

# Webster's Salamander

*Plethodon websteri*

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## DESCRIPTION

### Taxonomy and Basic Description

Webster's salamander is a small member of the woodland salamander family. This species reaches lengths of 7 to 8.2 cm (2.7 to 3.2 inches) (Conant and Collins 1991). Both striped and unstriped individuals of this species may be found. Striped individuals typically have a wavy yellowish brown to orange red dorsal stripe extending from the head to the tail tip (Petranka 1998). Unstriped individuals are usually uniform in color, ranging from brown to reddish-orange. The belly of the salamander is mottled with black, white and reddish-orange (Martof et al 1980). This is a relatively non-descript salamander but is typically the only salamander of its size and coloration within its limited range in South Carolina.

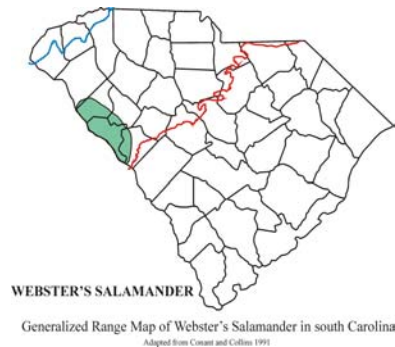


This species was originally considered to be *Plethodon dorsalis*, the zigzag salamander. *Plethodon websteri* was split from that species based on molecular genetics (Highton 1979).

### Status

Webster's salamander is listed as endangered in South Carolina with a ranking of imperiled (S2) and is considered vulnerable globally with a ranking of G3 (NatureServe 2005).

## POPULATION DISTRIBUTION AND SIZE



Webster's salamander occurs across the southeast in several disjunct populations. The majority of the species' range is in western Georgia and eastern Alabama in the lower piedmont. In South Carolina, the species is restricted to several counties along the Savannah River in the lower piedmont. Semlitsch and West (1983) surveyed this

Element Occurrence Records for Webster's Salamander in South Carolina



region of the state and found several new populations of this species. Little data exists on the size of the Webster's salamander populations in South Carolina; however, this salamander is abundant at Turkey Creek in the Long Cane district of Sumter National

Forest. Webster's salamanders were also found in the Lickfork Lake area (Metts and Gibbons 2003).

## HABITAT AND NATURAL COMMUNITY REQUIREMENTS

Webster's salamander is found in moist, mixed hardwood forests on steep north-facing slopes (Martof et al. 1980). Optimal habitat for this species has a rocky substrate with abundant coarse, woody debris (Petranka 1998). This species is typically associated with forests with a relatively dense canopy that prevents drying of the forest floor substrate.

## CHALLENGES

The primary challenge to Webster's salamander is habitat loss or alteration due to forestry practices, conversion to agriculture or development. Loss of the dense hardwood forest canopy this species prefers can lead to drying of the habitat and an elevation of soil temperatures, making the habitat unsuitable for the salamander.

## CONSERVATION ACCOMPLISHMENTS

Stevens' Creek Heritage Preserve in McCormick County protects a population of Webster's salamander. In the 1980's the South Carolina Department of Natural Resources (SCDNR) Nongame and Heritage Trust Program funded a survey of the Webster's salamander (Semlitsch and West 1983) that led to the discovery of several new locales for this species. Several of these locations are on the Sumter National Forest; Forest Service biologists have been made aware of these sites.

## CONSERVATION ACTIONS

- Encourage land managers to use Webster's salamander to promote conservation of biodiversity in South Carolina.
- Encourage the US Forest Service to protect Webster's salamanders to ensure biodiversity in South Carolina.
- Determine whether Webster's salamander is still present at historic sites and monitor populations discovered.
- Investigate basic life history research on public lands to determine the status of protected populations.

## MEASURES OF SUCCESS

As results from current research and surveys or future efforts are identified and analyzed, projects will be initiated to address specific needs that arise from these results. Development of site-specific management plans and stable or growing populations of this species on protected Land will be considered a measure of success.

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