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California/Winged Floater

Anodonta californiensis/nuttalliana clade

A member of the family Unionidae (freshwater mussels), winged floater is the least common of the Pacific Northwest's *Anodonta* species. Five native species of the genus *Anodonta* occur in western North America, of these three are found in BC. Winged floater, as with other freshwater mussels and clams in BC, is declining in terms of area occupied and number of sites and individuals.



External shell view Ethan Nedeau



Internal shell view ("nacre") Ethen
Nadeau



Typical freshwater sandbar bed Pamela
Zevit



Freshwater sand-bottomed lagoon
Pamela Zevit

Characteristics

Length Up to 9.5 cm. Smaller than other western *Anodonta* species, the shell is elliptical and more circular than oval and fairly flat. The outer portion of the shell is yellowish-green, yellowish-brown, or brown, the interior (nacre) is white or bluish. The margin of the rear top of the shell is compressed and raised to form a high prominent wing (though some individuals may be wingless). The valves are very thin but slightly inflated (can be compressed in some individuals). The beak of the winged floater is flattened, not usually raised above the hinge line and contoured with up to 20 irregular single or double-looped concentric ridges. A key lifecycle feature of this and other freshwater mussel species is the need for a host (usually a fish species) to carry the larvae (glochidia). Floaters do not appear to be host specific and in most cases the host species is unknown. Larvae are relatively large, and attach themselves to the fins or gills of their host fish with hook-like projections on each valve. They remain attached to a fish for several weeks (depending on species and water temperature) before letting go and dropping to the bottom where they burrow into the sediment. All *Anodonta* species have thin fragile shells compared to most other native mussels. This enables them to 'float' on less solid substrates like silt and mud. They have also earned their name from colony die-offs that occur from seasonal low oxygen and temperature stress in the summer. The post mortem build-up of gases in the shell cavity may float the light shells to the water's surface.

Status

Global Status: G5
Provincial Status: S4?
BC List Status: Yellow (Not at risk of extinction)

Resources

Freshwater Mussels of the Pacific Northwest

Three deeply divided lineages of the freshwater mussel genus *Anodonta* in western North America

CRITICAL UNCERTAINTIES FOR NATIVE FRESHWATER MUSSELS (BIVALVIA: UNIONOIDEA) IN THE PACIFIC NORTHWEST

For further information see

Xerces Society - Freshwater mussels: winged floater (*Anodonta nuttalliana*)

Identifying Freshwater Mussels in BC

BC Species and Ecosystems Explorer: Species and Ecosystems Search

A source for authoritative conservation information on thousands of plants and animals and hundreds of ecological communities in BC. From here connect to all provincial and federal recovery plans (including the SARA Registry), COSEWIC (Committee on the Status of Endangered Wildlife in Canada), Identified Wildlife guidance and conservation requirements for specific species and ecological communities of conservation concern impacted by forestry activities) and links to E-Flora and E-Fauna (the Electronic Atlas of the Plants and Wildlife of British Columbia).

British Columbia's Coast Region Species & Ecosystems of Conservation Concern

A joint venture resource providing comprehensive information on a range of species and ecological communities specific to the Coast Region of BC (including the South, Central and North Coast, Vancouver Island and Haida Gwaii).

Develop With Care Guidelines (see Lower Mainland Region section)

Environmental guidelines for urban and rural land development in BC.

Credits

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Source URL: <http://www.sccp.ca/species-habitat/californiawinged-floater>

Links

[1] <http://www.xerces.org/winged-floater/>

[2] <http://www.manandmollusc.net/BritishColumbia/CDC-Idandinfo-updated-March09,09.html>

[3] <http://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/conservation-data-centre/explore-cdc-data/species-and-ecosystems-explorer>

[4] <http://www.geog.ubc.ca/biodiversity/factsheets/>

[5] http://www.env.gov.bc.ca/wld/documents/bmp/devwithcare2006/develop_with_care_intro.html

[6] <http://www.sfiprogram.org/>

[7] <mailto:info@sccp.ca>