

# *Limnanthes macounii*

**English name** Macoun's meadow-foam

**Scientific name** *Limnanthes macounii*

**Family** Limnanthaceae (Meadow-foam)

**Other scientific names** *Floerkea macounii*

**Risk status**

BC: vulnerable (S3); blue-listed

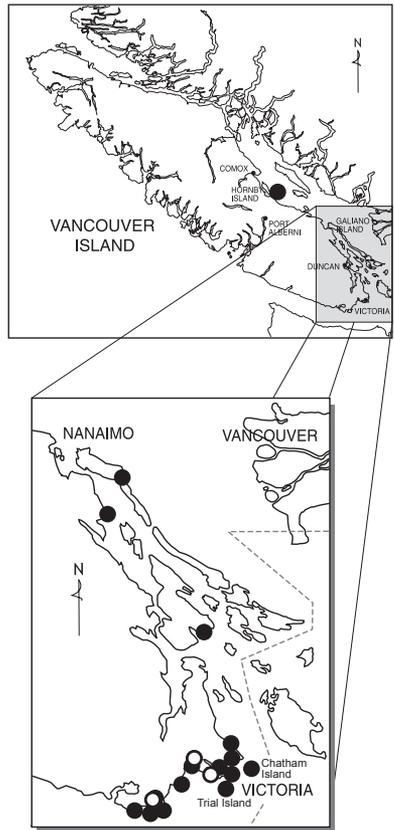
Canada: vulnerable (N3); COSEWIC: threatened (November 2004)

Global: vulnerable (G3)

Elsewhere: California – not currently ranked (SNR)

**Range/Known distribution**

Macoun's meadow-foam is considered endemic to southeastern Vancouver Island and the adjacent Gulf Islands. On Vancouver Island, populations of the plant are concentrated along the southeastern shore of Vancouver Island from East Sooke Regional Park to Yellow Point, near Ladysmith. Populations of Macoun's meadow-foam also occur on Saltspring, Gabriola, and Hornby Islands. Currently, in British Columbia there are **28** recently confirmed sites and **4** extirpated sites.



**Distribution of *Limnanthes macounii***

● recently confirmed sites

○ extirpated sites

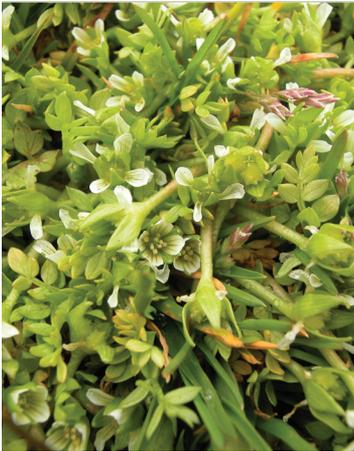
## *Limnanthes macounii*

### Field Description

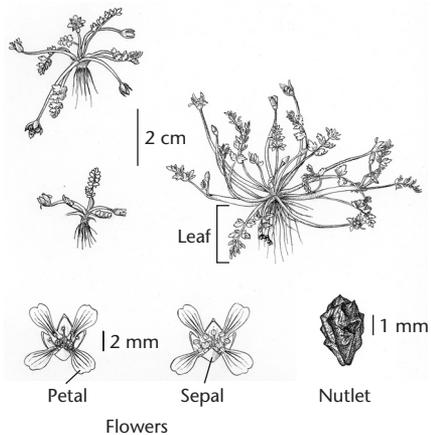
A **white- to yellowish-flowered annual** herb. The plant is non-hairy and small, 2-5 (-15) cm tall. Smaller plants grow **upright** and taller ones tend to **recline**. **Stems are unbranched or with one or more branches**. The leaves occur at the base of the stem and along the stem. The **leaves are pinnate** (leaflets arranged on each side of the leaf stalk), 1-7 cm long, with **3-13 toothed or lobed segments**. The **single flowers have 4 petals and sepals** (occasionally 5). The flowers are funnel or wheel-shaped, about 7-10 mm in diameter. The **petals are obovate** (egg-shaped and attached at the narrow end) and **4-5 mm long**, with 2 rows of hairs at the base. The 3-4 mm long green **sepals are ovate** (egg-shaped and attached at the broad end) with a sharply pointed tip. The fruits divide into (1) 3-4 nutlets that are cone-shaped, 3 mm long, yellow-green to brown, with small bumps on the surface.

### IDENTIFICATION TIPS

Macoun's meadow-foam is easily identified by its pinnate leaves and single flowers with four sepals and petals. Also, the conspicuous large nutlets are diagnostic. Sterile Macoun's meadow-foam may be mistaken for tall pepper-grass (*Lepidium virginicum*), but tall pepper-grass has a taproot and it is hairy. When not in flower, Macoun's meadow-foam may also look similar to some nemophila species (*Nemophila* spp.), but the latter have hairy leaves, unlike Macoun's meadow-foam.



Adolf Ceska



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### **Life history**

A winter annual, Macoun's meadow-foam germinates in the fall and grows throughout the winter. Flower stalks with green buds develop in February and March and flowering occurs at the end of March or beginning of April. Flowers are self-pollinated. Insect pollination may also occur, although most potential pollinators do not emerge in time for Macoun's meadow-foam's blooming period. Nutlets develop and ripen by the end of May or early June. By the end of June the plants have shed their nutlets and died. Wind and birds are the most likely agents of dispersal of the nutlets. These germinate soon after the first heavy rains in the fall (usually in October), and seedlings develop in the winter months. The best time to locate the plants is from December to February.

### **Habitat**

Macoun's meadow-foam occurs in open places or light open forest, usually close to the ocean, on shallow soils that are subject to an abundance of moisture during the winter. Typical sites are vernal moist habitats consisting of depressions in shallow soil lining bedrock or intermittent seepage areas along fractures in bedrock. Associated native species in vernal moist habitats include small-fruited parsley-piert (*Aphanes microcarpa*), harvest brodiaea (*Brodiaea coronaria*), common camas (*Camassia quamash*), Nuttall's quillwort (*Isoetes nuttallii*), slender plantain (*Plantago elongata*), poverty clover (*Trifolium depauperatum*), and dwarf owl-clover (*Triphysaria pusilla*). Sites near the ocean include native species such as thrift (*Armeria maritima*), gumweed (*Grindelia integrifolia*), and sea plantain (*Plantago maritima*). Introduced grasses prevail at most sites. Elevations: 3-200 m.

Macoun's meadow-foam occurs at the same locations as some red-listed species, including snake-root sanicle (*Sanicula arctopoides*), rosy owl-clover (*Orthocarpus bracteosus*), paintbrush owl-clover (*Castilleja ambigua*), bearded owl-clover (*Triphysaria versicolor* ssp. *versicolor*), erect pigmyweed (*Crassula connata* var. *connata*), Carolina meadow-foxtail (*Alopecurus carolinianus*), and seaside birds-foot trefoil (*Lotus formosissimus*).

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

Macoun's meadow-foam populations are declining and four populations known from 1988 have been lost. Populations are at risk from human activities associated with residential and tourist development along the coast. Introduced plants also contribute to Macoun's meadow-foam population decline and loss, particularly introduced grasses, which can cover patches of bare soil where Macoun's meadow-foam grows.

### **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 no action taken without it. Please refer to the introductory section of this manual.**

Small and declining populations of Macoun's meadow-foam should be carefully monitored and restoration measures should be undertaken if recommended by a species specialist. A successful restoration effort has been carried out at one site where a population of Macoun's meadow-foam disappeared due to competition from introduced grasses. The population re-established from the seed bank following manual removal of grass sod.

### **References**

Ceska, Adolf and Oldriska Ceska. 2004. Update Status Report on Macoun's Meadowfoam *Limnanthes macounii*. Committee on the Status of Endangered Wildlife in Canada.

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.