

Seepage Slope Amphibians

PRIMARY SPECIES

Chamberlain's Dwarf Salamander *Eurycea chamberlainii*

SECONDARY SPECIES

Southern Dusky Salamander *Desmognathus auriculatus*

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DESCRIPTION

Taxonomy and Basic Description

This small group comprises two salamander species that are closely associated with or possibly endemic to seepage slope habitats in the upper coastal plain and piedmont ecoregions. Primary species are high priority species that are directly tied to a unifying feature or habitat. Secondary species are priority species that may occur in or be related to a unifying feature at some time in their life.

Chamberlain's dwarf salamander is a newly described species that was recently recognized as distinct from the more common, dwarf salamander (*Eurycea quadridigittata*) (Harrison and Guttman 2003). Chamberlain's dwarf salamander is lighter in color than the dwarf salamander and has a yellow underside that lacks any markings. Chamberlain's dwarf salamander is very small, averaging approximately 2.5 cm (0.9 inches) in total length (Harrison and Guttman 2003).

The southern dusky salamander is moderately sized, ranging from 7.5 to 12.5 cm (2.9 to 4.9 inches) in length; maximum length is approximately 16 cm (6.2 inches) (Conant and Collins 1991). This is a dark salamander with a row of white or reddish spots along each side of the tail. The belly of this species is black; the dorsal coloration is highly variable.



Status

Chamberlain's dwarf salamander was previously considered a color variation of the dwarf salamander, a more common species. At this time, the new species has no official status designation, but qualifies for special concern status because of data deficiencies. The southern dusky salamander is a species that was previously thought to be common in South Carolina. It is now believed by some researchers (Harrison pers. com.), to have disappeared from areas where it was previously common. This species is not listed, but has been recommended as a species that merits some conservation attention.

POPULATION DISTRIBUTION AND SIZE

Little data exists on the population status of either species. Chamberlain's dwarf salamander has been found in Barnwell, Allendale and Pickens Counties in South Carolina. Further, this species is located on the Savannah River Site (Harrison and Guttman 2003). The southern dusky salamander is restricted to the coastal plain in South Carolina (Conant and Collins 1991).



HABITAT AND NATURAL COMMUNITY REQUIREMENTS

Both species are found in wet areas, particularly seepages near cypress ponds, small streams and other wetland types. These species are most typically found under leaf litter and small debris in these habitats (Conant and Collins 1991; Petranka 1998; Martof et al. 1980; Harrison and Guttman 2003). The general community types preferred by these species appear to be mesic forests with relatively closed canopies, in particular bottomland forests, in the coastal plain.

CHALLENGES

Little is known about the specific life histories of these species, but they could be threatened by habitat loss and alteration. In particular, forestry practices that alter the canopy structure of their habitat could affect these species.

Both species lay eggs in aquatic habitats such as springs, seeps and small streams. Therefore any alteration or drainage of these habitats could adversely affect the species.

CONSERVATION ACCOMPLISHMENTS

None known at this time.

CONSERVATION ACTIONS

- Determine actual distribution and occurrences of Chamberlain's dwarf and southern dusky salamanders through inventory. Protect and monitor any populations discovered.
- Include the importance of protecting Chamberlain's dwarf and southern dusky salamanders and their habitat in general education materials.
- Consider the habitat needs of both Chamberlain's dwarf and southern dusky salamanders when managing Carolina bays and similar wetland ecosystems.
- Conduct museum research to correctly assign historic records the new designation of *E. quadridigitata*, where appropriate.

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. Data from surveys will be used to identify and develop life history and ecology projects aimed at determining limiting factors for these species. Stable or growing populations of these species, located on protected properties will be considered a measure of success.

LITERATURE CITED

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