



# SOUTHEAST GAP ANALYSIS PROJECT



## Species Modeling Report

### Southern Zigzag Salamander

*Plethodon ventralis*

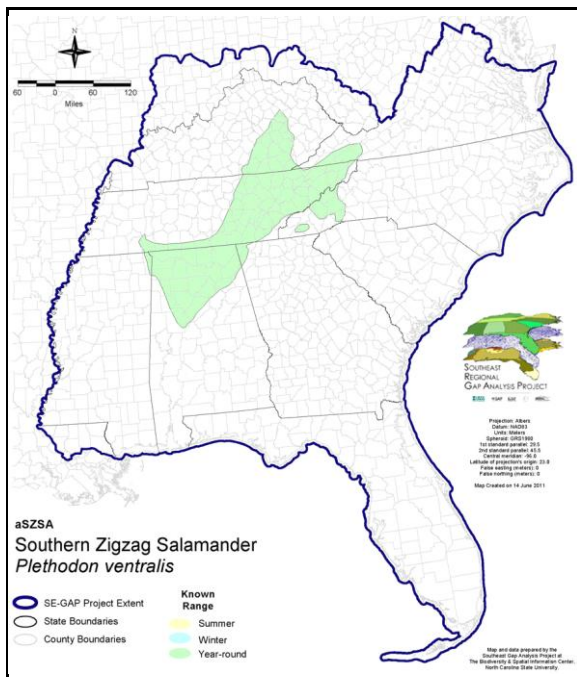
Taxa: Amphibian  
Order: Caudata  
Family: Plethodontidae

SE-GAP Spp Code: **aSZSA**

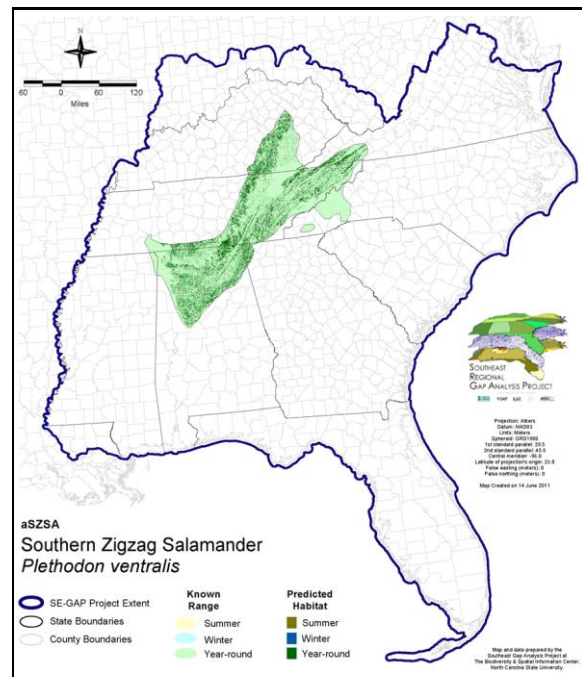
ITIS Species Code: 173673

NatureServe Element Code: AAAAD12370

#### KNOWN RANGE:



#### PREDICTED HABITAT:



Range Map Link: [http://www.basic.ncsu.edu/segap/datazip/maps/SE\\_Range\\_aSZSA.pdf](http://www.basic.ncsu.edu/segap/datazip/maps/SE_Range_aSZSA.pdf)

Predicted Habitat Map Link: [http://www.basic.ncsu.edu/segap/datazip/maps/SE\\_Dist\\_aSZSA.pdf](http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_aSZSA.pdf)

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

Data Download: [http://www.basic.ncsu.edu/segap/datazip/region/vert/aSZSA\\_se00.zip](http://www.basic.ncsu.edu/segap/datazip/region/vert/aSZSA_se00.zip)

#### PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: MS (Non-game species in need of management), NC (SC)

NS Global Rank: G4

NS State Rank: AL (S4), GA (S4), KY (S4), MS (S2), NC (S1), TN (S4?), VA (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	3,374.8	< 1	84.0	< 1	0.0	0	0.0	0
Status 2	77.5	< 1	16,552.4	< 1	0.0	0	0.0	0
Status 3	0.0	0	103,226.8	4	27,554.7	1	8,017.8	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	3,452.3	< 1	119,863.2	4	27,554.7	1	8,017.8	< 1
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	440.6	< 1	0.0	0	0.0	0
Status 2	0.0	0	222.8	< 1	0.0	0	0.0	0
Status 3	5,272.3	< 1	13,803.8	< 1	0.0	0	145.9	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	5,272.3	< 1	14,467.3	< 1	0.0	0	145.9	< 1
	Native Am. Reserv.		State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	643.0	< 1	51.6	< 1	0.0	0
Status 2	0.0	0	3,292.2	< 1	28,443.1	1	37.8	< 1
Status 3	0.0	0	7,548.5	< 1	3,331.5	< 1	31.8	< 1
Status 4	0.0	0	0.0	0	14,913.9	< 1	0.0	0
Total	0.0	0	11,483.6	< 1	46,740.1	2	69.6	< 1
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	4,809.7	< 1	0.0	0	0.0	0
Status 2	0.0	0	10,454.4	< 1	0.0	0	542.8	< 1
Status 3	0.0	0	966.2	< 1	252.1	< 1	0.0	0
Status 4	0.0	0	1.6	< 1	2.4	< 1	0.0	0
Total	0.0	0	16,232.0	< 1	254.5	< 1	542.8	< 1
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%		
Status 1	0.0	0	0.0	0	9,403.7	< 1		
Status 2	0.0	0	0.0	0	59,623.0	2		
Status 3	0.0	0	0.0	0	170,151.4	10		
Status 4	2,351,025.3	86	2,307.8	< 1	2,383,164.9	87		
Total	2,351,025.3	86	2,307.8	< 1	2,622,343.0	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: The Southern zigzag salamander is uncommon and rare with a highly restricted distribution. They are associated with mesic, rocky woodlands dominated by hardwood trees (Mount 1975). Populations are often in greatest abundance in and around rocky areas that allow access to deep underground passages and that are in the vicinity of seeps, springs and streams (Petranka 1998). They shelter under rocks, logs, or leaves during day and have been found in caves as deep as 2.4-7.6 m below the ground surface. All life stages are terrestrial. 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	South-Central Interior Mesophytic Forest
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 Ridge and Valley Dry Calcareous Forest
Forest/Woodland	Southern Ridge and Valley Dry Calcareous Forest - Hardwood Modifier
Rock Outcrop	Southern Interior Calcareous Cliff

- CITATIONS:** Conant, R. and J. T. Collins. 1991. A field guide to reptiles and amphibians: eastern and central North America. Third edition. Houghton Mifflin Co., Boston, Massachusetts. 450 pp.
- Highton, R. 1997. Geographic protein variation and speciation in the PLETHODON DORSALIS complex. *Herpetologica* 53:345-356.
- 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.
- Mount, R. H. 1975. The Reptiles and Amphibians of Alabama. Auburn University Agricultural Experiment Station, Auburn, Alabama. vii + 347 pp.
- Petranka, J. W. 1998. Salamanders of the United States and Canada. Washington DC: Smithsonian Inst. Press.
- 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.
- Thurrow, G. R. 1966. *Plethodon dorsalis*. *Cat. Am. Amph. Rep.* 29.1-29.3.

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Compiled: 15 September 2011

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