



# SOUTHEAST GAP ANALYSIS PROJECT



## Species Modeling Report

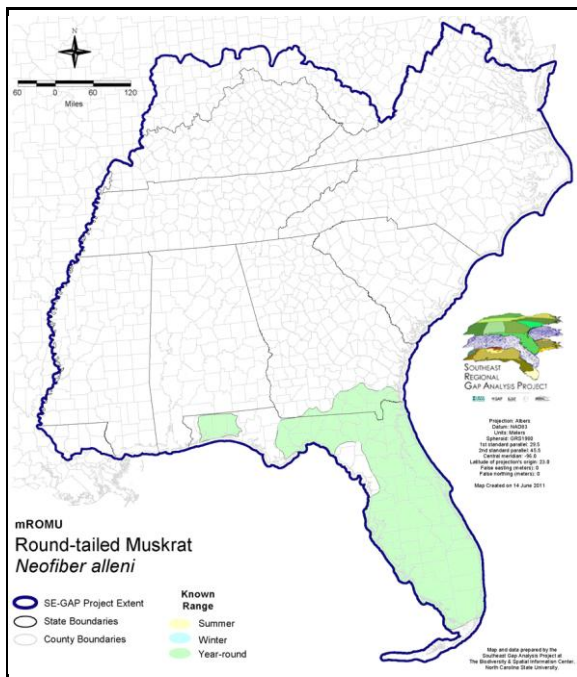
### Round-tailed Muskrat

*Neofiber alleni*

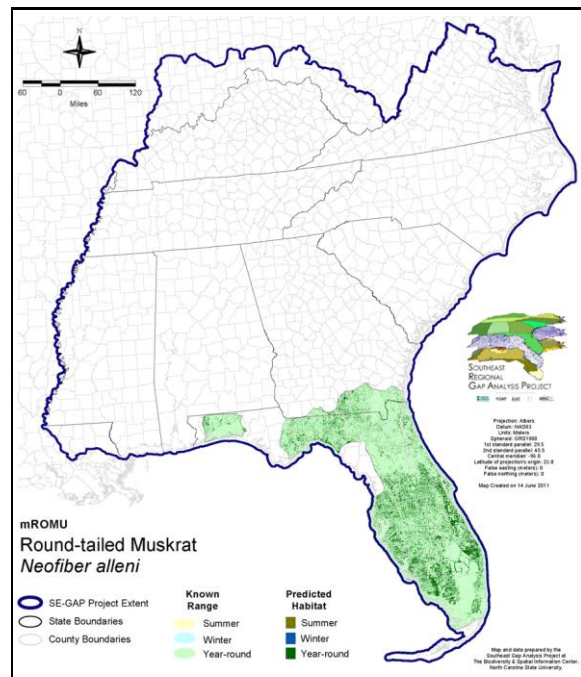
Taxa: Mammalian  
 Order: Rodentia  
 Family: Cricetidae

SE-GAP Spp Code: **mROMU**  
 ITIS Species Code: 180357  
 NatureServe Element Code: AMAFF14010

#### KNOWN RANGE:



#### PREDICTED HABITAT:



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

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

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

Data Download: [http://www.basic.ncsu.edu/segap/datazip/region/vert/mROMU\\_se00.zip](http://www.basic.ncsu.edu/segap/datazip/region/vert/mROMU_se00.zip)

#### PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---  
 State Status: GA (T)  
 NS Global Rank: G3  
 NS State Rank: FL (S3), GA (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	18,058.8	< 1	17.3	< 1	0.0	0	0.0	0
Status 2	7,666.7	< 1	8,974.6	< 1	0.0	0	39.8	< 1
Status 3	3.1	< 1	44,970.7	2	0.0	0	15,525.9	< 1
Status 4	4.8	< 1	0.0	0	0.0	0	0.0	0
Total	25,733.3	< 1	53,962.6	2	0.0	0	15,565.7	< 1
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	7,952.1	< 1	0.0	0	10,792.7	< 1
Status 2	0.0	0	3,615.1	< 1	636.6	< 1	16.5	< 1
Status 3	0.0	0	106,489.3	4	0.0	0	0.0	0
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	0.0	0	118,056.5	4	636.6	< 1	10,809.2	< 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	16.9	< 1	97,456.9	3	0.0	0
Status 3	0.0	0	224,015.4	8	45.6	< 1	59,314.1	2
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	0.0	0	224,032.3	8	97,502.5	3	59,314.1	2
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	0.0	0	0.0	0
Status 2	0.0	0	1,499.8	< 1	0.0	0	1,001.6	< 1
Status 3	0.0	0	10,030.8	< 1	2,221.4	< 1	28,975.9	1
Status 4	0.0	0	0.0	0	72.5	< 1	0.0	0
Total	0.0	0	11,530.5	< 1	2,293.9	< 1	29,977.5	1
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	36,820.9 1			
Status 2	0.0	0	0.0	0	120,924.4 4			
Status 3	59.9	< 1	0.0	0	491,651.9 19			
Status 4	2,164,253.0	75	16,428.3	< 1	2,180,753.9 76			
Total	2,164,313.0	75	16,428.3	< 1	2,830,151.1 100			

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: Round tailed muskrats inhabit shallow marshes with emergents, especially maidencane [*Panicum hemitomon*] and pickerelweed [*Pontederia cordata*] and salt marshes on Merrit Island and Cape Sable. They also inhabit sugarcane. They prefer soft substrate and water less than 50 cm deep. They are colonial and require access to water, including by burrowing (Lefebvre 1992). They are common in areas with Marsh/shallow water with moderate stands of emergent vegetation and are regularly recorded in salt marshes. Exclusive saw grass areas poor habitat (Layne et al. 1977). Wet environments are characteristic, but this requirement somewhat relaxed in south Florida where they have been found to use peat in overgrown and cultivated fields, cane patches, areas around houses, small canals, irrigation ditches, and marshes. Salt grass and *Spartina* marshes in brackish areas, sawgrass and mixed marsh prairie of open glades, cypress bogs, muck agricultural areas, canals with sedge, and small ponds with emergents is thought to be a suitable mixture of habitat types. Though they are most likely not in extensive sawgrass areas (Layne 1984). Wet habitats are thought to provide burrowing substrates in drought. Creek swamps, mixed bay swamp, fetterbush swamp, cypress swamp with pickerel weed all considered potential habitat (USFWS 1978). Deep ponds with hyacinth or open water are not suitable habitat. May move 1/2 mile in dispersal. Densities as high as 100/acre. Habitats as small as 0.6 acre occupied (Birkenholz 1963). Maximum density in sugarcane is 9/ha. Higher densities achieved in maidencane/pickerelweed marshes (Lefebvre 1982).

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

### Hydrography Mask:

Utilizes open water features with buffer of 30m into selected water features.

Utilizes wet vegetation features with buffers of 1000m from and unlimited into selected vegetation features.

### Selected Map Units:

Functional Group	Map Unit Name
Anthropogenic	Low Intensity Developed
Anthropogenic	Row Crop
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Indian River Lagoon Tidal Marsh
Brackish Tidal Marsh & Wetland	Florida Big Bend Salt-Brackish Tidal Marsh
Brackish Tidal Marsh & Wetland	Southwest Florida Perched Barriers Salt Swamp and Lagoon - Marsh Modifier
Freshwater Tidal Marsh & Wetland	Atlantic Coastal Plain Central Fresh-Oligohaline Tidal Marsh
Freshwater Tidal Marsh & Wetland	Florida Big Bend Fresh-Oligohaline Tidal Marsh
Water	Open Water (Brackish/Salt)
Water	Open Water (Fresh)
Wetlands	Atlantic Coastal Plain Depression Pondshore
Wetlands	Atlantic Coastal Plain Large Natural Lakeshore
Wetlands	Atlantic Coastal Plain Streamhead Seepage Swamp, Pocosin, and Baygall
Wetlands	Central Florida Herbaceous Pondshore
Wetlands	Central Florida Herbaceous Seep
Wetlands	East Gulf Coastal Plain Southern Depression Pondshore
Wetlands	Floridian Highlands Freshwater Marsh
Wetlands	South Florida Cypress Dome
Wetlands	South Florida Dwarf Cypress Savanna
Wetlands	South Florida Pond-Apple/Popash Slough
Wetlands	Southern Coastal Plain Herbaceous Seepage Bog
Wetlands	Southern Coastal Plain Hydric Hammock
Wetlands	Southern Coastal Plain Nonriverine Cypress Dome
Wetlands	Southern Coastal Plain Seepage Swamp and Baygall
Wetlands	Southern Coastal Plain Spring-run Stream Aquatic Vegetation

**CITATIONS:** Birkenholz, D.E. 1963. Movement and displacement in the ricerat. Quarterly Journal Florida Academy of Science 26:269-274.

Layne, J. N. 1984. The land mammals of South Florida. Environments of South Florida, Past and Present II. P. J. Gleason ed. Coral Gables, Florida: Miami Geological Society; pp. 269-295.

Layne, J.N.; Stallcup, J.A.; Woolfenden, G.E.; McCauley, M.N.; Worley, D.J. 1977. Fish and Wildlife Inventory of the Seven-County Region Included in the Central Florida Phosphate Industry Area-Wide Environmental Impact Study. Volumes I and II. Also avai

Lefebvre, L. W. 1982. Population dynamics of the round-tailed muskrat (*Neofiber alleni*) in Florida sugarcane. Unpublished Ph.D. diss. University of Florida, Gainesville. 204pp

Lefebvre, L. W., and J. T. Tilmant. 1992. Round-tailed muskrat *NEOFIBER ALLENI*. Pages 276-286 in S. R. Humphrey, editor. Rare and endangered biota of Florida. Vol. I. Mammals. Univ. Press of Florida, Gainesville. xviii + 392 pp.

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This data was compiled and/or developed  
by the Southeast GAP Analysis Project at  
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Center, North Carolina State University.