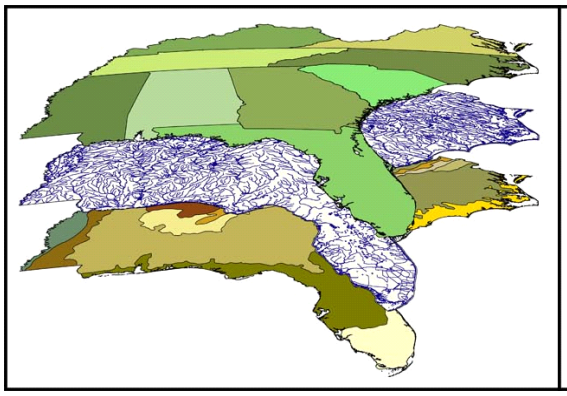


SOUTHEAST GAP ANALYSIS PROJECT

Species Modeling Report

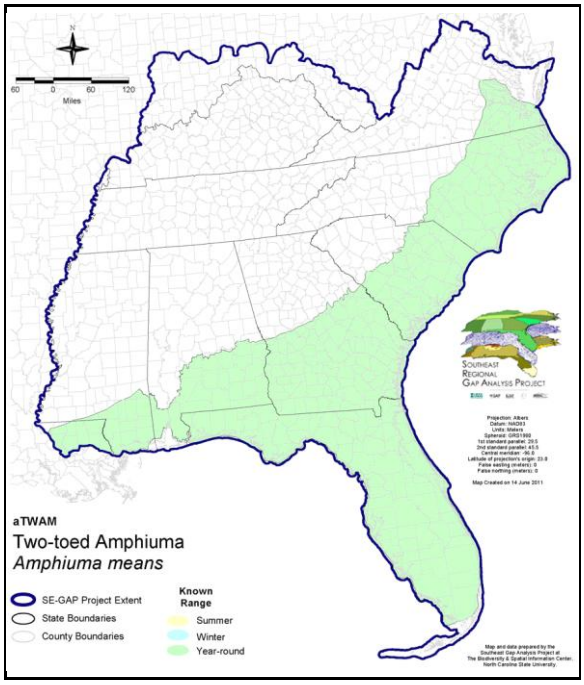
Two-toed Amphiuma

Amphiuma means

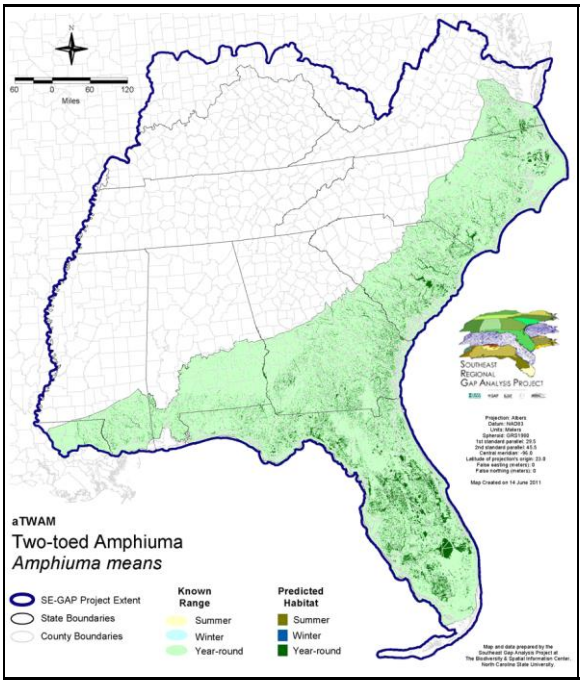
Taxa: Amphibian
Order: Caudata
Family: Amphiumidae

SE-GAP Spp Code: **aTWAM**
ITIS Species Code: 173609
NatureServe Element Code: AAAAB01010

KNOWN RANGE:



PREDICTED HABITAT:



Range Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Range_aTWAM.pdf
Predicted Habitat Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_aTWAM.pdf
GAP Online Tool Link: http://www.gapserve.ncsu.edu/segap/segap/index2.php?species=aTWAM
Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/aTWAM_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---
State Status: MS (Non-game species in need of management)
NS Global Rank: G5
NS State Rank: AL (S3), FL (SNR), GA (S5), LA (S3S4), MS (S4S5), NC (S4), SC (SNR), VA (S4)

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	44,127.4	< 1	4,332.2	< 1	0.0	0	0.0	0
Status 2	43,996.5	< 1	16,088.5	< 1	0.0	0	0.0	0
Status 3	303.8	< 1	95,373.8	2	0.0	0	59,723.6	1
Status 4	21.0	< 1	0.0	0	0.0	0	0.0	0
Total	88,448.7	2	115,794.5	2	0.0	0	59,723.6	1

	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	7,202.1	< 1	1.8	< 1	5,584.6	< 1
Status 2	0.0	0	2,084.7	< 1	1,702.1	< 1	5.4	< 1
Status 3	6,210.2	< 1	116,047.6	2	0.0	0	477.3	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	6,210.2	< 1	125,334.4	3	1,703.9	< 1	6,067.3	< 1

	Native Am. Reserv.		State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	6.4	< 1	0.0	0	0.0	0
Status 2	0.0	0	64.6	< 1	181,812.9	4	0.0	0
Status 3	2.4	< 1	260,698.7	6	15,411.2	< 1	77,772.6	2
Status 4	0.0	0	< 0.1	< 1	2,509.1	< 1	2.7	< 1
Total	2.4	< 1	260,769.8	6	199,733.1	4	77,775.3	2

	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	91.2	< 1	0.0	0	0.0	0
Status 2	5,563.9	< 1	17,211.4	< 1	0.0	0	1,126.8	< 1
Status 3	0.0	0	12,771.1	< 1	3,128.1	< 1	43,829.3	< 1
Status 4	0.0	0	0.0	0	191.3	< 1	0.0	0
Total	5,563.9	< 1	30,073.7	< 1	3,319.4	< 1	44,956.1	< 1

	Private Land - No Res.		Water		Overall Total	
	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	61,345.6	1
Status 2	0.0	0	0.0	0	269,656.7	6
Status 3	77.8	< 1	0.0	0	691,827.4	17
Status 4	3,589,866.8	76	16,622.7	< 1	3,611,701.8	76
Total	3,589,944.6	76	16,622.7	< 1	4,634,531.6	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: Occur in Coastal Plain habitats in or near swamps, cypress bays, ditches, sluggish streams, bayous, temporary ponds, sloughs, wet meadows, muddy lakes cypress-tupelo swamps, wet meadows, blackwater ponds and shallow pine flatwoods. The two-toed amphiuma can be found a variety of lowland and even some isolated upland water bodies of the coastal plain. Specimens have been found on some barrier islands (Gibbons and Coker 1978) and in the sandhills subregion (Garton and Sill 1977). These eel-like salamanders require lowland, acid water with a soft, muddy bottom. They are normally absent from rivers with substantial current. Presence of crayfish burrows probably important (Salthe 1973). Often found in root masses of water hyacinths and other aquatic plants (Petranka). They are not in the rivers of southern Florida and do not occur in waters with any saline influence (Duellman and Schwartz 1958). A. means has the capability of moving overland, but is limited by terrain and distance to isolated ponds. Therefore, it is primarily found within bottomlands and among low-lying wet sites at the margins of bottoms. Eggs are laid January-February in north, June-July in south. Eggs are laid at the bottom of seasonal ponds during drying periods. Eggs become encased in hardened mud until rains flood site and induce hatching. The female remains with eggs during most of incubation (about 5 months). S. Smith 18Feb05

Hydrography Mask:

Freshwater Only

Slow Current Only

Utilizes open water features with buffer of unlimited into selected water features.

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

Selected Map Units:

Functional Group	Map Unit Name
Freshwater Tidal Marsh & Wetland	Atlantic Coastal Plain Central Fresh-Oligohaline Tidal Marsh
Freshwater Tidal Marsh & Wetland	Atlantic Coastal Plain Embayed Region Tidal Freshwater Marsh
Freshwater Tidal Marsh & Wetland	Atlantic Coastal Plain Northern Fresh and Oligohaline Tidal Marsh
Freshwater Tidal Marsh & Wetland	Florida Big Bend Fresh-Oligohaline Tidal Marsh
Water	Open Water (Aquaculture)
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 Clay-Based Carolina Bay Forested Wetland
Wetlands	Atlantic Coastal Plain Clay-Based Carolina Bay Herbaceous Wetland
Wetlands	Atlantic Coastal Plain Depression Pondshore
Wetlands	Atlantic Coastal Plain Large Natural Lakeshore
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 Sandhill Seep
Wetlands	Atlantic Coastal Plain Small Blackwater River Floodplain Forest
Wetlands	Atlantic Coastal Plain Streamhead Seepage Swamp, Pocosin, and Baygall
Wetlands	Central Florida Herbaceous Pondshore
Wetlands	Central Florida Herbaceous Seep
Wetlands	East Gulf Coastal Plain Northern Depression Pondshore
Wetlands	East Gulf Coastal Plain Southern Depression Pondshore
Wetlands	Floridian Highlands Freshwater Marsh
Wetlands	Lower Mississippi River Bottomland and Floodplain Forest
Wetlands	Lower Mississippi River Bottomland Depressions - Forest Modifier
Wetlands	Mississippi River Low Floodplain (Bottomland) Forest
Wetlands	Mississippi River Riparian Forest
Wetlands	South Florida Bayhead Swamp
Wetlands	South Florida Cypress Dome
Wetlands	South Florida Freshwater Slough and Gator Hole
Wetlands	South Florida Pond-Apple/Popash Slough
Wetlands	South Florida Willow Head

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 Cypress Dome
Wetlands	Southern Coastal Plain Seepage Swamp and Baygall
Wetlands	Southern Coastal Plain Spring-run Stream Aquatic Vegetation

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

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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.