



SOUTHEAST GAP ANALYSIS PROJECT



Species Modeling Report

Pygmy Salamander

Desmognathus wrighti

Taxa: Amphibian

Order: Caudata

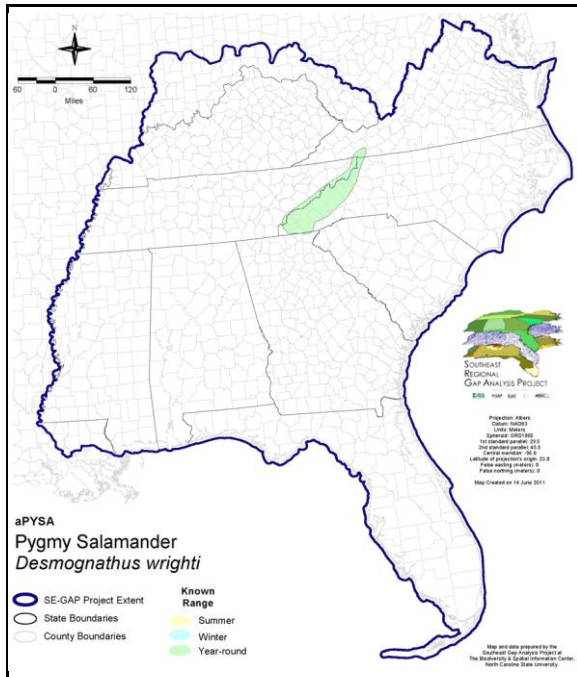
Family: Plethodontidae

SE-GAP Spp Code: **aPYSA**

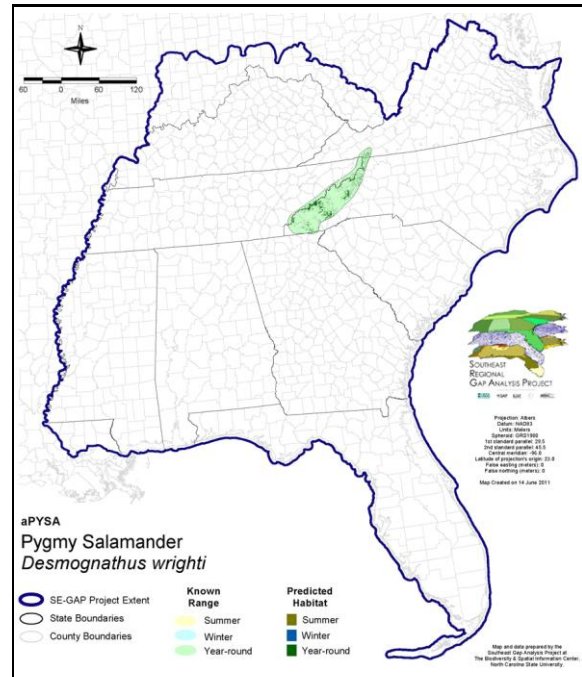
ITIS Species Code: 173645

NatureServe Element Code: AAAAD03100

KNOWN RANGE:



PREDICTED HABITAT:



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

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

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

Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/aPYSA_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: NC (SR), TN (D), VA (SC)

NS Global Rank: G3

NS State Rank: NC (S3), TN (S2), 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	2,288.4	< 1	0.0	0	0.0	0
Status 2	0.0	0	6,901.5	3	0.0	0	0.0	0
Status 3	0.0	0	57,152.7	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	66,342.6	26	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	46,715.6	18	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	3,429.7	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	50,145.3	19	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	1,380.7	< 1	1,277.6	< 1	670.4	< 1	41.8	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	1,380.7	< 1	1,277.6	< 1	670.4	< 1	41.8	< 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	429.5	< 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	429.5	< 1	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	49,004.0 19			
Status 2	0.0	0	0.0	0	7,331.0 3			
Status 3	0.0	0	0.0	0	63,952.8 47			
Status 4	81,058.9	31	0.2	< 1	81,059.0 31			
Total	81,058.9	31	0.2	< 1	201,346.8 100			

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: The range of the pygmy salamander is entirely contained within the southern Appalachian mountain region of Tennessee, North Carolina and Virginia (Martof et al. 1980). It is most abundant in spruce-fir forest, but is also found in mesophytic cove hardwoods (Huheey and Stupka 1967, Petranka 1998). Adults occupy the forest floor, sometimes well away from surface water. They utilize moss, leaf litter, rotten logs, the bark of stumps and logs, and rocks for shelter (Martof et al. 1980). They will ascend trees to about 2 m in wet or foggy weather. Winters are spent in underground seepages. Egg laying occurs in winter and perhaps in spring or fall in underground cavities among rocks of spring seeps. The average clutch size is 3-14. Hatching has been observed in fall. The female remains with eggs until hatching and there is no aquatic larval stage. S. Smith 18Feb05

Elevation Mask: > 838m and < 1981m

Selected Map Units:

Functional Group	Map Unit Name
Forest/Woodland	Appalachian Hemlock-Hardwood 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
Wetlands	Southern Appalachian Seepage Wetland

- 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.
- Conant, R. 1975. A Field Guide to Reptiles and Amphibians of Eastern and Central North America. Second Edition. Houghton Mifflin Company, Boston, Massachusetts. xvii + 429 pp.
- Huheey, J. E., and A. Stupka. 1967. Amphibians and reptiles of Great Smoky Mountains National Park. Univ. Tennessee Press, Knoxville. ix + 98 pp.
- 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.
- Mitchell, J. C. 1991. Amphibians and reptiles. Pages 411-76 in K. Terwilliger (coordinator). Virginia's Endangered Species: Proceedings of a Symposium. McDonald and Woodward Publishing Company, Blacksburg, Virginia.
- Petranka, J. W. 1998. Salamanders of the United States and Canada. Washington DC: Smithsonian Inst. Press.

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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.