

Aquatic Species at Risk



The Wavy-rayed Lampmussel... a Species at Risk in Canada

COSEWIC Status - SPECIAL CONCERN April 2010
SARA Status - SPECIAL CONCERN March 2013



Lampsilis fasciola

Photo credit: Environment Canada

The Wavy-rayed Lampmussel was re-assessed in 2010 by the Committee on the Status of Endangered Species in Canada (COSEWIC) as Special Concern from an earlier designation of Endangered. A similar change in listing status

under the federal *Species at Risk Act* followed in 2013. The Wavy-rayed Lampmussel is also listed as Threatened under Ontario's *Endangered Species Act, 2007*.

General description

The Wavy-rayed Lampmussel (*Lampsilis fasciola*) is one of five species of the genus *Lampsilis* that occur in Canada and has the following characteristics:

- yellow or yellowish-green in colour with numerous thin wavy rays;
- rays may be narrow and individual, or thin and coalesced into wide rays, but are always wavy with numerous interruptions;
- inside of shell (nacre) may be white or bluish-white;
- shells are rounded at both ends, while top and bottom are nearly parallel;
- shells are usually less than 75 mm long, but may reach 90-100 mm in length;
- smooth shell surface, except for concentric wrinkles and growth rests;
- the beak (raised part at the top of the shell) is elevated and beak cavities are moderately excavated; and
- triangular teeth at the front edge of the hinge are short and divergent, and there are two in each half of the shell.

Freshwater mussels are molluscs, soft-bodied animals without a skeleton (invertebrates), that live on the bottom of streams, rivers, lakes and ponds. They use a muscular foot to burrow and crawl and have a pair of hinged shells. Mussels are filter feeders — nature's water purifiers — and are food for other wildlife like fishes, otters, mink, muskrats and some birds. They are also among the most endangered creatures in the world.



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Canada

Distribution

The Wavy-rayed Lampmussel has historically been found in 13 U.S. states and the lower Great Lakes drainage of Ontario. Currently in Ontario, they are found in the Lake St. Clair delta and the St. Clair River, and four other watersheds: the Ausable, Grand, Maitland, and Thames rivers and associated tributaries. Recent population estimates suggest that the Wavy-rayed Lampmussel populations are gradually improving in southern Ontario, with the exception of the Lake St. Clair population.

Habitat and life history

The Wavy-rayed Lampmussel lives mainly in gravel or sand bottoms of riffle areas in clear, medium-sized streams. As it usually burrows into the substrate, it may be particularly sensitive to siltation. The Wavy-rayed Lampmussel is a moderately long-lived, sexually-dimorphic species with a lifespan of at least 10 years, but rarely more than 20 years. Spawning likely occurs in late summer and the glochidia (larvae) are released the following May-August. In females of the genus *Lampsilis*, the edge of the mantle has evolved into a minnow-shaped lure that is used to attract potential fish hosts when glochidia are ready to be released.

Two hosts for this species have been identified in Ontario: the Smallmouth Bass (*Micropterus dolomieu*) and the Largemouth Bass (*Micropterus salmoides*).

Diet

Like all species of freshwater mussels, the Wavy-rayed Lampmussel filters its food from the water. Bacteria and algae are its primary food sources.

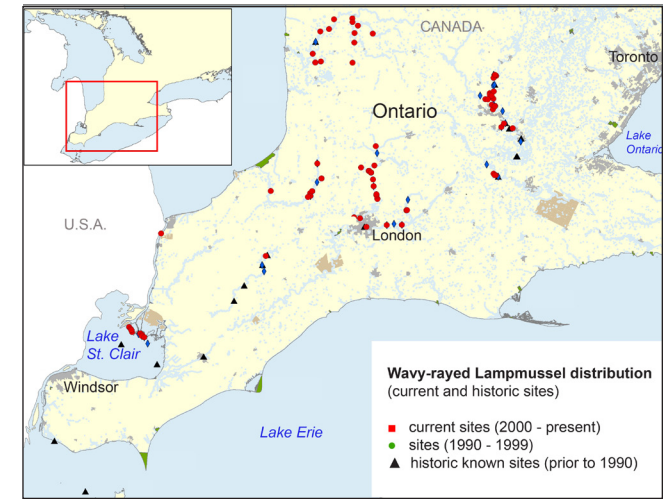
Threats

The dominant threats to most Wavy-rayed Lampmussel populations are declining habitat quality and overall habitat loss resulting from poor water quality. Similar to most freshwater mussels, the Wavy-rayed Lampmussel is extremely sensitive to a number of chemical contaminants, including copper, ammonia and chloride, particularly during their glochidial and juvenile life phases. An estimated 15 per cent of the Wavy-rayed Lampmussel's historic habitat is also overlapped by the invasive Zebra Mussel (*Dreissena polymorpha*), primarily in the St. Clair River and delta. Due to the Zebra Mussels' ability to attach themselves directly to hard surfaces (such as other freshwater mussels), Zebra Mussels directly impair the Wavy-rayed Lampmussels' ability to feed, respire, reproduce and move.

Similar species

Does not closely resemble any other mussel in Canada.

Wavy-rayed Lampmussel distribution in Canada



Text Sources: COSEWIC assessment and status report on the Wavy-rayed Lampmussel *Lampsilis fasciola* in Canada. 2010; DFO Recovery Strategy for the Wavy-rayed Lampmussel *Lampsilis fasciola* in Canada, 2007.

For more information, visit the SARA Registry at www.SARAreistry.gc.ca or the website below.

Cette publication est également disponible en français.

DFO/2013-1889

©Her Majesty the Queen in Right of Canada 2013
Cat No. Fs22-4/19-1-2013E-PDF 978-1-100-22511-1

www.aquaticspeciesatrisk.gc.ca

Section 32 (1) of the Species at Risk Act (SARA) states that “no person shall kill, harm or harass, capture or take an individual of a wildlife species that is listed as an extirpated species, an endangered species or a threatened species.”