



SOUTHEAST GAP ANALYSIS PROJECT



Species Modeling Report

Northern Myotis

Myotis septentrionalis

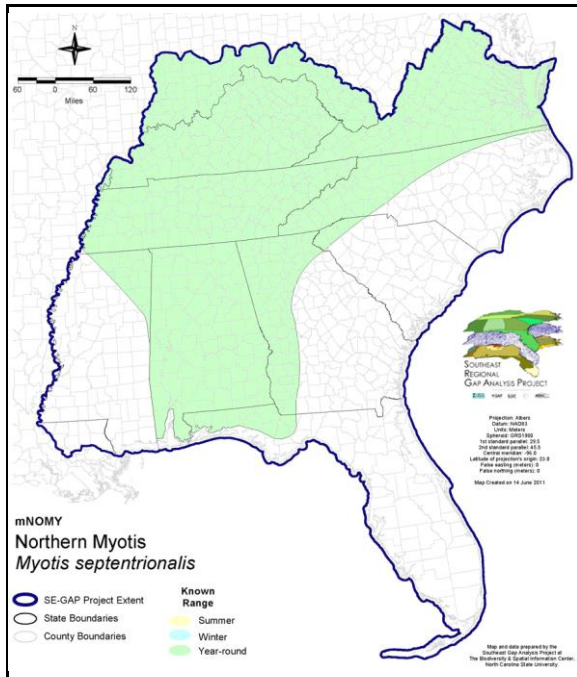
Taxa: Mammalian
Order: Chiroptera
Family: Vespertilionidae

SE-GAP Spp Code: **mNOMY**

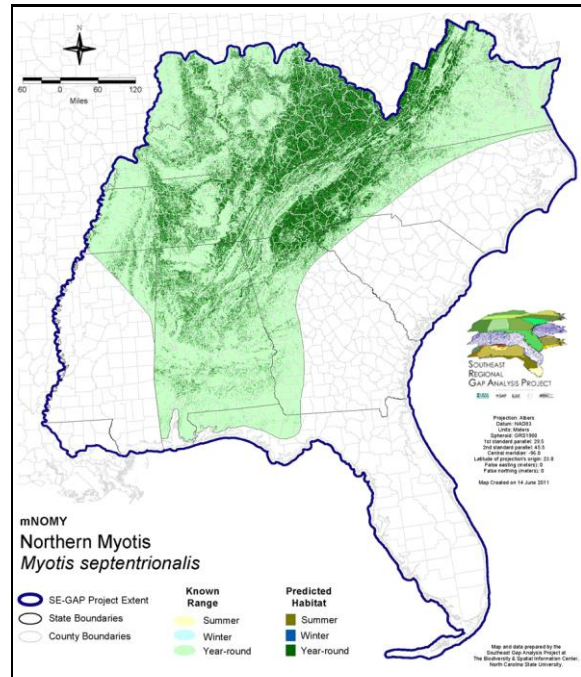
ITIS Species Code: 180000

NatureServe Element Code: AMACC01150

KNOWN RANGE:



PREDICTED HABITAT:



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

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

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

Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/mNOMY_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: IN (SSC), KY (N), MN (SPC), MS (Non-game species in need of management), MS (Non-game species in need of management), NC (W2), NH (SC), NJ (U), NY (U), RI (Not Listed), WI (THR), BC (2 (2005)), QC (Non suivie)

NS Global Rank: G4

NS State Rank: AL (S2), AR (S4), CT (SU), DC (S4), DE (SU), FL (SH), GA (S3S4), IA (S4), IL (S4), IN (S3), KS (S2), KY (S4), LA (SNR), MA (S4), MD (S4B,S4N), MD (S4B,S4N), ME (S4), MI (SNR), MN (S3), MO (S4), MS (S3?B,S3?N), MS (S3?B,S3?N), MT (S2S3), NC (S3S4), ND (SU), NE (S4), NH (S3), NJ (SU), NY (S3S4), OH (SNR), OK (S2), PA (S1), RI (S2), SC (S4), SD (S3), TN (S4), TX (SNA), VA (S3S4), VT (S4S5), WI (S3), WV (S3S4), WY (SNA), WY (SNA), AB (S2S3), BC (S2S3), LB (SNR), MB (S3S4N,S4B), MB (S3S4N,S4B), NB (S4), NF (S2S3), NS (S2), NT (SNR), ON (S3?), PE (S1S2), QC (S5), SK (S4B,SNRN), SK (S4B,SNRN), YT (S2S3)

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	2,751.0	< 1	30,227.7	< 1	0.0	0	0.0	0
Status 2	3,841.2	< 1	325,133.7	2	0.0	0	476.7	< 1
Status 3	1,219.5	< 1	1,553,923.2	9	29,354.3	< 1	53,884.8	< 1
Status 4	23.8	< 1	0.0	0	0.0	0	0.0	0
Total	7,835.5	< 1	1,909,284.6	11	29,354.3	< 1	54,361.5	< 1
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	263,414.3	2	0.0	0	0.0	0
Status 2	0.0	0	10,293.9	< 1	13.4	< 1	0.0	0
Status 3	6,913.8	< 1	66,941.6	< 1	0.0	0	0.8	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	6,913.8	< 1	340,649.8	2	13.4	< 1	0.8	< 1
	Native Am. Reserv.		State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	949.1	< 1	68.2	< 1	0.0	0
Status 2	0.0	0	14,677.4	< 1	227,368.4	1	1,290.1	< 1
Status 3	16,470.6	< 1	67,536.3	< 1	70,112.1	< 1	17,401.4	< 1
Status 4	0.0	0	0.0	0	45,589.3	< 1	0.0	0
Total	16,470.6	< 1	83,162.7	< 1	343,138.0	2	18,691.5	< 1
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	9,499.8	< 1	0.0	0	0.0	0
Status 2	0.0	0	31,412.2	< 1	2.2	< 1	783.1	< 1
Status 3	0.0	0	2,046.1	< 1	1,599.8	< 1	172.7	< 1
Status 4	0.0	0	2.1	< 1	193.9	< 1	0.0	0
Total	0.0	0	42,960.1	< 1	1,795.8	< 1	955.8	< 1
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	306,910.0 2			
Status 2	0.0	0	0.0	0	615,292.2 4			
Status 3	0.0	0	0.0	0	1,887,576.9 20			
Status 4	12,990,129.8	74	3,826.4	< 1	13,085,330.8 75			
Total	12,990,129.8	74	3,826.4	< 1	15,895,109.9 100			

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: *Myotis septentrionalis* is generally associated with forested communities. In summer it may be found in hollow trees, under loose bark, in attics and barns, and under the eaves of houses as well as in caves (SC-GAP 2003). Night roosts used in summer between foraging bouts are in different habitats than day roosts. Caves, mines, and quarry tunnels are used as night roosts, typically by males, but also by nonreproductive females (Clark et al. 1987, Jones et al. 1967). They are joined later in the summer by juveniles and post-lactating females (Kunz, 1973). During the day, these same sites usually house no *M. SEPTENTRIONALIS*. Daytime observations typically are of individuals under loose bark on trees and in a variety of small spaces associated with buildings and other structures (Hoffmeister 1989, Caire et al. 1979, Hamilton and Whitaker 1979, Barbour and Davis 1969). At times *M. SEPTENTRIONALIS* has been found in or around caves on summer nights, but not actually roosting in them (Mills 1971). Early in the summer, these groups mostly comprise males, with females and young-of-the-year joining later in the season (Caire et al. 1979).

Often solitary or in small groups, these bats will roost in a variety of partially to fully concealed sites. Crevices in tree bark and exterior 'nooks and crannies' of buildings appear to be all that the bat requires for secondary (or temporary) roosts (Whitaker and Hamilton 1998). Caves or deeper recesses of buildings may be most used as primary or recurrent roost sites (Webster et al. 1985). From few maternity colony records, small groups of females locate in hollow trees, crevices in tree bark, bat houses and other manmade structures such as barns and little-used warehouses (Whitaker and Hamilton 1998).

Northern *Myotis* is a gleaner foraging in forests under the crowns of trees (Brown 1997), and mainly on forested hillsides and ridges rather than along riparian areas or floodplain-forests (Owen et al. 2003). NatureServe 2005: 'Small, highly fragmented, or young forests that provide limited areas of subcanopy foraging habitat may not be suitable. In addition, young forests may also lack appropriate nursery sites.' Amy Silvano 16jun05

***Very limited information regarding this species roosting habitats. Amy Silvano

Ecosystem classifiers: Evergreen, Mixed, Hardwood, Mesic, Cove, Forested Wetlands, Rock outcrops and Disturbed (Mines and utility clear/cuts only). Amy Silvano 16jun05

Mask of Forest Interior Utilization: Include all forest interiors and 250m buffer from them.

Selected Map Units:

Functional Group	Map Unit Name
Anthropogenic	Deciduous Plantations
Anthropogenic	Quarry/Strip Mine/Gravel Pit
Anthropogenic	Successional Shrub/Scrub (Clear Cut)
Anthropogenic	Successional Shrub/Scrub (Other)
Anthropogenic	Successional Shrub/Scrub (Utility Swath)
Bald	Central Appalachian Montane Rocky Bald - Herbaceous Modifier
Bald	Central Appalachian Montane Rocky Bald - Shrub Modifier
Bald	Southern Appalachian Grass and Shrub Bald - Herbaceous Modifier
Bald	Southern Appalachian Grass and Shrub Bald - Shrub Modifier
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	Atlantic Coastal Plain Dry and Dry-Mesic Oak Forest
Forest/Woodland	Atlantic Coastal Plain Fall-line Sandhills Longleaf Pine Woodland - Offsite Hardwood Modifier
Forest/Woodland	Atlantic Coastal Plain Mesic Hardwood and Mixed Forest
Forest/Woodland	Atlantic Coastal Plain Northern Mixed Oak-Heath Forest
Forest/Woodland	Central and Southern Appalachian Montane Oak Forest
Forest/Woodland	Central and Southern Appalachian Northern Hardwood Forest
Forest/Woodland	Central Appalachian Oak and Pine Forest

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 - Offsite Hardwood Modifier
Forest/Woodland	East Gulf Coastal Plain Limestone 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	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	South-Central Interior Mesophytic Forest
Forest/Woodland	Southern and Central Appalachian Cove Forest
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 Appalachian Montane Pine Forest and Woodland
Forest/Woodland	Southern Coastal Plain Dry Upland Hardwood Forest
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 - 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 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
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	East Gulf Coastal Plain Dry Chalk Bluff
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 Montane Cliff
Rock Outcrop	Southern Appalachian Rocky Summit
Rock Outcrop	Southern Appalachian Spray Cliff
Rock Outcrop	Southern Interior Acid Cliff
Rock Outcrop	Southern Interior Calcareous Cliff
Rock Outcrop	Southern Interior Sinkhole Wall
Rock Outcrop	Southern Piedmont Cliff
Rock Outcrop	Southern Piedmont Granite Flatrock
Wetlands	Atlantic Coastal Plain Brownwater Stream Floodplain Forest
Wetlands	Atlantic Coastal Plain Nonriverine Swamp and Wet Hardwood Forest - Oak Dominated Modifier
Wetlands	Atlantic Coastal Plain Northern Basin Swamp and Wet Hardwood Forest
Wetlands	Atlantic Coastal Plain Small Blackwater River Floodplain Forest
Wetlands	Atlantic Coastal Plain Small Brownwater River Floodplain Forest
Wetlands	Central Appalachian Floodplain - Forest Modifier

Wetlands	Central Appalachian Riparian - Forest Modifier
Wetlands	East Gulf Coastal Plain Large River Floodplain Forest - Forest Modifier
Wetlands	East Gulf Coastal Plain Northern Seepage Swamp
Wetlands	East Gulf Coastal Plain Small Stream and River Floodplain Forest
Wetlands	Lower Mississippi River Bottomland Depressions - Forest Modifier
Wetlands	Mississippi River Low Floodplain (Bottomland) Forest
Wetlands	Mississippi River Riparian Forest
Wetlands	North-Central Appalachian Acidic Swamp
Wetlands	North-Central Interior and Appalachian Rich Swamp
Wetlands	South-Central Interior Large Floodplain - Forest Modifier
Wetlands	South-Central Interior Small Stream and Riparian
Wetlands	Southern Coastal Plain Blackwater River Floodplain Forest
Wetlands	Southern Coastal Plain Nonriverine Basin Swamp
Wetlands	Southern Coastal Plain Seepage Swamp and Baygall
Wetlands	Southern Piedmont Large Floodplain Forest - Forest Modifier
Wetlands	Southern Piedmont Small Floodplain and Riparian Forest
Wetlands	Southern Piedmont/Ridge and Valley Upland Depression Swamp

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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.