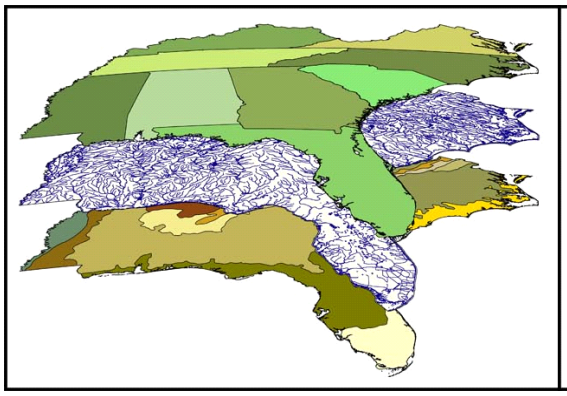


SOUTHEAST GAP ANALYSIS PROJECT

USGS gap BaSIC NARSAL

Species Modeling Report

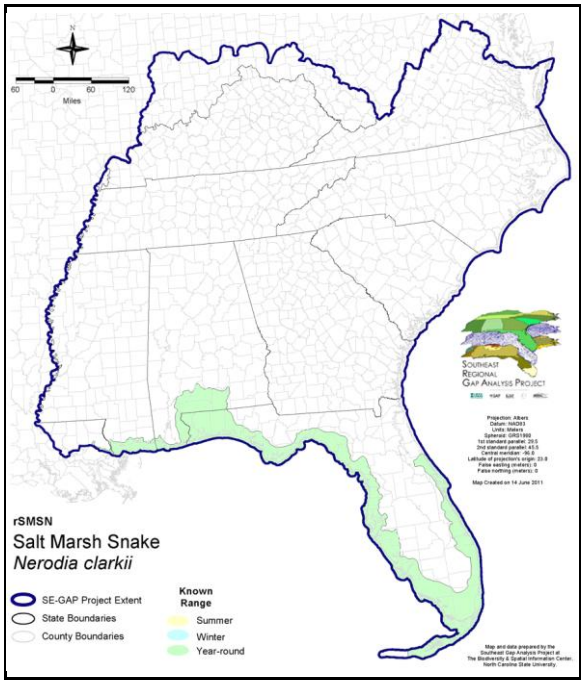
Salt Marsh Snake

Nerodia clarkii

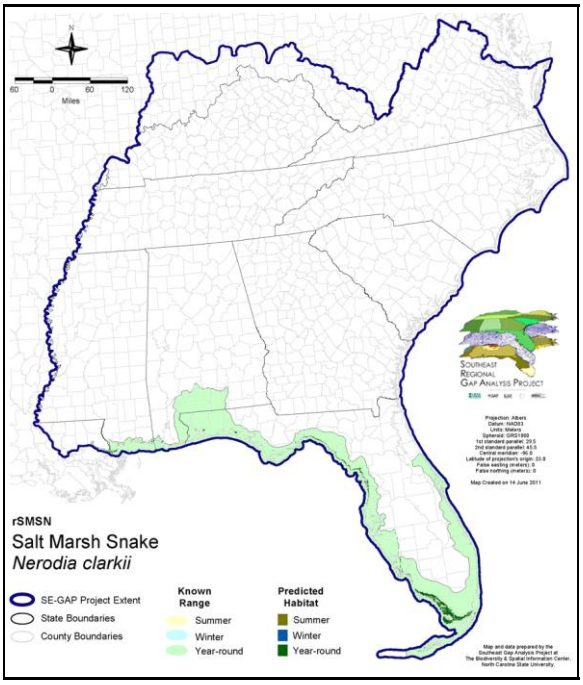
Taxa: Reptilian
Order: Squamata
Family: Colubridae

SE-GAP Spp Code: **rSMSN**
ITIS Species Code: 209370
NatureServe Element Code: ARADB22090

KNOWN RANGE:



PREDICTED HABITAT:



Range Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Range_rSMSN.pdf
Predicted Habitat Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_rSMSN.pdf
GAP Online Tool Link: http://www.gapserve.ncsu.edu/segap/segap/index2.php?species=rSMSN
Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/rSMSN_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---
State Status: ---
NS Global Rank: G4
NS State Rank: AL (S2), FL (SNR), LA (S3S4), MS (S2?), TX (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	24,408.8	6	0.0	0	0.0	0	0.0	0
Status 2	10,513.1	3	0.0	0	0.0	0	0.0	0
Status 3	0.0	0	0.0	0	0.0	0	2,519.6	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	34,921.9	9	0.0	0	0.0	0	2,519.6	< 1

	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	167,319.1	42	0.0	0	45.3	< 1
Status 2	0.0	0	917.5	< 1	11,353.9	3	24.2	< 1
Status 3	0.0	0	4,051.7	1	0.0	0	0.0	0
Status 4	0.0	0	3.0	0	0.0	0	0.0	0
Total	0.0	0	172,291.3	44	11,353.9	3	69.5	< 1

	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	45.9	< 1	14,762.6	4	0.0	0
Status 3	0.0	0	46,818.8	12	0.0	0	1,009.4	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	0.0	0	46,864.7	12	14,762.6	4	1,009.4	< 1

	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	415.0	< 1	0.0	0	0.0	0
Status 2	9,046.8	2	166.6	< 1	0.0	0	0.0	0
Status 3	0.0	0	699.8	< 1	0.0	0	287.1	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	9,046.8	2	1,281.3	< 1	0.0	0	287.1	< 1

	Private Land - No Res.		Water		Overall Total	
	ha	%	ha	%	ha	%
Status 1	0.0	4	0.0	0	192,188.3	49
Status 2	0.8	< 1	0.0	4	46,831.5	12
Status 3	125.6	< 1	< 0.1	< 1	55,512.0	14
Status 4	79,118.0	20	21,197.8	5	100,318.9	25
Total	79,244.6	20	21,198.1	5	394,850.7	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: As implied by the name the salt marsh snake inhabits salt marsh environments as well as mangrove swamps (Mount 1975, Dundee & Rossman 1988). Amy Silvano 23Aug05

Notes: N. fasciata=freshwater, N. clarkii previously considered a subspecies under N.fasciata (N. fasciata clarkii) is found in brackish, saltwater & mangrove. Amy Silvano 23Aug05

'N. f. clarkii in brackish or salt marshes and offshore islands. N. f. compressicauda found in black and red mangrove swamps, canals, and brackish swamps of south Florida (Ashton 1988). # N. clarkii taeniata [Atlantic salt marsh snake], found in coastal salt marshes and mangrove swamps from brackish to seawater. Also tidal creeks, ditches, and pools in association with glassworts and black mangrove (Kochman 1992). # N. c. clarkii found in coastal salt marshes with Spartina, blackrush (Juncus roemerianus), and other halophytes. Also mangrove swamps. Grassy edges of brackish creeks and ponds (Kochman 1992). # Two forms of species found in aquatic habitat, salt and freshwater. Fresh form in shallow parts of streams, rivers, lakes, swamps, marshes, ponds, sloughs, oxbows, and may be found in crayfish and muskrat burrows. Salt form in salt marshes, mangrove swamps, and estuaries (Ernst and Barbour 1989).' ---Directly from FL-GAP state notes for N. fasciata.

Ecosystem Classifiers: Open water, Tidal marshes and wetlands. Amy Silvano 23Aug05

Hydrography Mask:

Brackish/Saltwater Only

Utilizes flowing water features with buffers of 60m from and 120m into selected water features.

Utilizes open water features with buffers of 60m from and 120m into selected water features.

Utilizes wet vegetation features with buffers of 60m from and unlimited into selected vegetation features.

Selected Map Units:

Functional Group	Map Unit Name
Brackish Tidal Marsh & Wetland	East Gulf Coastal Plain Tidal Wooded Swamp
Brackish Tidal Marsh & Wetland	Florida Big Bend Salt-Brackish Tidal Marsh
Brackish Tidal Marsh & Wetland	Mississippi Sound Salt and Brackish Tidal Marsh
Brackish Tidal Marsh & Wetland	South Florida Everglades Sawgrass Marsh
Brackish Tidal Marsh & Wetland	South Florida Mangrove Swamp
Brackish Tidal Marsh & Wetland	Southwest Florida Perched Barriers Salt Swamp and Lagoon - Mangrove Modifier
Brackish Tidal Marsh & Wetland	Southwest Florida Perched Barriers Salt Swamp and Lagoon - Marsh Modifier
Freshwater Tidal Marsh & Wetland	Florida Big Bend Fresh-Oligohaline Tidal Marsh
Water	Open Water (Brackish/Salt)

CITATIONS:

Ashton, R. E., Jr., and P. S. Ashton. 1988. Handbook of reptiles and amphibians of Florida. Part Three. The amphibians. Windward Publ. Co., Miami.

Dundee, H. A., and D. A. Rossman. 1989. The amphibians and reptiles of Louisiana. Louisiana State Univ. Press, Baton Rouge.

Ernst, C. H., and R. W. Barbour. 1989. Turtles of the world. Smithsonian Institution Press, Washington, D.C. xii + 313 pp.

Kochman, H. I. Atlantic salt marsh snake. Rare and Endangered Biota of Florida: Amphibians and Reptiles. P. E. Moler ed. Gainesville, Florida: University of Florida; 1992; 3 pp. 111-116.

Kochman, H. I. Gulf salt marsh snake. Rare and Endangered Biota of Florida: Amphibians and Reptiles. P. E. Moler ed. Gainesville, Florida: University of Florida; 1992; 3 pp. 237-241.

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

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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.