Camassia quamash Common Camas Species Code: CAMQU

Image © 2007, Jamie Fenneman

www.nps.gov/.../Camassia%20quamash_JPG.jpg

Family: Liliaceae (Lilly)
Life Cycle: Perennial
The Common Camas produces an egg-shaped bulb (2cm) that produces shoots which begin to emerge underground as early as January, and are visible by early April. Peak flowering is in early to mid May Growing through June, it can reach up to 70 cm in height, and goes dormant for the rest of the year, leaving a dry stalk with lilaceous seed pods, open at the top. From germination, CAMQU usually requires three years of establishment before producing a large enough bulb to support a bloom.

Propagation Strategies: Seed germinates easily after 30-45 days of cold moist stratification. For outdoor cold moist stratification, best to sow in January in fast-draining potting soil or sandy planter bed. Cover very moderately with potting soil after sowing, and press to firm. For indoor cold moist stratification, place seed in a paper towel or mix with a small amount of peat moss or vermiculite, place in a sealable container, moisten, and keep refrigerated for up to 45 days before sowing in early spring. Established beds can be harvested in late summer for bulbs. Mature bulbs can be stored and planted in November (like garlic) for spring flowering.

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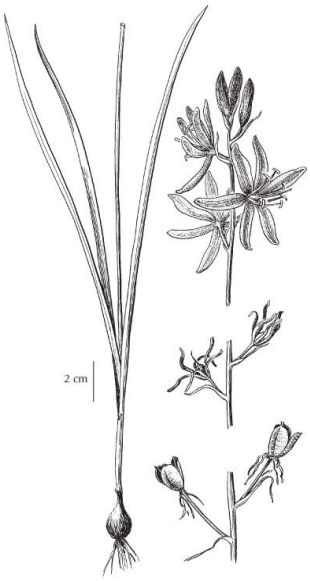
Established beds can be harvested in late summer for bulbs. Mature bulbs can be stored and planted in November (like garlic) for spring flowering.
Description: Scapose perennial from a deep-seated bulb, the scape (stalk) 2-7 dm. tall.
Leaves: Leaves several, all basal, 8-20 mm. broad, considerably shorter than the scape.
Flowers: Pale to deep blue, occasionally white. Up to 3.5 cm. 5 up to many in a terminal spike.
Fruit: Egg-shaped capsules, stalk curved toward stem, 1-2.5 cm. long.
Habitat: Both sides of the Cascades, British Columbia to California, east to Montana and Utah. Found in open, moist areas, that dry by late spring, at low to mid-elevations in the mountains.
Traditional Uses: Historically a major food source. Bulbs were dug up with pointed digging sticks, and then baked in pits. After baking, the bulbs could be made into a variety of foods: stews, breads. Dried and stored for winter months.
Wildlife: Bee Pollinated



Camassia quamash ssp. *azurea*

Illustration Source: *The Illustrated Flora of BC*

Works Cited

1. http://herb.umd.umich.edu/
2. Plants of the Pacific Northwest. Pojar J. and MacKinnon A. 1994. Lone Pine Publishing, Vancouver, British Columbia Canada.

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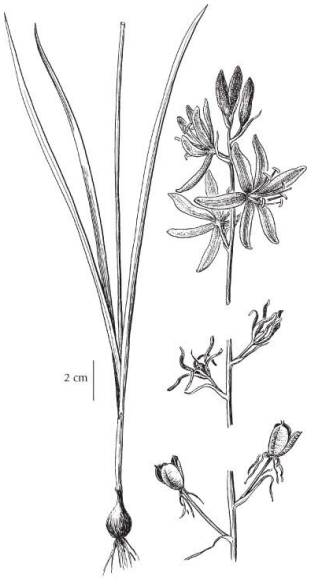

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Lomatium triternatum 9-leaf Desert Parsley Species Code: LOTR

Family: Apiaceae
Life Cycle: perennial

Propagation Strategies: For best results, sow in October and November in permanent location. Look for germination in March of the following year. If sowing in containers, use at least 7" deep containers to accommodate LOTR's deep taproot. To pretreat seeds for March sowing, cold moist stratify for 90 days. In December or January, place seeds in moist paper towel or mix with moistened peat moss, and place in sealed container in the refrigerator. Open container occaisionally to allow air in.

To collect seed from your garden, look in late June or early July when the inflorescence is dry and before the seeds shatter. Seed ripening within each individual umbel is uniform, but is less so between umbels on the same or different plants. The seeds are tan in color. Seed can be stripped from the inflorescence or the entire inflorescence can be clipped from the plant. Harvested seed is stored in paper bags at room temperature until cleaned.

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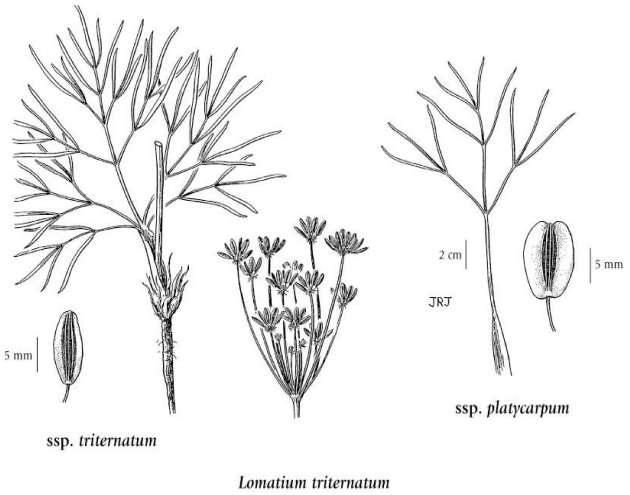
General Description:
Perennial from an elongate and slightly thickened taproot, 2-8 dm. tall, the stems solitary or few, erect, covered with fine but stiff hairs. Leaves chiefly basal or low-cauline, but usually one or more reduced leaves on the middle or upper stem; leaves ternately or ternate-pinnately 2-3 times cleft into long, narrow or broader segments, 1-10 cm. long, highly variable in this feature. Inflorescence of compound umbels, the rays unequal, 2-10 cm. long at maturity; involucre none, involucel bractlets inconspicuous; calyx teeth none; flowers yellow. Fruit oblong and narrow, glabrous, 7-15 mm. long and 2-4 mm. wide, the lateral wings less than half the width of the body.
Traditional Uses: Flower and upper leaves dried and used to flavor meats, stews and salads by the Okanagan-Colville. Spring roots were eaten. Infusion of flowers and upper leaves taken for sore throats, colds. Fruit chewed by long distance runners to avoid sideaches.



References Hellson, John C. 1974 Ethnobotany of the Blackfoot Indians. Ottawa. National Museums of Canada. Mercury Series (p. 67) Turner, Nancy J., R. Bouchard and Dorothy I.D. Kennedy 1980 Ethnobotany of the Okanagan-Colville Indians of British Columbia and Washington. Victoria. British Columbia Provincial Museum

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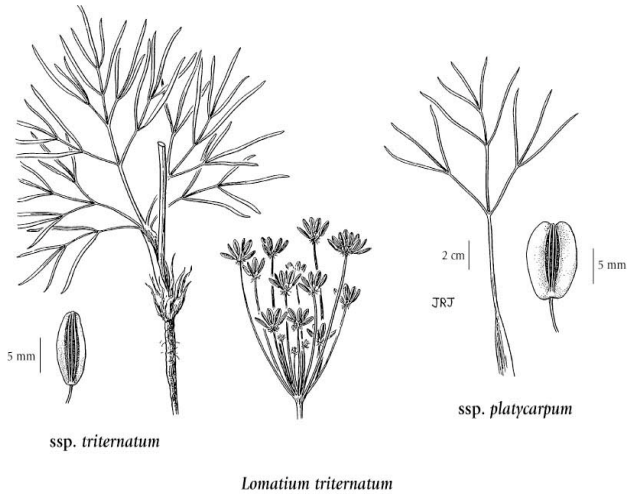

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Erigeron Philadelphicus Philadelphia Fleabane Species Code: ERPH

Rod Gilbert

Family: Asteraceae
Life Cycle: Biennial or short-lived perennial. The growth period of this plant is from spring to summer with a moderate growth rate needing moderate watering and fine to medium textured soil. The fibrous roots grow 10 inches deep and the plant grows 2.8 feet tall when mature. Self-sows readily.

Propagation Strategies Seeds do not exhibit dormancy. Can be easily grown in any container size. Can be somewhat aggressive in rich soils. Deadhead flowers if you want to prevent it from self sowing.

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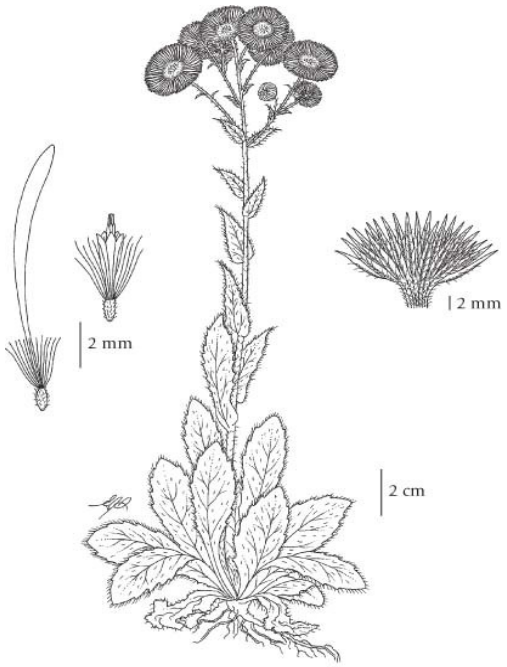
Collect Seed from Your Garden when the flower head begins to loosen its hold on the fluffy seed. Check to confirm that the base of each seed has turned from white to slightly darker.

Description: Biennial or short-lived perennial herb with a short, simple stem-base, rarely annual; stems erect, usually solitary, branched above, more or less hairy with long, spreading hairs, occasionally nearly glabrous, 20-70 cm tall. ***Leaves:*** Basal leaves broadly oblanceolate to egg-shaped, coarsely round-toothed or lobed, rounded at the tips, hairy like the stems, narrowly tapering to a short stalk, 15-30 cm long, 1.5-12 cm wide; stem leaves similar, becoming reduced and unstalked upwards, clasping at the base, round- to sharp-toothed. ***Flowers:*** Heads with ray and disk flowers, 1 to many in an open inflorescence, the disks 6-15 mm wide; involucres 4-6 mm tall; involucral bracts more or less stiff-hairy with flattened hairs or sometimes nearly glabrous, tapering to a slender tip, equal, light greenish or brownish with the translucent margins occasionally purplish; ray flowers numerous, about 150, deep pink to reddish-purple or white, 5-10 mm long, 0.2-0.6 mm wide; disk flowers 2.5-3.2 mm long. ***Fruits:*** Achenes 2-nerved, sparsely hairy; pappus of 20-30 bristles, often shorter than the disk flowers.

Wildlife: Attractive to bees, butterflies and birds



Erigeron philadelphicus

Source: The Illustrated Flora of BC

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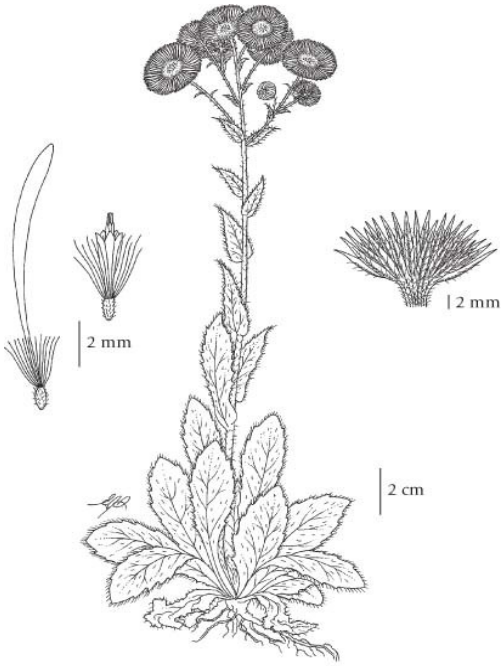

Erigeron philadelphicus

Source: The Illustrated Flora of BC

Erigeron speciosus Showy Fleabane Species Code: ERSP

Image © 2003, Rod Gilbert

Photo by Dennis Plank

Family: Asteraceae (Aster)
Life Cycle: Perennial, blooms late June to August, fiborous rooted, seed dispersed by wind.

Propagation Strategies
***Light Requirement*:** Sun
***Soil Description*:** Dry to moist soils.
***Description*:** Seeds may be sown outside in late fall without any cold treatment. Or cold moist stratify for 21 days in the refrigerator before sowing in spring. Seeds require light to germinate. A more practical method of propagation is division. Showy fleabane will form colonies. Divide mature plants when the rosettes begin to overlap. Remove fallen leaves from nearby trees in the fall, as they can smother the rosettes and cause them to rot.

Collecting Seed from Your Garden: Nutlets develop rapidly in the 2-3 weeks following bloom period. Collect seedheads in a paper bag when the nutlets begin to turn brown. Air-dry, clean and seal in a stored, refrigerated container.[1]

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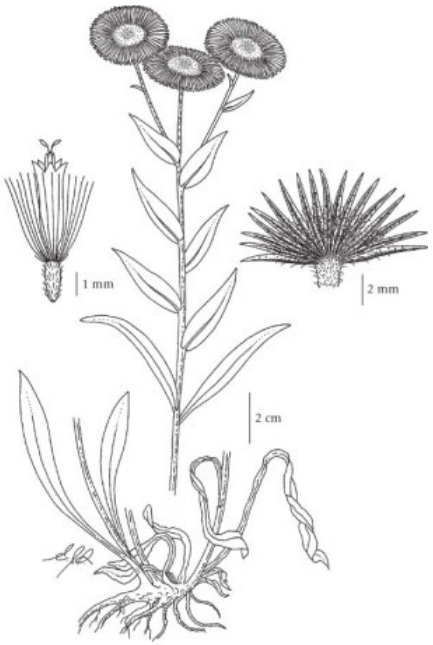
General: Clusters of leafy stems,1/2-2 1/2 ft. tall, rise from the woody rootstock of this perennial. Each stem bears several showy, nearly 2 in. wide flower heads with from 70-150 blue, or rarely white, narrow rays. A leafy stem branches near the top into leafless stalks, each with one flower head at the end, with many narrow pink, lavender or white rays surrounding a yellow disk. The disk flowers are yellow-orange. The lower leaves of this plant tend to fall off as the season advances.

This *Erigeron* has one of the showiest heads, reflected in the species name, *speciosus*, which means pretty. The similar Hairy Showy Daisy (*E. subtrinervis*) has spreading hairs over most of the stem and leaves.[1]

Habitat Open woods or openings in wooded areas, foothills to moderate elevations in the mountains.[2]

Works Cited
1. Lad Bird Johnson Wildflower Center NPIN. http://www.wildflower.org/plants/result.php?id_plant=ERSP4

2. University of Washington Burke Herbarium. http://biology.burke.washington.edu/herbarium/imagecollection.php?Genus=Erigeron&Species=speciosus



Erigeron speciosus var. *speciosus*

Illustration Source: The Illustrated Flora of BC

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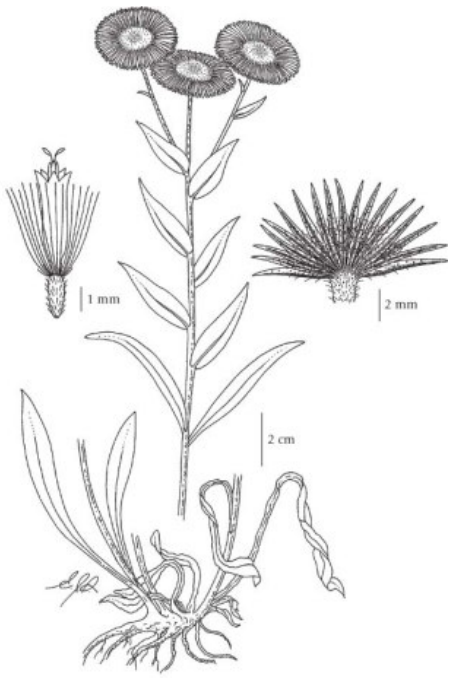
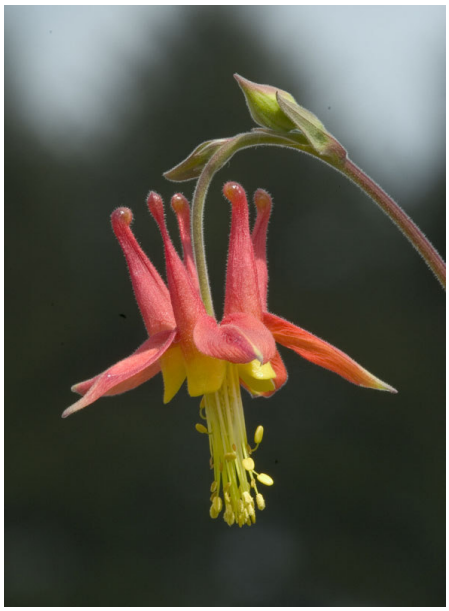


Erigeron speciosus var. *speciosus*

Illustration Source: The Illustrated Flora of BC

Aquilega formosa Red Columbine Species Code: AQFO

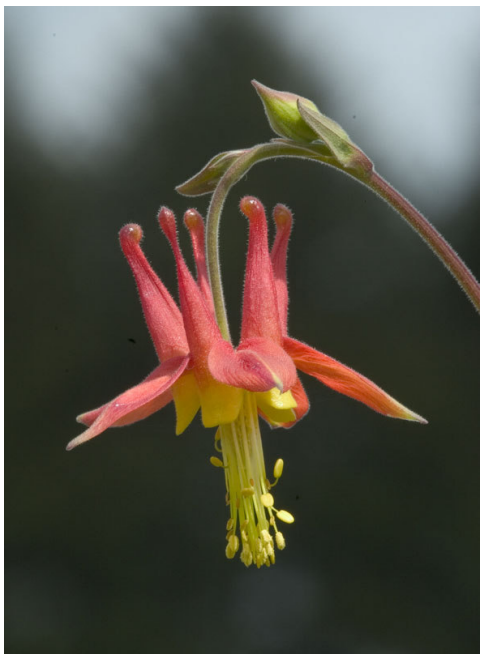


Rod Gilbert

photo by: Steve Hurst

Family Ranunculaceae
Life Cycle Perennial, flowers late Spring through Early Summer. Seed begins to mature in early summer. Self sows vigorously. Cross pollinates with other columbines. Dies back to basal crown in the fall. Normal lifespan about five years, longer with regular division.
Propagation Strategies To propagate in containers, sow 1" apart in open flat in October. Sprinkle potting soil lightly over seeds. Leave exposed outdoors through the winter. Look for germination the next spring. Pluck out to transplant after the first set of true leaves has developed. Transplant into 4" pots to grow it on, or directly into a prepared bed. Columbine often only produces vegetative growth in its first season, then will go dormant and emerge slowly starting in late winter. This is a typical Puget Sound prairie adaptation. We must be patient while it establishes a healthy taproot, which is usually the primary focus in its first growing season. Crowns can be mulched in the fall to improve next year's growth. To sow direct into a bed in the spring, seeds can be cold-moist stratified for a period of at least 90 days. Dampen the seeds in a peat moss mix or untreated paper towels, place in a sealed container, such as a plastic bag, and keep in the refrigerator. **Collect Seeds from your garden** when seed pods begin to turn from green to buff, and the seams at the very tops will just begin to split. Mature seeds are black.

Aquilega formosa Red Columbine Species Code: AQFO



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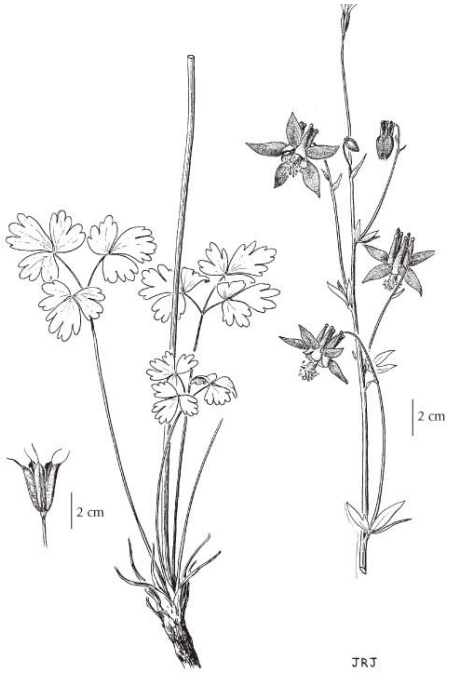
Description Perennial herb from taproot, stems simple, erect to 1 m tall, hairless below, sparsely hairy and somewhat glandular in the inflorescence. ***Leaves*** Mainly basal, twice divided in 3s; blades hairless to hairy, green above, paler and glaucous beneath. ***Flowers*** Red and yellow with 5 long, straight, reddish spurs with bulbous, glandular tips; central tuft of stamens and styles protruding; usually 2-5 flowers, sometimes more numerous in vigorous plants, drooping. ***Fruits*** Usually 5 erect follicles with hairy, spreading tips and numerous black, wrinkled seeds.
Habitat Open to partly shady sites from lowland meadows and beaches to rocky slopes near timberline.

Traditional Uses Medicinally, the plant was used as an analgesic and antirheumatic by rubbing the leaves over aching joints. Some chewed the leaves for coughs and sore throats and made a decoction of roots for a cold remedy. They made perfumes by chewing the seeds and rubbing it on their bodies and clothing. The columbine was considered a love medicine plant; the women used it as a charm, to gain men's affection.[1]
Wildlife Great nectar source for bees, hummingbirds, and butterflies. Some birds (finches, sparrows) eat the seeds.[1] Humans should not eat the seeds.
Works Cited [1]*Debra Teachout-Teashon, Rainy Side Gardeners, www.rainyside.com*



Aquilegia formosa ssp. *formosa*

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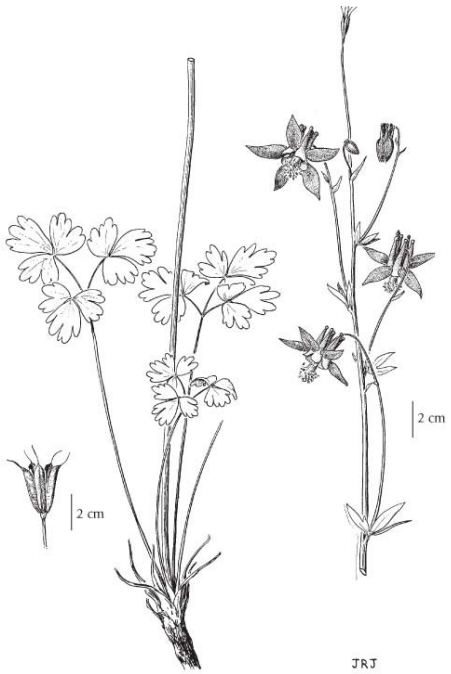

Aquilegia formosa ssp. *formosa*

Balsamorhiza deltoidea Puget Balsamroot

Seed Photo by Dennis Plank

Family Asteraceae
Life Cycle Perennial, emergence from large taproot begins in late winter to early spring. Flowers late spring to early summer. Requires active pollination to develop seed. Nectar favored by native bees, seeds favored by many birds, who can be seed dispersal vectors. Dehiscent leaves remain through summer, and can be heard scraping against each other in the breeze.

Propagation Strategies
60 days cold moist stratification improves germination. To stratify outdoors, sow in deep (7"+) container from November through January, allow exposure to winter rains. Germination usually occurs from Early April-Early May. Some seed will wait an additional year before germinating, so don't throw away those pots. Alternately, direct sow into sandy, well drained soil November-January, ½" deep. BADE seedlings can be transplanted while still young, but take great care to minimize disturbance of the central taproot. Time from germination to flowering can be from three to five years. **To Collect Seeds from Your Garden** look for mature seeds on dry flower in July harvest as soon as black seeds begin to loosen from peduncle (flower base). You'll be competing with the birds for seed collection. Note: not every ovary in BADE's compound flower will be fertilized. Many seed casings will have undeveloped seed.

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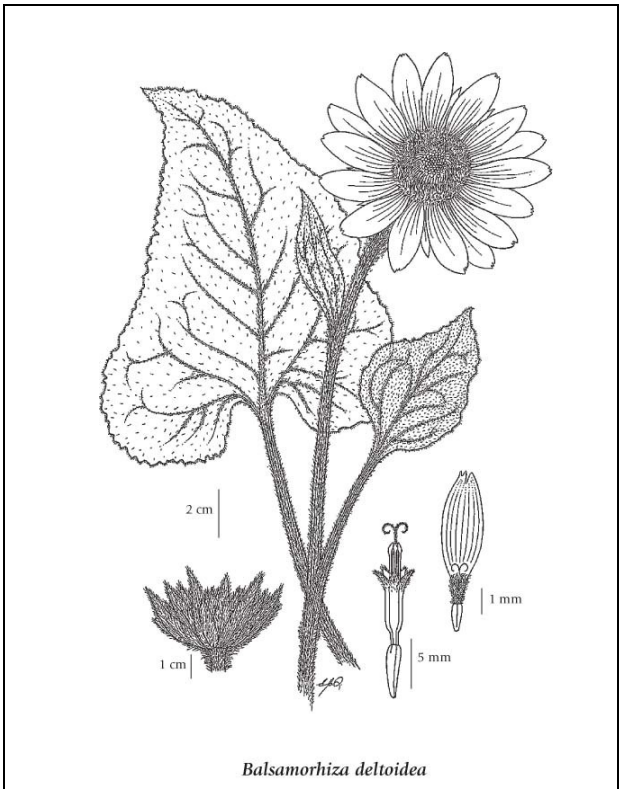
Description Perennial herb from a deep taproot and woody stem-base; stems ascending, few to several, densely glandular and sparsely long-hairy, 0.2-1.0 m tall.
Leaves Basal leaves long-stalked, the blades mostly triangular, 10-50 cm long, 10-20 cm wide, green, inconspicuously stiff-hairy and often glandular, prominently nerved, round-toothed; stem leaves few, lanceolate to linear, greatly reduced.
Flowers Heads with ray and disk flowers, 1-4, the disk 2.5 cm or more, the lateral heads smaller; involucral bracts lanceolate to oblong-lanceolate, slightly woolly, the outer ones 1-4 cm long and herbaceous, exceeding the inner ones; ray flowers 13 or 21 in a terminal head, yellow, 2-3 cm long; disk flowers 5-7 mm long, yellow. **Fruits** Achenes glabrous, 7-8 mm long; pappus lacking.
Habitat The species is restricted mainly to open, dry sites. It is usually found in rocky, exposed areas containing Oregon White Oak, and on the slopes of swales. Prefers deeper soils than other prairie perennials.
Traditional Uses Roots have a sweet taste when cooked, young shoots eaten raw, seed eaten raw or cooked. Seed ground into a powder and made into a bread. The roasted root is a coffee substitute. Medicinally, root decoction used as a remedy for coughs and colds.[1]



Balsamorhiza deltoidea

[1]**Yanovsky. E.** *Food Plants of the N. American Indians. Publication no. 237.* U.S. Depf of Agriculture.
A comprehensive but very terse guide. Not for the casual reader.

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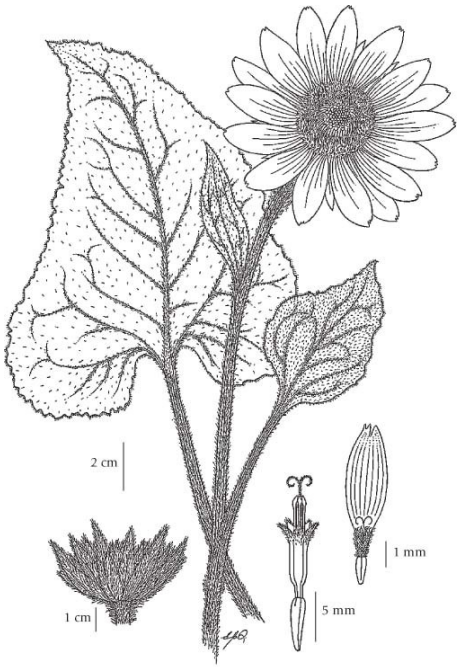

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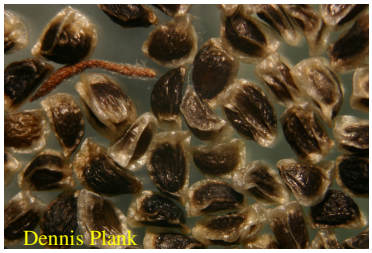
Delhpinium nuttalli Nuttall's Larkspur Species Code: DENU

2004 Rod Gilbert



Dennis Plank

Family Ranunculaceae
Life Cycle: Perennial
DENU emerges from it roots in early spring, flowers in May, and goes dormant by the end of June. It is pollinated primarily by bees and hummingbirds. It has the ability to adapt its growth habit to a wide array of conditions. On the prairie, it remains quite small, averaging under one foot in height, completing its life cycle over several years while spending most of its life in dormancy. In an irrigated bed, however, dormancy is delayed, the density of flowers on the inflorescence increases, it grows to a full meter in height, and self-sows prolifically.

Propagation Strategies
Propagation by seed is recommended. 180 day cold moist stratification is needed to break seed dormancy. Germination begins in May, after sowing outdoors from October to early November. Plants will go dormant in late spring without having produced a flower. For best results, sow directly into a permanent location. Growth in containers is very slow. To **Collect Seeds from your Garden,** shake the black seed from the seed pod when its top splits open in June.

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Description Crisp-puberulent, eglandular perennial from small, globose, fleshy roots, the single stems 3-6 dm. tall. ***Leaves*** long-petiolate, evenly distributed, the blades up to 10 cm. broad, 3-4 times dissected into narrowly lanceolate or linear segments. ***Flowers***: Inflorescence simple to compound, the racemes spike-like above, the lower pedicels exceeding the numerous, crowded flowers; sepals 5, deep bluish-purple, 7-12 mm. long, slightly spreading, with a conspicuous median, pubescent, greenish band; spur equal to the sepals; petals 4, small, the lower pair deep purplish-blue, shallowly cleft, the upper pair light blue; stamens numerous; pistils 3. ***Fruit***: Follicles about 15 mm. long, slightly bent.
Habitat Gravelly outwash prairies and basaltic cliffs.
Traditional Uses: Okanagan-Colville Dye (Blue)
Flowers used to make a blue stain for coloring arrows and other items.

Wildlife
Works cited
Plants of the Pacific Northwest. Pojar J. and MacKinnon A. 1994. Lone Pine Publishing, Vancouver, British Columbia Canada.
Turner, Nancy J., R. Bouchard and Dorothy I.D. Kennedy 1980 Ethnobotany of the Okanagan-Colville Indians of British Columbia and Washington. Victoria. British Columbia Provincial Museum (p. 119)


Delphinium staphisagria L.

www.answers.com/topic/delphinium

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Delphinium staphisagria L.

www.answers.com/topic/delphinium

Eriophylum lanatum Oregon Sunshine

Species Code: ERLA

Rod Gilbert

www.nps.gov/.../Eriophyllum%20lanatum_JPG.jpg

Family Asteraceae
Life Cycle: Perennial can flower from May through July if flowers are continually pinched. In the wild, it goes into partial summer dormancy, dying back close to the base, and returns with the rain in fall to grow very slowly through winter. Much of this cool season activity occurs in the root system, which supports rapid aerial growth in spring. Seed drop occurs in June, as the prairie soils begin to dry. Seeds lay dormant through the dry summer, and usually germinate by late October, though some will remain dormant and germinate in late winter or very early spring.

Propagation Strategies

Easiest to propagate by seed. Cold-moist stratification will improve germination for spring sowing. Mix with equal mass of peat moss or vermiculite in plastic bag or jar, wet mixture slightly (just to keep moist), and place in refrigerator for no more than three weeks. ERLA seedlings establish well in 2"diax>3"deep pots. Sow in late spring with stratification, or sow direct into container in fall, then leave container exposed through the winter. This method works best from Oct through early March, but late spring sowing (with refrigerated cold moist stratification), helps to avoid moss and liverwort buildup in containers.

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Description Perennial, white-woolly throughout, 1-6 dm. tall, usually several-stemmed from the base. ***Leaves:*** variable, 1-8 cm. long, entire to pinnatifid or ternate. ***Flowers:*** Heads solitary on long peduncles; involucre 6-12 mm. high, the bracts broad, erect and keeled; rays 8-13, yellow, 5-20 mm. long; disk flowers yellow; pappus a toothed crown, or a few chaffy scales. ***Fruit:*** Achenes slender, 4-angled.
Habitat Dry, open, often rocky areas at low to mid-elevations
Traditional Uses: dried flowers used as a love charm (Chehalis); leaves rubbed on skin to prevent chapping (Skagit); poultice used as an external anti-rheumatic to ease body aches (Miwok).
Wildlife Butterflies - attracts orange sulfur red admiral comma and skipper butterflies.

Works cited
http://biology.burke.washington.edu/herbarium/imagecollection
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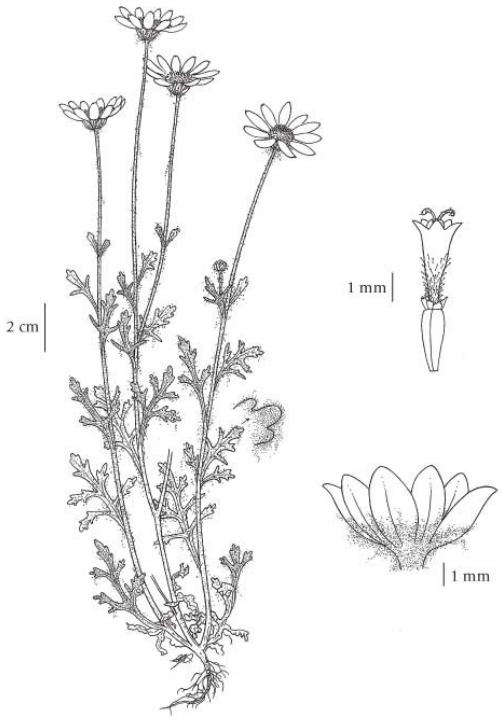

Eriophyllum lanatum var. *lanatum*

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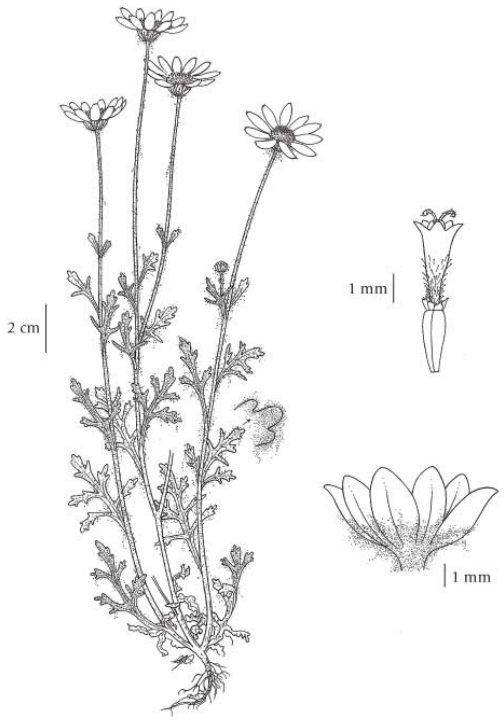

Eriophyllum lanatum var. *lanatum*

Lomatium nudicaule Bare Stem Desert Parsley Species code: LONU

Lomatium nudicaule Bare stem desert parsley

Family Apiaceae
Life Cycle: Perennial
Growth begins from a strong central taproot in late winter when slender leaves appear, soon followed by clusters of bright yellow flowers. With time, the flowers and leaves enlarge, sometimes reaching up to 3ft tall and several flower clusters growing together. By late June, the green seeds turn yellowish brown. Once mature, the seeds have pronounced wings and dark lines on them. They are dispersed by the wind. The plant then goes into dormancy through the heat of summer, to emerge in late winter again. The seeds are also dormant through the dry of summer, and then germinate in late winter. Blooms typically appear in the second spring after germination.
Propagation Strategies: LONU is best propagated by seed. Best germination results from sowing outdoors December through January. These seedlings need a container at least 7" deep to establish well. Sowing directly into permanent location is recommended, as its strong central taproot and summer dormancy can make this a difficult species to transplant from containers. LONU prefers deep, well-drained soil. Once established, it can go through the summer with very little watering.

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Description: Bare-stem desert parsley is a fairly easy to identify (at least in the Pacific Northwest) due to the erect, hollow stems that inflate or increase greatly in diameter directly beneath the inflorescence. ***Leaves:*** The firm leaves are found only near the base and are ternate 1-3 times compound with 3-30 veiny, often lanceolate to ovate leaflets. ***Flowers***: The flowers are yellow and small, with several to many in well-separated compact heads on stalks of unequal length. ***Fruit***: The fruit is 7-15 mm long, oblong to elliptic in shape, narrowing to a short beaklike tip. **Habitat**: The plant prefers acid, neutral and basic (alkaline) soils. It cannot grow in the shade. It requires dry, but seasonally moist soil. It may be found from the lowlands to moderate elevations in the mountains on dry, open or sparsely wooded places, and is often mixed with sagebrush or ponderosa pine.**Traditional Uses**: The seeds were chewed to treat fevers, colds and sore throats. Pregnant women would take an infusion to ensure an easy delivery. A poultice of crushed seeds was used to alleviate headaches, sore places, pains and itches. The seed is spicy and aromatic; it is used as a house fumigant and deodorant. It also repels mosquitoes! The root can be roasted and used as a vegetable, or can be dried and ground into a powder then used as a flavoring in soups etc. The leaves and young shoots can be eaten as a vegetable or used as a celery-like flavoring in soups. The leaves, stems and flowers are infused and used as a beverage.

Works cited

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http://ghs.gresham.k12.or.us/science/ps/nature/gorge/5petal/pars/lomatium/barestem.htm
http://www.fs.fed.us/r6/uma/urban/flower_l.htm
http://www.ibiblio.org/pfaf/cgi-bin/arr_html?Lomatium+nudicaule

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http://www.ibiblio.org/pfaf/cgi-bin/arr_html?Lomatium+nudicaule

Lomatium utriculatum Spring Gold Species Code: LOUT

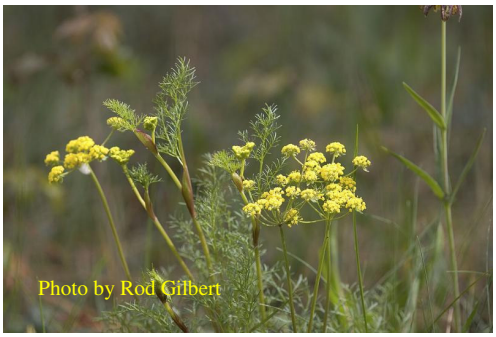

Photo source: Dennis Plank

Family: Apiaceae **Life Cycle:** Growth begins in the spring when tiny carrot-like leaves appear, soon followed by clusters of bright yellow flowers, a pleasant surprise of color dotting the meadow after a long dreary winter on the coast. With time, the flowers and leaves enlarge, sometimes reaching up to 50 cm tall and several flower clusters growing together. By late June, the green seeds are ready to start the cycle again and disappear back into long grasses that tend to overgrow it. Once mature, the seeds have tiny wings and dark lines on them. They are blown away by the wind. Spring Gold taproots grow much like a carrot and may have been one of the wild carrots that local First Nations ate. **Collecting Seed from Your Garden:** After enjoying the bountiful yellow blooms, let the flowers dry on the stalk. As they begin to brown, check the center of the flower for developing seeds, which are black and arranged similarly to a sunflower. When the seeds begin to loosen from the peduncle (base of flower) twist into a bag. If the seeds do not easily dislodge from the peduncle, wait a few days and try again.**Propagation Strategies** Seed - best sown as soon as it is ripe in a cold frame [188]. Stored seed can be rather slow to germinate, when sown in the spring it usually takes at least 12 months to germinate. Giving it a period of cold stratification might reduce this time. The seedlings need to be pricked out into individual pots as soon as they are large enough to handle, and should be planted out into their permanent positions in the summer. Fresh seed can be sown immediately in situ [188]. Division may be possible in spring or autumn.

Lomatium utriculatum Spring Gold Species Code: LOUT

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Description
General: Perennial from a slender taproot, 1-6 dm. tall.
Leaves: Leaves chiefly cauline, soft, ternate-pinnately dissected, the ultimate segments crowded, pointed, up to 5 mm. long and less than 1 mm. wide. ***Flowers:*** Inflorescence a compound umbel, the rays as many as 15, unequal, 2-7 mm. long at maturity; involucre none; bractlets of the involucel well developed, 2-5 mm. long, obovate to elliptic, the tip often shallowly cleft; calyx teeth none; flowers bright yellow; pedicels 2-8 mm. long.
Fruit: Fruit elliptic, glabrous at maturity, 5-11 mm. long and 3-6 mm. wide, lateral wings about the same width as the body; dorsal ribs slightly raised.

Habitat: West of the Cascades from British Columbia south to California.

Traditional Uses: Dried flowers used as a love charm (Chehalis); leaves rubbed on skin to prevent chapping (Skagit); poultice used as an external anti-rheumatic to ease body aches (Miwok).
Wildlife: Butterflies - attracts orange sulfur red admiral comma and skipper butterflies.

Works cited
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http://www.naturepark.com/lomatium.htm
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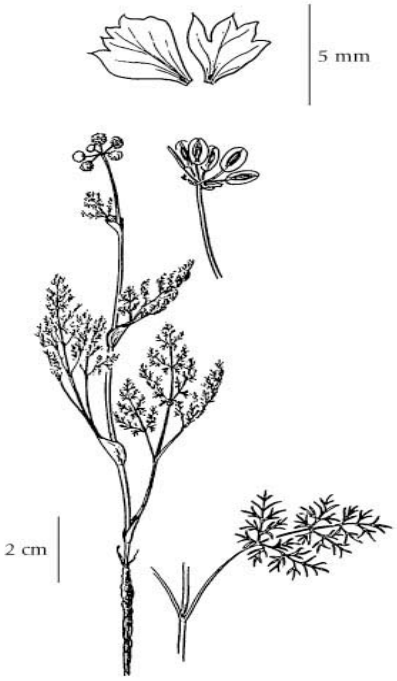

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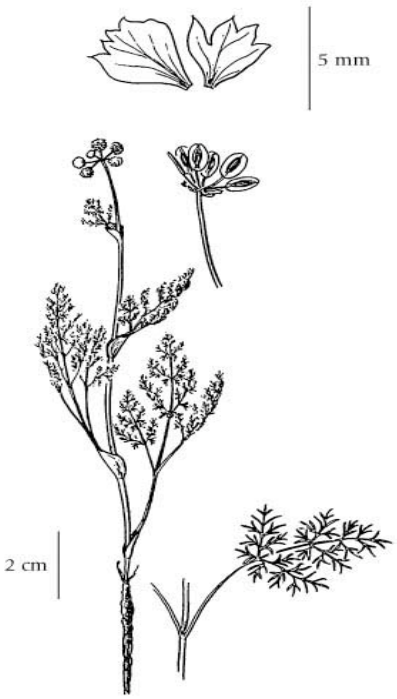
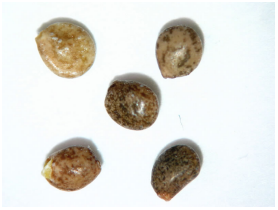


Lomatium utriculatum

Lupinus lepidus Pacific Lupine Species Code: LULE

2005 Rod Gilbert



www.nps.gov/.../images/Lupinus%20lepidus

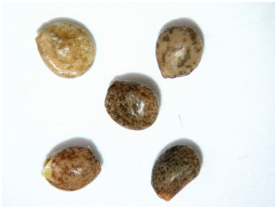
Family Asteraceae
Life Cycle Perennial. Blooms early-June through July. Employs bacterial nodules in the root system that fix nitrogen. Seed dispersal is by explosive dehiscence (bursting of the seed pod).

Propagation Strategies: Choose a sunny to partial shady site that is well drained. Seed can be sown directly in the fall for spring germination. Alternately seeds can be scarified (rubbed between sheets of sand paper) then moist-cold stratified for 3 weeks in the refrigerator prior to planting out in the springtime (April). Does not transplant well.

Collecting Seed from your garden Seed can be hand collected from June to August, but collecting is slow due to the small size of the plant. Seeds should be dried in the pods in paper bags. Remove the seeds from the pods by hand thresh and screen. Store air-dried seed under cool, dry conditions. Cuttings can also be taken from the side shoots of hardened stems in the spring.

Lupinus lepidus Pacific Lupine Species Code: LULE

2005 Rod Gilbert



www.nps.gov/.../images/Lupinus%20lepidus

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Description: Pacific lupine is a perennial herb that comes from a branched, woody rhizome, with erect stems, and is hollow at the base. It can grow up to 1.5 meters tall! ***Leaves:*** Palmately compound; 5-17 leaflets, to 12 cm. long. ***Flowers:*** Pea-like, blue to violet in color, dense clusters up to 40 cm. long. ***Fruits:*** Hairy pods up to 5 cm. long.

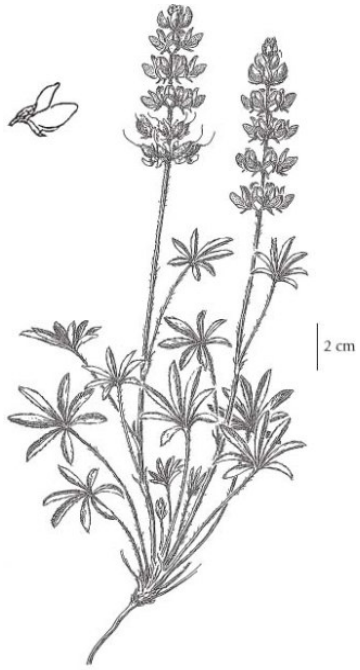
Habitat: Moist to wet, open habitats & disturbed sites. Lupine can also survive some drought because of its long taproot. Low to middle elevations.

Works cited

http://biology.burke.washington.edu/herbarium/imagecollection.php?ID=9119

Pojar, Jim, MacKinnon, A. *Plants of the Pacific Northwest Coast*. 1994.

Ecology, April, 1999. J.H. Braatne, L.C. Bliss



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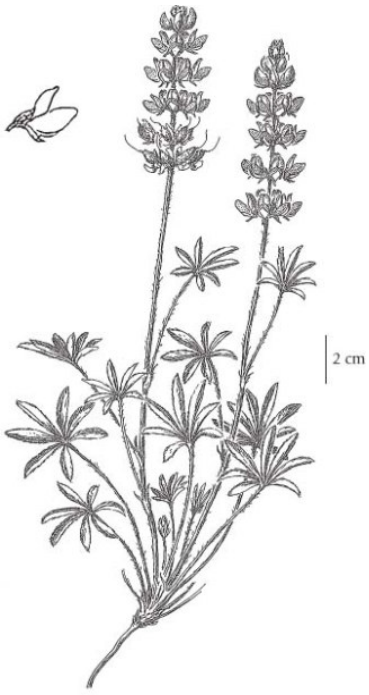

Lupinus lepidus

Potentilla gracilis Graceful Cinquefoil Species code: POGR

Rod Gilbert

www.nps.gov/plants/sos/bendcollections/index.htm

Family Asteraceae
Life Cycle
Graceful cinquefoil is a perennial with deciduous leaves. Its delicate yellow flowers, held above the leaves on inflorescences up to 2' tall, can bloom from late spring though the fall. It dies back partially through the winter, and begins to reemerge from its crown as early as January! Some butterflies use the plant as a nectar source, in addition to bees.

Propagation Strategies Seed requires at least 30 days of cold moist stratification to germinate. Sowing outdoors into containers is recommended. POGR transplants very well. For best results, sow into containers in early December for germination in late April. Thin seedlings to one plant per container. Transplant in mid May. Seed can be sown into a prepared bed or sown to naturalize in borders in the fall. Plants in garden soil should produce flowers in their first year, and will readily self sow. To **collect seed from your garden,** try August when the inflorescence is dry and the seeds are brown in color. Harvested seed is stored in paper bags at room temperature until cleaned.

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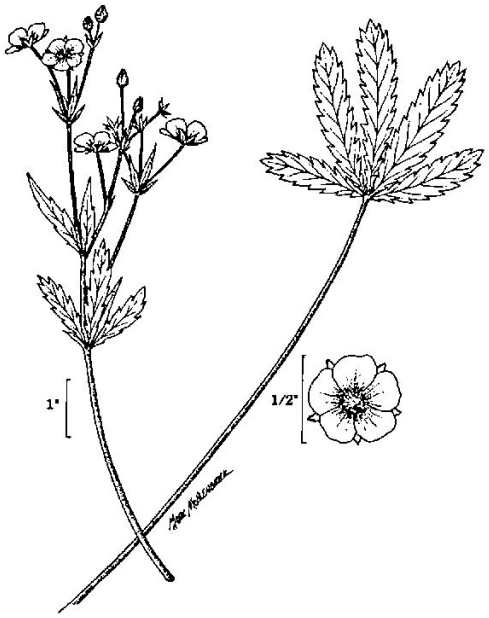
Description Perennial with a branched crown. Stems 4-8 dm. tall, usually several-stemmed from the base. ***Leaves*** variable, 1-8 cm. long, toothed to deeply dissected. ***Flowers***: Heads solitary on long peduncles; involucre 6-12 mm. high, the bracts broad, erect and keeled; rays 8-13, yellow, 5-20 mm. long; disk flowers yellow; pappus a toothed crown, or a few chaffy scales. ***Fruit***: Achenes slender, 4-angled.



Habitat: It is common on dry, sandy, gravelly, or clay loams of grasslands, sagebrush deserts. Distributed widely from Alaska to Saskatchewan, south to New Mexico and Baja, California, it blooms in June and July.

Traditional Uses: The Latin name is derived from *potens*, meaning powerful, in reference to its medicinal properties. There is evidence that an infusion of pounded roots could be taken as a general tonic for pains, such as diarrhea and sores.

Works cited

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http://herb.umd.umich.edu/herb/search.pl

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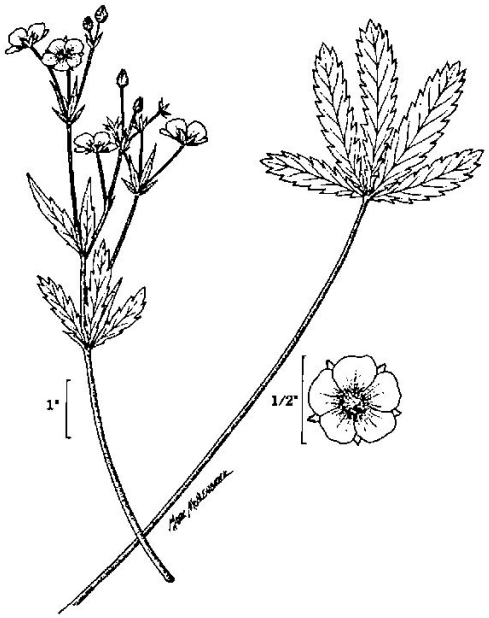

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Quercus garryana Oregon oak Species Code: QUGA

Rod Gilbert

Family Fagaceae (Beech)
Life Cycle: Perennial
Oregon white oak produces a central taproot and many lateral roots in the top 12 inches of soil. Oregon oaks' persistence is dependent on 3-20 year fire return interval. Mortality following fire is rare and sprouts rapidly from the root crown and/or roots.

Image © 1988, H. Tim Gladwin
Image © 1988, H. Tim **Gladwin**

Propagation Strategies
Seeds may be planted at the beginning of winter Prepare site by digging a 10"diameter hole 4-5" inches deep. Place one gram of slow-release fertilizer in bottom and cover with a small amount of soil. Place 6-10 acorns 1-2 inches deep and cover. To avoid herbivory construct an enclosure by cutting the bottom of a 1-quart yogurt container, place over the seeds and cover top with metal mesh screen. Seedlings should be thinned to 2 or 3 per hole after first season and then to one by second season. Water seedlings if a drought of 6 or more weeks occurs during the spring. Care should be taken to weed and mulch around plants until they are 6-10 inches tall.

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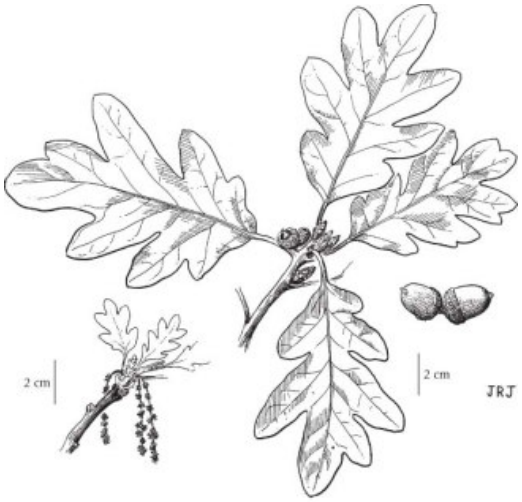
Collecting Seed from Your Garden Begin your acorn collection when nuts fall freely from their cap to the ground. Viable nuts may be green to brown and unblemished walls. Avoid nuts with with discoloration, insect holes, or sticky exudates.
Description Perennial, deciduous tree up to 30 m tall and has an open, rounded crown. ***Bark***: mature bark is brownish gray and shallowly fissured in a checker-like pattern. ***Leaves:*** olblong to obovate, 8-15 cm long, and deeply lobed (5-7 rounded lobes). The upper surfaces are shiny and dark green and underside is pale green. ***Catkins***: pale yellow tinged with green and vary from 3-10 cm long. ***Flowers***: closed pistillate flowers are small deep red, and covered with whitish hairs opening to greenish yellow interiors ***Seeds:*** acorns are a one-seeded nut 2-3 cm long, ovid and mature in one year. Like all oaks, Oregon Oak is monoecious and wind-pollinated.
Habitat Although often considered a xeric species, Oregon white oak occurs on a variety of soils ranging from dry to very moist and poorly to rapidly draining from the lowland open areas to mid elevation slopes and ridges. Climatic tolerance varies from mild moist conditions near the coast to hot dry inland valleys and foothill woodlands.
Traditional Uses: Pre-colonial Native Americans used acorns as a food staple. In the Pacific Northwest large trees were coveted for shipbuilding, railroad ties, and construction. It remains to be important to cottage furniture and cabinet industries.
Wildlife Oregon oak is a valuable source of food and cover for Gray squirrels, deer, and livestock. They eat acorns and the leaves of young shoots and sprouts.



Quercus garryana

Illustration Source: *The Illustrated Flora of BC*.

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1.www.na.fs.fed.us/pubs/silvics_manual/volume_2/qurcus/garryana.htm
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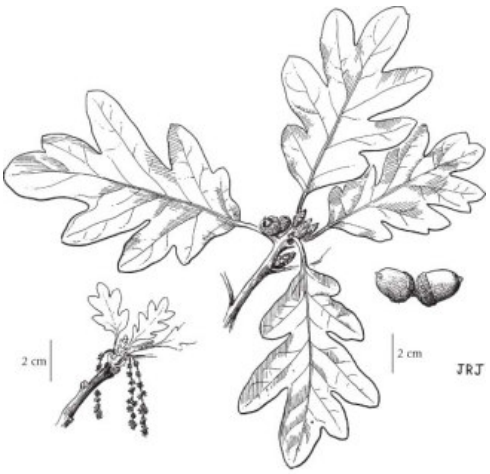

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Viola Adunca Early Blue Violet *Species Code: VIAD*

Seed Photo by D. Plank

Family Violaceae
Life Cycle: Perennial
Blooms around April and June, sometimes with a separate bloom cycle in late summer, during which it can produce viable "clone" seeds without benefit of fertilization. Very cold hardy. Seeds germinate early to mid spring. Seedlings, depending on microclimate, can either die back to crowns through the heat of the summer, or persist. Grows in a slowly spreading compact mound, 6-8" dia, which dies back partially through winter.
Propagation Strategies 90-120 days cold moist stratification is required for germination. Best results come from natural outdoor stratification. To do this, sow in container in October or November, and leave trays exposed to winter rains. Slow-growing seedlings can take two months from germination before ideal transplant size. Transplants do best with crowns placed low, and mulched. VIAD is tolerant of most soil conditions, but needs calcium to thrive. To **Collect Seed From Your Garden,** look for seedpods after flowers fade. They will droop from the slender flower stalk, until, as they ripen, they begin to point upward. Just as the pod begins to point upward and turn from pale green to tan, pinch the pod. A day early, and the seed will be white and immature. A day late, and the seed pod will have exploded, throwing the seed up to several feet. Seed pods can mature even as new flowers continue to emerge. Mature plants readily colonize adjacent bare ground, given time.

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Habitat Low-elevation grasslands, moist meadows, open woodlands. Thrives in moderate shade and full sun; more shade tolerant than other prairie perennials.
Description (From Plants of the Pacific Northwest Coast, Pojar and MacKinnon)
Perennial with slender rhizomes, developing aerial stems to 10cm tall. Flowers born on distinct stems is characteristic of this species.) Plant forms mounded cluster to 10in.
Leaves Generally oval to heart-shaped at base, hairy or hairless; blades to 3cm, margins finely round-toothed; stipules reddish brown or with flecks, narrowly lance-shaped.
Flowers 1.5 cm long, with a slender spur half as long as the lowest petal; petals are blue to deep violet (varies within sp).
Fruits Small explosive three-valved capsules.
Traditional uses: Infusion of roots and leaves applied to sore and swollen joints, given to asthmatic children.[1] Roots and leaves chewed by women during labor.[2] (and many more uses)
Wildlife: Important larval host plant for the Oregon Silverspot, and preferred nectar source for the Mardon Skipper, and other butterflies.

[1]Hellson, John C. 1974 Ethnobotany of the Blackfoot Indians. Ottawa. National Museums of Canada. Mercury Series (p. 79)
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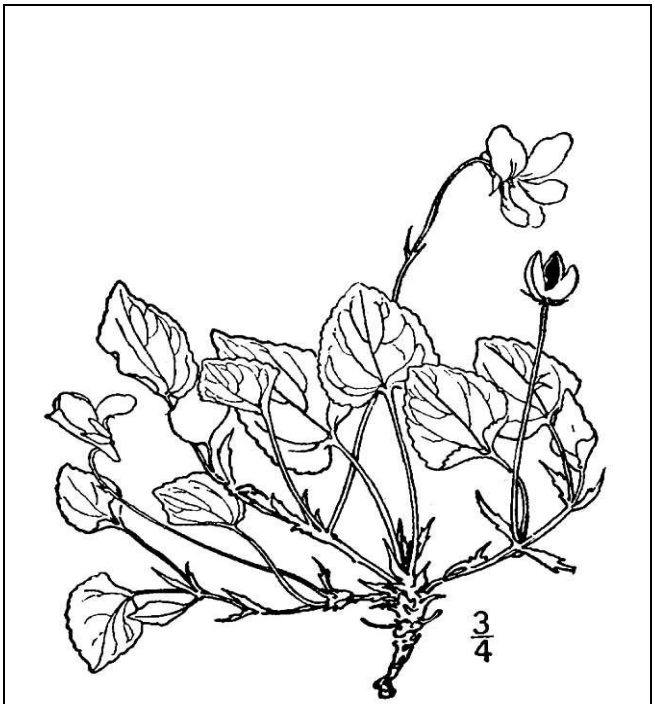

From USDA NRCS Plants Database

Ranunculus occidentalis Western Buttercup Species Code: RAOC

Rod Gilbert

Amanda Cemper

Family Ranunculaceae
Life Cycle: Perennial flowers from April-late May. Seed clings to peduncle(base of flower) while developing, and drops when mature. Seed can germinate right away in moist areas, but also can survive months of drought to germinate with early rains in the fall. Flower stalks dry and deteriorate, leaving a crown to begin reemergence as soon as rains return in the fall. This is one of the earliest flowers visible on the Puget prairie.

Propagation Strategies
RAOC prefers light (sandy), medium (loamy) and heavy (clay) soils. It can grow in semi-shade (light woodland) or no shade. It requires moist soil, but is well adapted to summer drought. The Western Buttercup is easy to grow from seed, as the seed exhibits very little, if any, dormancy. It germinates in very cool temperatures, and responds well to sowing in February or March. Look for seed to ripen in your garden by the end of May. Its color will change from white to tan, as it becomes loose on the peduncle. A gentle twist between fingers should be all that is required to release the seed from the peduncle. If it resists, it is not yet mature.

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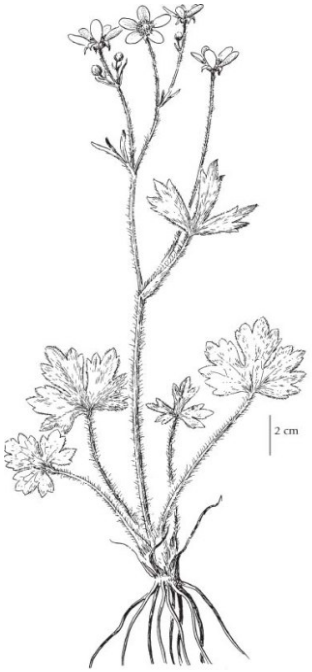
Description Perennial herb from a cluster of fibrous roots; stems 1 to several, erect or nearly so, 15-40 cm tall, more or less hollow; plants variously hairy.***Leaves:*** Basal leaf blades 3-parted or -foliolate, ultimate segments oblong or elliptic to lanceolate or oblanceolate, margins dentate or dentate-lobulate. ***Flowers***: inflorescence few to many cymes, yellow petals 5 distinct, oblong to egg-shaped. ***Fruits:*** Achenes, several to many in a hemispheric head, see picture opp page.
Habitat Grassy slopes of meadows or open woodlands; 0-1500 m; B.C.; Calif., Nev., Oreg., Wash.
Traditional Uses: Seeds can be cooked to be used as a pinole with other seeds. Must be cooked to remove acrid principle that makes this plant **poisonous**.

Works Cited:
1.http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Ranunculus%20occidentalis%20var.%20occidentalis
2. http://www.pfaf.org/database/plants.php?Ranunculus+occidentalis



Ranunculus occidentalis var. *occidentalis*

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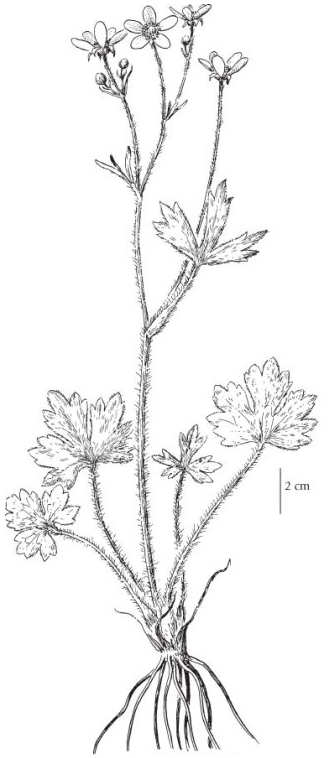

Ranunculus occidentalis var. *occidentalis*

Solidago missouriensis Missouri Goldenrod Species Code: SOMI

Family Asteraceae (Aster)
Life Cycle: Perennial
Missouri goldenrod, or prairie goldenrod, is a fire-resistant perennial that is particularly useful for revegetating disturbed sites and stabilizing soil. It survives well in areas of low grass cover, and can tolerate some drought. Its roots can be shallow, but sometimes they can reach about two meters.


Photo source: Dennis Plank

Propagation Strategies This plant can be an aggressive colonizer in gardens.
Propagation by seed is recommended. Sow trays in March for early summer transplant. SOMI can be held in its container through Summer under shade for fall planting. When sowing, cover seed very lightly with soil, or cover with a single layer of pea gravel.

To Collect Seed in your Garden:
Fruit is an achene. Seed ripens in late September and early October. It is collected when the pappus begins to expand. Seed is brown in color and wind disseminated, so must be collected before it blows away. Seed maturity is indeterminant. Seed can be collected using a vacuum. This removes only mature seed, leaving immature seed to ripen, and reduces the amount of trash which subsequently must be cleaned from the seed. Harvested seed is stored in paper bags at room temperature until cleaned.[1]

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Description Missouri goldenrod, or prairie goldenrod, is a glabrous perennial growing from creeping rhizomes. The plant can reach almost a meter in height; its yellow flowers bloom in late summer. It grows both flowering and non-flowering shoots. ***Leaves:*** usually triple-veined; basal leaves oblanceolate, growing up to 30 cm. The other leaves are petioled, elliptical-shaped, with serrated edges. Distinguished from *Solidago Canadensis* by its hairless leaves and stems. ***Flowers***: The inflorescence is a compact panicle with bunches of yellow flowers, about 3-5 mm high. ***Seeds:*** A small achene, with many bristles. Seeds are ready for collection about 6 weeks after the plant has flowered. Since the seeds are easily dispersed by wind, there can be an abundance of Missouri goldenrod in open sites.

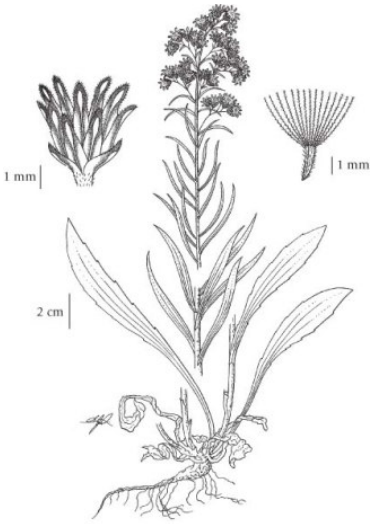
Habitat Likes open spaces with sun exposure, but can tolerate partial shade. It grows on grassy slopes and disturbed sites, such as along railroads and ditches. Missouri goldenrod can regenerate from rhizomes or rootstalk, making it fairly fire-resistant. It can grow in the valleys and plains all the way into higher mountainous elevations.

Traditional Uses The *Solidago* genus name comes from the Latin word for "to make whole, or heal;" a name chosen to reflect the plants' various healing applications.

Wildlife Prairie voles eat the leaves and seedheads. Its flowerheads are used by many insects as a nectar source.

[1] Dave Skinner, PMC Farm Manager
USDA NRCS - Pullman Plant Materials Center

Illustration Source: *The Illustrated Flora of BC.*



Solidago missouriensis var. *missouriensis*

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1. www.fs.fed.us/database/feis/plants/forb/solmis/all.html
2. http://plants.usda.gov/java/profile?symbol=SOMI2

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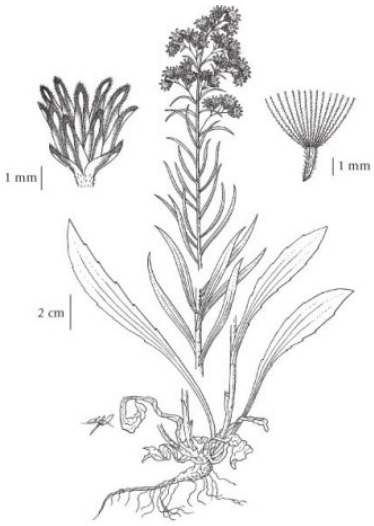

Solidago missouriensis var. *missouriensis*

Aster curtus Whitetop Aster Species Code: ASCU

Aster curtus (syn. Seriocarpus rigidus) White-top aster

Dennis Plank

Family Asteraceae
Life Cycle: Perennial Blooms July-August. Reproduces both by air-born, fluffy seed and clonal rhizomatous growth. Pollinated by bees and many other insects. Seed producing inflorescence often remains as dead stalk through winter, to be replaced by new flowering stalk the following year. Newly germinated seeds can establish slowly in the first season. Flowering stalks usually appear in the second year, after strong crown establishment.

Propagation Strategies Can be grown from seed and from division or layering of rhizomatous clones. Seed exhibits dormancy, and rarely germinates at greater than 50%, even with appropriate pretreatment. Easiest to sow in October and November, for natural outdoor cold-moist stratification. For spring sowing, start refrigerated cold-moist stratification around mid-January for a late April sowing. To stratify, place seeds in a paper towel or mix with peat moss or vermiculite. Moisten moderately, and place in a sealed container, such as a plastic bag. Open occasionally to provide air.

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Image © 2004, Rod Gilbert

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Collecting Seed from Your Garden Look for the small, understated white flower clusters to ripen in July. Seed is ready to harvest when the seedhead begins to loosen. Look closely at the peduncle (base of flower) to see if the seed body releases from it with ease. Wait too long, and they will take to the wind. Seeds are ready to harvest when the base of the seed body (closest to peduncle) turns from a tender white color to buff or slightly brown in color.

Description Nearly glabrous perennial from slender, creeping rhizomes, the stem 1-3 dm. tall, usually simple and unbranched up to the inflorescence. ***Leaves:*** Lowermost leaves reduced and early-deciduous, the largest ones a little above the base, 2.5-3.5 cm. long and 5-9 mm. wide, oblanceolate, sessile; those leaves above numerous and gradually reduced; often scabrous on the midrib beneath, and with stiff, short hairs on the margins. ***Flowers:*** Heads in a close terminal cluster; involucre 7-9 mm. high, narrow, the bracts imbricate, white and papery below with a light green herbaceous tip; rays usually 2, shorter than the capillary pappus, 1-3 mm. long, white; disk flowers 9-21, pale yellowish, with purple anthers. ***Fruit:*** Achedne. [1]

Habitat: Prairies and open areas at lower elevations from southern Vancouver Island to southern Oregon but primarily in Washington west of the Cascades

Works Cited

1. http://biology.burke.washington.edu/herbarium/imagecollection. php?Genus=Sericocarpus&Species=rigidus

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Castilleja hispida Paintbrush Species Code: CAHI

2007 Rod Gilbert

Dennis Plank

Family Scrophulariaceae
Life Cycle: Perennial, hemiparasitic. The flowers are very inconspicuous, but the brightly colored leaf bracts can range in color from bright red, to orange, and even yellow. The tiny seeds develop in hard pods which open at the top when dry. Emergent seedlings are tiny, and begin establishment as early as February. Depending on microclimate, paintbrush will display its colorful leaf bracts as early as April and as late as June. Seed usually matures in July, after the plant dies back to its crown to resume very slow growth starting in October, and surging again the following February or March.
Propagation Strategies CAHI is best propagated from seed. Seed can be germinated after 90-180 days (wide range) of refrigerated cold moist stratification, but germinates better from natural outdoor stratification. Sow in October for best results, and look for germination in February or March of the following year. CAHI, like other Castilleja species, is partially parasitic. It grows best when planted with a companion from a different genus, from whose roots it will draw nutrients. Eriophyllum lanatum (Oregon Sunshine) has proven to be an excellent companion. Castilleja

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Collecting Seed from Your Garden Watch for the flower stalks to harden and brown into July. Seed will ripen in gradually swelling pods arranged snugly along the stalk. Pods will turn very hard. Seeds should be collected when the tops of these pods begin to split open. Each pod can contain from 30 to 150 seeds.

Description Perennial herb, the stems mostly unbranched, clustered, erect or ascending from a woody base, 2-6 dm. tall, finely villous.***Leaves:*** Leaves alternate, lanceolate or broader, finely villous, the lower ones entire and reduced; upper leaves with 1-2 pairs of lateral lobes, these much narrower than the mid-blade. ***Flowers:*** Inflorescence showy, short and broad, becoming elongate, scarlet or red, occasionally yellow; bracts broad and deeply 3- to 5-lobed, stamens 4. ***Fruits:*** Capsule.[1]

Habitat Grassy slopes and forest openings, from sea level to moderate elevations in the mountains.

Traditional Uses: Okanagan-Colville: Dermatological aid, plant pounded up and put into moccasins for "sweaty feet." Nitinaht: food (candy), sweet nectar sucked by children. [2]

Wildlife Important larval host plant for Taylor's Checker Spot butterflies, pollinated by bees, sometimes by hummingbirds.

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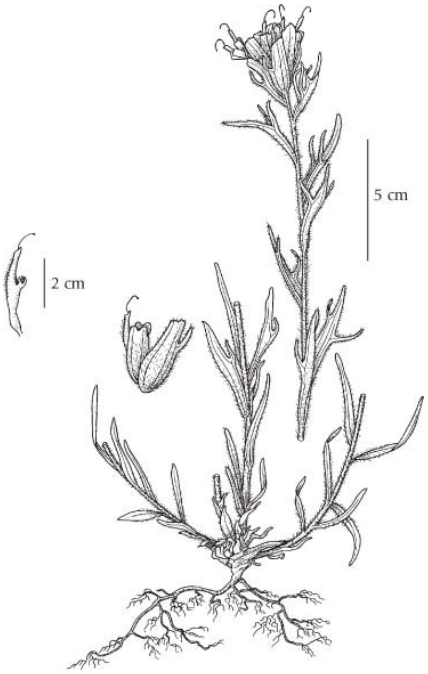

Castilleja hispida var. *hispida*
Illustration Source: *The Illustrated Flora of BC*

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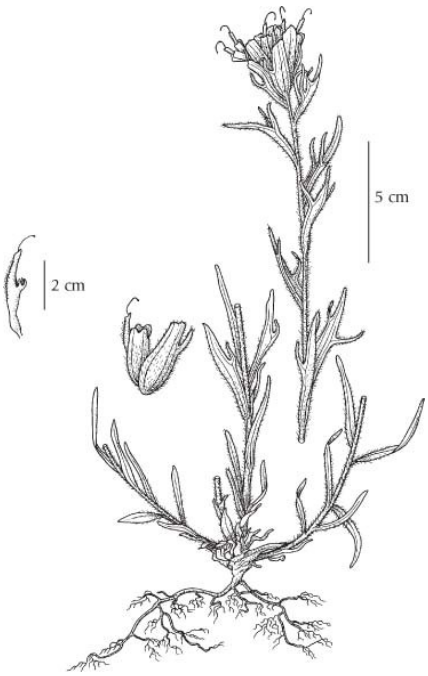

Castilleja hispida var. *hispida*

Microseris laciniata Cut Leaf Microseris/Cutleaf Silverpuffs Species code: MILA

Photo by Rod Gilbert

Family: Asteraceae (Aster)

Life Cycle: Perennial
Emerges early spring from strong central taproot, seed ripens in June, and germinates the following late winter.

www.nps.gov/plants/sos/bendcollections/index.htm

Propagation Strategies
In early November seed is sown in deep containers and covered lightly. A thin layer of pea gravel is applied to prevent seeds from floating. Conetainers are watered deeply and placed outside. Alternately, seed can be moist stratified in a refrigerator for 90 days before sowing in the spring.

To Collect Seeds from Your Garden: Fruit is an achene which ripens in June. It is collected when the pappus begins to expand. Seed is brown in color and wind disseminated, so must be collected before it blows away. Seed maturity is indeterminant and daily collections are needed to maximize volume. Seed is stored in paper bags at room temperature until cleaned. Seed should be stored loosely in bags. Compressing the seed with the attached pappus increases difficulty during cleaning.

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Description: Perennial growing 15-120 cm with a taproot. ***Leaves:*** Basal and with petioles; can have spiky edges with dotting. 10-50 cm in length. ***Flowers:*** Yellow flowerhead resembles a common dandelion. Flowers have both male and female organs and are pollinated by insects.

Habitat: The plant prefers light (sandy), medium (loamy) and heavy (clay) soils. The plant prefers acid, neutral and basic (alkaline) soils and can grow in saline soil. It cannot grow in the shade. It requires moist soil.

Traditional Uses: The roots were ground and used for food.

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