



SOUTHEAST GAP ANALYSIS PROJECT



Species Modeling Report

Smooth Earth Snake

Virginia valeriae

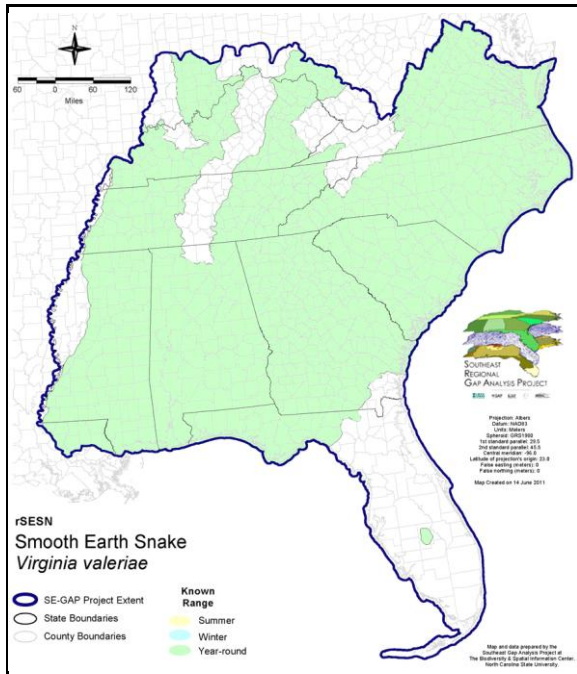
Taxa: Reptilian
Order: Squamata
Family: Colubridae

SE-GAP Spp Code: **rSESN**

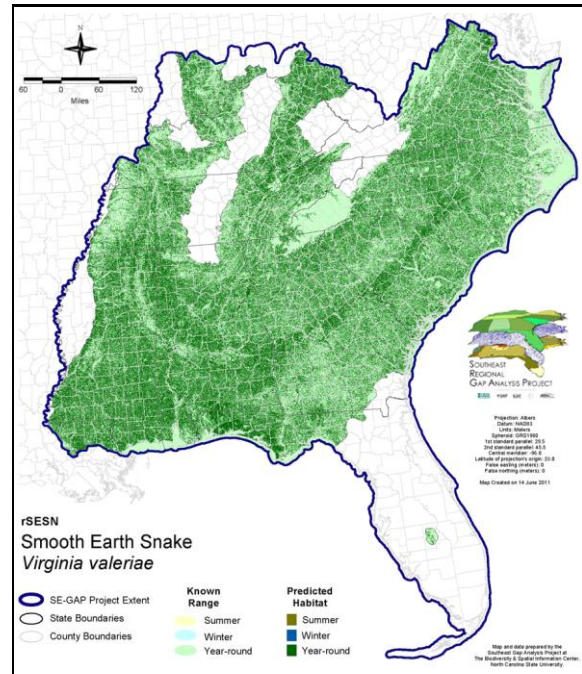
ITIS Species Code: 174151

NatureServe Element Code: ARADB39020

KNOWN RANGE:



PREDICTED HABITAT:



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

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

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

Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/rSESN_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: KS (T), KY (N), MS (Non-game species in need of management), NC (W2), NJ (U), OH (SC)

NS Global Rank: G5

NS State Rank: AL (S5), AR (S4), DC (S4), DE (S1), FL (SNR), GA (S4?), IA (S3), IL (S4), IN (SNR), KS (S3), KY (S4), LA (S4), MD (S455), MO (SNR), MS (S5), NC (S3), NJ (SU), OH (S2), OK (S4), PA (SH), SC (SNR), TN (S5), TX (S5), VA (S5), WV (S3)

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	31,965.2	< 1	2,774.8	< 1	0.0	0	0.0	0
Status 2	70,146.7	< 1	77,271.4	< 1	0.0	0	4,116.4	< 1
Status 3	1,927.1	< 1	909,896.5	2	51,716.2	< 1	520,443.9	1
Status 4	36.5	< 1	0.0	0	0.0	0	76.3	< 1
Total	104,075.5	< 1	989,942.7	2	51,716.2	< 1	524,636.6	1
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	19,537.6	< 1	77.0	< 1	0.0	0
Status 2	0.0	0	5,157.1	< 1	7,179.7	< 1	50.0	< 1
Status 3	54,468.4	< 1	50,143.1	< 1	0.0	0	4,110.5	< 1
Status 4	0.0	0	1.0	2	0.0	0	0.0	0
Total	54,468.4	< 1	74,839.0	< 1	7,256.7	< 1	4,160.5	< 1
	Native Am. Reserv.		State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	1,114.3	< 1	56.8	< 1	0.0	0
Status 2	0.0	0	4,124.1	< 1	290,498.3	< 1	529.7	< 1
Status 3	6,159.2	< 1	127,412.9	< 1	114,704.2	< 1	159,485.0	< 1
Status 4	0.0	0	0.0	0	78,010.0	< 1	47.9	< 1
Total	6,159.2	< 1	132,651.3	< 1	483,269.3	1	160,062.7	< 1
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	6,898.5	< 1	0.0	0	0.0	0
Status 2	6,031.8	< 1	36,531.7	< 1	0.3	< 1	743.7	< 1
Status 3	0.0	0	5,271.4	< 1	7,477.2	< 1	16,698.7	< 1
Status 4	0.0	0	0.3	< 1	2,342.3	< 1	0.0	0
Total	6,031.8	< 1	48,701.9	< 1	9,819.7	< 1	17,442.4	< 1
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%		
Status 1	0.0	0	0.0	0	62,424.2	< 1		
Status 2	0.0	0	0.0	4	502,381.1	1		
Status 3	155.3	< 1	1.1	< 1	2,030,070.6	7		
Status 4	38,612,102.5	91	25,008.4	< 1	38,795,598.9	92		
Total	38,612,257.8	91	25,009.7	< 1	41,390,474.8	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: Terrestrial and highly secretive, the smooth earth snake can be found in open woodlands of both mesic and dry, deciduous and mixed woodlands. (Conant & Collins 1998, Palmer and Braswell 1995, Wilson 1995). Typical habitat for this species includes open-canopied hardwood, pine, and mixed pine-hardwoods, exposed rocky slopes in mixed deciduous-pine associations, grassy-rocky slopes, mesic hammocks, rocky sparse woods, old fields, vacant lots, wooded or brushy residential areas. However, smooth earth snakes are most commonly encountered along the margins of forests or forest ecotone environments and wooded residential areas (Mitchell 1994, Wilson 1995, Mount 1975).

Ecosystem Classifiers: Xeric, Evergreen, Mixed, Mesic, & Maritime Forests, Low Urban, disturbed, Flatwoods, Floodplain/Riparian (No herbaceous Modifiers). Amy Silvano 29Aug05

Elevation Mask: < 610m

Mask of Forest/Open Ecotone: Include within 250m of ecotone edge.

Mask of Woodlands and Shrublands: Include all woodland and shrubland interiors and 250m buffer from them.

Selected Map Units:

Functional Group	Map Unit Name
Anthropogenic	Low Intensity Developed
Anthropogenic	Medium Intensity Developed
Anthropogenic	Successional Grassland/Herbaceous
Anthropogenic	Successional Grassland/Herbaceous (Other)
Anthropogenic	Successional Grassland/Herbaceous (Utility Swath)
Anthropogenic	Successional Shrub/Scrub (Clear Cut)
Anthropogenic	Successional Shrub/Scrub (Other)
Anthropogenic	Successional Shrub/Scrub (Utility Swath)
Forest/Woodland	Alabama Ketona Glade and Woodland
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland - Hardwood Modifier
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland - Pine Modifier
Forest/Woodland	Appalachian Hemlock-Hardwood Forest
Forest/Woodland	Appalachian Serpentine Woodland
Forest/Woodland	Appalachian Shale Barrens
Forest/Woodland	Atlantic Coastal Plain Central Maritime Forest
Forest/Woodland	Atlantic Coastal Plain Dry and Dry-Mesic Oak 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 - Offsite Hardwood 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 Alkaline Glade and Woodland
Forest/Woodland	Central Appalachian Oak and Pine Forest
Forest/Woodland	Central Appalachian Pine-Oak Rocky Woodland
Forest/Woodland	Central Interior Highlands Calcareous Glade and Barrens
Forest/Woodland	Central Interior Highlands Dry Acidic Glade and Barrens
Forest/Woodland	Cumberland Sandstone Glade and Barrens
Forest/Woodland	East Gulf Coastal Plain Black Belt Calcareous Prairie and Woodland - Woodland Modifier
Forest/Woodland	East Gulf Coastal Plain Interior Shortleaf Pine-Oak Forest - Hardwood Modifier
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 - Offsite Hardwood 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 Limestone Forest
Forest/Woodland	East Gulf Coastal Plain Maritime Forest
Forest/Woodland	East Gulf Coastal Plain Northern Dry Upland Hardwood Forest
Forest/Woodland	East Gulf Coastal Plain Northern Loess Bluff Forest
Forest/Woodland	East Gulf Coastal Plain Northern Loess Plain Oak-Hickory Upland - Hardwood Modifier
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	Florida Peninsula Inland Scrub
Forest/Woodland	Mississippi Delta Maritime Forest
Forest/Woodland	Nashville Basin Limestone Glade
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	Northern Atlantic Coastal Plain Dry Hardwood Forest
Forest/Woodland	Ridge and Valley Calcareous Valley Bottom Glade and Woodland
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 Cove Forest
Forest/Woodland	Southern and Central Appalachian Mafic Glade and Barrens
Forest/Woodland	Southern and Central Appalachian Oak Forest
Forest/Woodland	Southern and Central Appalachian Oak Forest - Xeric
Forest/Woodland	Southern Appalachian Low Mountain Pine Forest
Forest/Woodland	Southern Coastal Plain Dry Upland Hardwood Forest
Forest/Woodland	Southern Coastal Plain Oak Dome and Hammock
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 Glade and Barrens
Forest/Woodland	Southern Piedmont Mafic Hardpan Woodland
Forest/Woodland	Southern Piedmont Mesic Forest
Forest/Woodland	Southern Piedmont Northern Triassic Basin Dry Forest
Forest/Woodland	Southern Ridge and Valley Dry Calcareous Forest
Forest/Woodland	Southern Ridge and Valley Dry Calcareous Forest - Hardwood Modifier
Forest/Woodland	Southern Ridge and Valley Dry Calcareous Forest - Pine Modifier
Forest/Woodland	Southwest Florida Coastal Strand and Maritime Hammock
Prairie	Bluegrass Basin Savanna and Woodland
Prairie	East Gulf Coastal Plain Black Belt Calcareous Prairie and Woodland
Prairie	East Gulf Coastal Plain Black Belt Calcareous Prairie and Woodland - Herbaceous Modifier
Prairie	East Gulf Coastal Plain Jackson Plain Prairie and Barrens
Prairie	East Gulf Coastal Plain Jackson Prairie and Woodland
Prairie	Eastern Highland Rim Prairie and Barrens
Prairie	Eastern Highland Rim Prairie and Barrens - Dry Modifier
Prairie	Florida Dry Prairie

Prairie	Panhandle Florida Limestone Glade
Prairie	Pennyroyal Karst Plain Prairie and Barrens
Prairie	Southern Ridge and Valley Patch Prairie
Prairie	Western Highland Rim Prairie and Barrens
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 Circumneutral Cliff and Talus
Rock Outcrop	Southern Appalachian Granitic Dome
Rock Outcrop	Southern Piedmont Granite Flatrock
Wetlands	Atlantic Coastal Plain Blackwater Stream Floodplain Forest - Forest Modifier
Wetlands	Atlantic Coastal Plain Brownwater Stream Floodplain Forest
Wetlands	Atlantic Coastal Plain Northern Wet Longleaf Pine Savanna and Flatwoods
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	Central Appalachian Floodplain - Forest Modifier
Wetlands	Central Appalachian Riparian - Forest Modifier
Wetlands	Central Florida Pine Flatwoods
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 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 Small Stream and River Floodplain Forest
Wetlands	East Gulf Coastal Plain Southern Loblolly-Hardwood Flatwoods
Wetlands	East Gulf Coastal Plain Treeless Savanna and Wet Prairie
Wetlands	Lower Mississippi River Bottomland and Floodplain Forest
Wetlands	Lower Mississippi River Bottomland Depressions - Forest Modifier
Wetlands	Mississippi River Low Floodplain (Bottomland) Forest
Wetlands	Mississippi River Riparian Forest
Wetlands	South-Central Interior Large Floodplain - Forest Modifier
Wetlands	South-Central Interior Small Stream and Riparian
Wetlands	South-Central Interior/Upper Coastal Plain Wet Flatwoods
Wetlands	Southern Coastal Plain Blackwater River Floodplain Forest
Wetlands	Southern Piedmont Large Floodplain Forest - Forest Modifier
Wetlands	Southern Piedmont Small Floodplain and Riparian Forest

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