

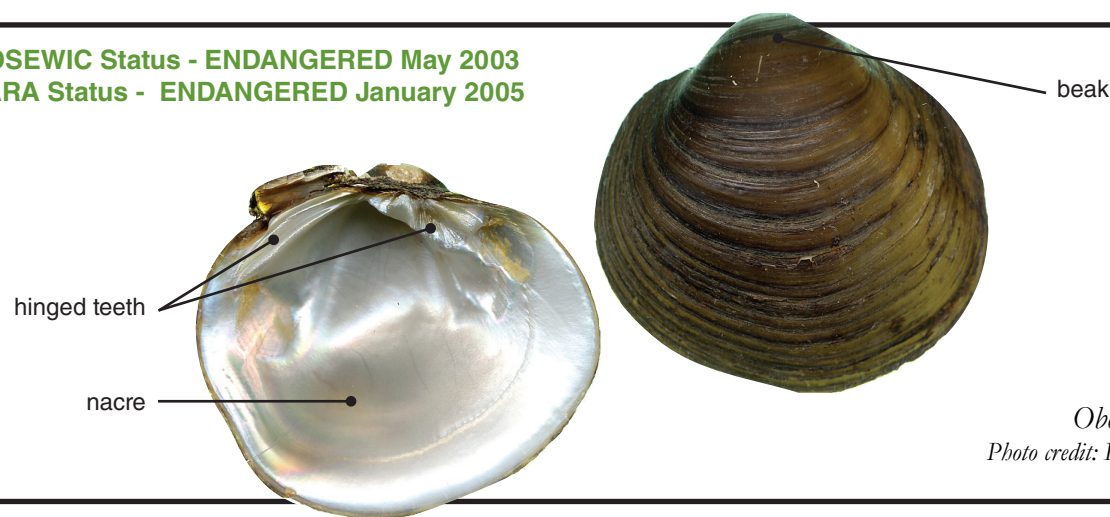
Aquatic Species at Risk



The Round Hickorynut... a *Species at Risk* in Canada

COSEWIC Status - ENDANGERED May 2003

SARA Status - ENDANGERED January 2005



Obovaria subrotunda
Photo credit: Environment Canada

This species has been identified as Endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). It is listed under the federal *Species at Risk Act* (SARA) and was afforded protection under the Act as of

January 2005. Additional protection is afforded through Ontario's *Endangered Species Act, 2007*. As required under SARA, a recovery strategy and an action plan have been developed for this species.

General description

The Round Hickorynut (*Obovaria subrotunda*) is one of Canada's 54 freshwater mussel species, and is one of only two species of the genus *Obovaria* found in the country (both are listed as endangered). It is a small mussel, easily recognized by its almost perfectly round shape, with the following features:

- thick, solid shell is olive-brown to dark brown in colour, with a light-coloured band along the top front surface;
- shell is mostly smooth;
- maximum length about 6 cm (in Canada);
- centrally located beak (raised part at the top of the shell) curves inward and is raised well above the hinge line;
- heavy, strong hinge teeth; and
- the inside of the shell (nacre) is silvery-white, sometimes with a tinge of blue or pink.

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 fish, otters, mink, muskrats and some birds. They are also among the most endangered creatures in the world.



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Distribution

In Canada, the Round Hickorynut was historically found in western Lake Erie, Lake St. Clair and the Welland, Grand, Sydenham, Thames and Detroit rivers of Ontario. It has been lost from Lake Erie, the Detroit River and the offshore waters of Lake St. Clair due to the impact of the invasive Zebra Mussel (*Dreissena polymorpha*). It is no longer found in the Grand and Thames rivers and has significantly declined in the Sydenham River. Overall, the Round Hickorynut has been lost from about 90% of its historical range in Canada and is considered critically imperiled. This species is now limited to a 12 km² region of the Canadian waters of the St. Clair River delta and a 60 km reach of the East Sydenham River. In the U.S., the Round Hickorynut was historically found in 13 states, but most populations are now in decline and it has been lost from Georgia, Illinois and New York.

Habitat and life history

The Round Hickorynut lives mainly in medium- to large-sized rivers with steady moderate flows, and sand and gravel bottoms (substrates) at depths up to 2 m. However, in Ontario it has mainly been found in murky, slow-moving rivers with clay/sand or clay/gravel substrates. The Round Hickorynut is a moderately long-lived species with a lifespan of at least 10 years. Spawning likely occurs in late summer and the glochidia (the mussel's larvae) are released the following June. Like most other freshwater mussels, the glochidia are parasitic on fish - the glochidia attach to the gills of their host fish until they reach their juvenile, free-living stage and drop

off onto the substrate below. Adult mussels are sedentary and spend their lives partially or completely buried in the substrate. The host fishes for the Round Hickorynut in Canada are the Blackside Darter (*Percina maculata*), Fantail Darter (*Etheostoma flabellare*) and Iowa Darter (*Etheostoma exile*).

Diet

Like all species of freshwater mussels, the Round Hickorynut filters its food from the water. Bacteria and algae are its primary food source.

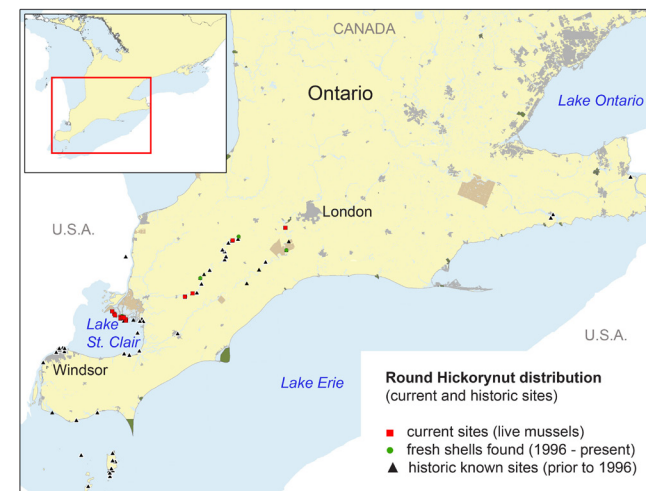
Threats

Invasive Zebra Mussels (*Dreissena polymorpha*) compete with the Round Hickorynut for food and also attach to its shells by the hundreds-to-thousands, killing the Round Hickorynut by interfering with its ability to feed, breathe and move. Intensive agriculture and increasing urbanization also threaten remaining populations, particularly heavy loadings of silt, sediments, nutrients and pollution that destroy mussel habitat, clog their gills and reduce water quality.

Similar species

The Pimpleback (*Quadrula pustulosa*) is similar, but has a bright golden-yellow shell that is typically covered with irregular nodules.

Round Hickorynut distribution in Canada



Text Sources: COSEWIC Status Report on Round Hickorynut (*Obovaria subrotunda*), 2002; Metcalfe-Smith et al. Photo Field Guide to the Freshwater Mussels of Ontario, 2005; Fisheries and Oceans Canada. Action Plan for the Sydenham River in Canada [proposed], 2012; Fisheries and Oceans Canada. Recovery Strategy for the Round Hickorynut (*Obovaria subrotunda*) and the Kidneyshell (*Ptychobranhus fasciolaris*) in Canada [proposed], 2012.

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

Cette publication est également disponible en français.

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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.”