



SOUTHEAST GAP ANALYSIS PROJECT



Species Modeling Report

Southern Redback Salamander

Plethodon serratus

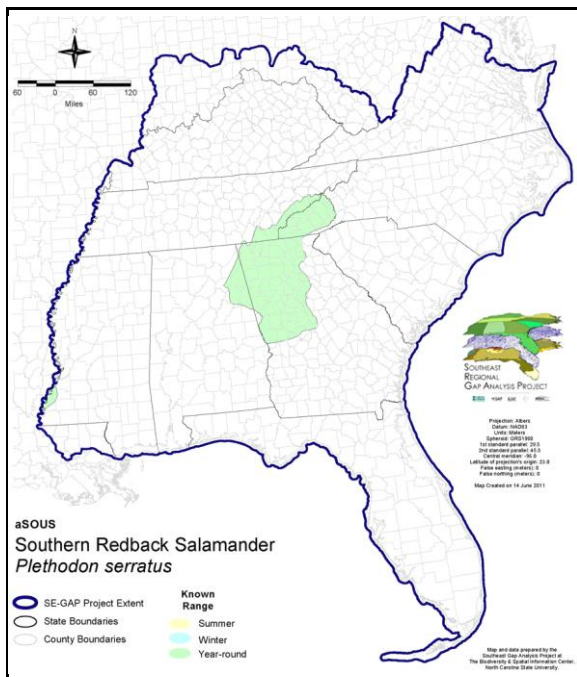
Taxa: Amphibian
 Order: Caudata
 Family: Plethodontidae

SE-GAP Spp Code: **aSOUS**

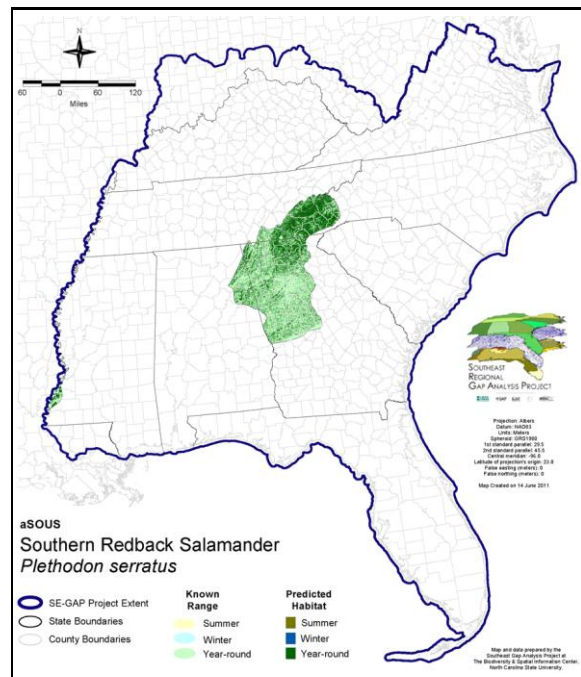
ITIS Species Code: 173668

NatureServe Element Code: AAAAD12160

KNOWN RANGE:



PREDICTED HABITAT:



Range Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Range_aSOUS.pdf

Predicted Habitat Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_aSOUS.pdf

GAP Online Tool Link: <http://www.gapservice.ncsu.edu/segap/segap/index2.php?species=aSOUS>

Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/aSOUS_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: LA (Prohibited)

NS Global Rank: G5

NS State Rank: AL (S2S3), AR (S3), GA (S5), LA (S1), MO (S5), NC (S4), OK (S3S4), TN (S4), TX (S1)

SUMMARY OF PREDICTED HABITAT BY MANAGMENT AND GAP PROTECTION STATUS:

	US FWS		US Forest Service		Tenn. Valley Author.		US DOD/ACOE	
	ha	%	ha	%	ha	%	ha	%
Status 1	6,592.5	< 1	14,063.0	< 1	0.0	0	0.0	0
Status 2	1,291.3	< 1	65,399.6	2	0.0	0	0.0	0
Status 3	0.0	0	505,605.2	16	106.3	< 1	1,536.9	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	7,883.8	< 1	585,067.9	18	106.3	< 1	1,536.9	< 1
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	184,955.3	6	0.0	0	0.0	0
Status 2	0.0	0	0.0	0	0.0	0	0.0	0
Status 3	0.0	0	6,718.8	< 1	0.0	0	0.0	0
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	0.0	0	191,674.1	6	0.0	0	0.0	0
	Native Am. Reserv.		State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	406.4	< 1	0.0	0	0.0	0
Status 2	0.0	0	3,896.6	< 1	38,032.2	1	0.0	0
Status 3	16,581.3	< 1	10,872.2	< 1	3,498.9	< 1	0.0	0
Status 4	0.0	0	0.0	0	201.9	< 1	0.0	0
Total	16,581.3	< 1	15,175.3	< 1	41,733.0	1	0.0	0
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	0.0	0	0.0	0
Status 2	0.0	0	2,437.2	< 1	0.0	0	1.0	< 1
Status 3	0.0	0	758.6	< 1	634.5	< 1	0.0	0
Status 4	0.0	0	0.0	0	231.8	< 1	0.0	0
Total	0.0	0	3,195.8	< 1	866.3	< 1	1.0	< 1
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	206,017.3 6			
Status 2	0.0	0	0.0	0	111,057.9 3			
Status 3	0.0	0	0.0	0	546,312.8 33			
Status 4	1,829,951.4	57	91.4	< 1	1,830,678.2 57			
Total	1,829,951.4	57	91.4	< 1	2,694,066.2 100			

GAP Status 1: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, and intensity) are allowed to proceed without interference or are mimicked through management.

GAP Status 2: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive use or management practices that degrade the quality of existing natural communities.

GAP Status 3: An area having permanent protection from conversion of natural land cover for the majority of the area, but subject to extractive uses of either a broad, low-intensity type or localized intense type. It also confers protection to federally listed endangered and threatened species throughout the area.

GAP Status 4: Lack of irrevocable easement or mandate to prevent conversion of natural habitat types to anthropogenic habitat types. Allows for intensive use throughout the tract. Also includes those tracts for which the existence of such restrictions or sufficient information to establish a higher status is unknown.

PREDICTED HABITAT MODEL(S):

Year-round Model:

Habitat Description: Southern red-backed salamanders are inhabitants of mesic upland forests (Redmond and Scott 1996). They are often most abundant in terrain features such as coves, ravines, riparian zones and caves, that provide some insulation from high summer temperatures. They can also be found in abundance in mesic forests with plentiful dead and down wood, leaf litter and other debris on the forest floor. In dry summer months, red-backed salamanders occur in and near damp areas. Red-backed salamanders prefer cool temperatures, and are most active above ground in late winter and early spring. In the Georgia piedmont, courtship and mating occur in winter or early spring. They lay a clutch of up to about 15 eggs (normally about 5-6 in Georgia, 6 in Ouachita Mountains) in June-July in moss or a rotten log, or under a rock. The female stays with the eggs until hatching and the larval stage is passed in the egg. Hatching occurs in late summer, 7-8 weeks after oviposition (Georgia). They reach sexual maturity in about 2 years. The oogenic cycle is apparently annual in the Georgia piedmont and in the Ouachita Mountains (Camp 1988, Taylor et al. 1990). Stacy Smith, 15April05

Selected Map Units:

Functional Group	Map Unit Name
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland - Hardwood Modifier
Forest/Woodland	Appalachian Hemlock-Hardwood Forest
Forest/Woodland	Central and Southern Appalachian Montane Oak Forest
Forest/Woodland	Central and Southern Appalachian Northern Hardwood Forest
Forest/Woodland	Central and Southern Appalachian Spruce-Fir Forest
Forest/Woodland	Central Appalachian Oak and Pine Forest
Forest/Woodland	East Gulf Coastal Plain Northern Mesic Hardwood Forest
Forest/Woodland	East Gulf Coastal Plain Southern Loess Bluff Forest
Forest/Woodland	East Gulf Coastal Plain Southern Mesic Slope Forest
Forest/Woodland	South-Central Interior Mesophytic Forest
Forest/Woodland	Southern and Central Appalachian Cove Forest
Forest/Woodland	Southern and Central Appalachian Oak Forest
Forest/Woodland	Southern and Central Appalachian Oak Forest - Xeric
Forest/Woodland	Southern Interior Low Plateau Dry-Mesic Oak Forest
Forest/Woodland	Southern Interior Low Plateau Dry-Mesic Oak Forest - Evergreen Modifier
Forest/Woodland	Southern Piedmont Dry Oak-(Pine) Forest - Hardwood Modifier
Forest/Woodland	Southern Piedmont Dry Oak-Heath Forest - Virginia/Pitch Pine Modifier
Forest/Woodland	Southern Piedmont Mesic Forest
Forest/Woodland	Southern Ridge and Valley Dry Calcareous Forest
Forest/Woodland	Southern Ridge and Valley Dry Calcareous Forest - Hardwood Modifier
Rock Outcrop	Southern Appalachian Montane Cliff

CITATIONS: Behler, J. L., and F. W. King. 1979. The Audubon Society field guide to North American reptiles and amphibians. Alfred A. Knopf, New York. 719 pp.

Camp, C. D. 1988. Aspects of the life history of the southern red-back salamander *Plethodon serratus* Grobman in the southeastern United States. *Am. Midl. Nat.* 119:93-100.

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Johnson, T. R. 1977. The amphibians of Missouri. *Univ. Kansas Mus. Nat. Hist., Pub. Ed. Ser.* 6. ix + 134 pp.

Martof, B. S., W. M. Palmer, J. R. Bailey, and J. R. Harrison, III. 1980. Amphibians and reptiles of the Carolinas and Virginia. University of North Carolina Press, Chapel Hill, North Carolina. 264 pp.

Redmond, W. H., and A. F. Scott. 1996. Atlas of amphibians in Tennessee. The Center for Field Biology, Austin Peay State University, Miscellaneous Publication Number 12. v + 94 pp.

Taylor, C. L., R. F. Wilkinson, Jr., and C. L. Peterson. 1990. Reproductive patterns of five plethodontid salamanders from the Ouachita Mountains. *Southwestern Naturalist* 35:468-472.

Wilson, L. A. 1995. The Land Manager's Guide to the amphibians and reptiles of the South. Chapel Hill, NC: The Nature Conservancy.

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This data was compiled and/or developed
by the Southeast GAP Analysis Project at
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Center, North Carolina State University.