

Allium ampletens

English name Slimleaf Onion

Scientific name *Allium ampletens*

Family Liliaceae (Lily)

Other English names Narrowleaf Onion; Paper Onion

Risk status

BC: vulnerable (S3); blue-listed; Conservation Framework Highest Priority – 2 (Goal 2, Preventative conservation)

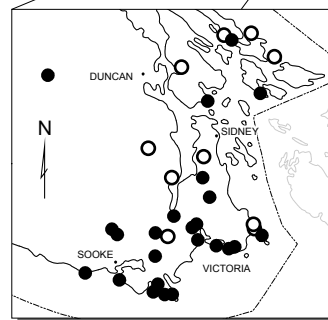
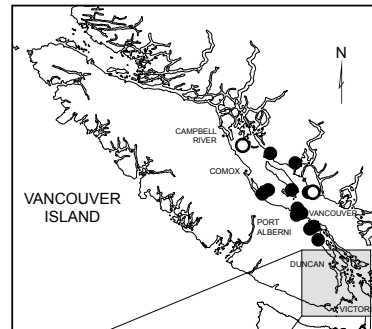
Canada: National General Status – sensitive (2010); COSEWIC – not assessed

Global: apparently secure (G4)

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

Range/Known distribution

Slimleaf Onion occurs along the west coast of North America from southwestern British Columbia, south through Washington and Oregon, to California. In Canada, it is restricted to lowland areas of southern Vancouver Island and the Gulf Islands from Mitlenatch Island (near Campbell River) to west of Sooke. Several populations are also known from the Sunshine Coast near Powell River. Currently, there are at least 50 known occurrences in this region, including several historical occurrences which have not been recently confirmed. Two morphological variants exist in British Columbia: a more common white or pale pink variant (triploid) which occurs across the species' range, and a rarer dark pink variant (tetraploid) which is confined to exposed seaside cliffs west of Victoria.



Distribution of *Allium ampletens*
● Recently confirmed sites
○ Unconfirmed or extirpated sites

Allium ampletens

Field description

Slimleaf Onion is a slender perennial herb with **whitish to pink flowers and a strong onion smell when handled or crushed**. Each plant originates from an egg-shaped scaly bulb with a brown-to-grey, wavy, fibrous coat. Plants initially produce 2-4 (usually more than 2) linear-shaped basal leaves that are narrow, smooth, and **shorter than the flowering stems**; stem leaves are absent. Leaves often **wither early, prior to flowering**. Flowering stems are smooth, **upright, round**, between 10 and 40 cm tall, and terminate in an **umbel-like (round-topped) cluster of 10 to 50 flowers**. Flowers have 6 distinct papery tepals (petals and sepals of the same colour), lanceolate in shape, with **short-tapering pointed tips which do not curve back**. Stamens are short, **usually about half the length of the tepals**. Fruits are egg-shaped capsules with 6 low, rounded crests. Each capsule produces 6 or fewer black seeds.

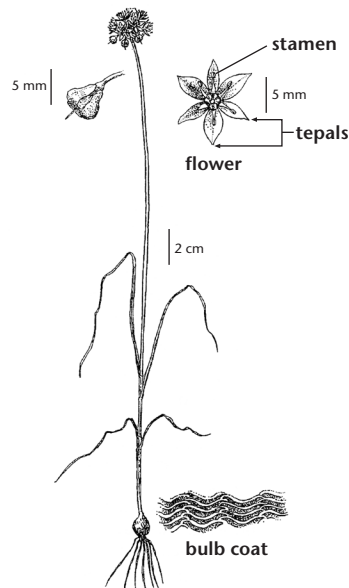
IDENTIFICATION TIPS

Four other native and one non-native onion species are found within the range of Slimleaf Onion in British Columbia. Hooker's Onion (*A. acuminatum*) is generally shorter than Slimleaf Onion, has rose-purple (occasionally white) flowers, and tepals with long-tapering pointed tips which curve back at the tips. Nodding Onion (*A. cernuum*) has conspicuously nodding flowering heads (the stems are erect except for the very top), leaves which persist during flowering, and stamens that extend well beyond the tepals. Geyer's Onion (*A. geyeri*) has bulbs with a more coarse-meshed fibrous coat, leaves which persist during flowering, and stamens which are near the length of the tepals. Olympic Onion (*A. crenulatum*) typically has much



Allium ampletens

Hans Roemer



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

Allium amplexans

shorter flowering stems than Slimleaf Onion, sickle-shaped leaves, and a distinctly flattened stem with wing-like ridges on both edges. This species is more commonly found at higher elevations. Wild Garlic* (*A. vineale*) is an introduced species which is typically much taller (30-100 cm) and has filaments (stalks of the stamens) with long appendages that extend well beyond the anthers. It is typically found in more disturbed habitats, such as roadsides. Fool's Onion (*Triteleia hyacinthina*) can be confused with Slimleaf Onion and can occupy similar habitats; however, its flowers are typically bluish-white, with the tepals and stamen filaments fused into a tube, and plants have no onion odour.

Life history

Leaves emerge in early spring during moist conditions and flowering stems emerge as leaves are dying back. Flowering occurs from mid-May to early July. Flowering is synchronous within populations. The timing of flowering varies depending on soil moisture regime, exposure, latitude, and weather conditions in a given year; the peak flowering period is typically mid- to late-June. Slimleaf Onion primarily reproduces vegetatively through bulb offsets but can also reproduce via seed. Fruits mature and are dispersed in July and August.

Habitat

Slimleaf Onion inhabits a variety of sites which are moist in the spring and dry out later in summer. Occupied sites include vernal moist coastal bluffs, shallow swales among rock outcrops in larger meadow or oak woodland complexes, and along the bases of riverside cliffs supplied with seasonal seepage. The majority of sites are on rocky bluffs and ledges within a short distance of the ocean. Plants generally occur as diffuse colonies in thin soils over bedrock. Tree and shrub cover is generally sparse or lacking entirely. Mosses and grasses such as California Oatgrass (*Danthonia californica*), Roemer's Fescue (*Festuca roemerii*), Sweet Vernalgrass* (*Anthoxanthum odoratum*), Common Velvet-grass* (*Holcus lanatus*), and hairgrass species* (*Aira* spp.) are often dominant. Species commonly found with Slimleaf Onion include Broad-leaved Stonecrop (*Sedum spathulifolium*), Chocolate Lily (*Fritillaria affinis*), Menzies' Larkspur (*Delphinium menziesii*), Sea Blush (*Plectritis congesta*), camas species (*Camassia* spp.), and Oceanspray (*Holodiscus discolor*).

Why this species is at risk

The most direct and immediate threat to historic Slimleaf Onion populations is habitat destruction. Although some populations occur within parks and other protected areas, many sites occur on private land. Coastal bluff sites are often favoured for residential development because of their ocean views. Steep slopes may seem to offer *de facto* protection for some Slimleaf Onion populations, but upslope development can impact site hydrology and affect the supply of spring seepage on which Slimleaf Onion populations depend.

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





Allium amplexans

Populations within protected sites can also be impacted by recreational use. Several populations are located on well-known viewpoints or next to trails where they may be damaged through trampling, soil compaction, and picking of flowers, which may prevent reproduction. Trail maintenance activities may also damage plants. Rock climbing is also a potential threat to populations on cliffs and ledges.

Invasive species such as the exotic Scotch Broom* (*Cytisus scoparius*) and introduced grasses have invaded many coastal bluff sites. Scotch Broom* is one of the few shrubs which can survive in the thin soils inhabited by Slimleaf Onion. Invasive grasses, including Common Velvet-grass*, often establish a dense mat in seepage areas on rock bluffs and are considered a major threat to Slimleaf Onion populations.

Grazing pressure by Black-tailed Deer (*Odocoileus hemionus columbianus*), feral sheep, and, on the coast, Canada Geese (*Branta canadensis*) can also damage the plants and threaten populations.

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. Management needs include protecting the natural hydrology of occupied sites, limiting access to sensitive habitat, and removing invasive species. Existing populations should be monitored on an on-going basis to determine their viability, as well as for any negative impacts stemming from land development, recreational pressure, invasion by competitive, exotic plants, and grazing. Bulbs should not be collected for horticultural use.

References

- Hawryzki, A. R. 2002. Natural history, population ecology, and conservation biology of slim-leaf onion (*Allium amplexans*). M.Sc. thesis, Dept. of Biology, University of Victoria, Victoria, BC. 102 p.
- Wheeler, E. 2000. Autopolyploid evolution and phylogeography of the slim-leaf onion (*Allium amplexans*, Alliaceae). M.Sc. thesis, Dept. of Biology, University of Victoria, Victoria, BC. 124 p.

For further information, contact the Garry Oak Ecosystems Recovery Team, or see the web site at: www.goert.ca.

Line art reprinted with permission of University of Washington Press. Photograph reprinted with permission of Hans Roemer.

© 2011

*Refers to non-native species.