

American Sweet-flag (*Acorus americanus*)

Acoraceae (Sweet-flag Family)

RANGE

- Found throughout North America, although rarer in the western provinces and states
- In British Columbia, known from eight locations from Smithers to the Lower Mainland to the Kootenays, with one location in the Thompson Okanagan at the south end of Salmon Arm on Shuswap Lake



Figure 1 Thompson Okanagan Region distribution of *Acorus americanus* (BC CDC 2014)

HABITAT

- Foreshore backwaters and mudflats, usually with a seasonally fluctuating water table; along lakes and slow-moving rivers, often in wetland fringe vegetation
- Known in the Thompson Okanagan Region from the Interior Douglas Fir Biogeoclimatic Zone
- Associates include common cattail (*Typha latifolia*), sedges (*Carex* spp.), bur-reeds (*Sparganium* ssp.), loosestrife, yellow iris (*Iris pseudacorus*) and other semi-aquatic or emergent plants



Figure 2 Plants (dark green band) above mudflat habitat beside lake



Figure 3 Wetland fringe habitat along Pitt River with reed canarygrass (*Phalaris arundinacea*) and large sedges; photo depicts one of few flowering individuals in population (inflorescence circled)

LIFE HISTORY

- Perennial species that reproduces from segmented rootstocks and by seed
- Extensive, mostly vegetative stands may have only a few fertile plants
- Seed dispersal by wind and water currents, as well as by small rodents, waterfowl and (to a lesser extent historically) by humans

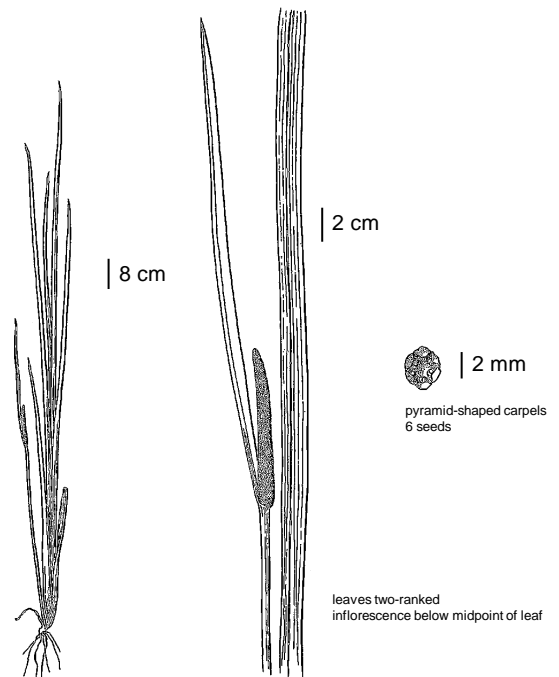


Figure 4 Illustration of *Acorus americanus* by Jeanne R. Janish (Hitchcock et al. 1969)

Acorus americanus (continued)

DESCRIPTION

General

- Aquatic or semi-aquatic perennial plant, up to 1.5 m tall from a thick, spreading root-stalk
- Plants aromatic, containing a complex mix of chemical compounds, and were used in traditional medicine by both First Nations and early settlers

Leaves

- Leaves two-ranked (iris-like), arising from the base of plant and folded such that both edges are in line with the stem, not more than 2.5 cm wide
- Midvein only slightly more prominent than neighbouring veins

Flowers

- Inflorescence a spike-like aggregate of many tiny flowers, 5 to 10 cm long, occurring below the mid-point of a modified leaf
- Flowers have 6 scale-like, yellow to brown sepals

Fruits

- Fleshy, pyramid-shaped carpels, buoyant in water
- Each fruit usually with 6 seeds



Figure 5 Close-up of leaves showing midvein (arrow) that is almost flush with the surface of the leaf

IDENTIFICATION TIPS

- Most similar to European sweet-flag (*Acorus calamus*), a plant widely introduced across North America but currently not reported from B.C.
- While technical keys focus on the sterility of the European species, the most strikingly different feature from *A. americanus* is a prominent midvein that is raised above the surface of the leaf
- *A. americanus* leaves are brighter green than those of common cattail, thicker than those of yellow iris, and wider and held more strictly upright than those of emergent bur-reed species (*Sparganium emersum*, *S. eurycarpum*)



Figure 6 Close-up of (a) spike-like inflorescence and (b) leaf arrangement of a non-flowering individual

GENERAL THREATS AND GUIDANCE

- **Avoid development in areas with known occurrences of *Acorus americanus* through project relocation or redesign**
- Protect foreshore habitats from disturbance and development, by maintaining natural water level fluctuations and avoiding vegetation removal for recreational or aesthetic purposes
- Follow provincial methods for when and how to conduct plant species at risk surveys
- Follow provincial policy and guidance on how to avoid, minimize, restore and offset impacts to plant species at risk and their habitats
- Report any sightings to the B.C. Conservation Data Centre (cdccdata@gov.bc.ca) and FLNR Ecosystems Section (josie.symonds@gov.bc.ca)

REFERENCES

- B.C. Conservation Data Centre. 2014. <http://a100.gov.bc.ca/pub/eswp/>
- Douglas et al. (editors). 1999. *Illustrated Flora of British Columbia*. Vol. 6. B.C. Min. Environ., Lands and Parks, and Min. For., Victoria, B.C.
- Hitchcock et al. 1969. *Vascular Plants of the Pacific Northwest*. Univ. Washington Press, Seattle, WA
- Klinkenberg, Brian (editor). 2014 E-Flora BC <http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Acorus%20americanus>

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