



# SOUTHEAST GAP ANALYSIS PROJECT



## Species Modeling Report

### Woodland Vole

*Microtus pinetorum*

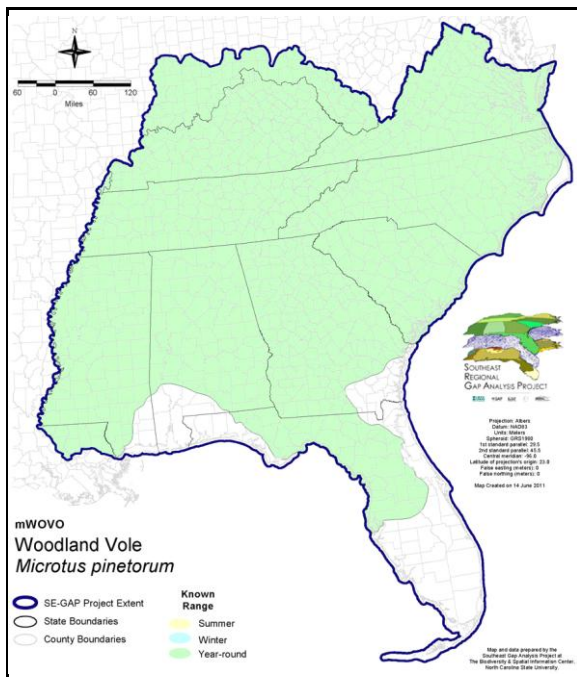
Taxa: Mammalian  
Order: Rodentia  
Family: Cricetidae

SE-GAP Spp Code: **mWOVO**

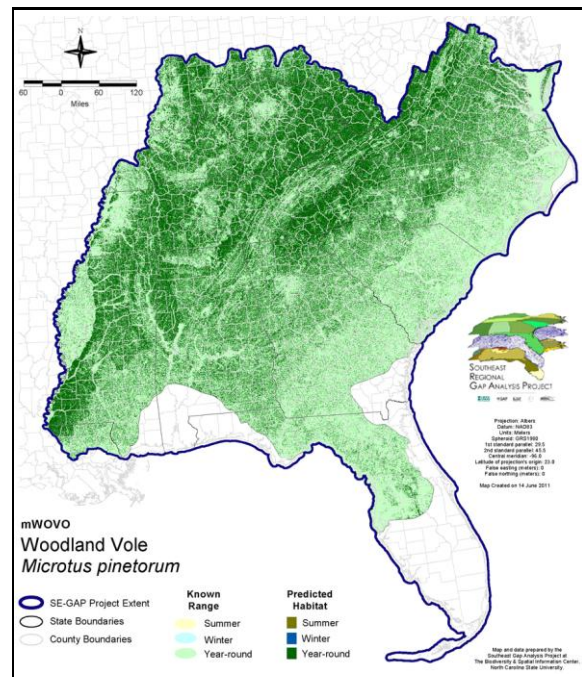
ITIS Species Code: 180314

NatureServe Element Code: AMAFF11150

#### KNOWN RANGE:



#### PREDICTED HABITAT:



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

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

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

Data Download: [http://www.basic.ncsu.edu/segap/datazip/region/vert/mWOVO\\_se00.zip](http://www.basic.ncsu.edu/segap/datazip/region/vert/mWOVO_se00.zip)

#### PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: KY (N), MI (SC), MN (SPC), MS (Non-game species in need of management), NJ (S), NY (U), RI (Not Listed), WI (SC/N), ON (SC), QC (Susceptible)

NS Global Rank: G5

NS State Rank: AL (S5), AR (S5), CT (S5), DC (S4), DE (S4), FL (SNR), GA (S5), IA (S3), IL (S5), IN (S4), KS (S5), KY (S5), LA (S4), MA (S5), MD (S5), ME (S1), MI (S3S4), MN (S3), MO (SNR), MS (S5), NC (S5), NE (S1), NH (S4), NJ (S4), NY (S5), OH (SNR), OK (S5), PA (S5), RI (SU), SC (SNR), TN (S5), TX (S3), VA (S5), VT (S3), WI (S1), WV (S4), ON (S3?), QC (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	16,203.8	< 1	30,332.9	< 1	0.0	0	0.0	0
Status 2	40,799.8	< 1	345,823.0	< 1	0.0	0	2,884.8	< 1
Status 3	2,515.1	< 1	1,909,853.9	4	47,162.0	< 1	224,874.2	< 1
Status 4	52.0	< 1	0.0	0	0.0	0	24.8	< 1
Total	59,570.6	< 1	2,286,009.8	5	47,162.0	< 1	227,783.7	< 1
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	282,354.1	< 1	11.3	< 1	0.0	0
Status 2	0.0	0	11,110.0	< 1	1,943.6	< 1	0.0	0
Status 3	14,862.2	< 1	100,670.6	< 1	0.0	0	506.4	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	14,862.2	< 1	394,134.7	< 1	1,954.8	< 1	506.4	< 1
	Native Am. Reserv.		State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	1,198.0	< 1	76.8	< 1	0.0	0
Status 2	0.0	0	16,707.5	< 1	351,682.2	< 1	1,386.3	< 1
Status 3	23,466.4	< 1	134,024.2	< 1	109,750.9	< 1	55,802.5	< 1
Status 4	0.0	0	0.0	0	62,521.7	< 1	0.0	0
Total	23,466.4	< 1	151,929.7	< 1	524,031.5	1	57,188.8	< 1
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	11,622.4	< 1	0.0	0	0.0	0
Status 2	476.8	< 1	46,781.4	< 1	3.7	< 1	1,301.8	< 1
Status 3	0.0	0	6,231.5	< 1	8,760.8	< 1	17,333.4	< 1
Status 4	0.0	0	2.1	< 1	1,638.1	< 1	0.0	0
Total	476.8	< 1	64,637.4	< 1	10,402.6	< 1	18,635.1	< 1
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0			341,799.2	< 1
Status 2	0.0	0	0.0	0			820,900.7	2
Status 3	42.2	< 1	0.0	0			2,655,856.3	10
Status 4	37,789,979.6	87	14,554.2	< 1			37,931,242.0	87
Total	37,790,021.8	87	14,554.2	< 1			41,749,798.1	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: Woodland voles inhabit dry to moist deciduous woodlands with thick leaf mold or thick herbaceous ground cover. They can be found in "park like" grassy areas (Whitaker 1980). They are rare or missing from extreme coastal regions of southeastern states. Especially common in hedgerows and apple orchards, but also live in a wide variety of woodland to grassland habitats where there is adequate cover, friable soil, and a good food supply. For example, found over entire Savanna River Site area in old fields and hardwood forests where the soil is loose or where rich leaf mold is present. Thought to be uncommon in pine plantations (Cothran et al. 1991). Occur in a wide variety of habitats varying from subclimax beech-maple forests with closed canopies and varying depths of leaf litter to grassy fields with many bushes, patches of brambles, and mats of honeysuckle. In Florida, rosemary shrubs, sand pine, and turkey oak are often used (Smolen 1981). Most foraging is confined to a 30 foot radius of the burrows. Nine out of 62 males, and 10/69 females made movements of 200 feet or more. Burt (1940) stated that the normal home range is about 0.25 acres (Fitch 1958). # Home range of *Microtus*, in general, 1000 square meters or less (Nowak 1991).

They inhabit the upper reaches of tidal bays and rivers and also occur in upland pine and mixed forests, mountain meadows, fallow fields, orchards, gardens and tilled croplands with hedgerows or nearby woods (Golley 1962, Linzey and Linzey 1971, Brown 1997, Whitaker and Hamilton 1998).

Adapted from Florida and North Carolina state habitat notes - K. Cook - 6-2-05

### Selected Map Units:

Functional Group	Map Unit Name
Anthropogenic	Deciduous Plantations
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	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	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	Central and Southern Appalachian Montane Oak Forest
Forest/Woodland	Central and Southern Appalachian Northern Hardwood Forest
Forest/Woodland	Central and Southern Appalachian Spruce-Fir Forest
Forest/Woodland	Central Appalachian Oak and Pine Forest
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 Upland Longleaf Pine Woodland - Offsite Hardwood 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 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 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 - Scrub/Shrub Understory Modifier
Forest/Woodland	Florida Peninsula Inland Scrub

Forest/Woodland	Northeastern Interior Dry Oak Forest - Mixed 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 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 Ridge and Valley Dry Calcareous Forest
Forest/Woodland	Southern Ridge and Valley Dry Calcareous Forest - Hardwood Modifier
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	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
Wetlands	Atlantic Coastal Plain Northern Basin Swamp and Wet Hardwood Forest
Wetlands	East Gulf Coastal Plain Near-Coast Pine Flatwoods - Offsite Hardwood Modifier
Wetlands	East Gulf Coastal Plain Southern Loblolly-Hardwood Flatwoods

**Selected Secondary Map Units within 60m of Primary Map Units:**

Functional Group	Map Unit Name
Anthropogenic	Pasture/Hay
Anthropogenic	Row Crop

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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.