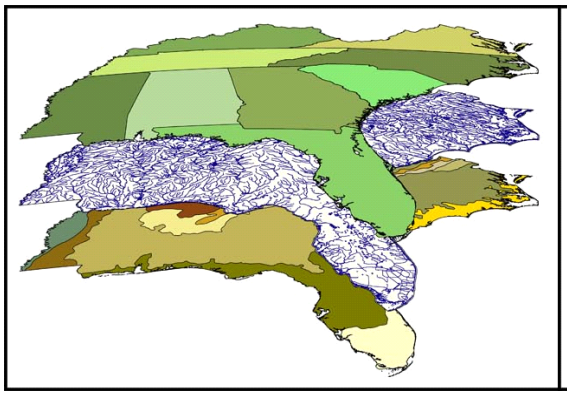


SOUTHEAST GAP ANALYSIS PROJECT

USGS gap BaSIC NARSAL

Species Modeling Report

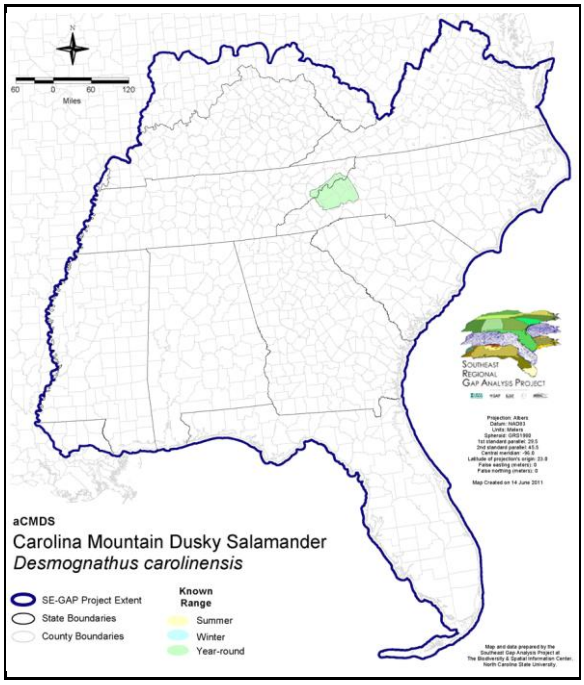
Carolina Mountain Dusky Salamander

Desmognathus carolinensis

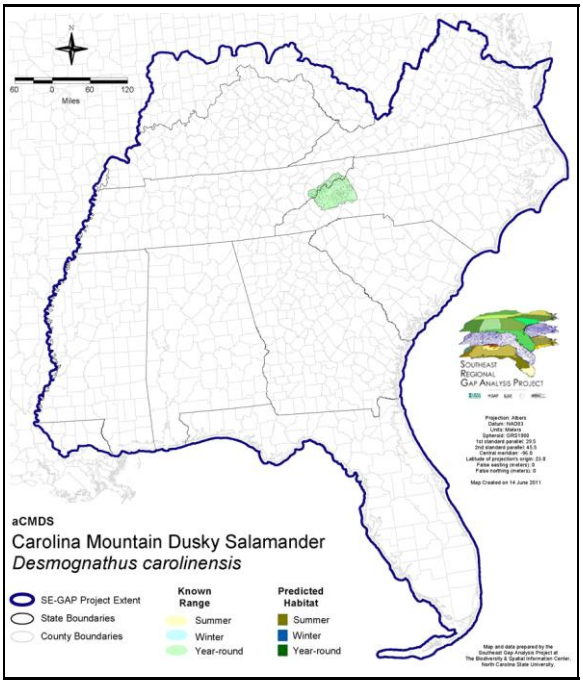
Taxa: Amphibian
Order: Caudata
Family: Plethodontidae

SE-GAP Spp Code: **aCMDS**
ITIS Species Code: 550253
NatureServe Element Code: AAAAD03130

KNOWN RANGE:



PREDICTED HABITAT:



Range Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Range_aCMDS.pdf
Predicted Habitat Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_aCMDS.pdf
GAP Online Tool Link: http://www.gapserve.ncsu.edu/segap/segap/index2.php?species=aCMDS
Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/aCMDS_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---
State Status: ---
NS Global Rank: G4
NS State Rank: NC (S3S4), TN (S2S3)

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	1,052.3	< 1	0.0	0	0.0	0
Status 2	0.0	0	623.9	< 1	0.0	0	0.0	0
Status 3	0.0	0	24,518.6	22	0.0	0	0.0	0
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	0.0	0	26,194.8	24	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	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	276.5	< 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	276.5	< 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	0.0	0	0.0	0
Status 3	0.0	0	148.4	< 1	472.4	< 1	25.3	< 1
Status 4	0.0	0	0.0	0	58.1	< 1	0.0	0
Total	0.0	0	148.4	< 1	530.6	< 1	25.3	< 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	51.7	< 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	32.5	< 1	0.0	0
Total	0.0	0	51.7	< 1	32.5	< 1	0.0	0

	Private Land - No Res.		Water		Overall Total	
	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	1,052.3	< 1
Status 2	0.0	0	0.0	0	675.5	< 1
Status 3	0.0	0	0.0	0	25,441.2	46
Status 4	57,312.0	53	5.1	< 1	57,465.9	53
Total	57,312.0	53	5.1	< 1	84,634.9	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: This salamander is very common in a variety of moist to saturated mountain habitats (Huheey and Stupka 1967), especially spruce-fir forests. They can be found on wet rockfaces, in seepages, and among leaf litter and debris on the forest floor in and near streams (Petranka 1998). Found from high peaks down to most mountain valleys within its range (King 1939). At elevations below ~4500 ft and in winter they usually concentrate near seepage areas, springs, and small streams, but are more terrestrial at higher elevations and may range into adjacent wooded areas in wet weather. The distribution of this species is restricted to a few mountain ranges in the southern Appalachians, including the Unaka, Black, Bald, and Blue Ridge mountains in North Carolina (Petranka 1998). Their eggs are laid in wet rock crevices, under rocks, logs, and moss or leaves in seepage areas or near small streams. The larvae are aquatic. S. Smith 18Feb05

Elevation Mask: > 300m and < 2000m

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
Rock Outcrop	Southern Appalachian Montane Cliff
Rock Outcrop	Southern Appalachian Spray Cliff
Water	Open Water (Fresh)
Wetlands	Southern Appalachian Seepage Wetland

CITATIONS:

Huheey, J. E., and A. Stupka. 1967. Amphibians and reptiles of Great Smoky Mountains National Park. Univ. Tennessee Press, Knoxville. ix + 98 pp.

King, W. 1939. A survey of the herpetology of Great Smoky Mountains National Park (Tennessee). Am. Midl. Nat. 21:531-582.

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

Tilley, S. G., and M. J. Mahoney. 1996. Patterns of genetic differentiation in salamanders of the DESMOGNATHUS OCHROPHAEUS complex (Amphibia:Plethodontidae). Herpetological Monographs 10:1-41.

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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.