



SOUTHEAST GAP ANALYSIS PROJECT



Species Modeling Report

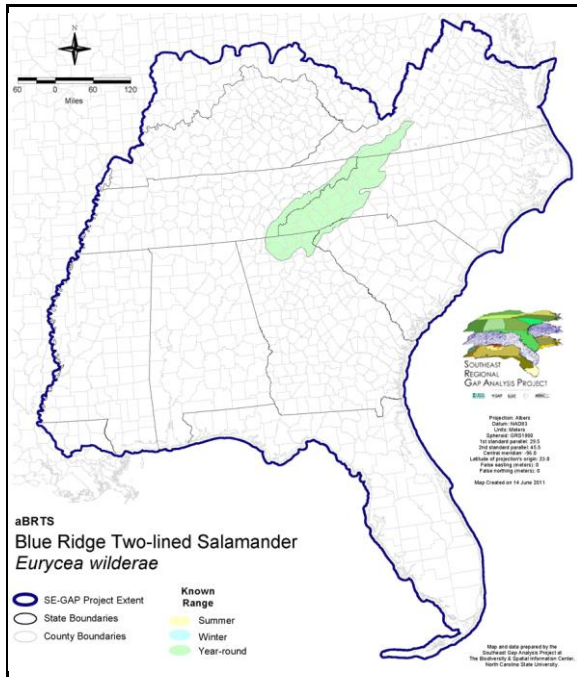
Blue Ridge Two-lined Salamander

Eurycea wilderae

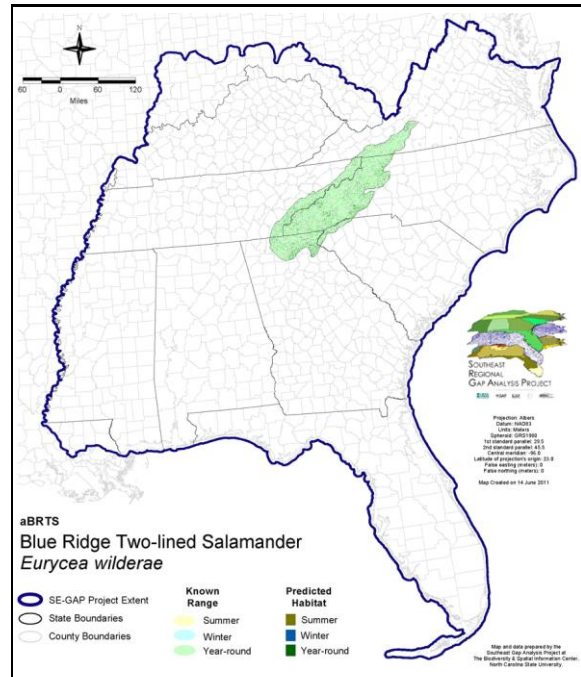
Taxa: Amphibian
 Order: Caudata
 Family: Plethodontidae

SE-GAP Spp Code: **aBRTS**
 ITIS Species Code: 550248
 NatureServe Element Code: AAAAD05150

KNOWN RANGE:



PREDICTED HABITAT:



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

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

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

Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/aBRTS_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---
 State Status: ---
 NS Global Rank: G5
 NS State Rank: GA (S5), NC (S5), TN (S5), VA (S2)

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	0.0	0	2,936.4	< 1	0.0	0	0.0	0
Status 2	0.0	0	12,265.1	2	0.0	0	0.0	0
Status 3	0.0	0	99,167.9	18	0.2	< 1	0.0	0
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	0.0	0	114,369.5	21	0.2	< 1	0.0	0
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	27,348.9	5	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	2,004.3	< 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	29,353.2	5	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	0.0	0	0.0	0	0.0	0
Status 2	0.0	0	978.1	< 1	2,878.8	< 1	0.0	0
Status 3	1,367.7	< 1	3,087.5	< 1	1,264.6	< 1	694.4	< 1
Status 4	0.0	0	0.0	0	158.7	< 1	0.0	0
Total	1,367.7	< 1	4,065.6	< 1	4,302.1	< 1	694.4	< 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	0.0	0	563.9	< 1	0.0	0	0.0	0
Status 3	0.0	0	0.0	0	20.3	< 1	0.5	< 1
Status 4	0.0	0	0.0	0	18.5	< 1	0.0	0
Total	0.0	0	563.9	< 1	38.7	< 1	0.5	< 1
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	30,285.4 6			
Status 2	0.0	0	0.0	0	16,685.9 3			
Status 3	0.0	0	0.0	0	107,607.2 38			
Status 4	286,321.2	53	10.4	< 1	286,667.5 53			
Total	286,321.2	53	10.4	< 1	441,246.0 100			

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 Blue Ridge two-lined salamander is primarily found in the southern Appalachians. Adults may be found in and around rocky brooks, springs, and seepages during the breeding season. After breeding, adults migrate into surrounding mesic deciduous or mixed forests and spend most of the year underground. Eggs are laid in water on the undersides of rocks, logs, etc. In southwestern North Carolina, eggs are laid in late winter and early spring. The average clutch size is 28-56. The female stays with eggs until the eggs hatch in late June-early July. Larvae metamorphose in 1-2 years (in 1 year in warmer first-order streams, in 1-2 years in cooler higher-order streams; (Voss 1993). The average age at first reproduction is 3-4 years, usually the latter (Bruce 1985). Stacy Smith, 15April05

Elevation Mask: < 2000m

Hydrography Mask:

Freshwater Only

Utilizes flowing water features with buffers of 120m from and 30m into selected water features.

Selected Map Units:

Functional Group	Map Unit Name
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	Northeastern Interior Dry Oak Forest - Mixed Modifier
Forest/Woodland	Northeastern Interior Dry Oak Forest - Virginia/Pitch Pine Modifier
Forest/Woodland	Northeastern Interior Dry Oak Forest-Hardwood Modifier
Forest/Woodland	South-Central Interior Mesophytic Forest
Forest/Woodland	Southern and Central Appalachian Cove Forest
Forest/Woodland	Southern Appalachian Montane Pine Forest and Woodland
Forest/Woodland	Southern Piedmont Dry Oak-(Pine) Forest - Hardwood Modifier
Forest/Woodland	Southern Piedmont Dry Oak-(Pine) Forest - Mixed Modifier
Forest/Woodland	Southern Piedmont Dry Oak-Heath Forest - Virginia/Pitch Pine Modifier
Forest/Woodland	Southern Piedmont Mesic Forest
Water	Open Water (Fresh)
Wetlands	Central Appalachian Floodplain - Forest Modifier
Wetlands	Central Appalachian Floodplain - Herbaceous Modifier
Wetlands	Central Appalachian Riparian - Forest Modifier
Wetlands	Central Appalachian Riparian - Herbaceous Modifier
Wetlands	Southern Appalachian Seepage Wetland
Wetlands	Southern Piedmont Seepage Wetland
Wetlands	Southern Piedmont Small Floodplain and Riparian Forest

CITATIONS: Bruce, R. C. 1985. Larval period and metamorphosis in the salamander EURYCEA BISLINEATA. *Herpetologica* 41:19-28.

Camp, C.D., J.L. Marshall, K.R. Landau, R.M. Austin, and S.G. Tilley. 2000. Sympatric occurrence of two species of the two-lined salamander (*Eurycea bislineata*) complex. *Copeia* 2000: 572-578.

Jacobs, J. F. 1987. A preliminary investigation of geographic genetic variation and systematics of the two-lined salamander, EURYCEA BISLINEATA (Green). *Herpetologica* 43:423-446.

Mittleman, M. B. 1966. EURYCEA BISLINEATA. *Cat. Am. Amph. Rep.* 45:1-45.4.

Petranka, J. W., M. E. Eldridge, and K. E. Haley. 1993. Effects of timber harvesting on southern Appalachian salamanders. *Conservation Biology* 7(2):363-370.

Sever, D.M. 1999. *Eurycea wilderae*. *Catalogue of American Amphibians and Reptiles*, pp. 685.1-685.4.

Voss, S.R. 1993. The relationship between stream order and length of larval period in the salamander *Eurycea wilderae*. *Copeia* 1993:736-742.

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