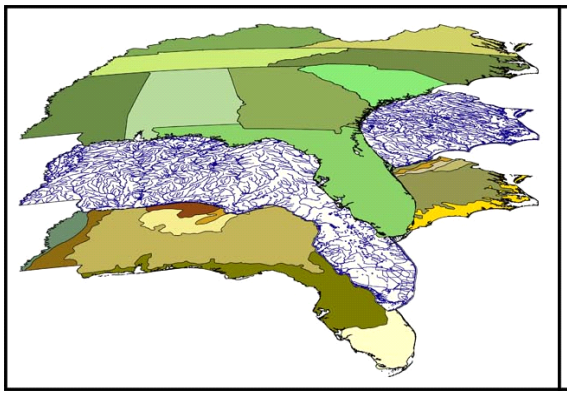


SOUTHEAST GAP ANALYSIS PROJECT

USGS | gap | BaSIC | NARSAL

Species Modeling Report

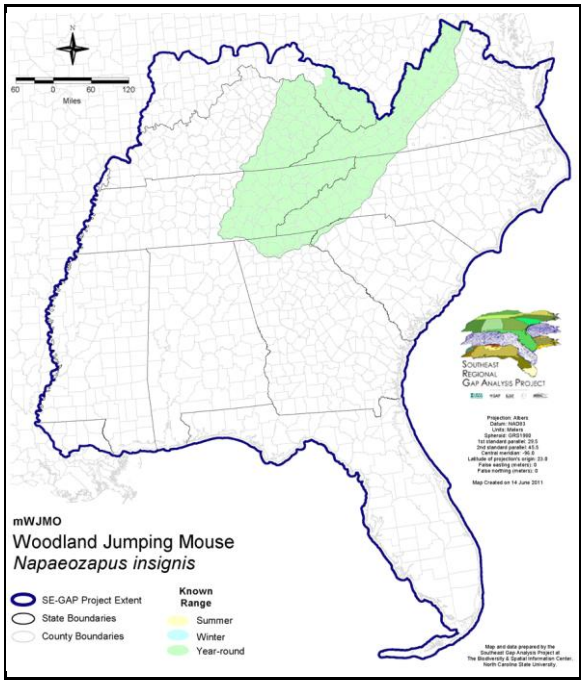
Woodland Jumping Mouse

Napaeozapus insignis

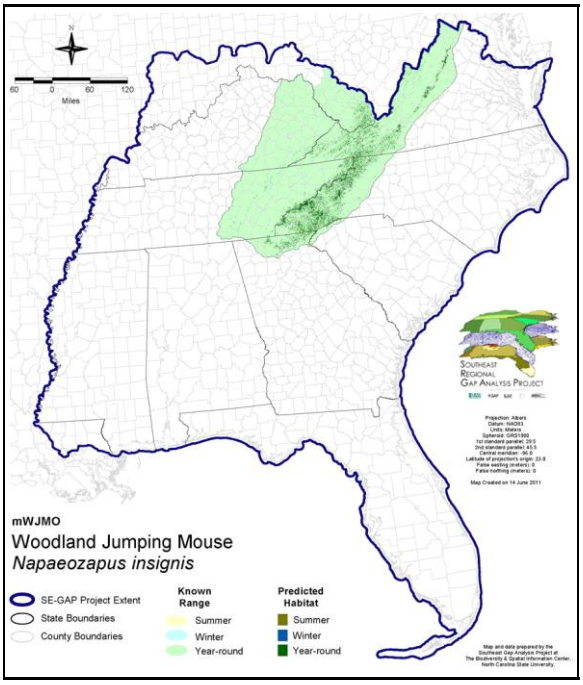
Taxa: Mammalian
Order: Rodentia
Family: Dipodidae

SE-GAP Spp Code: **mWJMO**
ITIS Species Code: 180390
NatureServe Element Code: AMAFH02010

KNOWN RANGE:



PREDICTED HABITAT:



Range Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Range_mWJMO.pdf
Predicted Habitat Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_mWJMO.pdf
GAP Online Tool Link: http://www.gapserve.ncsu.edu/segap/segap/index2.php?species=mWJMO
Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/mWJMO_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: KY (N), NJ (U), NY (U), OH (SC), RI (Not Listed), TN (D), WI (SC/N), QC (Non suivie)

NS Global Rank: G5

NS State Rank: CT (S5), GA (S3), KY (S4), MA (S5), MD (S4), ME (S5), MI (S5), MN (SNR), NC (S4), NH (S5), NJ (S4), NY (S5), OH (S3), PA (S5), RI (S4), SC (S4?), TN (S4), VA (S5), VT (S5), WI (S2S3), WV (S4), LB (S1?), MB (S2), NB (S5), NS (S5), ON (S5), PE (S4), QC (S5)

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	0.0	0	8,231.7	< 1	0.0	0	0.0	0
Status 2	0.0	0	53,142.2	4	0.0	0	0.0	0
Status 3	0.0	0	254,456.2	19	0.0	0	33.6	< 1
Status 4	2.3	< 1	0.0	0	0.0	0	0.0	0
Total	2.3	< 1	315,830.1	24	0.0	0	33.6	< 1

	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	100,716.4	8	0.0	0	0.0	0
Status 2	0.0	0	750.0	< 1	0.0	0	0.0	0
Status 3	0.0	0	11,468.5	< 1	0.0	0	0.0	0
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	0.0	0	112,934.9	9	0.0	0	0.0	0

	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	1,335.1	< 1	12,940.8	< 1	0.0	0
Status 3	5,031.0	< 1	4,792.0	< 1	2,507.1	< 1	1,976.2	< 1
Status 4	0.0	0	0.0	0	215.4	< 1	0.0	0
Total	5,031.0	< 1	6,127.0	< 1	15,663.3	1	1,976.2	< 1

	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	479.6	< 1	0.0	0	0.0	0
Status 2	0.0	0	1,972.7	< 1	0.0	0	0.0	0
Status 3	0.0	0	0.0	0	28.2	< 1	0.0	0
Status 4	0.0	0	0.0	0	50.0	< 1	0.0	0
Total	0.0	0	2,452.3	< 1	78.1	< 1	0.0	0

	Private Land - No Res.		Water		Overall Total	
	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	109,427.7	8
Status 2	0.0	0	0.0	0	70,140.8	5
Status 3	0.0	0	0.0	0	280,292.8	41
Status 4	595,232.6	45	5.9	< 1	595,719.1	45
Total	595,232.6	45	5.9	< 1	1,055,580.3	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: The woodland jumping mouse is locally abundant in the southern Appalachian mountains, but is restricted to the mid and high elevations of the region (Lee et al. 1982). Seldom occurring in open areas, they are mainly restricted to woodland habitats, often in riparian areas. They are most common in cool, damp forests with moss-covered rocks.

This mouse is a resident of cool, moist woodlands. However, ecotones with more open, herbaceous habitats in moist settings are used as well (Whitaker and Hamilton 1998). Open situations in conifer (primarily spruce-fir or hemlock) or mixed conifer and northern hardwood forest, rhododendron thickets, and rocky areas near water appear to be where the species reaches its highest population densities (Lee et al. 1982, Webster et al. 1985, Whitaker and Hamilton 1998). It also occurs in bog conditions (Webster et al. 1985).

Nests are made in underground chambers, in piles of brush, or under fallen trees (Webster et al. 1985).

Quoted from state habitat notes - K. Cook 6-10-05

Customized Model: Do not exclude Mus outside the buffer. The stream buffer is additive.

Elevation Mask: > 609m and < 2500m

Hydrography Mask:

Freshwater Only

Fast Current Only

Utilizes flowing water features with buffer of 30m from selected water features.

Selected Map Units:

Functional Group	Map Unit Name
Forest/Woodland	Appalachian Hemlock-Hardwood Forest
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	South-Central Interior Mesophytic Forest
Forest/Woodland	Southern and Central Appalachian Cove Forest
Forest/Woodland	Southern Appalachian Montane Pine Forest and Woodland
Forest/Woodland	Southern Piedmont Mesic Forest
Wetlands	Central Appalachian Floodplain - Forest Modifier
Wetlands	Central Appalachian Riparian - Forest Modifier
Wetlands	Cumberland Riverscour
Wetlands	North-Central Appalachian Seepage Fen
Wetlands	South-Central Interior Large Floodplain - Forest Modifier
Wetlands	South-Central Interior Small Stream and Riparian
Wetlands	Southern and Central Appalachian Bog and Fen
Wetlands	Southern Appalachian Seepage Wetland
Wetlands	Southern Piedmont Large Floodplain Forest - Forest Modifier
Wetlands	Southern Piedmont Seepage Wetland
Wetlands	Southern Piedmont Small Floodplain and Riparian Forest
Wetlands	Southern Piedmont/Ridge and Valley Upland Depression Swamp
Wetlands	Western Highland Rim Seepage Fen

Selected Secondary Map Units within 30m of Primary Map Units:

Functional Group	Map Unit Name
Prairie	Western Highland Rim Prairie and Barrens
Prairie	Eastern Highland Rim Prairie and Barrens
Prairie	Eastern Highland Rim Prairie and Barrens - Dry Modifier
Prairie	Pennyroyal Karst Plain Prairie and Barrens
Prairie	Southern Ridge and Valley Patch Prairie
Prairie	Bluegrass Basin Savanna and Woodland

Anthropogenic	Successional Shrub/Scrub (Clear Cut)
Anthropogenic	Successional Shrub/Scrub (Utility Swath)
Anthropogenic	Successional Shrub/Scrub (Other)
Anthropogenic	Pasture/Hay

CITATIONS:

Baker, Rollin H. 1983. Michigan mammals. Michigan State University Press. 642 pp.

Banfield, A.W.F. 1974. The mammals of Canada. University of Toronto Press, Toronto.

Blair, W.F. 1941. Same data on home ranges and general life history of the short-tailed shrew, redbacked mouse and wood-land jumping mouse in northern Michigan. Am. Midl. Nat. 25(3):681-685.

Brower, J.E. and T.J. Cade. 1966. Ecology and physiology of Mapaeozapus insignis (Miller) and other woodland mice. Ecology, 47(1):46-63.

Godin, A.J. 1977. Wild Mammals of New England. Johns Hopkins University Press, Baltimore. 304 pp.

Hall, E. R. 1981. The Mammals of North America. Second edition. 2 Volumes. John Wiley and Sons, New York, New York. 1181 p.

Hamilton, William J., Jr., and John O. Whitaker, Jr. 1979. Mammals of the eastern United States. Cornell Univ. Press, Ithaca, New York. 346 pp.

Jones, G.S. and H.H. Thomas. 1982. Mites, ticks, and fleas of the mice Zapus hudsonius and Napaeozapus insignis from the Maritime Provinces and Gaspe Peninsula, Quebec, Canada. Can. Ent. 114: 1031-1035.

Jones, J. K., Jr., et al. 1992. Revised checklist of North American mammals north of Mexico, 1991. Occas. Pap. Mus., Texas Tech Univ. (146):1-23.

Lee, D. S., L. B. Funderburg Jr., and M. K. Clark. 1982. A distributional survey of North Carolina mammals. Occasional Papers of the North Carolina Biological Survey, No. 1982-10. North Carolina State. Mus. Nat. Hist., Raleigh, North Carolina. 72 pp.

Ovaska, K., and T. B. Herman. 1988. Life history characteristics and movements of the woodland jumping mouse, NAPAEOZAPUS INSIGNIS, in Nova Scotia. Can. J. Zool. 66:1752-1762.

Preble, E. A. 1899. Revision of the jumping mice of the genus Zapus. North American Fauna 15:1-43.

Townsend, M. T. 1935. Studies on some of the small mammalsof central New York. Roosevelt Wildl. Ann. 4. 120 pp.

Webster, W. D., J. F. Parnell and W. C. Biggs Jr. 1985. Mammals of the Carolinas, Virginia, and Maryland. The University of North Carolina Press, Chapel Hill, NC.

Whitaker, J.O. Jr. and W.J. Hamilton, Jr. 1998. Mammals of the eastern United States. Cornell Univ. Press, Ithaca, New York. 583 pp.

Whitaker, J.O., and R. E. Wrigley. 1972. ZAPUS HUDSONIUS. Am. Soc. Mamm., Mammalian Species No. 11. 7 pp.

Wilson, D. E., and D. M. Reeder (editors). 1993. Mammal Species of the World:a Taxonomic and Geographic Reference. Second Edition. Smithsonian Institution Press, Washington, DC. xviii + 1206 pp.

Wrigley, R. E. 1972. Systematics and biology of the woodland jumping mouse Napaeozapus insignis. Illinois Biol.Monogr. 47. Univ. Chicago Press, Urbana, IL. 117 pp.

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Compiled: 15 September 2011

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