

Allium ampletens – Slimleaf Onion

English name: Slimleaf Onion

Other English name: Narrowleaf Onion; Paper Onion

Scientific name: *Allium ampletens* Torr.

Other scientific name: N/A

Family: *Amaryllidaceae* (Amaryllis Family)

Risk status

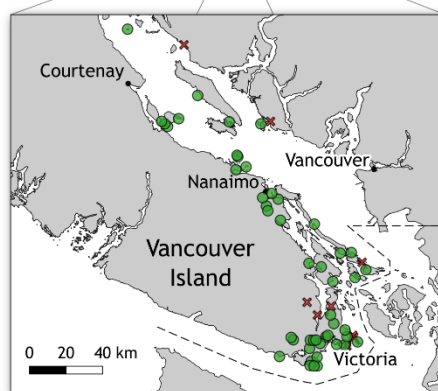
BC: vulnerable (S3); blue-listed

Canada: N3 (vulnerable)

Global: secure (G4)

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

Range/Known distribution: Vancouver Island and the Gulf Islands and San Juan Islands, mainland Washington State and Oregon (Coast and Cascade Ranges and intermountain area) south to California (Coastal Mountains and Sierra Nevadas with disjunct populations as far south as the San Diego area). In Canada, Slimleaf Onion 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 Canada, including several historical occurrences which have not been recently confirmed. Two genetic 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.

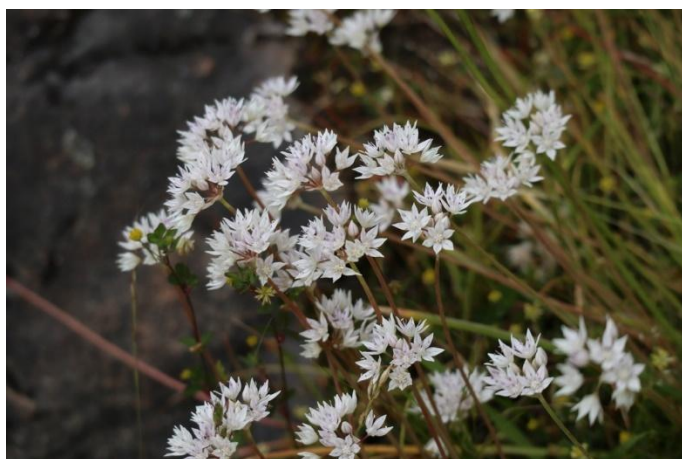


Distribution of *Allium ampletens*
● Confirmed Sites
* Extirpated Sites

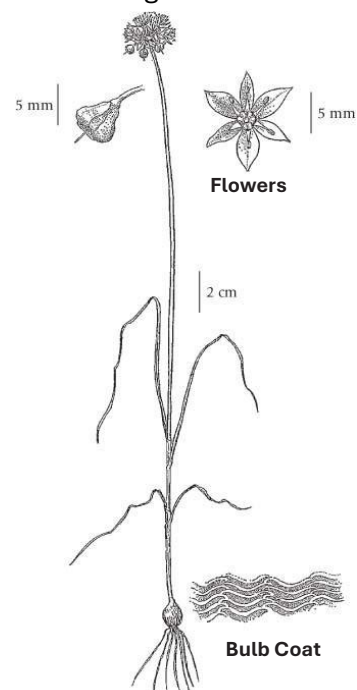
Allium amplectens – Slimleaf Onion

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 papery tepals (petals and sepals of the same colour) that are free to the base, 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 (rarely 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 at 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 about the same length as the tepals. Olympic Onion (*A. crenulatum*) typically has much shorter, distinctly flattened flowering stems, sickle-shaped leaves; and Olympic Onion is a high elevation species that rarely occurs as low down as Slimleaf Onion. Crow Garlic* (*A. vineale*) is an introduced species which is typically much taller (30-100 cm) often has some or all of its flowers replaced by bulbils; its flowers, when present, are purplish to green. White Triteteleia (*Triteleia hyacinthina*) - which is also known as Fool's Onion - can be confused with Slimleaf Onion and can occupy similar habitats; its tepals are larger (9-16 mm long) and fused below, and neither the foliage nor the bulbs have an onion-like odour.



Allium amplectens



Allium amplexans – Slimleaf Onion

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 tetraploids can also reproduce via seed. Fruits mature and are dispersed in July and August. The bulbs of Slimleaf Onion may remain dormant for 2 or more years, which may allow it to persist in areas where spring moisture is unreliable and growing conditions may be poor over multiple growing seasons.

Habitat: Slimleaf Onion inhabits a variety of open, sunny sites which are moist in the spring and dry out in summer. These 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, or sometimes quite dense 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 Vernal Grass* (*Anthoxanthum odoratum*), Common Velvet-grass* (*Holcus lanatus*), and Hairgrass species* (*Aira* spp.) are often abundant. Native 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 (*Camassia* spp.), and Oceanspray (*Holodiscus discolor*).

Why this species is at risk: The most direct and immediate threat to Slimleaf Onion populations has been habitat loss. At some sites, Slimleaf Onion gets trampled, and its habitat gets eroded by informal trails. Fire suppression has allowed native trees and shrubs such as Douglas-fir (*Pseudotsuga menziesii*) and Common Snowberry (*Symphoricarpos albus*) to develop dense canopies in areas which were previously open enough to support Slimleaf Onion. These species- and non-native plants such as Scotch Broom* (*Cytisus scoparius*), Eurasian vetches* (particularly *Vicia sativa* and *V. hirsuta*), Orchard Grass* (*Dactylis glomerata*), Sweet Vernal Grass* (*Anthoxanthum odoratum*), Perennial Ryegrass* (*Lolium perenne*), Sterile Brome* (*Bromus sterilis*), and Soft Brome* (*Bromus hordeaceus*) – have also provided increased competition for soil moisture and nutrients where Slimleaf Onion grows.

What you can do to help this species: High quality populations should be monitored regularly to identify changing threats and assess the effectiveness of management actions. It may not be practical to monitor all of the many small and medium-sized populations..

Measures should be taken to protect populations on private lands through conservation agreements. Populations near trails should be protected from trampling.

Forest and shrub ingrowth presents a particularly serious threat but it is unlikely that fire can be returned to most areas so novel techniques must be devised and implemented to reverse encroachment.

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Invasive woody species such as Scotch Broom* and One-seeded Hawthorn* should be removed, but this must be done carefully or else they will simply be replaced by invasive herbaceous species. Invasive forbs and grasses are difficult to control, and this can be ongoing and very time-consuming. Nevertheless, given the very high threat they pose, their control should be considered in high quality occurrences.

References

- Hawryszko, 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 pp.
- 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 pp.

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

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*Refers to non-native species