



SOUTHEAST GAP ANALYSIS PROJECT



Species Modeling Report

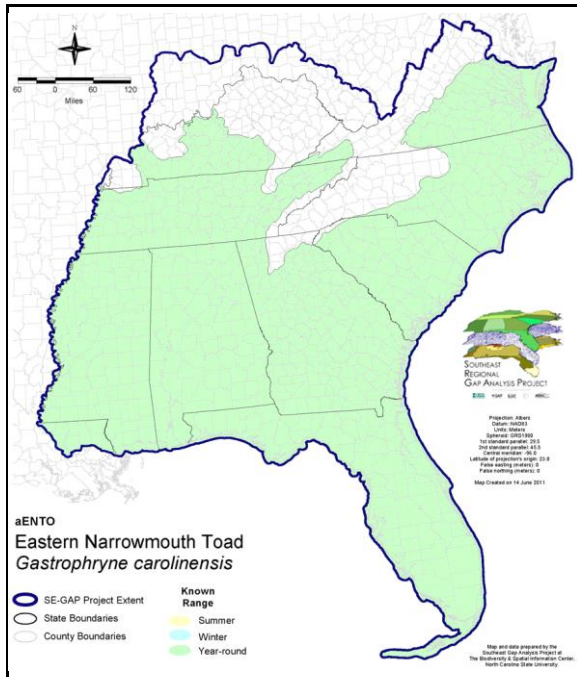
Eastern Narrowmouth Toad

Gastrophryne carolinensis

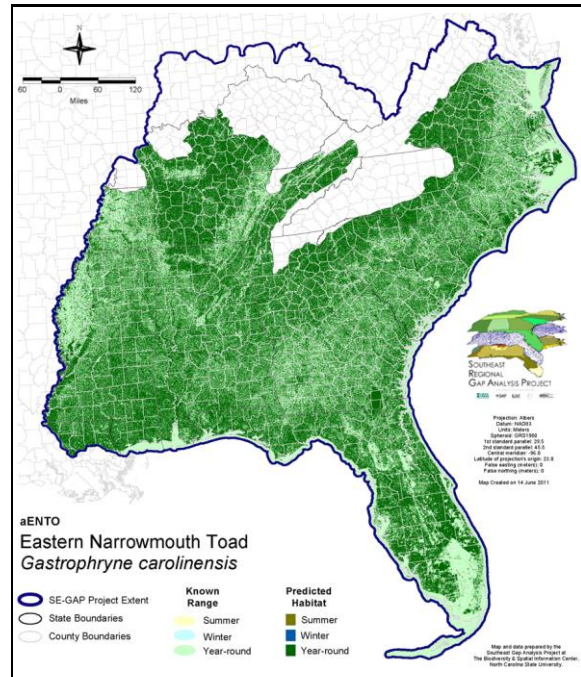
Taxa: Amphibian
 Order: Anura
 Family: Microhylidae

SE-GAP Spp Code: **aENTO**
 ITIS Species Code: 173467
 NatureServe Element Code: AAABE01010

KNOWN RANGE:



PREDICTED HABITAT:



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

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

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

Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/aENTO_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: IL (LT), KS (T), KY (N), MD (E), MS (Non-game species in need of management)

NS Global Rank: G5

NS State Rank: AL (S5), AR (S5), FL (SNR), GA (S5), IL (S2), KS (S1), KY (S4), LA (S5), MD (S1S2), MO (S5), MS (S5), NC (S5), OK (S4), SC (SNR), TN (S5), TX (S5), 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	269,748.5	< 1	6,933.3	< 1	0.0	0	0.0	0
Status 2	221,978.7	< 1	107,920.2	< 1	0.0	0	4,591.8	< 1
Status 3	3,217.8	< 1	1,145,082.7	2	63,320.0	< 1	622,226.9	1
Status 4	1,412.5	< 1	< 0.1	< 1	0.0	0	130.0	< 1
Total	496,357.4	< 1	1,259,936.3	2	63,320.0	< 1	626,948.6	1
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	51,828.6	< 1	56.3	< 1	13,604.8	< 1
Status 2	0.0	0	7,416.9	< 1	6,321.7	< 1	23.1	< 1
Status 3	56,366.5	< 1	225,350.6	< 1	0.0	0	7,166.3	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	56,366.5	< 1	284,596.0	< 1	6,378.0	< 1	20,794.1	< 1
	Native Am. Reserv.		State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	923.0	< 1	58.7	< 1	0.0	0
Status 2	0.0	0	4,574.4	< 1	615,803.1	1	93.3	< 1
Status 3	7,273.5	< 1	643,058.0	1	164,379.7	< 1	353,003.3	< 1
Status 4	0.0	0	< 0.1	< 1	74,550.1	< 1	42.3	< 1
Total	7,273.5	< 1	648,555.6	1	854,791.6	1	353,138.9	< 1
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	7,148.0	< 1	0.0	0	0.0	0
Status 2	13,106.3	< 1	70,017.6	< 1	6.1	< 1	3,887.3	< 1
Status 3	0.0	0	27,133.6	< 1	25,172.8	< 1	153,487.6	< 1
Status 4	0.0	0	0.7	< 1	3,473.3	< 1	< 0.1	< 1
Total	13,106.3	< 1	104,299.8	< 1	28,652.2	< 1	157,375.0	< 1
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%		
Status 1	0.0	0	0.0	0	350,301.2	< 1		
Status 2	389.8	< 1	0.0	0	1,056,130.3	2		
Status 3	1,897.1	< 1	1.0	< 1	3,498,137.2	8		
Status 4	51,264,775.8	89	47,667.2	< 1	51,465,189.7	89		
Total	51,267,062.7	89	47,668.2	< 1	56,369,758.3	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: A subterranean species, the eastern narrowmouth toad can be found in burrows, decaying logs and stumps, and under rocks and leaf litter (Mount 1975). This species can occur in a variety of situations where sufficient moisture and shelter is available. Suitable habitats include pine flatwoods, pine woods, mixed pine hardwoods, bottomland hardwoods, maritime forests and cypress swamps (Wilson 1995). This species also persists in pastures, suburban lawns, golf course grasses, and Florida Pine Rocklands (Bartlett & Bartlett 1999, Donnelly et al. 2001). The eastern narrowmouth toad breeds in puddles, margins of ponds and streams, and ditches (Wright and Wright 1949), in both permanent and semi-permanent environments. Eggs and larvae develop in varied water bodies including barrier beach ponds, lakes, ponds, sloughs, roadside ditches, swamps, stream margins, and cattail marshes (Gibbons and Coker 1978, Martof et al. 1980, Wilson 1995, NatureServe 2004). Lays clutch of up to about 850 eggs (divided among several batches), usually after heavy rains in spring or summer. Aquatic larvae hatch in a couple days, metamorphose into terrestrial form in about 3-10 weeks (NatureServe 2004). Amy Silvano 22Mar05

Ecosystem Classifiers: Pine Rocklands, Evergreen, Mixed, & Mesic Hardwood Forests, Maritime, Anthropogenic (Low Urban, Successional shrub/shrub (other), pasture/hay), Wetlands (Flatwoods, Shrub/Scrub, Depressional, Lakes/Pondshore, Floodplain/Riparian). Excluded ecosystems in Southern & Central Appalachians to eliminate from Blue Ridge. Amy Silvano 22Ma05

Hydrography Mask:

Freshwater Only

Slow Current Only

Utilizes flowing water features with buffers of 500m from and 30m into selected water features.

Utilizes open water features with buffers of 500m from and 30m into selected water features.

Utilizes wet vegetation features with buffers of 500m from and unlimited into selected vegetation features.

Selected Map Units:

Functional Group	Map Unit Name
Anthropogenic	Developed Open Space
Anthropogenic	Low Intensity Developed
Anthropogenic	Pasture/Hay
Anthropogenic	Successional Grassland/Herbaceous
Anthropogenic	Successional Grassland/Herbaceous (Other)
Anthropogenic	Successional Grassland/Herbaceous (Utility Swath)
Coastal Dune & Freshwater Wetland	Atlantic and Gulf Coastal Plain Interdunal Wetland
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland - Hardwood Modifier
Forest/Woodland	Atlantic Coastal Plain Central Maritime Forest
Forest/Woodland	Atlantic Coastal Plain Fall-Line Sandhills Longleaf Pine Woodland - Loblolly Modifier
Forest/Woodland	Atlantic Coastal Plain Fall-line Sandhills Longleaf Pine Woodland - Open Understory Modifier
Forest/Woodland	Atlantic Coastal Plain Fall-line Sandhills Longleaf Pine Woodland - Scrub/Shrub Understory Modifier
Forest/Woodland	Atlantic Coastal Plain Mesic Hardwood and Mixed Forest
Forest/Woodland	Atlantic Coastal Plain Northern Maritime Forest
Forest/Woodland	Atlantic Coastal Plain Northern Mixed Oak-Heath Forest
Forest/Woodland	Atlantic Coastal Plain Southern Maritime Forest
Forest/Woodland	Atlantic Coastal Plain Upland Longleaf Pine Woodland
Forest/Woodland	Central Appalachian Oak and Pine Forest
Forest/Woodland	East Gulf Coastal Plain Interior Shortleaf Pine-Oak Forest - Mixed Modifier
Forest/Woodland	East Gulf Coastal Plain Interior Shortleaf Pine-Oak Forest - Pine Modifier
Forest/Woodland	East Gulf Coastal Plain Interior Upland Longleaf Pine Woodland - Loblolly Modifier
Forest/Woodland	East Gulf Coastal Plain Interior Upland Longleaf Pine Woodland - Open Understory Modifier
Forest/Woodland	East Gulf Coastal Plain Interior Upland Longleaf Pine Woodland - Scrub/Shrub Modifier
Forest/Woodland	East Gulf Coastal Plain Maritime Forest
Forest/Woodland	East Gulf Coastal Plain Northern Loess Bluff Forest
Forest/Woodland	East Gulf Coastal Plain Northern Loess Plain Oak-Hickory Upland - Juniper Modifier

Forest/Woodland	East Gulf Coastal Plain Northern Mesic Hardwood Forest
Forest/Woodland	East Gulf Coastal Plain Southern Loess Bluff Forest
Forest/Woodland	East Gulf Coastal Plain Southern Mesic Slope Forest
Forest/Woodland	Florida Longleaf Pine Sandhill - Open Understory Modifier
Forest/Woodland	Florida Longleaf Pine Sandhill - Scrub/Shrub Understory Modifier
Forest/Woodland	Mississippi Delta Maritime Forest
Forest/Woodland	Northeastern Interior Dry Oak Forest - Mixed Modifier
Forest/Woodland	Northeastern Interior Dry Oak Forest - Virginia/Pitch Pine Modifier
Forest/Woodland	Northeastern Interior Dry Oak Forest-Hardwood Modifier
Forest/Woodland	South Florida Pine Rockland
Forest/Woodland	South-Central Interior Mesophytic Forest
Forest/Woodland	Southeast Florida Coastal Strand and Maritime Hammock
Forest/Woodland	Southeastern Interior Longleaf Pine Woodland
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
Forest/Woodland	Southern Piedmont Dry Oak-(Pine) Forest - Hardwood Modifier
Forest/Woodland	Southern Piedmont Dry Oak-(Pine) Forest - Loblolly Pine Modifier
Forest/Woodland	Southern Piedmont Dry Oak-(Pine) Forest - Mixed Modifier
Forest/Woodland	Southern Piedmont Dry Oak-Heath Forest - Hardwood Modifier
Forest/Woodland	Southern Piedmont Dry Oak-Heath Forest - Mixed Modifier
Forest/Woodland	Southern Piedmont Dry Oak-Heath Forest - Virginia/Pitch Pine Modifier
Forest/Woodland	Southern Piedmont Mesic Forest
Forest/Woodland	Southern Ridge and Valley Dry Calcareous Forest
Forest/Woodland	Southern Ridge and Valley Dry Calcareous Forest - Hardwood Modifier
Forest/Woodland	Southwest Florida Coastal Strand and Maritime Hammock
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 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 Northern Basin Peat Swamp
Wetlands	Atlantic Coastal Plain Northern Basin Swamp and Wet Hardwood Forest
Wetlands	Atlantic Coastal Plain Northern Pondshore
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
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 Florida Herbaceous Pondshore
Wetlands	Central Florida Herbaceous Seep
Wetlands	Central Florida Pine Flatwoods
Wetlands	Central Interior Highlands and Appalachian Sinkhole and Depression Pond
Wetlands	East Gulf Coastal Plain Interior Shrub Bog

Wetlands	East Gulf Coastal Plain Jackson Plain Dry Flatwoods - Open Understory Modifier
Wetlands	East Gulf Coastal Plain Jackson Plain Dry Flatwoods - Scrub/Shrub Understory Modifier
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 Near-Coast Pine Flatwoods - Offsite Hardwood Modifier
Wetlands	East Gulf Coastal Plain Near-Coast Pine Flatwoods - Open Understory Modifier
Wetlands	East Gulf Coastal Plain Near-Coast Pine Flatwoods - Scrub/Shrub Understory Modifier
Wetlands	East Gulf Coastal Plain Northern Depression Pondshore
Wetlands	East Gulf Coastal Plain Northern Seepage Swamp
Wetlands	East Gulf Coastal Plain Small Stream and River Floodplain Forest
Wetlands	East Gulf Coastal Plain Southern Depression Pondshore
Wetlands	East Gulf Coastal Plain Southern Loblolly-Hardwood Flatwoods
Wetlands	East Gulf Coastal Plain Treeless Savanna and Wet Prairie
Wetlands	Floridian Highlands Freshwater Marsh
Wetlands	Lower Mississippi River Bottomland and Floodplain Forest
Wetlands	Lower Mississippi River Bottomland Depressions - Forest Modifier
Wetlands	Lower Mississippi River Bottomland Depressions - Herbaceous Modifier
Wetlands	Mississippi River Low Floodplain (Bottomland) Forest
Wetlands	Mississippi River Riparian Forest
Wetlands	North-Central Appalachian Acidic Swamp
Wetlands	North-Central Appalachian Seepage Fen
Wetlands	North-Central Interior and Appalachian Rich Swamp
Wetlands	South Florida Bayhead Swamp
Wetlands	South Florida Cypress Dome
Wetlands	South Florida Dwarf Cypress Savanna
Wetlands	South Florida Freshwater Slough and Gator Hole
Wetlands	South Florida Hardwood Hammock
Wetlands	South Florida Pine Flatwoods
Wetlands	South Florida Pond-Apple/Popash Slough
Wetlands	South Florida Wet Marl Prairie
Wetlands	South Florida Willow Head
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	South-Central Interior/Upper Coastal Plain Wet Flatwoods
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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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

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The Biodiversity and Spatial Information
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