



# SOUTHEAST GAP ANALYSIS PROJECT



## Species Modeling Report

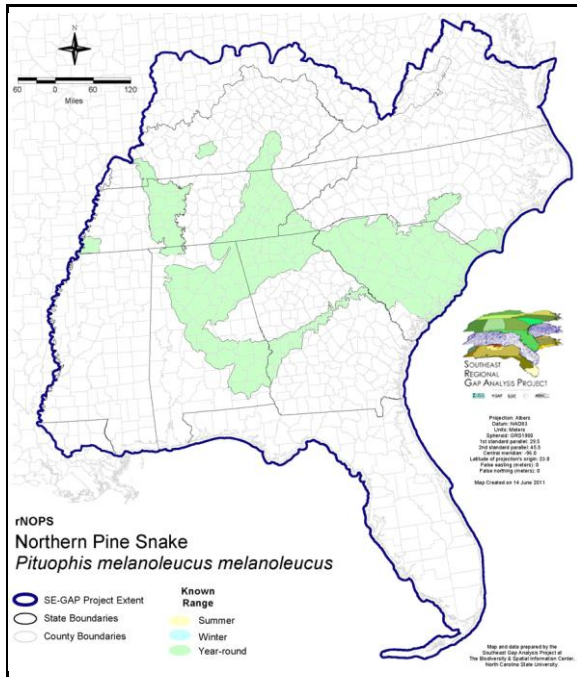
### Northern Pine Snake

*Pituophis melanoleucus melanoleucus*

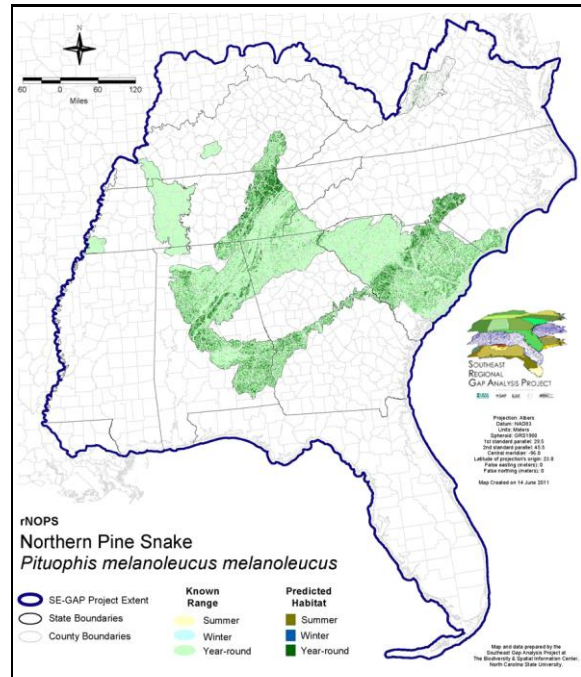
Taxa: Reptilian  
 Order: Squamata  
 Family: Colubridae

SE-GAP Spp Code: **rNOPS**  
 ITIS Species Code: 209397  
 NatureServe Element Code: ARADB26012

#### KNOWN RANGE:



#### PREDICTED HABITAT:



Range Map Link: [http://www.basic.ncsu.edu/segap/datazip/maps/SE\\_Range\\_rNOPS.pdf](http://www.basic.ncsu.edu/segap/datazip/maps/SE_Range_rNOPS.pdf)

Predicted Habitat Map Link: [http://www.basic.ncsu.edu/segap/datazip/maps/SE\\_Dist\\_rNOPS.pdf](http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_rNOPS.pdf)

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

Data Download: [http://www.basic.ncsu.edu/segap/datazip/region/vert/rNOPS\\_se00.zip](http://www.basic.ncsu.edu/segap/datazip/region/vert/rNOPS_se00.zip)

#### PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: KY (T), MS (Non-game species in need of management), NC (SC), NJ (T), TN (T)

NS Global Rank: G4T4

NS State Rank: AL (S3), FL (SNR), GA (S2), KY (S2), MS (SNA), NC (S3), NJ (S2), SC (SNR), TN (S3), VA (S1S3), WV (SH)

**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	2,444.9	< 1	2,047.2	< 1	0.0	0	0.0	0
Status 2	14,764.5	< 1	34,979.1	< 1	0.0	0	0.0	0
Status 3	0.0	0	232,439.4	6	3,420.9	< 1	103,171.4	2
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	17,209.4	< 1	269,465.8	7	3,420.9	< 1	103,171.4	2
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	8,497.1	< 1	0.0	0	0.0	0
Status 2	0.0	0	1,319.4	< 1	13.3	< 1	0.0	0
Status 3	36,077.2	< 1	22,543.3	< 1	0.0	0	0.0	0
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	36,077.2	< 1	32,359.8	< 1	13.3	< 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	413.7	< 1	19.0	< 1	0.0	0
Status 2	0.0	0	1,704.5	< 1	73,528.6	2	0.0	0
Status 3	0.0	0	8,903.7	< 1	19,352.5	< 1	17,309.7	< 1
Status 4	0.0	0	0.0	0	23,450.6	< 1	0.0	0
Total	0.0	0	11,021.9	< 1	116,350.7	3	17,309.7	< 1
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	2,151.3	< 1	0.0	0	0.0	0
Status 2	< 0.1	< 1	15,016.6	< 1	0.0	0	326.3	< 1
Status 3	0.0	0	1,215.8	< 1	860.7	< 1	664.6	< 1
Status 4	0.0	0	0.5	< 1	158.3	< 1	0.0	0
Total	< 0.1	< 1	18,384.1	< 1	1,019.0	< 1	990.9	< 1
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%		
Status 1	0.0	0	0.0	0	15,573.2	< 1		
Status 2	0.0	0	0.0	0	141,652.4	3		
Status 3	15.1	< 1	0.0	0	445,974.3	16		
Status 4	3,251,723.7	79	641.5	< 1	3,299,425.1	80		
Total	3,251,738.8	79	641.5	< 1	3,902,625.1	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: Pine snakes inhabit xeric environments (Mount 1975). They are most commonly associated with sandy habitats of longleaf pine, turkey oak, sandhills, and pine dry flatwoods (Mount 1975, FL-GAP 2002). Outside the Coastal Plain, this snake is usually found in dry upland forests and ridges such as Virginia, shortleaf, or loblolly pine habitat (Wilson 1995). Mitchell (1998) describes VA habitat (outside CP) from anecdotal information as 'dry, open, and on mountain slopes, ridges, or hills, sometimes abundant rock cover.' Typically, these pine snakes are rarely found in riparian zones, hardwoods, or closed canopy conditions (NatureServe 2005). Amy Silvano 23Aug 05

Ecocystem Classifiers: Evergreen Forests, Bare Sand, Flatwoods and Mixed Forest, Xerix Uplands, and Rock outcrop (Talus Systems only) in all physio-regions EXCEPT CP. Amy Silvano 23Aug05

### Selected Map Units:

Functional Group	Map Unit Name
Anthropogenic	Bare Sand
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland - Pine Modifier
Forest/Woodland	Appalachian Serpentine Woodland
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 Upland Longleaf Pine Woodland
Forest/Woodland	Central Appalachian Oak and Pine Forest
Forest/Woodland	Central Appalachian Pine-Oak Rocky Woodland
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 Northern Loess Plain Oak-Hickory Upland - Juniper Modifier
Forest/Woodland	Northeastern Interior Dry Oak Forest - Mixed Modifier
Forest/Woodland	Northeastern Interior Dry Oak Forest - Virginia/Pitch Pine Modifier
Forest/Woodland	Southeastern Interior Longleaf Pine Woodland
Forest/Woodland	Southern Appalachian Low Mountain Pine Forest
Forest/Woodland	Southern Piedmont Dry Oak-(Pine) Forest - Loblolly Pine 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 Ridge and Valley Dry Calcareous Forest - Pine Modifier
Rock Outcrop	Allegheny-Cumberland Sandstone Box Canyon and Rockhouse
Rock Outcrop	Central Interior Acidic Cliff and Talus
Rock Outcrop	Central Interior Calcareous Cliff and Talus
Rock Outcrop	North-Central Appalachian Acidic Cliff and Talus
Rock Outcrop	North-Central Appalachian Circumneutral Cliff and Talus
Rock Outcrop	Southern Appalachian Granitic Dome
Rock Outcrop	Southern Appalachian Rocky Summit
Rock Outcrop	Southern Piedmont Granite Flatrock
Wetlands	Atlantic Coastal Plain Northern Wet Longleaf Pine Savanna and Flatwoods
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 Southern Loblolly-Hardwood Flatwoods

**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.

Burger, J., and R. T. Zappalorti. 1986. Nest site selection by pine snakes, *PITUOPHIS MELANOLEUCUS*, in the New Jersey Pine Barrens. *Copeia* 1986:116-121.

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

Green, N. B., and T. K. Pauley. 1987. Amphibians and reptiles in West Virginia. University of Pittsburg Press, Pittsburg, Pennsylvania. xi + 241 pp.

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

Nussbaum, R. A., and E. D. Brodie, Jr. and R. M. Storm. 1983. Amphibians and Reptiles of the Pacific Northwest. University Press of Idaho. 332 pp.

Parker, W. S., and W. S. Brown. 1980. Comparative ecology of two colubrid snakes, *Masticophis t. taeniatus* and *Pituophis melanoleucus deserticola*, in northern Utah. Milwaukee Pub. Mus. Pub. Biol. Geol. 7. 104 pp.

Parker, W.S. and W.S. Brown. 1980. Comparative ecology of two colubrid snakes, *MASTICOPHIS T. TAENIATUS* and *PITUOPHIS MELANOLEUCUS DESERTICOLA* in northern Utah. Milwaukee Pub. Mus. Publ. Biol. and Geol. No. 7, i-viii+104 pp.

Stebbins, R. C. 1985. A Field Guide to Western Reptiles and Amphibians. Second Edition. Houghton Mifflin Company, Boston, Massachusetts. xiv + 336 pp.

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  
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