



# SOUTHEAST GAP ANALYSIS PROJECT



## Species Modeling Report

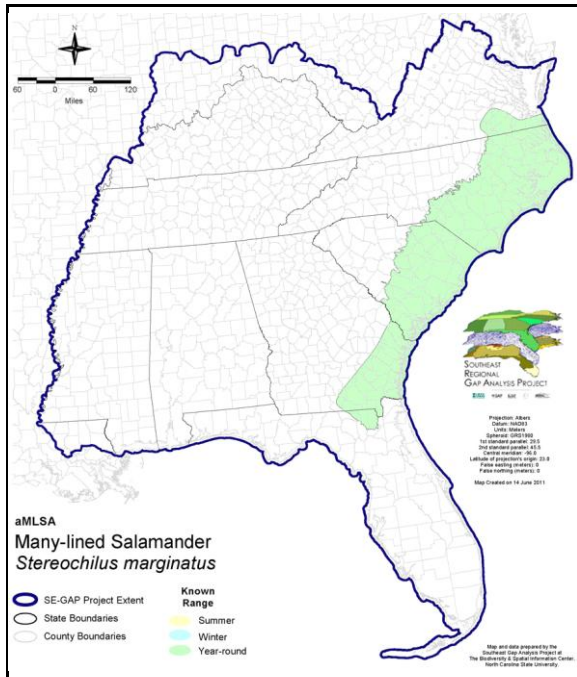
### Many-lined Salamander

*Stereochilus marginatus*

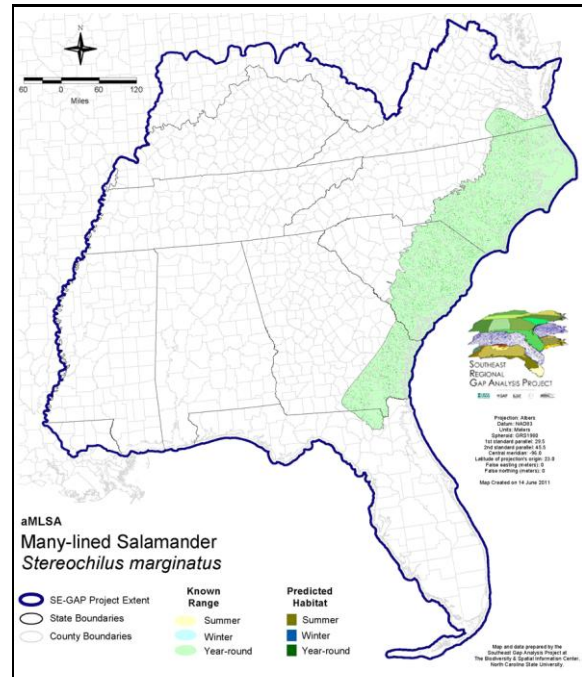
Taxa: Amphibian  
 Order: Caudata  
 Family: Plethodontidae

SE-GAP Spp Code: **aMLSA**  
 ITIS Species Code: 173647  
 NatureServe Element Code: AAAAD14010

#### KNOWN RANGE:



#### PREDICTED HABITAT:



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

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

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

Data Download: [http://www.basic.ncsu.edu/segap/datazip/region/vert/aMLSA\\_se00.zip](http://www.basic.ncsu.edu/segap/datazip/region/vert/aMLSA_se00.zip)

#### PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---  
 State Status: NC (W3)  
 NS Global Rank: G5  
 NS State Rank: FL (S1), GA (S3), NC (S3?), SC (SNR), VA (S3)

**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	639.5	< 1	473.8	< 1	0.0	0	0.0	0
Status 2	1,955.0	< 1	287.3	< 1	0.0	0	0.0	0
Status 3	0.0	0	10,272.9	2	0.0	0	15,012.8	3
Status 4	0.0	0	0.0	0	0.0	0	0.2	< 1
Total	2,594.4	< 1	11,033.9	2	0.0	0	15,013.0	3
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	13.4	< 1	0.0	0	0.0	0
Status 2	0.0	0	0.0	0	15.9	< 1	0.0	0
Status 3	299.3	< 1	10.8	< 1	0.0	0	0.4	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	299.3	< 1	24.2	< 1	15.9	< 1	0.4	< 1
	Native Am. Reserv.		State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	0.0	0	0.0	0
Status 2	0.0	0	0.0	0	8,561.3	1	0.0	0
Status 3	0.0	0	1,966.1	< 1	1,988.9	< 1	2,790.7	< 1
Status 4	0.0	0	0.0	0	151.9	< 1	0.0	0
Total	0.0	0	1,966.1	< 1	10,702.1	2	2,790.7	< 1
	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	92.3	< 1	2,334.2	< 1	0.0	0	0.0	0
Status 3	0.0	0	0.0	0	77.0	< 1	53.3	< 1
Status 4	0.0	0	0.0	0	91.6	< 1	0.0	0
Total	92.3	< 1	2,334.2	< 1	168.6	< 1	53.3	< 1
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%		
Status 1	0.0	0	0.0	0	1,126.6	< 1		
Status 2	0.0	0	0.0	0	13,245.8	2		
Status 3	5.2	< 1	0.0	0	32,477.3	7		
Status 4	535,994.6	90	79.5	< 1	536,469.7	90		
Total	535,999.8	90	79.5	< 1	583,319.4	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 many-lined salamander lives within sluggish swampy and marshy aquatic habitats. Adults and larvae are largely aquatic (Christman1992). It inhabits swamps, gum and cypress ponds, sluggish streams, small ponds in pine woodland, borrow pits, drainage ditches, canals, and other permanent aquatic habitat (Petranka 1998; Christman and Kochman 1975; Bruce 1971; Bishop 1943). It will use wetlands in both forest and herbaceous savanna situations. In dry weather the adults hide under leaf litter, sphagnum mats, or rotten logs (Martof et al. 1980). Courtship and mating occur in fall. Lays clutch of up to 100 eggs in winter (in south) or early spring (in north). Eggs are laid in or under logs or attached to plants in or near water. Female may stay with eggs until hatching. Aquatic larvae hatch in spring and metamorphose in 13-28 months. Sexually mature in 3-4 years. Stacy Smith, 3May05

### Hydrography Mask:

Freshwater Only

Slow Current Only

Utilizes flowing water features with buffers of 60m from and 30m into selected water features.

Utilizes open water features with buffers of 60m from and 30m into selected water features.

### Selected Map Units:

Functional Group	Map Unit Name
Water	Open Water (Fresh)
Wetlands	Atlantic Coastal Plain Blackwater Stream Floodplain Forest - Forest Modifier
Wetlands	Atlantic Coastal Plain Blackwater Stream Floodplain Forest - Herbaceous Modifier
Wetlands	Atlantic Coastal Plain Clay-Based Carolina Bay Forested Wetland
Wetlands	Atlantic Coastal Plain Clay-Based Carolina Bay Herbaceous Wetland
Wetlands	Atlantic Coastal Plain Depression Pondshore
Wetlands	Atlantic Coastal Plain Nonriverine Swamp and Wet Hardwood Forest - Taxodium/Nyssa Modifier
Wetlands	Atlantic Coastal Plain Nonriverine Swamp and Wet Hardwood Forest - Oak Dominated Modifier
Wetlands	Atlantic Coastal Plain Peatland Pocosin
Wetlands	Atlantic Coastal Plain Sandhill Seep
Wetlands	Atlantic Coastal Plain Small Blackwater River Floodplain Forest
Wetlands	Atlantic Coastal Plain Streamhead Seepage Swamp, Pocosin, and Baygall
Wetlands	Southern Coastal Plain Blackwater River Floodplain Forest
Wetlands	Southern Coastal Plain Herbaceous Seepage Bog
Wetlands	Southern Coastal Plain Nonriverine Basin Swamp
Wetlands	Southern Coastal Plain Nonriverine Cypress Dome
Wetlands	Southern Coastal Plain Seepage Swamp and Baygall

**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.

Bishop, S., 1943. Handbook of Salamanders - Volume III. Comstock Publishing Company Inc., New York. Pages143-147, 232-236.

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Christman, S.P. 1992. Many-lined salamander. Pages 58-61 in Rare and endangered biota of Florida: reptiles and amphibians (P. Moler, ed.). Gainesville, University Press of Florida.

Christman, S.P. and H.I. Kochman. 1975. The southern distribution of the many-lined salamander, *Stereochilus marginatus*. *The Florida Scientist* 38:139-141.

Foard, T., and D. L. Auth. 1990. Food habits and gut parasites of the salamander, *STEREOCHILUS MARGINATUS*. *J. Herpetol.* 24:428-431.

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.

Petranka, J. W. 1998. Salamanders of the United States and Canada. Washington DC: Smithsonian Inst. Press.

Rabb, G. B. 1966. *Stereochilus marginatus*. *Cat. Am. Amph.Rep.* 25.1-25.2.

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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.