ZEBRA MUSSEL (*Dreissena polymorpha*)
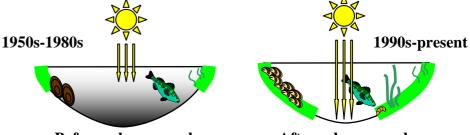
- Discovered in Oneida Lake in 1991
- Associated with record water clarity
- Caused the extirpation of three native clams
- Provide food for fish such as lake sturgeon

A cluster of zebra mussels
Scott Camazine, New York Sea Grant

A zebra mussel with distinct striping
Brigitte Cusson and Denis Lebonte
St. Lawrence Centre

Zebra mussel (left) and quagga mussel
USGS

Native clams (Lampsilis radiata,
Elliptio complanata, and Pyganodon sp.)
extirpated by zebra mussels
Bev Wigney

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January 2007

Zebra mussels are native to the Ponto-Caspian region (Black, Caspian, and Aral Seas) of Eurasia. They were first found in the Great Lakes in Lake St. Clair in 1988 and are believed to have been introduced in ballast water of transoceanic ships.

Oneida Lake's zebra mussels are small (usually under 1 inch), and their shells are typically marked by alternating light and dark bands giving them a striped appearance. Mussels will attach themselves to any available solid surface including rock, wood, steel, concrete, vegetation, and even each other. Zebra mussels are generally absent from the deepest areas of the lake (> 30 feet) due to the lack of suitable substrate. In contrast, quagga mussels (a close relative of the zebra mussel that has yet to be observed in Oneida Lake) are capable of colonizing soft substrates and deeper areas.

The most visible effect zebra mussels have had on Oneida Lake is increased water clarity (see figure below). Prior to their establishment, the lake was green with algae through most of the summer months, submerged plants were restricted to shallower waters, and native clams were abundant. Since zebra mussels have become established, algal blooms have been delayed until August or September, plants are common at depths of 15 feet or more, and native clams have been extirpated (see photo at left).

1950s-1980s

1990s-present

Before zebra mussels

After zebra mussels