

SOUTHEAST GAP ANALYSIS PROJECT



Species Modeling Report

Mabee's Salamander

Ambystoma mabeei

Taxa: Amphibian

Order: Caudata

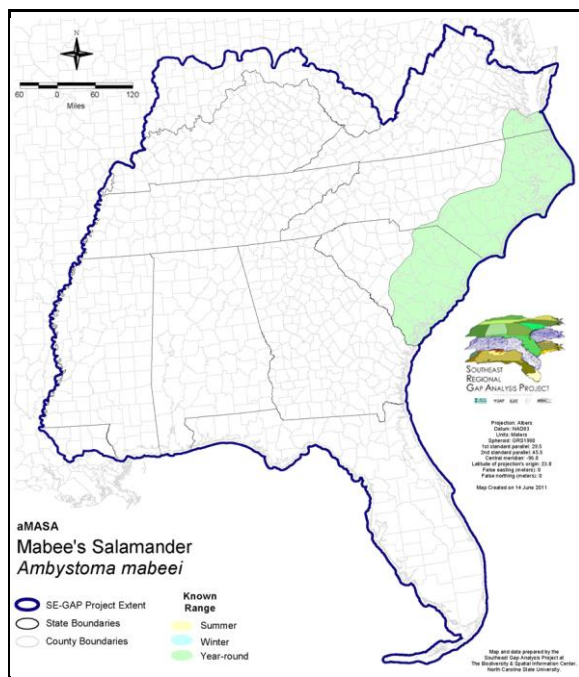
Family: Ambystomatidae

SE-GAP Spp Code: **aMASA**

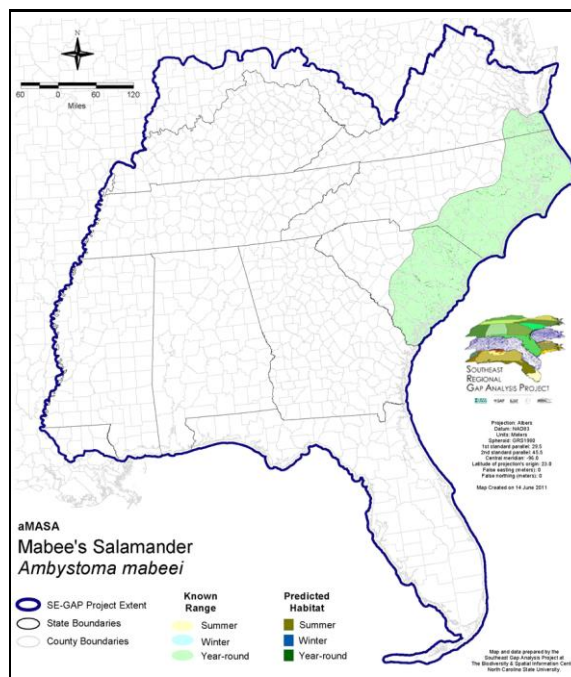
ITIS Species Code: 173600

NatureServe Element Code: AAAAA01070

KNOWN RANGE:



PREDICTED HABITAT:



Range Map Link: http://www.basinc.ncsu.edu/segap/datazip/maps/SE_Range_aMASA.pdf

Predicted Habitat Map Link: http://www.basinc.ncsu.edu/segap/datazip/maps/SE_Dist_aMASA.pdf

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

Data Download: http://www.basinc.ncsu.edu/segap/datazip/region/vert/aMASA_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: NC (SR), VA (LT)

NS Global Rank: G4

NS State Rank: NC (S3), SC (S4), VA (S1S2)

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	2,315.6	1	0.7	< 1	0.0	0	0.0	0
Status 2	7,123.9	4	37.4	< 1	0.0	0	0.0	0
Status 3	60.4	< 1	1,800.2	< 1	0.0	0	971.7	< 1
Status 4	2.1	< 1	0.0	0	0.0	0	1.2	< 1
Total	9,501.9	5	1,838.3	1	0.0	0	972.9	< 1
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	174.1	< 1	3.4	< 1	0.0	0
Status 2	0.0	0	0.0	0	141.8	< 1	0.0	0
Status 3	0.0	0	26.1	< 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	200.2	< 1	145.2	< 1	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	1,511.5	< 1	0.0	0
Status 3	0.0	0	1,510.9	< 1	1,401.8	< 1	345.4	< 1
Status 4	0.0	0	0.0	0	96.8	< 1	0.0	0
Total	0.0	0	1,510.9	< 1	3,010.1	2	345.4	< 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	571.2	< 1	1,376.9	< 1	0.0	0	0.0	0
Status 3	0.0	0	0.0	0	39.7	< 1	0.0	0
Status 4	0.0	0	0.0	0	141.8	< 1	0.0	0
Total	571.2	< 1	1,376.9	< 1	181.4	< 1	0.0	0
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha %			
Status 1	0.0	0	0.0	0	2,493.8 1			
Status 2	0.0	0	0.0	0	10,762.7 6			
Status 3	0.0	0	0.0	0	6,156.3 4			
Status 4	160,282.5	88	1.3	< 1	160,620.2 88			
Total	160,282.5	88	1.3	< 1	180,032.9 100			

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 an uncommon to locally common resident of the coastal plain in tupelo and cypress bottoms in pine land, open fields, pine flatwoods, pine savannahs, low wet woods, swamps, and lowland deciduous forest. In bottomland areas, both conifer and deciduous forests are apparently used (Harrison 1978, Behler and King 1979). In Virginia, breeds in fish-free vernal pond in a large clearcut area and in ephemeral sinkhole ponds up to 1.5 m deep, within bottomland hardwood forest mixed with pine (Mitchell 1991). Adults usually remain near breeding water bodies (Petranka 1998). They can sometimes be found buried at the bottom of dried seasonal pools (Hardy 1969). Water bodies that contain fish are less favorable for offspring survival than are fish-free waters (Wilson 1995). Therefore, small water bodies and seasonal ponds are often used for breeding. Threats include drainage of breeding sites, other hydrological alterations that may affect breeding sites, and urbanization and forestry practices that destroy or degrade nonbreeding habitat (Mitchell 1991). Many breeding sites have been lost through draining of wetlands and conversion of forests into croplands (Petranka 1998). Moves to breeding sites in fall and winter (North Carolina), breeds late fall to early spring. Eggs are laid singly or in loose chains of 2-6 eggs. Eggs hatch in 9-14 days. Metamorphosis to the terrestrial form occurs in April and May. Aggregates when breeding. S. Smith 18Feb05

Hydrography Mask:

Freshwater Only

Utilizes open water features with buffer of 250m from selected water features.

Selected Map Units:

Functional Group	Map Unit Name
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 Depression Pondshore
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 Northern Wet Longleaf Pine Savanna and Flatwoods
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 Southern Wet Pine Savanna and Flatwoods
Wetlands	Atlantic Coastal Plain Streamhead Seepage Swamp, Pocosin, and Baygall

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.

Hardy, J. D., Jr. 1969. Reproductive activity, growth and movements of AMBYSTOMA MABEEI Bishop in North Carolina. Bull. Maryland Herpetol. Soc. 5:65-67.

Hardy, J.D., Jr. and J.D. Anderson. 1970. AMBYSTOMA MABEEI Cat. Amer. Amphib. Rept. 81.1-81.2.

Harrison. 1978. Amphibians. in An annotated checklist of the biota of the coastal zone of South Carolina. R.G. Zingmark (ed.), Columbia, SC: Belle W. Baruch Institute for Marine Biology and Coastal Research, Univ. South Carolina.

Jones, T. R., A. G. Kluge, and A. J. Wolf. 1993. When theories and methodologies clash:a phylogenetic reanalysis of the North American ambystomatid salamanders (Caudata:Ambystomatidae). Systematic Biology 42:92-102.

Kraus, F. 1988. An empirical evaluation of the use of the ontogeny polarization criterion in phylogenetic inference. Systematic Zoology 37:106-141.

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.

Wilson, L. A. 1995. The Land Manager's Guide to the amphibians and reptiles of the South. Chapel Hill, NC: The Nature Conservancy.

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.