



# Species Modeling Report

## Mud Snake

Farancia abacura

- Taxa: Reptilian
- Order: Squamata
- Family: Colubridae

#### **KNOWN RANGE:**



### SE-GAP Spp Code: **rMUSN** ITIS Species Code: 174164 NatureServe Element Code: ARADB14010

#### PREDICTED HABITAT:



 Range Map Link:
 http://www.basic.ncsu.edu/segap/datazip/maps/SE\_Range\_rMUSN.pdf

 Predicted Habitat Map Link:
 http://www.basic.ncsu.edu/segap/datazip/maps/SE\_Dist\_rMUSN.pdf

 GAP Online Tool Link:
 http://www.gapserve.ncsu.edu/segap/segap/index2.php?species=rMUSN

 Data Download:
 http://www.basic.ncsu.edu/segap/datazip/region/vert/rMUSN\_se00.zip

#### **PROTECTION STATUS:**

Reported on March 14, 2011

Federal Status: ---

State Status: IN (SE), KY (N), MS (Non-game species in need of management)

NS Global Rank: G5

NS State Rank: AL (S5), AR (S5), FL (SNR), GA (S5), IL (SNR), IN (SNR), KY (S3), LA (S5), MO (SNR), MS (S5), NC (S4), OK (S1), 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	214,264.9	2	5,537.8	< 1	0.0	0	0.0	0
Status 2	173,780.7	1	37,603.8	< 1	0.0	0	533.6	< 1
Status 3	1,207.4	< 1	281,773.7	2	1,891.6	< 1	119,290.7	< 1
Status 4	1,279.5	< 1	< 0.1	< 1	0.0	0	4.2	< 1
Total	390,532.5	3	324,915.4	3	1,891.6	< 1	119,828.5	< 1
LIS Dept. of Energy		US Nat. Park Service			NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	222,872.4	2	136.4	< 1	7,198.6	< 1
Status 2	0.0	0	5,332.4	< 1	6,858.4	< 1	32.1	< 1
Status 3	15,358.1	< 1	266,592.3	2	0.0	0	1,544.1	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	15,358.1	< 1	494,797.1	4	6,994.8	< 1	8,774.8	< 1
Notive Am Percent		State Dark/Hist Dark		State WMA/G	State W/MA/Campland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	<i>,</i> °	146 5	< 1	0.0	<i>/</i> 0	0.0	0
Status 2	0.0	0	636.2	< 1	667 026 0	5	0.0	0
Status 3	1.833.5	< 1	461.508.6	4	96,758,5	< 1	157.666.1	1
Status 4	0.0	0	< 0.1	< 1	7.796.1	< 1	4.4	< 1
Total	1,833.5	< 1	462,291.4	4	771,580.5	6	157,670.5	1
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	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	1,910.2	< 1	0.0	0	0.0	0
Status 2	12,851.5	< 1	42,444.2	< 1	0.0	0	1,790.8	< 1
Status 3	0.0	0	18,641.1	< 1	6,265.4	< 1	86,586.0	< 1
Status 4	0.0	0	0.0	0	181.2	< 1	0.0	0
Total	12,851.5	< 1	62,995.4	< 1	6,446.6	< 1	88,376.9	< 1
Private Land - No Res.			Water			Overa	all Total	
	ha	%	ha	%			ha	%
Status 1	0.0	0	0.0	0			452,066.8	4
Status 2	376.5	< 1	0.0	0			949,266.2	7
Status 3	1,399.6	< 1	1.0	< 1			1,518,317.6	14
Status 4	9,514,681.9	74	48,490.5	< 1			9,578,954.5	75
Total	9,516,458.0	74	48,491.5	< 1			12,498,605.0	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:

ption: Primarily aquatic (Palmer & Braswell 1995, Wilson 1995), mud snakes are found in and around swamps, ponds, lakes, floodplains, and sluggish creeks with abundant aquatic vegetation and mud-bottoms for burrowing (Mount 1975, Wilson 1995). 'In contrast to F. erytrogramma, usually occupies cypress ponds, flatwoods ponds, quiet lakes and lagoons, wet prairies, swamps, and bogs, usually still waters with aquatic vegetation and debris. Also found in small acidic streams with swampy edges where it feeds on sirens and amphiumas (Neill 1964).' Amy Silvano 18Aug05

Exosystem classifiers: All wetland MU's (excluding Coastal Dune & Tidal Salt Lagoons). Amy Silvano 18Aug05

#### Hydrography Mask:

Slow Current Only

Utilizes flowing water features with buffers of 60m from and 60m into selected water features. Utilizes open water features with buffers of 60m from and 60m into selected water features. Utilizes wet vegetation features with buffer of unlimited into selected vegetation features.

Selected Map Units:	
Functional Group	Map Unit Name
Anthropogenic	Pasture/Hay
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Northern Tidal Wooded Swamp
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Southern Tidal Wooded Swamp
Brackish Tidal Marsh & Wetland	East Gulf Coastal Plain Tidal Wooded Swamp
Brackish Tidal Marsh & Wetland	South Florida Everglades Sawgrass Marsh
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 (Brackish/Salt)
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	Atlantic Coastal Plain Xeric River Dune
Wetlands	Central Florida Herbaceous Pondshore
Wetlands	Central Florida Herbaceous Seep
Wetlands	Central Florida Pine Flatwoods
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 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	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

CITATIONS: Ashton, R. E., Jr., and P. S. Ashton. 1981. Handbook of Reptiles and Amphibians of Florida. Part One: The Snakes. Windward Pub. Co., Miami, Florida. 176 pp.

> 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.

Fitch, H. S. 1970. Reproductive cycles of lizards and snakes. Univ. Kansas Museum Natural History Miscellaneous Publication 52:1-247.

McDaniel, V. R., and J. P. Karges. 1983. Farancia abacura.Cat. Am. Amph. Rep. 314.1-

Minton, S. A., Jr. 1972. Amphibians and reptiles of Indiana. Indiana Academy Science Monographs 3. v + 346 pp.

<sup>314.2.</sup> 

Mount, R. H. 1975. The Reptiles and Amphibians of Alabama. Auburn University Agricultural Experiment Station, Auburn, Alabama. vii + 347 pp.

Semlitsch, R. D., J. H. K. Pechman, and J. W. Gibbons. 1988. Annual emergance of juvenile mud snakes (FARANCIA ABACURA) at aquatic habitats. Copeia 1988:243-245.

Tennant, A. 1984. The Snakes of Texas. Texas Monthly Press, Austin, Texas. 561 pp.

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