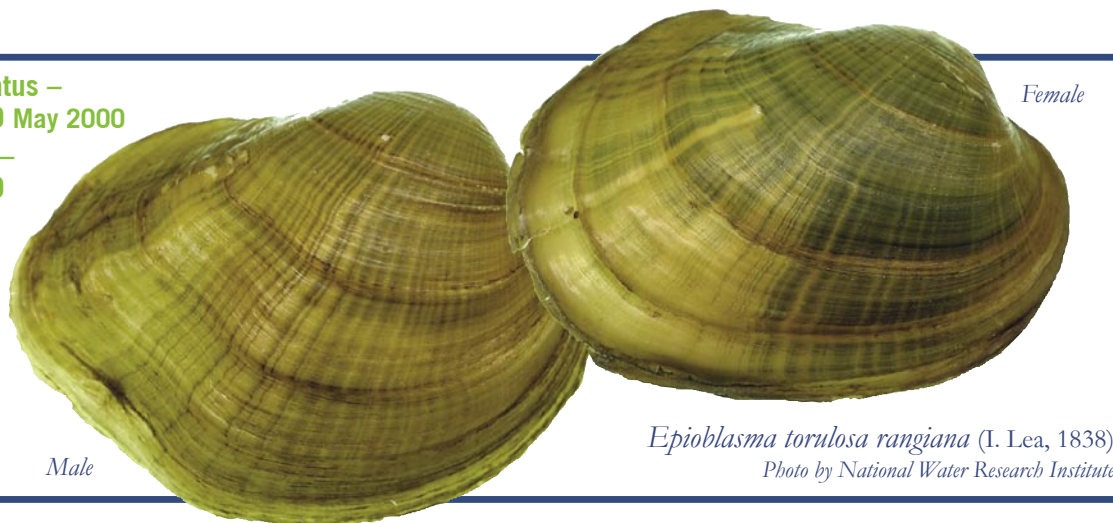




## The Northern Riffleshell... a *Species at Risk* in Ontario

as designated under the federal *Species at Risk Act*

**COSEWIC Status –  
ENDANGERED May 2000**  
**SARA Status –  
ENDANGERED  
June 2003**



*Epioblasma torulosa rangiana* (I. Lea, 1838)  
Photo by National Water Research Institute

### General Description

The Northern Riffleshell (*Epioblasma torulosa rangiana*) is a rare subspecies of the genus *Epioblasma* with the following characteristics:

- Outside of shell is brownish yellow to yellowish green with diffuse, fine green rays
- Females can be recognized by a broadly rounded posterior margin
- Beak (raised part of the top of the shell) is finely double-looped
- Inside of shell is white, triangular teeth are small, elongated teeth are fairly short and moderately thick
- Beaks are elevated above the hinge line and moderately excavated
- Mature individuals vary in length from 45 to 76 mm

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 is afforded protection

under the SARA as of June 2004. Additional protection is afforded through the federal *Fisheries Act*. Under the SARA, a recovery strategy must be developed for this species.

## Distribution

The Northern Riffleshell is usually a minor component of the mussel community. It has suffered a range reduction in North America of 95% over the last century. It was historically known from six states and the Province of Ontario. In Ontario, this species is historically known from western Lake Erie and the Detroit River, Lake St. Clair, Sydenham River and the Ausable River. The Ontario range is now limited to the middle reaches of the Sydenham and Ausable Rivers with the Sydenham River population representing one of only three known reproducing populations in the world.

## Habitat and Life History

The Northern Riffleshell lives in highly oxygenated riffle areas of rivers. Preferred substrates include rocky and sandy bottoms or firmly packed sand and fine to coarse gravel.

The Northern Riffleshell is a moderately long-lived, sexually-dimorphic species with a lifespan of 15 years or more. It is believed that spawning occurs in late summer and the glochidia (larvae) are released the following spring.

## Host

This species is an external parasite on the fins of its host. The endemic fish host for this species in Ontario is unknown. The Brown Trout (*Salmo trutta*), introduced in 1913, is suspected to be a host. Recent research suggests that Blackside Darter (*Percina*

*maculata*), Logperch (*Percina caprodes*), Rainbow Darter (*Etheostoma caeruleum*), Fantail Darter (*Etheostoma flabellare*) and Mottled Sculpin (*Cottus bairdi*) are also hosts in Canada.

## Diet

Like all species of freshwater mussels, the Northern Riffleshell uses bacteria and algae as its primary food source.

## Threats

The Northern Riffleshell is sensitive to pollution from municipal, industrial and agricultural sources. Siltation, habitat perturbation and impoundment of rivers has also likely destroyed much of the habitat for this species over the last century. More recently, the Zebra Mussel (*Dreissena polymorpha*) has devastated Great Lakes populations. Access to suitable host species may also threaten this species.

## Similar Species

Does not closely resemble any other mussel in Canada.

Text Sources: Staton *et al.* 2000.

## NORTHERN RIFFLESHELL DISTRIBUTION



For more information, visit the SARA Registry Website at [www.SARAreistry.gc.ca](http://www.SARAreistry.gc.ca) and the Fisheries and Oceans Canada (DFO) Website noted below.

*Cette publication est également disponible en français.*

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[www.aquaticspeciesatrisk.gc.ca](http://www.aquaticspeciesatrisk.gc.ca)

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