

# Chittenango Ovate Amber Snail

## *Novisuccinea chittenangoensis*

Every living thing on the planet finds its own solution to the biggest challenge facing us all – how to stay alive and flourish. Some species are not limited to living in one kind of habitat, and many of these habitat generalists seem to benefit from not being circumscribed in where they live. Other species so closely fit where they live that they seem beautifully adapted for their habitat, and their unique design often serves them well. However, when facing habitat changes, such specialist species run the risk of becoming threatened - unable to continue to flourish - or ultimately endangered - unable to continue to stay alive.

The Chittenango ovate amber snail seems to be a specialist. This small land snail is only found at the edge of one waterfall. While fossil shells similar in appearance have been found at isolated sites from Ontario to Tennessee and as far west as Minnesota and Iowa, the world's only living population of the Chittenango ovate amber snail exists at a waterfall in a state park in central New York State.

The Chittenango ovate amber snail and its habitat perfectly suit one another. The waterfall's spray zone provides a moist, mild environment. The surrounding rocks are calcium-rich, and they support lush vegetation. This snail seems to need calcium in some form as much as it does the green vegetation it eats to survive.

When an entire species lives at one single site in the world, the risk of disaster is high. Any threat has the potential to become very serious. The Chittenango ovate amber snail was given Endangered Species Act protection as threatened in 1978 because of its rarity and population

decline. When first discovered in 1905, the species was described as "abundant," but by 1990 surveys located fewer than 25 individuals.

Scientists are not certain about the causes of this snail's population decline. People viewing the waterfall have trampled soil and overturned rocks, crushing snails. Somehow, a non-native snail was introduced to the area, and its population is thriving. Biologists are investigating the interaction of the two snail species, and as yet are unclear about the invader's effect on the Chittenango ovate amber snail. Some scientists initially suspected stream pollutants and the resulting reduced water quality as a problem, but now they think this is not a serious contributor to the Chittenango ovate amber snail's precarious state.

In partnership with the U.S. Fish and Wildlife Service, New York State has erected fences and taken actions to restrict human access to the snail's habitat. In addition, state law requires a permit for many activities that could impact Chittenango Creek. Biologists conducted a captive breeding program from 1990 to 2002. Over the course of those 12 years and at up to four zoo locations, results were varied. Some snails simply did not reproduce. Some laid eggs that proved to be infertile. Other eggs did yield young, but the juvenile snails did not survive. More study is needed to determine the ideal conditions for maintaining a healthy captive population of Chittenango ovate amber snails. Scientists view captive propagation as essential to stabilizing the population of this species.

When viewing the grand whole of the natural world, it seems inevitable that humans can lose sight of the smaller, quieter, hidden creatures.



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One of the far-sighted strengths of the Endangered Species Act is that it affords protection to all failing species unconditionally. The Chittenango ovate amber snail could not compete with Canada lynx – not in a race, not in a beauty contest – but both species are protected equally under law. The U.S. Fish and Wildlife Service is committed to working with all who will help prevent the extinction of the Chittenango ovate amber snail.

### What's in a name?

The snail is named for Chittenango Creek, its ovate – egg-shaped – shell, and the amber, or pale yellow, color of the shell and body.

**U.S. Fish & Wildlife Service**  
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