

COMMON CAMAS • *Camassia quamash*

GENERAL: Perennial herb to 70 cm tall, from a deep, egg-shaped, 2-cm-long bulb.

LEAVES: Numerous, basal, grass-like, to 2 cm wide and 50 cm long.

FLOWERS: Pale to deep blue, occasionally white, to 3.5 cm long; 5 to many in a terminal spike.

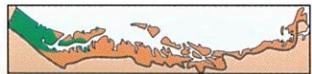
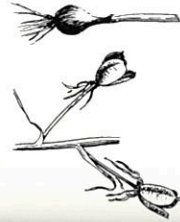
FRUITS: Egg-shaped capsules to 2.5 cm long; stalk curved in towards stem.

ECOLOGY: Grassy slopes and meadows, low to middle elevations; southeast Vancouver Island (also in a bog on the Brooks Peninsula) south to California; one record from Haines, Alaska.

NOTES: Camas is one of several beautiful lily-family plants restricted, in our region, to rainshadow climates. An entry from the journal of Meriwether Lewis of June 12, 1806, hints at how abundant camas meadows must have been prior to their depletion due to agriculture and urban sprawl: 'The quawmash is now in blume and from the colour of its bloom at a short distance it resembles lakes of fine clear water, so complete in this despection that on first sight I could have sworn it was water.'



The great camas (*C. leichlinii*) is less common than common camas, but it can be expected in similar habitats and over a similar range. The two camas species are distinguishable mainly by flower characteristics: the tepals of the great camas eventually twist together to cover and protect the fruit, while those of the common camas do not, and the common camas has 5 tepals curved upward and the 6th curved downward. • Camas was an important staple food, and the bulbs were eaten wherever available. The bulbs were harvested during or soon after flowering, so as not to confuse them with death-camas. Among the Vancouver Island Coast Salish, camas is semi-cultivated. The camas beds could be owned and inherited, and each season they were cleared of stones, and weeds and brush, often through controlled burning in summer. Harvesting the bulbs was a seasonal event often involving setting up temporary living shelters. It could last for several weeks, with entire families participating. The bulbs were dug with pointed digging sticks; only the larger ones were taken, and the smaller ones were left to grow. Usually steamed in large pits for 24 hours or more, the bulbs were sweet when cooked and they were often used to sweeten other foods. Because most of the bulb's carbohydrate is in the form of a long-chain sugar, inulin, which is highly digestible nor very palatable, prolonged cooking was necessary to break down the inulin into its component fructose molecules. The properly cooked bulbs are markedly sweet and much more digestible. The steaming pits could be quite large: as much as 50 kg of bulbs could be cooked at a time. The cooked bulbs could be served right away, often at large feasts and potlaches, or sun-dried for trade or storage. • **WARNING:** Death-camas often grows in the same habitat as the edible blue camas species. Although death-camas flowers are cream-coloured, the bulbs are very similar to blue camas bulbs, but they are highly toxic and potentially fatal. • A hole is scraped in the ground, in which are placed a number of flat stones on which the fire is placed and kept burning until sufficiently warm, when it is taken away. The cakes, which are formed by cutting or bruising the roots and then compressing into small bricks, are placed on the stones and covered with leaves, moss, or dry grass, with a layer of earth on the outside, and left until baked or roasted, which generally takes a night. They are moist when newly taken off the stones, and are hung up to dry. Then they are placed on shelves or boxes for winter use. When warm they taste much like a baked pear. It is not improbable that a very palatable beverage might be made from them. Lewis observes that when eaten in a large quantity they occasion bowel complaints. Assuredly they produce flatulence: when in the Indian hut I was almost blown out by strength of wind. (Journal of David Douglas) • The common camas is also known as 'early camas,' because it flowers several weeks before great camas.



MEADOW DEATH-CAMAS • *Zygadenus venenosus*

GENERAL: Perennial from oval bulbs covered with blackish scales; stems to 60 cm tall.

LEAVES: Mainly basal, grasslike, channelled, to 30 cm long, becoming smaller up the stem.

FLOWERS: Creamy-white, bell- or saucer-shaped, with green glands at the base of the petals, foul-smelling; many in fairly compact, terminal cluster.

FRUITS: Cylindrical capsules to 1.5 cm long, with brown, spindle-shaped seeds.

ECOLOGY: Open forests and forest edges, damp (at least in spring) meadows, and rocky or grassy slopes, at low to middle elevations.

NOTES: On the coast, the range of this deadly poisonous plant coincides closely with that of camas, which was an important root food. The bulbs and leaves resemble those of blue camas; but give a burning sensation when touched to the tongue, and the flowers are cream-coloured rather than blue. The northwest coast people within the range of this plant were well aware of its poisonous qualities, caused by powerful alkaloids. Great care was taken when digging camas and other edible bulbs not to confuse them with the bulbs of death-camas. Blue camas beds were often weeded of death-camas to reduce risk and make harvesting more simple. The Chehalis and Squaxin used this plant as a violent emetic. It was also applied as a poultice to sprains, bruises, boils, rheumatism and pain in general. • **WARNING:** The bulb and leaves are poisonous to humans and grazing animals. Symptoms include vomiting, lowered body temperature, difficult breathing and finally coma. • The genus name means 'joined glands,' referring to pairs of glands inside the flowers of another species in the genus.



ALP LILY • *Lloydia serotina*

GENERAL: Small (4–15 cm tall) alpine perennial from oblong, scaly bulbs sometimes connected by thin rhizomes.

LEAVES: Narrow, grass-like, basal, somewhat fleshy, to 15 cm long, but with 2–3, smaller, alternate leaves on the stem.

FLOWERS: Yellowish-white with purple or green veins, to 2 cm across, erect or drooping in poor weather; solitary to few atop the stems.

FRUITS: Oval capsules to 8 mm long; seeds numerous, flattened and crescent-shaped.

ECOLOGY: Rocky ridges and ledges, meadows, subalpine parkland and alpine tundra.

NOTES: This small lily is much more common (even abundant) in alpine areas of the north and only scattered in the south. Its main area of distribution is in Europe and Asia.

• Plants on the Queen Charlotte Islands are larger, with greenish veins on the flowers. • Alp lily is named for Welsh naturalist Edward Lloyd (1660–1709). This is one of the earlier flowers to appear in the alpine, so the species name *serotina* ('late-flowering') is a misnomer. However, it may be that the word is derived from the verb *serro* ('to weave together') in reference to the fine web-like network of rhizomes. • Alp lily is probably the only relatively showy, lily-and-related-family species of the northern hemisphere that has a circum-polar, arctic-alpine distribution.





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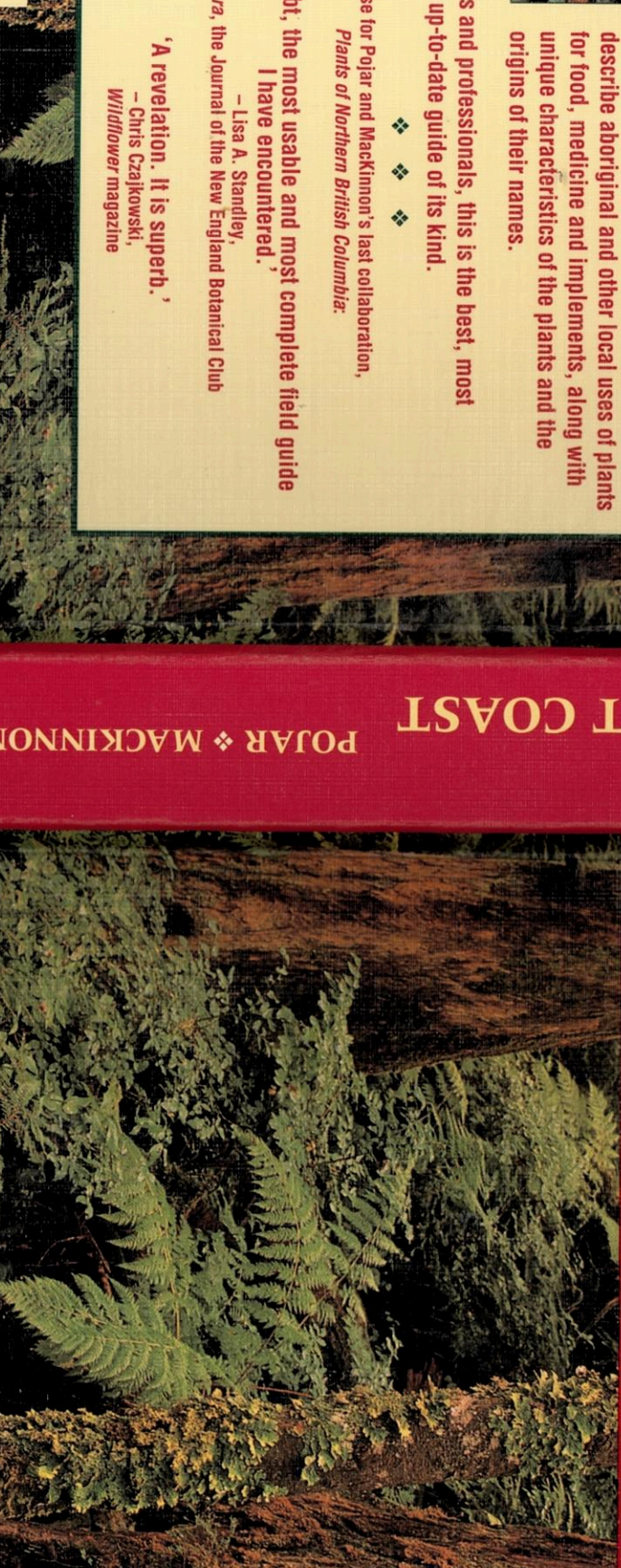
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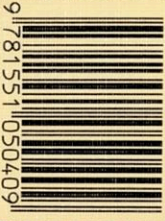


Printed in Canada

USA \$19.95

Canada \$26.95

ISBN 1-55105-040-4



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