

Western Pearlshell (*Margaritifera falcata*)

RANGE IN B.C.

Known throughout southern B.C. (reported as far east as Jaffray) and north to Babine Lake.



Jenny Heron

Figure 1. *Margaritifera falcata*

HABITAT

Prefers cold, clean creeks and rivers and can, although not commonly, inhabit small systems up to a few feet wide. Substrate preferences includes sand, gravel and cobbles in stable areas of a stream.



Lea Gelling

Figure 2. *Margaritifera falcata* habitat in the Shuswap River, B.C.



Lea Gelling

Figure 3 Live *Margaritifera falcata* from the Shuswap River, B.C.



Jenny Heron

Figure 4. Photo of the interior of *Margaritifera falcata*, showing its colour and pseudocardinal teeth.

LIFE HISTORY

- Some *Margaritifera falcata* have been found to live up to 100 years.
- The host fish are thought to include native and non-native trout and salmon.
- Precise timing of breeding and release of glochidia is not known. Fertilization is thought to occur in the spring and gravid females may be found from late summer to early spring.
- In environments where host fish are abundant, physical habitat is ideal and human threats are minimal, *M. falcata* can attain very high densities (>300 per square metre), often covering the stream bottom.

Margaritifera falcata (continued)

DESCRIPTION

Size: Up to 12.5 cm long,

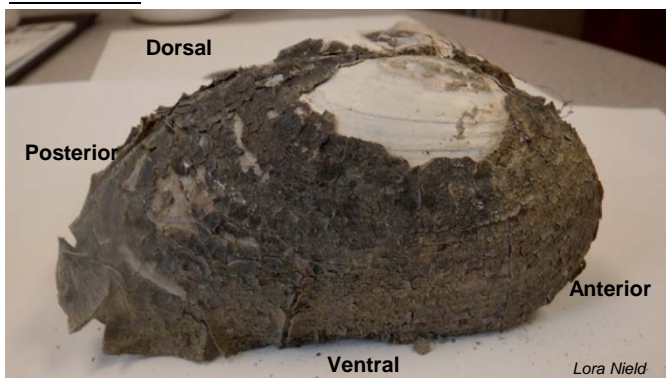
Shape: Elongated. Curved dorsal margin and the ventral margin is concave.

Colour: Shell is light brown (juveniles) to dark brown or black (adults). Nacre (inside of shell lining) is purple, salmon-coloured or pink.

Shell: Thicker than the floater species.

Teeth: Have “teeth” on the interior hinge, which create a strong connection between each valve. This is a distinguishing feature for this local species of freshwater mussel.

ANATOMY



Figures 5 (top) and 6. *Margaritifera falcata* shells anatomy.

GENERAL GUIDANCE

- Avoid developments in areas with known occurrences of *Margaritifera falcata*, through project relocation or redesign.
- Use a qualified professional when undertaking works in potential mussel habitat areas.
- Protect known habitat areas from disturbance through education and development design features.
- To determine the presence of mussels and appropriate mitigation for proposed works, use the *Guidance for Freshwater Mussel Detection and Relocation in the Okanagan* <http://www.env.gov.bc.ca/okanagan/esd/bmp.html>

IDENTIFICATION TIP

The “teeth” on the interior hinge of this species is its predominant distinguishing feature.



Figure 7. Photo of *Margaritifera falcata* collected from the Nicola River, B.C.



Figure 8. Photo of *Margaritifera falcata* habitat. Nicola River, B.C.

REFERENCES

- B.C. Conservation Data Centre. 2014. Species Summary: *Margaritifera falcata*. B.C. Ministry of Environment. Available: <http://a100.gov.bc.ca/pub/eswp/> (accessed Feb 5, 2014).
- Freshwater Mussels of the Pacific Northwest. 2009. The Xerces Society for Invertebrate Conservation. http://www.xerces.org/wp-content/uploads/2009/06/pnw_mussel_guide_2nd_edition.pdf
- Gelling, Lea. 2009. Identifying Freshwater Mussels in BC. BC Conservation Data Centre

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