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Common Plants of the INL

Environmental Surveillance, Education and Research Program
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Preface

Although we sincerely hope this guidebook will appeal to a broad audience, it was written for a specific purpose; to aid in plant identification for vegetation projects at the INL (Idaho National Laboratory). Therefore, several aspects of the format and content of this book were specifically chosen to facilitate vegetation data collection. For example, each species is presented alphabetically by a four letter code that is typically derived from the first two letters of the genus and the first two letters of the specific epithet. These codes are commonly used and widely accepted abbreviations for vegetation data. The codes used in this book generally follow the USDA Plants National Database (2004); however, a few species are listed under codes that are traditional to the INL (i.e. ARTP). When two species share the same code, at least one of the species is assigned a number (i.e. ERNA2) so that they can be easily differentiated from one another. The number is specific to the INL plant species list and is related to the abundance of that species at the INL. A table containing species' scientific names and their associated codes can be found in a table at the end of the book. Identification follows Hitchcock and Cronquist (1973), but several scientific names and codes have been updated to reflect recent reclassifications. The updated classifications and nomenclature can be viewed on the USDA Plants National Database (2004).

The book is a first edition of a living document that will continue to change as its utility is assessed and tested through use in the field. For the most current version of this document, and for additional INL plant identification resources, see (http://www.stoller-eser.com).

Credits

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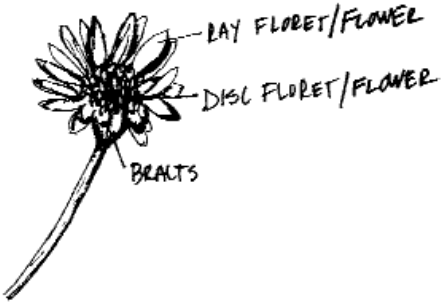
Terminology

Forbs and Shrubs



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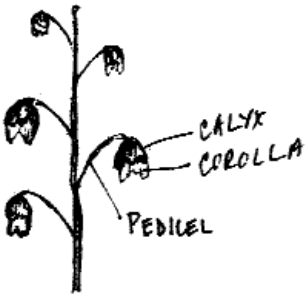

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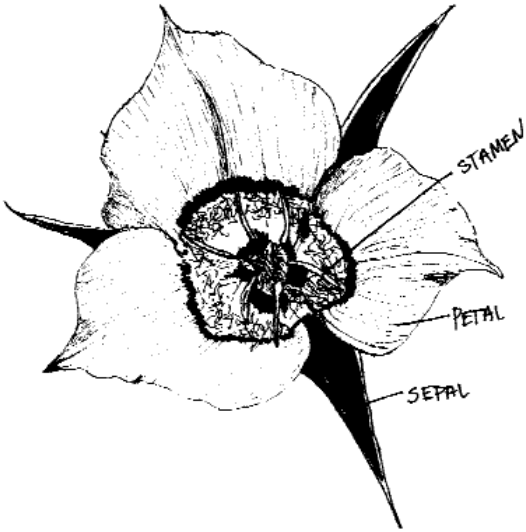
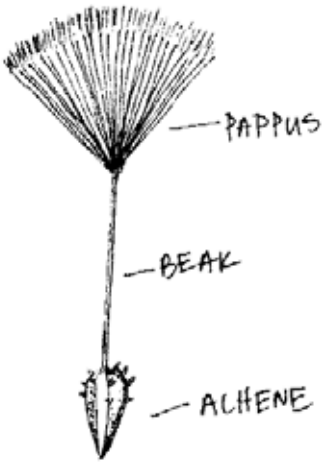
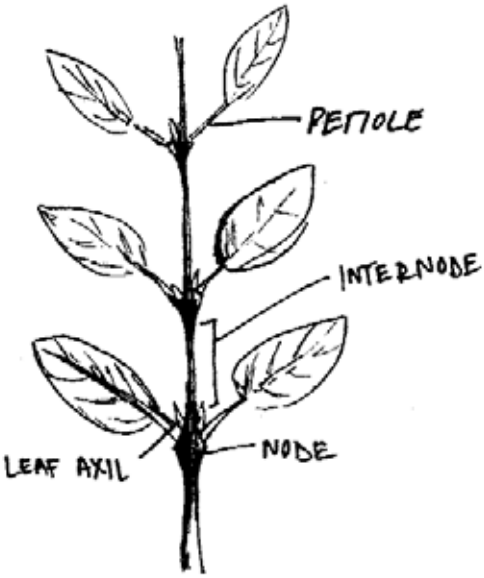
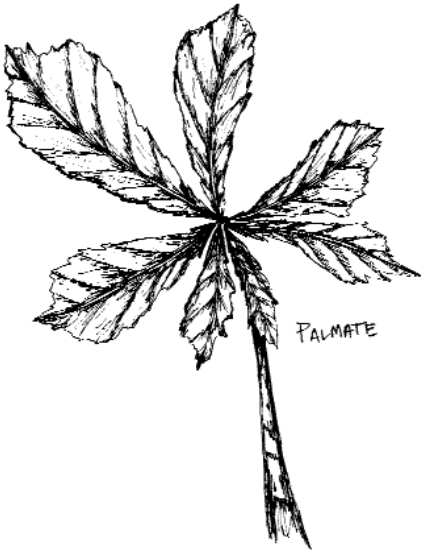


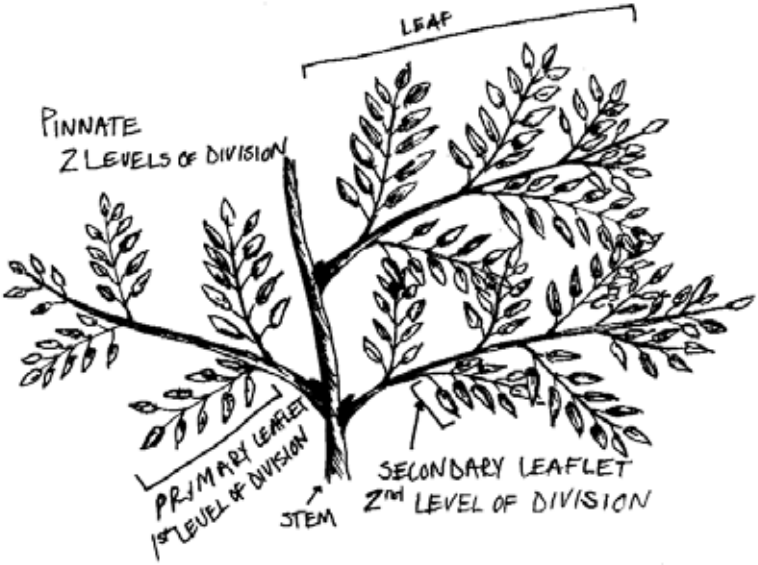




STEM, LEAVES OPPOSITE

Forbs and Shrubs (cont.)





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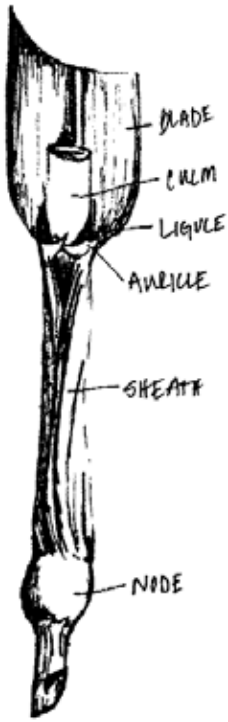
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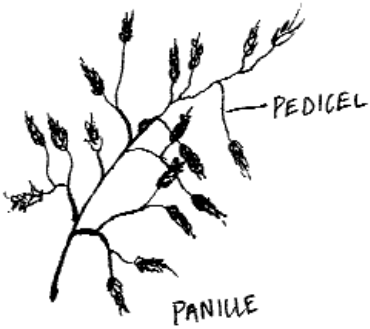
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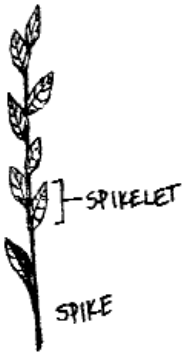

SPIKELET
SPIKE

AWN
FLORET
GLUME
SPIKELET

Forbs

ACMI
Achillea millefolium

Common Name(s): common yarrow

Identifying Characteristics
- Height ranges from 10 to 80 cm.
- Leaves have a silvery, fern-like appearance; they are densely pubescent, alternate, and pinnately divided.
- Flowers are white and occur in flat-topped flower clusters.
- Stems are not branched or are only sparsely branched.
- Plants are rhizomatous and have a distinct pungent odor.

Site and Habitat
Can occupy a wide range of sites.

Fun Plant Facts
Yarrow can be used to stop bleeding, treat burns, relieve itching, reduce fevers, and as a mild laxative.

AGGL
Agoseris glauca

Common Name(s): pale agoseris, false dandelion

Identifying Characteristics

- Leaf margins may be entire to wavy to shallowly lobed.
- Leaves have a distinct white midvein.
- Milky juice through entire plant.
- Yellow flowers turn pink as they dry.

Site and Habitat

Adapted to a wide range of soils.

Not to Be Mistaken For:

NOTR, AGRE - NOTR has glabrous herbage; AGGL has hairy herbage, especially the bracts surrounding the flowers. AGRE has long beaks, about 2 to 4 times as long as the body of the achene and has retrorsely lobed leaves; AGGL has short beaks, about half as long as the body of the achene.

ALAC
Allium acuminatum

Common Name(s): Hooker's onion, tapertip onion

Identifying Characteristics

- Plant height varies from 10 to 30 cm.
- Flowers are rose to purple in color.
- Plants have a distinct onion odor.
- Leaves are often withered when plants are in flower.
- Small bulbs (< 1 cm diameter) are marked with square reticulations.

Site and Habitat

Found in medium to coarse textured soils and around basalt outcroppings.

Fun Plant Facts

Wild onions are edible and can be used to flavor food.

ALDE
Alyssum desertorum

Common Name(s): desert alyssum, desert madwort

Identifying Characteristics
- Plants range from 3 to 20 cm in height.
- Leaves are generally simple and lanceolate.
- Flowers occur on racemes.
- Flowers have 4 petals and fade from yellow to white.
- Fruit is round and flattened with one to two seeds per capsule.

Site and Habitat
Prevalent in disturbed areas, but common and widespread across the INL.

Phenology
Plants typically flower in early to mid-spring and retain capsules most of the summer.

Not to Be Mistaken For:
LEDE - LEDE has divided, oblong fruits with a notch at the tip; ALDE has round, smooth fruits.

ALTE
Allium textile

Common Name(s): textile onion

Identifying Characteristics

- Flowers are white or slightly pink; petals have a reddish-brown midrib.
- Each flower stalk generally has 2 leaves that persist while plants are in bloom.
- Plants have a distinct onion taste and odor.
- Bulbs range from 1.5 to 2.5 cm in diameter and are covered with coarse, fibrous, mesh-like bulb coats.

Site and Habitat

Adapted to a wide range of soils, common and widespread across the INL.

Not to Be Mistaken For:

ALGE - ALGE has 3 or more leaves per flower stalk; flowers are generally pink (intermediate in color between ALTE and ALAC). ALTE has 2 leaves per flower stalk and white flowers.

ANMI
Antennaria microphylla

Common Name(s): littleleaf pussytoes, rosy everlasting

Identifying Characteristics

- Plants are mat-forming and stoloniferous.
- Several flower heads consisting of white disc flowers surrounded by reddish bracts occur on each flowering stem.
- Leaves occur basally and on the flowering stalk.
- Leaves are oblanceolate (broader at the tip than at the base) and have matted, woolly hair.

Site and Habitat

Can occur across a wide range of fine to medium textured soils.

AKA

Antennaria rosea

Not to Be Mistaken For:

ANDI - ANDI only has 1 flower head per stem; ANMI has several.

ARFR
Arenaria franklinii

Common Name(s): Franklin's sandwort

Identifying Characteristics

- Plants form low-growing (about 5 cm tall), dense mats (5 to 10 cm in diameter).
- Stems have swollen nodes and very small opposite leaves.
- White flowers have 5 petals and 10 stamens; petals are pointed at the tip.
- Sepals are as long as or longer than the petals and are sharply pointed.

Site and Habitat

Commonly found in sandy areas, but can occur across a range of soils.

Not to Be Mistaken For:

PHHO - PHHO has shorter sepals and more rounded petals that are fused at the base; ARFR petals are not fused at the base.

ARHO
Arabis holboellii

Common Name(s):
Holboell's rockcress, reflexed rockcress

Identifying Characteristics

- Plants have a basal rosette with stem(s) 10 to 90 cm tall; leaves are alternate along generally unbranched stems.
- Leaves are clasping, lanceolate and have small, branching hairs.
- Flowers are in elongating racemes and are light purple with 4 petals and 4 sepals.
- Pod-like seed capsules are pendulous and straight; pedicels are abruptly reflexed at the stem.

Site and Habitat
Adapted to medium to coarse textured and sometimes gravelly soils.

Not to Be Mistaken For:
There are several *Arabis* species on the INL, but ARHO and ARLI are the most common and widespread. ARLI has recurved pods and gently curved pedicles; ARHO has straight pods and sharply reflexed pedicels.

ARLI
Arabis lignifera

Common Name(s): woody-branched rockcress, desert rockcress

Identifying Characteristics

- Leaves occur in a basal rosette and alternately along stem(s) that may or may not be branched.
- Leaves are clasping, lanceolate and have small, branching hairs.
- Flowers are pinkish-purple, have 4 petals and 4 sepals and occur in elongating racemes.
- Pod-like seed capsules are recurved; pedicels gently curve downward.

Site and Habitat

Occurs across a range of medium to coarse textured soils.

Not to Be Mistaken For:

ARHO - ARHO has straight pods and sharply reflexed pedicels; ARLI has recurved pods and gently curved pedicels.

ASCA
Astragalus calycosus

Common Name(s): Torrey's milkvetch

Identifying Characteristics

- Plants are less than 10 cm tall.
- Plants are silvery in color with stiff, bristly hairs that lie flat in the same direction.
- Leaves are pinnately divided with 3 to 7 leaflets.
- Leaflet tips are obtuse or rounded.
- Flowers are typically two-toned and range from pinkish-purple and white to purple and white in color.
- Seed pods are oblong and slightly curved.

Site and Habitat

Common on lava outcroppings and playas, but can be found on a wide range of sites.

Not to Be Mistaken For:

ASPU - ASPU has leaflet tips that are more acute in shape than ASCA; ASPU can have greater than 7 leaflets per leaf, and ASPU leaflets have soft, matted hairs.

ASCU
Astragalus curvicarpus

Common Name(s): curvepod milkvetch, sickle milkvetch

Identifying Characteristics

- Leaves are pinnately divided with an odd number of opposite leaflets.
- Leaflets are pubescent, tend to be oblong to elliptic in shape, and are occasionally slightly notched at the tip.
- Flowers are white to cream in color, are attached to the stem with a pedicel, and have a nodding habit.
- Pods are narrow, sickle shaped, and pendulous.

Site and Habitat

Thrives across a range of medium to coarse textured soils.

Not to Be Mistaken For:

ASLE - ASLE is slightly more common than ASCU. ASLE flowers are less than 1 cm in length, may have some purple petals, and are ascending. ASCU flowers are 1.5 to 2 cm in length, have no purple coloring, and are nodding. ASLE pods are rounded and inflated; ASCU pods are narrow and curved or sickle shaped.

ASFI
Astragalus filipes

Common Name(s): basalt milkvetch, threadstalk milkvetch

Identifying Characteristics

- Plants are very upright; up to 80 cm in height.
- Leaflets are linear and range from 10 to 20 mm in length and 1 to 2 mm in width.
- Flowers are white to cream in color.
- Pods are straight and flattened in shape.

Site and Habitat

Common INL-wide, especially on medium to coarse textured soils and lava outcroppings.

Fun Plant Fact

Several species from the genus *Astragalus* occur across the INL and the sagebrush steppe; the species are numerous and diverse. As nitrogen-fixers, they may play an important role in desert ecosystems.

ASLE
Astragalus lentiginosus

Common Name(s): freckled milkvetch

Identifying Characteristics

- Leaves usually have greater than 13 leaflets per leaf; leaflets are slightly to moderately pubescent.
- Leaflets are oblong, ovate, or obovate in shape and may be notched at the tip.
- Flowers are typically white to yellow, may have purple inner petals, and lack pedicels.
- Pods are distinctly inflated and are greenish to yellowish in color.

Site and Habitat

Common and widespread; occurs on a wide range of soils including fine and coarse textured materials.

Not to Be Mistaken For:

ASCU - ASCU usually has fewer than 13 leaflets per leaf; ASLE regularly has more than 13 leaflets per leaf. ASCU has narrow sickle-shaped pods; ASLE has round and inflated pods.

ASPU
Astragalus purshii

Common Name(s): woollypod milkvetch

Identifying Characteristics

- Plants are low-growing, dense, cushion-like, and heavily pubescent.
- Leaves typically have 7 to 11 leaflets; leaflets range from obtuse to acute at the tip.
- Flowers range from white to purple in color, but almost always have both white and purple petals in a single flower.
- Pods are covered in white, woolly pubescence.

Site and Habitat

Abundant INL-wide; can occur in medium to coarse textured substrates, and especially in shallow soils.

Not to Be Mistaken For:

ASCA - ASCA has a maximum of 7 leaflets per leaf; ASPU usually has between 7 and 11 leaflets per leaf. ASCA has bristly hairs that lie in one direction; ASPU has soft, matted hairs that extend in every direction.

BASA
Balsamorhiza sagittata

Common Name(s): arrowleaf balsamroot

Identifying Characteristics

- Large arrow-shaped leaves are covered in silvery, soft, wool-like hairs; leaves are mostly basal.
- Flower stalks are 20 to 80 cm tall and occasionally have small lanceolate leaves.
- Flowers typically occur 1 (sometimes 2) per stalk.
- Flowers are yellow in color and sunflower-like in appearance.

Site and Habitat

Plants typically occur in deeper soils that are fine to medium in texture.

Not to Be Mistaken For:

BAHO - BAHO has leaves with toothed to pinnate margins; BASA has leaves with entire margins.

CAAN
Castilleja angustifolia

Common Name(s): northwest Indian paintbrush, desert paintbrush, narrow-leaf paintbrush

Identifying Characteristics

- Plant stems and leaves are pubescent and are deep grayish-purple in color.
- Lower leaves are linear and upper leaves have 3 to 5 linear, spreading lobes.
- Bracts and flowers are magenta in color.

Site and Habitat

Thrives in medium textured soils and occurs commonly with sagebrush.

Not to Be Mistaken For:

A few additional species of Indian paintbrush occur on the INL; bract and flower color in those species range from white to light pink to red, but none of them have the distinct magenta bracts and flowers of CAAN.

CABR
Calochortus bruneaunis

Common Name(s): Bruneau mariposa lily, sego lily

Identifying Characteristics

- Plants have a few small grass-like leaves.
- Flowering stalks may be branched and generally have between 1 and 5 flowers.
- Flowers have 3 sepals that are narrow and acuminate in shape and are greenish-yellow in color and 3 petals that are white with yellow at the base and have a greenish median stripe.
- Each petal has a gland near the base; a reddish-purple spot occurs above the gland and a few short thick hairs occur around the gland.

Site and Habitat

Common and scattered throughout the INL.

Not to Be Mistaken For:

CAMA - CAMA has sepals that are longer than the petals and the petals are pinkish-purple in color; CABR has sepals that are shorter than the petals and the petals are white in color.

CANU
Carduus nutans

Common Name(s): musk thistle, nodding plumeless thistle

Identifying Characteristics

- Plants range from 1 to 2 m in height.
- Leaves are deep green with a light green midrib.
- The base of the leaves extend down the stem giving the stems a winged appearance.
- Leaf margins are deeply lobed and have spines.
- Purple flowers are solitary and nodding.
- Flowers range from 2 to 5 cm in diameter.

Site and Habitat

Populations usually occur in disturbed or heavily grazed areas, but may occur scattered elsewhere.

Not to Be Mistaken For:

CIVU, ONAC - CIVU and ONAC have flowers in clusters and narrow linear bracts below the flowers; CANU has single flowers and wide, flat bracts below the flowers.

CHDO
Chaenactis douglasii

Common Name(s): Douglas' dustymaiden, hoary false-yarrow

Identifying Characteristics

- Plants are silvery in appearance due to dense, woolly hairs; they may also be sticky and glandular.
- Leaves occur in a basal rosette and along the stem(s).
- Leaves are pinnately dissected and fern-like in appearance.
- Flower heads consist of numerous tubular disc flowers, each with five lobes.
- Flowers are white to slightly pinkish in color.

Site and Habitat

Widespread across medium to coarse textured soils.

Not to Be Mistaken For:

ACMI - ACMI has a distinct pungent odor; CHDO does not.

CHLE
Chenopodium leptophyllum

Common Name(s): slimleaf goosefoot

Identifying Characteristics

- Plants can range from 10 to 80 cm in height.
- The entire plant often has a purple tinge, especially at maturity.
- Leaves are linear to lanceolate and have a fine powder on the underside.
- Flowers and fruits are green and occur in a crowded linear inflorescence at the tip of each stem and from some of the nodes.

Site and Habitat

Widespread but rarely abundant at any given location.

Not to Be Mistaken For:

CHAL, CHFR - CHAL and CHFR have ovate to triangular to arrow-shaped leaves with toothed to shallowly lobed margins; CHLE has liner to narrow lanceolate leaves with entire margins.

CIAR
Cirsium arvense

Common Name(s): Canada thistle

Identifying Characteristics

- Plants range from 0.5 to 1.5 m in height.
- Single stems are ridged, hollow and highly branched, especially near the top.
- Leaves are highly variable, deeply cut, and oblong or lance-shaped with abundant yellow spines.
- The flower heads are purple to white and are up to 2 cm in diameter.

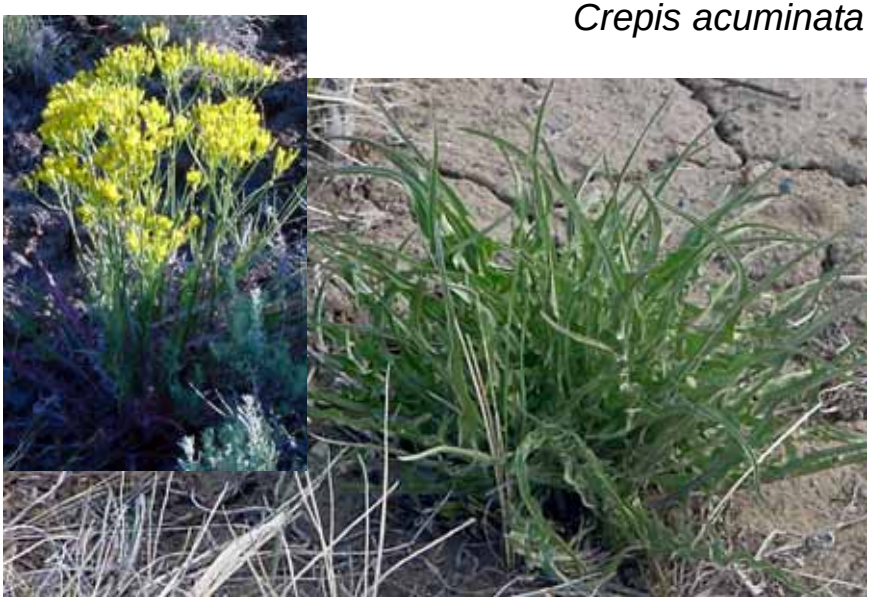
Site and Habitat

Found commonly across the entire INL, especially in disturbed and heavily grazed areas.

Not to Be Mistaken For:

CIVU, ONAC - CIVU and ONAC have winged stems; CIAR does not have winged stems. CIVU has short, stiff hairs on the upper surface of the leaves; CIAR has less abundant, softer hairs on the leaves.

CRAC
Crepis acuminata



Common Name(s): tapertip hawksbeard, long-leaf hawksbeard

Identifying Characteristics

- Plants range from 20 to 60 cm in height and contain a milky juice.
- Leaves are mostly basal with a few occurring along the stems.
- Leaves are lanceolate with deeply divided margins.
- Leaves and stems have dense woolly hairs, especially on young plants and near the base of older plants.
- Yellow flower heads occur in flat-topped clusters; plants generally have 20 to 100 flower heads.
- Each flower head contains 5 to 10 ray flowers.

Site and Habitat

One of the most common forbs across the INL; widespread and abundant.

Not to Be Mistaken For:

CROC - CROC has between 10 and 40 ray flowers in each flower head; CRAC rarely has more than10 ray flowers per flower head.

CRIN
Cryptantha interrupta

Common Name(s): Elko cryptantha, bristly cryptantha

Identifying Characteristics

- Plants are covered in stiff, glassy bristles.
- Leaves are narrow and entire, and occur primarily basally with a few along the stem.
- Flowers are white and occur in clusters along an elongating spike.
- Flowers have 5 petals that are fused at the base.

Site and Habitat

Widespread and common across the INL.

Not to Be Mistaken For:

CRSC - CRSC does not have a basal rosette, and flowers occur along a reflexing spike; CRIN has a basal rosette and flowers occur along a straight spike.

CRSC
Cryptantha scoparia

Common Name(s): desert cryptantha, Pinyon Desert cryptantha

Identifying Characteristics

- Plants are covered in stiff, bristly hairs.
- Leaves are linear, 5 mm or less in width, and are covered in small, nipple-like projections.
- White flowers are inconspicuous and surrounded by bristly bracts.
- Flowers occur linearly along an reflexing spike that resembles a scorpion's tail.

Site and Habitat

Occurs across a range of habitats at the INL.

Not to Be Mistaken For:

CRKE, CRCI - CRKE has oblanceolate shaped leaves that range from 5 to 10 mm in width; CRSC has linear leaves that are less than 5 mm in width. CRCI is mat-forming and has flowers in clusters; CRSC is upright and has flowers on spikes.

DEAN
Delphinium andersonii

Common Name(s): Anderson's larkspur

Identifying Characteristics
- Leaves occur in a basal rosette and alternately up the flowering stalks.
- Leaves are palmately divided into several lobes and are dark green in color with a pinkish to purplish tinge.
- Blue to purple flowers occur in spikes; plants may have 1 to several flowering spikes.
- Flowers are bilaterally symmetrical with 5 petals and a distinctive spur.

Site and Habitat
Widespread across coarse textured soils.

Not to Be Mistaken For:
DENU - DENU does not have hollow stems, stems are strongly pubescent or glandular, lower flowers are spreading, and basal leaves persist during flowering. DEAN usually has hollow stems that are glabrous below the flowers, lower flowers are ascending, and basal leaves are usually withered at the end of flowering.

DEPI
Descurainia pinnata

Common Name(s): western tansymustard

Identifying Characteristics

- Plants range from 5 to 80 cm in height and are covered in star-shaped hairs.
- Leaves are pinnately divided and occur alternately along freely branching stems.
- Flowers have 4 light yellow petals, 4 sepals, and occur in elongating spikes.
- Pods are club-shaped and usually contain fewer than 20 seeds each.

Site and Habitat

Widespread and common across the INL.

Not to Be Mistaken For:

DESO, SCLI - DESO has finely divided pinnate leaves and pods have more than 20 seeds arranged in a single row. DEPI has once pinnate leaves and pods have fewer than 20 seeds arranged in 2 rows. SCLI has entire to occasionally toothed leaves and pods are slightly constricted between seeds. DEPI has pinnately divided leaves and smooth pods.

DESO
Descurainia sophia

Common Name(s): tansymustard, herb sophia, flixweed

Identifying Characteristics

- Plants range from 20 to 100 cm in height, are covered in star-shaped hairs, and are often grayish in appearance.
- Lower leaves are 2 to 3 times pinnately divided and fern-like.
- Flowers have 4 light yellow petals, 4 sepals, and occur in elongating spikes.
- Pods are linear and generally contain more than 20 seeds each.

Site and Habitat

Common in and around disturbed areas.

Not to Be Mistaken For:

DEPI - DEPI has once pinnate leaves and has fewer than 20 seeds per pod. DESO has 2 to 3 times pinnately divided leaves and more than 20 seeds per pod.

ERCE
Eriogonum cernuum

Common Name(s): nodding buckwheat

Identifying Characteristics

- Plants form a basal rosette between 1 and 3 cm in height and between 2 and 8 cm in diameter.
- Leaves are pubescent (almost woolly on the bottom side), and round with a slight point at the tip.
- Plants have 1 flowering stalk that is dark brown to red in color. Flowering stalks range from 5 to 15 cm in height and are branched to form an umbel.
- Umbels are compound, loosely formed, and the stalk of each single flower is reflexed.
- Flowers are pink to white and > 0.5 cm long.

Site and Habitat

Widespread and common across the INL, especially in medium to coarse textured soils.

Phenology

ERCE blooms in late July through early August.

EROV
Eriogonum ovalifolium

Common Name(s): cushion buckwheat

Identifying Characteristics

- Plants form a basal rosette from a branching, woody base. The basal rosettes range from 5 to 10 cm in height.
- Leaves are woolly and oval to slightly diamond shaped.
- Plants have multiple flower stalks that can be up to 25 cm in height and are also woolly.
- Flowers form compact umbels that are white to yellow in color and may have a pinkish to reddish tinge.

Site and Habitat

Abundant throughout the INL on medium to coarse textured soils and basalt outcroppings.

Not to Be Mistaken For:

ERUM - ERUM has a row of distinct bracts encircling the stem at the base of the umbel. EROV has bracts that are inconspicuous and scale like.

ERPU
Erigeron pumilus

Common Name(s): shaggy fleabane

Identifying Characteristics

- Plants range from 10 to 25 cm in height and have multiple erect stems originating from the base.
- Leaves are linear with dense, coarse hairs that are randomly oriented. Leaves occur basally and along the entire length of the stems.
- Stems are also pubescent and branch occasionally.
- Flower heads are composed of numerous yellow disc flowers surrounded by 50-100 ray flowers that range from white to purple in color.

Site and Habitat

Common in medium to coarse textured soils across the INL.

Not to Be Mistaken For:

ERFI, TOFL - ERFI has hairs that lie flat and are oriented in the same direction along the leaves and stems; ERPU has hairs that are erect and randomly oriented. TOFL has spatulate-shaped leaves and pink ray flowers; ERPU has linear leaves and purplish ray flowers.

ERWI
Eriastrum wilcoxii

Common Name(s): Wilcox's woollystar

Identifying Characteristics

- Plants range from 3 to 20 cm in height and are usually branched.
- Leaves occur along stems and are linear with 1 to 5 narrow lateral lobes.
- Flowers occur singly and are surrounded by several distinct bracts covered with thick, fine, woolly hair.
- Flowers are small (about 0.5 cm long) and range from white to light purple or blue in color.

Site and Habitat
Abundant across the INL, especially in disturbed areas.

AKA
Eriastrum sparsiflorum var. wilcoxii

Not to Be Mistaken For:
IPCO - IPCO stems originate mostly from the base of the plant, flowers occur in clusters; ERWI stems are branched and flowers occur singly.

GADI
Gayophytum diffusum

Common Name(s): spreading groundsmoke

Identifying Characteristics

- Plants are up to 25 cm in height.
- Stems are typically branched, spreading, and reddish in color.
- Leaves are bright green and linear.
- Flowers are white to pink in color.
- Fruit capsules range from 4 to 15 mm in length and have 2 cells.

Site and Habitat

Scattered throughout the INL on dry, coarse-textured soils.

Not to Be Mistaken For:

GARA, GARA2 - GARA capsules are 15 to 20 mm in length, aren't tightly constricted between the seeds, and don't have distinct pedicels; GADI capsules are 4 to 15 mm in length, are tightly constricted between the seeds, and have distinct pedicels. GARA2 has 3 to 6 mm capsules with sharply reflexed pedicels; GADI has 4 to 15 mm capsules with spreading to ascending pedicels.

GRSQ
Grindelia squarrosa

Common Name(s): curlycup gumweed

Identifying Characteristics

- Plants range from 15 to 50 cm in height and have a sticky residue.
- Plants are erect and branching with alternate leaves.
- Leave are elliptic to egg-shaped with serrated edges.
- Flower heads occur singly on branched stems.
- Flower heads have several yellow disc flowers surrounded by 25 to 40 yellow ray flowers.
- Numerous bracts surrounding the flowers are green, pointed, and curl back away from the flowers.

Site and Habitat

Common in disturbed areas, especially along roadsides.

Fun Plant Facts

Curlycup gumweed has been used to relieve asthma, bronchitis, and skin irritations.

HAGL
Halogeton glomeratus

Common Name(s): Halogeton, saltlover

Identifying Characteristics

- Plants range from 5 to 30 cm in height and branch primarily from the base.
- Stems are erect and red in color.
- Blue-green leaves are small (< 1 cm in length), linear, fleshy, have soft, fine hairs near the axils, have short, pointed spines at the tip, and often occur in clusters.
- Flowers are light green to cream-colored and originate from the leaf axils.

Site and Habitat

Very common across the INL in a wide range of soils.

Phenology

Halogeton blooms in late summer.

Not to Be Mistaken For:

SAKA - SAKA has longer (> 1 cm in length), less fleshy leaves and red-striped stems; HAGL has shorter (< 1 cm in length) more fleshy leaves and solid red stems.

HEBO
Hedysarum boreale

Common Name(s): northern sweetvetch, boreal sweetvetch

Identifying Characteristics

- Plants are 20 to 60 cm in height and have multiple branching stems.
- Leaves are pinnately compound with 7 to 15 egg-shaped leaflets.
- Leaflets have dense hairs on the lower surface.
- Several flowers occur along an elongating spike; flowers are bright pinkish-purple in color.
- Fruits consist of flattened pods containing 2 to 5 round seeds.

Site and Habitat

Common on the northern end of the INL and in some revegetated areas. Can occupy a wide range of soils, but prefers very fine soils.

Not to Be Mistaken For:

VIAM - VIAM has an even number of leaflets with tendrils at the tip of the leaf; HEBO has an odd number of leaflets without tendrils.

IOAL
Ionactis alpina

Common Name(s): lava aster

Identifying Characteristics

- Plants range in height from 5 to 20 cm.
- Plants have multiple stems from the base; stems are not branched.
- Leaves are narrow, slightly elliptical in shape, and occur alternately around the axis of each stem.
- Flower heads occur singly on each flowering stalk.
- Flower heads have 8 to 13 purple ray flowers and several yellow disc flowers.

Site and Habitat

Common on rocky soils and basalt outcroppings.

AKA

Aster scopulorum

IPCO
Ipomopsis congesta

Common Name(s): ballhead gilia

Identifying Characteristics

- Plants are tufted to upright, are covered in fine woolly hairs, have a distinct unpleasant odor, and range from 5 to 15 cm in height.
- Multiple stems originate from a woody base, and are mostly unbranched.
- Leaves are pinnate and occur alternately along the stems.
- White flowers occur in ball-shaped clusters.
- Flowers have 5 petals that are fused at the base.

Site and Habitat

Abundant across a range of soils.

Not to Be Mistaken For:

ERWI, CRIN - ERWI stems are branched, flowers occur singly, and plants have no distinct odor; IPCO stems originate from the base, flowers occur in clusters, and plants have an unpleasant odor. CRIN has a basal rosette, and entire leaves; IPCO does not have a basal rosette and has pinnate leaves.

IVAX
Iva axillaris

Common Name(s): poverty weed, poverty sumpweed

Identifying Characteristics

- Plants are 20 to 50 cm in height.
- Stems are highly branched, and yellowish in color.
- Leaves occur oppositely along the stems.
- Leaves are oblong to ovate with rough, bristly hairs and are attached directly to the stem, with no obvious petiole.
- Flower heads originate in the leaf axils and have multiple green, tubular flowers.

Site and Habitat

Occurs commonly in disturbed areas and adjacent to the Big Lost River. Common in very fine, alkaline, and/or saline soils.

Phenology

Blooms in mid to late summer.

KOSC
Kochia scoparia

Common Name(s): Kochia, summer cypress, Mexican-fireweed

Identifying Characteristics

- Plants range from 20 cm to 2 m in height and have one primary stem with multiple lateral branches.
- Stems often have multiple vertical red stripes.
- Leaves are alternate along the stem, are narrow and lanceolate in shape, have entire margins, have soft, fine hairs on the margins and lower surfaces, and have 3 to 5 distinct veins.
- Flowers are non-showy, form clustered spikes, and originate from the leaf axils.

Site and Habitat

Widespread across the INL; especially in disturbed areas.

LAOC
Lappula occidentalis

Common Name(s): flatspine stickseed, beggar's ticks

Identifying Characteristics

- Plants range from 5 to 40 cm in height.
- Leaves are alternate, lanceolate, hairy, and have entire margins.
- Flowers are light blue in color with yellow centers, have 5 petals that are fused at the base, and occur singly along the length of the stems.
- Fruits have 4 segments, or nutlets; each nutlet has 1 row of spines.

Site and Habitat

Widespread across the INL; especially common in disturbed areas.

AKA

Lappula redowskii

Not to Be Mistaken For:

LASQ - LASQ has 2 to 3 rows of spines on each nutlet; LAOC has 1 row of spines on each nutlet.

LASE
Lactuca serriola

Common Name(s): prickly lettuce

Identifying Characteristics

- Plants range from 10 cm to 2 m in height, have a single, spiny stem that branches at the top, and have milky juice.
- Leaves are alternate, pinnately lobed, have toothed margins, are slightly clasping, and have a row of erect spines along the midrib.
- Flower heads occur along lateral branches and have 10 to 40 yellow ray flowers.
- Achenes have 10 to 14 veins at the base, and a white, fuzzy pappus.

Site and Habitat

Common in disturbed areas and along roadsides.

Not to Be Mistaken For:

LAPU - LAPU has blue flowers and lacks spines on the stalks and the midrib of the leaves; LASE has yellow flowers and spines on the stalks and midribs of the leaves.

LODI
Lomatium dissectum

Common Name(s): fernleaf biscuitroot, desert parsley

Identifying Characteristics

- Plants range from 25 cm to 1 m in height.
- Leaves are mostly basal, pinnately divided several times, and have a rough texture.
- Stems are hollow and purplish in color.
- Flowering stalks are mostly leafless.
- Flowers are yellow to slightly purplish in color and occur in compound umbels.
- Fruits are flattened with several prominent veins and a distinct wing around the circumference.

Site and Habitat

Abundant across the INL in a wide range of soil textures.

Not to Be Mistaken For:

LOFO, LOTR - LOFO has primary leaflets (1st level of pinnate division) that are < 1 cm in length; LODI has primary leaflets that are > 1 cm in length. LOTR has long, linear leaves with < 2 pinnate divisions; LODI has fern-like leaves with > 2 pinnate divisions.

LOFO
Lomatium foeniculaceum

Common Name(s): fennel-leaved desert parsley, desert biscuit root

Identifying Characteristics

- Plant height is usually < 10 cm, and plants are mostly decumbent.
- Leaves originate basally, have multiple pinnate divisions, and have dense, short hairs.
- Flowering stalks are leafless.
- Flowers are in compound umbels and are yellow with a pink tinge.
- Seeds are flattened with several prominent veins and a papery wing around the edge.

Site and Habitat
Common in rocky soils.

Not to Be Mistaken For:
LODI - LODI has primary leaflets (1st level of pinnate division) that are > 1 cm in length; LOFO has primary leaflets that are < 1 cm in length.

LUAR
Lupinus argenteus

Common Name(s): silvery lupine

Identifying Characteristics

- Plants have several branching stems and range from 20 cm to 1 m in height.
- Leaves occur basally and alternately along the stems; basal leaves are usually absent when the flowers are fully opened.
- Leaves are palmately divided with 6 to 9 lance-shaped leaflets and abundant, silvery pubescence.
- Flowers are in an elongating spike.
- Flowers are bright purple to blue with white centers. The back of the uppermost petal is glabrous.

Site and Habitat

Scattered across the INL on a wide range of soils.

Not to Be Mistaken For:

LUHO - LUHO has basal leaves that are usually present when flowers are fully open and the lower 2/3 of the back of the upper petal is hairy; LUAR lacks basal leaves when flowers are fully open and the back of the upper petal lacks hair.

LYGR
Lygodesmia grandiflora

Common Name: largeflower skeletonweed, prairie pink

Identifying Characteristics

- Plants range from 10 to 50 cm in height, have branched stems, and milky, white juice.
- Leaves occur basally and alternately, however, basal leaves whither quickly after flowering begins.
- Leaves are linear and roll inward at the edges.
- Flowers heads occur singly or in loose clusters.
- Flower heads have 4 to 15 light pink to light purple ray flowers and lack disc flowers.

Site and Habitat

Scattered throughout the INL on gravelly and sandy soils.

Not to Be Mistaken For:

STSP - STSP has numerous rigid spines and a brownish tuft of woolly hair at the base of the plant; LYGR lacks spines and lacks woolly hair at the base of the plant.

MACA
Machaeranthera canescens

Common Name(s): hoary aster, purple aster

Identifying Characteristics

- Immature plants have basal rosettes that range from 5 to 10 cm in diameter.
- Plants mature in mid to late summer and develop several branching stems that range from 10 to 60 cm in height.
- Stems and leaves are covered in short, white bristly hairs.
- Leaves are lanceolate with toothed margins.
- Flower heads have several yellow disc flowers surrounded by 20 to 40 purple ray flowers.

Site and Habitat

Abundant across the INL in a wide range of soils.

Not to Be Mistaken For:

CEMA - CEMA has pinnately divided leaves and fringed edges on the bracts surrounding the flower heads; MACA has entire leaves with toothed margins and entire edges on the bracts surrounding the flower heads.

MEAL
Mentzelia albicaulis

Common Name(s): whitestem blazingstar

Identifying Characteristics

- Plants have a basal rosette, multiple branching stems, and range from 2 to 40 cm in height.
- Stems are distinctly white and fleshy.
- Leaves may be opposite or alternate along the stems, are lanceolate and shallowly lobed, and have barbed hairs that give them a Velcro-like texture.
- Flowers occur on branching inflorescences with a flower at the end of each branch. Flowers are yellow with 5 petals, and are often orange at the center.

Site and Habitat

Common across the INL in sandy and gravelly soils.

Not to Be Mistaken For:

PHGL, GILE - PHGL leaf lobes extend almost to the midrib and leaves have glands; MEAL has shallow leaf lobes and barbed hairs. GILE leaves occur primarily in the basal rosette and are toothed; MEAL leaves occur in the basal rosette and along the stems and are lobed.

MINA
Mimulus nanus

Common Name(s): dwarf purple monkey flower

Identifying Characteristics

- Plants may or may not be branched, and range from 1 to 5 cm in height.
- Leaves are opposite, ovate with light pubescence, and are purple tinged.
- Flowers are bilaterally symmetrical and are magenta in color.
- Flowers have 5 fused petals with dark red and yellow markings at the base.

Site and Habitat

Scattered throughout the INL on sandy and gravelly soils.

Phenology

Blooms in early to mid spring.

Not to Be Mistaken For:

MIBR - MIBR has yellow flowers; MINA has pink flowers.

OECA
Oenothera caespitosa

Common Name(s): tufted evening-primrose, desert evening-primrose

Identifying Characteristics

- Plants consist of a basal rosette of leaves and multiple stemless flowers.
- Plants are a maximum of 20 cm in diameter and 5 cm in height.
- Leaves are lanceolate and may be toothed or lobed.
- Flowers are showy, and are white to slightly pink or purple.
- Flowers have 4 heart-shaped petals and 4 reflexed sepals.
- Flowers have elongated calyces that look like stems.

Site and Habitat

Common across the INL, especially on rock outcroppings.

Fun Plant Fact

Primrose flowers bloom at sunset and wilt shortly after sunrise the following day.

PACA
Packera cana

Common Name(s): woolly groundsel

Identifying Characteristics

- Plants range from 10 to 30 cm in height and have several stems from a branching, woody base.
- Larger leaves occur basally and reduced leaves occur alternately along the stems.
- Leaves are lance-shaped with highly variable edges ranging from entire or toothed to lobed.
- Leaves are covered in a dense, fine, woolly hair, giving them a silvery appearance.
- Flowers occur in branched, flat-topped clusters.
- Flower heads have numerous yellow disc flowers and 6 to 10 yellow ray flowers.

Site and Habitat

Scattered throughout the INL, especially in rocky areas.

Not to Be Mistaken For:

SEIN - SEIN has larger (10 to 20 cm in length) leaves and black-tipped bracts surrounding each flower head; PACA has smaller (5 to 10 cm in length) leaves and solid green bracts.

PECY
Penstemon cyaneus

Common Name(s): blue penstemon

Identifying Characteristics

- Plants range from 40 to 70 cm in height and have both basal leaves and opposite leaves along the flower stalks.
- Leaves are glabrous, shiny, lanceolate and slightly clasping.
- Flowers occur along a spike.
- Flowers are bright blue in color, are bilaterally symmetrical, and have a prominent hairy stamen.

Site and Habitat

Scattered throughout the INL.

Not to Be Mistaken For:

PERA - PERA lacks basal leaves and leaves have short hairs; PECY has basal leaves and leaves are glabrous.

PHHA
Phacelia hastata

Common Name(s): silverleaf phacelia, whiteleaf scorpionweed

Identifying Characteristics

- Plants have several partially erect to slightly decumbent stems that range from 10 to 40 cm in height.
- Plants are covered in a short, dense, silvery pubescence.
- Leaves occur basally and alternately along the stems.
- Leaves are elliptic and usually have entire margins, but may have two opposite lobes at the base.
- Flowers range from white to light purple in color and have 5 petals that are fused at the base.
- Flowers occur along an elongating, reflexing spike that resembles a scorpion's tail.

Site and Habitat

Occurs on dry sites with coarse-textured soils.

PHHO
Phlox hoodii

Common Name(s): Hood's phlox

Identifying Characteristics

- Plants are low-growing (< 10 cm), dense, mat-forming, and are covered in web-like hairs.
- Leaves are small (< 10 mm long), narrowly linear, stiff, occur alternately along the stem and are strongly overlapping.
- Flowers have 5 petals with rounded tips that fuse at the base to form a tube.
- Flowers are usually white, but may be slightly blue to purple in color.

Site and Habitat

Very abundant across the INL, especially on rocky soils.

Not to Be Mistaken For:

PHLO, ARFR - PHLO has 2 to 6 cm leaves, distinct stalks on the flowers, and distinct internodes; PHHO has 1 cm leaves, flowers attached directly to the stem, and tightly overlapping leaves that make internodes difficult to distinguish. ARFR does not have petals that fuse at the base; PHHO does have petals that fuse at the base.

PHLO
Phlox longifolia

Common Name(s): longleaf phlox

Identifying Characteristics

- Plants are 5 to 15 cm in height, are highly branched from the base, and are mostly erect.
- Stems have distinct internodes between opposite leaves.
- Leaves are linear and range from 2 to 6 cm in length.
- Flowers have 5 spreading petals that are fused at the base, and are light purple in color.
- Flowers occur in loose clusters and are attached to the stems with slender stalks. Calyces around the flowers are slightly bulged at the base.

Site and Habitat

Scattered throughout the INL on rocky soils.

Not to Be Mistaken For:

PHHO, PHAC - PHHO flowers attach directly to the stems and leaves are < 1 cm long; PHLO flowers have distinct stalks on the flowers and leaves are > 1 cm long. PHAC flowers attach directly to the stem; PHLO flowers have distinct stalks attaching the flowers to the stems.

PSLA
Psoralidium lanceolatum

Common Name(s): lanceleaf scurfpea, lemon scurfpea

Identifying Characteristics
- Plants range from 10 to 35 cm in height and are highly branched above the base.
- Plants have an unpleasant odor, and are bright yellowish green in color.
- Leaves are pinnately divided with 3 lanceolate leaflets.
- Leaflets are covered in distinct round glands.
- Flowers are small (< 5 mm in length), and light purple to blue in color.
- Flowering stalks are tight spikes.

Site and Habitat
Plants occur in patches on sandy soils.

Fun Plant Fact
Scurfpea can be burned to repel mosquitoes.

PTTE
Pteryxia terebinthina

Common Name(s): turpentine wavewing

Identifying Characteristics

- Plant range from 5 to 15 cm in height with mostly basal leaves.
- Plants have a turpentine-like odor.
- Leaves are three times pinnately divided and are bright yellowish green in color.
- Flowering stalks lack leaves.
- Flowers are bright yellow in color and occur in compound umbels.
- Fruit are disc-shaped with wings around the lateral edge and wings down the middle of the flattened surface.

Site and Habitat

Plants occur in clusters on coarse-textured soils.

Not to Be Mistaken For:

CYAC, CYNI, LOFO - CYAC and CYNI have white flowers; PTTE has yellow flowers. LOFO fruit has two wings and PTTE fruit has four wings.

RUVE
Rumex venosus

Common Name(s): wild begonia, sand dock

Identifying Characteristics
- Plants range from 10 to 30 cm in height, are strongly rhizomatous and form dense patches.
- Leaves occur basally and alternate along the stems.
- Leaves have a leathery texture with shiny surfaces and are ovately shaped.
- Flowers are disc-shaped (petals are fused to form a round, flat flower) and occur in dense clusters along the flowering stalk.
- Flowers are yellow near the center and pink to red around the edges.

Site and Habitat
Plants occur in patches on sandy soils.

Not to Be Mistaken For:
RUCR, RUMA, RUSA - RUCR, RUMA, and RUSA are not rhizomatous and do not form dense patches, and they have narrow linear leaves; RUVE is rhizomatous, forms dense patches and has ovate leaves.

SAKA
Salsola kali

Common Name(s): Russian thistle

Identifying Characteristics

- Plants are highly branched from the base and along the stems and range from 10 to 80 cm in height.
- Plants are succulent when young and become hardened as they age.
- Stems have vertical red stripes.
- Leaves are fleshy and linear with a short spine at the tip.
- Inconspicuous flowers occur in the leaf axils and range from green to magenta in color.

Site and Habitat

Abundant in disturbed areas across the INL.

Phenology

Most of the growth and flowering occur in late summer. Plants then senesce and detach as tumbleweeds.

Not to Be Mistaken For:

HAGL - HAGL has solid red stems and soft hairs in the leaf axils; SAKA has striped stems and lacks hairs in the leaf axils.

SCLI
Schoenocrambe linifolia

Common Name(s): flaxleaf plainsmustard

Identifying Characteristics
- Plants range from 10 to 70 cm tall, have several stems, and are mostly glabrous with a waxy coating, but occasionally have sparse hairs near the base.
- Leaves are linear with entire to occasionally toothed margins.
- Flowers have 4 yellow petals and occur alternately on elongating spikes.
- Fruit are ascending linear pods, 2 to 5 cm in length, that open when mature.

Site and Habitat
Common across a wide range of soils.

Not to Be Mistaken For:
DEPI, SIAL, ERIN - DEPI has smooth pods that are slimy when wet; SCLI has pods that constrict slightly between seeds and are not slimy when wet. SIAL has > 5 cm spreading pods; SCLI has < 5 cm ascending pods. ERIN has abundant pubescence; SCLI has little to no pubescence.

SIAL
Sisymbrium altissimum

Common Name(s): Jim Hill tumblemustard

Identifying Characteristics
- Plants range from 20 cm to 1 m in height with one highly branched stem originating from a basal rosette.
- Leaves are lanceolate and deeply lobed to pinnately divided; basal rosette leaves are much larger than those occurring along the stems.
- Flowers have 4 yellow petals and occur on elongating spikes.
- Pedicels that attach the pods to the stems are nearly as thick as the pods.
- Pods are spreading, narrowly linear, and 5 to 10 cm in length.

Site and Habitat
Common in disturbed areas.

Not to Be Mistaken For:
DEPI, SCLI - DEPI has pods that are slimy when wet; SIAL pods are not slimy when wet. SCLI has multiple stems from the base; SIAL has 1 branching stem.

SPMU
Sphaeralcea munroana

Common Name(s): orange globemallow, white-stemmed globemallow

Identifying Characteristics
- Plants range from 10 to 60 cm in height and have multiple stems from the base.
- Leaves are palmately lobed with rounded teeth and are covered in star-shaped hairs.
- Flowers occur on elongating spikes.
- Flowers have 5 showy reddish-orange petals.

Site and Habitat
Common across a wide range of soil textures.

Not to Be Mistaken For:
SPGR - SPGR has deeply lobed leaves (lobes extend nearly to the midvein); SPMU has shallowly lobed leaves.

STVI
Stanleya viridiflora

Common Name(s): prince's plume

Identifying Characteristics

- Plants have basal leaves and alternate leaves along the stem, plant height ranges from 40 to 100 cm, and plants are mostly glabrous.
- Basal leaves have distinct petioles and are elliptic in shape; leaves on the stem attach directly to the stem (lack petioles) and the base of the leaves wraps around the stem slightly.
- Flowers occur on elongating spikes and have 4 yellow petals.
- Pods are linear, spreading and slightly downward-curved.

Site and Habitat

Scattered on basalt outcroppings and rocky soils.

Not to Be Mistaken For:

THLA - THLA has deeply lobed leaves, purple stems, and white flowers, STVI has mostly entire leaves, green stems, and yellow flowers.

TAOF
Taraxacum officinale

Common Name(s): common dandelion

Identifying Characteristics

- Plants consist of basal rosettes with leafless flowering stalks, contain milky juice, and range from 5 to 40 cm in height.
- Basal leaves are lanceolate and deeply lobed to pinnately divided.
- Flower heads occur singly on hollow stems and have over 100 yellow ray flowers.
- Fruits have a distinct pappus of white bristles.

Site and Habitat

Primarily found around facilities.

Fun Plant Fact

Fried Dandelion Blossoms

- New blossoms
- 1 c. milk
- ½ tsp. salt
- cooking oil
- 1 egg
- 1 cup flour

Mix egg, milk, flour, and salt to make batter. Coat dandelion blossoms in batter and fry in hot oil until lightly browned.

THLA
Thelypodium laciniatum

Common Name(s): cutleaf thelypody

Identifying Characteristics
- Plants range from 30 to 100 cm in height.
- Leaves occur basally and alternately on the stem.
- Leaves are deeply lobed to pinnately divided and have distinct pedicels attaching them to the stem.
- Stems have a purplish tinge and several erect branches.
- Flowers have 4 white petals and occur on elongating spikes.
- Pods are linear and spreading.

Site and Habitat
Scattered across the INL.

Not to Be Mistaken For:
STVI, THMI, THIN - STVI has mostly entire leaves, green stems, and yellow flowers; THLA has deeply lobed leaves, purple stems, and white flowers. THMI has erect pods; THLA has spreading pods. THIN has entire leaves; THLA has lobed leaves.

TOFL
Townsendia florifer

Common Name(s): showy Townsend daisy

Identifying Characteristics

- Plants range from 4 to 12 cm in height with several stems from the base; stems may occasionally be branched.
- Plants are covered in stiff hairs and have a grayish appearance.
- Leaves are spatula-shaped (narrow near the bottom and widening near the tip), and occur alternately along the stems.
- Flower heads appear to occur in clusters, have numerous yellow disc flowers and 15 to 25 white to light pink ray flowers.

Site and Habitat

Common across the INL in a range of soil textures.

Not to Be Mistaken For:

ERPU, ERFI - ERPU and ERFI have narrow, linear leaves and purple ray flowers; TOFL has spatula-shaped leaves and pink ray flowers.

TRDU
Tragopogon dubius

Common Name(s): yellow salsify, goat's beard

Identifying Characteristics

- Plants have multiple branching stems, range from 20 to 50 cm in height, and have milky juice.
- Stems are hollow.
- Leaves are very narrow and linear, alternate, and clasp around the stem.
- Flower heads consist of numerous yellow ray flowers that are surrounded by 8 to 13 bracts.
- Bracts are linear, taper near the tip, and are longer than the ray flowers.
- Seeds have a distinct feathery white pappus.

Site and Habitat

Scattered and widespread across the INL.

Fun Plant Fact

Flowers open early in the morning and close around noon.

ZIVE
Zigadenus venenosus

Common Name(s): meadow death camas

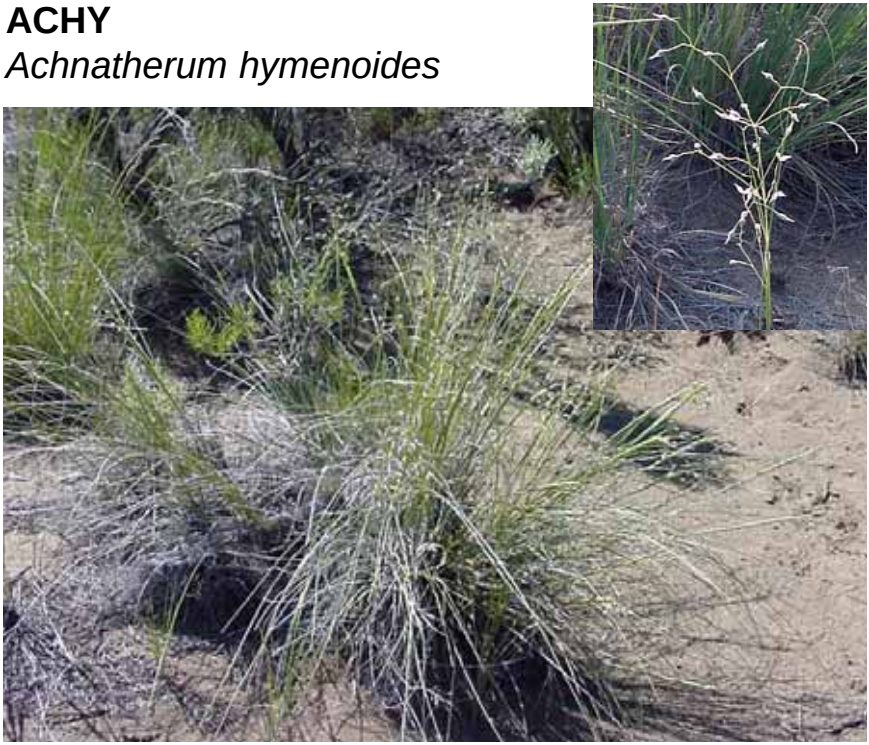
Identifying Characteristics
- Plants range from 20 to 50 cm in height.
- Leaves occur mostly basally and occasionally along the stem, but do not sheath the stem.
- Leaves are linear and bent inward at the midvein.
- Flowers occur mostly singly on a spike, but sometimes occur in clusters at the base of the spike.
- Flowers are white to pale yellow in color, petals are slightly dimorphic (half of them are longer, and alternate around the shorter half), and the stamens extend only to the top of the petals.

Site and Habitat
Mostly found on the west side of the INL in sandy areas.

Not to Be Mistaken For:
ZIPA - ZIPA has mostly clusters of flowers on the flowering stalk, highly dimorphic petals, and stamens extend well above the petals; ZIVE has mostly single flowers on the flowering stalk, slightly dimorphic petals, and stamens are even with the top of the petals.

Graminoids

ACHY
Achnatherum hymenoides



Common Name(s): Indian ricegrass

Identifying Characteristics
- Bunchgrass with culms from 30 to 70 cm tall.
- Blades are threadlike and rolled inward.
- Single seeds occur on dichotomous branching culms.
- Seeds are dark brown and hairy at maturity.
- Ligules are membranous, 5-7 mm long, and acuminate; they may be notched.

Site and Habitat
Prefers rocky and/or sandy soils.

AKA
Oryzopsis hymenoides

Not to Be Mistaken For:
HECO - Both species look similar without seed heads; ACHY has pubescent sheath collars and HECO has glabrous sheath collars.

AGCR
Agropyron cristatum

Common Name(s): crested wheatgrass

Identifying Characteristics

- Bunchgrass ranging from 20 to 60 cm in height.
- Blades are flat, have short, fringed ligules and distinct slender auricles at the sheath collar.
- Flower spikes are compact (spikelets are about 4x as long as the internodes), and are 2 to 7 cm long.
- Spikelets grow in 2 distinct opposite rows, are flattened, are slightly spreading, and have curved awns 2 to 4 mm in length.

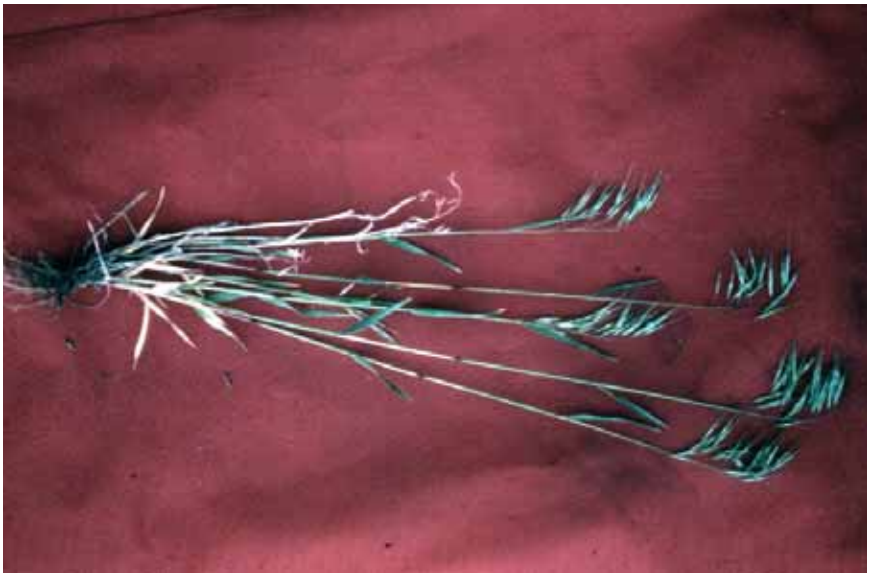
Site and Habitat

Planted extensively on roads, in burned areas, and other disturbed sites; can be found in the understory of adjacent undisturbed areas.

Not to Be Mistaken For:

AGDE - AGDE has longer flower spikes (5 to 9 cm) with tightly ascending spikelets; AGCR has shorter flower spikes (2 to 7 cm) with slightly spreading spikelets. AGCR and AGDE are difficult to distinguish and are often lumped in classification.

BRTE
Bromus tectorum



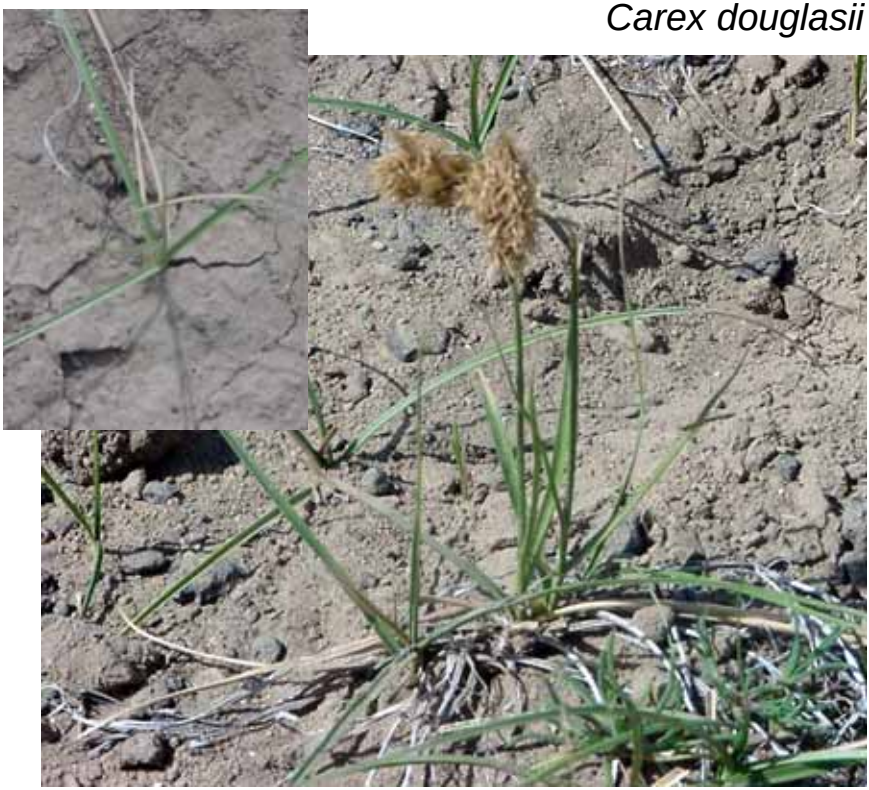
Common Name(s): cheatgrass, downy brome

Identifying Characteristics
- Plants are covered in fine pubescence, range from 5 to 40 cm in height, and are purplish at maturity.
- Leaves are flat with papery, jagged ligules.
- Plants may have 1 to several culms.
- The flower spikes are loosely formed with drooping spikelets.
- Spikelets have awns 1 to 2 cm in length.

Site and Habitat
Common INL-wide, especially on coarse-textured and disturbed soils.

Not to Be Mistaken For:
BRJA - BRJA has panicle branches shorter than the spikelets and awns that are longer than 2 cm and reflexed; BRTE has panicle branches longer than the spikelets and awns that are shorter than 2 cm and straight.

CADO
Carex douglasii



Common Name(s): Douglas' sedge

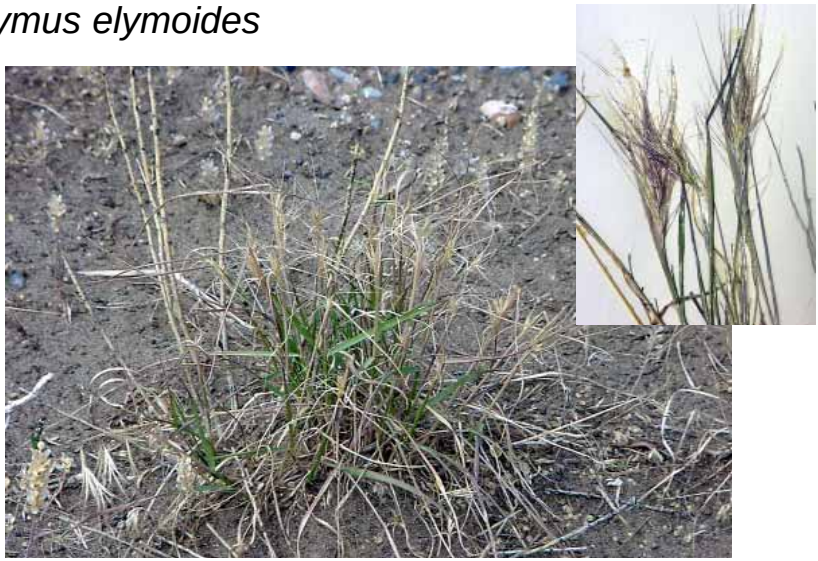
Identifying Characteristics

- Rhizomatous grass-like plants range from 10 to 40 cm in height.
- Leaves are narrow, have closed sheaths, and reflex away from the culm.
- Flower stalks, or culms, have three sides (are triangular in cross-section).
- When viewed from above, leaves appear to be arranged like a propeller with three blades.
- Flowers occur in compact spikes.
- Fruits are achenes.

Site and Habitat

Plants occur in patches across a wide range of soil textures.

ELEL
Elymus elymoides



Common Name(s): bottlebrush squirreltail

Identifying Characteristics
- Bunchgrass ranging from 10 to 50 cm in height.
- Blades are flat, rolled inward near the base, have distinct auricles, and short membranous ligules.
- Inflorescences occur in spikes that are often purplish in color when mature.
- Spikelets occur in pairs at each node, and each spikelet attaches directly to the culm.
- Spikelets have awns up to 6 cm in length and reflex away from the culm when mature.

Site and Habitat
Common in fine to medium textured and sometimes gravelly soils.

AKA
Sitanion hystrix

Not to Be Mistaken For:
HOJU - HOJU has 3 spikelets at each node (2 have pedicels); ELEL has 2 spikelets per node and no pedicels.

ELLA
Elymus lanceolatus

Common Name(s): thickspike wheatgrass

Identifying Characteristics
- Rhizomatous plants are 10 to 60 cm tall.
- Blades are flat, linear, have prominent veins, are rolled inward, and have hairs at the sheath base.
- Spikes are up to 20 cm long and have strongly overlapping spikelets.
- Spikelets are compact, ascending, and pubescent.
- Glumes have 5 to 7 veins and are smaller than the 1st floret.

Site and Habitat
Common on medium to coarse-textured soils.

AKA
Agropyron dasystachyum

Not to Be Mistaken For:
PASM - PASM has a blue tinge, glabrous spikelets, and glumes are the same size as the 1st floret; ELLA is green, has pubescent spikelets, and glumes are smaller than the 1st floret.

HECO
Hesperostipa comata

Common Name(s): needle-and-thread grass

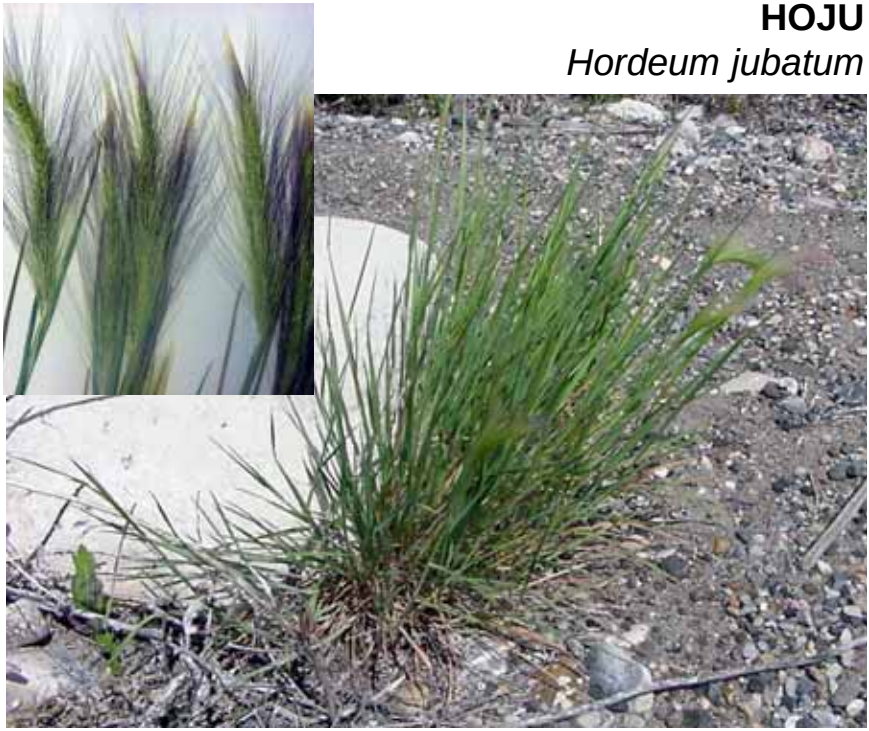
Identifying Characteristics
- Plants occur in bunches, and culms range from 30 to 80 cm in height.
- Leaves occur basally with one prominent flag leaf at the base of a spreading panicle.
- Leaves are narrow, linear, and flat.
- Glumes are narrow and 15 to 40 cm long.
- Distinct awns are 10 to 20 cm long and are twisted.

Site and Habitat
Common in sandy and gravelly soils.

AKA
Stipa comata

Not to Be Mistaken For:
ACHY, ACOC - ACHY has pubescent sheath collars; HECO has glabrous sheath collars. ACOC has twice-bent awns < 6 cm long; HECO has twisted awns > 10 cm long.

HOJU
Hordeum jubatum



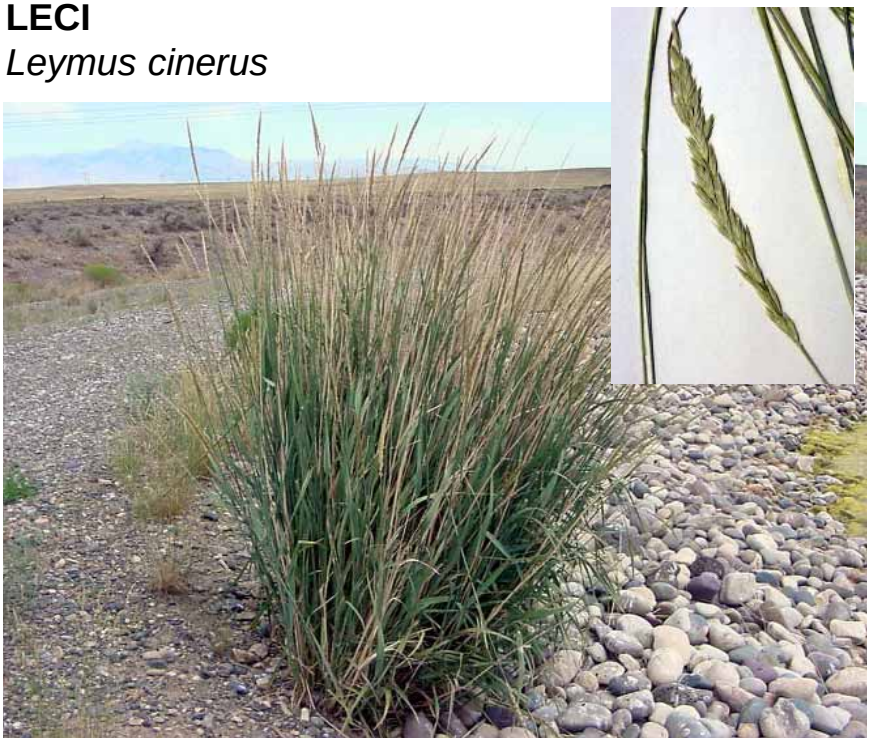
Common Name(s): foxtail barley

Identifying Characteristics
- Bunchgrass ranges from 30 to 50 cm in height.
- Leaves are flat, tapered, have membranous ligules and are rough to the touch.
- Flowers occur in a spike and most spikelets have pedicels.
- Each joint on the culm has 3 spikelets.
- Spikelets have awns up to 7 cm in length that are purplish at the tips.

Site and Habitat
Common in disturbed areas on gravelly soils.

Not to Be Mistaken For:
ELEL - ELEL has 2 spikelets per node, lacks pedicels attaching the spikelets to the culms, and has distinct auricles on the sheath collars; HOJU has 3 spikelets at each node (2 have pedicels) and lacks auricles on the sheath collars.

LECI
Leymus cinerus



Common Name(s): basin wildrye, giant wildrye

Identifying Characteristics

- Plants range from 70 cm to 2 m in height and appear to be bunchgrasses because they grow in tight rhizomatous clumps.
- Blades are flat, 5 to 20 mm wide, have ligules > 2 mm long, and have clasping auricles.
- Culms are hollow and have up to six nodes.
- Spikes are 10 to 25 cm long and have tight, overlapping spikelets.
- Spikelets have narrow, linear glumes.

Site and Habitat

Can occur across a range of soils, but especially common in low-lying, poorly drained areas.

AKA

Elymus cinerus

PASM
Pascopyrum smithii

Common Name(s): western wheatgrass

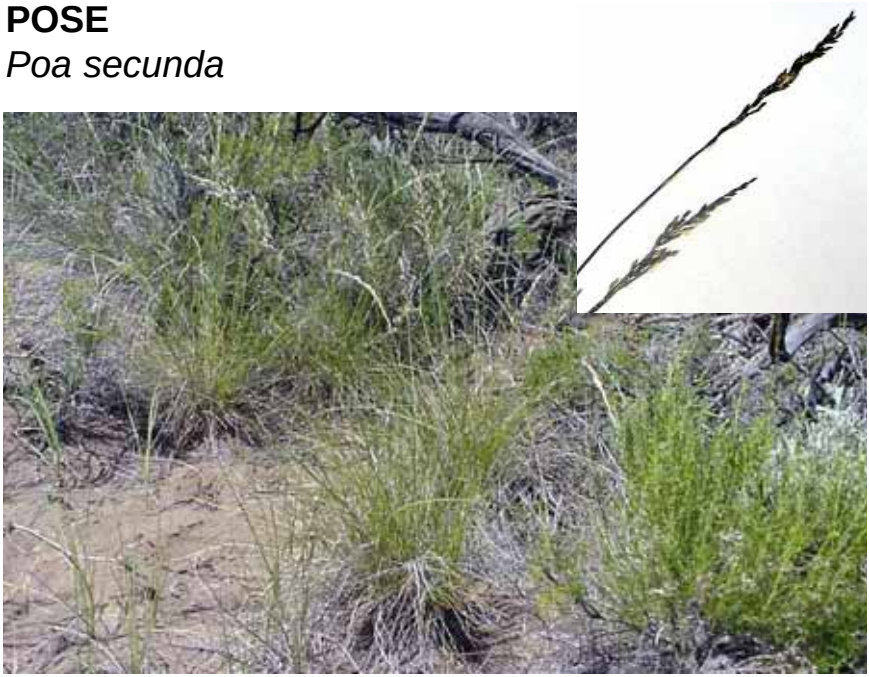
Identifying Characteristics
- Strongly rhizomatous plants range from 20 to 80 cm in height.
- Blades are linear, prominently veined, rigid, and are glabrous at the sheath base.
- Spikes are up to 20 cm long.
- Spikelets are ascending to slightly spreading, are overlapping, and are usually glabrous.
- Glumes have 3 to 5 veins and are almost as long as the first floret.

Site and Habitat
Common on fine to medium textures soils.

AKA
Agropyron smithii

Not to Mistaken For:
ELLA - ELLA is green, has pubescent spikelets, and glumes are smaller the first floret; PASM has a blue tinge, glabrous spikelets, and glumes are the same size as the first floret.

POSE
Poa secunda



Common Name(s): Sandberg bluegrass

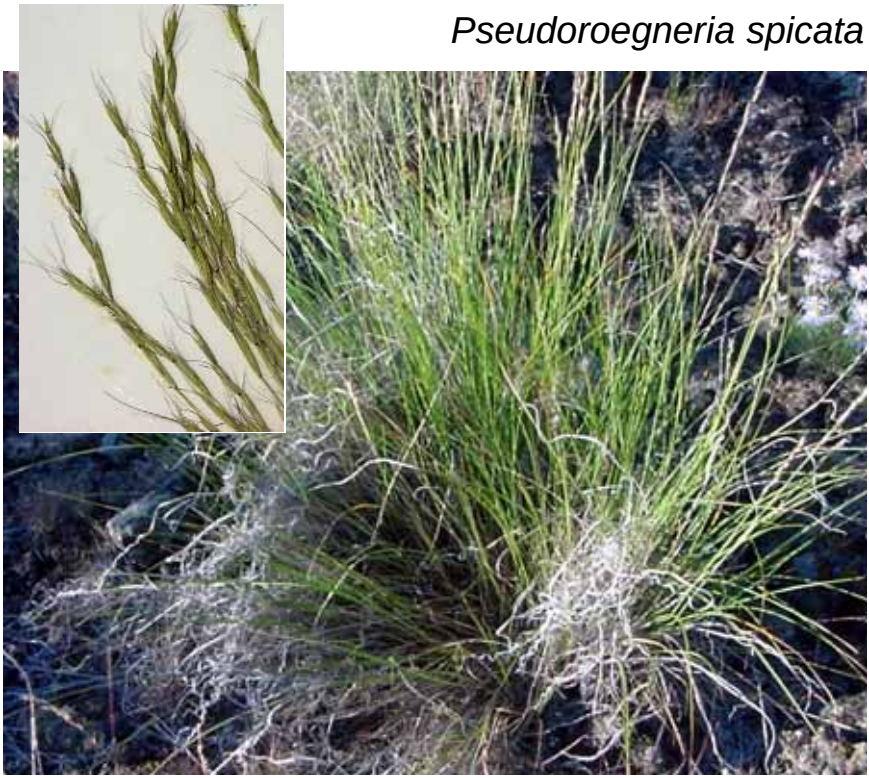
Identifying Characteristics
- Bunchgrass with culms from 10 to 40 cm in height.
- Leaves are short (3 to 10 cm), very narrow, and have distinct acute membranous ligules that are 2 to 4 mm long with entire margins.
- Flower heads consist of narrow panicles.
- Spikelets have short pedicels (< 1 cm).

Site and Habitat
Common across a wide range of soil textures.

AKA
Poa nevadensis, Poa scabrella, Poa sandbergii

Not to Be Mistaken For:
POFE, POPR - POFE has ligules < 1 mm in length; POSE has ligules > 2 mm in length. POPR is rhizomatous and has pedicels > 1 cm in length; POSE is a bunchgrass has pedicels < 1 cm in length.

PSSP
Pseudoroegneria spicata



Common Name(s): bluebunch wheatgrass

Identifying Characteristics

- Bunchgrass ranges from 30 to 60 cm in height.
- Blades are linear, flat to slightly rolled inward, are generally glabrous to slightly waxy, and have clasping auricles.
- Spikes are 8 to 20 cm long, have 1 spikelet per node, and spikelets do not overlap or overlap very little.
- Spikelets have awns that range from 1 to 2 cm in length and reflex sharply at maturity.

Site and Habitat

Common on medium to coarse-textured soils at higher elevations, such as the base of the buttes and the base of the foothills.

AKA

Agropyron spicatum

Shrubs

ARAR
Artemisia arbuscula

Common Name(s): low sagebrush, dwarf sagebrush

Identifying Characteristics

- Plants range from 10 to 40 cm in height.
- Leaves are three-toothed, have short, dense, grayish-white hairs, and are grayish-green in color.
- The flower heads are on racemose spikes, are grayish in color, and don't persist into the next year.
- The bracts surrounding the flower heads are covered in dense, short, white hairs.

Site and Habitat

Plants occur on medium to fine textured soils around the buttes and foothills.

Not to Be Mistaken For:

ARNO - ARNO has flower heads in panicles that are brown in color and persist into the next year, and has glabrous bracts surrounding the flower heads; ARAR has flower heads in racemes that are gray in color and don't persist into the next year, and has pubescent bracts surrounding the flower heads.

ARNO
Artemisia nova

Common Name(s): black sagebrush

Identifying Characteristics
- Plants range from 10 to 40 cm in height, and have dark brown to black stems.
- Leaves are three-toothed, have short, dense hairs, small glands, and are dark green in color.
- Flower heads occur in narrow panicles that are yellow to brown in color, extend beyond the top of the plant, and persist well into the next year.
- The bracts surrounding the flowers are glabrous.

Site and Habitat
Plants occur on shallow, rocky soils and outcroppings around the buttes and foothills.

Not to Be Mistaken For:
ARAR - ARAR has flower heads in racemes that are gray in color and don't persist into the next year, and has pubescent bracts surrounding the flower heads; ARNO has flower heads in panicles that are brown in color and persist into the next year, and has glabrous bracts surrounding the flower heads.

ARTP
Artemisia tripartita

Common Name(s): threetip sagebrush

Identifying Characteristics
- Plants are grayish-green and range from 20 to 60 cm in height.
- Leaves on the branches are deeply lobed and have 3, long (about 1 cm long), narrow (about 1 mm wide) teeth.
- Flower heads occur in panicles.
- Leaves on the panicles have entire margins, and are longer than the flower heads.

Site and Habitat
Occurs in a wide range of soil textures on deep, well-drained soils, especially around the buttes and foothills.

Not to Be Mistaken For:
ARFR2 - ARFR2 has leaves divided into > 3 segments and leaves along the flowering stalk are divided; ARTP has leaves divided into 3 segments and leaves along the flowering stalk have entire margins.

ARTRT
Artemisia tridentata ssp. *tridentata*

Common Name(s): basin big sagebrush

Identifying Characteristics

- Mature plants range from 1 m to 4 m in height and are highly branched above the base.
- Leaves are opposite, wedge-shaped, have 3 teeth, and are pubescent.
- Older stems have dark gray bark that has a shredded appearance.
- Flowers occur in panicles that extend above the crown of the plant.

Site and Habitat

Occurs across the INL on deep, coarse soils.

Not to Be Mistaken For:

ARTRW, ARCA, ARLU - ARTRW is usually < 1 m in height and leaf margins bell outward; ARTRT is > 1 m in height and leaf margins are straight. ARCA and ARLU have leaves with entire margins or an occasional tooth and stems branch basally; ARTRT has leaves with three teeth and stems branch mostly above the base.

ARTRW
Artemisia tridentata ssp. *wyomingensis*

Common Name(s): Wyoming big sagebrush

Identifying Characteristics
- Mature plants are generally < 1 m in height and are highly branched above the base.
- Leaves are opposite, wedge-shaped, have 3 teeth, and are pubescent.
- Older stems occasionally branch from the base, and have dark gray bark that has a shredded appearance.
- Flowers occur in panicles that extend above the crown of the plant.

Site and Habitat
Common across the INL on shallow, fine-textured soils.

Not to Be Mistaken For:
ARTRT, ARAR - ARTRT is > 1 m in height and leaf margins are straight; ARTRW is < 1 m in height and leaf margins bell outward. ARAR has racemose flower heads that extend to equal heights above the crown, giving the shrub an even-topped appearance; ARTRW has paniculate flower heads that vary in height above the crown, giving the shrub an uneven-topped appearance.

ATCO
Atriplex confertifolia

Common Name(s): shadscale saltbush

Identifying Characteristics

- Plants are highly branched and range from 15 to 50 cm in height.
- Plants are light grayish-green in color and may have a slight pink to red tinge.
- Stems are rigid and have numerous prominent spines.
- Leaves are oval in shape, pointed near the tip, occur alternately along the stems, and taste salty.
- Flowers are non-showy and occur as short spikes or clusters in the leaf axils.

Site and Habitat

Occurs across the INL on medium to fine-textured, alkaline soils.

Not to Be Mistaken For:

ATCA - ATCA has linear leaves that attach directly to the stem, and fruits with 4 prominent, papery bracts; ATCO has oval-shaped leaves that attach to the stem with a stalk (petiole), and fruits lack prominent bracts.

ATNU
Atriplex nuttallii

Common Name(s): Nuttall's saltbush

Identifying Characteristics
- Plants range from 10 to 50 cm in height.
- Numerous, erect, herbaceous stems arise from a spreading, woody base.
- Leaves are oblong to liner in shape, occur alternately, and are often in clusters.
- Non-showy flowers occur in clusters along a spike at the tips of the branches.

Site and Habitat
Common in medium to fine-textured soils in the center and on the north end of the INL.

Not to Be Mistaken For:
ATCA - ATCA has woody branches throughout, and has fruits with four papery bracts; ATNU has herbaceous branches above the base, and has fruit without prominent bracts.

CHVI
Chrysothamnus viscidiflorus

Common Name(s): green rabbitbrush, yellow rabbitbrush

Identifying Characteristics

- Mature plants are usually < 1 m in height, and are highly branched.
- Stems are glabrous to slightly pubescent and have white bark above the base and gray to brown shredding bark near the base.
- Leaves are alternate, linear, have entire margins, and twist like a corkscrew.
- Flowers heads occur in bunches at the tips of the stems.
- Flower heads consist of 5 yellow disc flowers.

Site and Habitat

Extremely abundant across the INL.

Not to Be Mistaken For:

ERNA - ERNA has green, woolly stems and straight, linear leaves; CHVI has white, glabrous stems and linear, twisted leaves.

ERMI
Eriogonum microthecum

Common Name(s): shrubby buckwheat

Identifying Characteristics
- Plants range from 10 to 50 cm in height and are highly branched and spreading from a woody base.
- Stems are dark reddish-brown in color.
- Leaves are narrowly lanceolate, occur alternately along the stem and occasionally in clusters, and are covered in dense, white, woolly hair.
- Flowers are white to pinkish in color and occur in loose umbels.

Site and Habitat
Common in medium to coarse-textured soils across the INL.

Phenology
Plants bloom in late summer to early autumn.

ERNA
Ericameria nauseosa

Common Name(s): gray rabbitbrush, rubber rabbitbrush

Identifying Characteristics
- Mature plants typically range from 1 to 2 m in height, and are highly branched.
- Stems at the top of the plant are green in color and covered in dense, felt-like hair.
- Leaves are alternate, linear, and have entire margins.
- Flowers heads occur in clusters.
- Flowers heads consist of 5 yellow disc flowers.

Site and Habitat
Common across the INL; especially in disturbed areas and deep, gravelly soils.

AKA
Chrysothamnus nauseosus

Not to Be Mistaken For:
CHVI - CHVI has white, glabrous stems and linear, twisted leaves; ERNA has green, woolly stems and straight, linear leaves.

ERNA2
Ericameria nana

Common Name(s): dwarf goldenbush

Identifying Characteristics
- Plants are highly branched and range from 5 to 20 cm in height.
- Plants are resinous and have a lemon-like odor.
- Leaves are bright green, linear, and alternate.
- Flower heads occur in tight clusters.
- Flower heads consist of 4 to 10 yellow disc flowers and up to 10 bright yellow ray flowers.

Site and Habitat
Common on basalt outcroppings.

AKA
Haplopappus nanus

Not to Be Mistaken For:
HAAC, GUSA - HAAC has only basal leaves; ERNA2 has alternate leaves on the stems. GUSA has flower heads that occur in loose clusters and has leaves > 2 cm long; ERNA2 has flower heads that occur in tight clusters and has leaves < 2 cm long.

GRSP
Grayia spinosa

Common Name(s): spiny hopsage

Identifying Characteristics
- Mature plants range from 50 cm to 1.5 m in height.
- Plants are covered in gray, flaky scales.
- Stems are gray and have numerous spines.
- Leaves are alternate, and are lanceolate, but slightly wider near the tip than at the base.
- Fruits occur in clusters in the leaf axils and at the tips of the branches.
- Fruits are flattened and round with a papery wing around the edge, and are red to pink tinged.

Site and Habitat
Has a patchy distribution across a range of soil textures.

AKA
Atriplex spinosa

Not to Be Mistaken For:
ATCO - ATCO has broad oval leaves, non-showy fruits, and is < 50 cm tall; GRSP has narrow lanceolate leaves, showy fruits, and is > 50 cm tall.

GUSA
Gutierrezia sarothrae

Common Name(s): broom snakeweed, matchbrush

Identifying Characteristics
- Plants branch primarily from the base and range from 10 to 40 cm in height.
- Leaves are linear, alternate, and 2 to 4 cm long.
- Lower leaves are often dried and withered.
- Flower heads occur in loose clusters.
- Flower heads consist of 3 to 8 yellow disc flowers and 3 to 8 yellow ray flowers.
- Old flower heads often persist into the following year.

Site and Habitat
Common on basalt outcroppings and in rocky soils.

Not to Be Mistaken For:
CHVI, ERNA2 - CHVI braches primarily above the base and has twisted leaves; GUSA braches primarily from the base and has flat leaves. ERNA2 branches above the base and has leaves < 2 cm long; GUSA branches at the base and has leaves > 2 cm long.

KRLA
Krascheninnikovia lanata

Common Name(s): winterfat, white sage

Identifying Characteristics

- Plants range from 15 to 50 cm in height, have a woody base, and numerous erect, herbaceous stems.
- Plants are covered in dense, woolly hairs, making them light gray to white in color.
- Leaves are narrowly lanceolate to linear, roll under at the edges, and occur alternately or in clusters along the stems.
- Flowers are white and cottony and occur in clusters in the leaf axils.

Site and Habitat

Scattered throughout the INL, occasionally becomes dominant in medium to fine-textured, saline soils.

Not to Be Mistaken For:

TECA - TECA is highly branched, with woody stems above the base, swollen nodes, and flat leaves; KRLA branches primarily from the base, has herbaceous stems above the base, and leaves that roll under at the edges.

LEPU
Leptodactylon pungens

Common Name(s): granite prickly phlox

Identifying Characteristics

- Plants are highly branched, spreading, and are < 50 cm in height.
- Leaves attach directly to the stem and are palmately divided, making them appear as if they occur in clusters along the stem.
- Leaflets are short, narrow, and pointed at the tip.
- Dead, gray leaves often remain on the lower branches.
- Flowers are white and have 5 petals that are fused at the base.

Site and Habitat

Scattered throughout the INL on medium to coarse-textured and sometimes rocky soils.

Not to Be Mistaken For:

PHLO - PHLO has entire leaves that are opposite and herbaceous stems; LEPU has palmately divided leaves that may be opposite or alternate, and woody stems.

OPPO
Opuntia polyacantha

Common Name(s): prickly pear

Identifying Characteristics

- Plants are spreading and range from 5 to 20 cm in height.
- Pads (stems) are flattened and succulent.
- Spines (leaves) are slightly barbed and have woolly, sometimes rust-colored hair at the base where they attach to the pads.
- Flowers are showy and have numerous petals that range from bright yellow to pink to red in color.

Site and Habitat

Common across the INL in a wide range of soil textures.

Fun Plant Fact

Prickly pear is edible and taste somewhat like cucumber; it can also be used to thicken soups.

PIDE
Picrothamnus desertorum

Common Name(s): bud sage

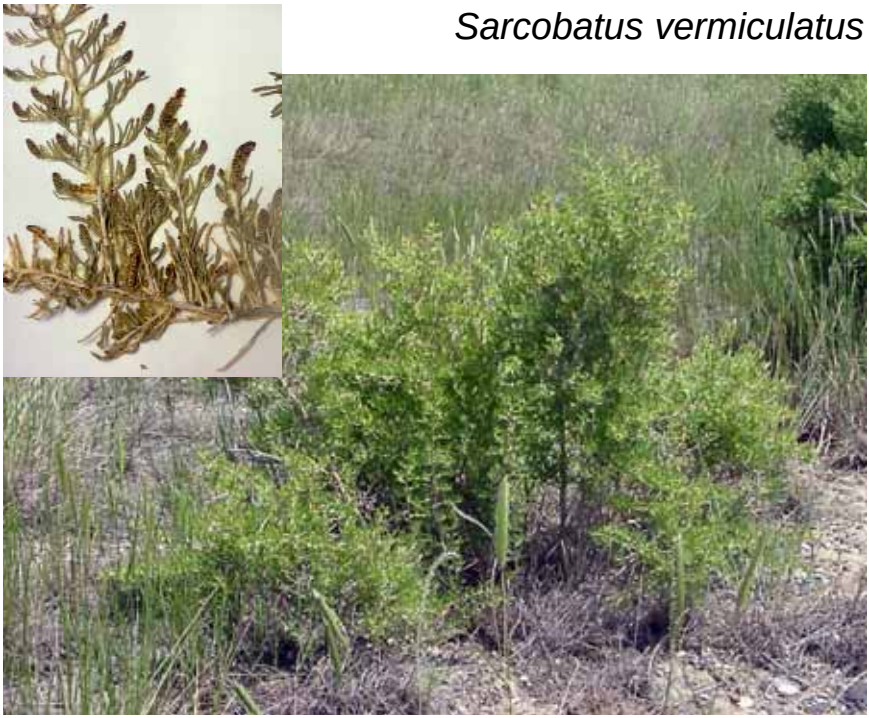
Identifying Characteristics
- Plants are highly branched, spiny, and range from 5 to 30 cm in height.
- Leaves are alternate and are divided into 3-5 segments; those segments are also deeply lobed, further separating the leaves into several palmately divided spatula-shaped leaflets.
- Leaves are covered in long, shaggy hairs.
- Flower heads occur in leaf axils along flower spikes.
- Flower heads are nodding and may be solitary or in clusters.

Site and Habitat
Scattered across the INL in a range of well-drained soils.

Phenology
Plants bloom in late spring to early summer.

AKA
Artemisia spinescens

SAVE
Sarcobatus vermiculatus



Common Name(s): greasewood

Identifying Characteristics
- Mature plants range from 1 to 2.5 m in height, are highly branched, and have numerous spines.
- Leaves are bright green, alternate, succulent, linear, and round to slightly square in cross section.
- Younger stems are white in color and turn gray to brown as they age.
- Male flowers are similar to pine cones in appearance.

Site and Habitat
Occurs in scattered patches across the INL in fine to medium-texture, saline soils.

Fun Plant Fact
Greasewood thrives in saline soils by concentrating salt in its leaves; thus, the leaves have a salty taste.

TECA
Tetradymia canescens

Common Name(s): gray horsebrush, spineless horsebrush

Identifying Characteristics

- Mature plants range from 40 cm to 1 m in height and are highly branched above the base.
- Stems have noticeably swollen nodes, are covered in dense, woolly hair near the top of the plant, and are dark gray in color near the bottom of the plant.
- Leaves are lanceolate, have entire margins, and are covered in dense, white, woolly hairs.
- Flower heads occur in clusters at the tip of the stems, and each flower head has 4 bright yellow disc flowers.

Site and Habitat

Common on medium to coarse-textured soils.

Not to Be Mistaken For:

KRLA - KRLA branches primarily from the base, has herbaceous stems above the base, and leaves that roll under at the edges; TECA is highly branched, with woody stems above the base, swollen nodes, and flat leaves.

TESP
Tetradymia spinosa

Common Name(s): spiny horsebrush

Identifying Characteristics

- Mature plants range from 40 cm to 1 m in height and are highly branched above the base.
- Younger stems are white in color and are covered in white, felt-like hair.
- Stems have numerous green downward-curved spines.
- Leaves are bright green and linear.
- Flower heads occur in clusters at the tips of the stems, and each flower head has 5 to 9 bright yellow disc flowers.

Site and Habitat

Scattered in patches throughout the INL across a range of soil textures.

Fun Plant Fact

Ingestion of spiny horsebrush can cause extreme sensitivity to light.

Trees

JUOS
Juniperus osteosperma

Common Name(s): Utah juniper

Identifying Characteristics
- Mature plants can be up to 10 m tall.
- The trunk is often branched several times at the base.
- Plants are highly branched above the base, and have a rounded, spreading appearance.
- Leaves are small, scale-like and occur in 3's (3 leaves occur around the diameter of the branch at the same distance from the base of the branch).
- Cones are berry-like and blue to black in color with a waxy coating.

Site and Habitat
Scattered on medium to coarse-texture soils, on and around basalt outcroppings, and around the buttes and foothills.

Not to Be Mistaken For:
JUSC - JUSC has an upright appearance, seldom branches at the base, and leaves occur in 2's; JUOS has a spreading appearance, usually branches at the base, and leaves occur in 3's.

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Glossary

Acuminate - coming to a point at the tip.

Capsules - dry, pod-like fruit that contain seeds.

Clasping Leaves - leaves in which the base wraps around the stem or flowering stalk.

Decumbent - stems lie along the ground, but turn upward at the tip.

Elliptic - oval in shape, but slightly narrower at the tip and at the base.

Entire Margins - edges are straight and smooth, not divided or lobed.

Glabrous - surface is smooth, without hair or projections.

Inflorescence - a cluster of flowers.

Lanceolate - narrow, but slightly wider at the base than near the tip.

Nutlet - a small nut-like fruit.

Oblanceolate - narrow, but slightly wider at the tip than at the base.

Obovate - oval, but slightly wider at the tip than at the base.

Ovate - oval, but slightly wider at the base than at the tip.

Pendulous - hanging downward from a stem or stalk.

Pubescent - surface is hairy.

Reflexed - bent backwards at a sharp angle.

Reticulation - marked with a pattern of raised squares or rectangles.

Rhizomatous - having a fibrous network of roots from which individual stems or tillers sprout.

Spatulate - shaped like a spatula.

Stoloniferous - having stems that lie along the ground and produce roots and buds at the nodes.

Succulent - water-filled and fleshy.

Tendril - a slender, twining projection that plants use for attachment.

Code List

ACHY	*Achnatherum hymenoides*
ACMI	*Achillea millefolium*
ACOC	*Acnatherum occidentale*
AGCR	*Agropyron cristatum*
AGDE	*Agropyron desertorum*
AGGL	*Agoseris glauca*
AGRE	*Agoseris retrorsa*
ALAC	*Allium acuminatum*
ALDE	*Alyssum desertorum*
ALGE	*Allium geyeri*
ALTE	*Allium textile*
ANDI	*Antennaria dimorpha*
ANMI	*Antennaria microphylla*
ARAR	*Artemisia arbuscula*
ARFR	*Arenaria franklinii*
ARFR2	*Artemisia frigida*
ARHO	*Arabis holboellii*
ARLI	*Arabis lignifera*
ARNO	*Artemisia nova*
ARTP	*Artemisia tripartita*
ARTRT	*Artemisia tridentata* ssp. *tridentata*
ARTRW	*Artemisia tridentata* ssp. *wyomingensis*
ASCA	*Astragalus calycosus*
ASCU	*Astragalus curvicarpus*
ASFI	*Astragalus filipes*
ASLE	*Astragalus lentiginosus*
ASPU	*Astragalus purshii*
ATCA	*Atriplex canescens*
ATCO	*Artiplex confertifolia*
ATNU	*Atriplex nuttallii*
BAHO	*Balsamorhiza hookeri*
BASA	*Balsamorhiza sagittata*
BRJA	*Bromus japonicus*
BRTE	*Bromus tectorum*
CAAN	*Castilleja angustifolia*
CABR	*Calochortus bruneaunis*
CADO	*Carex douglasii*
CAMA	*Calochortus macrocarpus*
CANU	*Carduus nutans*
CEMA	*Centaurea maculosa*
CHAL	*Chenopodium album*
CHDO	*Chaenactis douglasii*
CHFR	*Chenopodium fremontii*
CHLE	*Chenopodium leptophyllum*
CHVI	*Chrysothamnus viscidiflorus*
CIAR	*Cirsium arvense*
CIVU	*Cirsium vulgare*
CRAC	*Crepis acuminata*
CRCI	*Cryptantha circumscissa*
CRIN	*Cryptantha interrupta*

CRKE	*Cryptantha kelseyana*
CROC	*Crepis occidentalis*
CRSC	*Cryptantha scoparia*
CYAC	*Cymopterus acaulis*
CYNI	*Cymopterus nivalis*
DEAN	*Delphinium andersonii*
DENU	*Delphinium nuttallianum*
DEPI	*Descurainia pinnata*
DESO	*Descurainia sophia*
ELEL	*Elymus elymoides*
ELLA	*Elymus lanceolatus*
ERCE	*Eriogonum cernuum*
ERFI	*Erigeron filifolius*
ERIN	*Erysimum inconspicuum*
ERMI	*Eriogonum microthecum*
ERNA	*Ericameria nauseosa*
ERNA2	*Ericameria nana*
EROV	*Eriogonum ovalifolium*
ERPU	*Erigeron pumilus*
ERUM	*Eriogonum umbellatum*
ERWI	*Eriastrum wilcoxii*
GADI	*Gayophytum diffusum*
GARA	*Gayophytum racemosum*
GARA2	*Gayophytum ramosissimum*
GILE	*Gilia leptomeria*
GRSP	*Grayia spinosa*
GRSQ	*Grindelia squarrosa*
GUSA	*Gutierrezia sarothrae*
HAAC	*Haplopappus acualis*
HAGL	*Halogeton glomeratus*
HEBO	*Hedysarum boreale*
HECO	*Hesperostipa comata*
HOJU	*Hordeum jubatum*
IOAL	*Ionactis alpina*
IPCO	*Ipomopsis congesta*
IVAX	*Iva axillaris*
JUOS	*Juniperus osteosperma*
JUSC	*Juniperus scopulorum*
KOSC	*Kochia scoparia*
KRLA	*Krascheninnikovia lanata*
LAOC	*Lappula occidentalis*
LASE	*Lactuca serriola*
LASQ	*Lappula squarrosa*
LECI	*Leymus cinerus*
LEDE	*Lepidium densiflorum*
LEPU	*Leptodactylon pungens*
LODI	*Lomatium dissectum*
LOFO	*Lomatium foeniculaceum*
LOTR	*Lomatium triternatum*
LUAR	*Lupinus argenteus*

LUHO	*Lupinus holosericeus*
MACA	*Machaeranthera canescens*
MEAL	*Mentzelia albicaulis*
MIBR	*Mimulus breviflorus*
MINA	*Mimulus nanus*
NOTR	*Nothocalais troximoides*
OECA	*Oenothera caespitosa*
ONAC	*Onopordum acanthium*
OPPO	*Opuntia polyacantha*
PACA	*Packera cana*
PASM	*Pascopyrum smithii*
PECY	*Penstemon cyaneus*
PERA	*Penstemon radicosus*
PHAC	*Phlox aculeata*
PHGL	*Phacelia glandulifera*
PHHA	*Phacelia hastata*
PHHO	*Phlox hoodii*
PHLO	*Phlox longifolia*
PIDE	*Picrothamnus desertorum*
POFE	*Poa fendleriana*
POPR	*Poa pratensis*
POSE	*Poa secunda*
PSLA	*Psoralidium lanceolatum*
PSSP	*Pseudoroegneria spicata*
PTTE	*Pteryxia terebinthina*
RUCR	*Rumex crispus*
RUMA	*Rumex maritimus*
RUSA	*Rumex salicifolius*
RUVE	*Rumex venosus*
SAKA	*Salsola kali*
SAVE	*Sarcobatus vermiculatus*
SCLI	*Schoenocrambe linifolia*
SEIN	*Senecio integerrimus*
SIAL	*Sisymbrium altissimum*
SPGR	*Sphaeralcea grossulariifolia*
SPMU	*Sphaeralcea munroana*
STSP	*Stephanomeria spinosa*
STVI	*Stanleya viridiflora*
TAOF	*Taraxacum officinale*
TECA	*Tetradymia canescens*
TESP	*Tetradymia spinosa*
THIN	*Thelypodium intergrifolium*
THLA	*Thelypodium laciniatum*
THMI	*Thelypodium milleflorum*
TOFL	*Townsendia florifera*
TRDU	*Tragopogon dubius*
VIAM	*Vicia americana*
ZIPA	*Zigadenus paniculatus*
ZIVE	*Zigadenus venenosus*

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15 cm

10 cm

5 cm

0 cm

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