

## *Epilobium densiflorum*

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### **Why the species is at risk**

The populations are under threat because of potential changes in local hydrological patterns that result from development in the surrounding areas. One park population is threatened by motorbikes traversing the meadow habitat and by the invasion of common hawthorn (*Crataegus monogyna*). Other populations suffer disturbance from road gravel placement in the habitat, by vehicles being driven over the meadow during the wet season as well as the dumping of refuse, and by a driveway excavation.

### **What you can do to help this species**

Management practices should be tailored to the needs of the site. Potential management tools will depend on the specific circumstances and may require experimentation prior to implementation. **Before taking any action, expert advice must be obtained and not action taken without it. Please refer to the introductory section of this manual.**

### **References**

- Raven, Peter H., and David M. Moore. 1965. A revision of *Boisduvalia* (Onagraceae). *Brittonia* 17:238-254.
- Raven, Peter H. 1979. A survey of reproductive biology in Onagraceae. *New Zealand Journal Bot.* 17:575-593.

For further information, contact the Garry Oak Ecosystems Recovery Team, or see the web site at: [www.goert.ca](http://www.goert.ca).

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## *Epilobium densiflorum*

**English name** dense spike-primrose

**Scientific name** *Epilobium densiflorum*

**Family** Onagraceae (Willow herb)

**Other scientific names** *Boisduvalia densiflora*

### **Risk status**

BC: imperilled (S2); red-listed

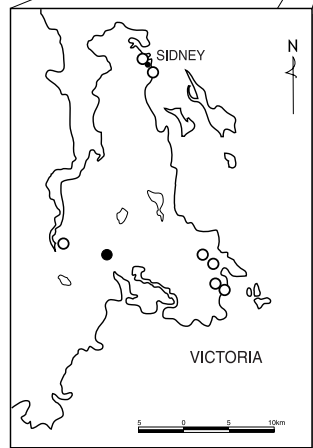
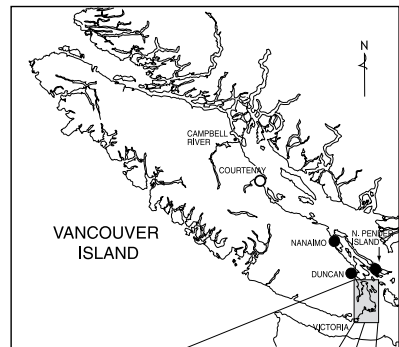
Canada: threatened (N2)

Global: imperilled (G2)

Elsewhere: Arizona, California, Idaho, Nevada, Oregon, Washington – reported (SR); Montana – possibly extirpated (SH); Utah – critically imperilled (S1)

### **Range/Known distribution**

Dense spike-primrose occurs in North America from British Columbia to California and east to Montana and Nevada. Currently in British Columbia, there are 15 known occurrences and 13 unconfirmed historic localities.



### **Distribution of *Epilobium densiflorum*.**

- recently confirmed sites
- unconfirmed sites

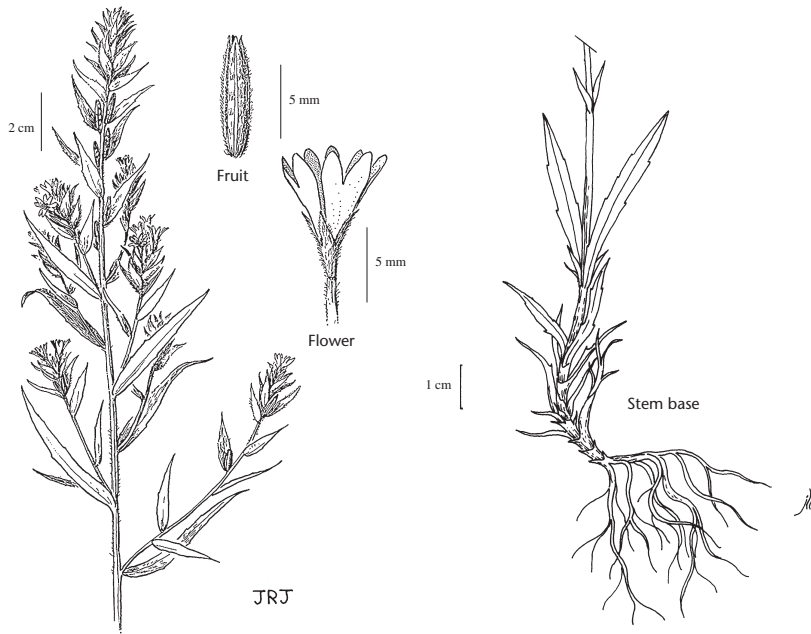
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### Field description

An annual herb from a taproot. **Stems** are 15-100 cm tall, **simple or branched above**, with peeling epidermis on the lower part of the stem. **Plants are covered in dense, white long soft- or stiff-hairs** and sometimes with glands. **Leaves are arranged in an alternate pattern, except near the base** where they are arranged oppositely. They are mostly **lance-shaped but become narrowly egg-shaped** in the inflorescence. The leaves are 1-8.5 cm long, with an entire (untoothed) or finely toothed margin. Upper leaves are hairy, unstalked or nearly so. **Flowers** are arranged in a **crowded inflorescence** that consists of a densely-leafy, terminal and lateral (side) spikes. The **3-10 mm long petals are white to rose-purple and notched** at the tip. **Sepals are 2-9 mm** long. The fruit is a spindle-shaped capsule 0.4-1.1 cm long with a very short beak (tip). The capsules are 4-chambered and covered in long hairs. There are 3-6 flat, 1.2-2 mm long seeds per chamber, which lack a tuft of hairs at the tip.

### IDENTIFICATION TIPS

Dense spike-primrose is distinguishable from brook spike-primrose (*Epilobium torreyi*) by having larger leaves, a more crowded inflorescence and longer petals. However, at the end of the season when plants dry out, the two species are difficult to tell apart.



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### **Life history**

Annual, flowering in July or August. Seedlings germinate after being submerged under water during the winter rainy season. The seedlings have round, opposite, hairless leaves that differ from the spiralled, narrow and hairy mature leaves. Pollination is thought to be predominately by bees, and to a lesser extent by syrphid flies.

### **Habitat**

*Epilobium densiflorum* occurs in a wide range of situations. It grows in vernal wet soils, in low elevation meadows, on gravelly roadsides, in Douglas-fir-Arbutus and Garry oak ecosystems, and also on grassy to rocky bluffs along the shoreline. The species generally occurs on shallow soils over bedrock, on exposed mineral soils and or on clay. It can also be found on mud flats and in salt marshes at the mouths of creeks. Associated native shrubs include oceanspray (*Holodiscus discolor*), tall Oregon grape (*Mahonia aquifolium*), Nootka rose (*Rosa nutkana*), hardhack (*Spiraea menziesii*). At one site it is associated with the red-listed species, slender woolly-heads (*Psilocarphus tenellus* var. *tenellus*). Associated herbaceous native species include common camas (*Camassia quamash*), meadow sedge (*Carex praticola*), woolly sunflower (*Eriophyllum lanatum*), small-flowered alumroot (*Heuchera micrantha* var. *diversifolia*), dagger-leaf rush (*Juncus ensifolius*), slender rush (*Juncus tenuis*), the red-listed species, bog birds-foot trefoil (*Lotus pinnatus*), hooded lady's tresses (*Spiranthes romanzoffiana*), white triteleia (*Triteleia hyacinthina*), tomcat clover (*Trifolium willdenowii*) and meadow death-camas (*Zigadenus venenosus*). Elevations: to 120 m.

The size of the individual plants and the population size are related to the amount of water available during the season.