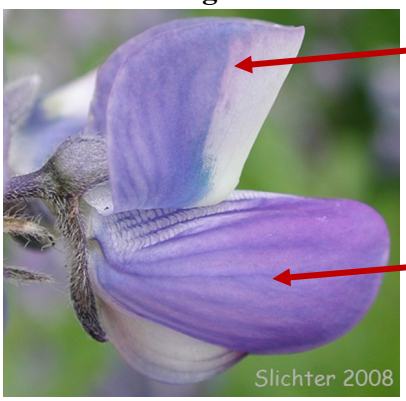
KEY TO GRASSES OF DISTURBED HABITATS IN ALASKA

Partial key to Alaska grasses, part 2; consult Hultén (1968) or Welsh (1974) for more information

Legume Family (Fabaceae)

- Includes herbs, shrubs, vines and trees; only herbs and shrubs represented in Alaska
- Roots with nitrogen-fixing bacterial nodules
- Leaves compound
- Flowers composed of 5 sepals, 5 petals, 10 stamens and 1 style
- Fruit a legume (e.g. peanuts, beans, peas, lentils, alfalfa)

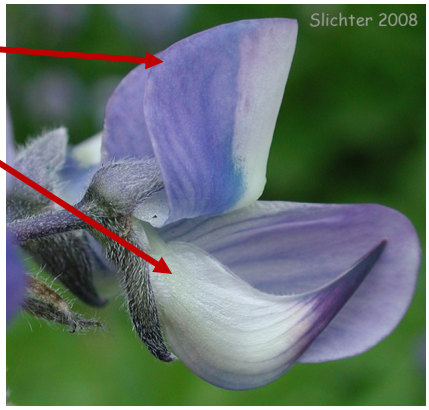
Parts of the legume flower



Standard: upper petal

Keel: lower 2 petals, fused

Wings: two side petals



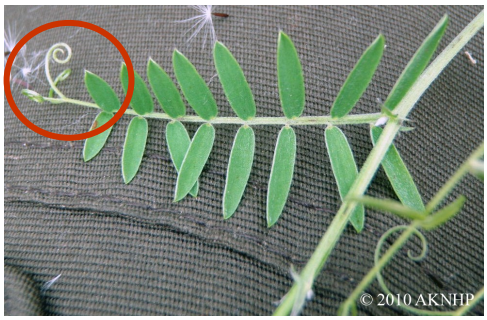
Types of compound leaves

Trifoliate: 3 leaflets

Pinnate: leaflets arranged like a feather

Palmate: leaflets radiate from a central point

Pinnate with tendrils and/or stipules



Tendrils: modified, thread-like, terminal leaflets

Stipules: leaf-like appendages at the base of the leaf

White sweetclover • *Melilotus albus*

syn. *Melilotus alba, Melilotus officinalis*

Invasiveness Rank: 81 points Species Code: MEAL2

General Information:
Biennial
1-1.5 m tall

Description:
Leaves
- Compound with 3 leaflets
- Toothed margin extends two-thirds the way down the leaf (unlike *Medicago* species which are toothed only at the tip; see following pages for comparison)

Inflorescence
- White, fragrant

Fruit
- Black when ripe

Habitat: human and naturally disturbed areas with fine grained mineral soil, such as roadsides and roadside dust shadows, waste areas, glacial river bars and recently burned habitats.
Distribution: all three ecogeographic regions. Gravel bars on the Stikine River (Tongass National Forest), Nenana and Matanuska Rivers in south central Alaska; intersection of the Yukon River and Dalton Highway. Northern limit is Coldfoot; western limit is Galena and near Dillingham.

Yellow sweetclover ● *Melilotus officinalis*

syn. *Melilotus albus, Melilotus alba*

Invasiveness Rank: 69 points | Species Code: MEOF

General Information:
Annual or biennial
1-1.5 m tall

Description:
Leaves
- Compound with 3 leaflets
- Toothed margin extends two-thirds the way down the leaf (unlike *Medicago* species which are toothed only at the tip)

Inflorescence
- Yellow

Fruit
- Wrinkled pod
- Yellow-brown when ripe

Habitat: similar to *M. albus* but is not known to colonize river bars or burned areas
Distribution: similar range as *M. albus* but much less common; not yet recorded in western Alaska
Remarks: *Melilotus albus* and *M. officinalis* are sometimes lumped together under the accepted name of *M. officinalis* (PLANTS Database). Morphologically, these species are differentiated by color of flowers and ripe fruits However, because *M. alba* appears to be more invasive in Alaska, particularly within riparian zones, we treat the species separately.

Yellow alfalfa • *Medicago sativa* ssp. *falcata*

syn. *Medicago falcata*

Invasiveness Rank: 64 points | Species Code: MESAF

General Information:
Perennial, but plants escaped from cultivation behave as annuals
Up to 0.9 m tall

Description:
Stems
- Decumbent or erect

Leaves
- Trifoliate and toothed at the tip

Inflorescence
- Yellow
- Globular clusters
- 10-13 mm diameter

Fruits
- Pods sickle-shaped or nearly straight
- 2-5 seeds per pod

Habitat: roadsides, waste places, near cultivated fields
Distribution: few populations in the Pacific maritime and interior boreal regions. Absent from southeast Alaska. Present around Fairbanks, the vicinity of Tok, Gakona, Fort Yukon, Anchorage, and Mat-Su Valley.

Alfalfa ● *Medicago sativa* ssp. *sativa*

syn. *Medicago sativa*

Invasiveness Rank: 59 points | Species Code: MESAS

General Information:
Annual or perennial
<1 m tall

Description:
Stems
- Decumbent or erect

Leaves
- Trifoliate and toothed at the tip

Inflorescence
- Purple
- Globular clusters
- <1 cm diameter

Fruits
- Pods spirally coiled loosely 2-3 times

Habitat: roadsides, disturbed sites, near cultivated fields
Distribution: few locations in Pacific maritime and interior boreal regions, including Anchorage, Fort Yukon, Dalton Hwy south of Prospect Creek, southeast and south coastal Alaska.

Black medick ● *Medicago lupulina*

Invasiveness Rank: 48 points | Species Code: MELU

General Information:
Summer or winter annual
Prostrate stems up to 40 cm long

Description:
Stems
- Hairy and trailing

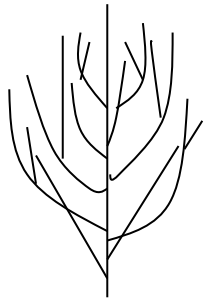
Leaves
- Leaflets broad and round (unlike the elongate leaflets of other *Medicago* species; leaves similar to *Trifolium* species but are different in that the apical leaflet has a distinctly longer stem than the lateral two leaflets)

Inflorescence
- Yellow
- In globular clusters 16 mm wide and 6 mm tall (smaller than flowers of *Medicago sativa* ssp. *falcata)*

Fruits
- Pods ridged, 1-seeded
- Black when ripe

Habitat: roadsides, lawns, cultivated crops
Distribution: scattered across the Pacific maritime and interior boreal regions,

Differences between *Melilotus* and *Medicago* species:

	Leaves	Inflorescence	Pods	Growth Habit
***Melilotus* species**	Leaflets are toothed for two-thirds of their length 	Elongated 	Ovoid 	Erect 
***Medicago* species**	Elongate leaflets are toothed only at the tip (*M. sativa* subspecies) 	Short 	Coiled or curved 	Semi-erect, often creeping 

White clover • *Trifolium repens*

Invasiveness Rank: 59 points | Species Code: TRRE3

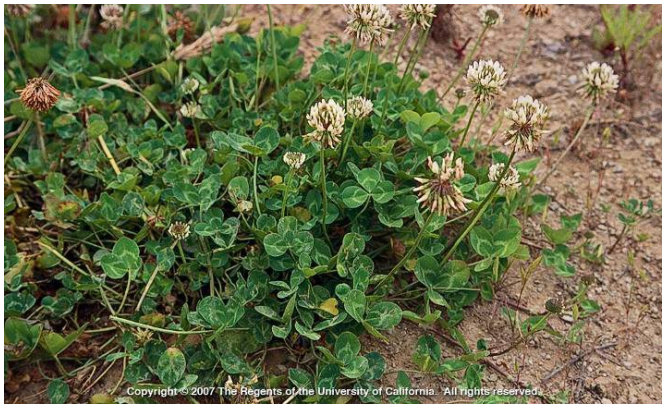
General Information:
Perennial
Approx. 15 cm tall
Prostrate stems up to 30 cm long

Description:
Stems
- Creeping and rooting at nodes

Leaves
- Leaflets often with V-shaped marks, but not always

Inflorescence
- White to pinkish-white

Habitat: waste areas, lawns, ditches, disturbed sites
Distribution: widespread across the state in all three ecogeographic regions



Alsike clover • *Trifolium hybridum*

Invasiveness Rank: 57 points | Species Code: TRHY

General Information:
Perennial
15-60 cm tall

Description:
Stems
- Upright and does not root at nodes (unlike *T. repens*)

Inflorescence
- White to pinkish

Habitat and distribution: similar to *Trifolium repens*

Red clover • *Trifolium pratense*

Invasiveness Rank: 53 points | Species Code: TRPR2

General Information:
Perennial
15-60 cm tall

Description:
Stems
- Upright and does not root at nodes (unlike *T. repens*)

Leaves
- 3 leaflets immediately below the flowering head (unlike *T. repens* and *T. hybridum*)
- Leaflets often with v-shaped marks

Inflorescence
- Reddish-pink flowers

Habitat: cultivated fields, roadsides, lawns, gardens, meadows
Distribution: Pacific maritime and interior boreal regions

How are these three similar or different?

White clover • *Trifolium repens* **Red clover • *Trifolium pratense*** **Alsike clover • *Trifolium hybridum***

Bird's foot trefoil • *Lotus corniculatus*

Invasiveness Rank: 65 points Species Code: LOCO6

General Information:
Perennial
0.6-0.9 m tall

Description:
Leaves
- Divided into 5 oval-linear leaflets
- Center 3 leaflets are large (appearing as a trifoliate or trefoil leaf)
- Lower 2 leaflets resembling stipules

Inflorescence
- Yellow globular clusters on a long stalk

Fruits
- Pods brown-black, cylindrical, resembling a bird's foot

Habitat: in other states *Lotus corniculatus* is known to occur on pastures, roadsides, wetlands, disturbed grasslands, and riparian areas

Distribution:
- Pacific maritime: southeast Alaska in logged areas and along roads
- Interior boreal: recorded along the Dalton Hwy and in Anchorage

5 LEAFLETS APPEARING AS 3, INFLORESCENCE GLOBULAR

Crownvetch • *Securigera varia*
syn. *Coronilla varia*

Invasiveness Rank: 68 points | Species Code: SEVA4

General Information:
Perennial
Up to 0.9 m tall
Trailing stems up to 2 m long

Description:
Leaves
- Pinnately compound with a terminal leaflet

Inflorescence
- Pink-white

Fruits
- Pods linear

Habitat: roadsides; used for revegetation outside of Alaska
Distribution: interior boreal; Fairbanks and along greenbelts in Anchorage

Bird vetch • *Vicia cracca* ssp. *cracca*

Invasiveness Rank: 73 points | Species Code: VICRC

General Information:
Perennial
Climbing stems up to 2 m long

Description:
Stems
- Climbing or trailing
- Not winged (unlike native *Lathyrus* species)

Leaves
- 8-10 pairs of leaflets
- Branched tendrils (unlike *Coronilla varia*)

Inflorescence
- Blue-violet
- Dense, one-sided clusters of 20-50 flowers

Fruits
- Seed pod not constricted

Habitat: roadsides, forest edges and openings, thickets
Distribution: all three ecogeographic regions

Winter vetch • *Vicia villosa*

Invasiveness Rank: 53 points | Species Code: VIVI

General Information:
Annual or biennial
0.3-0.9 m tall

Description:
Similar to *Vicia cracca* ssp. *cracca*, but *V. villosa* can be distinguished by the following characteristics:
- Plant very hairy
- Flowers distinctly two-toned (purple and white, red and white)

Habitat and distribution: reported from one site in Anchorage and a community garden in Juneau

Garden vetch • *Vicia sativa* ssp. *nigra*
syn. *Vicia angustifolia*

Invasiveness Rank: not yet ranked | Species Code: VISAN2

General Information:
Perennial
Stems up to 2 m long

Description:
Smooth to hairy
Leaves
- Pinnate with 5-7 pairs of leaflets per leaf
- Leaflets rounded or with a shallow notch, and with a needle-like tip
- Tendrils well-developed and branched
- Stipules 3-8 mm long, deeply toothed or arrow-shaped

Inflorescence
- In the leaf axils (not hanging)
- Longer or equal to the length of leaflets
- Style densely bearded at the tip

Habitat: disturbed ground, yards, roadsides
Distribution: low elevations; Fairbanks, Dawson and the Yukon Territory

Giant vetch • *Vicia gigantea*

- Inflorescence shorter than compound leaf (unlike *Vicia cracca* ssp. *cracca*)
- Only found in southeast Alaska

American vetch • *Vicia americana*

- Flowers on all sides of the raceme (unlike the one-sided raceme of *V. cracca* ssp. *cracca)*
- Only found in southeast and south coastal Alaska (Wrangles, Talkeetna Mountains)

Native Fabaceae genera resembling invasive *Vicia* species:

Lathyrus species

- Sometimes has winged stem
- Fewer leaflets per leaf, <12
- Leaflets distinctly narrow and long or rounded
- Sometimes has tendrils

Oxytropis species

- No tendrils
- Pod is not constricted between seeds
- Keel is tipped with a sharp point

Hedysarum species

- Erect stems
- No tendrils
- Pod is constricted between seeds

Astragalus species

- Erect stems
- No tendrils
- Pod is inflated and not constricted or flattened
- Keel is not tipped with a sharp point

Marsh pea • *Lathyrus palustris*

General Information:
Perennial
Vine stems 45-120 cm long

Description:
Stems
- Winged

Leaves
- 2-3 pairs of leaflets
- Tendrils

Habitat and distribution: wet meadows, moist forest understories, disturbed sites; Pacific maritime and interior boreal regions

Beach pea • *Lathyrus japonicus*

General Information:
Perennial
Stems 15-30 cm long

Description:
Stems
- Not winged

Leaves
- Leaflets are broadly ovate
- Sometimes with tendrils

Habitat and distribution: sandy soils along the coast

Alpine sweetvetch • *Hedysarum alpinum*

General Information:
Perennial
20-70 cm tall

Description:
Stems
- Erect, not climbing or trailing

Leaves
- Pinnate with a terminal leaflet (no tendril)
- Leaflets broadly lanceolate or oblong

Fruits
- Pod constricted between seeds

Habitat: roadsides, rocky slopes, gravel bars, spruce forests
Distribution: Pacific maritime and interior boreal regions

Siberian pea shrub • *Caragana arborescens*

Invasiveness Rank: 74 points | Species Code: CAAR18

General Information:
Shrub
<3 m tall

Description:
Leaves
- 8-12 leaflets per leaf
- Leaflets oblong to elliptic
- Spiny stipules

Inflorescence
- Yellow
- Borne singly

Habitat and distribution: ornamental; planted in towns and villages throughout south central and interior Alaska

Scotch broom • *Cytisus scoparius*

Invasiveness Rank: 69 points Species Code: CYSC4

General Information:
Perennial, evergreen shrub
2-4 m tall

Description:
Stems
- Strongly 5-angled
- Green

Leaves
- Lower leaves trifoliate, upper leaves simple (unlike *Caragana arborescens*, which has pinnately compound leaves)

Inflorescence
- Bright yellow
- 1-3 in leaf axils

Fruits
- Pods dark brown to black
- Pods flat with hairy margins

Habitat: found mostly in urban settings and along roadsides
Distribution: southeast Alaska; Funny River Road and Kasilof Transfer Station on the Kenai Peninsula

Bigleaf lupine • *Lupinus polyphyllus* ssp. *polyphyllus*

Invasiveness Rank: 71 points | Species Code: LUPOP2

General Information:
Perennial
0.4-1.0 m tall

Description:
Leaves
- Palmately compound
- 10-18 leaflets per leaf (more than native lupines)
- Basal leaves 15-20 cm in diameter (larger than native lupines) and have long stalks

Inflorescence
- Blue to violet
- Long, dense clusters up to 40 cm tall
- Fragrant

Fruits
- Hairy pods up to 5 cm long

Habitat: meadows, gravel bars, shaded forest understories, disturbed sites, roadsides
Distribution: Pacific maritime and interior boreal ecogeographic regions; Fairbanks to the Kenai Peninsula, Glennallen and vicinity, Copper River Delta, southeast Alaska
Remarks: The nativity of this species is suspect. Alaska-specific flora consider it introduced to Alaska; however, several collections have been made in remote locations, where introduction by humans is unlikely, including the Copper River Delta, Glacier Bay National Park, near Yakutat Bay and Katalla.

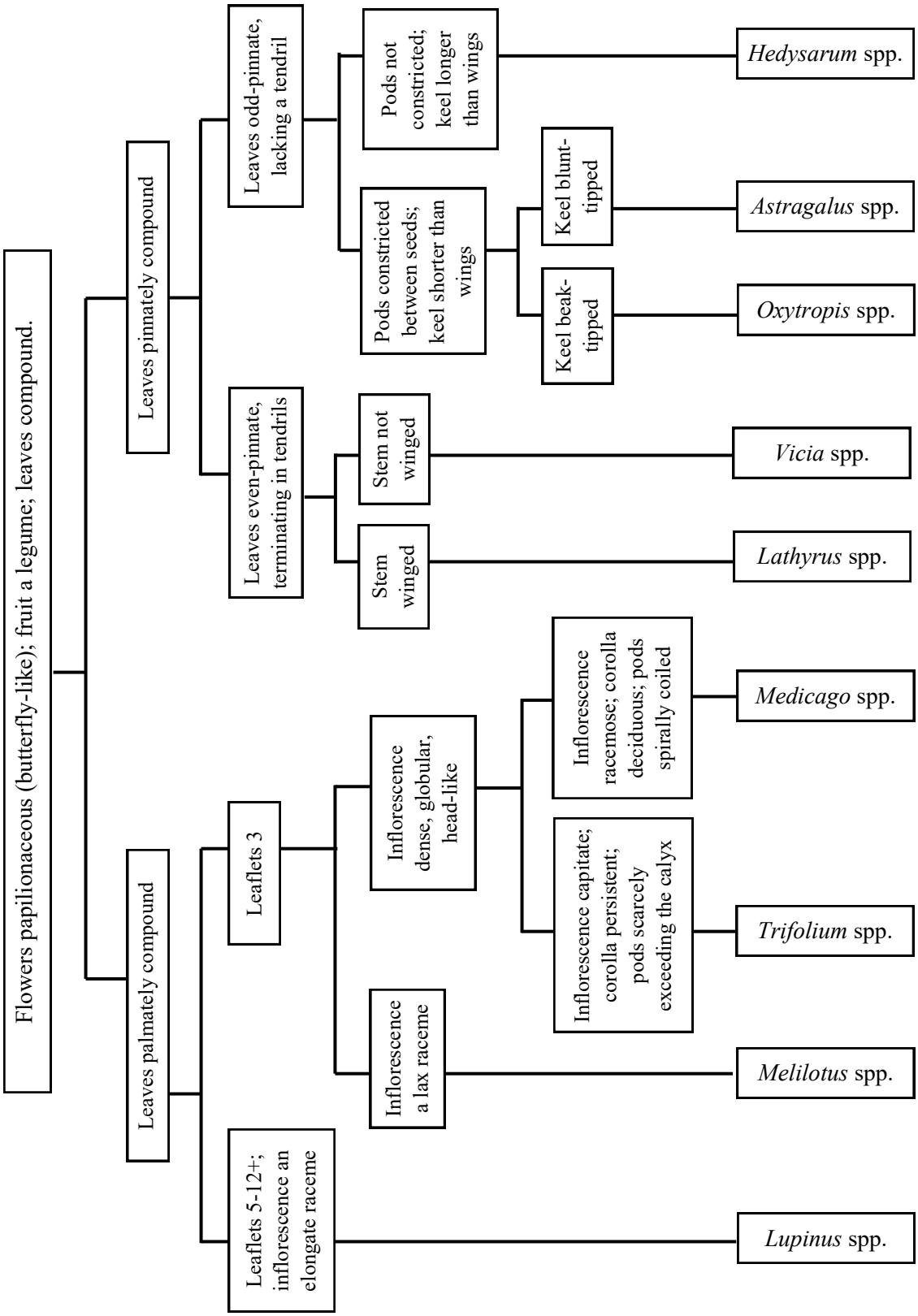
Arctic lupine ● *Lupinus arcticus*
Nootka lupine ● *Lupinus nootkatensis*

Description:
Leaves
- Leaves with a smaller diameter than *L. polyphyllus*
- <10 leaflets per leaf, fewer than *L. polyphyllus*

L. arcticus:
- The basal leaf petiole is two times as long as the diameter of the compound leaf
- Found on dry and damp slopes, gravel bars, solifluction soils, roadsides, and mountainous areas
- Found in all three ecogeographic regions but is most common in the interior boreal region

L. nootkatensis:
- The basal leaf petiole is not longer than the diameter of the leaf
- Found on dry slopes and gravel bars
- Found only in the Pacific maritime ecogeographic region

Remarks: **Native and non-native lupines may co-occur as seen in the photo below.**
Note the non-native *Lupinus polyphyllus* with larger (darker green in photo) leaves and the native *Lupinus nootkatensis* with smaller leaves.


Flowers papilionaceous (butterfly-like); fruit a legume; leaves compound.
Leaves pinnately compound
Leaves odd-pinnate, lacking a tendril
Pods not constricted; keel longer than wings
Hedysarum spp.
Pods constricted between seeds; keel shorter than wings
Keel blunt-tipped
Astragalus spp.
Keel beak-tipped
Oxytropis spp.
Leaves even-pinnate, terminating in tendrils
Stem not winged
Vicia spp.
Stem winged
Lathyrus spp.
Leaves palmately compound
Leaflets 3
Inflorescence dense, globular, head-like
Inflorescence racemose; corolla deciduous; pods spirally coiled
Medicago spp.
Inflorescence capitate; corolla persistent; pods scarcely exceeding the calyx
Trifolium spp.
Inflorescence a lax raceme
Melilotus spp.
Leaflets 5-12+; inflorescence an elongate raceme
Lupinus spp.

Giant hogweed • *Heracleum mantegazzianum*

Invasiveness Rank: 81 points Species Code: HEMA17

General Information:
Biennial or perennial
3-4.5 m tall
Typically die after flowering

Description:
Stems
- Hollow
- Reddish spots
- Bristles

Leaves
- Compound

Inflorescence
- Umbels up to 75 cm in diameter
- Flowers small and white

Fruits
- Flat, oval, dry

Habitat: damp locations, along rivers and streams, disturbed areas including waste places and roadsides
Distribution: Pacific maritime; only one population known in Kake, which appears to have been eradicated.

Comparison to native *H. maximum*:

	Height	Umbel Width	Leaves
H. mantegazzianum	< 4.5 m	< 75 cm	Compound
H. maximum	< 1.8 m	<30 cm	Palmately lobed

Ornamental jewelweed • *Impatiens glandulifera*

Invasiveness Rank: 82 points Species Code: IMGL

General Information:
0.9-1.8 m tall
Entire plant has purple or reddish tinge

Description:
Stems
- Hollow

Leaves
- Mostly opposite or whorled
- Serrated margins
- Petioles with large glands

Inflorescence
- White, pink, red or purple
- With a 4-5 mm long spur

Fruits
- Dehisce explosively (ripe seeds shoot out when touched)

Habitat: riparian areas, wetlands, beach meadows; escapes from gardens
Distribution: few sites in the Pacific maritime and interior boreal regions; Kenai, Anchorage, Juneau, Skagway, Haines; in and near Fairbanks and Salcha

Touch-me-not • *Impatiens noli-tangere*

General Information:
0.2-0.8 m tall
Smaller than *I. glandulifera*

Description:
Stems
- Watery to fleshy

Leaves
- Alternate
- Margins coarsely toothed

Inflorescence
- Yellow-orange with brown spots
- With a 6-10 mm long spur

Fruits
- Dehisce explosively

Habitat: moist forests and stream banks
Distribution: Pacific maritime and interior boreal regions

Key to select common, small, blue-flowered species:

1a. Alternate leaves and round stems ……..Boraginaceae
  2a. Annual or biennial, fruit with nutlets with hooked prickles ……..…..*Lappula*
    3a. 2 rows of prickles on nutlet ……...……*L. squarrosa*
    3b. 1 row of prickles on nutlet ……*L. occidentalis*
  2b. Perennial
    4a. Up to 10 cm tall, nutlets with jagged prickles on the margins…..….*Eritrichium*
    4b. Up to 40 cm tall, smooth nutlets ……..…..*Myosotis*
      * Calyx densely covered in hairs, which are all appressed in one direction……...……..…*M. scorpioides*
      * Calyx with spreading hairs ……..……*M. asiatica*
1b. Opposite leaves
    5a. 5 petals and sepals, 2 stamens, fruit is a capsule with seeds ……*Veronica* (Plantaginaceae)
    5b. 4 or 5 petals, 4 or 5 stamens, fruit is a nutlet, stem square or angled.....Lamiaceae

***Mertensia paniculata* (Boraginaceae)**

***Myosotis scorpioides* (Boraginaceae)**

***Veronica spicata* (Plantaginaceae)**

European stickseed • *Lappula squarrosa*
syn. *Lappula myosotis*

Invasiveness Rank: 44 points | Species Code: LASQ

General Information:
Annual Perennial
Up to 60 cm tall

Description:
Annual or biennial; bristly herb
Leaves
- Narrowly lanceolate to oblanceolate
- Hairy

Inflorescence
- 5 small, pale blue petals

Fruits
- Nutlets with 2 distinct rows of prickles

Habitat: mostly wet areas; roadsides, waste areas, cultivated fields
Distribution: frequent throughout Pacific maritime and interior boreal regions; northernmost infestation in Circle, westernmost in Anchorage, easternmost along the Alaska Hwy east of Northway Jct. In southeast Alaska, it has only been reported from Gustavus.
Remarks: Native *Lappula occidentalis* (flatspine stickseed) has only 1 row of prickles and occurs on mesic to dry sites in alpine and subalpine meadows across Alaska.

True forget-me-not • *Myosotis scorpioides*

syn. *Myosotis palustris, Myosotis scorpioides* var. *palustris*

Invasiveness Rank: 54 points | Species Code: MYSC

General Information:
Perennial
15-60 cm tall
Entire plant has inconspicuous, scattered, short, stiff, appressed hairs

Description:
Roots
- Rhizomes and stolons

Stems
- Decumbent to ascending
- Mostly unbranched

Leaves
- Lower leaves with little to no stalk
- Upper leaves oblong, elliptical, or lance-shaped, with short appressed hairs or nearly smooth

Inflorescence
- Sky blue to white
- Pedicels 1-2 times as long as the calyx
- Floral tube of the corolla longer than calyxes (unlike native *M. laxa*, in which they are the same length)
- Flower 3-5 mm long, 4-10 mm wide (wider than native *M. laxa*)
- Calyx teeth equally broad and long
- Calyx has appressed hairs that are not hooked

Fruits
- Smooth, 4-parted nutlet, egg-shaped

Habitat: mostly wet locations, meadows, ditches, pond edges, swamps; escapes cultivation
Distribution: Pacific maritime and interior boreal, including Denali National Park and throughout Anchorage

Small-flowered forget-me-not • *Myosotis laxa*

http://luirig.altervista.org

General Information:
Short-lived perennial, sometimes annual
10-40 cm tall
Hairs inconspicuous, straight, appressed

Description:
Roots
- Lacking rhizomes and stolons

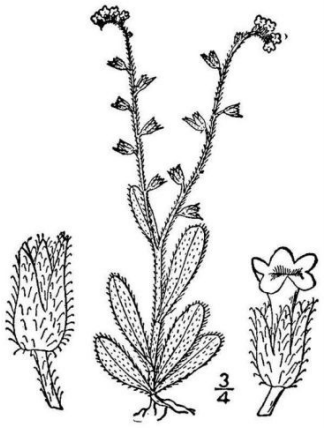
Stems
- Weak, slender, often decumbent

Leaves
- Oblong to lance-shaped
- 1.5-8 cm long, 3-15 mm wide

Inflorescence
- Pedicels usually longer than calyx
- Petals blue
- Corolla tube equal in length to calyxes (in *M. scorpioides* the corolla is longer)
- Flower is 3-7 mm long, 2-5 mm wide (narrower than *M. scorpioides, or M. sylvatica)*
- Calyx with appressed hairs lacking hooks

Habitat: meadows, ditches, pond edges, swamps; moist to wet areas

Spring forget-me-not • *Myosotis verna*



General Information:
Annual
5-40 cm tall
Hairs short, coarse, spreading to appressed, some hooked

Description:
Roots
- Lacking rhizomes and stolons

Stems
- Branched or unbranched

Leaves
- Lower leaves oblanceolate, somewhat stalked
- Upper leaves oblong to linear; 1-5 cm long, 2-10 mm wide

Inflorescence
- Pedicels often shorter than calyx
- Petals inconspicuous, white
- Flower 4-7 mm long, 1-2 mm wide
- Sepal tube covered with short, hooked hairs; lobes with stiff ascending hairs
- Flower asymmetric, with two longer lobes and three shorter lobes

Habitat: meadows, grasslands, shrub lands, forest openings; moist to dry areas

Asian (alpine) forget-me-not • *Myosotis asiatica*

General Information:
Perennial
3-50 cm tall
Tufted, erect clumps
Hairs spreading or appressed hairs arising from base, some hooked

Description:
Roots
- Lacking rhizomes and stolons

Stems
- Branched several to many times, forming erect clumps

Leaves
- Lower leaves stalked, oblanceolate to elliptical; 5-13 cm long, 2-12 mm wide
- Stem leaves, without stalks, oblong to lance-shaped

Inflorescence
- Calyx teeth are longer than they are broad
- Pedicels are equal in length to the calyx
- Corollas blue, sometimes white; yellow bulges at the throat
- Calyx with ascending to spreading hairs, hooked or straight

Fruits
- Black, smooth, shiny, 1-2 mm long
- With narrow margin on upper half (unlike *M. arvensis* and *M. laxa*, which have a margin all around.

Habitat and distribution: alpine and subalpine meadows across Alaska; streambanks, rocky slopes, forest openings; mesic to dry sites; higher elevations than non-native *M. sylvatica*

Key to *Myosotis* species:

1. Calyces with appressed hairs, lacking hooks
   2a. Corollas 2-5 mm wide, the tube equal to the calyces .....*M. laxa*
   2b. Corollas 5-10 mm wide, the tube longer than calyces .....*M. scorpioides*
1. Calyces with spreading hairs, some of which are hooked
   3a. Corollas 4-10 mm wide
      Stems erect, from branching stem-base or short rhizome, forming tight, erect, clumps; leaves largest basally, gradually reduced upwards; common at high elevations .....*M. asiatica*
   3b. Corollas 1-3 mm wide
      Calyces asymmetric, 2 lobes longer than other 3.....*M. verna*

Common comfrey ● *Symphytum officinale*

Invasiveness Rank: 48 points | Species Code: SYOF

General Information:
Perennial
0.3-0.9 m tall
Coarse, stiff-hairs

Description:
Roots
- Taproot

Stems
- Hairy
- Winged

Leaves
- Bases broadly winged
- Large basal leaves with stalk
- Cauline leaves becoming smaller and stalkless toward the top of the plant

Inflorescence
- Leafless, branched cluster
- 5-parted
- Blue to cream colored
- Nodding
- Tubular bell-shaped
- Tube much longer than the lobes
- Stalks have spreading hairs

Fruits
- Black, smooth, shiny nutlet

Habitat: disturbed areas, such as roadsides and abandoned gardens
Distribution: Pacific maritime; throughout southeast Alaska to Glacier Bay and on the Kenai Peninsula

Rampion bellflower ● *Campanula rapunculoides*

Invasiveness Rank: 64 points Species Code: CARA

General Information:
Perennial
0.4-1 m tall

Description:
Roots
- Creeping rhizomes

Stems
- Branched
- Reddish

Leaves
- Alternate
- Irregularly toothed

Inflorescence
- Bell-shaped, 2-3.5 cm
- Blue to purple
- Nodding
- One-sided with many flowers

Habitat: abandoned gardens
Distribution: Pacific maritime and interior boreal regions, including Anchorage and around Juneau
Remarks: Native *Campanula* species can be distinguished by smaller flowers or flowers that are borne singly, and an inflorescence that is not one-sided.

Tatarian honeysuckle ● *Lonicera tatarica*

Invasiveness Rank: 66 points Species Code: LOTA

General Information:
Shrub
Up to 3 m tall

Description:
Stems
- Finely branched

Leaves
- Opposite
- Hairless
- Oval-oblong
- Entire margins
- Round bases

Inflorescence
- Pink to white
- <2.5 cm long
- Tubular
- Flowers in pairs

Fruits
- Fruit an orange-red berry (unlike *L. involucrata*)
- Seeds are yellow and flattened

Distribution: one documented location in Juneau in a botanical garden

Bearberry honeysuckle ● *Lonicera involucrata*

General Information:
Shrub
Up to 4 m tall

Description:
Stems
- Finely branched

Leaves
- Often hairy on the underside

Inflorescence
- Yellow
- Tubular
- Flowers in pairs
- Large green-purple bracts

Fruits
- Fruit a purple-black berry (unlike *L. tatarica*)
- Fruit cupped by two pairs of purple maroon bracts

Habitat: moist forests, clearings, swamps, thickets, stream sides
Distribution: Pacific maritime region, in Haines and southern southeast Alaska

Traits of *Cerastium* and *Stellaria* Species in Alaska:

Cerastium:	*Stellaria:*
Petals are lobed or notched	5 petals are deeply bifid, often appearing as 10
Flowers have 5 styles	Flowers have 3 styles
Stem nodes are not swollen	Stem nodes are swollen

Big chickweed • *Cerastium fontanum* ssp. *vulgare*
syn. *Cerastium fontanum* ssp. *triviale*

Invasiveness Rank: 36 points — Species Code: CEFOV2

General Information:
Biennial or perennial
Prostrate stems up to 38 cm long
Stems and leaves hairy

Description:
Inflorescence

- Petal tips two-lobed
- Petals equal to or slightly longer than sepals
- Sepals hairy (unlike *C. glomeratum,* hairs are not longer than the sepal tip

Habitat: roadsides, waste places, gardens, fields
Distribution: all three ecogeographic regions; western limit is around Bethel, and it has not been reported from the Arctic Coastal Plain

Sticky chickweed ● *Cerastium glomeratum*

Invasiveness Rank: 36 points | Species Code: CEGL2

General Information:
Biennial or perennial
Up to 45 cm tall

Description:
Stems and leaves
- With gland-tipped hairs

Inflorescence
- Glandular hairs and long white hairs on sepals that exceed the sepal tip
- Petals equal to or slightly longer than sepals

Habitat: similar habitat as *C. fontanum*
Distribution:
- Pacific maritime: Kenai Peninsula; in the vicinity of Haines and Prince of Wales
- Interior boreal: Anchorage, Mat-Su, and the Sourdough Creek campground along the Gulkana River

Remarks: There are many native *Cerastium* species in Alaska. They can be distinguished from non-native species because their petals are always longer than their sepals.

Cerastium beeringianum

Common chickweed • *Stellaria media*

Invasiveness Rank: 42 points | Species Code: STME2

General Information:
Annual,
Stems up to 40 cm long

Description:
Stems
- Vascular bundles inside the stem stay intact when the stem is damaged
- With a line of white hairs on the stem (unlike native *Stellaria* species)

Leaves
- Opposite
- Ovate
- Membranaceous
- Stalked lower leaves (unlike native *Stellaria* species, which have sessile leaves)

Habitat: cultivated and disturbed sites
Distribution: widespread throughout all three ecogeographic regions; northernmost location is Arctic Village, westernmost locations are Dillingham, Manokotak and the Seward Peninsula
Remarks: Native *Stellaria* species have stalkless lower leaves and lack a line of white hairs on the stem.

White cockle ● *Silene latifolia*

syn. *Lychnis alba* x *loveae, Melandrium album*

Invasiveness Rank: 42 points Species Code: SILA21

General Information:
Annual to short-lived perennial
<100 cm tall

Description:
Roots
- Woody taproot

Stems
- Branched
- With fine hairs

Leaves
- Lanceolate to elliptic
- 3-12 cm long and 0.6-3 cm wide (narrower than *S. dioica*)
- Sparsely hairy on both sides
- Basal leaves wither by the time of flowering

Inflorescence
- Unisexual; plants with either all staminate flowers or all pistillate flowers
- Pedicels 1-5 cm long
- Several to many flowers

Fruits
- Capsules have 4-8 bifid teeth
- Slightly reflexed or spreading at maturity (*S. dioica* has teeth that roll backward)
-

Habitat: waste lands, roadsides
Distribution: Pacific maritime (only from Skagway in the southeast) and interior boreal regions (throughout Anchorage)
Remarks: *Silene dioica* and *Silene latifolia* are closely related and often hybridize.

Red catchfly • *Silene dioica*

Invasiveness Rank: 42 points Species Code: SIDI4

General Information:
Perennial
<80 cm tall

Description:
Roots
- Slender taproot

Stems
- Branched
- Softly pubescent and more or less glandular

Leaves
- Ovate to elliptic, 3-13 cm long, 1-5 cm wide (*S. latifolia* has narrower leaves)
- Stem leaves stalkless, lower leaves have petioles
- Softer and thinner than *S. latifolia*

Inflorescence
- Unisexual; plants have either all staminate flowers or all pistillate flowers
- Bracts have soft hair
- Several to many flowers
- Bright pink, 2-2.5 cm diameter
- Pedicels 0.2-3 cm, usually shorter than the calyx

Fruits
- Capsules with 5 bifid teeth that curve backward at maturity
- Capsule broad, nearly spherical, thin, brittle

Habitat: woodlands, hedges, gardens, river banks, open waste places
Distribution: interior boreal, only reported from Anchorage and Palmer
Remarks: *Silene dioica* and *Silene latifolia* are closely related and often hybridize. *Silene dioica* can be distinguished by:
- Dense, long, soft hairs covering at least the distal portions of the plant (*S. latifolia*) is more sparsely pubescent
- Capsule that is broad, nearly spherical, thin, and brittle with teeth that roll backward
- Softer, thinner, usually broader leaves
- Pink flowers

Nightflowering Silene ● *Silene noctiflora*

syn. *Melandrium noctiflorum*

Invasiveness Rank: 42 points Species Code: SINO

General Information:
Annual
<75 cm tall
Entire plant densely hairy; outer portions may be sticky

Description:
Roots
- Slender taproot

Stems
- Erect
- Few basal braches

Leaves
- Elliptic, oblanceolate or lanceolate
- 6-14 cm long and 2-4.5 cm wide
- Hairy on both sides

Inflorescence
- Flowers bisexual
- 3 styles
- White, often tinged with pink
- Flowers 2-2.5 cm diameter
- Flowers opening at night

Fruits
- Capsules with 6 long, very narrow teeth (unlike *S. dioica* and *S. latifolia*) that are curved backward at maturity

Habitat: arable and disturbed sites
Distribution: Pacific maritime and interior boreal regions, including Kantishna, Healy, Kenai Peninsula, Anchorage, Skagway and McCarthy areas

Bladder campion • *Silene vulgaris*

Invasiveness Rank: 42 points Species Code: SIVU

General Information:
Short-lived perennial
20-80 cm tall
Glabarous to glaucous, rarely pubescent

Description:
Roots
- Stout taproot

Stems
- Several to many
- Branched

Leaves
- Broadly oblong to oblanceolate or lanceolate, rounded at base
- 2-8 cm long, 0.5-3 cm wide
- Sessile, almost clasping

Inflorescence
- Some plants with bisexual flowers; others with pistillate unisexual flowers
- 3 styles
- Flowers 1.5-2 cm in diameter
- Petals are white, or tinged with pink, twice as long as the calyx
- Calyx pale green, occasionally purplish

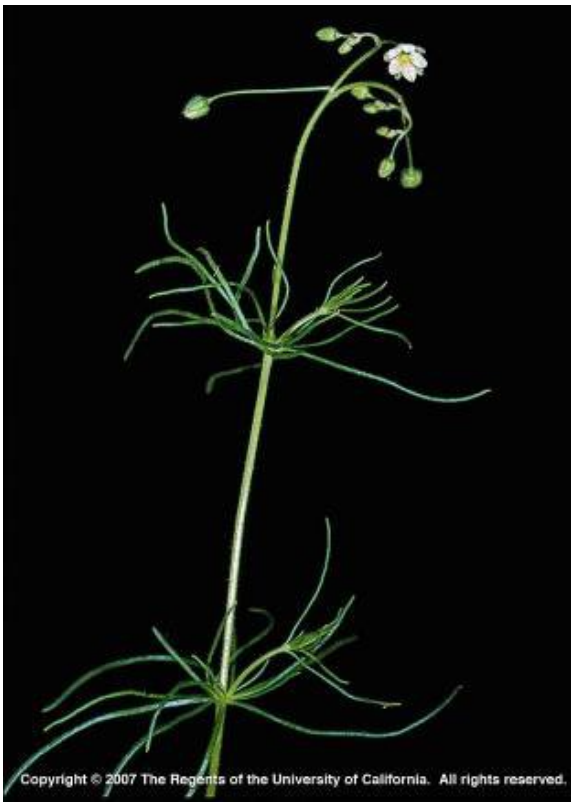
Fruits
- Capsules with 6 straight teeth, not contracted at the base or mouth (unlike *S. noctiflora*)

Habitat: roadsides, waste ground, gravel pits, shores, arable land
Distribution: Skagway; Dawson and the Yukon Territory

Corn spurry • *Spergula arvensis*

Invasiveness Rank: 32 points Species Code: SPAR

General Information:
Annual
10-50 cm tall



Description:
Stems
- Branched from the base with branches erect or spreading
- Yellowish-green

Leaves
- Leaves opposite but appear whorled
- 4 stipules per node (unlike *Spergularia* species, which have 2 stipules per node)

Inflorescence
- Sepals and petals are free (not fused at the base)
- White
- 5 styles and capsule valves (unlike *Spergularia* species, which have 3 styles and capsule valves)

Fruits
- Capsule with many roundish, dark seeds

Habitat: dry areas, woods, forests
Distribution: Pacific maritime and interior boreal regions; northern and easternmost location is by Chena Hot Springs, westernmost location is in Kodiak

Lambsquarters ● *Chenopodium album* ssp. *album*

Invasiveness Rank: 37 points Species Code: CHALA

General Information:
Annual
0.1-1.0 m tall

Description:
Stems
- Often turning reddish as the plant matures

Leaves
- Triangular with irregular lobes
- Green on top and white-mealy on the bottom
- Taste like spinach

Inflorescence
- Clustered in panicles
- Five tiny, greenish sepals

Fruits
- Seeds black, shiny, circular, flattened, and enclosed in a thin, white, papery envelope

Habitat: disturbed soils in clearings, burns, river bars, waste places, and cultivated soil
Distribution: all three ecogeographic regions

Blite goosefoot ● *Chenopodium capitatum*

General Information:
Annual
0.1-1.0 m tall
Hairless
Succulent

Description:
Leaves
- Triangular

Inflorescence
- Clustered in ball-shaped, sessile heads that form interrupted spikes
- 3-5 fleshy sepals turning red at maturity

Fruits
- Bright red
- Seeds black and lens-shaped

Habitat: disturbed areas, roadsides, waste areas, cultivated fields
Distribution: interior boreal

Common St. Johnswort ● *Hypericum perforatum*

Invasiveness Rank: 52 points | Species Code: HYPE

General Information:
Perennial
30-90 cm tall

Description:
Stems
- Two-sided
- Rust colored

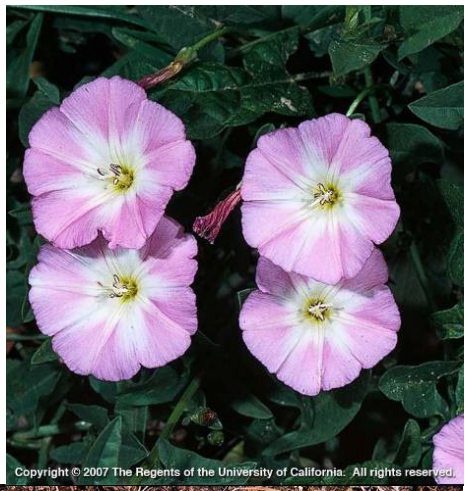
Leaves
- Sessile
- Opposite
- Oval
- Prominent veins
- Transparent dots; appearing to be perforated when held up to the light
- Black, glandular perforations on the margins

Inflorescence
- 2 cm across
- Bright yellow with purple dots along the margins
- Forming flat-topped clusters
- 5 petals
- Sepals with dark dots
- Many stamens with yellow and purple tips

Habitat: roadsides, gravel pits
Distribution: southeast Alaska; also reported from Anchorage

Field bindweed • *Convolvulus arvensis*

Invasiveness Rank: 56 points Species Code: COAR4



General Information:
Perennial
Up to 7 m long

Description:
Roots
- Rhizomes

Stems
- Trailing to twining

Leaves
- Alternate
- More or less arrowhead-shaped

Inflorescence
- Large and showy
- Funnel-shaped
- White-pink
- Borne singly or in pairs

Habitat: disturbed sites, fields, roadsides

Distribution:
- Interior boreal: Fairbanks
- Pacific maritime: Skagway, Haines, Ketchikan and vicinities

Remarks: There are no native *Convolvulus* species in Alaska. However, when not in flower, this species may be confused with *Polygonum convolvulus* (black bindweed).

	Roots	Leaves	Flowers	Sheaths
***Fallopia convolvulus* (black bindweed)**	Annual with thin but deep roots	arrow-shaped leaves; distinctly heart-shaped leaf base	small and reduced to white bracts, resembling other knotweeds	membrane-like sheaths where the leaf stalk joins the stem, resembling other knotweeds
***Convolvulus arvensis* (field bindweed)**	perennial with rhizomes	arrow-shaped leaves; straight leaf bases	large and funnel-shaped	does not have membrane-like sheaths

Redstem stork's bill • *Erodium cicutarium*

Invasiveness Rank: not yet ranked | Species Code: ERCI6

General Information:
Perennial
Flowering stems up to 30 cm tall

Description:
Leaves and stems
- Generally reddish
- Swollen nodes
- Leaves pinnate and mostly basal

Inflorescence
- Umbels on long flower stalks, originating in the leaf axils
- 5 sepals distinct, bristly, with a needle-like tip
- 5 petals red-violet, with a claw with marginal hairs
- 5 styles 2.5-5 cm long, persistent and twist spirally at maturity
- 5 carpels with sharp points at the base

Fruits
- Resembling a bird's beak at maturity

Habitat and distribution: has only been reported as a contaminant of nursery trees sold in Anchorage
Remarks: There are no native species of *Erodium* in Alaska. General traits of non-native *Erodium* species in Alaska include pinnate leaves and five sepals that twist spirally at maturity, while seeds remain attached.

Robert geranium ● *Geranium robertianum*

Invasiveness Rank: 67 points Species Code: GERO

General Information:
Annual
10 to 60 cm tall
Distinct unpleasant odor

Description:
Roots
- Taproot

Stems
- Hairy

Leaves
- Egg-to pentagon-shaped
- Light green to reddish
- Palmate
- Lowermost leaves deeply divided into 5 segments, and each segment is pinnately divided (unlike native *Geranium* species, which have palmate leaves that are not divided to the base)

Inflorescence
- Petals pink to purple
- Sepals glandular, hairy, and distinctly bristle-tipped

Fruits
- 5-parted capsules with styles fused to form a central column

Habitat and distribution: along roadsides and in yards in southeast Alaska
Remarks: General traits of *Geranium* species in Alaska include palmate leaves and five sepals that roll upwards at maturity and release seeds.

Canadian waterweed ● *Elodea canadensis*

Invasiveness Rank: 79 points Species Code: ELCA7

General Information:
Perennial
Freshwater aquatic forb
Tolerates brackish conditions
Dies back in the winter and regenerates from belowground parts in the spring

Description:
Leaves and Stems

- Dark green, crisp
- Whorls of 3
- 5-17 mm long, 1.8-5 mm wide
- Recurved with minutely toothed margins
- Have bud-like shoots (unlike *E. nuttallii*)

Inflorescence

- Flowering plants rare
- Solitary flowers arise from leaf axils on long, thread-like stalks
- Male and female flowers borne on different plants

Fruits

- Spindle-shaped, capsules 5-6 mm long, 2-3.2 mm wide with 5-6 mm long beaks
- Lacking short hairs at base (unlike *E. nuttallii*)

Habitat: slow-moving or standing freshwater, mostly calcareous; grown as an aquarium plant
Distribution: in the Pacific maritime ecoregion *Elodea* species have been recorded from Anchorage, the Kenai Peninsula, and Cordova and have been reported but not confirmed from Juneau; in the interior boreal ecoregion *Elodea* is present in Fairbanks

Western waterweed • *Elodea nuttallii*

Invasiveness Rank: not yet ranked Species Code: ELNU2

General Information:
Perennial
Freshwater aquatic forb
Tolerates brackish conditions
Overwinters as sunken prostrate shoots; in the spring it regenerates shoots which grow upward and branch upon reaching the water surface

Description:
Leaves and stems
- Pale green and flaccid
- Whorls of 3 (may appear as whorls of 6)
- 4-15 mm long, 1.7 mm wide (unlike *E. canadensis*, which are wider)
- Linear to lanceolate with pointed tips
- Often recurved with undulate margins
- Folded along the midrib
- Leaves lack bud-like shoots (unlike *E. canadensis*)

Inflorescence
- Male flower stalk separates from stem during the bud stage

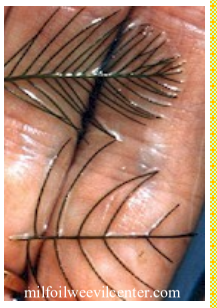
Fruits
- Spindle-shaped, 4-4.6 mm
- Short hairs at the base (unlike *E. canadensis*)
- Lack an apical collar (unlike *E. canadensis*)

Habitat: lakes and rivers in still or slowing-moving water; mostly found in calcareous and/or eutrophic water
Distribution: in the Pacific maritime ecoregion *Elodea* species have been recorded from Anchorage, the Kenai Peninsula, and Cordova and have been reported but not confirmed from Juneau; in the interior boreal ecoregion *Elodea* species have been confirmed from Fairbanks
Remarks: *E. nuttallii* and *E. canadensis* have been known to form fertile hybrids in natural and laboratory environments (Cook and Urmi-Konig 1985, Ernst-Schwarzenbach 1945). Hybrids between these two species exhibit morphologically intermediate vegetative characteristics and are only distinguishable by their floral structures, which are rarely found. In the absence of floral structures, genetic techniques are often necessary to determine taxonomic identity. Both species share geographic range and are native to most of temperate North America.

A comparison of freshwater aquatic forbs:

	Regrows from:	Leaves per node	Leaf shape	Leaf length (cm)	Leaf width (mm)	Leaf color/texture
Elodea canadensis **Canadian waterweed (not reported from AK)**	Belowground parts	Whorls of 3	Linear; blunt/rounded tips	0.5-1.7	1.75-5	• Dark green • Crisp • Minutely toothed • Recurved
Elodea nuttallii **Western waterweed**	Sunken prostrate shoots	Whorls of 3, but may appear as 6	Linear/lanceolate; pointed tips	0.4-1.5	Usually <1.75	• Pale green • Flaccid • Undulate margins folded along midrib • Recurved
Myriophyllum spicatum **Eurasian watermilfoil (not reported from AK)**	Rhizome	Whorls of 3-5, nodes 1+ cm apart	Pinnate with >12 pairs of leaflet segments; flimsy	<2.5	Usually <1.0	• Reddish-brown
Myriophyllum sibiricum **(syn. *M. spicatum* ssp.*excalabances*) Siberian watermilfoil**	Short rhizome	Whorls of 3-4, nodes 1+ cm apart	Pinnate with <12 pairs of leaflet segments; stiffer than Eurasian watermilfoil	>3	Usually <1.0	• Purplish
Egeria densa **(Brazilian waterweed)**	Stem fragments	Whorls of 4-8, most often 4	Linear with acute tip	1-4	2-5	• Bright green
Hydrilla verticillata **(hydrilla)**	Tubers	Whorls of 3-10, most often 5	Linear with acute tip	0.5-2	2-4	• With large teeth along margin and midvein

Linear (*Elodea spp.*)



Pinnate (*Myriophyllum spp.*)

Splitlip hempnettle • *Galeopsis bifida*
Bristlestem hempnettle • *Galeopsis tetrahit*

Invasiveness Rank: 50 points | Species Code: GABI3, GATE2

General Information:
Annual
20 to 80 cm tall

Description:
Stems
- Square
- Swollen below nodes
- Bristly

Leaves
- Opposite, decussate
- Ovate
- Margins are broadly serrated
- Leaf base wedge-shaped

Inflorescence
- In leaf axils
- Purplish-pink or white
- Pubescent
- Middle lobe notched

Habitat: disturbed sites, roadsides, forests; moist soil
Distribution: widespread in all three ecogeographic regions; the Seward Peninsula hosts the westernmost and northernmost infestations
Remarks: Two traits are commonly used to distinguish between these species:
- *Galeopsis bifida* has smaller flowers than *Galeopsis tetrahit*
- *Galeopsis bifida* has a cleft in the lower petal lip (unlike *G. tetrahit*)

Some botanists have described additional differences between these species, but there is no consensus on their validity. In Alaska some specimens exhibit intermediate flower sizes or a moderate cleft in the lower lip, and differences in size and morphology have even been observed among flowers on a single plant.

White deadnettle • *Lamium album*

Invasiveness Rank: 40 points Species Code: LAAL

General Information:
Perennial
0.2 - 0.8 m tall

Description:
Leaves
- Soft (not stinging, unlike similar-looking native *Urtica dioica*)
- Ovate; rounded to heart-shaped base, tapering to a point (but less heart-shaped than *Urtica dioica*)
- Coarsely and/or doubly toothed

Inflorescence
- White
- Consists of two lips with a wide-open "mouth" between them; the upper lip is hooded and hairy; the lower lip is broad and flat.

Habitat: waste places, fields, forest edges
Distribution: Pacific maritime and interior boreal, including, Skagway, Glacier Bay National Park, southeast Alaska and Anchorage

Stinging nettle • *Urtica dioica*

NETTLE FAMILY (URTICACEAE)

General Information:
Perennial
0.5-3.0 m tall

Description:
Causes stinging pain when touched on the leaves or stem
Leaves
- Serrated (more so than similar-looking *Lamium album*)
- Heart-shaped to rounded base

Inflorescence
- Small, greenish, catkin-like clusters
- Prominent stipules 5-15 mm long

Habitat: stream banks, thickets, meadows; disturbed areas with moist, rich soils
Distribution: Pacific maritime and interior boreal

Purple loosestrife • *Lythrum salicaria*

Invasiveness Rank: 84 points Species Code: LYSA2

General Information:
Perennial
1.8-4.2 m tall

Description:
Leaves
- Opposite

Inflorescence
- Pink
- 5-7 petals
- Dense terminal spikes

Fruits
- Short capsules, 4 mm long
-

Habitat: moist, wetland habitats; garden escapee
Distribution: planted in Anchorage; Juneau; reported but not confirmed from Fairbanks
Remarks: *Lythrum salicaria* superficially resembles native *Chamerion angustifolium* (fireweed). However, the two can be distinguished on the basis of a number of traits:

	Chamerion angustifolium	*Lythrum salicaria*
Leaves	Alternate 	Opposite 
Flowers	With four petals 	With five petals 
Fruits	Long seed capsules, plumed seeds 	Short seed capsules 
Habitat	Grows in dry habitats	Grows in wet habitats

Common eyebright • *Euphrasia nemorosa*

Invasiveness Rank: 42 points Species Code: EUNE3

General Information:
Annual
10-40 cm tall
Hairy
Partly parasitic on the roots of other plants

Description:
Stems
- Often branched from the base with 1-7 pairs

Leaves
- Small
- Deep green
- Serrated, with long points or awns

Inflorescence
- Small (5 to 8 cm)
- White
- Open, trumpet-shaped
- Lower lip is divided, with purple lines

Habitat: disturbed sites, including trails and roadsides
Distribution: Pacific maritime and interior boreal

Traits of native *Euphrasia* species in Alaska:
Euphrasia mollis, E. disjuncta, and E. subarctica are native to Alaska. They can be distinguished from non-native *Euphrasia nemorosa* by their corolla which are smaller, (2 to 5.5 mm), branching pattern is usually from middle of the stem, and don't have long pointed serrated teeth on the leaves.

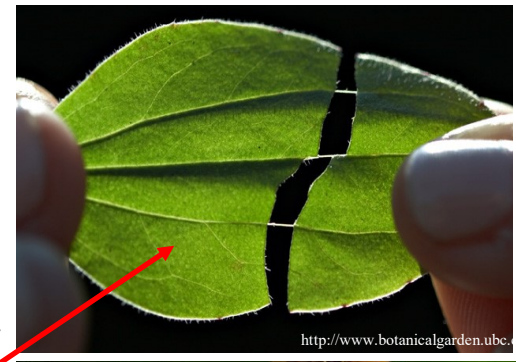
- *E. mollis*: yellow corolla 4 to 5 mm, bracts dense with coarse stiff hairs
- *E. subarctica*: yellow corolla 3 to 4 mm, bracts sparse with coarse stiff hairs
- *E. disjuncta*: white corolla 4 to 4.5 mm ,

Habitat: grassy heaths, wet meadows, moist river gravel, bogs, open woods; chalky and acidic soils

Common plantain • *Plantago major*

Invasiveness Rank: 44 points | Species Code: PLMA2

General Information:
Annual, biennial or perennial
Flowering stalks 15-20 cm tall



Description:
Leaves
- Ovate
- Smooth margins
- Basal rosette only
- 3-5 prominent parallel ribs; the vascular bundles of these veins stay intact when leaves are damaged

Inflorescence
- Small and clustered in spikes
- Greenish-white, turning brown

Fruits
- Ovate capsule that splits around the middle
- >6 seeds per capsule

Habitat: cultivated fields, lawns, roadsides, waste areas, open woods and valleys; mid-montane locations
Distribution: widespread across all three ecogeographic regions
Remarks: Most botanists specializing in northern floras think there were, or still are, native populations of *Plantago major*

Guide to *Plantago* species:

1. Leaves linear and somewhat fleshy ……*Plantago maritima* ssp. *juncoides* (goose tongue)
    - Leaves are glabrous and almost linear
    - Found along seashores and coastal marshes
    - Mostly found in the Pacific maritime region

1. Leaves lance-shaped to oval
    2. Base of leaves distinctly heart-shaped, 6+ seeds per capsule ....*Plantago major* (common plantain)
    2. Base of leaves are not heart-shaped.....Generally native*

*With the exception of non-native *P. lanceolata*, which is uncommon and can be distinguished by slender petioles, somewhat hairy leaves, a thin root and bracts with a slender appendage; grows in waste places

Native *Plantago macrocarpa* (seashore plantain)
- Stout root
- Leaves glabrous or almost glabrous
- Found in wet areas, beaches
- South coastal Alaska

Native *Plantago canescens* (grey pubescent plantain)
- Leaves are erect and narrowly lance-shaped
- Leaves are hairy to ciliate on both sides
- 2-4 seeds per capsule
- Found on grassy slopes, rocky outcrops, and open soil
- Interior boreal and arctic-alpine regions

Butter and eggs, yellow toadflax ● *Linaria vulgaris*

Invasiveness Rank: 69 points | Species Code: LIVU2

General Information:
Perennial
Up to 60 cm tall

Description:
Leaves
- Linear to narrowly lance-shaped
- Bluish-green

Inflorescence
- Many small, zygomorphic flowers arranged in spikes
- Light yellow with an orange throat
- Long, straight spurs, nearly as long as the corolla

Habitat: roadsides, waste places
Distribution: very common in the interior boreal region and common in the Pacific maritime region; northernmost infestation is in Coldfoot, westernmost infestations are from Dillingham and near Aniak
Remarks: There are no native species in Alaska with similar flowers

Purple foxglove ● *Digitalis purpurea*

Invasiveness Rank: 51 points | Species Code: DIPU

General Information:
Biennal or perennial
0.9-1.8 m tall

Description:
Leaves
- Soft and hairy
- Lanceolate to egg-shaped
- Toothed
- Basal leaves can be up to 30 cm long

Inflorescence
- Purple with darker purple mottling inside
- Bell-shaped
- Borne on one side of a spike

Habitat: garden escapee
Distribution: Pacific maritime. primarily southeast Alaska

Thymeleaf speedwell● *Veronica serpyllifolia* ssp. *serpyllifolia*

Invasiveness Rank: 36 points Species Code: VESES

General Information:
Perennial; Herb/forb
Rhizomatous
10 to 30 cm tall

Description:
Leaves
- Glabrous (usually)
- Opposite
- Lower leaves: short stalks with three veins
- Upper leaves: without stalks,

Inflorescence
- Up to 40 flowers
- Raceme
- Irregularly 4-lobed; lowest lobe is smaller than the other lobes
- White to pale blue

Fruit
- Heart shaped and lightly hairy capsules

Habitat: moist soils with partial sunlight. Forest edges , roadsides, fill importation sites, gardens.
Distribution: Pacific Maritime ecogeographic region of Alaska and Haines Junction in the boreal region of Canada


Photo by R. Old.


Photo by M. Harte

Brightblue speedwell ● *Veronica serpyllifolia* ssp. *humifusa*

This subspecies is native to Alaska. This native subspecies can be differentiated from the non-native by:
- Blue flowers
- Flower pedicels are covered in long, brown hairs,
- Capsules with cuneate bases compared to a tapered base

Tiny trumpet ● *Collomia linearis*

Invasiveness Rank: not yet ranked Species Code: COLI2

General Information:
Annual,
Up to 40 cm
Plant sticky due to secretions from the seeds

Description:
Stems
- Slightly hairy
- Simple or branched toward the top

Leaves
- Lance-shaped and narrow
- Alternate

Inflorescence
- Small, 8-15 mm
- Pale purple to white
- 5 short lobes extending from a long tube
- Borne in the axils of upper leaves, forming a dense cluster

Habitat: dry, disturbed sites
Distribution: along roads in the interior boreal ecogeographic region

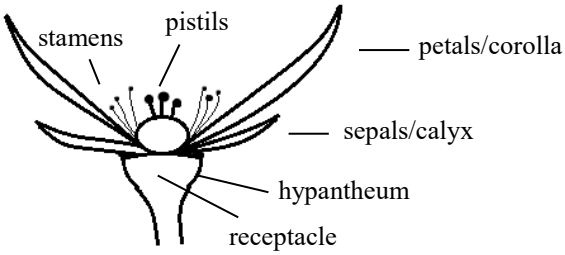
Distinguishing the *Ranunculus* genus (buttercups) from the *Geum* (avens) and *Potentilla* (cinquefoil) genera in Alaska:

Diagnostic traits for *Ranunculus* species in Alaska:

- Leaves form a sheath at the base
- Sepals look like petals; both are yellow
- Sepals are deciduous
- No to many petals
- Stipules absent
- Stamens inserted in the receptacle, free from the calyx
- Is in the Ranunculaceae, Buttercup family

Diagnostic traits for *Geum* and *Potentilla* species in Alaska:

- Yellow petals
- Leafy, green sepals often persisting at fruiting
- 5 petals
- Often with stipules
- Stamens borne on calyx or on rim of **hypanthium**
- Are in the Rosaceae, Rose family



Potentilla diversifolia
Yellow petals and green sepals
(native)

Ranunculus acris
Yellow petals and sepals
(not native)

Creeping buttercup ● *Ranunculus repens*

Invasiveness Rank: 54 points Species Code: RARE3

General Information:
Perennial
Stems up to 0.9 m long

Description:
Stems
- Leaves all along stem, not just at the base
- Horizontal growth habit due to trailing vegetative stems (runners and stolons) that root at nodes

Leaves
- Basal leaves are divided all the way to the petiole into three distinct leaflets (unlike all other non-aquatic buttercups with leafy stems and runners)
- White reflective spots are often present at base of major tooth divisions

Inflorescence
- Few, showy
- Bright yellow
- 5-10 petals 6-10 mm in length (unlike native *R. macounii*, which has petals <6 mm)

Fruits
- Spherical fruiting head (unlike native *R. macounii*, which has an oval fruiting head)

Habitat: disturbed soils, gardens, croplands; semi-aquatic communities, including swamps, ditches, and margins of ponds and rivers (not aquatic like some native *Ranunculus* species)
Distribution: Pacific maritime and interior boreal regions; westernmost locations are by Lake Iliamna and in Kodiak, northernmost location is in the vicinity of Healy

Tall buttercup ● *Ranunculus acris*

Invasiveness Rank: 54 points Species Code: RAAC3

General Information:
Biennial to short-lived perennial
40-100 cm tall

Description:
Stems
- Erect, no runners (unlike *R. repens* and some native species, which are trailing and have runners)

Leaves
- Basal leaves are deeply lobed (unlike native tall, erect, *Ranunculus* species, which have basal leaves that are kidney-shaped, round, or 3-parted)
- Basal leaves have soft hairs on both sides (unlike native, erect *Ranunculus* species that also have deeply lobed basal leaves but no hairs on the leaves)
- Basal leaves are divided into 3-5 parts (*R. repens* leaves are divided into 3 separate leaflets)

Inflorescence
- Large, 1.5-3 cm across (many native *Ranunculus* species have small flowers, <1.5 cm across)
- Stalked
- 5 shiny yellow petals 5 sepals

Fruits
- Fruit has a short, straight beak (~0.5 mm), compared many native *Ranunculus* species, which have a beak that is long, slender or hooked.

Habitat: grasslands, woodlands; occasionally sand dunes
Distribution: common in the Pacific maritime region; few infestations in the interior boreal region, including in the vicinity of Chena Hot Springs, Talkeetna, and the Mat-Su Valley

Lady's mantle • *Alchemilla mollis*

Invasiveness Rank: 56 points | Species Code: ALMO12

General Information:
Perennial
20-80 cm tall

Description:
Leaves
- Densely hairy on stems and leaves
- Grey-green
- Circular and palmately lobed with 9-11 lobes
- Each lobe has 15-19 inwardly curved, slightly pointed teeth
- <10 cm wide

Inflorescence
- Loose, spreading cymes at the ends of stems
- Petals absent
- Sepals yellow-green, star-shaped
- <6 mm wide

Fruits
- Hips are sparsely hairy and contain small, ovoid seeds

Habitat: disturbed sites, roadsides
Distribution: Pacific maritime - southeast Alaska only

European bird cherry • *Prunus padus*

Invasiveness Rank: 74 points | Species Code: PRPA5

General Information:
Tree
Up 9 m tall
Purple-grey bark

Description:
Leaves
- Long stalks on leaves
- Obovate
- Sharply serrated
- Two greenish glands at the top of the petiole, not always easily visible

Inflorescence
- Whitish
- Clusters of long, showy, terminal spikes
- Inside of the hypanthium is hairy
- Petals 6 to 9 mm
- **Sepals 1.2 to 2 mm and are longer than they are wide**

Fruits
- Black, ovoid
- Fruits are toxic; known to have killed moose calves in Anchorage

Habitat: ornamental that escapes cultivation and spreads quickly in undisturbed forests. Along riverbanks, it forms single-species stands, replacing native trees and shrubs. Spreading into subalpine areas in Anchorage. A few have been founding growing in muskeg.

Distribution:
- Pacific maritime: Juneau (Jensen Arboretum)
- Interior boreal: abundant in Anchorage, localized infestations in or near Palmer, Talkeetna, Fairbanks, Delta Junction, and Fort Yukon

Remarks: The glands at the top of the petiole are diagnostic of the *Prunus* genus and serve as extrafloral nectaries, which attract ants toward the flowers.

Chokecherry ● *Prunus virginiana*

Invasiveness Rank: 74 points | Species Code: PRVI

Traits that distinguish *Prunus virginiana* from *Prunus padus*:

- The hypanthium of *Prunus virginiana* is less hairy to completely hairless
- In late summer the foliage of *P. virginiana* turns dark red; *P. padus* stays green throughout the growing season
- Petals 2 to 5 mm
- Sepals 0.7 to 1.4 mm and **are as long as wide**

Habitat: ornamental that escapes cultivation; similar habitat as *P. padus*
Distribution: recorded primarily in Anchorage and Palmer. But also found in Skagway.

Sweet cherry • *Prunus avium*

syn. *Cerasus avium*

Invasiveness Rank: not yet ranked | Species Code: PRAV

General Information:
Tree
Up to 15 m tall
Peeling, red-brown bark

Description:
Leaves
- Alternate
- Oval and pointed
- Finely serrated
- Green on top and somewhat downy beneath
- 2 conspicuous glands at the top of the petiole (see image under *P. padus*)

Inflorescence
- Loose cluster of 2-6 flowers

Fruits
- Yellow, turning dark red

Habitat and distribution: ornamental that may escape cultivation; reported from Sitka

Key to *Sorbus* species in Alaska:

(excluding native *S. sambucifolia*, which is restricted to the outer Aleutian Islands)

1a. leaflets 9 or 11, elliptic, rounded or short-pointed at tip, margins smooth in lowest third ..... ***S. sitchensis***

1b. leaflets 11 to 15, oblong, short-pointed at tip, margins toothed nearly to base

- 2a. leaflets becoming hairless ..... ***S. scopulina***
- 2b. leaflets pale and hairy beneath ..... ***S. aucuparia***

1c. leaflets 11

- 3a. plant a tree ..... ***S. aucuparia***
- 3b. plant a shrub = *S. scopulina* or *S. sitchensis* (native; see couplets 1 and 4)
- 3c. plant form indeterminate
  - 4a. flower stalks and winter buds with red hairs; paired, narrow, red-hairy deciduous stipules; winter buds red hairy. ..... ***S. sitchensis***
  - 4b. flower stalks and winter buds with white hairs
    - 5a. leaflets pale and hairy beneath; paired, 3-angled, persistent stipules; winter buds with white hairs, not sticky ..... ***S. aucuparia***
    - 5b. leaflets becoming hairless; paired, very narrow, hairless, persistent stipules; winter buds sticky and more or less white hairy ..... ***S. scopulina***

Sorbus aucuparia

Sorbus scopulina

European mountain ash ● *Sorbus aucuparia*

Invasiveness Rank: 59 points Species Code: SOAU

General Information:
Tree
7.5-12 m tall


Leo michels, http://luirig.altervista.org


http://www.ces.ncsu.edu

Description:
Leaves
- Pinnately compound, with 9-17 leaflets
- Leaflets short-pointed, unequal and rounded at base, toothed nearly to base, pale and hairy beneath
- Paired, 3-angled, persistent stipules

Inflorescence
- Clusters of many small, white flowers
- Flower stalks with white hairs
- Winter buds white hairy, not sticky

Fruits
- Bright, deep orange

Distribution: planted as an ornamental in south central Alaska. Pacific maritime; throughout southeast and south coastal Alaska, including the Kenai Peninsula and west to Manokotak (near Dillingham). Interior boreal; few instances; one in Palmer and at Denali National Park and Preserve.
Remarks: Native *Sorbus* species are shrubs; non-native *Sorbus aucuparia* is a tree.

Greene's mountain ash • *Sorbus scopulina*

General Information:
Shrub
1.0-6.0 m tall

Description:
Leaves
- Pinnately compound, with 11-13 leaflets
- Leaflets sharp-pointed, unequal and rounded at base, toothed nearly to base, becoming hairless
- Paired, very narrow, hairless, persistent stipules

Inflorescence
- Flower stalks with white hairs
- Winter buds sticky and more or less white hairy

Distribution: southern half of Alaska

Sitka mountain ash • *Sorbus sitchensis*

General Information:
Shrub
4.5-6.0 m tall

Description:
Shrub
Leaves
- Pinnately compound, with 9-11 leaflets
- Leaflets rounded to short-pointed, margins smooth in lower third, pale beneath with red hairs but becoming hairless
- Paired, narrow, red-hairy deciduous stipules

Inflorescence
- Flower stalks with red hairs
- Winter buds red hairy

Distribution: southern Alaska coast

Himalayan blackberry • *Rubus armeniacus*

syn. *Rubus discolor*

Invasiveness Rank: 77 points Species Code: RUDI2

General Information:
Shrub
Stems up to 9 m long

Description:
Stems

- Thick, up to 2 cm wide
- Clambering to erect, then trailing and rooting at the nodes
- Thorns are stout, recurved, <1 cm long (unlike native *R. idaeus*, which has smaller, prickly thorns)

Leaves

- Most often 5 leaflets, with 3 leaflets in floral shoots (unlike native *R. spectabilis*, which always has 3 leaflets)
- White-hairy underneath
- Lightly toothed (unlike native *R. spectabilis*, which has serrated margins)

Fruits

- Fruit solid on the inside, like other blackberries; not hollow like raspberries

Habitat and distribution: roadsides and disturbed areas in southeast Alaska; reported from Ketchikan and Sitka
Remarks: This species is distinctly different from native *Rubus* species because it has much bigger leaves and is taller than native species

Rugosa rose • *Rosa rugosa*

Invasiveness Rank: 72 points Species Code: RORU

General Information:
Shrub
1.2-1.8 m tall
Forms dense thickets

Description:
Roots
- Spreads by extensive woody rhizomes

Stems
- Twigs stout and covered in thick, straight, sharp thorns
- Young stems green, later turning brown

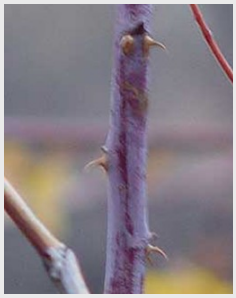
Leaves
- Alternate
- Pinnately compound with 5-9 ovate to elliptical leaflets
- Leaflets 5-13 cm long, including the petiole
- Obvious stipules at the base of the petiole
- Dark green, glabrous, and wrinkled on top; slightly waxy and pubescent underneath
- Serrated margins

Inflorescence
- 4-9 cm across
- White or pink
- Single or double flowered varieties

Fruits
- Fruit a hip that is fleshy, shiny, deep red

Habitat: In northern Europe (Denmark, Finland, Norway) this salt-tolerant species has escaped cultivation and is invading coastal habitats, where it can colonize dune environments and replace native vegetation.
Distribution: southeast Alaska; greenbelts in Anchorage

Comparison of native *Rosa* species to non-native *Rosa rugosa*:

	Rosa acicularis (prickly rose)	*Rosa nutkana* (Nootka rose)	*Rosa woodsii* (Wood's rose)
Thorns	**Thin, needle-like** thorns 	Few short, straight flattened prickles. No thorns on upper parts 	**Pairs of straight prickles** mostly at the base of leaves and stems 
Leaves	Underside of leaflets sparsely hairy	Underside of leaflets have **long hairs**	Pedicles, both sides of leaflets are **glabrous**
Distribution	South central, interior, and part of arctic alpine regions	Southeast Alaska	Interior boreal region

Johnny-jumpup ● *Viola tricolor*

Invasiveness Rank: 34 points Species Code: VITR

General Information:
Annual or biennial
10 to 30 cm tall

Description:
Stems
- Branched from the base

Leaves
- Elongate
- Round-toothed

Inflorescence
- Purple and yellow; usually darker at the top
- 5-parted
- Borne singly from leaf axils

Fruits
- Capsule with 3 valves
- Dark brown seeds

Habitat: garden escapee
Distribution: Pacific maritime and interior boreal regions

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Notes:

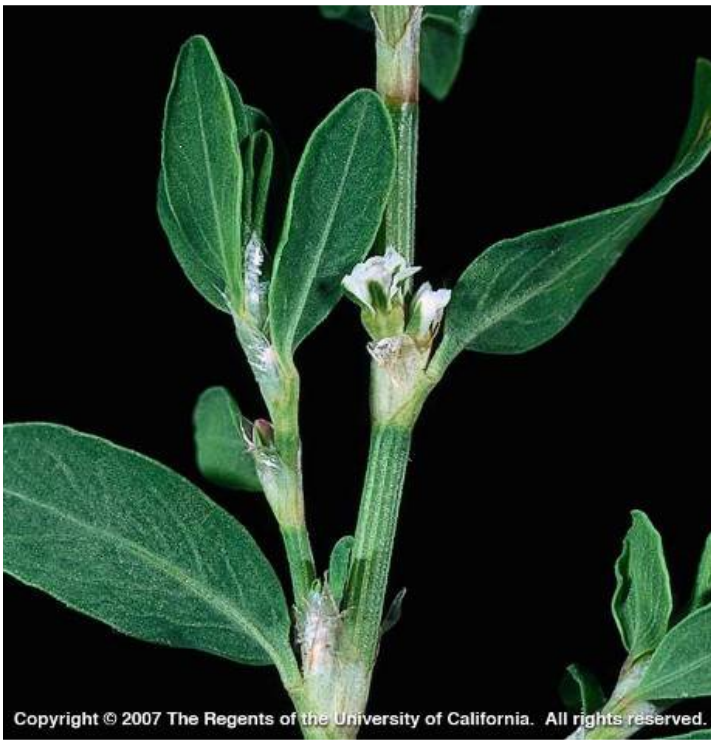
Buckwheat Family (Polygonaceae)

Common characteristics of Polygonaceae genera:

- Membranaceous sheaths where the leaf meets the stem
- Alternate, simple leaves
- Flowers small, perfect and regular
- Flowers borne in spike-like racemes, panicles or axillary clusters
- No petals, but with 3-6 sepals that sometimes resemble petals, referred to as tepals
- Fruit is an achene

Additional characteristics shared by *Fallopia* and *Rumex* species:

- Leafy stems
- Leaves entire
- Flowers without involucral bracts



Differences between *Fallopia* and *Rumex* species:

Fallopia species (knotweeds):

- Perennial or annual
- Mostly terrestrial, few aquatic
- 5 sepals often resemble petals; sepals are the same size and join at the base
- Achenes are lens-shaped or triangular
- Swollen joints

Rumex species (docks, sorrels):

- Mostly perennial
- Some aquatic
- Glabrous
- Flower consists of 6 segments; at maturity, the inner 3 enlarge to form valves enclosing the achene
- Achenes are 3-angled
- Sometimes the achene includes a 'grain-like' tubercle

Japanese knotweed • *Fallopia japonica*
syn. *Polygonum cuspidatum*

Invasiveness Rank: 87 points | Species Code: FAJA2

General Information:
Perennial
Up to 2.7 m tall

Description:
Roots
- Long, creeping rhizomes

Stems
- Bamboo-like stems
- Zig-zag pattern

Leaves
- 5-15 cm long
- Leaf base is flat or tapering (unlike *F. sachalinensis*, in which they are heart-shaped)
- Lower leaf with minute hairs along the veins, less than 0.1 mm (unlike *F. sachalinensis*, which has long wavy hairs along veins)
- Hairs are blunt-tipped and scabrous

Inflorescence
- Greenish-white
- In leaf axils and at the end of stems
- 6 tepals, outer 3 winged (unlike *Persicaria wallichii*, in which the tepals are not winged)

Fruit
- 3-sided
- Black, shiny

Habitat: moist habitats, waste places, right-of-ways, old homesites, neglected gardens
Distribution: throughout southeast Alaska, Kodiak

Giant knotweed • *Fallopia sachalinensis*
syn. *Polygonum sachalinense*

Invasiveness Rank: 87 points | Species Code: FASA3

General Information:
Perennial
2-4 m tall

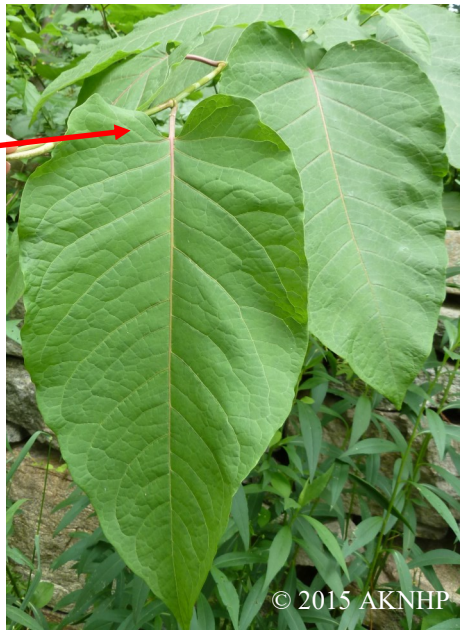
Description:
Roots
- Rhizomes

Stems
- Thick and less mottled relative to *F. japonica* and *F.* x*bohemica*
- Clustered, erect, sparingly branched
- Glabrous, glaucous

Leaves
- Ovate-oblong
- 15-30+ cm long, 7-25 cm wide
- Leaf bases are heart-shaped (unlike *F. japonica*, which are flat or tapering)
- Lower leaf surface has long, wavy hairs along veins, 0.2-0.6 mm (unlike *F. japonica* and *F.* x*bohemica*, which have hairs <0.1 mm)
- Petiole 1-4 cm long

Inflorescence
- In axils, panicle-like, 3-8 cm
- Greenish-white
- Outer 3 tepals winged (unlike *Persicaria wallichii*, which has no wings)

Fruit
- Brown, shiny, smooth



Habitat: disturbed sites
Distribution: only two known occurrences in Alaska; one near Ketchikan and a second in Kodiak

Bohemian knotweed • *Fallopia xbohemica*

syn. *Polygonum xbohemicum*

Invasiveness Rank: 87 points | Species Code: POBO10

General Information:
Perennial
1.5-2.5 m
Hybrid of *F. japonica* and *F. sachalinensis*

Description:
Roots
- Rhizomes

Stems
- Clustered, erect, branched many times
- Glabrous, glaucous

Leaves
- Ovate, bases flat to heart-shaped
- 5-25 cm long, 2-10 cm wide
- Petioles 1-3 cm long
- Lower leaf covered with fine, soft hairs along veins
- Hairs very short (<0.1 mm), with a triangular base and an acute tip (unlike *F. japonica*, in which hairs are blunt-tipped and scabrous; unlike *F. sachalinensis*, in which hairs are long and wavy)

Inflorescence
- At the ends of branches or in axils; erect or spreading, resembling a panicle or raceme, 4-12 cm long
- Greenish-white, white to pink
- Outer 3 tepals are winged (unlike *Persicaria wallichii*, which has no wings)

Fruits
- Dark brown, shiny, smooth
- 2.6-3.2 mm long

Distribution: one population in downtown Anchorage; multiple infestations in and around Juneau

Remarks: This species is distinguished from its parent species most reliably by the hair along veins on the underside of leaves; these are easiest to see on new leaves.

Black bindweed • *Fallopia convolvulus*
syn. *Polygonum convolvulus*

Invasiveness Rank: 50 points | Species Code: FACO

General Information:
Annual
0.5-1 m
Herbaceous and climbing

Description:
Roots
- Thin but deep

Stems
- Sometimes with a reddish tinge

Leaves
- Ovate to arrow-shaped, with heart-shaped base
- Backward-pointing basal lobes
- Long petioles
- 2-6 cm long, 1-4 cm wide

Inflorescence
- Small and white or greenish-white
- In racemes or clustered in axils

Fruits
- Triangular achene, 3-4 mm long

Habitat: common in cultivated fields, gardens, orchards; also found in waste areas, thickets, roadsides; occasionally present on riverbanks and in pastures

Distribution: all three ecogeographic regions, but only one population documented from the arctic-alpine region, in Aniak. The northernmost infestation is on the Steese Highway near Chatanika. There is a remote infestation at the Kantishna Roadhouse in Denali National Park

Remarks: When not in flower, *F. convolvulus* may be confused with *Convulvuluis arvensis* (field bindweed); see description in Other Families section.

KNOTWEEDS (MEMBRANOUS SHEATH AT LEAF BASE)

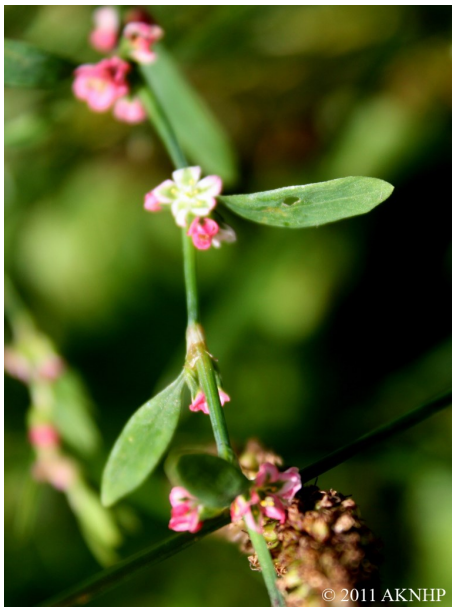
A comparison of *Fallopia* species:

	Longevity	Height (m)	Roots	Stems	Leaves	Under leaf hairs	Inflorescence	Fruit
Fallopia japonica (Japanese knotweed)	Perennial	2.7	Rhizomes	• Zig-zagged • Bamboo-like	• 5-15 cm long • Leaf base flat or tapered • Petiole 1-3 cm	• Minute hairs along veins • Blunt-tipped, scabrous, • Short (<0.1 mm)	• Greenish-white • At end of branches or in axils • Erect/spreading • 4-12 cm long • Outer 3 tepals winged	• Dark brown, shiny, smooth • 2-3.5 cm long
Fallopia sachalinensis (Giant knotweed)	Perennial	2-4	Rhizomes	• Somewhat mottled • Clustered, erect • Sparingly branched • Glabrous, glaucous	• 15-30+ cm long • Ovate/oblong • Leaf base heart-shaped • Petiole 1-4 cm long	• Wavy hairs along veins • Long (0.2-0.6 mm)	• Greenish-white • Panicle-like, in axils • 3-8 cm long • Outer 3 tepals winged	• Brown, shiny, smooth
Fallopia xbohemica (Bohemian knotweed)	Perennial	1.5-2.5	Rhizomes	• Clustered, erect • branched many times • Glabrous, glaucous	• 5-25 cm long • Ovate • Leaf base flat to heart-shaped • Petioles 1-3 cm long	• Fine, soft, hairs along veins • Short (<0.1 mm) • Hairs with triangular base and acute tip	• Greenish-white/ pink • At ends of branches or in axils • Erect/spreading • 4-12 cm long • Outer 3 tepals winged	• Dark brown, shiny, smooth, • 3 mm long
Fallopia convolvulus (Black bindweed)	Annual	0.5-1	No rhizomes	• Climbing • Sometimes with reddish tinge	• 2-6 cm long • Ovate to arrow-shaped • Leaf base heart-shaped • Petioles 0.5-5 cm long	• Not hairy	• White to greenish-white • In racemes or clustered in axils	• Triangular

BUCKWHEAT FAMILY (POLYGONACEAE)

Prostrate knotweed ● *Polygonum aviculare*

Invasiveness Rank: 45 points Species Code: POAV



General Information:
Annual
Stems 6-200 cm long
Mats up to 1.2 m in diameter

Description:
Stems
- Trailing
- <1 m long
- Silvery papery sheaths at leaf bases

Leaves
- Green to bluish-green to gray-green
- Leaves linear to oblong
- Stem leaves 1-4 times longer than branch leaves; largest leaves 2.5-6 cm long
- Sessile or with short petiole

Inflorescence
- 3-6 flowered clustered in the axils of reduced upper leaves
- Tepals reddish brown with white, pink, or red margins
- Tepals resemble petals and are not keeled

Fruits
- Achenes dull and mostly included within the calyx
- 2.2-3 mm long
- Dark brown

Habitat and distribution: human and naturally disturbed sites in all three ecogeographic regions

Leathery knotweed ● *Polygonum achoreum*

Invasiveness Rank: not yet ranked Species Code: POAC3

General Information:
Annual
50-70 cm tall

Description:
Stems
- Prostrate to ascending

Leaves
- Light green or yellowish-green
- Oval, obovate, or elliptic with a rounded tip
- Stem leaves are 1-3 times longer than branch leaves
- Short petiole

Inflorescence
- Clusters in the axils all along the stem
- Tepals yellow-green with a margin that is occasionally pinkish
- Margins appear keeled (unlike *P. aviculare*)

Fruits
- Achenes dull,
- Triangular

Habitat and distribution: only reported at Clam Cove in the Cook Inlet, and in Eagle on the Yukon River

Fowler's knotweed ● *Polygonum fowleri*

General Information:
Perennial
5-50 cm tall

Britton, N.L., and A. Brown. 1913.

Description:
Stems
- Branched from base
- Sometimes zig-zagged
- Prostrate to ascending

Leaves
- Light green or sometimes purple-tinged
- Elliptic to obovate, somewhat succulent
- 8-30 mm long, 4-15 mm wide
- Middle stem leaves are 1-3 times longer than branch leaves
- Petiole 2-7 mm

Inflorescence
- Axillary
- Tepals green with white to pink margins
- Not keeled

Fruits
- Olive-brown to dark brown
- Ovate
- Shiny

Habitat: stream banks, and sandy or gravelly seashores
Distribution: south coastal and western Alaska, including southeast Alaska, near Anchorage, in Kodiak, and on the Alaska and Seward Peninsulas
Remarks: More erect and shrubby than non-native *Polygonum* spp.

Alaska wild rhubarb ● *Polygonum alaskanum*

General Information:
Perennial
<2 m tall
Glabrous

Description:
Roots
- Woody rhizome
- Crown many branched

Stems
- Hollow

Leaves
- Sessile or with very short petiole
- Lanceolate to lanceolate-oval
- 5-20 cm long
- Wavy margins
- Dark green above, pale beneath
- Pale brown stipules 1.5-2 cm long

Inflorescence
- White
- Open panicle with many branches

Fruits
- Achenes ovate, triangular in cross-section
- Light brown

Habitat and distribution: common in the interior boreal region along roadsides, natural meadows, and other early successional sites

A comparison of *Polygonum* species:

	Longevity	Height (cm)	Stems	Leaves	Inflorescence	Achene
Polygonum aviculare **(prostrate knotweed)**	Annual	prostrate	• Trailing • <1 m long	• Bluish to gray green • Linear/oblong • Stem leaves (2.5-6 cm) longer than branch leaves • Sessile or with short petioles	• Clustered in axils of reduced upper leaves • Tepals reddish brown with white/pink/red margins	• Dull, • Dark brown
Polygonum achoreum **(leathery knotweed)**	Annual	50-70	• Prostrate to • ascending	• Light or yellowish-green • Ovate/obovate/elliptic • Rounded tip • 8-30 mm long • Stem leaves longer than branch leaves • Short petiole	• Flowers in axils • Tepals green with white/pink margins • Margins appear keeled	• Dull • Triangular
Polygonum fowleri **(Fowler's knotweed)**	Annual	5-50	• Erect and shrubby relative to non-natives • Sometimes zig-zagged	• Light green to purplish • Obovate/elliptic • 8-30 mm long • Middle stem leaves longer than branch leaves • Somewhat succulent • Petiole 2-7 mm	• Flowers in axils • Tepals green with white to pink margins • Not keeled	• Olive-brown/ dark brown • Ovate
Polygonum alaskanum **(Alaska wild rhubarb)**	Perennial	<200	• Hollow	• Dark green above, pale beneath • Lanceolate • 5-20 cm long • Wavy margins • Stipules 1.5-2 cm • More or less sessile	• Open panicle with many branches • White	• Light brown, • Triangular in cross section; • Ovate

Himalayan knotweed ● *Persicaria wallichii*

syn. *Polygonum polystachyum*

Invasiveness Rank: 80 points | Species Code: PEWA18

General Information:
Perennial
<1.8 m

Description:
Roots
- Creeping rhizomes

Stems
- Ribbed
- Red-brown
- Erect and branching

Leaves
- Alternate
- Lance-shaped
- 9-22 cm long
- Long-tipped (unlike the three non-native *Fallopia* spp., which are indistinctly-tipped)
- Leaf bases flat or heart-shaped
- Membranaceous sheaths are red-brown and 1-4 cm long

Inflorescence
- Wide and spreading
- White-pink (unlike the three non-native *Fallopia* spp., which have greenish-white tepals)
- 6 tepals without wings (unlike the three non-native *Fallopia* spp., which have wings on the outer three tepals)

Habitat: moist sites, disturbed sites, roadsides, fields, waste areas; in the Pacific Northwest it is known to establish in areas disturbed by river action or flooding
Distribution: southeast Alaska in the vicinities of Ketchikan, Metlakatla, and Canada's Queen Charlotte Islands (also known as the Haida Gwaii)

Curlytop knotweed • *Persicaria lapathifolia*
syn. *Polygonum lapathifolium*

Invasiveness Rank: 47 points | Species Code: POLA4

General Information:
Annual
10-20+ cm tall

Description:
Roots
- Rhizomes and stolons absent

Stems
- Ascending or decumbent
- Branch near the base
- Sheath margins are smooth and glabrous

Leaves
- Lanceolate to elliptic
- 2-6+ cm long
- Hairy underneath
- Scabrous margins

Inflorescence
- Arching or nodding, at the ends of branches or in axils
- Tepals greenish to pale pink to whitish

Fruits
- Achenes lens-shaped, light brown, shiny

Habitat: wet lake edges
Distribution: southeast Alaska, Kodiak, Kenai Peninsula, Anchorage, Mat-Su Valley, Talkeetna

Spotted ladysthumb • *Persicaria maculosa*
syn. *Polygonum persicaria*

Invasiveness Rank: 47 points | Species Code: POPE3

General Information:
Annual
30-100 cm tall

Description:
Roots
- Rhizomes and stolons absent

Stems
- Erect to ascending
- Sheath margins with bristly hairs

Leaves
- Often with dark spots on top
- Lanceolate to elliptic to oblong
- 3-15 cm long

Inflorescence
- Erect spikes at the ends of branches or in axils
- Tepals are deep pink to purplish, 2.5 mm long

Fruits
- Achenes 3-angled or lens-shaped
- 2.5-3 mm long

Habitat: waste places
Distribution: Kodiak, Kenai Peninsula, Anchorage, Mat-Su Valley, north of Talkeetna along the Parks Highway

A comparison of *Persicaria* species:

	Longevity	Height (cm)	Roots	Stems	Leaves	Inflorescence	Achene
Persicaria wallichii (Himalayan knotweed)	Perennial	180	Creeping rhizomes	• Erect and branching • Sheaths red-brown, 1-4 cm long • Ribbed	• Lanceolate • Bases flat or heart-shaped • With a distinctly long tip • 9-22 cm long • hairy underneath	• Wide/spreading • White-pink	• 3-angled, • Brown, dull • 2-2.5 mm long
Persicaria lapathifolia (Curlytop knotweed)	Annual	20	Rhizomes absent	• Ascending to decumbent • Branching at base • Sheaths are smooth and glabrous	• Lanceolate/elliptic • Bases wedge-shaped • 2-6+ cm long • Hairy underneath • Scabrous margins	• Arching/nodding at the ends of branches or in axils • Greenish to pale pink/white	• Lens-shaped • Light brown • Shiny
Persicaria maculosa (Spotted ladysthumb)	Annual	30-100	Rhizomes absent	• Erect/ascending • Sheath margins with bristly hairs	• Lanceolate/elliptic/oblong • Bases tapered or wedge-shaped • 3-15 cm long • Often have dark spots on top • Smooth or with short stiff hairs	• Erect • Spikes at the ends of branches or in axils • Deep pink to purplish	• 3-angled or lens-shaped • 2.5-3 mm long

Common sheep sorrel • *Rumex acetosella*

Invasiveness Rank: 51 points Species Code: RUAC3

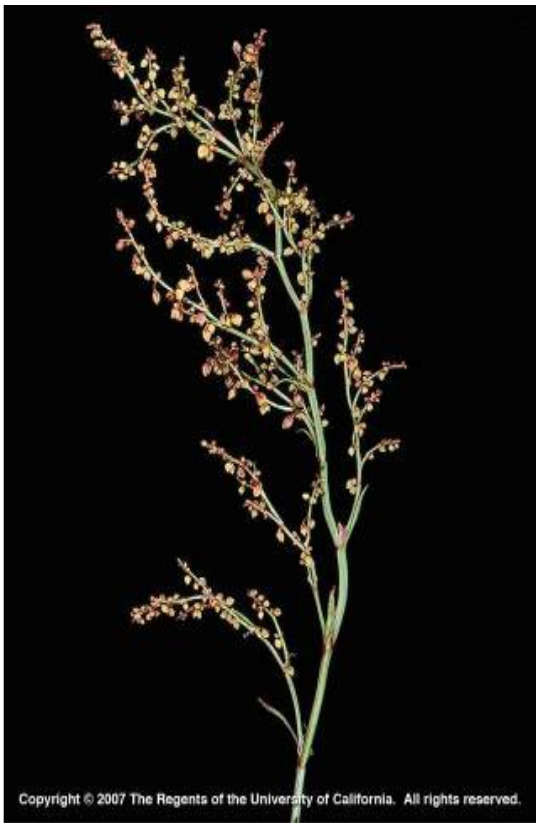
General Information:
Perennial
10-60 cm tall

Description:
Leaves
- Basal leaves arrow-shaped and narrow with lateral lobes pointing upwards or outwards

Inflorescence
- Reddish, loose panicle
- Male and female flowers on separate plants

Fruits
- Three valves surrounding the fruit not longer than the fruit

Habitat: roadsides, cultivated areas, waste places; shows up in relatively remote areas
Distribution: common in Pacific maritime and interior boreal regions; also present in southwest Alaska



Garden sorrel • *Rumex acetosa* ssp. *alpestris*

General Information:
Perennial
0.1-1.0 m tall

Description:
Roots
- Short rhizome

Leaves
- Basal leaves arrow shaped and broad with downward pointing triangular lobes (unlike *R. acetosella*, which has narrow leaves with upward or outward pointing lobes)

Flowers
- Male and female flowers on separate plants

Fruits
- Wine-colored
- Net-like veining
- 2-2.5 mm long

Habitat and distribution: most alpine meadows in western Alaska

Grassleaf sorrel • *Rumex graminifolius*

General Information:
Perennial
5-30+ cm tall

Description:
Leaves
- All leaves narrowly linear, although a few may be faintly arrow-shaped

Fruit
- Valves enclosing the fruit up to twice the length of the fruit

Habitat and distribution: sandy places in tundra in western Alaska; rare

Curly dock • *Rumex crispus*

Invasiveness Rank: 48 points | Species Code: RUCR

General Information:
Perennial
0.4-1.5 m tall

Description:
Leaves
- Lanceolate
- Tapered at the base
- Wavy margins

Inflorescence
- Large terminal clusters

Fruits
- Reddish with white tubercles
- Valves not toothed

Habitat and distribution: disturbed sites; all three ecogeographic regions but mostly in southeast Alaska, Kenai Peninsula, Anchorage

Dooryard dock • *Rumex longifolius*

Invasiveness Rank: 48 points Species Code: RULO2

General Information:
Perennial
0.5-1.5 m tall

Description:
Leaves
- Basal leaves stalked
- Truncated or heart-shaped at the base, broadest at the middle
- Sometimes with wavy margins

Inflorescence
- Large terminal clusters

Fruits
- Tubercles absent
- Valves not toothed

Habitat and distribution: waste places; scattered locations in Pacific maritime and interior boreal regions

Bitter dock • *Rumex obtusifolius*

Invasiveness Rank: 48 points | Species Code: RUBO

General Information:
Perennial
0.6-1.5 m tall

Description:
Leaves
- Heart-shaped base
- Wavy margins

Inflorescence
- Distinct small whorls

Fruits
- Some with tubercles
- Valves distinctly toothed

Habitat and distribution: agricultural areas, disturbed sites, riparian areas; only recorded from the southeast

Arctic dock • *Rumex arcticus*

General Information:
Perennial
<50-100 cm tall
(only 10 cm tall in the Arctic)

Description:
Roots
- Stout rhizome

Stem
- Unbranched or just a few upright branches

Leaves
- Dark green to reddish-purple
- Most leaves basal with long petioles
- Oblong to oval to lanceolate with square or wedge-shaped bases
- 7-30 cm long, 2-5 cm wide

Inflorescence
- Simple or short-branched panicle
- Flowers small, reddish

Fruit
- Achenes 3-4 mm long
- Tubercles absent

Habitat: wet areas, snow beds
Distribution: common in western and northern Alaska

Western dock • *Rumex occidentalis*
syn. *Rumex fenestratus*

General Information:
Perennial
≥ 1 m tall

Description:
Roots
- Taproot

Stems
- Yellowish-green to reddish

Leaves
- Mostly basal with long petioles
- Oblong to lanceolate with heart-shaped bases
- Crisped margins
- 30 cm long

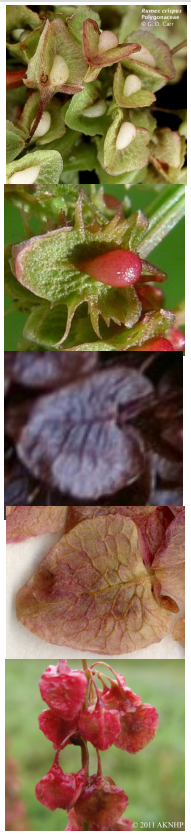
Inflorescence
- Very large panicle with erect branches
- Pedicles 5-7 mm long

Fruits
- Reddish brown
- No tubercles

Habitat: marshy areas; common bordering boreal or alpine areas; not found in the Arctic

A comparison of five large *Rumex* species:

	Basal Leaves	Flower Cluster	Fruit Scale
Rumex crispus **(curly dock)**	Tapered bases Margins strongly wavy	Dense	Margins entire 3 tubercles
Rumex obtusifolius **(bitter dock)**	Broad, flat Heart-shaped bases Margins entire Flat	Usually loose and widely spaced in whorls	Distinctly toothed Usually 1 tubercle
Rumex longifolius **(dooryard dock)**	Rounded to truncate base Margins entire	Usually dense	Margins entire Tubercles usually absent
Rumex arcticus **(arctic dock)**	Often very purple Flat, obtuse tip Tapered base Margins entire	Interrupted	Margins entire Tubercles absent
Rumex occidentalis syn. R. fenestratus **(western dock)**	Acute tip Heart-shaped or rounded base Margins entire	Dense to interrupted	Margins entire Tubercles absent



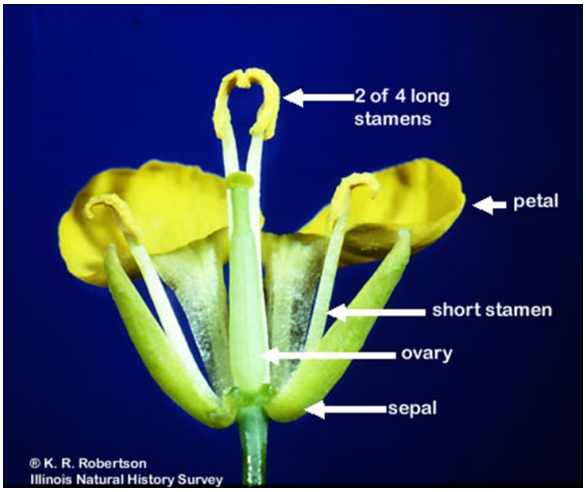
Photos credits
R. crispus: http://www.botany.hawaii.edu, G.D. Carr
R. obtusifolius: http://www.discoverlife.org
R. longiflolius: http://www.plant-identification.co.uk, Carl Farmer
R. arcticus: http://nature.ca
R. occidentalis ©2011 AKNHP

Mustard Family (Brassicaceae)

- Annual or perennial herbs
- Alternate leaves, simple, lobed or divided
- Often with a basal rosette
- Often with simple to complex hairs
- Inflorescence is a raceme
- Fruit pod-like and open from the base toward the apex
- Fruits are siliques (long and narrow) or silicles (length is less than 3 times the width).

Flowers

- 4 petals
- 4 sepals
- Arranged in a "cross" pattern, but can be variable
- **6 stamens**
  - 4 long stamens, visible
  - 2 short, hidden in the corolla



Seed pods

Siliques - generally longer than broad, often with a "beak or "point" at the tip

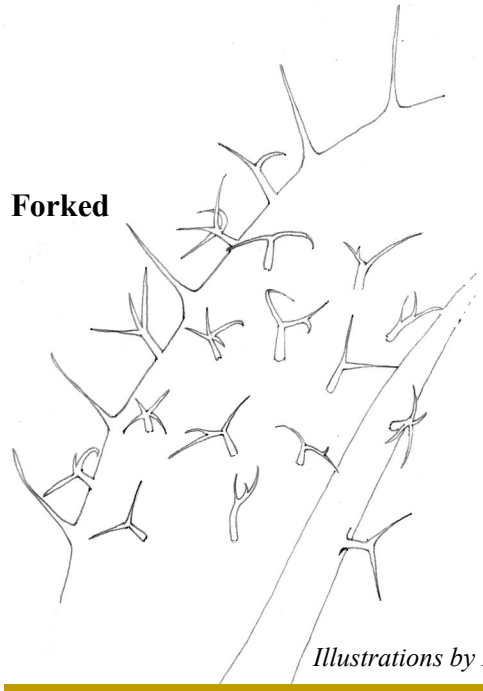
Silicles - length is less than 3 times the width

Types of hairs

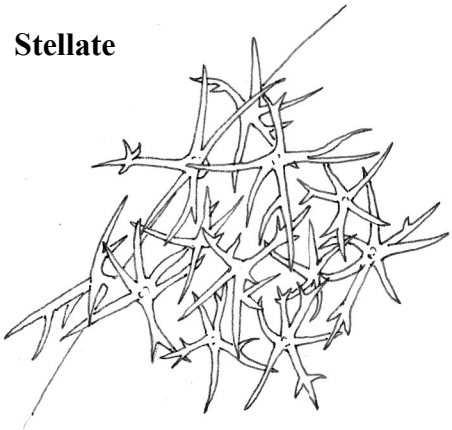
Simple

Glandular

Forked



Stellate



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Shepherd's purse ● *Capsella bursa-pastoris*

Invasiveness Rank: 40 points Species Code: CABU2

General Information:
Annual or winter annual
10-50 cm tall
Mix of simple and other types of hairs

Description:
Leaves
- Slightly to deeply lobed
- Basal rosette composed of entire to dissected leaves
- Stem leaves clasping and arrow-shaped at the base

Inflorescence
- White

Fruits
- Heart-shaped silicles
- Silicles almost as long as they are broad

Habitat: roadsides, cultivated fields, waste areas
Distribution: common in the Pacific maritime and interior boreal regions; northernmost occurrence is in Arctic Village

Field pennycress • *Thlaspi arvense*

Invasiveness Rank: 42 points | Species Code: THAR5

General Information:
Annual
15-45 cm tall
Strong odor
No hairs

Description:
Stem and Leaves
- Yellowish-green
- Basal leaves lanceolate, simple, entire to lobed
- Stem leaves arrow-shaped

Inflorescence
- White
- Clustered in racemes at the end of branches

Fruits
- Silicle with broad wings
- Circular with a notch at the top
- Resembling a penny

Habitat: roadsides, fields, waste places, lawns, gardens, railroad tracks, stream banks, bluffs, thickets, slopes, floodplains, woods
Distribution: somewhat common in the Pacific maritime and interior boreal regions; northernmost records from Denali Park and Delta

Common peppergrass • *Lepidium densiflorum*

Invasiveness Rank: 25 points Species Code: LEDE

General Information:
Annual or winter annual
10-60 cm tall

Description:
Leaves
- Basal rosette
- Stem leaves are toothed or deeply lobed

Inflorescence
- No petals, or petals are shorter than sepals
- Green-white
- Inconspicuous
- <4 mm wide
- 2 stamens

Fruits
- Heart-shaped to round silicles
- Silicles have narrow wings
- About 3 mm long
- Contain two seeds
- Densely arranged along the stem

Habitat: roadsides, cultivated fields, waste areas
Distribution: Interior boreal and Pacific maritime regions; northernmost record is Arctic Village, southernmost is the Kenai Peninsula
Remarks: The nativity of this species is disputed: Hultén 1968 lists it as introduced, while Flora of North America lists it as occurring in Alaska but introduced to Europe and Asia. Cody (Flora of the Yukon Territories) makes no mention of its nativity.

Differences Between *L. densiflorum* and *L. latifolium*

	Height	Inflorescence	No. of Stamens
Common peppergrass *Lepidium densiflorum*	10-60 cm	single raceme or sparsely branched raceme	2
Broadleaved pepperweed *Lepidium latifolium*	50-200 cm	dense pyramid-shaped cluster	6

Broadleaved pepperweed • *Lepidium latifolium*

Invasiveness Rank: 71 points | Species Code: LELA2

General Information:
Perennial
0.5-2 m tall

Description:
Roots
- Widely spreading, thick rhizomes

Stems
- Numerous, simple, erect, branching at the ends

Leaves
- Oblong, elliptic-ovate or lanceolate with wedge-shaped base
- Margins entire or serrated
- 2-30 cm long, 6-8 cm wide
- 1-9 cm petiole on lower leaves; stem leaves smaller and lacking petioles

Inflorescence
- Dense clusters in pyramid-shaped panicles
- White, small (1.5 mm)
- Petals are white and twice the length of sepals (sepals <1 mm)
- 6 stamens

Fruits
- Silicle containing 2 seeds
- Not winged

Habitat: disturbed sites, roadsides, ditch banks; also in a variety of natural habitats ranging from wetlands to dry flats and hillsides
Distribution: Only reported from Anchorage

Garlic mustard • *Alliaria petiolata*

Invasiveness Rank: 70 points Species Code: ALPE4

General Information:
Biennial
< 1 m tall
Strong garlic odor when crushed

Description:
Stems
- Unbranched

Leaves
- Basal leaves are kidney-shaped
- Stem leaves are heart-shaped
- 5-10 cm wide

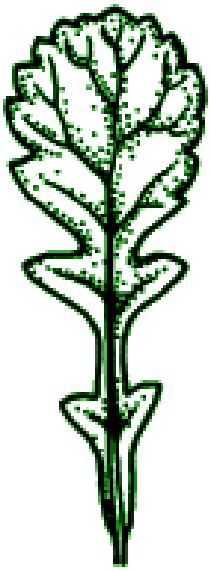
Inflorescence
- White

Fruits
- Siliques
- 20-45 mm long, 0.7-2 mm wide

Habitat: roadsides, abandoned fields, open forest, clearcuts
Distribution: Juneau
Remarks: There are other white flowered mustards in Alaska. Unlike *Allaria petiolata*, however, none have large, well-developed and toothed stem leaves, or a garlic scent.

Lyrate rockcress • *Arabidopsis lyrata*
syn. *Arabis lyrata*

General Information:
Biennial or perennial
5-50 cm tall



Description:
Leaves
- Basal leaves lyre-shaped and oblong
- Stem leaves not stalked

Fruits
- Siliques slightly flattened
- 20-35 mm long, 1.25-1.5 mm wide

Habitat: sandy and rocky slopes, open areas
Distribution: interior boreal and Pacific maritime regions; common along the coast

Ball mustard • *Neslia paniculata*

Invasiveness Rank: not ranked | Species Code: NEPA3

General Information:
Annual
< 0.8 m tall

Description:
Stems
- Branched many times
- Star-shaped hairs

Leaves
- Arrow-shaped
- Clasping

Inflorescence
- Small, yellow

Fruits
- Silicles a roundish, pitted pod, with a net-work of veins
- One seed per pod (unlike weedy *Rorippa* species found in Alaska, which have more seeds per pod)

Habitat: fields, grassy mountain slopes, plains, roadsides, cultivated fields
Distribution: Anchorage, Kenai Peninsula

Flixweed • *Descurainia sophia*

Invasiveness Rank: 41 points Species Code: DESO2

General Information:
Annual, winter annual, or biennial
< 1 m tall

Description:
Stems
- Numerous branches
- Star-shaped or tree-like hairs
- Hairs never glandular

Leaves
- Grayish-green
- Tripinnate, divided into narrow segments

Inflorescence
- Yellow

Fruits
- Siliques not overtopping developing flowers
- Inside of siliques, the septum with longitudinal bands

Habitat: roadsides, waste places, disturbed sites, railroads, hillsides, mountain slopes, stream banks, fields, lawns, pastures
Distribution: arctic-alpine and interior boreal regions

Northern tansymustard • *Descurainia sophioides*

General Information:
Annual,or biennial
0.1-1.5 m tall

Description:
Very similar to *D. sophia*, but:
- Hairs with or without glands and may or may not be tree-shaped
- Leaves are bipinnate
- Siliques overtop developing flowers
- Septum inside of siliques without longitudinal bands

Habitat: gravel bars, disturbed soil, roadsides
Distribution: arctic-alpine and interior boreal regions

Dog mustard • *Erucastrum gallicum*

syn. *Brassica erucastrum*

Invasiveness Rank: not yet ranked | Species Code: ERGA

General Information:
Annual
0.3-1.2 m tall
Simple hairs

Description:
Leaves
- Deeply pinnately lobed

Inflorescence
- Yellow, sparse
- Lowermost flowers and seed pods in the of small leaves

Fruits
- 2.5-5 cm
- Approximately 4-sided

Habitat: roadsides, waste places, disturbed sites, railroads, fields, gardens
Distribution: Pacific maritime

Field mustard ● *Brassica rapa*

Invasiveness Rank: 50 points Species Code: BRRA

General Information:
Winter annual or biennial
0.3-1.2 m tall

Description:
Stems and leaves

- Smooth and green
- Lower leaves < 30 cm long with a large terminal lobe and smaller lateral lobes
- Upper leaves small, clasping, and not lobed
- Underside of leaves hairy

Inflorescence

- Deep yellow
- 6-11 mm long
- When open, flowers equal or overtop buds

Fruits

- Siliques 3.8-6.4 cm long
- Borne on long pedicles
- Pods without hairs
- Pods with a conspicuous beak 13-19 mm long and round in cross-section

Habitat: cultivated fields, abandoned cabins, roadsides; beaches and other naturally disturbed sites along the coast
Distribution: interior boreal and Pacific maritime regions

Rapeseed • *Brassica napus*

Invasiveness Rank: 47 points | Species Code: BRNA

General Information:
Annual or biennial
Up to 1.5m tall
Similar to *B. rapa*

Description:
Inflorescence

- Gold to cream-to pale yellow
- Petals broadly egg-shaped, 10-16 mm long and 6-9 mm wide
- When open, flowers do not overtop buds

Habitat: abandoned gardens, old home sites, roadsides, waste areas
Distribution: Fairbanks, urban areas in south-central Alaska
Remarks: *Brassica napus* is an important oil (rapeseed or canola oil) and vegetable crop (rutabaga) that easily escapes cultivation. In temperate North America it is a widespread and naturalized weed.

Rorippa species and *Barbarea* species

Description:
Weedy but native species
All hairs are simple and glandular
Stems
- *Barbarea* species have angled edges

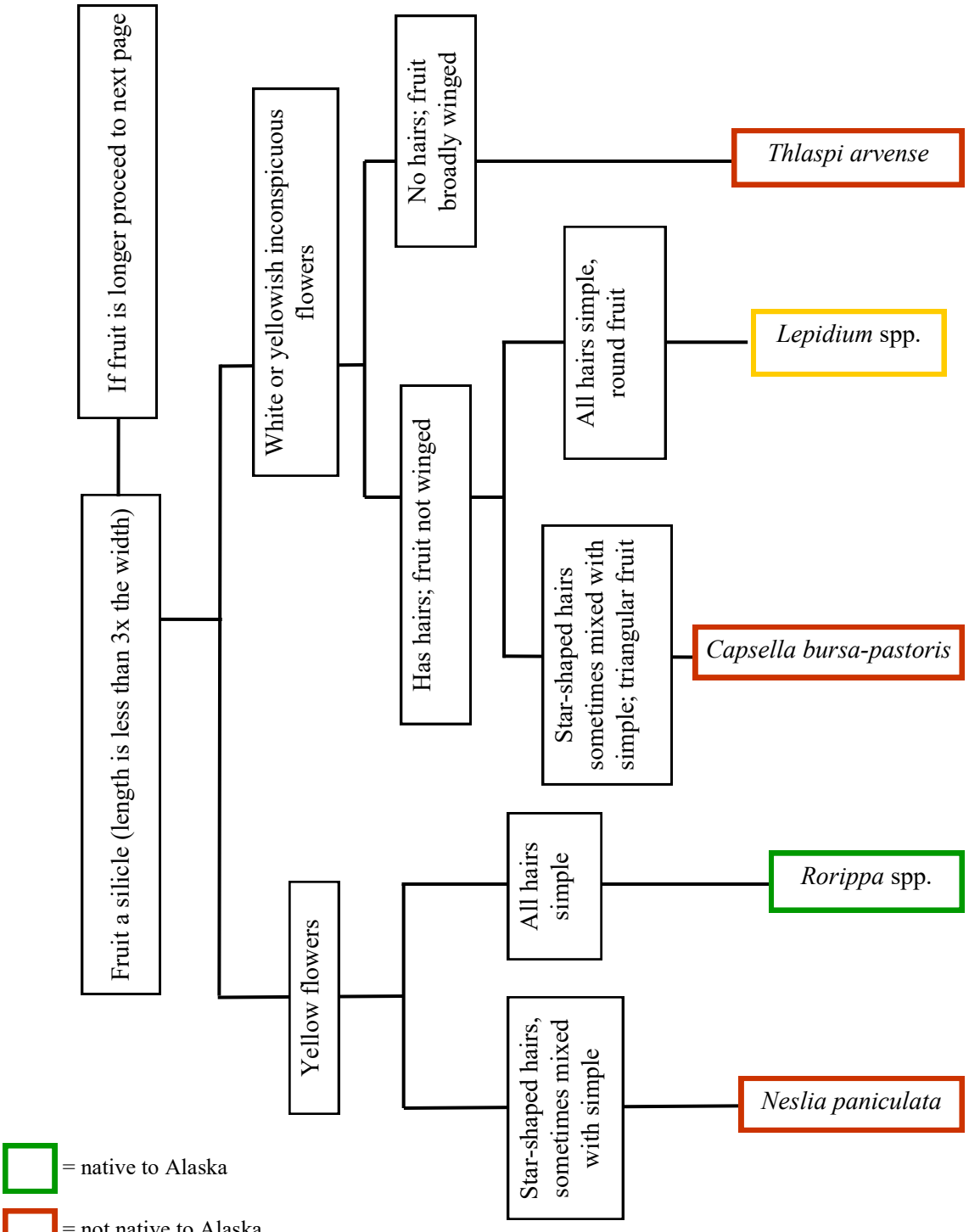
Inflorescence
- Yellow

Fruits
- Silique 3-5 times longer than broad
- *Rorippa* species with siliques shorter than 6 cm

Habitat: roadsides, moist areas; very common
Distribution: arctic-alpine and interior boreal regions

Rorippa islandica

Barbarea orthoceras



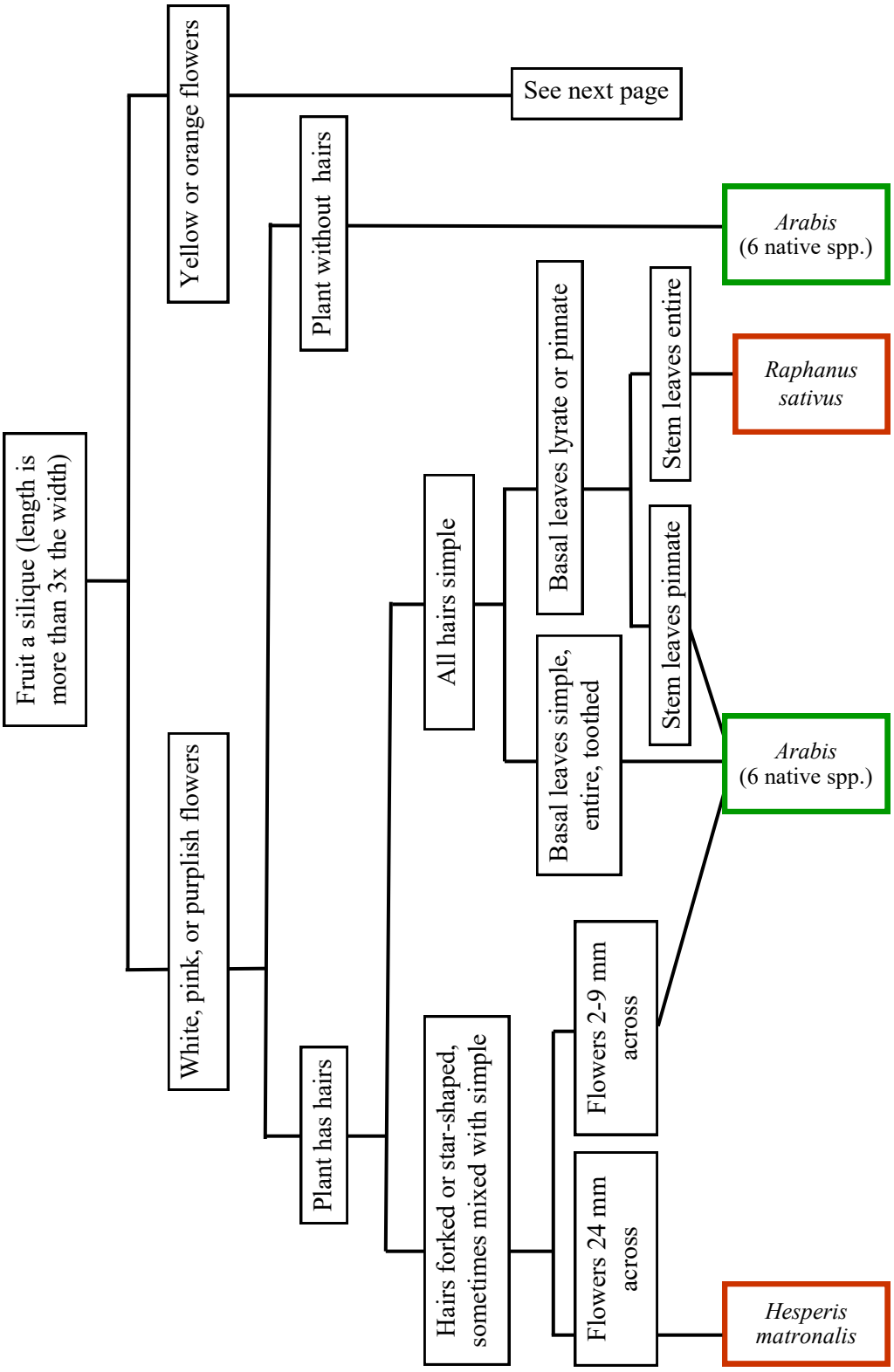
= native to Alaska

= not native to Alaska

= disputed native status OR large genus with some species native and some not native to Alaska

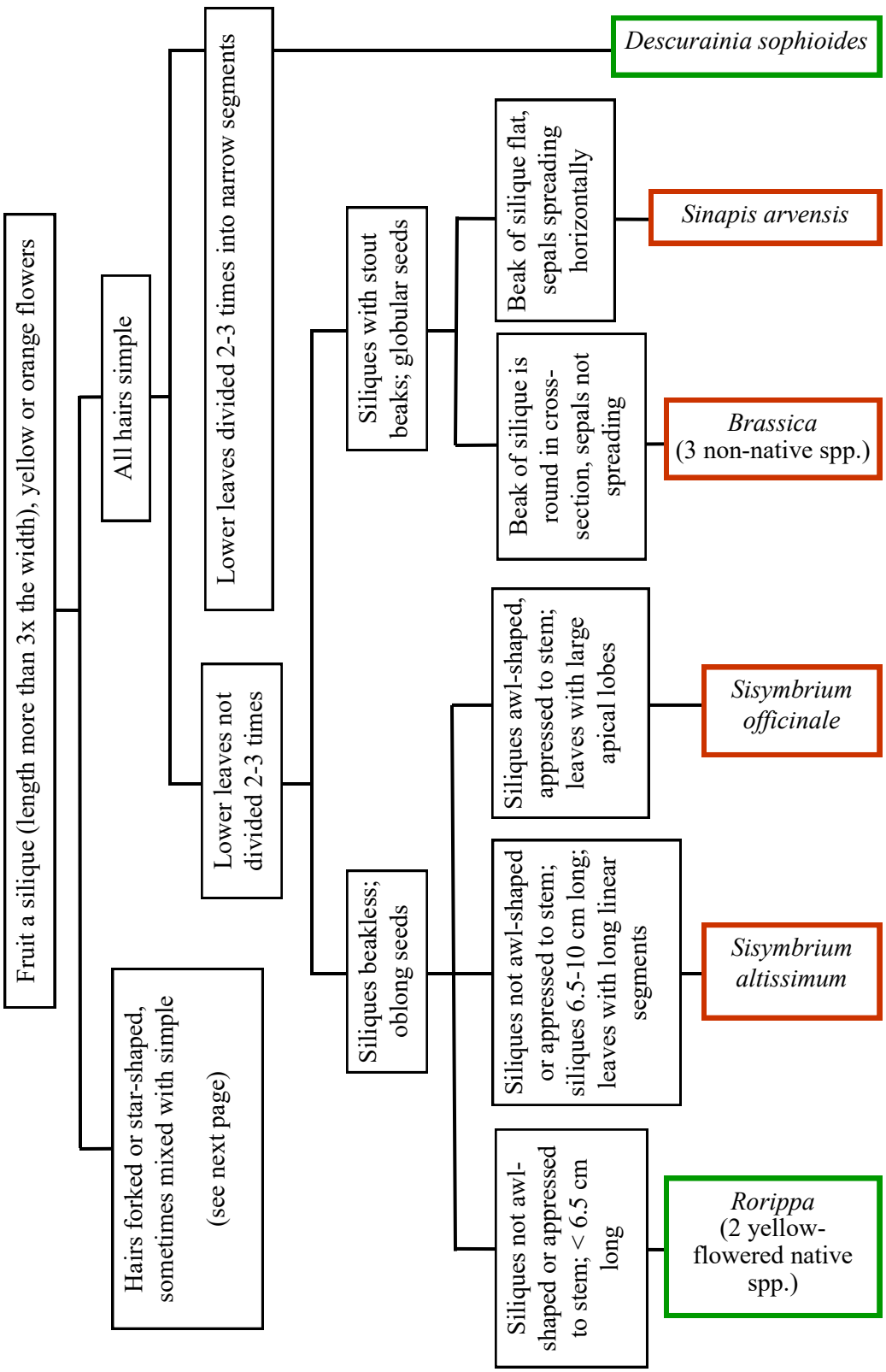
KEY TO MUSTARDS OF DISTURBED HABITATS IN ALASKA

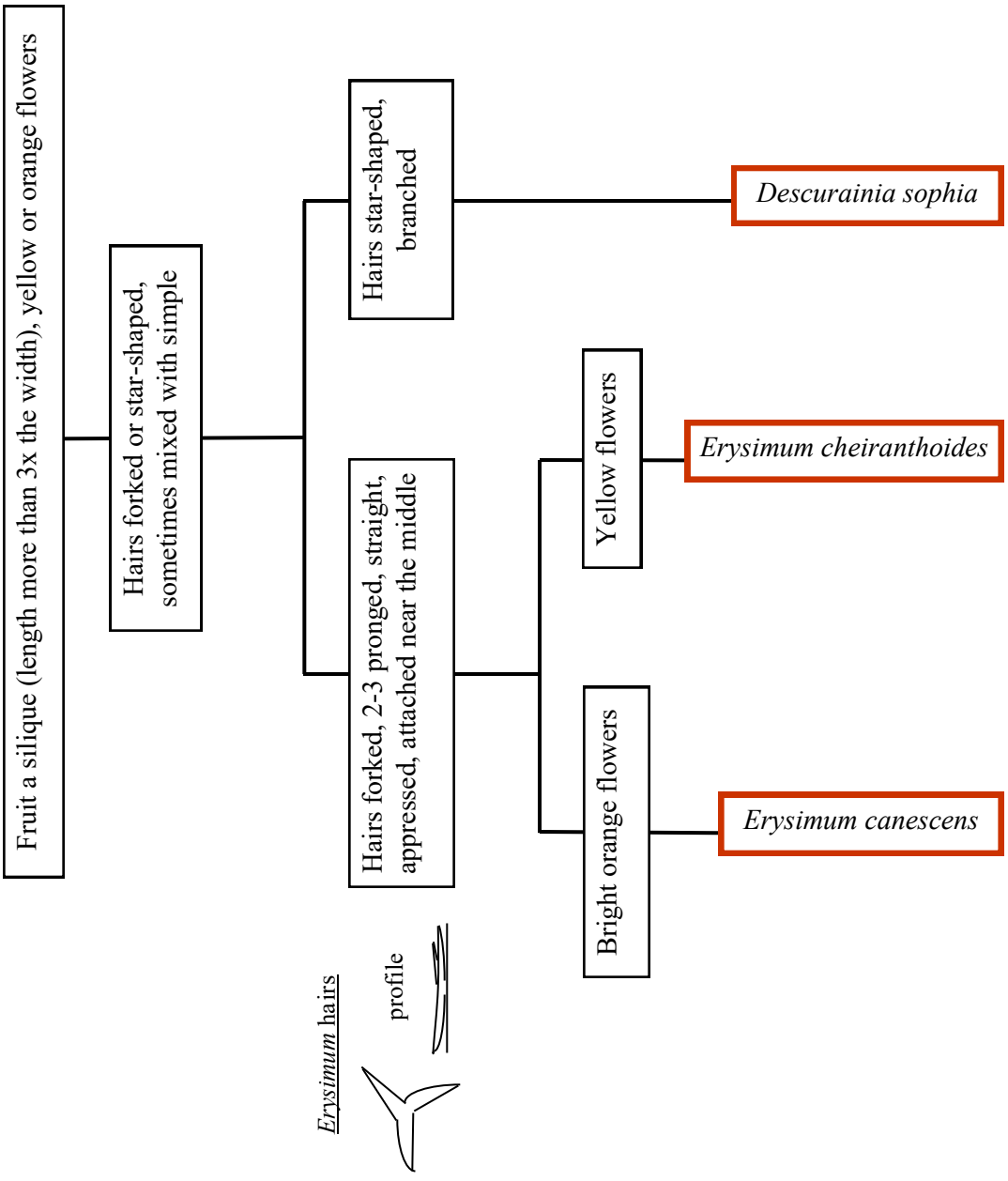
Partial key to mustards of disturbed habitats; consult Hultén (1968) or Welsh (1974) for more info



KEY TO MUSTARDS OF DISTURBED HABITATS IN ALASKA

Partial key to mustards of disturbed habitats; consult Hultén (1968) or Welsh (1974) for more info


Fruit a silique (length more than 3x the width), yellow or orange flowers
All hairs simple
Lower leaves divided 2-3 times into narrow segments
Descurainia sophioides
Lower leaves not divided 2-3 times
Siliques with stout beaks; globular seeds
Beak of silique flat, sepals spreading horizontally
Sinapis arvensis
Beak of silique is round in cross-section, sepals not spreading
Brassica (3 non-native spp.)
Siliques beakless; oblong seeds
Siliques awl-shaped, appressed to stem; leaves with large apical lobes
Sisymbrium officinale
Siliques not awl-shaped or appressed to stem; siliques 6.5-10 cm long; leaves with long linear segments
Sisymbrium altissimum
Siliques not awl-shaped or appressed to stem; < 6.5 cm long
Rorippa (2 yellow-flowered native spp.)
Hairs forked or star-shaped, sometimes mixed with simple
(see next page)



Key to mustards of disturbed habitats in Alaska

Partial key to mustards of disturbed habitats; consult Hultén (1968) or Welsh (1974) for more info

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Notes:

Recommended Floras and Field Guides

Regional floras

Hultén, E. 1968. Flora of Alaska and Neighboring Territories.
Good reference; included all non-natives at the time he wrote the book and most natives growing on disturbed sites.

Welsh, S.L. 1974. Anderson's Flora of Alaska and adjacent parts of Canada. Brigham Young University Press, Provo, Utah.
A second Alaska-specific flora. Good for comparison of or keying out on the basis of quantitative traits and measurements.

Cody, W. 1974. Flora of the Yukon Territory.
Keys often use better diagnostic traits to separate genera and species than Hultén.

Douglas, G.W., G.B. Straley, D. Meidinger, and J. Pojar. 1998. Illustrated Flora of British Columbia. Vol. 1-8. British Columbia: Ministry of Environment, Lands and Parks, Ministry of Forests.
Good for weed identification; very good for Asteraceae family.

Skinner, Q., S. Wright, R. Henszey, J. Henszey, and S. Wyman. 2012. A Field Guide to Alaska Grasses. Education Resources Publishing, Cumming, Georgia.
The most comprehensive guide to all grasses occurring in Alaska.

Regional field guides

Pojar, J., and A. MacKinnon. 2013. Alpine plants of the Northwest, Wyoming to Alaska. Lone Pine Publishing, Edmonton, Alberta.
Most up-to-date regional flora but concentrates on native plants. Includes high quality photos.

Johnson, D., L. Kershaw, and A. MacKinnon. 1995. Plants of the Western Boreal Forest and Aspen Parkland.
Includes many exotics with good habitat descriptions and notes about nativity and distribution, good for South-central and Interior Alaska.

Pojar, J. and A. MacKinnon. 1994. Plants of the Pacific Northwest Coast.
Includes many exotics with good habitat descriptions and notes about nativity and distribution. Good for Southeast Alaska.

Guide to botanical terminology

Harris, J.G. and M.W. Harris. 2001. Plant Identification Terminology: An Illustrated Glossary.
Great pictorial explanations of botanical terminology to help you decipher the floras.

Non-native plant field guides

Royer, F. and R. Dickinson. 1999. Weeds of the Northern US and Canada.
Perhaps is the best, especially in combination with Weeds of the West.

Whitson, T.D. (ed), et al. 2005. Weeds of the West.
Botanical descriptions of weeds in the western U.S. with emphasis on agricultural contaminants.

Guide to Weeds in British Columbia. Available online: http://www.weedsbc.ca/pdf/GuidetoWeeds.pdf
Habitat descriptions and notes about nativity and distribution.

[AKEPIC] Alaska Exotic Plants Information Clearinghouse. 2005. Invasive Plants of Alaska.
Alaska-specific, non-native plant guide book. Provides 'user-friendly' plant descriptions including some diagnostic traits, and covers the known or expected ecological impacts of key invasives in Alaska.

DiTomaso, J.M. and E.A. Healy. 2007. Weeds of California and Other Western States. University of California Agriculture and Natural Resources. Oakland, CA. 1808 pp.
A two-volume set with supplemental CD of plant images.

Michael Shephard, M., T. Huette, J.M. Nielsen, C. Lindemuth. 2007. Selected Invasice Plants of Alaska. USDA Forest Service.

Everman, W.A, C.L. Sprague, S.A. Gower and R.J. Richardson. 2010. An IPM Pocket Guide for Weed Identification in Field Crops.
Who doesn't love a pocket guide? Great images of seedlings.

Morgan, V. and M. Sytsma. 2009. Introduction to Common Native & Potential Invasive Freshwater Plants in Alaska. Prepared for the Alaska Department of Fish and Game. Available online: http://aknhp.uaa.alaska.edu/botany/akepic/publications
Field guide for identifying freshwater plants in Alaska.

Online resources - general botany

eFloras
A compilation of floras including, in part, the Flora of North America.
http://www.efloras.org/

USDA PLANTS Database
Standardized information about the vascular plants, mosses, liverworts, hornworts, and lichens of the U.S. and Canada.
http://plants.usda.gov/

ITIS (Integrated Taxonomic Information System)
Taxonomic information on plants, animals, fungi, and microbes of North America and the world.
http://www.itis.gov/

Arctos
A multi-institution database, which includes collections of the University of Alaska Museum Herbarium (ALA). Provides information for most of ALA's plant specimens (includes native and non-native species).
http://arctos.database.museum/home.cfm

Alaska Plant Materials Center
Provides testing, production, development and distribution of materials to resource industries to meet environmental requirements and includes development of a native seed industry.
http://www.plants.alaska.gov/

Consortium of Pacific Northwest Herbaria
Over 3.6 million specimen records and numerous online electronic resources are managed by the region's 60 herbaria. Includes the herbaria at both the museum of the North (ALA) and Alaska Natural Heritage Program (AKNHP-UAAH).
http://www.pnwherbaria.org/

Cooperative Extension Service
The Alaska Integrated Pest Management Program addresses the public need for pest management education within the state. General educational outreach services provided include evaluation and identification of insect, plant and disease specimens, recommendation of control options to reduce pest problems and site visits to examine tree disorders and invasive plants in the field.
http://www.uaf.edu/ces/ipm

Panarctic Flora Checklist
A collaborative and ongoing effort to establish a unified list of accepted names for arctic vascular plants, with annotations to highlight and explain taxonomic disagreements.
http://nhm2.uio.no/paf/

Online resources - non-native specific

AKEPIC (Alaska Exotic Plant Information Clearinghouse)
Includes publications, species biographies, invasiveness ranking documents and the non-native species tracking list for Alaska
http://accs.uaa.alaska.edu/invasive-species/non-native-plants

AKEPIC Data Portal
An interactive, web-based mapping system for over 100,000 record locations of non-native plant species in Alaska and the Yukon Territory
http://aknhp.uaa.alaska.edu/apps/akepic/

CNIPM (Alaska Committee for Noxious and Invasive Plant Management)
Aims to heighten awareness of problems associated with non-native invasive plants and to bring about greater statewide coordination, cooperation and action to halt the introduction and spread of undesirable plants.
http://www.uaf.edu/ces/cnipm/

Invasive.org
Information and images of invasive and exotic species of North America; based at The University of Georgia's Center for Invasive Species and Ecosystem Health.
www.invasive.org

EDDMapS (Early Detection and Distribution Mapping System)
Displays the distribution of invasive species in the U.S., including Alaska.
http://www.eddmaps.org/alaska/

Center for Invasive Plant Management
Promotes ecologically sound management of invasive plants by facilitating collaboration and partnerships among scientists, educators, and land managers; based at Montana State University.
http://www.weedcenter.org/

Invaders Database System
Exotic plant names and weed distribution records for five states in the northwestern United States; based at the University of Montana.
http://invader.dbs.umt.edu/

Online resources - non-native specific (continued)

US Forest Service – Forest Health Protection
Invasive Plants program works to protect Alaska's forest and tree resources from damaging outbreaks of insects, diseases and invasive plants.
http://www.fs.fed.us/r10/spf/fhp/

AACD (Alaska Association of Soil and Water Conservation Districts)
Actively supports 12 statewide Soil and Water Conservation Districts— Anchorage, Southeast, Fairbanks, Homer, Kenai, Kenny Lake, Kodiak, Mid-Yukon Kuskokwim, Palmer, Salcha-Delta, Upper Susitna, and Wasilla. The Invasive Plant Program coordinates the districts efforts to combat invasive weeds.
http://www.alaskaconservationdistricts.org/

Alaska Department of Fish and Game
Information on invasive plant species considered 'high priority threats.'
http://www.adfg.state.ak.us/special/invasive/invasive.php

Cooperative Weed Management Areas
Groups of federal, state, and local land managers, as well as individuals, who work together to protect Alaska from the threat of noxious, invasive weeds.
Anchorage: http://www.weedwar.org/about/CWMA.htm
Fairbanks:http://www.fairbankssoilwater.org/resources_CWMA.html
Kenai Peninsula: http://www.kenaiweeds.org/about-cwma.php
Kodiak: n-icoordinator@ak.net
Juneau: http://www.juneauinvasives.org/
Mat-Su: http://www.alaskaconservationdistricts.org/UpSu/usswcdhome.htm
Salcha/Delta: http://www.salchadeltaswcd.org/

Alaska Weeds ID App
An easy method for identification help. The Alaska Weeds ID mobile app available for smartphones (http://apps.bugwood.org/apps/alaska/). This 'all in one' feature app provides identification help and assists with data collection. Data be automatically submitted to UAF Cooperative Extension Service. The app does not have an extensive list on non-native species, but has many common ones. It includes useful photos and descriptions that can be used when not connected to cell service.

Alaska Weeds ID App available for Android and iPhone IOS.

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Glossary

Achene	A small, dry, hard, single-seeded fruit, similar in appearance to a seed whose outer covering does not burst when ripe.
Alien	See Non-native.
Alternate	Leaves occurring one at a node.
Annual	A plant that produces seed and dies within one year of germinating from seed.
Anther	The pollen-bearing organ of a flower, situated at the tip of the stamen.
Apical	Situated at the tip.
Appressed	Pressed close or flat against another organ.
Articulate	Jointed; has nodes or joints or places where separation naturally takes place
Attenuate	Gradually tapering to a very slender point.
Auricles	A claw-like appendage at the base of the leaf blade or at the apex of the leaf sheath, especially in grasses.
Auriculate	With a small projecting lobe or appendage at the base of an organ; ear-shaped.
Awn	A stiff, bristle-like appendage, usually at the end of a structure.
Basal	Situated at, or pertaining to the base.
Biennial	A plant requiring two years to complete its life cycle.
Bifid	Deeply two-cleft or two-lobed, usually from the tip.
Blade	The leaf of a plant, especially a grass; the flat or expanded portion of a leaf.
Bract	A modified leaf, growing at the base or on the stalk of a flower; usually differing from other leaves in shape or color.
Calyx	The usually green outer whorl or series of whorls surrounding the flower petals.
Carpel	A simple pistil, or one member of a compound pistil; a modified leaf forming the ovary or, in a compound ovary, part of the ovary.
Cauline	Of or pertaining to the stem.
Ciliate	Fringed with regularly arranged hairs on the margin.
Clasping	Wholly or partially surrounding the stem.
Cleft	Cut or split about half-way to the middle or base.
Compound	Made up of two or more similar parts (e.g. a compound leaf with multiple leaflets).
Corolla	All of the petals of a flower.
Crisped	Irregularly curled.
Culm	The stem of a grass plant.
Cuneate	Wedge-shaped; narrowly triangular.
Decumbent	A plant that has its base lying on the ground and a stem that grows upward.
Decussate	Arranged along the stem in pairs, with each pair at right angles to the pair above or below.
Dehisce	To split or burst open, discharging pollen or seeds.

Dentate	Coarsely toothed.
Disarticulate	Separating at maturity at a joint.
Disc florets	The regular tubular flowers on the heads of the Asteraceae family.
Entire	Not toothed, notched or divided; refers to the continuous, smooth margins of some leaves.
Exotic	See Non-native.
Falcate	Scythe-shaped, curved sideways and flat, tapering upwards, asymmetrical.
Fibrous roots	A root system with all branches of approximately equal thickness, as in the grasses and other monocots.
Filament	The stalk of a stamen that bears the anther.
Floret	A single flower in a head of many flowers.
Geniculate	Bent abruptly at an angle, like a knee.
Glume	A chaffy or membranous bract at the base of a grass inflorescence or spikelet; the first glume refers to the lower bract, the second glume to the upper bract.
Glabrous	Having a smooth, even surface; without hairs.
Glaucous	Having a whitish or blueish waxy coating.
Glandular	Having secreting organs or glands.
Hastate	Arrowhead-shaped.
Hyaline	Thin, dry and transparent or translucent.
Hypanthium	A cup-shaped extension of the floral axis usually formed from the union of the basal parts of the calyx, corolla and the stamens, commonly surrounding or enclosing the pistils.
Internode	The part of the stem that lies between two nodes or joints on a plant.
Invasive	Exotic plants that produce viable offspring in large numbers and have the potential to establish and spread in natural areas.
Involucre	A whorl of leaves or bracts that enclose a flower or inflorescence.
Irregular	Describes a flower in which sets of organs differ in size, shape or structure.
Keel	A central ridge along the back of any organ of a plant; the lowest, fused petals of a pea-like flower.
Lemma	The lower, and larger, of two membranous bracts enclosing the flower in grasses.
Ligule	A strap-shaped plant part. The flattened part of the ray floret in many members of the Asteraceae family. In grasses and sedges, the membranous appendage arising from the inner surface of the leaf at the junction with the leaf sheath.
Margin	The outer edge of the leaf; may be toothed, wavy, entire, etc.
Native	Refers to plants that live or grow naturally in a particular region.
Naturalized	Exotic plants that reproduce consistently in their new environment and sustain populations over many life cycles without direct intervention by humans.

Nerve	A prominent vein or rib of a leaf or other organ.
Node	A knob or joint of a stem from which leaves, roots, shoots or flowers may arise.
Non-native	Plants whose presence in a given area is due to accidental or intentional introduction by humans.
Noxious weed	A plant species that has been defined as undesirable by legal statute.
Obovate	Reversed ovate, having the distal end broader.
Opposite	Leaves or bracts occurring two at a node on opposite sides of the stem. Flower parts that occur one in front of another.
Ovary	The part of the pistil that contains the ovules
Ovule	The structure in the ovary that develops into the seed
Palea	The inner of the two bracts enclosing a grass flower.
Palmate	Leaves divided into lobes arising from a common center. Palmately compound leaves have multiple leaflets arising from a common center.
Panicle	A branched inflorescence
Pappus	A modified calyx seen in the Asteraceae family, forming a crown of awns, scales or bristles at the summit of the achene.
Pedicle	The stalk of a single flower or inflorescence.
Peduncle	A flower stalk supporting a cluster of flowers, or a single flower when the pedicel is very long.
Perennial	A plant that lives three or more years.
Petaloid	Resembling a petal.
Petiole	The slender stalk or stem of a leaf.
Pinnate	Divided in a feathery manner, having leaflets arranged on each side of a central stalk.
Pinnatifid	Pinnately cleft.
Pistil	The female reproductive unit of a flower; situated immediately within the petals and composed of the ovary, style, and stigma
Pubescent	Covered with soft hair or down.
Raceme	An inflorescence with flowers borne along a more or less elongated axis with the younger flowers nearest the top.
Rachis	The main axis of a structure.
Ray floret	The strap-shaped flower in the Asteraceae family; multiple ray florets extend outward from the center of a flower head.
Receptacle	The more or less expanded portion of the flower stalk that bears the organs of a flower or the collected flowers of a head as in Asteraceae.
Recurved	Bent backward in a curve.
Reflexed	Bent or turned abruptly backward or down
Regular	Radially symmetrical.
Rhizome	A subterranean, horizontal root-like stem sending out leaves and shoots from its upper surface and roots from its lower surface.
Rosette	A group of organs, such as leaves, clustered and crowned around a common point of attachment.
Sagittate	Arrowhead-shaped, with the basal lobes directed downward.
Scabrous	Rough to the touch due to the presence of short, stiff hairs.

Scarious	Thin, dry, membranous and more or less translucent; not green.
Sepals	The petal-like structures that subtend the petals of most flowers; any of the leaf divisions of the calyx
Sessile	Attached directly, without a supporting stalk as a leaf without a petiole.
Sheath	A protective covering; the lower part of a leaf enveloping the stem.
Silicle	A short fruit of the mustard family that is not more than twice as long as wide.
Silique	A long, narrow fruit of the mustard family that is more than twice as long as wide.
Simple	Of only one part, not divided into separate segments.
Spike	An elongate inflorescence with stalkless flowers
Spikelet	A subdivision of a spike, as in the spikelets of grasses.
Stamens	The male reproductive organ in a flower; situated immediately within the petals and composed of the filament and the anther.
Standard	Upper petal of a pea-like flower.
Stellate	Star-shaped.
Stigma	The part of the pistil that receives pollen.
Stipules	Appendages at the base of a petiole or leaf.
Stolon	A stem which grows horizontally along the surface of soil and is able to root at the tip and develop a new plant.
Style	The usually stalk-like portion of the pistil connecting the stigma and ovary.
Succulent	Fleshy and full of juice.
Taproot	The main root axis from which smaller root branches arise, as in many dicots (compare fibrous roots).
Tepal	A division of the perianth of a flower that has an indistinguishable calyx and corolla.
Tomentose	A covering of short, matted or tangled, soft, wooly hairs.
Trifoliate	With three leaves or leaflets.
Truncate	The apex or base squared at the end as if cut off.
Tubercle	A small tuber-like swelling or projection.
Tufted	Arranged in a dense cluster.
Villous	With long, soft, somewhat wavy hairs.
Viscid	Glutinous, sticky or gummy to the touch.
Weed	Any plant, native or exotic, whose presence is undesirable to people in a particular time or place.
Whorled	When three or more leaves are arranged at the same level on a stem.
Winter annual	A plant that germinates in the fall, overwinters as a seedling, and in the spring and summer flowers, produces seed and dies.
Wing	Any membranous or thin expansion bordering or surrounding an organ.

Glossary adapted from: Harris, J.G. and M.W. Harris, 2001

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