



# SOUTHEAST GAP ANALYSIS PROJECT



## Species Modeling Report

### Whip-poor-will

*Caprimulgus vociferus*

Taxa: Avian

Order: Caprimulgiformes

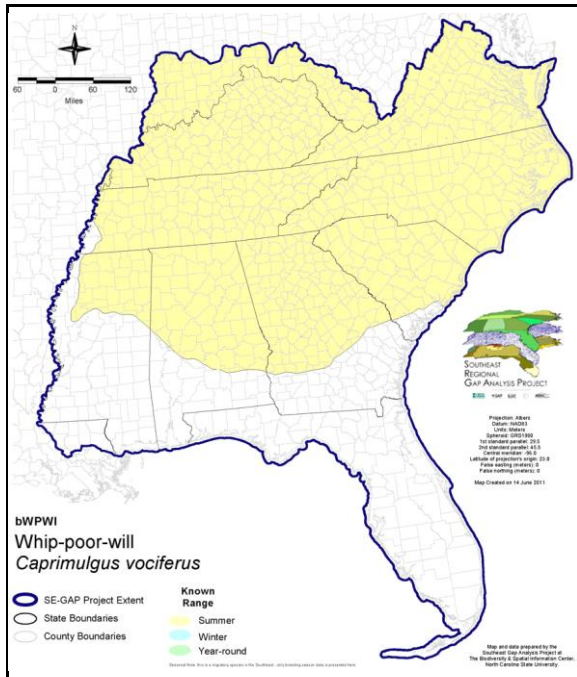
Family: Caprimulgidae

SE-GAP Spp Code: **bWPWI**

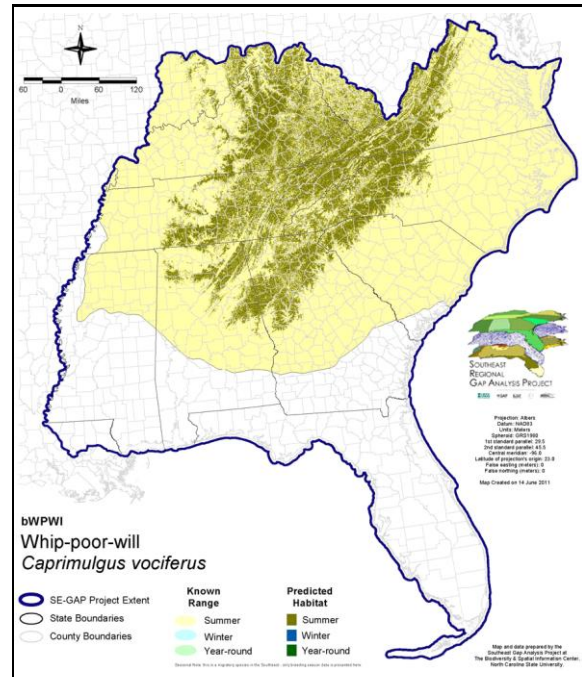
ITIS Species Code: 177961

NatureServe Element Code: ABNTA07070

#### KNOWN RANGE:



#### PREDICTED HABITAT:



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

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

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

Data Download: [http://www.basic.ncsu.edu/segap/datazip/region/vert/bWPWI\\_se00.zip](http://www.basic.ncsu.edu/segap/datazip/region/vert/bWPWI_se00.zip)

#### PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: CT (SC), CT (SC), IN (SSC), KS (C), KY (N), MA (- WL), ME (SC), NH (SC), NJ (SC/S), NV (YES), NY (SC), RI (Not Listed), UT (None), WI (SC/M), WI (SC/M), BC (8 (2005)), ON (THR), QC (Candidate)

NS Global Rank: G5

NS State Rank: AK (SNA), AL (S5B,S3N), AR (S4B), AZ (S4), CA (SNRN), CT (S3B), CT (S3B), DC (S3N), DE (S4B), FL (SNRN), GA (S4S5), IA (S5B), IL (S5), IN (S4B), KS (S3B), KY (S5B), LA (SNA), MA (S2S3B,S3N), MD (S3S4B), ME (S3B), MI (S5), MN (SNRB), MO (SNRB), MS (S2?B), MS (S2?B), MT (SNA), NC (S5B), NC (S5B), ND (SU), NE (S3), NH (S3B), NJ (S3B), NM (S4B,S4N), NV (S1B), NY (S4), OH (S5), OK (S2B), PA (S4B), RI (S4B), SC (S4), SD (S2B), SD (S2B), TN (S3S4), TX (S4B), UT (SNA), VA (S5), VT (S2B), VT (S2B), WI (S3B), WI (S3B), WV (S3B), BC (SNA), MB (S3B), MB (S3B), NB (S3B), NS (S1?B), ON (S4B), PE (SNA), QC (S3S4B), SK (S3B)

**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	1,210.4	< 1	8,763.0	< 1	0.0	0	0.0	0
Status 2	738.5	< 1	97,220.5	< 1	0.0	0	0.0	0
Status 3	0.0	0	522,308.3	3	35,451.9	< 1	30,453.5	< 1
Status 4	49.1	< 1	0.0	0	0.0	0	0.0	0
Total	1,997.9	< 1	628,291.8	4	35,451.9	< 1	30,453.5	< 1
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	56,319.5	< 1	0.0	0	0.0	0
Status 2	0.0	0	3,596.6	< 1	0.0	0	0.0	0
Status 3	7,080.3	< 1	42,610.8	< 1	0.0	0	0.0	0
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	7,080.3	< 1	102,526.8	< 1	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	310.1	< 1	5.0	< 1	0.0	0
Status 2	0.0	0	4,448.7	< 1	107,540.7	< 1	523.6	< 1
Status 3	9,136.5	< 1	33,357.2	< 1	28,806.4	< 1	6,813.4	< 1
Status 4	0.0	0	0.0	0	8,571.1	< 1	0.0	0
Total	9,136.5	< 1	38,116.0	< 1	144,923.1	< 1	7,337.0	< 1
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	4,357.1	< 1	0.0	0	0.0	0
Status 2	0.0	0	12,777.9	< 1	1.5	< 1	79.7	< 1
Status 3	0.0	0	906.5	< 1	737.2	< 1	21.8	< 1
Status 4	0.0	0	0.3	< 1	414.0	< 1	0.0	0
Total	0.0	0	18,041.8	< 1	1,152.7	< 1	101.4	< 1
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%		
Status 1	0.0	0	0.0	0	70,965.1	< 1		
Status 2	0.0	0	0.0	0	226,927.7	1		
Status 3	0.0	0	0.0	0	717,683.6	7		
Status 4	15,621,437.2	91	3,843.2	< 1	15,642,836.7	91		
Total	15,621,437.2	91	3,843.2	< 1	16,658,413.1	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):

### Summer Model:

Habitat Description: Whip-poor-wills are found in a broad range of forest types, elevations, and levels of humidity (Cleere 1998) from lowland moist and deciduous forest to montane forest and pine-oak association (AOU 1983). They may prefer young dry hardwood forests (Harrison 1975) with an open understory (Nicholson 1997). Their range is expanding southward in Georgia, onto much of the Coastal Plain. They usually inhabit hardwood or mixed forest, as well as some pine types (GA). Population is increasing along the coast of North Carolina as well, where it occurs mostly on the barrier islands and the adjacent mainland (Fussell 1994). Along the coast, they are most often found in pine plantations (Fussell 1994). In the mountains, they are found in wooded areas near fields and forest openings (Simpson 1992). They are reported to be common in open woodlands with well spaced trees and a low canopy; uncommon in mature forest; prefers even-aged successional habitats, from regeneration to pole-stage stands (Bushman and Therres 1988). Hammel (1992) reports that they breed in woodlands - medium-growth and upland woods, primarily where deciduous or mixed - not far from fields and other open country, and feed over adjacent fields.

They forage in flight through the tree-tops or hawk insects from a perch in open areas, and often rest on the ground or in the middle of roads at night (Cleere 1998) or rests on branches, in thicket at forest edge, in hedgerow or gallery forest (Stiles and Skutch 1989).

The nest site may be in a small clearing or along the edge of a wooded area (Cleere 1998). Eggs are laid on the ground on dead leaves, under trees or bushes 'typically where light and shadow filter through, blending incubating bird with surroundings' (Harrison 1975, Harrison 1978), and may be near a fallen log or under bushes (Cleere 1998).

Quoted directly from existing state habitat notes - K. Cook, 17Feb05

#### Additional information:

"Degree of openness in forest understory appears to be more important than forest composition (Wilson 1985)". Grand and Cushman (2003) also found that whip-poor-whil calling frequency as a measure of abundance was related to the structure of forest plots rather than landscape level plot effects. K. Cook, 17Feb05

Elevation Mask: > 240m and < 1219m

Mask of Forest Interior Avoidance: Exclude forest interiors with 250m buffer into them.

#### Selected Map Units:

Functional Group	Map Unit Name
Anthropogenic	Developed Open Space
Anthropogenic	Evergreen Plantations
Anthropogenic	Pasture/Hay
Anthropogenic	Successional Grassland/Herbaceous
Anthropogenic	Successional Grassland/Herbaceous (Other)
Anthropogenic	Successional Grassland/Herbaceous (Utility Swath)
Anthropogenic	Successional Shrub/Scrub (Clear Cut)
Anthropogenic	Successional Shrub/Scrub (Other)
Anthropogenic	Successional Shrub/Scrub (Utility Swath)
Coastal Dune & Freshwater Wetland	Atlantic Coastal Plain Northern Dune and Maritime Grassland
Coastal Dune & Freshwater Wetland	Atlantic Coastal Plain Southern Dune and Maritime Grassland
Forest/Woodland	Alabama Ketona Glade and Woodland
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland
Forest/Woodland	Allegheny-Cumberland Dry Oak Forest and Woodland - Hardwood Modifier
Forest/Woodland	Appalachian Serpentine Woodland
Forest/Woodland	Appalachian Shale Barrens
Forest/Woodland	Atlantic Coastal Plain Central Maritime 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 Maritime Forest

Forest/Woodland	Atlantic Coastal Plain Northern Mixed Oak-Heath Forest
Forest/Woodland	Atlantic Coastal Plain Southern Maritime Forest
Forest/Woodland	Central and Southern Appalachian Montane Oak Forest
Forest/Woodland	Central and Southern Appalachian Northern Hardwood Forest
Forest/Woodland	Central Appalachian Alkaline Glade and Woodland
Forest/Woodland	Central Appalachian Oak and Pine Forest
Forest/Woodland	Central Appalachian Pine-Oak Rocky Woodland
Forest/Woodland	Central Interior Highlands Calcareous Glade and Barrens
Forest/Woodland	Central Interior Highlands Dry Acidic Glade and Barrens
Forest/Woodland	Cumberland Sandstone Glade and Barrens
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 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	Nashville Basin Limestone Glade
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	Ridge and Valley Calcareous Valley Bottom Glade and Woodland
Forest/Woodland	South-Central Interior Mesophytic Forest
Forest/Woodland	Southern and Central Appalachian Cove Forest
Forest/Woodland	Southern and Central Appalachian Mafic Glade and Barrens
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 Coastal Plain Oak Dome and Hammock
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 Glade and Barrens
Forest/Woodland	Southern Piedmont Mafic Hardpan Woodland
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
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	Florida Dry Prairie
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

**CITATIONS:** American Ornithologists' Union (AOU), Committee on Classification and Nomenclature. 1983. Check-list of North American Birds. Sixth Edition. American Ornithologists' Union, Allen Press, Inc., Lawrence, Kansas.

Bent, A. C. 1940. Life histories of North American cuckoos, goatsuckers, hummingbirds, and their allies. Part I. U.S. Nat. Mus. Bull. 176. 244 pp., 36 pls.

Bushman, E.S., and G.D. Therres. 1988. Habitat management guidelines for forest interior breeding birds of coastal Maryland. Maryland Department of Natural Resources, Wildlife Tech. Publ. 88-1. 50 pp.

Cleere, N. 1998. Nightjars: a guide to the nightjars, nighthawks, and their relatives. Yale Univ. Press, New Haven, CT.

Ehrlich, P.R., D.S. Dobkin, and D. Wheye. 1992. Birds in jeopardy: the imperiled and extinct birds of the United States and Canada, including Hawaii and Puerto Rico. Stanford University Press, Stanford, California. 259 pp.

Fussell, J.O. III. 1994. A birder's guide to coastal North Carolina. Chapel Hill and London: The University of North Carolina Press.

Grand, J., and S. A. Cushman. 2003. A multi-scale analysis of species-environment relationships: breeding birds in a pitch pine-scrub oak (*Pinus rigida*-*Quercus ilicifolia*) community. *Biological Conservation* 112:307-317 | 307.

Hamel, P. B. 1992. The land manager's guide to the birds of the south. The Nature Conservancy, Chapel Hill, North Carolina. 367 pp + several appendices.

Harrison, C. 1978. A field guide to the nests, eggs and nestlings of North American birds. Collins, Cleveland, Ohio.

Harrison, H.H. 1975. A field guide to bird's nests in the U.S. east of the Mississippi River. Houghton Mifflin Company, Boston, Massachusetts. 257 p.

Harrison, H.H. 1979. A field guide to western birds' nests. Houghton Mifflin Company, Boston. 279 pp.

Mills, A. M. 1986. The influence of moonlight on the behavior of goatsuckers (*Caprimulgidae*). *Auk* 103:370-378.

Nicholson CP. 1997. Atlas of the breeding birds of Tennessee. Knoxville: University of Tennessee Press.

Potter, E. F., J. F. Parnell, and R. P. Teulings. 1980. Birds of the Carolinas. Univ. North Carolina Press, Chapel Hill. 408 pp.

Simpson MB Jr. 1992. Birds of the Blue Ridge Mountains. Chapel Hill and London: University of North Carolina Press.

Stiles, F.G., and A.F. Skutch. 1989. A guide to the birds of Costa Rica. Comstock Publ. Associates, Cornell University Press, Ithaca, New York. 511 pp.

Terres, J.K. 1980. The Audubon Society encyclopedia of North American birds. Alfred A. Knopf, New York.

Wilson, S. G. 1985. Summer distribution of whip-poor-wills in Minnesota. *Loon* 57:6-8.

For more information:: SE-GAP Analysis Project / BaSIC  
 127 David Clark Labs  
 Dept. of Biology, NCSU  
 Raleigh, NC 27695-7617  
 (919) 513-2853  
[www.basic.ncsu.edu/segap](http://www.basic.ncsu.edu/segap)

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.