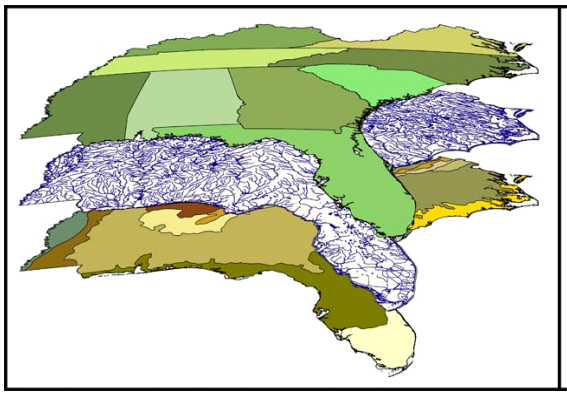


SOUTHEAST GAP ANALYSIS PROJECT

Species Modeling Report

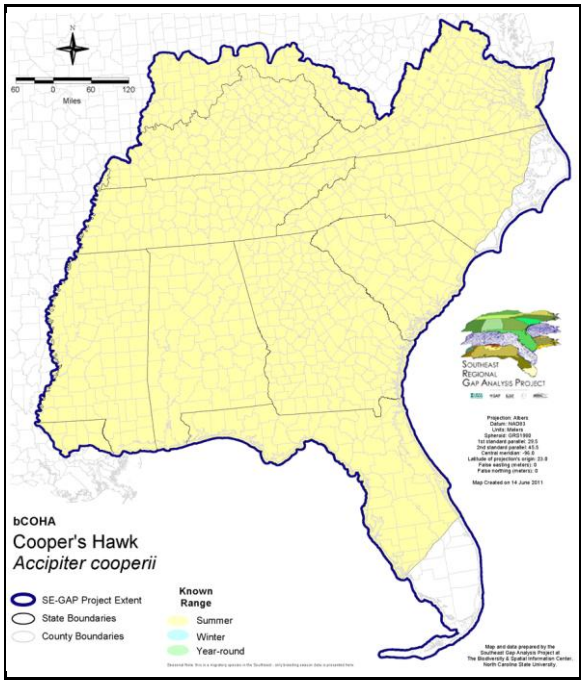
Cooper's Hawk

Accipiter cooperii

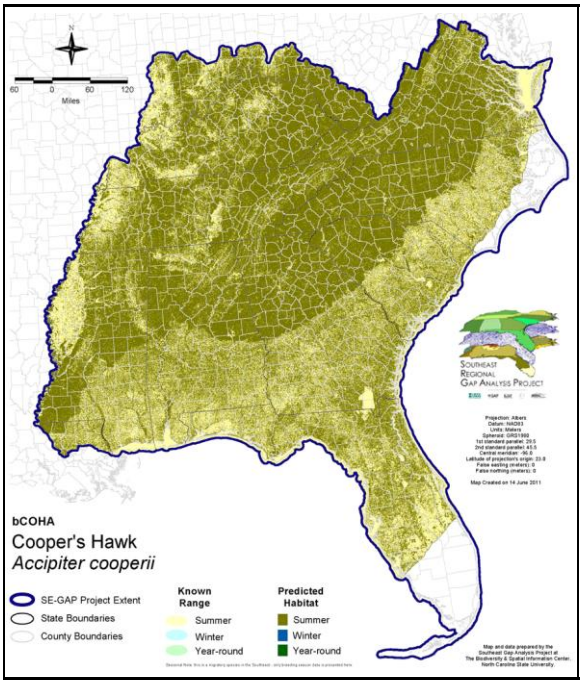
Taxa: Avian
Order: Falconiformes
Family: Accipitridae

SE-GAP Spp Code: **bCOHA**
ITIS Species Code: 175309
NatureServe Element Code: ABNKC12040

KNOWN RANGE:



PREDICTED HABITAT:



Range Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Range_bCOHA.pdf
Predicted Habitat Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_bCOHA.pdf
GAP Online Tool Link: http://www.gapserve.ncsu.edu/segap/segap/index2.php?species=bCOHA
Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/bCOHA_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: AL (SP), CA (None), DE (E), DE (E), ID (P), IL (RE), KY (N), ME (SC), NJ (T/S), NV (YES), NY (SC), RI (Concern), UT (None), BC (4 (2005)), ON (NAR), QC (RetirΘe)

NS Global Rank: G5

NS State Rank: AK (SNA), AL (S3B,S4N), AR (S1B,S3N), AZ (S4), CA (S3), CO (S3S4B,S4N), CT (S2B), CT (S2B), DC (S3N,SHB), DC (S3N,SHB), DE (S1B), DE (S1B), FL (S3), GA (S3S4), IA (S3B), IA (S3B), ID (S4), IL (S3), IN (S3B), IN (S3B), KS (S3B,S4N), KY (S4B,S4N), LA (S2B,S3N), MA (S4B,S5N), MD (S4B,S4N), ME (S3S4B,S3?N), MI (S3S4), MN (SNRB,SNRN), MO (S3), MS (S3?B), MS (S3?B), MT (S4B), MT (S4B), NC (S3S4B,S4N), ND (SU), NE (S5), NH (S2B), NH (S2B), NJ (S2B,S4N), NM (S4B,S4N), NV (S3), NY (S4), OH (S3S4), OK (S2S3), OR (S4), PA (S4B,S5N), RI (S1B,S3N), SC (S3?), SC (S3?), SD (S3B), SD (S3B), TN (S3B), TX (S4B,S3N), UT (S4B,S3S4N), VA (S3B,S3N), VT (S2S3B), VT (S2S3B), WA (S4B,S4N), WI (S4B,S2N), WV (S3B,S4N), WY (S4), AB (S4), BC (S5B,S4N), MB (S4S5B), MB (S4S5B), NB (S1S2B), NF (SNA), NS (SHB), NS (SHB), ON (S4), PE (SNA), QC (S4B), SK (S4B,S2M,S2N)

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	86,807.6	< 1	38,142.1	< 1	0.0	0	0.0	0
Status 2	124,373.6	< 1	411,047.2	< 1	0.0	0	5,885.5	< 1
Status 3	3,072.2	< 1	2,558,714.6	3	78,350.9	< 1	494,420.7	< 1
Status 4	89.0	< 1	< 0.1	< 1	0.0	0	212.1	< 1
Total	214,342.4	< 1	3,007,904.0	4	78,350.9	< 1	500,518.3	< 1

	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	316,337.1	< 1	75.3	< 1	6,883.7	< 1
Status 2	0.0	0	20,500.6	< 1	9,226.6	< 1	2.3	< 1
Status 3	56,233.3	< 1	140,145.8	< 1	0.0	0	3,813.4	< 1
Status 4	0.0	0	1.0	< 1	0.0	0	0.0	0
Total	56,233.3	< 1	476,985.1	< 1	9,302.0	< 1	10,699.5	< 1

	Native Am. Reserv.		State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	1,518.8	< 1	78.5	< 1	0.0	0
Status 2	0.0	0	20,749.8	< 1	732,175.6	< 1	1,471.7	< 1
Status 3	28,483.9	< 1	475,373.1	< 1	198,715.4	< 1	238,594.2	< 1
Status 4	0.0	0	< 0.1	< 1	130,720.1	< 1	15.5	< 1
Total	28,483.9	< 1	497,641.8	< 1	1,061,689.6	1	240,081.4	< 1

	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	14,436.1	< 1	0.0	0	0.0	0
Status 2	2,968.3	< 1	93,725.4	< 1	6.8	< 1	2,836.1	< 1
Status 3	0.0	0	19,278.2	< 1	26,980.4	< 1	92,258.1	< 1
Status 4	0.0	0	2.1	< 1	4,289.4	< 1	< 0.1	< 1
Total	2,968.3	< 1	127,441.7	< 1	31,276.6	< 1	95,094.3	< 1

	Private Land - No Res.		Water		Overall Total	
	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	464,279.3	< 1
Status 2	0.2	< 1	0.0	2	1,424,969.7	2
Status 3	1,118.0	< 1	0.0	0	4,415,552.0	9
Status 4	67,364,995.1	88	47,308.8	< 1	67,678,265.1	88
Total	67,366,113.3	88	47,309.0	< 1	73,983,066.1	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: Generally breed in mature forest, either broadleaf or coniferous, mostly the former; also in open woodland and forest edge (AOU 1983). Forest edge habitat especially important during breeding (Rosenfield and Dielefeldt 1993). Hamel (1992) reports breeding in a variety of forests interspersed with fields and openings. Mixed woodlands, especially in swamps or river food plains are used (Layne et al. 1977, Stevenson and Anderson 1994).). In New Jersey and New York, nested mostly in mixed deciduous-coniferous forest and tended to nest in areas with relatively large basal area and more canopy cover; nests were in live over-story trees (43% conifers), typically within the canopy, always in dense forest but commonly near wetland openings, on level ground or lower slopes, typically several hundred meters from paved roads (but sometimes within 100 m or less); avoided southern exposures (Bosakowski et al. 1992). Where openings occur nearby, however, these are also used for foraging, especially where hedgerows or windbreaks offer shelter for prey species. Johnsgard (1990) states that Cooper's hawks are less fussy about the forest type than sharp-shins, and are more often 'associated with deciduous and mixed forests and open woodland habitats such as woodlots, riparian woodlands, semiarid woodlands of the southwest, and other areas where the woodlands tend to occur in patches and groves or as spaced trees.' A study in Missouri documented numerous Cooper's hawks nesting in young pine plantations in essentially the same habitat as sharp-shins (Wiggers and Kritz 1991) and Rosenfield et al. (1991) report that pine plantations are important habitat for breeding Cooper's hawks throughout the Midwest. In the East, where the goshawk rarely nest, the Cooper's hawk prefers mature stands (Brown and Amadon 1968). In some areas the species seems to require large tracts of forests and to avoid human contact, in others they may use small forest tracts, (e.g., British Columbia and Nevada), woodlots (e.g., Ohio) or even nest in urban/suburban areas where they seem tolerant of human activities (e.g., Utah, Wisconsin, Indiana) (Hennessy 1978, cited in Penak 1983; Herron et al. 1985; Campbell 1990; Peterjohn and Rice 1991; Rosenfield et al. 1991, Castrale 1992).

Nests are typically built below the canopy, placed against the trunk usually 6 - 18 m above the ground and hidden by dense foliage. Trees with deformed crowns were preferred in a Missouri study (Wiggers and Kritz 1991). Nest was usually located in stand of trees near opening/edge, often near water (Kale 1978). Nests were usually rebuilt each year, but in some cases an old nest was added to and reused (Campbell (1990). Data on North Caolina's breeding population is nearly nonexistent

Males vigorously defend an area 30 m in diameter around the nest site although they may forage up to 3.2 km away (Brown and Amadon 1968). Johnsgard (1990) compiled numbers on home range sizes from the literature. These numbers ranged from 105 to 784 ha (the latter was seasonal home range; daily home range was 231 ha). One set of 17 observations of home range averaged 207 ha. Nests are typically spaced 2.4 - 5.6 km apart (Brown and Amadon 1968, Reynolds and Wight 1978, Kennedy 1980, Campbell 1990). The smaller sharp-shinned hawk also appears to keep similar distances from Cooper's hawk nests (Brown and Amadon 1968, Reynolds and Wight 1978).

Quoted directly from existing state habitat notes - K. Cook, 13Feb05

Selected Map Units:

Functional Group	Map Unit Name
Anthropogenic	Deciduous Plantations
Anthropogenic	Evergreen Plantations
Anthropogenic	Low Intensity Developed
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 - 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 and Southern Appalachian Spruce-Fir 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 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 - Offsite Hardwood 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 Dry Upland Hardwood Forest - Offsite Pine Modifier
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	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	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
Wetlands	Atlantic Coastal Plain Blackwater Stream Floodplain Forest - Forest Modifier
Wetlands	Atlantic Coastal Plain Brownwater Stream Floodplain Forest
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 Small Blackwater River Floodplain Forest
Wetlands	Atlantic Coastal Plain Small Brownwater River Floodplain Forest
Wetlands	Central Appalachian Floodplain - Forest Modifier
Wetlands	Central Appalachian Riparian - Forest Modifier
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 Large River Floodplain Forest - Forest Modifier
Wetlands	East Gulf Coastal Plain Small Stream and River Floodplain Forest
Wetlands	East Gulf Coastal Plain Southern Loblolly-Hardwood Flatwoods
Wetlands	Lower Mississippi River Bottomland and Floodplain Forest
Wetlands	Lower Mississippi River Bottomland Depressions - Forest 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 Florida Bayhead Swamp
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 Coastal Plain Blackwater River Floodplain Forest
Wetlands	Southern Coastal Plain Hydric Hammock
Wetlands	Southern Coastal Plain Nonriverine Cypress Dome
Wetlands	Southern Piedmont Large Floodplain Forest - Forest Modifier
Wetlands	Southern Piedmont Small Floodplain and Riparian Forest

Selected Secondary Map Units within 120m of Primary Map Units:

Functional Group	Map Unit Name
Anthropogenic	Developed Open Space
Anthropogenic	Successional Shrub/Scrub (Clear Cut)
Anthropogenic	Successional Shrub/Scrub (Utility Swath)
Anthropogenic	Successional Shrub/Scrub (Other)
Anthropogenic	Successional Grassland/Herbaceous
Anthropogenic	Successional Grassland/Herbaceous (Other)
Anthropogenic	Successional Grassland/Herbaceous (Utility Swath)
Anthropogenic	Pasture/Hay

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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.