



SOUTHEAST GAP ANALYSIS PROJECT



Species Modeling Report

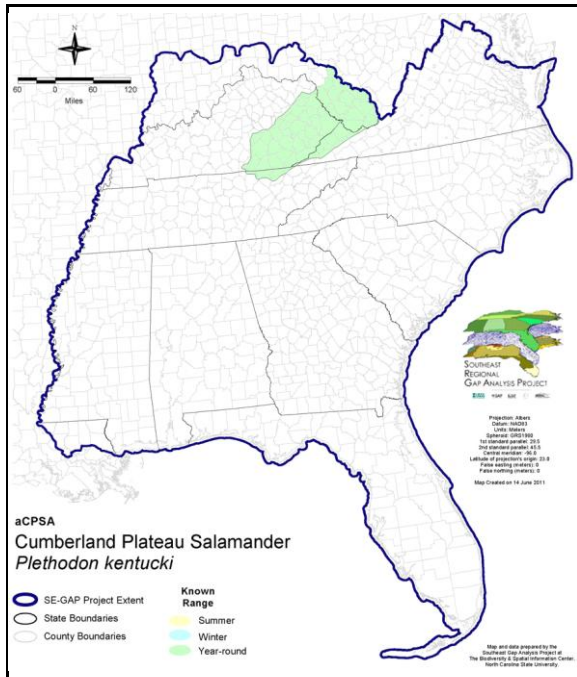
Cumberland Plateau Salamander

Plethodon kentucki

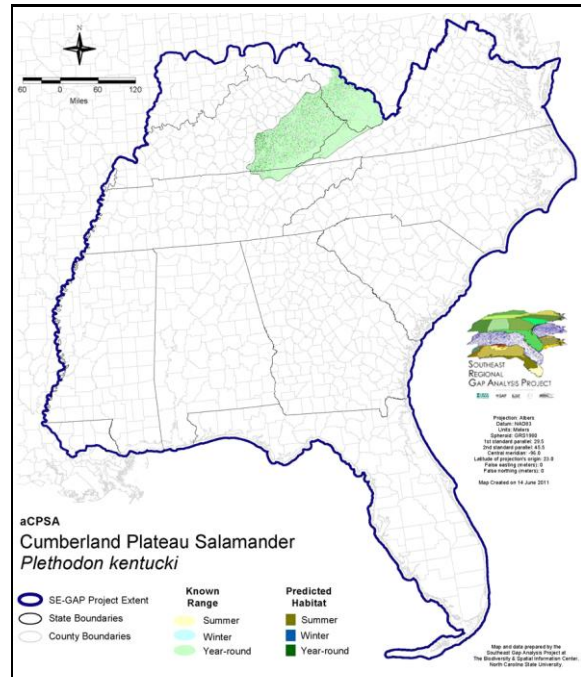
Taxa: Amphibian
 Order: Caudata
 Family: Plethodontidae

SE-GAP Spp Code: **aCPSA**
 ITIS Species Code: 173661
 NatureServe Element Code: AAAAD12260

KNOWN RANGE:



PREDICTED HABITAT:



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

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

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

Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/aCPSA_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---
 State Status: KY (N)
 NS Global Rank: G4
 NS State Rank: KY (S4), TN (S2), VA (S3), WV (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	0.0	0	15.9	< 1	0.0	0	0.0	0
Status 2	0.0	0	1,998.3	< 1	0.0	0	0.0	0
Status 3	0.0	0	23,751.4	8	0.6	< 1	6.6	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	0.0	0	25,765.6	8	0.6	< 1	6.6	< 1
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	0.0	0	0.0	0
Status 2	0.0	0	50.6	< 1	0.0	0	0.0	0
Status 3	0.0	0	3,872.0	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	3,922.6	1	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	0.0	0	2,039.1	< 1	38.0	< 1
Status 3	0.0	0	305.3	< 1	3,174.3	1	3.7	< 1
Status 4	0.0	0	0.0	0	634.7	< 1	0.0	0
Total	0.0	0	305.3	< 1	5,848.1	2	41.7	< 1
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	86.9	< 1	0.0	0	0.0	0
Status 2	0.0	0	134.6	< 1	0.0	0	0.0	0
Status 3	0.0	0	0.0	0	0.0	0	0.0	0
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	0.0	0	221.5	< 1	0.0	0	0.0	0
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%		
Status 1	0.0	0	0.0	0	102.8	< 1		
Status 2	0.0	0	0.0	0	4,260.6	1		
Status 3	0.0	0	0.0	0	31,113.8	18		
Status 4	242,667.9	80	464.8	< 1	244,402.0	80		
Total	242,667.9	80	464.8	< 1	279,879.2	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: The Cumberland Plateau Salamander is found terrestrially in hardwood and mixed forest. They are occasionally found in sandstone/shale rock outcrops and rock crevices. They use fallen logs, leaf litter, and debris as cover. This species is similar to *P. glutinosus*, with which it is usually sympatric. Populations reach their highest densities on west facing slopes (Baily and Pauley 1993). They were regarded as conspecific with *P. glutinosus* until 1983 (Highton and MacGregor 1983). They are terrestrial breeders that deposit eggs in July. Mean clutch size is 10 with individual females reproducing biennially or less frequently. Hatching occurs in October. Males are sexually mature in 3-4 years after hatching. Females are probably sexually mature at 4-5 years after hatching. Stacy Smith, 15April05

Selected Map Units:

Functional Group	Map Unit Name
Forest/Woodland	South-Central Interior Mesophytic Forest
Rock Outcrop	Central Interior Acidic Cliff and Talus
Rock Outcrop	Central Interior Calcareous Cliff and Talus
Rock Outcrop	Southern Interior Acid Cliff
Rock Outcrop	Southern Interior Calcareous Cliff

CITATIONS: Bailey, J. E. and T. K. Pauley. 1993. Aspects of the natural history of the Cumberland Plateau salamander, *Plethodon kentucki*, in West Virginia. Association of Southeastern Biologists Bulletin 40(2): 133.

Highton, R. and R.B. Peabody. 2000. Geographic protein variation and speciation in salamanders of the *Plethodon jordani* and *Plethodon glutinosus* complexes in the Southern Appalachian mountains with the description of four new species. Pages 31-94 in Br

Highton, R., and J. R. MacGregor. 1983. PLETHODON KENTUCKI Mittleman: a valid species of Cumberland Plateau woodland salamander. Herpetologica 39:189-200.

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

For more information:: SE-GAP Analysis Project / BaSIC
127 David Clark Labs
Dept. of Biology, NCSU
Raleigh, NC 27695-7617
(919) 513-2853
www.basic.ncsu.edu/segap

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.