

# Shenandoah Salamander

*Plethodon shenandoah*

## Description

The Shenandoah salamander is a small terrestrial amphibian known only from three mountains, all within the boundaries of Shenandoah National Park in Virginia. It occurs on northwest to northeast facing talus slopes 2,900 feet above sea level. This is a slender, moderate-sized salamander with a total length of 3.5 to 4.5 inches. The body is dark brown, with two color phases. The striped color phase has a narrow red to yellow stripe down the center of the back. In the unstriped phase, the back is dark brown with scattered brass-colored flecks. In both phases, white or yellow spots occur along the sides.

## Life History

This woodlands salamander has no aquatic stage. It is generally found in forested conditions, where the presence of an overstory promotes surface moisture. Respiration occurs through the skin surface, which must be kept constantly moist for this purpose.

Primarily nocturnal, this salamander spends its days in rock crevices or under other objects; its movements are restricted during droughts. The salamander's diet generally consists of mites, springtails, flies, small beetles, and other soil invertebrates. Breeding takes place in late spring or summer. In contrast with most salamanders, complete development of the embryo takes place within the egg. Small egg clusters, containing three to seventeen eggs, are laid in damp logs, moss, or other available crevices, and the females guard the eggs. Incubation lasts one to three months, during which time the female does not forage for food. Females do

not breed before four years of age, and breed only every other year. Adult survival is high, with a small percentage surviving twenty-five years or longer. Activity and movements are restricted during dry periods.

## Conservation

The Shenandoah salamander was federally listed as an endangered species on September 18, 1987. This species was believed to be endangered due to natural biological causes, the encroachment of woodlands on the talus slopes. However, it now appears that certain human-related factors are likely to have adverse effects on the salamander. Threats are wide-ranging and include habitat deterioration, acid deposition, defoliation of the overstory by gypsy moths, and soil acidification.

## What you can do to help

To learn more about the Shenandoah salamander visit:

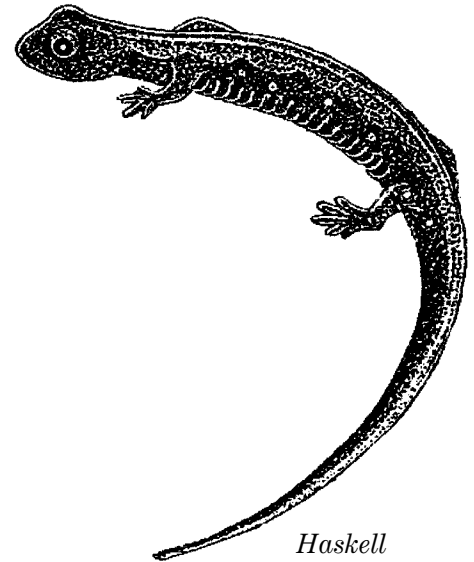
**Shenandoah National Park  
National Park Service  
3655 U.S. Highway 211 East  
Luray, Virginia 22835  
540/999 2243**

When visiting the Park, follow all signs and do not enter restricted areas. If you find a salamander, please do not disturb it!

## References

U.S. Fish and Wildlife Service. 1994. Shenandoah salamander (*Plethodon shenandoah*) recovery plan. Hadley, Massachusetts.

Wynn, A.H. 1991. Shenandoah salamander. Pages 439-442 in K. Terwilliger, J.R. Tate, and S.L.



Woodward, eds. A guide to endangered and threatened species in Virginia. McDonald and Woodward Publishing Company, Blacksburg, Virginia.

**U.S. Fish and Wildlife Service  
Virginia Field Office  
6669 Short Lane  
Gloucester, Virginia 23061  
804/693 6694**

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**U.S. Fish & Wildlife Service  
1 800/344 WILD  
<http://www.fws.gov>**

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