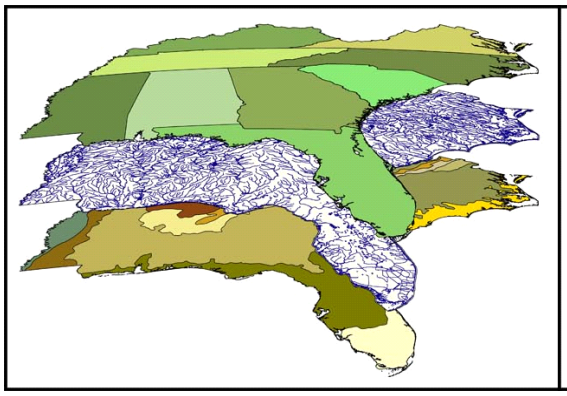


SOUTHEAST GAP ANALYSIS PROJECT

Species Modeling Report

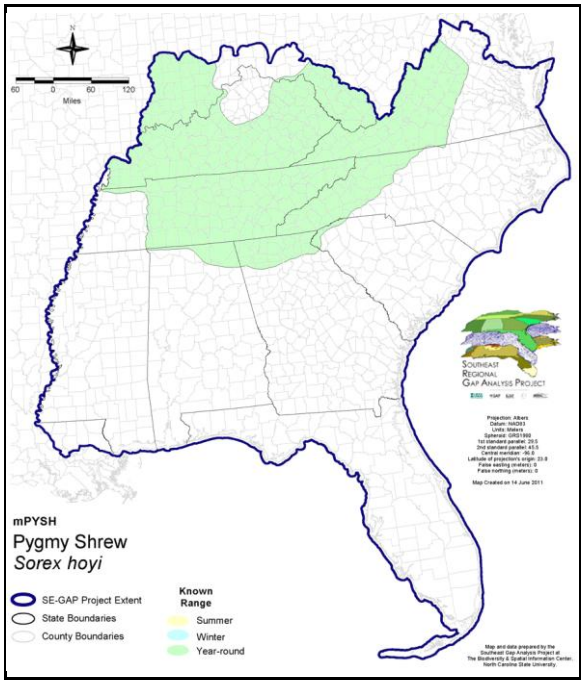
Pygmy Shrew

Sorex hoyi

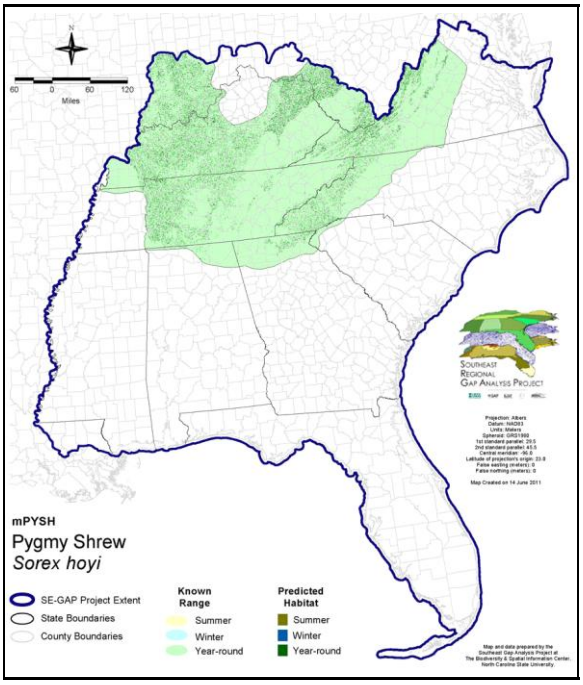
Taxa: Mammalian
Order: Soricomorpha
Family: Soricidae

SE-GAP Spp Code: **mPYSH**
ITIS Species Code: 179946
NatureServe Element Code: AMABA01250

KNOWN RANGE:



PREDICTED HABITAT:



Range Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Range_mPYSH.pdf
Predicted Habitat Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_mPYSH.pdf
GAP Online Tool Link: http://www.gapserve.ncsu.edu/segap/segap/index2.php?species=mPYSH
Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/mPYSH_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: IN (SSC), KY (N), NC (W2), ND (Level II), NY (U), OH (SC), WA (M), WI (SC/N), BC (4 (2005)), QC (RetirΘe)

NS Global Rank: G5

NS State Rank: AK (S5), AL (S1), CO (S2), GA (S2), IA (SU), ID (S1), IL (SH), IN (S2), KY (S4), MA (S1?), MD (SNR), ME (S5), MI (S5), MN (SNR), MT (S4), NC (S3), ND (SU), NH (S5), NJ (SNR), NY (S4?), OH (SNR), PA (SNR), SC (S3S4), SD (S2), TN (S2), VA (S4), VT (S2), WA (S2S3), WI (S3S4), WV (S2S3), WY (S1), AB (S4), BC (S5), LB (S1?), MB (S5), NB (S5), NS (S4), NT (SNR), NU (SNR), ON (S4), PE (S2S3), QC (S5), SK (S5), YT (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	7.6	< 1	2,580.8	< 1	0.0	0	0.0	0
Status 2	1,507.0	< 1	50,041.6	2	0.0	0	0.0	0
Status 3	478.6	< 1	191,745.2	9	1,153.9	< 1	28,269.6	1
Status 4	4.0	< 1	0.0	0	0.0	0	0.0	0
Total	1,997.1	< 1	244,367.6	11	1,153.9	< 1	28,269.6	1

	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	34,160.9	2	0.0	0	0.0	0
Status 2	0.0	0	1,197.2	< 1	0.0	0	0.0	0
Status 3	0.0	0	4,563.5	< 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	39,921.7	2	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	779.2	< 1	33,343.6	2	0.0	0
Status 3	1,726.7	< 1	5,797.4	< 1	9,505.9	< 1	2,557.4	< 1
Status 4	0.0	0	0.0	0	425.7	< 1	0.0	0
Total	1,726.7	< 1	6,576.7	< 1	43,275.2	2	2,557.4	< 1

	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	980.4	< 1	0.0	0	0.0	0
Status 2	0.0	0	1,894.6	< 1	2.0	< 1	64.8	< 1
Status 3	0.0	0	0.0	0	460.5	< 1	0.0	0
Status 4	0.0	0	0.0	0	33.8	< 1	0.0	0
Total	0.0	0	2,875.0	< 1	496.4	< 1	64.8	< 1

	Private Land - No Res.		Water		Overall Total	
	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	37,729.7	2
Status 2	0.0	0	0.0	0	88,829.9	4
Status 3	0.0	0	0.0	0	246,258.8	20
Status 4	1,644,548.5	74	1,928.4	< 1	1,647,362.2	74
Total	1,644,548.5	74	1,928.4	< 1	2,020,180.6	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 pygmy shrew has the distinction of being the smallest mammal to presently inhabit North America (Allen 1979). Its distribution in the southern and mid-Appalachian mountain regions is not well defined. However, the few state records of occurrence for S. hoyi place its populations primarily at mid and upper elevations within the mountain region (Lee et al. 1982; Linzey and Linzey 1971). Pygmy shrews are restricted to relatively moist, cool forested locations having heavy leaf litter or an understory of rhododendrons or drier conditions near surface water (Allen 1979). They appear to prefer grassy openings of boreal forest. Nest sites are not well known. They burrow beneath stumps and downed logs, into thick leaf litter and humus or among rocks for shelter (Whitaker and Hamilton 1998; Webster et al. 1985). In Kentucky and Tennessee, the primary birth period was January to early March. Individuals entered the trappable population about 8 weeks later. Births also occurred from August to December, but at a lower rate. Gestation probably lasts 2-3 weeks. Litter size is 5-6 with one litter/year. They are sexually mature in their second summer. Stacy Smith, 12June05

Customized Model: Elevation minimum of 610 meters is limting model to the Appalachians and eliminating portions of the range in central TN and KY and southern IN. I altered this model to make it hand model in which elevation limitations are dropped in the western portion of the range. All other model parameters are maintained. MJR 19 March 2008.

Elevation Mask: > 610m and < 2500m

Selected Map Units:

Functional Group	Map Unit Name
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	Appalachian Hemlock-Hardwood 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	Northeastern Interior Dry Oak Forest - Mixed Modifier
Forest/Woodland	Northeastern Interior Dry Oak Forest-Hardwood Modifier
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 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	Pennyroyal Karst Plain Prairie and Barrens
Prairie	Southern Ridge and Valley Patch Prairie
Wetlands	Central Appalachian Floodplain - Forest Modifier
Wetlands	Central Appalachian Floodplain - Herbaceous Modifier
Wetlands	Central Appalachian Riparian - Forest Modifier
Wetlands	Central Appalachian Riparian - Herbaceous Modifier
Wetlands	Central Interior Highlands and Appalachian Sinkhole and Depression Pond
Wetlands	East Gulf Coastal Plain Interior Shrub Bog

Wetlands	North-Central Appalachian Acidic Swamp
Wetlands	North-Central Appalachian Seepage Fen
Wetlands	North-Central Interior and Appalachian Rich Swamp
Wetlands	South-Central Interior Small Stream and Riparian
Wetlands	Southern and Central Appalachian Bog and Fen
Wetlands	Southern Appalachian Seepage Wetland
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

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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.