

SOUTHEAST GAP ANALYSIS PROJECT



Species Modeling Report

Mud Salamander

Pseudotriton montanus

Taxa: Amphibian

Order: Caudata

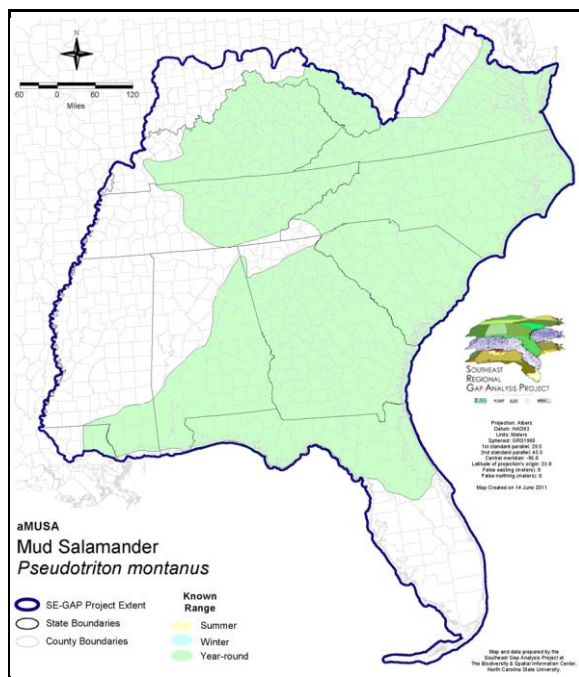
Family: Plethodontidae

SE-GAP Spp Code: **aMUSA**

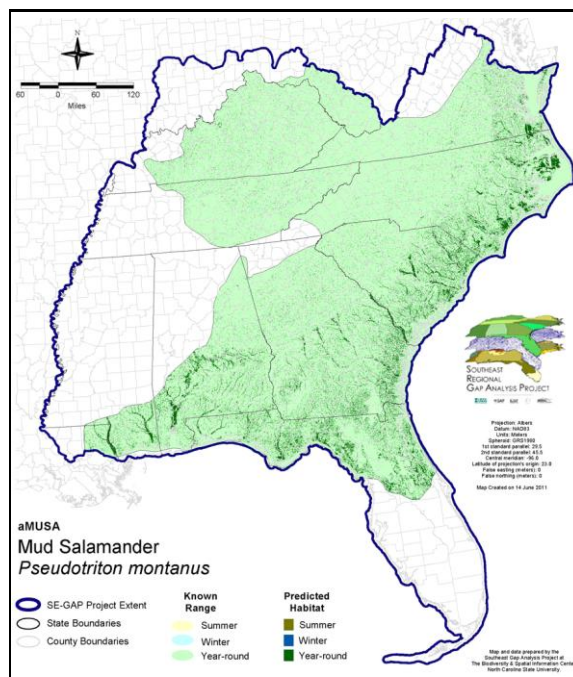
ITIS Species Code: 173682

NatureServe Element Code: AAAAD13010

KNOWN RANGE:



PREDICTED HABITAT:



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

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

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

Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/aMUSA_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: KY (N), LA (Prohibited), MS (Non-game species in need of management), OH (T), PA (PE)

NS Global Rank: G5

NS State Rank: AL (S4), DC (S3), DE (S1), FL (SNR), GA (S4), IN (SNA), KY (S4), LA (S1), MD (S2?), MS (S2S3), NC (S5), NJ (SNR), OH (S2), PA (S1), SC (SNR), TN (S5), VA (S5), WV (S1)

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	66,488.2	< 1	5,420.1	< 1	0.0	0	0.0	0
Status 2	109,999.8	1	25,233.2	< 1	0.0	0	1,110.5	< 1
Status 3	672.3	< 1	200,744.1	3	1,810.4	< 1	100,266.2	1
Status 4	23.6	< 1	< 0.1	< 1	0.0	0	2.0	< 1
Total	177,183.9	2	231,397.5	3	1,810.4	< 1	101,378.7	1
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	10,314.6	< 1	8.6	< 1	0.0	0
Status 2	0.0	0	880.8	< 1	1,412.6	< 1	0.0	0
Status 3	15,672.3	< 1	4,394.0	< 1	0.0	0	984.5	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	15,672.3	< 1	15,589.4	< 1	1,421.2	< 1	984.5	< 1
	Native Am. Reserv.		State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	104.1	< 1	0.0	0	0.0	0
Status 2	0.0	0	945.5	< 1	211,653.1	3	30.5	< 1
Status 3	68.6	< 1	158,428.0	2	67,368.7	< 1	71,904.3	< 1
Status 4	0.0	0	< 0.1	< 1	6,287.5	< 1	4.6	< 1
Total	68.6	< 1	159,477.8	2	285,309.3	4	71,939.4	< 1
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	551.9	< 1	0.0	0	0.0	0
Status 2	10,276.2	< 1	31,548.2	< 1	2.3	< 1	416.6	< 1
Status 3	0.0	0	3,749.0	< 1	4,147.5	< 1	28,346.0	< 1
Status 4	0.0	0	0.0	0	861.4	< 1	0.0	0
Total	10,276.2	< 1	35,849.1	< 1	5,011.2	< 1	28,762.7	< 1
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha %			
Status 1	0.0	0	0.0	0	82,887.6 1			
Status 2	0.0	0	0.0	0	393,509.3 5			
Status 3	452.8	< 1	0.0	0	659,008.7 12			
Status 4	6,076,018.5	82	16,002.0	< 1	6,105,463.7 82			
Total	6,076,471.3	82	16,002.0	< 1	7,240,869.3 100			

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: Although not commonly observed, mud salamanders have a wide distribution, occurring throughout the Coastal Plain and Piedmont. They are most often encountered in muddy springs, sluggish floodplain streams, swampy wooded areas, and other damp, low-lying situations. They are also found in helocrene springs, seepages, small sand bottomed hammock streams (Carr 1940). The semi-fossorial adults live in leaf accumulations in spring-fed brooks, beneath nearby logs and stones, and in damp rock crevices (Martof et al. 1980, Petranks 1998). They have been found in vertical burrows in damp, soft mud from 1 m to up to 15-20 m from water (Petranks 1998). They are primarily found at elevations of less than 700m. They are absent from most of the higher elevations in the Appalachian Mountains. The mud salamander lays clutch of 65-200 eggs in late fall to early winter, apparently every other year. The eggs are attached to objects in water or are laid in water-filled channels within the banks of streams and ponds (Green and Pauley 1987). The larvae are aquatic and metamorphose in 14-32 months in western South Carolina. They are sexually mature in 2.5 (males) or 4-5 (females) years (Conant 1975). S. Smith 18Feb05

Elevation Mask: < 700m

Hydrography Mask:

Freshwater Only

Slow Current Only

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

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

Utilizes wet vegetation features with buffer of unlimited into selected vegetation features.

Selected Map Units:

Functional Group	Map Unit Name
Forest/Woodland	Appalachian Hemlock-Hardwood Forest
Forest/Woodland	Atlantic Coastal Plain Mesic Hardwood and Mixed Forest
Forest/Woodland	East Gulf Coastal Plain Southern Loess Bluff Forest
Forest/Woodland	East Gulf Coastal Plain Southern Mesic Slope Forest
Forest/Woodland	South-Central Interior Mesophytic Forest
Forest/Woodland	Southern and Central Appalachian Cove Forest
Forest/Woodland	Southern Piedmont Mesic Forest
Water	Open Water (Fresh)
Wetlands	Atlantic Coastal Plain Blackwater Stream Floodplain Forest - Forest Modifier
Wetlands	Atlantic Coastal Plain Blackwater Stream Floodplain Forest - Herbaceous Modifier
Wetlands	Atlantic Coastal Plain Brownwater Stream Floodplain Forest
Wetlands	Atlantic Coastal Plain Clay-Based Carolina Bay Forested Wetland
Wetlands	Atlantic Coastal Plain Clay-Based Carolina Bay Herbaceous Wetland
Wetlands	Atlantic Coastal Plain Nonriverine Swamp and Wet Hardwood Forest - Taxodium/Nyssa Modifier
Wetlands	Atlantic Coastal Plain Nonriverine Swamp and Wet Hardwood Forest - Oak Dominated Modifier
Wetlands	Atlantic Coastal Plain Northern Basin Peat Swamp
Wetlands	Atlantic Coastal Plain Northern Basin Swamp and Wet Hardwood Forest
Wetlands	Atlantic Coastal Plain Peatland Pocosin
Wetlands	Atlantic Coastal Plain Sandhill Seep
Wetlands	Atlantic Coastal Plain Small Blackwater River Floodplain Forest
Wetlands	Atlantic Coastal Plain Small Brownwater River Floodplain Forest
Wetlands	Atlantic Coastal Plain Streamhead Seepage Swamp, Pocosin, and Baygall
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	East Gulf Coastal Plain Interior Shrub Bog
Wetlands	East Gulf Coastal Plain Large River Floodplain Forest - Forest Modifier
Wetlands	East Gulf Coastal Plain Large River Floodplain Forest - Herbaceous Modifier

Wetlands	East Gulf Coastal Plain Northern Seepage Swamp
Wetlands	East Gulf Coastal Plain Small Stream and River Floodplain Forest
Wetlands	Floridian Highlands Freshwater Marsh
Wetlands	North-Central Appalachian Acidic Swamp
Wetlands	North-Central Appalachian Seepage Fen
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
Wetlands	Southern Appalachian Seepage Wetland
Wetlands	Southern Coastal Plain Blackwater River Floodplain Forest
Wetlands	Southern Coastal Plain Herbaceous Seepage Bog
Wetlands	Southern Coastal Plain Hydric Hammock
Wetlands	Southern Coastal Plain Nonriverine Basin Swamp
Wetlands	Southern Coastal Plain Nonriverine Cypress Dome
Wetlands	Southern Coastal Plain Seepage Swamp and Baygall
Wetlands	Southern Coastal Plain Spring-run Stream Aquatic Vegetation
Wetlands	Southern Piedmont Large Floodplain Forest - Forest Modifier
Wetlands	Southern Piedmont Large Floodplain Forest - Herbaceous Modifier
Wetlands	Southern Piedmont Seepage Wetland
Wetlands	Southern Piedmont Small Floodplain and Riparian Forest
Wetlands	Southern Piedmont/Ridge and Valley Upland Depression Swamp
Wetlands	Western Highland Rim Seepage Fen

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Compiled: 15 September 2011

This data was compiled and/or developed
by the Southeast GAP Analysis Project at
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Center, North Carolina State University.