

Final Report of the Bird Inventory: Chattanooga and Chickamauga National Military Park, 2004-2006

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Kenneth Dubke, now retired from the NPS, but a well-known and keen observer of birds who worked at CHCH for many years and observed the birdlife there, shared many historical accounts of the park with us. He had conducted systematic hawk watches at the Signal Point Unit for many years during fall; results of these hawk watches were published in the publications of the Hawk Migration Association of North America. His avid personal interest in birds has added much to the knowledge of birds in the general area of the park.

We would also like to thank all the rangers, staff, and maintenance personnel whom we met frequently during the inventory. They were always friendly, helpful, and interested in our work, making that work easier and helping with the overall success of the bird inventory.

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Final Report of the Bird Inventory: Chattanooga and Chickamauga National Military Park, 2004-2006

Introduction

Chattanooga and Chickamauga National Military Park (CHCH)--located in Hamilton County, Tennessee, and Catoosa, Dade, and Walker counties, Georgia—is the oldest and largest national military park, having been established in 1890 to commemorate the September 1963 Battle of Chickamauga in northeast Georgia and the November 1863 Battle of Chattanooga in southeast Tennessee. The park encompasses approximately 3640 hectares (9000 acres) and is comprised of 18 units (J. Staub pers. com.), including two main large battlefields at Chickamauga and Lookout Mountain (each with visitor centers), various other smaller units along Missionary Ridge, Orchard Knob, and Signal Point, and numerous small sites where monuments have been erected in urban areas. The purpose of this study was 1) to inventory the bird species occurring at CHCH; and 2) to indicate the status and relative seasonal abundance of documented species.

Description of Study Site

The Chickamauga unit of CHCH, the largest park unit (2145 hectares [5300 acres]), is located in Catoosa and Walker counties, Georgia, and adjoins Fort Oglethorpe, Georgia, to the north. Lying about 6.5 km (4 mi) south of Chattanooga, Tennessee, this unit rests in the southern portion of the Southern

Ridge and Valley physiographic province, a province that is characterized by parallel ridges and valleys (Hunter et al. 1998). The strata underlying the park are composed of 450-million-year-old Bangor limestone underlain by sedimentary formations of Cambrian age (Eardley 1951). The highest point in the unit is Horseshoe Ridge, an extension of Missionary Ridge, with an elevation of 285 m (940 ft); most of the unit is quite flat with a base elevation of 205 m (675 ft) at the visitor center.

Habitat in the Chickamauga unit of CHCH is largely forested and is composed mainly of oak-hickory-pine forest with several large bottomland tracts also present. Many large mowed fields and several very large hayfields are interspersed in the unit; some of these fields resemble wet meadows including established wetland plants. A few small cedar glades occur in the eastern section of the unit. Most tracts of pine were killed by an outbreak of southern pine beetles (*Dendroctonus frontalis*) in the early 2000s, leaving numerous large slash piles and some second-growth habitat in the early stages of succession. West Chickamauga Creek borders the unit on the southeast, and several of its tributaries lie within the unit; beavers have dammed some creeks, leaving wide pond-like sections bordered by willows and standing dead trees killed by the infusion of water. Fragmentation results from the fact that three major roadways traverse the park.

The Lookout Mountain unit of CHCH lies in Hamilton County, Tennessee, and Walker County, Georgia; its 1130 hectares (2800 acres) adjoin Chattanooga to the north. Lookout Mountain is a limestone ridge capped with sandstone and

shale. Like the Chickamauga unit of CHCH, the Lookout Mountain unit lies in the Southern Ridge and Valley physiographic province (Hunter 1998). Point Park is located at the highest elevation found in this unit (640 m [2112 ft]), the lowest being along Lookout Creek (195 m [644 ft]) at the base of Lookout Mountain.

The habitat of the Lookout Mountain unit is largely forested with the principle hardwood species being oaks, hickories, and some red maple. Stands of pine (mostly Virginia) are scattered throughout; some damage to the pine tracts was wrought by southern pine beetle outbreak during the early 2000s. Bottomlands along Lookout Creek are dominated by sycamore and willow. A few acres of mowed pasture can be found bordering the park at Reflection Riding, and small tracts of manicured lawns can be found at Point Park. The Cravens House compound is situated at approximately 460 m (1520 ft) on the side of Lookout Mountain. The slopes above and below it contain classic oak-hickory forest community with some large tulip poplars mixed in. Many private residences are scattered below the compound; these residences are surrounded by mowed lawns and some edge habitat, mostly consisting of privet and exotic shrubs. This slope of Lookout Mountain is inundated with invasive exotic plants.

The largest of the smaller units connected to CHCH is Moccasin Bend, a 90-hectare (220-acre) archeological park located on a peninsula formed by a bend of Tennessee River just east of Lookout Mountain. The highest elevation (~213 m) occurs on a spine that runs the full length of the southern edge of the peninsula and the lowest elevation (~195 m) in some bottomland that lies along the river to the north. The habitat is quite varied with the higher elevations

containing oak-hickory forest and the remainder oak-hickory forest interspersed with some stands of Virginia pine also displaying southern pine beetle damage. Two moderate-sized tracts of pasture reverting to early second growth are present at this site, as well as some wet bottomland dominated by willows along the low-lying fingers extending from the Tennessee River on the north side of the peninsula. Industrial areas and a large hospital institution border the park at this site.

The Sherman Reservation is a 10-hectare (25-acre) unit on the northern end of Missionary Ridge with an elevation of 274 m. It has early successional growth where the compound was once a manicured lawn area bordered by scrub, mainly privet. At least half of the compound is oak-hickory, maple forest with a smattering of Virginia Pine, and many trees at this site are old-growth sized. The entire area is bordered by private homes, and a major highway is nearby.

Signal Point is a small unit of CHCH located high (~518 m [1710 ft]) on the northwest plateau of Signal Mountain overlooking the Tennessee River gorge. Habitats include stunted pines and an oak-hickory hardwood forest. A hectare (2.5 acres) of manicured lawn covers the main park area.

Orchard Knob is a 2-hectare (5-acre) hill bordered by Hawthorne, Ivy, Fourth Streets and Orchard Knob Avenue in south Chattanooga. It is mostly a manicured lawn compound with some scattered large oaks and some limestone outcroppings lying at an elevation of ~213 m (710 ft).

Another dozen very small sites, often just large enough to harbor a monument dedicating various events of the Civil War battles fought near them, comprise the remainder of CHCH. Most of these were visited seldom during the bird inventory and none was the subject of a point count.

Methods--Bird Inventory Techniques

Point counts were the most regimented method of collecting bird data at this NPS unit. Forty point counts were conducted at CHCH during late May and early June in each of two years, 2005 and 2006. The protocol for these counts entailed standing at the center of a 100-meter diameter plot and counting all birds heard and seen for 10 minutes; birds were recorded as occurring at one of four distance intervals (< 25 m; 25-50 m; 50-100 m; and >100 m) or as flyovers; birds were also recorded as occurring within one of three temporal intervals (0-3 min; 3-5 min; 5-10 min) (Hamel 1992; Hamel et al. 1996). Any birds flushed during approach to the plot center were included among the birds recorded at the point. Birds believed to have been already counted at a one point were not counted if detected at an adjacent point. All birds seen or heard were recorded on a special point count data form. All point count data are provided in a supplemental Excel file included with this report.

A second method used to gather data about the birds of this site was the migration walk. During spring and fall, these walks were conducted 8-10 times per season. The walks typically lasted 1-3 hours and covered a distance of

about 1.5 km through habitat considered to have potential for harboring migrant birds. All species seen or heard were recorded on a standard field card.

A third method used to gather data about the birds of the site was the raptor survey. These surveys were undertaken during fall and early winter. Typically, the survey lasted 2-4 hours during late morning and early afternoon. A route was driven by automobile along all the roads of the unit, usually totaling about 35 km. All raptors detected were included in the resulting data. All species seen or heard were recorded on a standard field card.

A fourth method of gathering bird data at this site was the night survey, a somewhat informal method entailing the use of tape-recorded owl calls to elicit responses from owls at the site. Besides owls, nightjars were also detected by night surveys during summer; woodcocks at all seasons; and Grasshopper Sparrows during spring and summer. All species seen or heard were recorded on a standard field card, sometimes in conjunction with data obtained using the following method.

The fifth and last method of obtaining bird data at this site was the general inventory, involving less regimented efforts to visit many promising sites within this NPS unit during the course of a day and to keep track of all species sighted. During the breeding period for birds, which includes most of the spring and summer, the general inventory included efforts to detect breeding evidence of for all species breeding in the unit. All species seen or heard and all breeding evidence observed were recorded on a standard field card.

Data obtained during migration walks, raptor surveys, night surveys, and general inventory surveys are provided in a supplemental Excel file submitted with this report.

Results

Expected Species List

The most comprehensive source listing bird species expected to occur at CHCH is “Status of the Birds of the Chattanooga Area” (Calhoon 2006; see Appendix A: Table 1), a compilation that lists 323 species recorded in six Tennessee and three Georgia counties surrounding Chattanooga, Tennessee, including Hamilton County, Tennessee, and Catoosa, Dade, and Walker counties, Georgia, wherein the various units comprising CHCH are located.

Total Species Inventoried

During the inventory period, Kevin A. Calhoon and Barbara H. Stedman made visits to CHCH on a total of 185 days (Calhoon 157 days and Stedman 41 days) during all seasons of the year (55 visits during fall; 41 visits during winter; 55 visits during spring; and 34 visits during summer). In the course of these visits they observed 173 species (Appendix A: Table 2) and one identifiable form (“Brewster’s” Warbler) by one or more of the methods described above. At least nine additional species have been recorded in the park in the past (Appendix A: Table 2). The total of 173 species detected during the two-year inventory represents about 54% of the 323 species that might be expected to occur at the site.

Breeding Species Inventoried

Evidence of breeding by species using the unit was divided into three categories: possible evidence; probable evidence; and confirmed evidence. In all, 86 species (Appendix A: Table 2) were placed in one of these categories, including 14 (16.3%) possible breeders, 29 (33.7%) probable breeders, and 43 (50%) confirmed breeders.

Point counts were conducted during the breeding period of many species. A total of 67 species was registered during point counts conducted during 2005, while 63 species were detected during point counts conducted in 2006. In all, point count effort led to data for 74 species of birds (Appendix A: Table 3), all of which use CHCH during the breeding season. Detailed data from the point counts are provided in a supplemental Excel file submitted in conjunction with this report.

Species Composition of the Isolated Units

Generally speaking, the larger and more diverse in habitat a site is, the larger the number of bird species that will be found in it. This rule of thumb was generally borne out by the data obtained during this survey; i.e., the two larger units of CHCH harbor a larger and more diverse avifauna than all but one of the smaller units. For instance, Moccasin Bend, which at 90 hectares (220 acres) may be considered to be a moderate-sized unit of the park, produced a moderately diverse array of species, while all the remaining smaller units had comparatively short bird lists as a result of the inventory effort.

Discussion

Comparative Effectiveness of Survey Techniques

Each of the five survey techniques used for this inventory was effective for its purpose, but in terms of generating the largest number of species per unit of time expended, the general inventory was probably the most effective, followed by the migration walk and the point count (for breeding species only). Due to their restricted emphasis, night surveys and raptor surveys generated fewer species per unit of time expended.

Influence of Weather on Results

An effort was made to visit CHCH during periods when the weather was conducive for registering the maximum number of species during general inventory work, migration walks, point counts, night surveys, and raptor surveys, so the influence of weather on the results of the overall inventory was generally positive. However, some factors that may have affected the bird inventory in a negative manner need to be mentioned:

1. No strong cold fronts took place during either fall migration season, resulting in few days when large numbers of migrants could be found.
2. Each winter of the inventory was warm (compared to the long-term average), resulting in few incursions by boreal finches and related species.
3. During the summer of 2005 remnants of Hurricane Arlene passed over the area in early June, bringing heavy rain and

strong winds that caused many trees to blow down and disrupting the nesting cycle of many species.

4. Spring and summer of 2006 were much hotter and drier than the long-term average. The spring lacked strong frontal passages and consequently few concentrations of migrants were to be found. The summer heat was so intense that birdsong often diminished considerably before the end of the period when point counts were conducted each morning.

Also affecting the bird inventory, though not strictly related to the influence of weather on the results, were some park maintenance projects that took place during the period of our work. First, during the winter of 2005-2006 and the spring of 2006, Jay Mill Rd. along the eastern border of the Chickamauga unit was closed for grading and repaving. Wet weather that winter delayed the project into spring. Jay Mill Rd. traverses some of the best habitat for wintering sparrows and for many migrant birds, but this area could not be effectively covered during the period noted above, no doubt resulting in failure to register some species that might otherwise have been found in the park. Second, during spring 2006 several roads in the southwest sector of the Chickamauga unit were closed for relocation, grading and paving, limiting access to this part of the park at an important season for birds. Third and finally, the entire southeastern sector of the Chickamauga unit was closed for most of 2006 so that extensive roadwork could be performed. In particular, Viniard-Alexander Rd. was closed, limiting

access except on foot to an area of the park that has some of the most important habitat for birds, especially along West Chickamauga Creek.

Description of Bird Diversity in Terms of Observed and Estimated Species Richness

Bird diversity in the park was expected to be fairly high since it is a large unit, and this expectation was borne out by the findings of the inventory.

Unexpected Results

Both species of accipitrine hawk (Sharp-shinned Hawk and Cooper's Hawk) were found to be a territorial (Cooper's) or a possible nester (Sharp-shinned) in the park or nearby, an unexpected but positive outcome of the inventory. Additionally, the expected *Buteos*--Broad-winged Hawk, Red-shouldered Hawk, and Red-tailed Hawk--were all noted as confirmed nesters in the park.

The moderately large rookery of Great Blue Herons found by KAC in 2005 was quite unexpected. A nearby beaver pond probably led to its formation. Tree Swallows were also present at this site during 2006. The beaver pond at the heronry and beaver ponds at other sites in the park may also have caused an increase in the population of Red-headed Woodpeckers to take place.

The high density of Chuck-will's-widows along Brotherton Rd. during May 2006 (calling at 7 locations along a km of road) was unexpected and good news for this decreasing nocturnal species.

Birds Not Found

Raptors were generally low in numbers in field habitat at all seasons; in particular, no harriers or Short-eared Owls were seen hunting over the fields of

the Chickamauga unit during winter, and few falcons used the park as a foraging site; even American Kestrels, which might be expected to breed in the park, were scarce in park field habitat. The mowing regime in the park probably affects these (and other) species in a negative manner, since it keeps the grass too short to support sufficient prey species sought by raptors; some fields were even mowed in December of one year during the inventory, at the very time that they need to be allowed to provide cover for wildlife. We did not conduct any hawk watches during the inventory, but Signal Point was the site of considerable effort to monitor the hawk migration in the past; for instance, K. Dubke and other observers counted 1288 migrant raptors from Signal Point during the fall of 1982 (Puckette 1983).

A few Whip-poor-wills were heard during the project, but most (or all) were probably migrants. Lack of sufficient undergrowth on areas of steep, wooded hillsides may have been a factor in their virtual absence as breeders.

Bewick's Wren was found prior to the start of the inventory nesting in the Chickamauga unit from late May to early August 2004 (Davis 2004: 512, 630 [photo—Figure 2 below]); however, efforts to locate this species during the inventory were unsuccessful.

Some species of warblers—Yellow Warbler, Prairie Warbler, Black-and-white Warbler, and Louisiana Waterthrush--were not found as breeders during the inventory. Lack of suitable habitat along streams and in wet areas of the park probably prevented the breeding of these species.

Species dependent on shrub-scrub habitat were generally present in low numbers. Such species as Blue-winged Warbler (not found in Chickamauga unit), Prairie Warbler (not found in Chickamauga unit), Yellow-breasted Chat (found sparsely in Chickamauga unit), and Field Sparrow (not found in Chickamauga unit) respond to the general lack of availability of this habitat in a predictable manner—i.e., they are often absent from the park.

Recommendations for Management and Protection of Significant Habitats

By far the most critical management reforms we can recommend relate to the mowing regime of the many fields present in CHCH; removal of exotic plants is also of importance in the park's future plans.

1. For fields that remain moist or wet except in the driest months of late summer (and for any that are out of sight of the public from roads), mow only once a year in late July or August, so as to encourage a wider diversity of wildlife to use them during the fall, winter, and spring. Snodgrass Field, Dyer Field, Viniard Field, and Glenn Field, to name some specific examples, could all be shifted to a once-per-annum mow cycle with great benefit to the grassland wildlife using the park.
2. Leave a buffer zone about 30 m (100 ft) wide between forests and fields, allowing this buffer to develop several years of growth before it is mowed or bush-hogged; mow or bush-hog this buffer strip in different years for different fields, so that they are not all in the same growth condition at the same time.

3. The Lookout Mountain Land Trust has been removing exotic shrubs and trees from the edges of the Hardy and Guild trails in the battlefield park. It would be worthy goal to remove exotics from the successional areas on the slopes beside and below the Cravens House Compound although the cost and time to do this would make it a daunting task.

Suitability of Habitat for Persistence of Sensitive Species

The forests of the park are generally maintained in good condition for forest-obligate species. However, the grasslands of the park are unsuitable for persistence of many species of grassland obligates, especially those that breed or spend the winter; to remedy this situation, a major change in mowing regime to make it better suited to these species is recommended. Little shrub-scrub habitat is present in the park, so allowing field edges to grow into this type of habitat would increase the suitability of the park for shrub-scrub species, many of which are decreasing on a continental scale.

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Appendix A

Table 1. "Status of the Birds of the Chattanooga Area" (Calhoon 2006).

This status report was updated by Kevin Calhoon in August 2006 using data from the report created by V. Jowayne Stone and Daniel R. Jacobson (October 1983) with revisions (1985) and "Birds of Hamilton County, Tennessee" created by Rock L. Comstock, Jr. (March 1962). Also "The Checklist of Birds of the Chattanooga Area" by Kenneth H. and Lillian H. Dubke (October 1977) was used, as well as records gleaned from the Chattanooga TOS and local birders. Most records have been published either in *The Migrant* or in *American Birds/Field Notes/North American Birds*, but a few unpublished records have also been included.

The Chattanooga area is defined as Hamilton, Marion, Sequatchie, Bledsoe, Meigs, and Bradley counties in Tennessee and Catoosa, Walker, and Dade counties in Georgia.

The seasons of the year are defined as follows:

Spring (Sp--March, April, and May)

Summer (Su--June and July)

Fall (F--August, September, October, and November)

Winter (W--December, January, and February)

Abundance is defined as follows:

c common: a species certain to be observed in suitable habitat

fc fairly common: a regularly occurring species not certain to be observed in all suitable habitat.

u uncommon: a species observed regularly in limited numbers

o occasional: observed one to five times during a season

r rare: observed only once or twice every few years

x accidental: observed fewer than five times

only one known record

Nesting status is defined as:

(*) presently known to nest

(*r) rare nester

(*f) formerly known to nest

(*?) thought to nest in area

(*#) only one known nesting record

Location:

These locations are historic centers of concentration or just good habitat to see specific species. They should be used as a general guide to begin a search, but are not usually the only location where a species can be found

AMM Amnicola Marsh – Hamilton co.

BAY Baylor School – Hamilton co.

BRA Brainerd Levee – Hamilton co.

BRO Bradley County

BTW Booker T Washington State Park – Hamilton co.

BLE Bledsoe co.

CHA Chattanooga, Hamilton co.

CHL Chickamauga Lake – Hamilton co.

CHF Chester Frost State Park – Hamilton co.

CRA Craven's House Unit of the Lookout Mountain National Military Park – Hamilton co.

HLC Hamilton co.

HRA Hiwassee Wildlife Refuges (including the Blythe Ferry unit) – Meigs co.

MAR Marion co.

NIL Nickajack Reservoir – Hamilton, Marion co.

RAM Raccoon Mountain – Marion co.

RIV Riverport area, Riverport Dr. – Hamilton co.

SEQ Sequatchie County

SAV Savannah Bay – Hamilton co.

SIG Signal Mountain – Hamilton co.

SGM Standifer Gap Marsh, Hamilton co.

SMG Soddy Mountain Hawkwatch

TNR Tennessee River – Hamilton co.

TNR Gorge – Mullen's Cove Rd., Marion co.

TWC Tennessee Wildlife Center – Hamilton co.

WCG Walker co., GA

This report follows the order and uses the common names of *The AOU Check-list of North American Birds*, Seventh Edition (1998). It includes 323 species of which 127 have been known to nest in the Chattanooga area. I would like to thank Benton Basham, Carl Chadwell, Dennis Harris, Kenneth Dubke, John Henderson, and Daniel Jacobson for their help with this report.

Kevin Calhoon

STATUS OF THE BIRDS OF THE CHATTANOOGA AREA

Species	Status Sp	Su	F	W	Location
Red-throated Loon	x			x	BTW
Common Loon	fc	x	fc	fc	BTW, NIL
Yellow-billed Loon			#		BTW
Pied-billed Grebe (*f,*?)	c	o	c	c	Rivers, ponds, lakes
Horned Grebe	u		fc	fc	BTW, NIL
Red-necked Grebe	x			X	BTW, NIL
Clark's Grebe (First TN record)				#	NIL
Western Grebe				#	NIL
Storm-petrel species (Band-rumped?)			#		HLC
American White Pelican	#		r	#	CHL,BTW
Brown Pelican	#	#			CHL
Double-crested Cormorant	u	r	u	u	TNR,HRA
Anhinga	#		#		AMM,SIG
American Bittern	o		o	r	BRA,AMM, SGM
Least Bittern (*)	o	r	o		BRA, Sugar Creek V
Great Blue Heron	c	c	c	c	Rivers, ponds, lakes
Great Egret	u	fc	fc	o	Rivers, ponds, lakes
Snowy Egret	r	o	o		Rivers, ponds, lakes
Little Blue Heron	o	fc	fc		Rivers, ponds, lakes
Tricolored Heron	#				BRA
Cattle Egret (*f)	u	u	u		Rivers, ponds, lakes
Green Heron (*)	c	c	c	r	Rivers, ponds, lakes
Black-crowned Night Heron	r	r	r	x	BRA,AMM
Yellow-crowned Night Heron (*)	u	u	u		Rivers, ponds, lakes
White Ibis	r	r	r		BRA
Glossy Ibis	r		r		BRA
Roseate Spoonbill	#				Thomas Farm, HLC
White-faced Ibis	#				BRA
Black Vulture (*)	fc	fc	fc	fc	Throughout
Turkey Vulture (*)	c	c	c	c	Throughout
Fulvous Whistling Duck	#				AMM
Greater White-fronted Goose	r		r	r	HRA,BRA
Snow Goose	r		o	o	HRA, BRA
Ross's Goose	#			#	HRA, TWC
Canada Goose (*)	c	c	c	c	Rivers, ponds, lakes
Brant			r	r	HRA
Mute Swan			r	r	Rivers, ponds, lakes
Tundra Swan	o		o	o	HRA
Wood Duck (*)	fc	fc	fc	u	Rivers, ponds, lakes
Gadwall	fc		fc	c	Rivers, ponds, lakes
Eurasian Wigeon			x	x	SAV,HRA,HCL
American Wigeon	fc		fc	c	Rivers, ponds, lakes
American Black Duck	u		u	fc	HRA
Mallard (*)	c	u	c	c	Rivers, ponds, lakes
Blue-winged Teal	c		c	r	BRA, HRA
Cinnamon Teal	X				BRA, HRA
Northern Shoveler	u		u	u	BRA, HRA
Northern Pintail	u		fc	fc	BRA, HRA
Green-winged Teal	u		u	fc	Rivers, ponds, lakes
Canvasback	u		u	u	HRA, NIL
Redhead	u		u	u	HRA,NIL
Ring-necked Duck	fc		c	fc	HRA,NIL
Greater Scaup	u		u	u	BTW,NIL

Lesser Scaup	fc		fc	u	BTW, NIL
Surf Scoter	r		r	r	CHL,HRA
White-winged Scoter	r		r	r	NIL, CHL
Black Scoter			x	x	BTW,CHL
Long-tailed Duck	r			r	BTW,CHL
Bufflehead	fc		fc	fc	Rivers, ponds, lakes
Common Goldeneye	u		u	u	BTW,NIL
Hooded Merganser (*r)	fc	r	fc	fc	Rivers, ponds, lakes
Common Merganser	r		r	r	BTW,HRA
Red-breasted Merganser	u		u	u	CHL,NIL
Ruddy Duck	fc		fc	fc	NIL, HRA
Osprey (*)	u	u	u	r	HRA,CHL
American Swallow-tailed Kite			#	#	SEQ,Rhea co.
Mississippi Kite	r		r		Bradely co.HLC
Bald Eagle (*)	u	o	u	fc	HRA, TNR, RAC
Northern Harrier	u		u	u	Open fields
Sharp-shinned Hawk (*r)	u	o	u	u	Throughout
Cooper's Hawk (*)	u	u	u	u	Throughout
Northern Goshawk	r			r	SMH,HLC
Red-shouldered Hawk (*)	fc	fc	fc	fc	Throughout
Broad-winged Hawk (*)	u	u	fc	#	Throughout
Swainson's Hawk			#		SMH
Red-tailed Hawk (*)	fc	fc	c	c	Throughout
Rough-legged Hawk				o	BLE
Golden Eagle **	r			r	BLE,HRA,MAR
American Kestrel (*)	fc	u	fc	c	Throughout
Merlin	o		o	o	SMH,HLC
Prairie Falcon (First GA record)				#	Walker co., GA
Peregrine Falcon (*)	u	u	u	r	CHL,HLC, SMH
Ring-necked Pheasant extirpated					HRA
Ruffed Grouse (*)	r	r	r	r	Wooded ridges
Wild Turkey (*)	u	u	u	u	PRC, Audubon Acres
Northern Bobwhite (*)	fc	fc	fc	fc	PRC,BRA
Yellow Rail	#		#		HLC
Black Rail	#				SGM
King Rail(*f)	r	r	r		Sugar Creek, AMM
Virginia Rail (*#)	r	r	r	#	BRA,AMM,SGM
Sora	fc	x	fc		BRA,AMM, SGM
Purple Gallinule	x	x	x		BRA
Common Moorhen	r		r		BRA
American Coot (*r)	c	o	c	a	Rivers, ponds, lakes
Sandhill Crane	u		u	fc	HRA
Black-bellied Plover	r		r		BRA
American Golden Plover	o		o		BRA
Semipalmated Plover	u		u		BRA
Piping Plover			x		?
Killdeer (*)	c	c	c	a	Throughout
American Avocet	r		r		BRA,SAB
Greater Yellowlegs	u	u	u		BRA
Lesser Yellowlegs	u	u	u		BRA
Solitary Sandpiper	fc	u	fc		BRA, water
Willet	r		r		BRA
Spotted Sandpiper (*#)	fc	o	fc		BRA, Rivers, Ponds,
Upland Sandpiper	r		r		RIV
Hudsonian Godwit	x		x		SAB
Marbled Godwit	#		#		TNR
Ruddy Turnstone			r		?
Sanderling			r		BRA
Semipalmated Sandpiper	u	u	u		BRA
Western Sandpiper	u	u	u		BRA
Least Sandpiper	fc	fc	fc		BRA
White-rumped Sandpiper	o	r	o		BRA
Baird's Sandpiper	o		o		BRA
Pectoral Sandpiper	fc	fc	fc		BRA
Purple Sandpiper (unpublished)			#		HRA
Dunlin	o		o	u	HRA
Stilt Sandpiper	o	o	o		BRA
Buff-breasted Sandpiper			r		?
Ruff (First TN Record)	#				SEQ
Short-billed Dowitcher	o	o	o	x	BRA, HRA

Long-billed Dowitcher	r		r		BRA
Common Snipe	fc	r	fc	fc	BRA, Throughout
American Woodcock (*)	fc	u	u	fc	Throughout
Wilson's Phalarope	r		o		BRA
Red-necked Phalarope			x		TNR, SAV
Red Phalarope (Only winter record for TN)			x		BRA, SAB
Pomarine Jaeger (Third TN Record)			#		NIL
Laughing Gull	r	r	r	r	TNR, CHL, NIL
Franklin's Gull			x		NIL, CHL
Sabine's Gull (unpublished)	#				CHL
Bonaparte's Gull	u		u	u	TNR
Little Gull				#	TNR
Ring-billed Gull	c	r	c	c	TNR
Herring Gull	fc		fc	fc	TNR
Iceland Gull				#	CHL
Lesser Black-backed Gull				x	NIL, CHL
Glaucous Gull				x	CHL
Great Black-backed Gull				x	TNR
Black-legged Kittiwake				#	CHL, NIL
Caspian Tern	o	r	o		NIL, CHL
Common Tern	r		r		NIL, CHL
Forster's Tern	o		u	x	NIL, CHL
Least Tern	#		r		BRA, CHL
Bridled Tern (Second record for TN)			#		TNR
Black Tern	r				BRA, CHL
Sooty Tern			#		NIL
Black Skimmer			x		NIL, TNR
Rock Dove (*)	c	c	c	c	Throughout
Eurasian-collared Dove (*)	u	u	u	u	CHA, BLE, MAR
Mourning Dove (*)	c	c	a	c	Throughout
Common Ground Dove				#	HLC
Black-billed Cuckoo (*#)	o	r	o		Woods
Yellow-billed Cuckoo (*)	fc	fc	fc		Throughout
Barn Owl (*)	o	o	o	o	SEQ
Eastern Screech Owl (*)	c	c	c	c	Throughout
Great Horned Owl (*)	fc	fc	fc	fc	Throughout
Barred Owl (*)	u	u	u	u	Throughout
Long-eared Owl	r			r	NIL, SEQ
Short-eared Owl			r	r	NIL
Northern Saw-whet Owl				r	HRA, NIL
Common Nighthawk (*)	c	c	c		Throughout
Chuck-wills-widow (*)	fc	fc	fc		Throughout
Whip-poor-will (*)	u	u	u		Throughout
Chimney Swift (*)	c	c	c	X	Throughout
Ruby-throated Hummingbird (*)	fc	fc	c	X	Throughout
Black-chinned Hummingbird (First TN Record)				X	HLC
Broad-tailed Hummingbird (Second TN Record)				#	HLC
Calliope Hummingbird (Third TN Record)				#	HLC
Rufous Hummingbird	X		r	r	HLC
Allen's Hummingbird (First TN Record)				#	HLC
Belted Kingfisher (*)	c	c	c	c	Rivers, Ponds, Lakes
Red-headed Woodpecker (*)	u	u	fc	u	CHF
Red-bellied Woodpecker (*)	c	c	c	c	Throughout
Yellow-bellied Sapsucker	fc		fc	fc	Throughout
Downy Woodpecker (*)	c	c	c	c	Throughout
Hairy woodpecker (*)	u	u	u	u	Woods, CRA
Red-cockaded Woodpecker (*f)	extirpated				Bradely co.
Northern Flicker (*)	c	c	c	c	Throughout
Pileated Woodpecker (*)	fc	fc	fc	fc	Throughout
Olive-sided Flycatcher	o		o		CRA, RAM
Eastern Wood-Pee wee (*)	c	c	c		Woods
Yellow-bellied Flycatcher	r		r		CRA
Acadian Flycatcher (*)	fc	fc	u		BPW, TNR Gorge
Willow Flycatcher (*f)	o		o		BRA, HRA, SGM
Least Flycatcher	o	#	o		MAR
Eastern Phoebe (*)	c	c	c	u	Throughout
Great Crested Flycatcher (*)	fc	fc	u	#	Throughout
Eastern Kingbird (*)	c	c	c		Fields
Scissor-tailed Flycatcher (*X)	X	X	X		Bradely co., BLE, MAR
White-eyed Vireo (*)	fc	fc	fc		Throughout

Blue-headed Vireo (*?)	u	r	o		Woods
Yellow-throated Vireo (*)	u	u	u		Woods
Warbling Vireo	r				HLC
Philadelphia Vireo	o		o		CRA, RAM
Red-eyed Vireo (*)	c	c	c		Throughout
Blue Jay (*)	c	c	a	c	Throughout
Horned Lark (*)	u	u	u	fc	BLE,MAR,HLC,SEQ
Purple Martin (*)	fc	fc	u		Throughout
Tree Swallow (*r)	u	X	u		BRA, TNR
Northern Rough-winged Swallow (*)	fc	fc	u		Rivers, Ponds, Lake
Bank Swallow	u	o	u		Rivers, Ponds, Lake
Cliff Swallow (*)	fc	fc	u		Bridges over water
Barn Swallow (*)	c	c	fc	r	Throughout
American Crow (*)	c	c	c	a	Throughout
Fish Crow	r	r			HLC
Common Raven (*f)	no recent records				CHF
Carolina Chickadee (*)	c	c	c	c	Throughout
Tufted Titmouse (*)	c	c	c	c	Throughout
Red-breasted Nuthatch	u		u	u	Irruptive species
White-breasted Nuthatch (*)	c	c	c	c	Woods
Brown-headed Nuthatch (*)	u	u	u	u	BTW, CHF
Brown Creeper	u		u	u	Woods
Rock Wren (First TN Record)			#		Point Park
Carolina Wren (*)	c	c	c	c	Throughout
Bewick's Wren (*f)	no recent records				Sequatchie Valley
House Wren (*)	u	o	u	r	Throughout
Winter Wren	u		u	u	Throughout
Sedge Wren	o		o	r	BRA, HRA, AMM
Marsh Wren	o		o	r	BRA, HRA, AMM
Golden-crowned Kinglet	fc		fc	fc	Throughout
Ruby-crowned Kinglet	fc		fc	fc	Throughout
Blue-gray Gnatcatcher (*)	c	c	c	r	Throughout
Eastern Bluebird (*)	c	c	c	c	Throughout
Veery	u		u		CRA,RAM
Gray-cheeked Thrush	u		u		CRA,RAM
Swainson's Thrush	fc		fc		CRA,RAM
Hermit Thrush	u		u	fc	Throughout
Wood Thrush (*)	fc	fc	fc		Woods
American Robin (*)	c	c	c	c	Throughout
Varied Thrush (First GA Record)				X	SIG,HLC,Dade co,G
Gray Catbird (*)	fc	u	fc	r	Throughout
Northern Mockingbird (*)	c	c	c	c	Throughout
Brown Thrasher (*)	fc	fc	fc	u	Throughout
American Pipit	u		u	fc	Fields
Cedar Waxwing (*r)	c	r	c	c	Throughout
Loggerhead Shrike (*)	u	u	u	u	Fields
European Starling (*)	a	a	a	a	Throughout
Blue-winged Warbler (*r)	u	o	u		CRA, RAM
Golden-winged Warbler (*)	o	o	o		CRA,RAM, BAY
Tennessee Warbler	fc		c		CRA,RAM
Orange-crowned Warbler	o		o	r	CRA,AMM
Nashville Warbler	u		u		CRA,RAM
Northern Parula (*)	fc	u	u		TNR Gorge
Yellow Warbler (*)	fc	u	o		TNR Gorge
Chestnut-sided Warbler (*?)	fc	r	fc		CRA,RAM
Magnolia Warbler	u		c		CRA,RAM
Cape May Warbler	u		o		CRA,RAM
Black-throated Green Warbler (*f)c		u	fc		BPW, TNR Gorge
Blackburnian Warbler	u		u		CRA,RAM
Yellow-throated Warbler (*)	fc	fc	u	#	TNR Gorge
Pine Warbler (*)	fc	fc	fc	u	Pine Woods
Prairie Warbler (*)	fc	fc	u		Clearings and edges
Palm Warbler	fc		fc	o	BRA,RIV
Bay-breasted Warbler	u		fc		CRA,RAM
Blackpoll Warbler	fc		o		CRA,RAM
Cerulean Warbler (*)	u	o	u		CRA,TNR gorge
Black-and-White Warbler (*)	fc	fc	fc		CRA,TNR gorge
American Redstart (*)	fc	u	c		TNR gorge, CRA
Prothonotary Warbler (*)	u	u	u		TWC,TNR Gorge
Worm-eating Warbler (*)	u	u	u		CRA,RAM, PCW

Swainson's Warbler (*?)	o	r	o		CRA,BTW,BAY
Ovenbird (*)	fc	u	fc		CRA,RAM
Northern Waterthrush	u		u		BRA,AMM
Louisiana Waterthrush (*)	fc	u	o		TNR Gorge
Kentucky Warbler (*)	fc	fc	fc		CRA
Connecticut Warbler	r	X	r		CRA,BAY
Mourning Warbler	r		r		CRA,BAY
Common Yellowthroat (*)	c	c	c	r	BRA,AMM, HRA
Hooded Warbler (*)	fc	fc	fc		CRA,RAM
Wilson's Warbler	o		o		CRA,BAY
Canada Warbler	u		u		CRA,RAM
Yellow-breasted Chat (*)	fc	fc	u	#	Clearings and edges
Summer Tanager (*)	fc	fc	fc		TNR Gorge, RAM,CL
Scarlet Tanager (*)	fc	fc	fc		TNR Gorge, RAM,CL
Northern Cardinal (*)	c	c	c	c	Throughout
Rose-breasted Grosbeak	fc		fc	#	CRA,RAM
Black-headed Grosbeak	X				BAY, MAR
Blue Grosbeak (*)	u	u	u		RAM,BRA
Indigo Bunting (*)	c	c	c	#	Clearings and edges
Painted Bunting	#				HLC
Dickcissel (*)	u	u	u		BLE,BRA
Eastern Towhee (*)	c	c	c	c	Throughout
Bachman's Sparrow (*f)	r	r			Formerly Chick. NM
American Tree Sparrow	r			r	AMM,HRA
Chipping Sparrow (*)	fc	fc	fc	fc	Throughout
Clay-colored Sparrow			#		SGM
Field Sparrow (*)	fc	fc	fc	fc	Fields
Vesper Sparrow	u		u	u	RIV,BRA
Lark Sparrow	r		r		HLC
Savannah Sparrow	fc		fc	fc	RIV,BRA
Grasshopper Sparrow (*)	u	u	o	r	Fields
Henslow's Sparrow	X		X		BRA,AMM
LeConte's Sparrow				X	MAR, RIV, HLC
Fox Sparrow	u		u	u	Woods
Song Sparrow (*)	c	c	c	c	Throughout
Lincoln's Sparrow	o		o	r	BRA,AMM
Swamp Sparrow	fc		fc	fc	Wet brush and fields
White-throated Sparrow	c		c	c	Throughout
White-crowned Sparrow	u		u	u	HRA,SEQ,BLE
Dark-eyed Junco	fc		fc	fc	Throughout
Lapland Longspur				X	MAR
Snow Bunting (unpublished)				#	RIV
Bobolink	u		o		BRA,RIV
Red-winged Blackbird (*)	c	c	c	c	Throughout
Yellow-headed Blackbird				#	MAR
Eastern Meadowlark (*)	c	c	c	c	Fields
Rusty Blackbird	u		u	u	AMM,BRA
Brewer's Blackbird				X	BRA,AMM
Common Grackle (*)	c	c	c	c	Throughout
Brown-headed Cowbird (*)	c	c	c	c	Throughout
Orchard Oriole (*)	fc	fc	u		BRA
Baltimore Oriole (*r)	u	r	u		TNR Gorge, CRA
Purple Finch	u		u	u	Irruptive species
House Finch (*)	fc	fc	fc	fc	Throughout
Common Redpoll				#	HLC
Red Crossbill	r			r	Irruptive species
White-winged Crossbill	X			X	SIG
Pine Siskin	u		u	u	Irruptive species
American Goldfinch (*)	c	c	c	c	Throughout
Evening Grosbeak	o		o	u	Irruptive species
House Sparrow (*)	c	c	c	c	Urban areas

** Golden Eagles seen in the HRA area are probably from the hacking program in the late 1990s.

Table 2. Species, status, seasonal abundance, and breeding status of birds observed at Chattanooga and Chickamauga National Military Park; species with names in all capitals were not recorded during the inventory. * = possible breeding evidence noted; ** = probable breeding evidence noted; *** = confirmed breeding evidence noted. Key to abbreviations: PR = permanent resident; SR = summer resident; TR = transient; VR = visitor; WR = winter resident; UN = unknown/uncertain status; C = common; FC = fairly common; U = uncommon; VU = very uncommon; R = rare.

Common Name	Scientific Name	Status	Sp	Su	Fa	Wi
Canada Goose **	<i>Branta Canadensis</i>	PR	U	U	U	U
Wood Duck ***	<i>Aix sponsa</i>	PR	U	U	U	R
Mallard **	<i>Anas platyrhynchos</i>	PR	U	U	U	U
Lesser Scaup	<i>Aythya affinis</i>	TR				R
Hooded Merganser	<i>Lophodytes cucullatus</i>	TR				R
RUFFED GROUSE	<i>Bonasa umbellus</i>	former PR				
Wild Turkey ***	<i>Meleagris gallopavo</i>	PR	C	C	C	C
Northern Bobwhite	<i>Colinus virginianus</i>	PR	VU	VU		
Common Loon	<i>Gavia immer</i>	TR				R
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	VR	R			
Great Blue Heron ***	<i>Ardea herodias</i>	PR	FC	FC	U	U
Great Egret	<i>Ardea alba</i>	VR		R		
Green Heron **	<i>Butorides virescens</i>	SR	VU	VU		
Black Vulture ***	<i>Coragyps atratus</i>	PR	U	U	U	U
Turkey Vulture *	<i>Cathartes aura</i>	PR	FC	FC	FC	FC
Osprey	<i>Pandion haliaetus</i>	TR	R		R	
Bald Eagle	<i>Haliaeetus leucocephalus</i>	VR	R		R	R
Northern Harrier	<i>Circus cyaneus</i>	TR	R		R	
Sharp-shinned Hawk	<i>Accipiter striatus</i>	UN	R	R	R	R
Cooper's Hawk *	<i>Accipiter cooperi</i>	PR	U	U	U	U
Red-shouldered Hawk ***	<i>Buteo lineatus</i>	PR	U	U	U	U

Broad-winged Hawk ***	<i>Buteo platypterus</i>	SR	U	U	U	
Red-tailed Hawk **	<i>Buteo jamaicensis</i>	PR	U	U	U	U
American Kestrel	<i>Falco sparverius</i>	WR	VU		VU	VU
Merlin	<i>Falco columbarius</i>	TR	R		R	
PEREGRINE FALCON	<i>Falco peregrinus</i>	TR	R		R	
Sora	<i>Porzana carolina</i>	TR			R	
Sandhill Crane	<i>Grus canadensis</i>	TR				VU
Killdeer ***	<i>Charadrius vociferus</i>	PR	U	U	U	U
Spotted Sandpiper	<i>Actitis macularius</i>	TR			R	
Greater Yellowlegs	<i>Tringa melanoleuca</i>	TR		R		
Wilson's Snipe	<i>Gallinago delicata</i>	WR				R
American Woodcock **	<i>Scolopax minor</i>	PR	VU		VU	VU
Bonaparte's Gull	<i>Larus philadelphia</i>	VR				R
Ring-billed Gull	<i>Larus delawarensis</i>	WR	U			U
Herring Gull	<i>Larus argentatus</i>	VR				VU
Rock Pigeon	<i>Columba livia</i>	PR	U	U	U	U
Eurasian Collared-Dove *	<i>Streptopelia decaocto</i>	PR	U	U	U	VU
Mourning Dove ***	<i>Zenaida macroura</i>	PR	FC	FC	FC	FC
Yellow-billed Cuckoo **	<i>Coccyzus americanus</i>	SR	U	U	U	
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	TR	R			
Eastern Screech-Owl *	<i>Megascops asio</i>	PR	U	U	U	U
Great Horned Owl *	<i>Bubo virginianus</i>	PR	U	U	U	U
Barred Owl **	<i>Strix varia</i>	PR	U	U	U	U
Common Nighthawk	<i>Chordeiles minor</i>	SR	U	U	FC	
Chuck-will's-widow **	<i>Caprimulgus carolinensis</i>	SR	VU	U		
Whip-poor-will	<i>Caprimulgus vociferus</i>	TR	VU	R		
Chimney Swift ***	<i>Chaetura pelagica</i>	SR	C	C	C	
Ruby-throat. Hummingbird ***	<i>Archilochus colubris</i>	SR	U	U	U	
Belted Kingfisher *	<i>Ceryle alcyon</i>	PR	VU	VU	VU	VU

Red-headed Woodpecker ***	<i>Melanerpes erythrocephalus</i>	PR	U	U	U	VU
Red-bellied Woodpecker ***	<i>Melanerpes carolinus</i>	PR	FC	FC	FC	FC
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	WR	U		U	U
Downy Woodpecker ***	<i>Picoides pubescens</i>	PR	FC	FC	FC	FC
Hairy Woodpecker ***	<i>Picoides villosus</i>	PR	U	U	U	U
RED-COCKADED WOODPECKER	<i>Picoides borealis</i>	former PR				
Northern Flicker **	<i>Colaptes auratus</i>	PR	U	U	U	U
Pileated Woodpecker **	<i>Dryocopus pileatus</i>	PR	U	U	U	U
Olive-sided Flycatcher	<i>Contopus cooperi</i>	VR	R		R	
Eastern Wood-Pewee *	<i>Contopus virens</i>	SR	U	U	U	
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	VR			R	
Acadian Flycatcher *	<i>Empidonax virescens</i>	SR	U	U		
Least Flycatcher	<i>Empidonax minimus</i>	TR	R			
Eastern Phoebe ***	<i>Sayornis phoebe</i>	PR	U	U	U	U
Great Crested Flycatcher **	<i>Myiarchus crinitus</i>	SR	U	U	VU	
Eastern Kingbird ***	<i>Tyrannus tyrannus</i>	SR	U	U	U	
White-eyed Vireo **	<i>Vireo griseus</i>	SR	U	U	U	
Yellow-throated Vireo ***	<i>Vireo flavifrons</i>	SR	U	U	U	
Blue-headed Vireo *	<i>Vireo solitarius</i>	SR	U	U	U	
Philadelphia Vireo	<i>Vireo philadelphicus</i>	TR	R		VU	
Red-eyed Vireo ***	<i>Vireo olivaceus</i>	SR	C	C	C	
Blue Jay ***	<i>Cyanocitta cristata</i>	PR	FC	FC	FC	FC
American Crow ***	<i>Corvus brachyrhynchos</i>	PR	C	C	C	C
Fish Crow	<i>Corvus ossifragus</i>	VR	R			
Horned Lark	<i>Eremophila alpestris</i>	VR				R
Purple Martin ***	<i>Progne subis</i>	SR	U	U		
Tree Swallow *	<i>Tachycineta bicolor</i>	SR	VU	R	R	
N. Rough-winged Swallow **	<i>Stelgidopteryx serripennis</i>	SR	U	U		
Bank Swallow	<i>Riparia riparia</i>	TR			R	

Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	SR	FC	FC		
Barn Swallow ***	<i>Hirundo rustica</i>	SR	FC	FC	U	
Carolina Chickadee ***	<i>Poecile carolinensis</i>	PR	C	C	C	C
Tufted Titmouse ***	<i>Baeolophus bicolor</i>	PR	C	C	C	C
Red-breasted Nuthatch	<i>Sitta canadensis</i>	WR	R		R	R
White-breasted Nuthatch **	<i>Sitta carolinensis</i>	PR	FC	FC	FC	FC
Brown-headed Nuthatch **	<i>Sitta pusilla</i>	PR	U	U	U	U
Brown Creeper	<i>Certhia americana</i>	WR	R		R	U
ROCK WREN	<i>Salpinctes obsoletus</i>	VR			R	
Carolina Wren ***	<i>Thryothorus ludovicianus</i>	PR	C	C	C	C
BEWICK'S WREN ***	<i>Thryomanes bewickii</i>	UN	R	R		
House Wren	<i>Troglodytes aedon</i>	SR	U	U	U	R
Winter Wren	<i>Troglodytes troglodytes</i>	WR	U		U	FC
Sedge Wren	<i>Cistothorus platensis</i>	TR	VU		VU	
Marsh Wren	<i>Cistothorus palustris</i>	TR	VU		VU	
Golden-crowned Kinglet	<i>Regulus satrapa</i>	WR	U			FC
Ruby-crowned Kinglet	<i>Regulus calendula</i>	WR	U		U	FC
Blue-gray Gnatcatcher ***	<i>Poliopitila caerulea</i>	SR	FC	FC	U	
Eastern Bluebird ***	<i>Sialia sialis</i>	PR	C	C	C	C
Veery	<i>Catharus fuscescens</i>	TR	VU		VU	
Gray-cheeked Thrush	<i>Catharus minimus</i>	TR	R		R	
Swainson's Thrush	<i>Catharus ustulatus</i>	TR	U		U	
Hermit Thrush	<i>Catharus guttatus</i>	WR	U		U	U
Wood Thrush **	<i>Hylocichla mustelina</i>	SR	FC	FC	U	
American Robin ***	<i>Turdus migratorius</i>	PR	FC	FC	FC	C
Gray Catbird	<i>Dumetella carolinensis</i>	SR	U	VU	U	R
Northern Mockingbird ***	<i>Mimus polyglottus</i>	PR	U	U	U	U
Brown Thrasher ***	<i>Toxostoma rufum</i>	PR	U	U	U	U
European Starling ***	<i>Sturnus vulgaris</i>	PR	C	C	C	C

American Pipit	<i>Anthus rubescens</i>	WR	U			C
Cedar Waxwing *	<i>Bombycilla cedrorum</i>	PR	FC	VU	FC	C
Blue-winged Warbler	<i>Vermivora pinus</i>	TR; former SR	VU		VU	
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	TR	R		R	
"Brewster's" Warbler		TR	R			
Tennessee Warbler	<i>Vermivora peregrina</i>	TR	U		FC	
Orange-crowned Warbler	<i>Vermivora celata</i>	TR	R		VU	R
Nashville Warbler	<i>Vermivora ruficapilla</i>	TR	VU		VU	
Northern Parula **	<i>Parula americana</i>	SR	U	U	VU	
Yellow Warbler	<i>Dendroica petechia</i>	TR	VU			
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	TR; former SR	U		FC	
Magnolia Warbler	<i>Dendroica magnolia</i>	TR	VU		FC	
Cape May Warbler	<i>Dendroica tigrina</i>	TR	U			
Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	TR	VU			
Yellow-rumped Warbler	<i>Dendroica coronata</i>	WR	FC		FC	FC
Black-thr. Green Warbler	<i>Dendroica virens</i>	TR	U		U	
Blackburnian Warbler	<i>Dendroica fusca</i>	TR	U		VU	
Yellow-throated Warbler **	<i>Dendroica dominica</i>	SR	U	VU	VU	
Pine Warbler ***	<i>Dendroica pinus</i>	PR	FC	FC	FC	U
Prairie Warbler	<i>Dendroica discolor</i>	TR	U		U	
Palm Warbler	<i>Dendroica palmarum</i>	TR	U		U	
Bay-breasted Warbler	<i>Dendroica castanea</i>	TR	U		U	
Blackpoll Warbler	<i>Dendroica striata</i>	TR	U			
Cerulean Warbler	<i>Dendroica cerulea</i>	TR	U		U	
Black-and-white Warbler ***	<i>Mniotilta varia</i>	SR	U	U	U	
American Redstart	<i>Setophaga ruticilla</i>	TR	U		FC	

Prothonotary Warbler	<i>Protonotaria citrea</i>	SR	VU	VU		
Worm-eating Warbler **	<i>Helmitheros vermivorum</i>	SR	U	U	VU	
Swainson's Warbler	<i>Limnothlypis swainsonii</i>	TR	R			
Ovenbird *	<i>Seiurus aurocapillus</i>	SR	U	VU	U	
Northern Waterthrush	<i>Seiurus novaboracensis</i>	TR	VU		VU	
Louisiana Waterthrush	<i>Seiurus motacilla</i>	UN	R	VU		
Kentucky Warbler ***	<i>Oporornis formosus</i>	SR	FC	FC		
Connecticut Warbler	<i>Oporornis agilis</i>	TR	R			
Mourning Warbler	<i>Oporornis philadelphia</i>	TR	R			
Common Yellowthroat **	<i>Geothlypis trichas</i>	SR	U	U	U	
Hooded Warbler *	<i>Wilsonia citrina</i>	SR	FC	U	U	
Wilson's Warbler	<i>Wilsonia pusilla</i>	TR	R		VU	
Canada Warbler	<i>Wilsonia canadensis</i>	TR	VU		VU	
Yellow-breasted Chat **	<i>Icteria virens</i>	SR	U	VU	VU	
Summer Tanager **	<i>Piranga rubra</i>	SR	FC	FC	U	
Scarlet Tanager **	<i>Piranga olivacea</i>	SR	FC	FC	FC	
Eastern Towhee ***	<i>Pipilo erythrophthalmus</i>	PR	FC	FC	FC	FC
BACHMAN'S SPARROW	<i>Aimophila aestivalis</i>	former SR				
Chipping Sparrow ***	<i>Spizella passerina</i>	PR	FC	FC	FC	U
Field Sparrow **	<i>Spizella pusilla</i>	PR	C	FC	U	U
Vesper Sparrow	<i>Poocetes gramineus</i>	TR	VU		VU	
Savannah Sparrow	<i>Passerculus sandwichensis</i>	WR	U		U	U
Grasshopper Sparrow **	<i>Ammodramus savannarum</i>	SR	U	U	U	
HENSLOW'S SPARROW	<i>Ammodramus henslowii</i>	TR	R			
Fox Sparrow	<i>Passerella iliaca</i>	WR	VU		VU	VU
Song Sparrow ***	<i>Melospiza melodia</i>	PR	U	U	U	FC
Lincoln's Sparrow	<i>Melospiza lincolni</i>	TR	R		VU	
Swamp Sparrow	<i>Melospiza georgiana</i>	WR	U		U	U

White-throated Sparrow	<i>Zonotrichia albicollis</i>	WR	FC		FC	C
WHITE-CROWNED SPARROW	<i>Zonotrichia leucophrys</i>	TR	R			
Dark-eyed Junco	<i>Junco hyemalis</i>	WR	U		VU	U
Northern Cardinal ***	<i>Cardinalis cardinalis</i>	PR	A	A	A	A
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	TR	U		U	
Blue Grosbeak ***	<i>Passerina caerulea</i>	SR	U	U	U	
Indigo Bunting ***	<i>Passerina cyanea</i>	SR	A	A	FC	R
Bobolink	<i>Dolichonyx oryzivorus</i>	TR	R			
Red-winged Blackbird **	<i>Agelaius phoeniceus</i>	PR	U	U	U	U
Eastern Meadowlark ***	<i>Sturnella magna</i>	PR	FC	FC	FC	FC
Rusty Blackbird	<i>Euphagus carolinus</i>	WR	R		R	U
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	UN				R
Common Grackle **	<i>Quiscalus quiscula</i>	PR	FC	FC	FC	FC
Brown-headed Cowbird ***	<i>Molothrus ater</i>	PR	U	U	U	U
Orchard Oriole **	<i>Icterus spurius</i>	SR	VU	VU		
Baltimore Oriole	<i>Icterus galbula</i>	TR	U		U	
Purple Finch	<i>Carpodacus purpureus</i>	WR	VU		VU	VU
House Finch *	<i>Carpodacus mexicanus</i>	PR	U	U	U	U
PINE SISKIN	<i>Carduelis pinus</i>	TR	R			
American Goldfinch ***	<i>Carduelis tristis</i>	PR	FC	FC	FC	FC
House Sparrow *	<i>Passer domesticus</i>	PR	U	U	U	U

Table 3. Species (74) registered during point counts conducted at 40 plots (10 minutes each at unlimited distance) during the breeding seasons of 2005 and 2006 at Chattanooga and Chickamauga National Military Park. Greater detail about the results of these point counts is provided in an Excel file that supplements this report. Inds = total individuals counted.

Species		2005		2006
	Stops	Inds	Stops	Inds
Wood Duck	1	2	0	0
Wild Turkey	2	6	4	9
Northern Bobwhite	1	1	0	0
Great Blue Heron	3	8	3	7
Green Heron	0	0	1	1

Turkey Vulture	1	3	0	0
Cooper's Hawk	0	0	1	1
Red-shouldered Hawk	1	1	2	2
Broad-winged Hawk	1	1	2	2
Red-tailed Hawk	1	1	0	0
Killdeer	0	0	1	1
Mourning Dove	12	14	9	11
Yellow-billed Cuckoo	8	11	12	12
Barred Owl	3	3	2	3
Chimney Swift	10	23	8	14
Ruby-throated Hummingbird	1	1	3	3
Belted Kingfisher	0	0	1	1
Red-headed Woodpecker	3	3	4	4
Red-bellied Woodpecker	27	33	25	36
Downy Woodpecker	6	6	14	17
Hairy Woodpecker	3	4	5	5
Northern Flicker	1	1	2	2
Pileated Woodpecker	12	13	16	22
Eastern Wood-Pewee	2	2	3	3
Acadian Flycatcher	4	6	3	3
Eastern Phoebe	2	2	0	0
Great Crested Flycatcher	8	10	12	15
White-eyed Vireo	3	3	2	2
Yellow-throated Vireo	6	7	10	11
Blue-headed Vireo	1	1	0	0
Red-eyed Vireo	33	69	35	74
Blue Jay	17	29	27	49
American Crow	23	43	24	55
Purple Martin	3	5	3	7
N. Rough-winged Swallow	0	0	1	1
Barn Swallow	2	9	2	5
Carolina Chickadee	28	47	23	39
Tufted Titmouse	33	52	33	53
White-breasted Nuthatch	13	18	19	28
Brown-headed Nuthatch	1	2	4	6
Carolina Wren	34	73	38	87
Blue-Gray Gnatcatcher	19	27	14	14
Eastern Bluebird	6	10	2	2
Wood Thrush	13	17	9	12
American Robin	6	8	7	10
Northern Mockingbird	5	5	0	0
Brown Thrasher	1	1	2	3
European Starling	1	3	0	0
Cedar Waxwing	0	0	1	1
Northern Parula	2	2	1	1

Yellow-throated Warbler	3	4	4	4
Pine Warbler	20	30	13	19
Black-and-white Warbler	1	1	2	3
Worm-eating Warbler	2	3	2	2
Ovenbird	2	2	0	0
Kentucky Warbler	6	6	9	11
Common Yellowthroat	1	2	2	4
Hooded Warbler	4	4	6	6
Yellow-breasted Chat	0	0	1	1
Summer Tanager	13	17	14	20
Scarlet Tanager	19	22	20	29
Eastern Towhee	18	31	17	30
Chipping Sparrow	1	1	5	5
Grasshopper Sparrow	3	3	1	1
Song Sparrow	1	1	1	1
Northern Cardinal	40	105	34	81
Blue Grosbeak	2	2	2	3
Indigo Bunting	16	30	6	10
Red-winged Blackbird	1	1	0	0
Eastern Meadowlark	2	6	2	7
Common Grackle	4	12	4	7
Brown-headed Cowbird	5	9	10	14
Orchard Oriole	1	1	0	0
American Goldfinch	14	30	8	11
Total Species		67		63

Figure 2. Photograph of Bewick's Wren in Chickamauga unit, CHCH, 6 August 2004 (Sandy Pangle photographer); photograph originally published in *North American Birds* 58 (2004): 630.



Extremely rare anywhere in Appalachia since the mid-1980s, Bewick's Wren was discovered nesting at Chickamauga Battlefield Park in northwestern Georgia between late May and early (here 6) August 2004. On 24 July, two adults were seen feeding two juveniles, for the first confirmed breeding in the Southern Atlantic Region since the early 1980s.

Photograph by Sandy Pangle.