



SOUTHEAST GAP ANALYSIS PROJECT



Species Modeling Report

Santeetlah Dusky Salamander

Desmognathus santeetlah

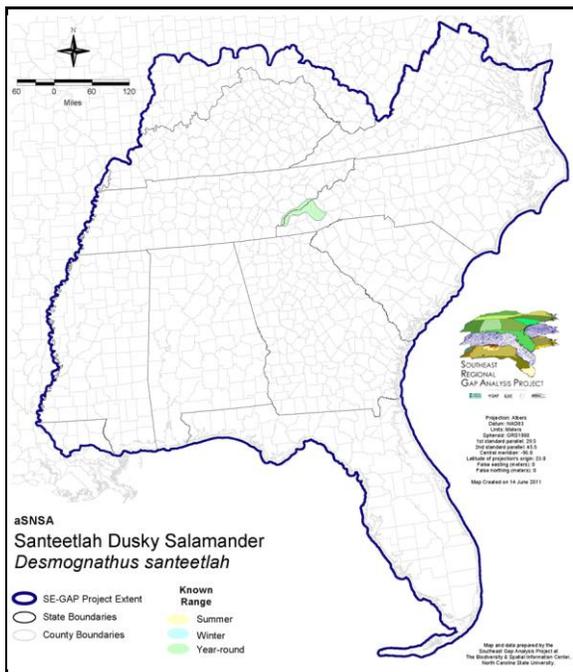
Taxa: Amphibian
 Order: Caudata
 Family: Plethodontidae

SE-GAP Spp Code: **aSNSA**

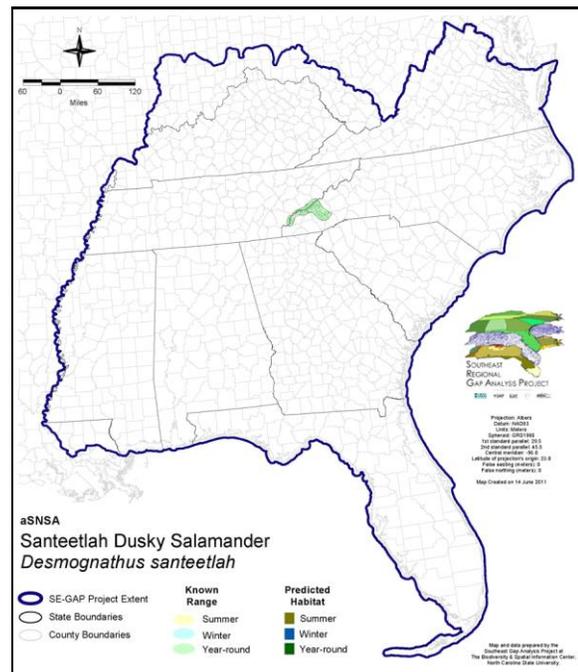
ITIS Species Code: 173643

NatureServe Element Code: AAAAD03110

KNOWN RANGE:



PREDICTED HABITAT:



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

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

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

Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/aSNSA_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: NC (SR)

NS Global Rank: G3G4Q

NS State Rank: NC (S2S3), TN (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	1,098.4	2	0.0	0	0.0	0
Status 2	0.0	0	944.0	2	0.0	0	0.0	0
Status 3	0.0	0	10,240.4	17	0.0	0	0.0	0
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	0.0	0	12,282.8	20	0.0	0	0.0	0
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	26,811.6	43	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	215.3	< 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	27,026.9	44	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	0.0	0	0.0	0
Status 3	1,958.1	3	0.0	0	241.4	< 1	0.0	0
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	1,958.1	3	0.0	0	241.4	< 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	0.0	0	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	0.0	0	0.0	0	0.0	0
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	27,910.0 45			
Status 2	0.0	0	0.0	0	944.0 2			
Status 3	0.0	0	0.0	0	12,655.2 37			
Status 4	9,896.6	16	< 0.1	< 1	9,896.7 16			
Total	9,896.6	16	< 0.1	< 1	51,405.8 100			

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: Found near stream headwaters and seepage areas in mid- and high-elevation hardwood and conifer forests (Wilson 1995). They are often under rocks in a few mm of water at margins of seeps, among gravel and cobble where ground water percolates to surface through muck, mossy rocks. *D. santeetlah* is restricted to the Unicoi, Great Smoky, Great Balsam mountains of the southern Appalachians (Petranka 1998). They lay clutches averaging 21 eggs, mostly in June. Eggs are laid mostly beneath mosses growing on rocks, on logs, or on soil surface. Nest sites 16-83 cm from nearest open water, commonly beneath mosses on logs lying in and around seepage areas (Jones 1986). Hatching occurs in lab in 50-60 days. Males sexually mature in about 2 years, females in about 3 years (Jones 1986). S. Smith 18Feb05

Elevation Mask: > 677m and < 1805m

Hydrography Mask:

Freshwater Only

Utilizes flowing water features with buffers of 60m 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	Southern and Central Appalachian Cove Forest
Forest/Woodland	Southern and Central Appalachian Oak Forest
Forest/Woodland	Southern and Central Appalachian Oak Forest - Xeric
Water	Open Water (Fresh)
Wetlands	Southern Appalachian Seepage Wetland

CITATIONS: Jones, R. L. 1986. Reproductive biology of *DESMOGNATHUS FUSCUS* and *DESMOGNATHUS SANTEETLAH* in the Unicoi Mountains. *Herpetologica* 42:323-334.

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

Tilley, S. G. 1981. A new species of *DESMOGNATHUS* (Amphibia:Caudata:Plethodontidae) from the southern Appalachian Mountains. *Univ. Michigan Mus. Zool., Occas. Pap.* 695:1-23.

Tilley, S. G. 1988. Hybridization between two species of *DESMOGNATHUS* (Amphibia:Caudata:Plethodontidae) in the Great Smoky Mountains. *Herpetol. Monogr.* 2:27-39.

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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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.