



SOUTHEAST GAP ANALYSIS PROJECT



Species Modeling Report

Chimney Swift

Chaetura pelagica

Taxa: Avian

Order: Apodiformes

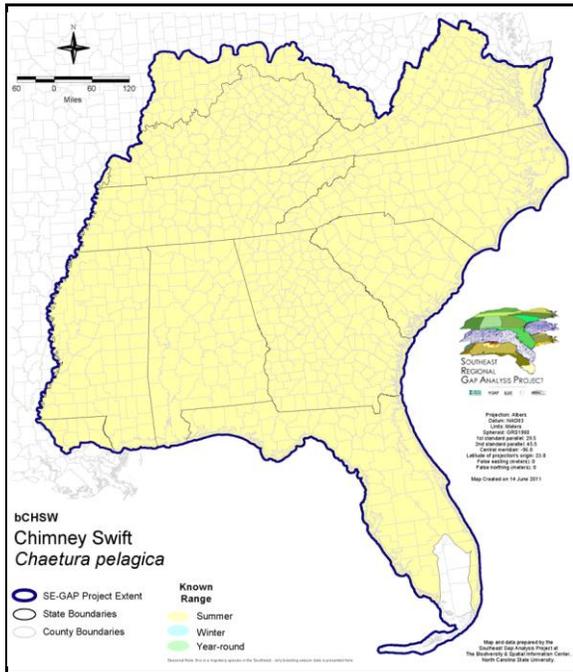
Family: Apodidae

SE-GAP Spp Code: **bCHSW**

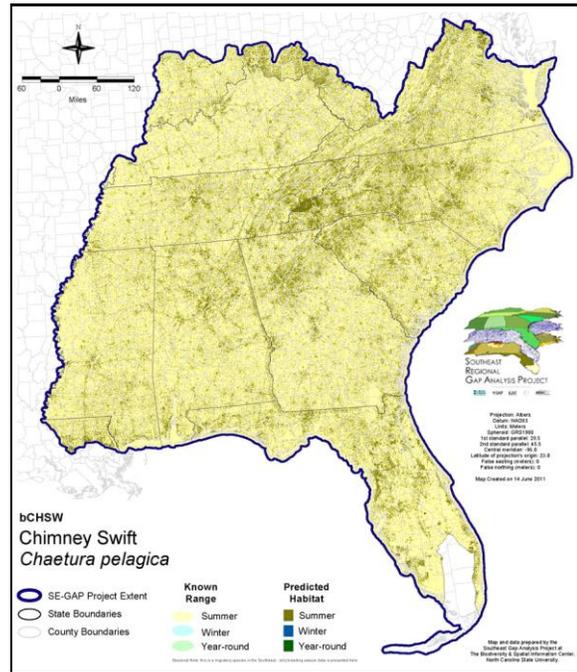
ITIS Species Code: 178001

NatureServe Element Code: ABNUA03010

KNOWN RANGE:



PREDICTED HABITAT:



Range Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Range_bCHSW.pdf

Predicted Habitat Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_bCHSW.pdf

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

Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/bCHSW_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: KY (N), MA (- WL), ME (SC), NJ (S/S), NY (PB), RI (Not Listed), UT (None), ON (THR), QC (Candidate)

NS Global Rank: G5

NS State Rank: AK (SNA), AL (S5B), AR (S4B,S5N), AZ (SNA), CA (SNA), CA (SNA), CO (S4B), CT (S5B), CT (S5B), DC (S4N,S5B), DE (S5B), FL (SNRB), GA (S5), IA (S5B), IL (S5), IN (S5B), KS (S4B), KY (S5B), LA (S5B), MA (S5B), MD (S5B), ME (S5B), MI (S5), MN (SNRB), MO (SNRB), MS (S5B), MS (S5B), MT (S3S4B), NC (S5B), NC (S5B), ND (SNRB), NE (S5), NH (S4B), NJ (S4B), NM (S2B,S4N), NY (S5), OH (S5), OK (S5B), PA (S5B), RI (S5B), SC (SNRB), SD (S5B), SD (S5B), TN (S5), TX (S3S4B), UT (SNA), VA (S5), VT (S5B), VT (S5B), WI (S5B), WI (S5B), WV (S5B), WY (S3B), WY (S3B), AB (SNA), MB (S2B), MB (S2B), NB (S2S3B), NF (SNA), NS (S4B), ON (S4B,S4N), PE (S?1B), QC (S3B), SK (S2B)

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	9,372.1	< 1	1,609.2	< 1	0.0	0	0.0	0
Status 2	19,859.5	< 1	21,072.8	< 1	0.0	0	652.3	< 1
Status 3	289.2	< 1	336,538.7	2	24,631.9	< 1	246,927.0	1
Status 4	30.2	< 1	0.0	0	0.0	0	98.1	< 1
Total	29,550.9	< 1	359,220.7	2	24,631.9	< 1	247,677.4	1
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	184,755.3	< 1	5.9	< 1	3,098.8	< 1
Status 2	0.0	0	6,222.0	< 1	2,205.5	< 1	12.9	< 1
Status 3	19,050.7	< 1	41,555.7	< 1	0.0	0	3,730.0	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	19,050.7	< 1	232,533.0	1	2,211.5	< 1	6,841.6	< 1
	Native Am. Reserv.		State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	237.9	< 1	0.0	0	0.0	0
Status 2	0.0	0	3,221.3	< 1	74,109.5	< 1	125.6	< 1
Status 3	9,381.8	< 1	83,077.0	< 1	32,543.1	< 1	70,361.8	< 1
Status 4	0.0	0	0.0	0	14,882.7	< 1	6.6	< 1
Total	9,381.8	< 1	86,536.2	< 1	121,535.3	< 1	70,493.9	< 1
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	1,034.6	< 1	0.0	0	0.0	0
Status 2	1,437.8	< 1	9,888.4	< 1	2.5	< 1	157.5	< 1
Status 3	0.0	0	1,894.7	< 1	11,678.3	< 1	14,674.3	< 1
Status 4	0.0	0	0.0	0	832.5	< 1	0.0	0
Total	1,437.8	< 1	12,817.6	< 1	12,513.3	< 1	14,831.8	< 1
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%		
Status 1	0.0	0	0.0	0	200,113.7	< 1		
Status 2	0.0	0	0.0	0	138,967.5	< 1		
Status 3	290.5	< 1	0.0	0	896,624.6	6		
Status 4	20,158,457.4	93	11,276.7	< 1	20,200,436.6	93		
Total	20,158,747.9	93	11,276.7	< 1	21,436,142.5	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: Spends most of the day high in the air foraging for flying insects over any type of habitat (Kaufman 1996), and is common in residential areas. Flies over open habitats and woodland, especially around human habitation (cities, towns, farms). Flies all day, roosts in air shafts and chimneys (NATURE SERVE). Swifts are largely dependent on the availability of suitable nest sites: chimneys, silos, wells, rafters, hollow trees, etc., and for this reason, they are often common around human habitation (GA).

In developed areas they roost and nests primarily in chimneys, but will also use the inside walls of vacant buildings, old cisterns, and wells (Nicholson 1997). Natural nesting habitats are caves, and sinkholes. Rarely uses hollow trees due to the lack of a sufficient number large enough for nesting (Kaufman 1996).

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

Additional information:

Chimney Swifts do use natural tree hollows as roosts and few quantitative habitat studies exist. While it is acknowledged that Chimney Swifts are most commonly observed in urban areas the have been documented to use a variety of habitats (Cink and Collins (2002-BNA). These authors cite that most atlases cite occurrence mainly in open habitats in or near any kind of human settlement (e.g., Norse and Kibbe 1985, Helleiner 1987, Sibley 1988, Palmer-Ball 1996). However, Chimney Swifts can inhabit natural areas. Cink and Collins (2002) cite that the Michigan Breeding Bird Atlas (Dexter 1991) reports that only 2 of 14 Upper Peninsula observations in Michigan were urban or residential. K. Cook, 17Feb05

Customized Model: Use avoid mask in inclusionary manner as opposed to exclusionary. The exception to this should be in the Smokies NP. They potentially still nest in historic habitats of large, hollow snags. MJR 9feb07.

Avoidance Mask: Medium - moderately intolerant of human disturbance.

Selected Map Units:

Functional Group	Map Unit Name
Anthropogenic	Developed Open Space
Anthropogenic	High Intensity Developed
Anthropogenic	Low Intensity Developed
Anthropogenic	Medium Intensity Developed
Anthropogenic	Pasture/Hay
Anthropogenic	Quarry/Strip Mine/Gravel Pit
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 and Gulf Coastal Plain Interdunal Wetland
Coastal Dune & Freshwater Wetland	Atlantic Coastal Plain Northern Dune and Maritime Grassland
Coastal Dune & Freshwater Wetland	Atlantic Coastal Plain Southern Dune and Maritime Grassland
Coastal Dune & Freshwater Wetland	East Gulf Coastal Plain Dune and Coastal Grassland
Coastal Dune & Freshwater Wetland	Southwest Florida Dune and Coastal 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	Allegheny-Cumberland Dry Oak Forest and Woodland - Pine Modifier
Forest/Woodland	Appalachian Hemlock-Hardwood Forest
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 - Loblolly Modifier

Forest/Woodland	Atlantic Coastal Plain Fall-line Sandhills Longleaf Pine Woodland - Offsite Hardwood Modifier
Forest/Woodland	Atlantic Coastal Plain Fall-line Sandhills Longleaf Pine Woodland - Open Understory Modifier
Forest/Woodland	Atlantic Coastal Plain Fall-line Sandhills Longleaf Pine Woodland - Scrub/Shrub Understory 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	Atlantic Coastal Plain Upland Longleaf Pine Woodland
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 Shortleaf Pine-Oak Forest - Pine Modifier
Forest/Woodland	East Gulf Coastal Plain Interior Upland Longleaf Pine Woodland - Loblolly 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 - Open Understory 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 Maritime 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 Loess Plain Oak-Hickory Upland - Juniper 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 - Open Understory Modifier
Forest/Woodland	Florida Longleaf Pine Sandhill - Scrub/Shrub Understory Modifier
Forest/Woodland	Florida Peninsula Inland Scrub
Forest/Woodland	Mississippi Delta Maritime Forest
Forest/Woodland	Nashville Basin Limestone Glade
Forest/Woodland	Northeastern Interior Dry Oak Forest - Mixed Modifier
Forest/Woodland	Northeastern Interior Dry Oak Forest - Virginia/Pitch Pine 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	Southeast Florida Coastal Strand and Maritime Hammock
Forest/Woodland	Southeastern Interior Longleaf Pine Woodland
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 Low Mountain Pine Forest
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 - Loblolly Pine 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
Forest/Woodland	Southern Ridge and Valley Dry Calcareous Forest - Pine Modifier
Forest/Woodland	Southwest Florida Coastal Strand and Maritime Hammock
Freshwater Tidal Marsh & Wetland	Atlantic Coastal Plain Central Fresh-Oligohaline Tidal Marsh
Freshwater Tidal Marsh & Wetland	Atlantic Coastal Plain Embayed Region Tidal Freshwater Marsh
Freshwater Tidal Marsh & Wetland	Atlantic Coastal Plain Northern Fresh and Oligohaline Tidal Marsh
Freshwater Tidal Marsh & Wetland	Florida Big Bend Fresh-Oligohaline Tidal Marsh
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 Blackwater Stream Floodplain Forest - Forest Modifier
Wetlands	Atlantic Coastal Plain Blackwater Stream Floodplain Forest - Herbaceous Modifier
Wetlands	Atlantic Coastal Plain Brownwater Stream Floodplain Forest
Wetlands	Atlantic Coastal Plain Clay-Based Carolina Bay Forested Wetland
Wetlands	Atlantic Coastal Plain Clay-Based Carolina Bay Herbaceous Wetland
Wetlands	Atlantic Coastal Plain Nonriverine Swamp and Wet Hardwood Forest - Taxodium/Nyssa Modifier
Wetlands	Atlantic Coastal Plain Nonriverine Swamp and Wet Hardwood Forest - Oak Dominated Modifier
Wetlands	Atlantic Coastal Plain Northern Basin Peat Swamp
Wetlands	Atlantic Coastal Plain Northern Basin Swamp and Wet Hardwood Forest
Wetlands	Atlantic Coastal Plain Northern Wet Longleaf Pine Savanna and Flatwoods
Wetlands	Atlantic Coastal Plain Peatland Pocosin
Wetlands	Atlantic Coastal Plain Sandhill Seep
Wetlands	Atlantic Coastal Plain Small Blackwater River Floodplain Forest
Wetlands	Atlantic Coastal Plain Small Brownwater River Floodplain Forest
Wetlands	Atlantic Coastal Plain Southern Wet Pine Savanna and Flatwoods
Wetlands	Atlantic Coastal Plain Streamhead Seepage Swamp, Pocosin, and Baygall
Wetlands	Atlantic Coastal Plain Xeric River Dune
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 Florida Herbaceous Seep
Wetlands	Central Florida Pine Flatwoods
Wetlands	Central Interior Highlands and Appalachian Sinkhole and Depression Pond
Wetlands	Cumberland Riverscour
Wetlands	East Gulf Coastal Plain Interior Shrub Bog
Wetlands	East Gulf Coastal Plain Jackson Plain Dry Flatwoods - Open Understory Modifier

Wetlands	East Gulf Coastal Plain Jackson Plain Dry Flatwoods - Scrub/Shrub Understory Modifier
Wetlands	East Gulf Coastal Plain Large River Floodplain Forest - Forest Modifier
Wetlands	East Gulf Coastal Plain Large River Floodplain Forest - Herbaceous Modifier
Wetlands	East Gulf Coastal Plain Near-Coast Pine Flatwoods - Offsite Hardwood Modifier
Wetlands	East Gulf Coastal Plain Near-Coast Pine Flatwoods - Open Understory Modifier
Wetlands	East Gulf Coastal Plain Near-Coast Pine Flatwoods - Scrub/Shrub Understory Modifier
Wetlands	East Gulf Coastal Plain Northern Seepage Swamp
Wetlands	East Gulf Coastal Plain Small Stream and River Floodplain Forest
Wetlands	East Gulf Coastal Plain Southern Loblolly-Hardwood Flatwoods
Wetlands	East Gulf Coastal Plain Treeless Savanna and Wet Prairie
Wetlands	Floridian Highlands Freshwater Marsh
Wetlands	Lower Mississippi River Bottomland and Floodplain Forest
Wetlands	Lower Mississippi River Bottomland Depressions - Forest Modifier
Wetlands	Lower Mississippi River Bottomland Depressions - Herbaceous Modifier
Wetlands	Mississippi River Low Floodplain (Bottomland) Forest
Wetlands	Mississippi River Riparian Forest
Wetlands	North-Central Appalachian Acidic Swamp
Wetlands	North-Central Appalachian Seepage Fen
Wetlands	North-Central Interior and Appalachian Rich Swamp
Wetlands	South-Central Interior Large Floodplain - Forest Modifier
Wetlands	South-Central Interior Large Floodplain - Herbaceous Modifier
Wetlands	South-Central Interior Small Stream and Riparian
Wetlands	South-Central Interior/Upper Coastal Plain Wet Flatwoods
Wetlands	Southern and Central Appalachian Bog and Fen
Wetlands	Southern Appalachian Seepage Wetland
Wetlands	Southern Coastal Plain Blackwater River Floodplain Forest
Wetlands	Southern Coastal Plain Herbaceous Seepage Bog
Wetlands	Southern Coastal Plain Hydric Hammock
Wetlands	Southern Coastal Plain Nonriverine Basin Swamp
Wetlands	Southern Coastal Plain Nonriverine Cypress Dome
Wetlands	Southern Coastal Plain Seepage Swamp and Baygall
Wetlands	Southern Piedmont Large Floodplain Forest - Forest Modifier
Wetlands	Southern Piedmont Large Floodplain Forest - Herbaceous 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

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.

Carter, M., G. Fenwick, C. Hunter, D. Pashley, D. Petit, J. Price, and J. Trapp. 1996. Watchlist 1996:For the future. Field Notes 50(3):238-240.

Cink, C. L., and C. T. Collins. 2002. Chimney Swift (*Chaetura pelagica*). in e. A. Poole and F. Gill, editor. The Birds of North America. The Birds of North America, Inc., Philadelphia, PA.

Dexter, R.W. 1991. Chimney Swift. In: R. Brewer GAM, and R. J. Adams Jr., editor. The atlas of breeding birds of Michigan: Michigan State Univ. Press, East Lansing. p 254–255.

Ehrlich, P.R., D.S. Dobkin, and D. Wheye. 1988. The birder's handbook:a field guide to the natural history of North American birds. Simon and Shuster, Inc., New York. xxx + 785 pp.

Fisher, R.B. 1958. The breeding biology of the chimney swift. 141 pp.

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

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

Helleiner, F. M. 1987. Chimney Swift. Pages 226-227 in P. F. J. E. M. D. Cadman, and F. M. Helleiner, editor. Atlas of the breeding birds of Ontario. Univ. of Waterloo Press, Waterloo, ON.

Kaufman K. 1996. Lives of North American Birds. Boston, New York: Houghton Mifflin Company.

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

Norse, W. J., D. P. Kibbe. 1985. Chimney Swift. Pp. 148–149 in The atlas of breeding birds of Vermont (S. B. Laughlin and D. P. Kibbe, eds.). Univ. Press of New England, Hanover, NH.

Palmer-Ball, B.L., Jr. 1996. The Kentucky Breeding Bird Atlas. The University Press of Kentucky, Lexington.

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

Sibley, S. C. 1988. Chimney Swift. Pages 220-221 in The atlas of breeding birds in New York State. Cornell Univ. Press, Ithaca, NY.

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.

Whittemore, M. 1981. Chimney swifts and their relatives. Nature Books. 176 pp.

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Compiled: 15 September 2011

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The Biodiversity and Spatial Information
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