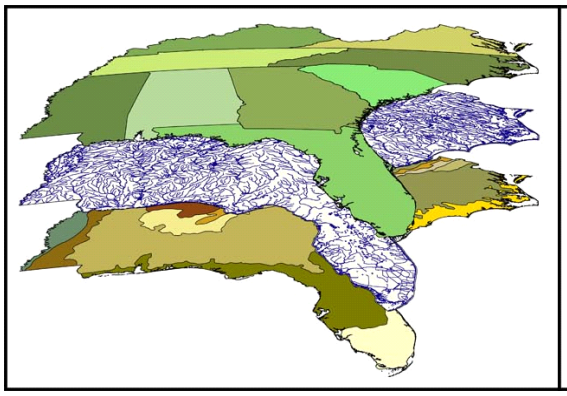


SOUTHEAST GAP ANALYSIS PROJECT

USGS science for a changing world | gap | BaSIC Biodiversity and Spatial Information Center | NARSAL

Species Modeling Report

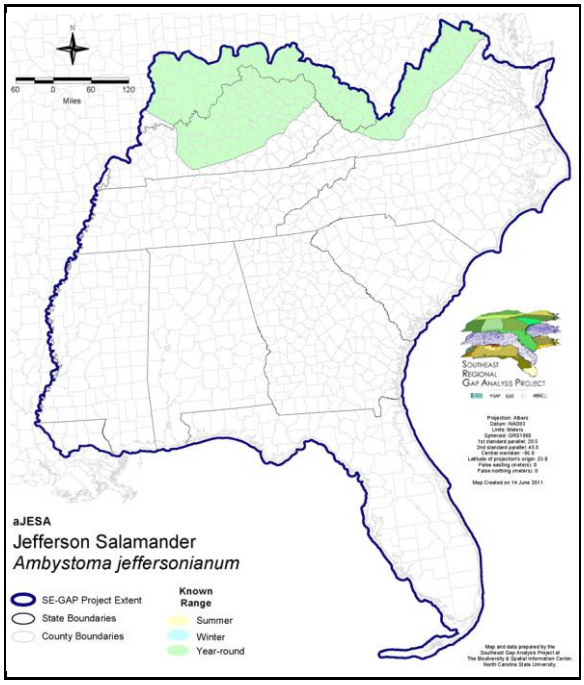
Jefferson Salamander

Ambystoma jeffersonianum

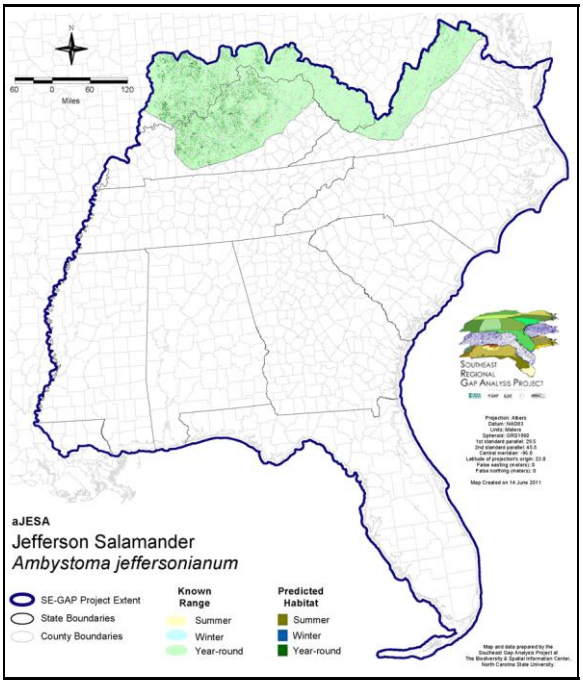
Taxa: Amphibian
Order: Caudata
Family: Ambystomatidae

SE-GAP Spp Code: **aJESA**
ITIS Species Code: 173598
NatureServe Element Code: AAAAA01050

KNOWN RANGE:



PREDICTED HABITAT:



Range Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Range_aJESA.pdf
Predicted Habitat Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_aJESA.pdf
GAP Online Tool Link: http://www.gapserve.ncsu.edu/segap/segap/index2.php?species=aJESA
Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/aJESA_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: CT (SC), IL (LT), KY (N), MA (SC), NH (SC), NJ (D), NY (SC), ON (THR)

NS Global Rank: G4

NS State Rank: CT (S3), IL (S2), IN (S4), KY (S4), MA (S2S3), MD (S3), NH (S2S3), NJ (S3), NY (S4), OH (SNR), PA (S3S4), VA (S4), VT (S2), WV (S3), ON (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	18.7	< 1	0.0	0	0.0	0
Status 2	0.0	0	1,418.4	< 1	0.0	0	0.0	0
Status 3	0.0	0	6,473.5	1	0.0	0	3,027.4	< 1
Status 4	7.1	< 1	0.0	0	0.0	0	0.0	0
Total	7.1	< 1	7,910.6	1	0.0	0	3,027.4	< 1

	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	804.1	< 1	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	280.1	< 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	1,084.1	< 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	10,237.1	2	0.0	0
Status 3	0.0	0	1,478.7	< 1	5,832.8	< 1	27.5	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	0.0	0	1,478.7	< 1	16,070.0	3	27.5	< 1

	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	202.1	< 1	0.0	0	0.0	0
Status 2	0.0	0	39.1	< 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	19.0	< 1	0.0	0
Total	0.0	0	241.2	< 1	19.0	< 1	0.0	0

	Private Land - No Res.		Water		Overall Total	
	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	1,024.9	< 1
Status 2	0.0	0	0.0	0	11,694.6	2
Status 3	0.0	0	0.0	0	17,120.1	4
Status 4	590,018.9	94	1,093.3	< 1	591,131.2	94
Total	590,018.9	94	1,093.3	< 1	620,970.8	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: Habitat includes seasonally ephemeral ponds in deciduous forests and farm ponds, but occasionally will use permanent water (Bishop 1941 and Douglas and Monroe 1981). Fishless ponds are optimal. The Jefferson Salamander uses upland forests more than many other Ambystoma species (Petranka 1998). Breed in late winter to early spring, adults are fossorial the remainder of the year. Individuals have been collected in caves in West Virginia (Green and Brant 1966). Appears to be especially vulnerable to acidification. S. Smith 18Feb05

Hydrography Mask:

Freshwater Only

Utilizes open water features with buffers of 250m from and 30m into selected water features.

Selected Map Units:

Functional Group	Map Unit Name
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland - Hardwood Modifier
Forest/Woodland	Appalachian Hemlock-Hardwood Forest
Forest/Woodland	Northeastern Interior Dry Oak Forest - Mixed 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 and Central Appalachian Oak Forest
Forest/Woodland	Southern and Central Appalachian Oak Forest - Xeric
Forest/Woodland	Southern Interior Low Plateau Dry-Mesic Oak Forest
Forest/Woodland	Southern Interior Low Plateau Dry-Mesic Oak Forest - Evergreen Modifier
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	Central Interior Highlands and Appalachian Sinkhole and Depression Pond
Wetlands	North-Central Interior and Appalachian Rich Swamp
Wetlands	South-Central Interior Large Floodplain - Forest Modifier
Wetlands	South-Central Interior Large Floodplain - Herbaceous Modifier
Wetlands	South-Central Interior Small Stream and Riparian
Wetlands	Southern and Central Appalachian Bog and Fen

CITATIONS:

Bishop, S. C. 1941. The salamanders of New York. New YorkState Mus. Bull. 324:1-365.

Douglas, M.E. and B.L. Monroe. 1981. A comparative study of topographical orientation in Ambystoma (Amphibia: Caudata). Copeia 1981:460-463.

Green, N.B. and P. Brant, Jr. 1966. Salamanders found in West Virginia caves. Proceedings of the West Virginia Academy of Science 38: 42-45.

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

Uzzell, T.M. Jr. 1967. Ambystoma jeffersonianum. Catalogue of American Amphibians and Reptiles. 47:1-2

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.