

## *Carex tumulicola*

**English name** foothill sedge, splitawn sedge

**Scientific name** *Carex tumulicola*

**Family** Cyperaceae (Sedge)

**Other scientific names** none

**Risk status**

BC: imperilled (S2); red-listed

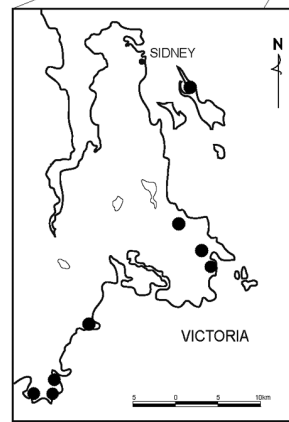
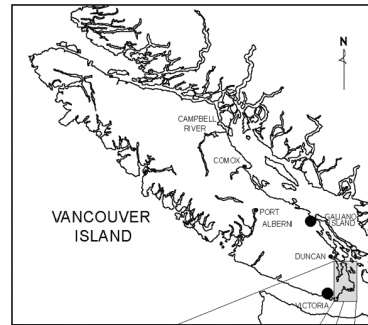
Canada: imperilled (N2); COSEWIC: endangered (2008)

Global: apparently secure (G4)

Elsewhere: California, Oregon, Washington – reported (SNR)

**Range/known distribution**

Foothill sedge is found in western North America from California to southwestern British Columbia. Although it was previously reported from Idaho, this may be due to misidentification. In Canada, foothill sedge is known from 10 locations, on a Gulf Island and on southeastern Vancouver Island from Nanaimo to Rocky Point (east of Sooke). Most of the sites are protected from development in municipal parks, Department of National Defence property, or Parks Canada land.



**Distribution of *Carex tumulicola***  
● recently confirmed sites



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### Field description

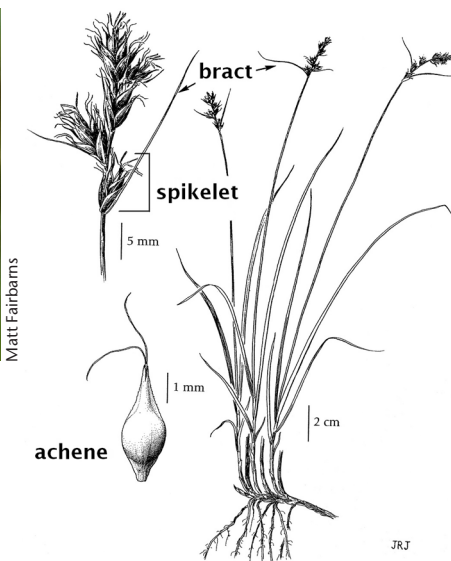
Foothill sedge is a perennial, **grass-like plant that grows in loose clumps up to 80 cm tall**. It will also occasionally form sods. There are 2-3 flat leaves per stem, each 1-2.5 mm wide. The flowering stems are taller than the leaves and each stem produces 3-10 oblong to cylindrical small flower clusters (spikes). Within each spike, the **male flowers occur above the female flowers**. The bracts (leaf-like structures below the flowers) **extend well beyond the lowest spike**. The fruit are single seeded achenes.

### IDENTIFICATION TIPS

It can be difficult to distinguish species in the sedge family because many are superficially similar. Mature specimens, a good hand lens or microscope, and a technical field guide are required to accurately identify foothill sedge. Foothill sedge may be confused with long-stoloned sedge (*C. inops*), Hood's sedge (*C. hoodii*), and valley sedge (*C. vallicola*). The other species lack the combination of large size (up to 80 cm), male flowers above the female flowers on the same spike, and long bracts that extend beyond the lower flowers.



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### **Life history**

In Canada, foothill sedge flowers in May or June and the flowers are wind pollinated. Fruit matures in the late summer or fall and is dispersed primarily by gravity short distances from the parent plant. Foothill sedge can also spread short distances by underground rhizomes and can reproduce from rhizome fragments. Foothill sedge plants are long-lived and slow growing. There is no information on population dynamics, dispersal distance, seed viability, seed predation rates, germination requirements, seedling survival rates, or competitive ability.

### **Habitat**

In Canada, foothill sedge is found in meadows associated with Garry oak ecosystems that are moist in the spring but dry out completely in the summer. Once established, plants can tolerate summer droughts and can grow in sun or light shade. Foothill sedge is found at low elevations (less than 50 m above sea level), generally within 200 m of the coastline. Foothill sedge plants are most vigorous in areas with light tree and shrub cover, where there are few invasive grasses, and/or where competition is reduced from mowing.

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

Habitat degradation by the invasion of non-native plants is the most serious threat to foothill sedge. Fire suppression has allowed denser shrub growth, increasing competition and limiting the amount of light and nutrients available to non-woody species including foothill sedge. Habitat loss due to urban development has destroyed much of the specialized coastal habitat required by foothill sedge. All-terrain vehicles, changes in water flow patterns, trampling, mowing, and shoreline erosion also threaten foothill sedge.





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

Management practices should be tailored to the specific circumstances at 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 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. Management needs include removal of invasive species and limiting access to sensitive habitat by all-terrain vehicles. Existing populations should be monitored on an ongoing basis to determine their viability, as well as for any negative impacts stemming from encroachment by invasive plants, fire suppression, land development, trampling, hydrological changes, mowing and erosion.

### **References**

- COSEWIC. 2008. COSEWIC assessment and status report on the foothill sedge *Carex tumulicola* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa, ON.
- Fairbarns, M. 2010. Personal communication. Botanist, Victoria, BC.

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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\*Refers to non-native species.

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Species at Risk in Garry Oak and Associated Ecosystems in British Columbia