

# *Minuartia pusilla*

**English name** dwarf sandwort

**Scientific name** *Minuartia pusilla*

**Family** Caryophyllaceae

**Other scientific names** *Arenaria pusilla*

**Risk status**

BC: critically imperilled (S1); red-listed

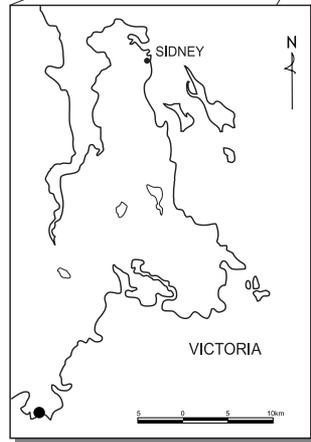
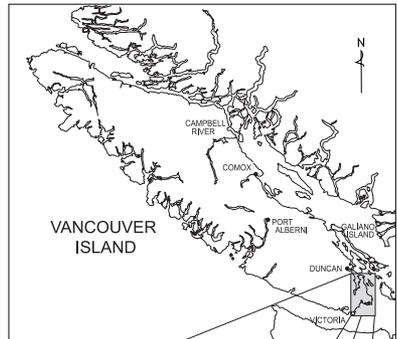
Canada: not yet assessed

Global: secure (G5)

Elsewhere: California – unranked (S?); Idaho, Nevada, Oregon, Washington – reported (SR); Utah – critically imperilled (S1)

**Range/Known distribution**

Dwarf sandwort is endemic to western North America. It is found from southwest British Columbia south through Idaho to Arizona, and through Washington and Oregon to northwest California. In Canada, the species is only known from one occurrence at Rocky Point on southern Vancouver Island.



**Distribution of *Minuartia pusilla***

● recently confirmed sites

# *Minuartia pusilla*

## Field description

*Minuartia pusilla* is a herbaceous **annual** from a weak taproot. The smooth, hairless stems (2-5 cm) are erect, simple or branched, and **glaucous**, with one or more than one per plant. The basal leaves and those on the lower stems are linear in shape, 2-4 mm long and 0.5 mm wide. They are opposite, smooth and hairless and single-nerved. Slightly reduced upper stem leaves are similar but few in number and without stipules. Plants produce several flowers in an open, leafy-bracted inflorescence that can comprise 80% of the overall height of the plant. **Flower petals (when present) are elliptical in shape** and 1-2 mm long. The 2-3 mm sepals are lance-shaped, 3-nerved, and have long to abruptly sharp points. Fruits are egg-shaped 3-valved capsules, 1-2 mm in length, and contain tiny brown and pimpled seeds about 0.3 mm in size.

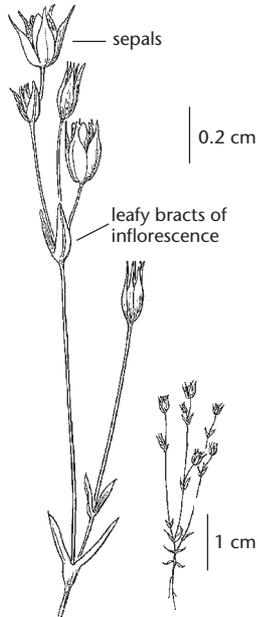
## IDENTIFICATION TIPS

Its annual habit, and long-pointed to sharply-pointed sepals in combination with glabrous (smooth and hairless) stems distinguish *M. pusilla* from sympatric *Minuartia* species. In southwestern BC, *M. pusilla* may be confused with the related shining sandwort (*Stellaria nitens*), but petals of the latter are cleft and its sepals possess broad, membranous margins. It superficially resembles *Moenchia erecta* but the latter has flowers with four sepals, four petals and four anthers while the flower parts of *Minuartia pusilla* occur in groups of five.



*Minuartia pusilla*

Adolf Caska



## *Minuartia pusilla*

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### **Life history**

It is not clear whether seeds germinate in fall, winter or spring. Flowers develop from April to June and seeds are produced in spring or summer. Flowering is likely controlled by temperature rather than by photoperiod. Seeds of related *Arenaria* species require an after-ripening period of high summer temperatures, but it is not known whether *M. pusilla* has similar requirements. Details of pollination biology and dispersal are unknown for this species, although other related species are both self- and insect-pollinated.

### **Habitat**

In British Columbia, *Minuartia pusilla* occurs on one flat-topped rocky bluff in the Coastal Douglas-fir zone. The soil is shallow and dry. Deeper and more moist soils may favour the establishment of larger species that can outcompete *M. pusilla*. Associated native plants include dwarf owl-clover (*Orthocarpus pusillus*), Scouler's popcornflower (*Plagiobothrys scouleri*), and beach bluegrass (*Poa confinis*). Red-listed winged water-starwort (*Callitriche marginata*), snake-root sanicle (*Sanicula arctopoides*), and seaside birds-foot trefoil (*Lotus formosissimus*) occur nearby. Elevation in British Columbia: 7 m. The historical role of fire in maintaining habitat for this species is unknown.

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

There is only one recorded occurrence of this species in British Columbia. It occurs on Federal Department of National Defence lands and has no formal protection.

### **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 should be obtained, and no action taken without it. Please refer to the introductory section of this manual.**

Public and private landowners should be made aware of new populations of this species if they are discovered, and appropriate management practices suggested. In particular, limiting access to the known occurrence will protect this and other co-occurring rare species from trampling.

### **References**

Costanzo, B. 2002. Stewardship Account: *Minuartia pusilla* (Dwarf Sandwort). Garry Oak Ecosystems Recovery Team, Victoria, British Columbia.

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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