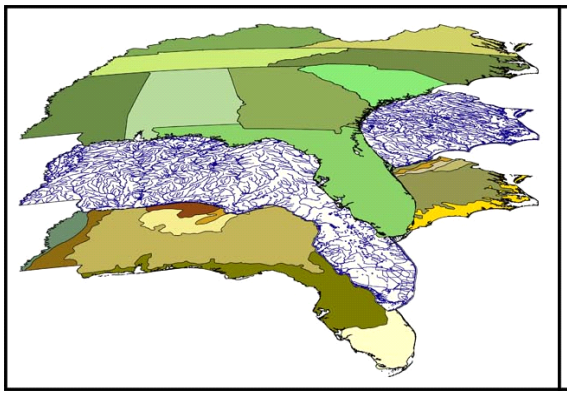


SOUTHEAST GAP ANALYSIS PROJECT

Species Modeling Report

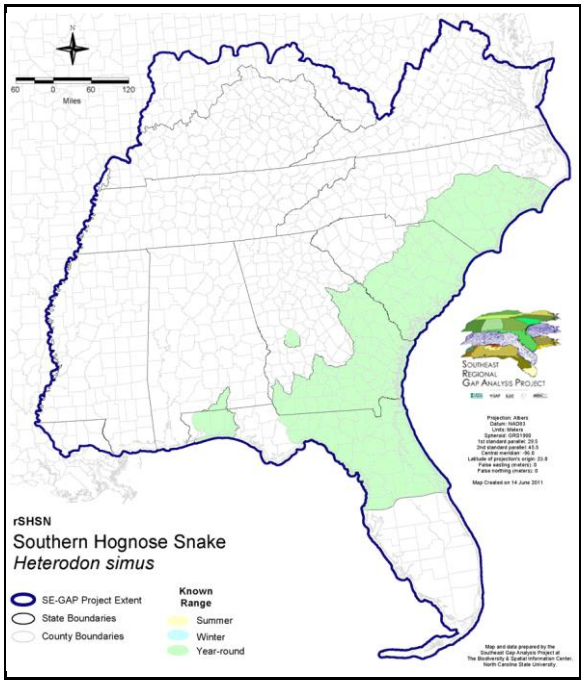
Southern Hognose Snake

Heterodon simus

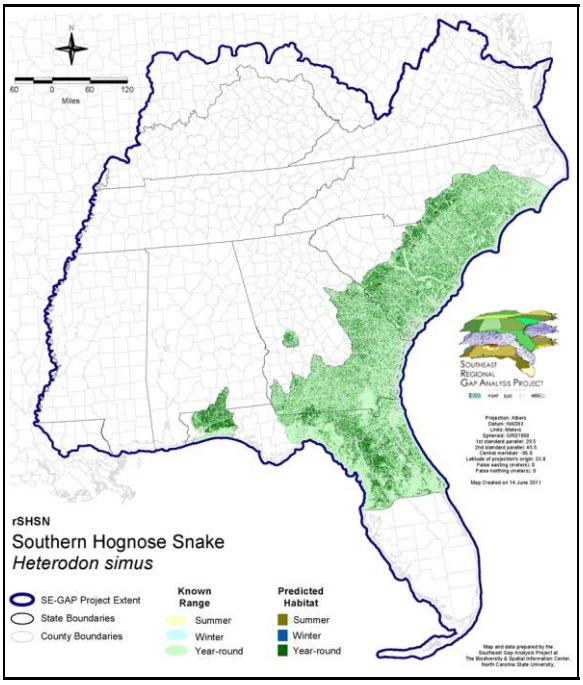
Taxa: Reptilian
Order: Squamata
Family: Colubridae

SE-GAP Spp Code: **rSHSN**
ITIS Species Code: 174156
NatureServe Element Code: ARADB17030

KNOWN RANGE:



PREDICTED HABITAT:



Range Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Range_rSHSN.pdf
Predicted Habitat Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_rSHSN.pdf
GAP Online Tool Link: http://www.gapserve.ncsu.edu/segap/segap/index2.php?species=rSHSN
Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/rSHSN_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---
State Status: AL (SP), GA (T), MS (LE), NC (SC)
NS Global Rank: G2
NS State Rank: AL (SH), FL (S2), GA (S2), MS (SX), NC (S2), SC (SNR)

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	4,240.2	< 1	373.0	< 1	0.0	0	0.0	0
Status 2	17,025.8	< 1	5,153.1	< 1	0.0	0	27.9	< 1
Status 3	0.0	0	121,320.7	2	0.0	0	215,171.5	3
Status 4	0.2	< 1	0.0	0	0.0	0	0.0	0
Total	21,266.1	< 1	126,846.8	2	0.0	0	215,199.4	3

	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	2,556.0	< 1	68.9	< 1	6,041.6	< 1
Status 2	0.0	0	7,017.5	< 1	5,016.8	< 1	0.0	0
Status 3	33,127.2	< 1	140.2	< 1	0.0	0	1,169.6	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	33,127.2	< 1	9,713.7	< 1	5,085.7	< 1	7,211.2	< 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	265.0	< 1	42,414.7	< 1	0.0	0
Status 3	0.0	0	64,211.5	< 1	19,656.5	< 1	124,343.0	2
Status 4	0.0	0	0.0	0	625.6	< 1	33.3	< 1
Total	0.0	0	64,476.5	< 1	62,696.7	< 1	124,376.3	2

	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	471.2	< 1	0.0	0	0.0	0
Status 2	93.9	< 1	8,105.7	< 1	0.0	0	672.7	< 1
Status 3	0.0	0	3,784.0	< 1	10,273.1	< 1	19,839.1	< 1
Status 4	0.0	0	0.0	0	763.7	< 1	< 0.1	< 1
Total	93.9	< 1	12,360.8	< 1	11,036.9	< 1	20,511.8	< 1

	Private Land - No Res.		Water		Overall Total	
	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	13,750.8	< 1
Status 2	0.0	0	0.0	0	85,792.9	1
Status 3	212.7	< 1	0.0	0	613,248.9	11
Status 4	5,869,177.9	88	524.1	< 1	5,871,750.3	88
Total	5,869,390.6	88	524.1	< 1	6,584,542.9	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: Southern hognose snakes are inhabitants of xeric environments. These secretive, fossorial snakes are most often encountered in sandy, friable soil in scrub habitats of pine and turkey oak, in dry pine flatwoods, and in other xeric communities having suitable soil.

Habitats include sandhills, pine-scrub oak, pine and wiregrass flatwoods, and other xeric communities.(Wilson 1995)# Sandy soils [as in eastern], but in more xeric areas , sand pine, longleaf pine/turkey oak. # Sandhills, pine and wiregrass flatwoods, longleaf-turkey oak. Sandy/xeric. A burrower. (Ernst and Barbour 1989). # Upland hammocks, dry river floodplains, wiregrass flatwoods, fields, and groves (Carr and Goin 1955).# Common in coastal scrub (Fernald 1989).

Quoted from State Habitat Notes: Amy Silvano 18aug05

Ecosystem Classifiers: Evergreen forest, Xeric Flat, & Xeric Uplands, Maritime Forest, Glades & Barrens. Amy Silvano 18Aug05

Selected Map Units:

Functional Group	Map Unit Name
Anthropogenic	Bare Sand
Anthropogenic	Pasture/Hay
Anthropogenic	Successional Grassland/Herbaceous
Anthropogenic	Successional Grassland/Herbaceous (Other)
Anthropogenic	Successional Grassland/Herbaceous (Utility Swath)
Forest/Woodland	Alabama Ketona Glade and Woodland
Forest/Woodland	Appalachian Serpentine Woodland
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 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 Alkaline Glade and Woodland
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 Plain Oak-Hickory Upland - Juniper Modifier
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	Ridge and Valley Calcareous Valley Bottom Glade and Woodland
Forest/Woodland	Southeast Florida Coastal Strand and Maritime Hammock
Forest/Woodland	Southeastern Interior Longleaf Pine Woodland
Forest/Woodland	Southern Coastal Plain Oak Dome and Hammock
Forest/Woodland	Southern Piedmont Mafic Hardpan Woodland
Forest/Woodland	Southwest Florida Coastal Strand and Maritime Hammock

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.

Conant, R. and J. T. Collins. 1991. A field guide to reptiles and amphibians:eastern and central North America. Third edition. Houghton Mifflin Co., Boston, Massachusetts. 450 pp.

Edgren, Richard A. 1955. The natural history of the hog- nosed snakes, genus Heterodon:a review. Herpetologica 11:105-117.

Ernst, C. H., and R. W. Barbour. 1989. Snakes of eastern North America. George Mason Univ. Press, Fairfax, Virginia. 282 pp.

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.

Meylan, P. A. 1985. Heterodon simus. Cat. Am. Amph. Rep. 375.1-375.2.

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

Tuberville, T.D., J.R. Bodie, J.B. Jensen, L. LaClaire, J.W.Gibbons. 2000. Apparent decline of the southern hog-nosed snake, Heterodon simus. J. Elisha Mitchell Sci. Soc. 116:19-40.

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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.