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buildings there; not mowing below the high-water level at the Surrender House; allowing more shrub-scrub habitat to grow up by cutting less grass; leaving debris piles near woodland edges to prevent erosion and to provide potential habitat for wildlife; continuing bird monitoring with volunteers from Cross Creeks NWR and other sources; and creating and maintaining a database of bird records to be used in updating the bird checklist for the park.

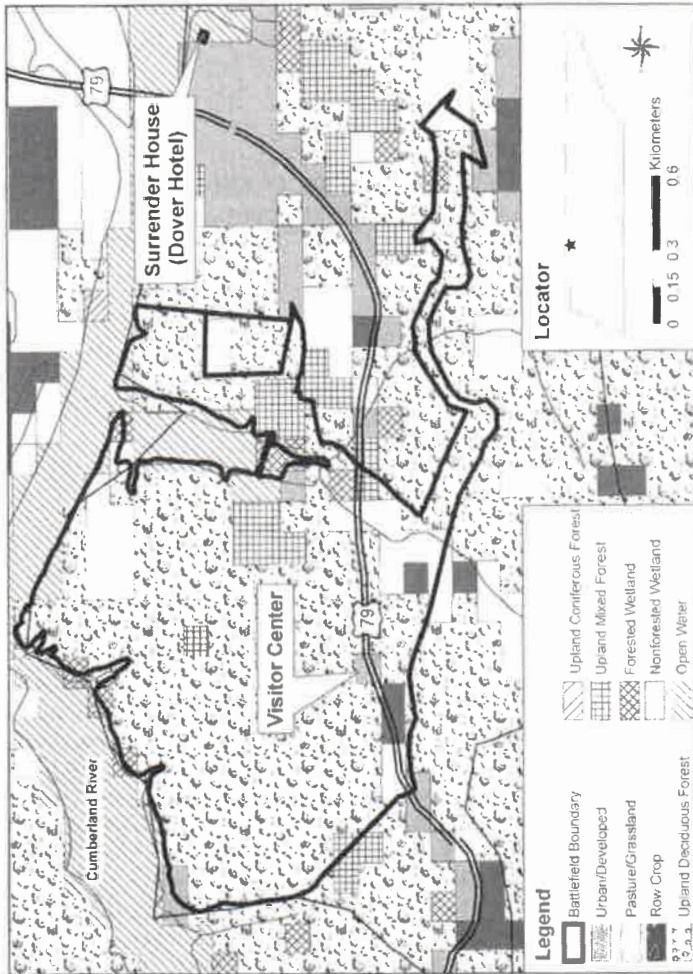


Figure 1. Map of Fort Donelson National Battlefield displaying land cover in and around the unit, located in and near Dover, Stewart County, Tennessee.

INTRODUCTION

Fort Donelson National Battlefield (FODO), established in 1928 to commemorate the site of the first major Union victory of the Civil War, is a small National Park Service unit that offers the visiting public a moderately rich bird fauna resulting from the diversity of habitats found within its boundaries. Within the battlefield boundaries lies Fort Donelson National Cemetery, created in 1867 as a burial site for the Union dead resulting from the victory; it contains about 1,780 gravesites not only for Union soldiers killed in 1862 but also for American soldiers killed during all national wars and conflicts occurring up to the time of the Vietnam Conflict, and it remains an active national cemetery today. The purpose of this study was 1) to inventory the bird species occurring at FODO; 2) to indicate the status and relative seasonal abundance of documented species; and 3) to develop management recommendations for improving bird habitat.

Fort Donelson National Battlefield is located on the Cumberland River (Lake Barkley) about 1.6 km (1 mi) west of downtown Dover and about 5 km (3 mi) east of the southern portions of Land Between the Lakes in Stewart County, Tennessee (Figure 1). It encompassed 223 ha (551 acres) at the time of the bird inventory. Elevation in the park ranges from 131 m (432 ft) at the Cumberland River to about 200 m (660 ft) near the Visitor Center. A slightly disjunct portion of the battlefield lies just south of Rt. 79 and contains about 5 km (3 mi) of rifle pits originally constructed as part of the perimeter defenses of the fort and now used as a trail system and greenway. Another small (0.4 hectares [1 acre]) disjunct site is the Surrender House (Dover Hotel), located on the east side of Dover just upriver from the Rt. 79 bridge over the Cumberland River. All of these sites are within the city limits of Dover. Sites surveyed during this inventory did not include the Fort Henry or Fort Herman sections added after 2003, nor did they include parcels to the south owned by the National Historic Trust.

Route 79, a major four-lane highway, runs through the southern part of the main battlefield. The Cumberland River forms the northern boundary of the park and carries a fairly large volume of boat traffic, both commercial and recreational. The noise generated by these transportation corridors sometimes inhibits effective detection of bird song.

Besides its proximity to major transportation arteries, FODO is also surrounded by an active community of businesses and private homes. Many local residents use the park trails and roadways at all hours of day and night. Despite heavy use, FODO serves as a largely forested and grassland island in an urban and suburban area.

The Surrender House property is bordered by the Cumberland River on two sides; depending on water level, a small beach is sometimes exposed along the edge of the property. Around the old hotel building itself most of the area is mowed, but there is a small wooded bluff along the west boundary with a small ravine and stream at the bottom. Some of the trees present on the property are pole-sized and a few are saw-timber-sized. There is a small amount of weedy growth along the river's edge when the water is too high for this area to be mowed (the water's edge

is actually owned by the Army Corps of Engineers). The whole site serves migrant land birds as a resting site, while the open water adjacent to the site attracts water birds (gulls, herons, and swallows), and Ospreys have nested on a nearby channel marker; species visible over the river from the shoreline of the Surrender House were included in the inventory. Several species of birds on the inventory list were found only at this site during the period of the bird inventory.

The greenway housing the old rifle pits lies south of Rt. 79. A trail runs about 3 km (1.85 mi) parallel to Rt. 79 among the earthworks and trenches. The trail traverses dry hillsides with mature hardwood forest. Two small creek crossings and several mowed areas are also present along the trail. Overall, this narrow (c. 100 m in width) part of FODO was not found to be attractive to birds except at the sites where small amounts of shrubby growth were present near the creeks.

Most of the Main Battlefield is located north of Rt. 79. The purpose of the fort constructed at this site was to protect the Cumberland River batteries from land attack and to protect the supply line that the river provided to Nashville. At the time of the battle (1862), all trees within 180 m (200 yd) of the original 6.7-hectare (15-acre) earthen fort were felled to provide a clear line of fire. Some large portions of the Main Battlefield are now maintained in mowed fields, as are large areas near the river batteries and along the river's edge, but a few wooded areas on high bluffs remain in these mowed areas.

The wooded portions of the Main Battlefield between Rt. 79 and the old fort include areas with steep slopes leading down to streambeds that are dry except during wet weather. Cedars (*Juniperus* sp.) and pines (*Pinus* sp.) are present, along with oaks (*Quercus* sp.) and hickories (*Carya* sp.) in most areas. Several trails traverse the ridges and hollows of this section of the park, crossing two small streams at several places.

The northwest boundary of the Main Battlefield is located at Hickman Creek, which is extensively flooded during the warmer months of the year as a result of Barkley Dam downstream from the park. The northern boundary of the park is the Cumberland River (Lake Barkley), which serves as a corridor for fairly heavy inland barge and recreational boat traffic. Between the river batteries located on the main river and the national cemetery, another flooded stream, Indian Creek, is present; like Hickman Creek, this creek is extensively flooded much of the year and is subject to daily fluctuations in water level amounting to 0.3–0.6 m (1–2 ft). Additionally, during periods of heavy rainfall, water is released at upstream dams, bringing flood conditions to Hickman and Indian creeks, as well as the main river. Contrastingly, during drought conditions, water levels in these creeks go down, revealing extensive mudflats. Although the Army Corps of Engineers controls the shorelines of the river, the National Park Service manages and mows them. The main river is a natural migration corridor, while the two creeks afford excellent foraging and roosting areas. During breeding season, these creeks and the river attract breeding species that require riparian habitat.

South of the national cemetery on Indian Creek is an area used infrequently as a Boy Scout camp. Part of this area is mowed field and part is forested, each attracting

a fairly large number of bird species throughout the year. One of several deep gullies within the park is located on the northern border of the scout camp, separating it from the cemetery. Shrub-scrub habitat along the slope of this gully is highly productive of bird species adapted to this habitat in all seasons.

The national cemetery in the northeast part of the Main Battlefield is a mowed area with many gravesites and monuments; many large trees have grown up in this area, creating a city park effect. Some old-growth forest is located west and north of the cemetery, and there are some bluffs and steep drop-offs between the cemetery and the main river, making the area conducive to the presence of raptors and other soaring species. East of the national cemetery is a cemetery of the city of Dover and residential areas.

Several trails in the Main Battlefield pass through forest and waterside habitats. One of these trails begins at the Visitor Center; this trail is characterized by considerable change in elevation. It was the only area in the park where several species of warblers were found during the breeding season.

In 2005 an observation platform was added to the river batteries site, making it possible to scan a large area of river bottomland on the far (north) side of the river.

Most of the deep water areas along the river are heavily used by fishermen in boats. The area across the river from the park and much of the surrounding countryside is a hunting and fishing recreation area. During hunting season, gunfire can often be heard from Hickman Creek, and heavy gunfire often erupts from the bottomlands across the river where a large waterfowl management area is located. Sometimes flights of ducks depart this area when fired upon, often overflying the river and park; Bald Eagles patrol this area during hunting seasons and sometimes snare downed ducks before duck hunters can get to them.

Overall, FODO is small by the standards of many parks, and it is bordered by urban sprawl to the east and south. Roads in the park are mainly limited by topography to the tops of ridges and away from steep areas and areas where water barriers are present, especially on the west, north, and east borders of the park. Four narrow, canopy-covered gravel roads that are gated to the public lie within the park. Fragmentation in the park forests is a lesser factor than in some larger parks. For a park of its size, FODO also has a large amount of riparian habitat.

METHODS — BIRD INVENTORY TECHNIQUES

The five inventory techniques employed — point counts, migration walks, night surveys, raptor surveys, and general inventory work — were identical to the techniques we used to inventory the avifauna of Stones River National Battlefield during the same period of time (Stedman and Stedman 2007); see that source for a description of the techniques. Fifteen plots for conducting point counts were established in FODO, and these were surveyed using the point count method during June 2004 and June 2005. Migration walks were conducted seven times during fall and six times during spring. Night surveys took place on 14 dates at all seasons and raptor surveys on three dates during winter. General inventory effort was expended during all dates (see Results) when the park was visited.

RESULTS

Total Species Inventoried

During the inventory period, Barbara H. Stedman and/or Stephen J. Stedman made visits to the unit on a total of 37 days during all seasons of the year (11 days during spring; 9 days during summer; 9 days during fall; and 8 days during winter). In the course of these visits, we observed 175 species (Table 1) by one or more of the methods described above. One additional species — American White Pelican — was observed in the park by maintenance personnel during the inventory period, and another species — Golden-winged Warbler — was recorded historically (Robinson and Blunk 1989).

Some factors that limited the results of the inventory included traffic noise from Rt. 79, often as loud as interstate traffic noise; barge traffic noise on the Cumberland River, often very loud and sometimes constant during all seasons; recreational boat disturbance on the main river and on Hickman and Indian creeks; gunfire during hunting season, especially directly across the river from the river batteries; urban development right up to park boundaries on three sides, probably inhibiting some species from nesting in otherwise suitable habitat; mowing of grass to river edge, preventing growth of weedy habitat that would be attractive to many migrant species; and high water during most migration seasons (see "Influence of Weather" below).

Breeding Species Inventoried

Evidence of breeding by bird species was divided into three categories: possible evidence, probable evidence, and confirmed evidence. These categories were the same as those used during the Tennessee Breeding Bird Atlas project (Nicholson 1997). In all, 89 species (Table 1) were placed in one of these categories, including 20 (22%) possible breeders, 17 (19%) probable breeders, and 52 (59%) confirmed breeders.

Point counts were conducted during the breeding period of many species. A total of 44 species was registered during point counts conducted in mid-June 2004, while 62 species were detected during point counts conducted in early June 2005. In all, point count effort led to data for 63 species of birds, all of which use FODO during the breeding season.

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, but not entirely, borne out by the data obtained during this survey. The smallest unit of the park, the Surrender House, was a productive area to bird, more so than the greenway, which is a larger unit of the park. The Main Battlefield, with its large amount of riparian habitat and its considerable forested area, as well as its overall larger size than either of the other units, produced more species than either of two smaller units.

Table 1. Species, status, and seasonal abundance of birds observed at Fort Donelson National Battlefield 2003–2005. See footnotes for a key to status, abundance, and detection method codes and symbols. [] = species not found during inventory.

Common Name	Scientific Name	Status	Spring	Summer	Fall	Winter	Detection Method
Snow Goose	<i>Chen caerulescens</i>	WR			R	R	MG
Canada Goose	<i>Branta canadensis</i>	PR**	FC	VU	U	FC	MNG
Wood Duck	<i>Aix sponsa</i>	PR**	U		VU	U	MG
Gadwall	<i>Anas strepera</i>	WR			R		M
American Wigeon	<i>Anas americana</i>	WR				VU	G
American Black Duck	<i>Anas rubripes</i>	WR			VU	VU	MG
Mallard	<i>Anas platyrhynchos</i>	PR			VU	U	G
Northern Shoveler	<i>Anas clypeata</i>	WR				VU	G
Northern Pintail	<i>Anas acuta</i>	WR				R	G
Green-winged Teal	<i>Anas crecca</i>	WR			VU		M
Ring-necked Duck	<i>Aythya collaris</i>	WR	VU		VU	VU	MG
Bufflehead	<i>Bucephala albeola</i>	WR				VU	G
Hooded Merganser	<i>Lophodytes cucullatus</i>	WR				VU	G
Ruddy Duck	<i>Oxyurus jamaicensis</i>	WR			VU		M
Wild Turkey	<i>Melaneris gallopavo</i>	PR***	U	VU	VU		PMG
Northern Bobwhite	<i>Colinus virginianus</i>	PR**	U	VU	VU	VU	MC
Common Loon	<i>Gavia immer</i>	VR			R	R	M
Pied-billed Grebe	<i>Podilymbus podiceps</i>	WR	VU				G
American White Pelican	<i>Pelecanus erythrorhynchos</i>	VR	R				#
Double-crested Cormorant	<i>Phalacrocorax auritus</i>	WR	FC		VU		MG
Great Blue Heron	<i>Ardea herodias</i>	PR*	U	U	FC	FC	PMNG
Great Egret	<i>Ardea alba</i>	VR	U		U		MG
Little Blue Heron	<i>Egretta caerulea</i>	VR	U	VU	U		G
Green Heron	<i>Bulorides virescens</i>	SR**	U	U	U		PMG
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	PR*	U	U	U	U	MNG
Yellow-crowned Night-Heron	<i>Nyctanassa violacea</i>	UN***		R	R		G
Black Vulture	<i>Coragyps atratus</i>	PR	U	U	U	U	MGR
Turkey Vulture	<i>Cathartes aura</i>	PR	U	U	U	U	MGR
Osprey	<i>Pandion haliaetus</i>	SR***	U	U	U	R	PMG
Mississippi Kite	<i>Ictinia mississippiensis</i>	TR		R	R		G
Bald Eagle	<i>Haliaeetus leucocephalus</i>	WR***	U	U	U	U	PMRG
Northern Harrier	<i>Circus cyaneus</i>	WR				R	R
Sharp-shinned Hawk	<i>Accipiter striatus</i>	WR			VU	U	RG
Cooper's Hawk	<i>Accipiter cooperi</i>	PR*	VU	VU	VU	U	MGR
Red-shouldered Hawk	<i>Buteo lineatus</i>	PR***	U	U	U	U	MGR
Broad-winged Hawk	<i>Buteo platypterus</i>	SR*	U	VU	U		PMG
Red-tailed Hawk	<i>Buteo jamaicensis</i>	PR***	U	U	VU	U	MGR
American Kestrel	<i>Falco sparverius</i>	VR				R	G
Peregrine Falcon	<i>Falco peregrinus</i>	TR			R		G
Semipalmated Plover	<i>Charadrius semipalmatus</i>	TR			VU		M
Killdeer	<i>Charadrius vociferus</i>	PR***	U	U	U	U	MG
Spotted Sandpiper	<i>Actitis macularia</i>	TR	VU	VU	U		MG
Greater Yellowlegs	<i>Tringa melanoleuca</i>	TR			R		M
American Woodcock	<i>Scolopax minor</i>	PR*	VU	VU	VU	R	NG
Bonaparte's Gull	<i>Larus philadelphia</i>	WR				VU	G
Ring-billed Gull	<i>Larus delawarensis</i>	WR	FC		U	A	MG
Herring Gull	<i>Larus argentatus</i>	WR				U	G
Caspian Tern	<i>Hydroprogne caspia</i>	TR				U	G
Black Tern	<i>Chlidonias niger</i>	TR			VU		M

Common Name	Scientific Name	Status	Spring	Summer	Fall	Winter	Delection Method
Forster's Tern	<i>Sterna forsteri</i>	TR	VU				G
Rock Pigeon	<i>Columba livia</i>	PR	VU		VU		G
Mourning Dove	<i>Zenaidura macroura</i>	PR***	FC	C	C	U	PMG
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	SR**	U	U	U		PMG
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	TR	VU				G
Eastern Screech-Owl	<i>Megascops asio</i>	PR**	U	U	U	U	MNRG
Great Horned Owl	<i>Bubo virginianus</i>	PR**	U	U	U	U	PMNG
Barred Owl	<i>Sirix varia</i>	PR**	U	U	U	U	PMNRG
Common Nighthawk	<i>Chordeiles minor</i>	TR	R		VU		G
Whip-poor-will	<i>Caprimulgus vociferus</i>	TR	R				NG
Chimney Swift	<i>Chaetura pelagica</i>	SR*	U	U	U		MG
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	SR*	U	U	U		PMG
Belted Kingfisher	<i>Ceryle alcyon</i>	PR*	U	U	U	U	PMG
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	PR***	U	U	U	U	
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	PR***	FC	FC	FC	FC	PMG
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	WR	U	U	U	U	MG
Downy Woodpecker	<i>Picoides pubescens</i>	PR***	FC	U	FC	FC	PMG
Hairy Woodpecker	<i>Picoides villosus</i>	PR***	U	U	U	U	PMG
Northern Flicker	<i>Colaptes auratus</i>	PR**	U	U	U	U	PMG
Pileated Woodpecker	<i>Dryocopus pileatus</i>	PR**	U	U	FC	U	PMG
Eastern Wood-Pewee	<i>Contopus virens</i>	SR***	U	FC	U		PMG
Acadian Flycatcher	<i>Empidonax virens</i>	SR***	U	FC	VU		PMG
Eastern Phoebe	<i>Sayornis phoebe</i>	PR***	U	U	U	U	PMG
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	SR***	U	U	VU		PMG
Eastern Kingbird	<i>Tyrannus tyrannus</i>	SR***	U	U	VU		PMG
White-eyed Vireo	<i>Vireo griseus</i>	SR***	FC	FC	FC		PMG
Yellow-throated Vireo	<i>Vireo flavifrons</i>	SR**	U	U	U		PMG
Blue-headed Vireo	<i>Vireo solitarius</i>	TR	VU		VU		MG
Warbling Vireo	<i>Vireo gilvus</i>	SR*	VU	R	VU		MG
Philadelphia Vireo	<i>Vireo philadelphicus</i>	TR			R		G
Red-eyed Vireo	<i>Vireo olivaceus</i>	SR***	FC	C	U		PMG
Blue Jay	<i>Cyanocitta cristata</i>	PR***	FC	C	FC	FC	PMG
American Crow	<i>Corvus brachyrhynchos</i>	PR**	FC	C	C	FC	PMG
Purple Martin	<i>Progne subis</i>	SR	U	U			PMG
Tree Swallow	<i>Iachycineta bicolor</i>	SR**	U	VU	U		MG
N. Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	SR***	U	U	U		MG
Bank Swallow	<i>Riparia riparia</i>	TR	VU				G
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	SR***	U	FC	U		MG
Barn Swallow	<i>Hirundo rustica</i>	SR***	U	FC	U		PMG
Carolina Chickadee	<i>Parus carolinensis</i>	PR***	C	FC	FC	A	PMG
Tufted Titmouse	<i>Parus bicolor</i>	PR***	C	FC	FC	A	PMG
Red-breasted Nuthatch	<i>Sitta canadensis</i>	WR				R	G
White-breasted Nuthatch	<i>Sitta carolinensis</i>	PR***	U	FC	FC	FC	PMG
Brown Creeper	<i>Certhia americana</i>	WR	VU		R	VU	MG
Carolina Wren	<i>Troglodytes ludovicianus</i>	PR***	C	C	C	A	PMG
House Wren	<i>Troglodytes aedon</i>	SR*	VU	VU	VU		MG
Winter Wren	<i>Troglodytes troglodytes</i>	WR	VU		VU	U	MG
Sedge Wren	<i>Cistothorus platensis</i>	VR				R	G
Marsh Wren	<i>Cistothorus palustris</i>	TR			R		G
Golden-crowned Kinglet	<i>Regulus satrapa</i>	WR			VU	U	MG
Ruby-crowned Kinglet	<i>Regulus calendula</i>	WR	U		VU	U	MG
Blue-gray Gnatcatcher	<i>Polioptila caerulea</i>	SR***	C	FC	FC		PMG
Eastern Bluebird	<i>Sialia sialis</i>	PR***	C	A	C	A	PMG
Veery	<i>Catharus fuscescens</i>	TR	VU				MG
Gray-cheeked Thrush	<i>Catharus minimus</i>	TR	R				G

Common Name	Scientific Name	Status	Spring	Summer	Fall	Winter	Detection Method
Swainson's Thrush	<i>Catharus ustulatus</i>	TR	U		VU		MG
Hermit Thrush	<i>Catharus guttatus</i>	WR	U		VU	U	MG
Wood Thrush	<i>Hylocichla mustelina</i>	SR***	FC	FC	VU		PMG
American Robin	<i>Turdus migratorius</i>	PR***	FC	C	C	A	PMG
Gray Catbird	<i>Dumetella carolinensis</i>	SR*	U	VU	VU		MG
Northern Mockingbird	<i>Mimus polyglottus</i>	PR***	U	FC	U	U	PMG
Brown Thrasher	<i>Toxostoma rufum</i>	PR***	U	U	U	U	PMG
European Starling	<i>Sturnus vulgaris</i>	PR***	FC	A	A	FC	PMG
American Pipit	<i>Anthus rubescens</i>	VR				R	G
Cedar Waxwing	<i>Boninycilla cedrorum</i>	PR*	VU	U	U	U	PMG
Blue-winged Warbler	<i>Vermivora pinus</i>	TR	VU		VU		M
[Golden-winged Warbler	<i>Vermivora chrysoptera</i>	TR			R		#]
Tennessee Warbler	<i>Vermivora peregrina</i>	TR	U		VU		MG
Orange-crowned Warbler	<i>Vermivora celata</i>	TR	VU		R		MG
Nashville Warbler	<i>Vermivora ruficapilla</i>	TR	VU		R		G
Northern Parula	<i>Parula americana</i>	SR***	FC	FC	VU		PMG
Yellow Warbler	<i>Dendroica petechia</i>	SR*	U		R		MG
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	TR	U		VU		MG
Magnolia Warbler	<i>Dendroica magnolia</i>	TR	U		VU		MG
Cape May Warbler	<i>Dendroica tigrina</i>	TR	VU				G
Yellow-rumped Warbler	<i>Dendroica coronata</i>	WR	FC		FC	A	MG
Black-throated Green Warbler	<i>Dendroica virens</i>	TR	U		VU		MG
Blackburnian Warbler	<i>Dendroica fusca</i>	TR	U		VU		MG
Yellow-throated Warbler	<i>Dendroica dominica</i>	SR**	U	U	U		PMG
Pine Warbler	<i>Dendroica pinus</i>	SR***	U	U	U		PMG
Prairie Warbler	<i>Dendroica discolor</i>	SR**	U	U	VU		PMG
Palm Warbler	<i>Dendroica palmarum</i>	TR	U		VU		MG
Bay-breasted Warbler	<i>Dendroica castanea</i>	TR	VU		VU		MG
Blackpoll Warbler	<i>Dendroica striata</i>	TR	U				MG
Cerulean Warbler	<i>Dendroica cerulea</i>	SR*	U		R		MG
Black-and-white Warbler	<i>Mniotilta varia</i>	TR	U		VU		MG
American Redstart	<i>Setophaga ruticilla</i>	TR	U		VU		MG
Prothonotary Warbler	<i>Protonotaria citrea</i>	SR***	U	U	VU		PMG
Worm-eating Warbler	<i>Helminthophila vermivorum</i>	SR*	U	VU	VU		MG
Ovenbird	<i>Seiurus aurocapillus</i>	SR*	U	VU	VU		MG
Northern Waterthrush	<i>Seiurus noveboracensis</i>	TR	VU				MG
Louisiana Waterthrush	<i>Seiurus motacilla</i>	SR***	U	VU			PG
Kentucky Warbler	<i>Oporornis formosus</i>	SR***	U	VU	R		PMG
Common Yellowthroat	<i>Geothlypis trichas</i>	SR**	U	U	U		PMG
Hooded Warbler	<i>Wilsonia citrina</i>	SR*	U	VU	VU		MG
Canada Warbler	<i>Wilsonia canadensis</i>	TR	VU				G
Yellow-breasted Chat	<i>Icteria virens</i>	TR	U		VU		G
Summer Tanager	<i>Piranga rubra</i>	SR***	FC	FC	U		PMG
Scarlet Tanager	<i>Piranga olivacea</i>	SR**	U	U	U		PMG
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	PR***	FC	C	FC	U	PMG
Chipping Sparrow	<i>Spizella passerina</i>	PR***	C	A	C	U	PMG
Field Sparrow	<i>Spizella pusilla</i>	PR*	U	VU	VU	VU	MG
Savannah Sparrow	<i>Passerculus sandwichensis</i>	WR	VU			VU	G
Grasshopper Sparrow	<i>Ammodramus savaannarum</i>	TR	R				MG
Fox Sparrow	<i>Passerella iliaca</i>	WR	VU			VU	G
Song Sparrow	<i>Melospiza melodia</i>	WR	VU		U	U	MG
Lincoln's Sparrow	<i>Melospiza lincolni</i>	TR	VU		R		MG
Swamp Sparrow	<i>Melospiza georgiana</i>	WR	U		VU		MG
White-throated Sparrow	<i>Zonotrichia albicollis</i>	WR	FC		VU	A	MG
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	WR	R				G

Common Name	Scientific Name	Status	Spring	Summer	Fall	Winter	Detection Method
Dark-eyed Junco	<i>Junco hyemalis</i>	WR	U		VU	A	MG
Northern Cardinal	<i>Cardinalis cardinalis</i>	PR***	FC	C	A	FC	PMG
Rose-breasted Grosbeak	<i>Pheneticus ludovicianus</i>	TR	U		U		MG
Blue Grosbeak	<i>Passerina caerulea</i>	SR*	U	VU	VU		PMG
Indigo Bunting	<i>Passerina cyanea</i>	SR***	FC	C	FC		PMG
Bobolink	<i>Dolichonyx oryzivorus</i>	TR	R				M
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	PR***	U	U	VU	VU	MG
Eastern Meadowlark	<i>Sturnella magna</i>	PR**	U	U	VU	VU	MG
Rusty Blackbird	<i>Euphagus carolinus</i>	WR				R	G
Common Grackle	<i>Quiscalus quiscula</i>	PR***	FC	C	U	U	PMG
Brown-headed Cowbird	<i>Molothrus ater</i>	PR**	FC	FC	VU		PMG
Orchard Oriole	<i>Icterus spurius</i>	SR***	U	U	VU		PMG
Baltimore Oriole	<i>Icterus galbula</i>	SR*	U	VU			PMG
Purple Finch	<i>Carpodacus purpureus</i>	WR	VU			U	MG
House Finch	<i>Carpodacus mexicanus</i>	PR***	U	U	U	U	PMG
Pine Siskin	<i>Carduelis pinus</i>	VR				R	G
American Goldfinch	<i>Carduelis tristis</i>	PR***	U	U	FC	U	PMG
House Sparrow	<i>Passer domesticus</i>	PR***	VU	VU	U	VU	G

Breeding status symbols: * = possible breeding evidence noted; ** = probable breeding evidence noted; *** = confirmed breeding evidence noted.

Status abbreviations: PR = permanent resident; SR = summer resident; TR = transient; UN = unknown status; VR = visitor; WR = winter resident.

Abundance abbreviations: A = abundant (25+ individuals / day); C = common (10-24 individuals / day); FC = fairly common (5-9 individuals / day); U = uncommon (1-4 individuals / day); VU = very uncommon (2-5 records/season); R = rare (on average 1 record or fewer / season).

Detection method abbreviations: P = point count; M = migration walk; N = night survey; R = raptor survey; and G = general inventory.

Observed by park personnel; ## see Robinson and Blunk (1989).

DISCUSSION

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

Diversity of bird species in the park was excellent compared to the diversity we expected. This result took place despite several factors, including:

- the small size of the park;
- the overall paucity of shrub-scrub habitat in the park;
- the absence of no-wake zones in Hickman and Indian creeks;
- the presence of urban development right up to the park boundary,
- the splitting of the park into two sections by Rt. 79;
- and the practice of mowing grass right up to the water's edge, leaving no weedy, shrub-scrub, or forest habitat for most bird species.

These factors were all likely negative in their effects on the diversity of species

observed during the inventory. Although a number of these factors are beyond management control, a change in the mowing practices in the park would probably benefit many species of birds and increase bird diversity. Species that require weedy grassland and shrub-scrub habitats were in especially short supply in the park.

A testament to the suitability of the park to birdlife was provided by the fact that a pair of Bald Eagles moved its nest site from downriver to a very public site near the log huts where they successfully fledged two young during May 2005.

Another testament to the park's suitability to birdlife was provided by a pair of Ospreys that nested on a cellular tower near the park in late May 2005, following the destruction of an earlier nest that was flooded out. These Ospreys were observed gathering sticks for their new nest near Buckner's Final Defense, well inside the park.

Unexpected Results

The relatively dense population of Prothonotary Warblers in the park's riparian habitat was unexpected but welcome. The park's management practice of leaving dead snags standing likely contributes to maintenance of this warbler's population in the park.

Six species of diurnal raptors—Osprey, Bald Eagle, Cooper's Hawk, Red-shouldered Hawk, Broad-winged Hawk, and Red-tailed Hawk — were noted in the park during nesting season, certainly a noteworthy and unexpected diversity of avian predators.

The high numbers of some forest interior obligates, such as Barred Owl, several species of woodpeckers, Acadian Flycatcher, and Wood Thrush, was unexpected in such a relatively small area.

It was unexpected to find singing Cerulean Warblers at two sites during June 2005; further monitoring for this species is warranted based on this finding.

Also unexpected was the presence of two scarce nesters — Warbling Vireo and Baltimore Oriole — east of the river batteries.

Birds Not Found

In general, the park populations of 13 species of breeding warblers were smaller than expected except for Northern Parula, and two warbler species that breed in Stewart County, Blue-winged Warbler and Yellow-breasted Chat, were absent, mostly due to very limited shrub-scrub habitat.

Grassland breeding obligates such as Northern Bobwhite, Field Sparrow, and Grasshopper Sparrow were either absent or present in very small numbers. Wintering species using the same habitat were also scarce or absent. These absences were likely caused by mowing most grassy areas in the park to keep the grass very short.

Few shorebirds were found because mudflat habitat was often flooded during the inventory. More shorebirds would be expected in years when mudflat habitat was available.

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. The raptor surveys at FODO produced better than expected results, possibly because of the presence of good roosting areas and because of the presence of many overlooks from which to observe them.

Influence of Weather on Results

An effort was made to visit FODO during periods when the weather was conducive to registering the maximum number of species during general inventory work, migration walks, point counts, night surveys, and raptor surveys, so weather did not generally affect the results of the overall inventory in a negative manner. However, broader scale weather patterns during the two years of the inventory may have affected bird presence/absence.

Very heavy rainfall during both years of the inventory prevented mudflat habitat for shorebirds from developing; the only exception was the fall of 2003. Flooding during late May 2005 was so great that two local Osprey nests were washed away. Bottomland nesting birds at FODO, such as Canada Goose and Prothonotary Warbler, may have been negatively affected by these conditions.

The fall of 2004 and the winter of 2004–2005 experienced a severe shortage of mast in the park as well as in the surrounding region, causing some species to move about seeking food resources. Some mast-obligate species may not have been recorded in the park during those seasons as a result of this factor.

The weather during both winters of the inventory was quite mild, possibly resulting in an absence of species of boreal irruptive species, such as Evening Grosbeak.

RECOMMENDATIONS FOR MANAGEMENT AND PROTECTION OF SIGNIFICANT HABITATS

Maintenance of FODO prior to the bird inventory appears to have been focused on aesthetic concerns rather than those associated with habitat for wildlife. Thus, for example, large areas of short grass dominate the non-forested parts of the park, and few efforts to specifically maintain the battlefield for wildlife were evident to us. Based on our inventory efforts, the following recommendations are offered in the hope that they will improve the battlefield as a refugium for birds and other wildlife:

- reduce mowing of grass within 50 m of the river to once per year in late July or early August;
- allow a shrub-scrub corridor to grow up between the river grassy area and the nearby woodland; maintain this corridor at 1-2 m, bush-hogging every 3-4 years;
- allow a 10-m wide band of shrub-scrub habit to grow up near the forest north of the stone fence at the national cemetery and below the maintenance buildings there;
- at Surrender House, do not mow below the high-water level; the wildflowers there are enjoyed by the public, and many species of wildlife will use this natural weedy habitat;

- at Sandy Road, allow more shrub-scrub habitat to grow up by cutting less grass on the west side of the road around the stream area; nesting Red-shouldered Hawks in this area would be benefited from less disturbance;
- if tree-cutting occurs in the greenway area, leave debris piles near the woodland edge to prevent erosion and to provide potential habitat for Bewick's Wren, an endangered species in Tennessee, and other species;
- continue bird monitoring using volunteers from Cross Creeks NWR and other sources; and
- create and maintain a database of bird records to be used in updating the bird checklist for the park.

ACKNOWLEDGMENTS

For coordinating our fieldwork in the park, Robert Wallace, Resource Manager and Ranger, deserves many thanks. All staff members of the Resource Management Office and Visitor Center of the park were helpful whenever called upon. In particular, Ranger Jim Jobe provided information about the features of the park and made access to non-public areas possible. We thank the two park superintendents whose tenure overlapped this inventory, Donald Stephenson and Steve McCoy, for their assistance. The entire Maintenance Department of the park deserves thanks for actively sharing information about the birdlife of the park; we appreciate their providing us with the record of American White Pelican. Jeff Hancock (Army Corps of Engineers) provided much useful information that led to the success of the bird inventory.

Whitney M. Fuquay helped create the map of FODO. Mark and Tracy Rawlings provided general inventory bird data from October 2004. Tom Diggs (NPS) assisted us greatly by finding and flagging many of the original plots where point counts were conducted. We are especially grateful to Teresa Leibfreid, NPS Inventory and Monitoring Coordinator for the Cumberland Piedmont Network, for her dedication and support throughout the duration of this bird inventory. The bird inventory at FODO was supported by a grant (TTU contract # H5000030200) from the National Park Service.

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MINUTES OF THE TOS 2009 FALL MEETING

7 NOVEMBER 2009

COLUMBIA, TENNESSEE

BOARD OF DIRECTORS MEETING

The Tennessee Ornithological Society's (TOS) 2009 fall meeting was held in Columbia, Tennessee, November 6-9, hosted by the Columbia chapter. Field trips were offered to Monsanto ponds and Williamsport Lakes.

The Directors meeting was called to order by President Dick Preston. Acting Secretary Donna Ward announced that a quorum had been met. Van Harris made the motion, with Joanne Routledge, second, that the minutes be approved as printed. The motion passed unanimously.

WEST TN VICE PRESIDENT: No report.

MIDDLE TN VICE PRESIDENT: No report

EAST TN VICE PRESIDENT: Dick stated that the office of Vice-President from East Tennessee is vacant and will need to be filled. He has asked the Board of Directors to locate persons who might be willing to serve as Vice-President from East Tennessee.

DIRECTORS-AT-LARGE: Dick placed in nomination Donna Ward, Larry Routledge, and Dr. Stephen Routledge as the three state Directors-at-Large and Chuck Nicholson as Curator and Webmaster. Ron Hoff seconded the motion. The motion passed unanimously.

SECRETARY: Dick expressed appreciation to Donna Ward for substituting for Secretary Laura McCall.

TREASURER: Mac McWhirter, Treasurer, who was unable to attend the meeting, sent the following report: The investments of TOS have made a very good recovery in the market upturn we have experienced since March 9th, gaining back about \$22,000. We are still approximately \$7,000 below the high point.

As we discussed at the Spring Meeting in Nashville, the economic downturn has had a significant effect on membership renewals in 2009. I project that the 2009 membership will be down approximately 8-9% from 2008 levels.

Finally, we have made progress in obtaining more e-mail addresses from our members. We now have approximately 60% of all members on the distribution list. Given the fact that about 20% of those can be expected not to be valid, we still should be able to electronically contact at least 50% of our membership. So, with the first *Warbler* published in 2010, I would like to try an electronic notification of access to the current *Warbler* to save mailing costs, printing costs, and maybe a tree or two.

CURATOR/WEBMASTER: Dick asks that the directors representing their chapters review the information on the website in order to keep the officers, directors, and contact information current.

MIGRANT: No Report

TENNESSEE WARBLER NEWSLETTER: Editor Theresa Graham noted that we have an extension on the upcoming copy of *The Tennessee Warbler* so that information could

be obtained from this meeting. She noted that the next copy of *The Warbler* will be sent out in April and that the deadline for submitting material is February 28th.

COMMITTEE REPORTS

TENNESSEE BIRD RECORDS COMMITTEE (TBRC): Dean Edwards, secretary of the TBRC, listed the other current members of the group: Don Miller, Kevin Calhoon, John Henderson, Jan Shaw, Mark Greene, and Philip Casteel, alternate. Dean reported that there were 22 bird records under review. Of those, 20 were accepted and two were rejected. There were two additions to the state list. A Chestnut-Collared Longspur was found on the Reelfoot Lake Christmas Bird Count, and a Green Violet-Ear Hummingbird was found in Shelby County. In addition, they reviewed the status of the Trumpeter Swan; the committee voted unanimously to accept the Trumpeter Swan as accidental. The record of the Reddish Egret from Rankin Bottoms was accepted. Based on current evidence, the committee voted unanimously to remove the Masked Duck from the state bird list. The current state bird list includes 417 species. Kevin Calhoon and Jan Shaw are finishing their first term and are willing to complete a second term; they have been nominated for a second term. John Henderson is finishing his second term and will need a replacement. Dean Edwards announced the following nominees for placement on the Bird Records Committee: Chris Sloan, Allan Trently and Michael Todd.

CONSERVATION AND RESEARCH FUNDING COMMITTEE: Dick stated that members of the committee would need to elect a chairperson, and that Virginia Reynolds has agreed to serve on the committee as a representative from West Tennessee.

CONSERVATION POLICY COMMITTEE: The members of the committee are Melinda Welton and Bob Hatcher, co-chairs, and Dick Preston, Chuck Nicholson, Kevin Calhoon and Gregg Elliott. Melinda Welton presented the following report of the committee:

Comprehensive Climate, Energy, and Wildlife Legislation: TOS signed-on to the National Wildlife Federation, urging Senate passage of climate change and wildlife legislation.

Categorical Exclusion of Broadband Towers from Environmental Review: TOS signed on to a National Audubon Society letter to the national Oceanic and Atmospheric Administration. The letter urged against allowing a categorical exclusion for all broadband towers from environmental review, as had been proposed in the Federal Register on July 9, 2009.

Full funding for Land and Water Conservation Fund HR 3534: TOS wrote letters to all TN members of the House of Representatives, as well as signing-on to a letter prepared by the TN Parks and Greenways Foundation in support of a provision within HR 3534 that would provide full funding for the Land and Water Conservation Fund. This fund is an important tool for acquiring public land in Tennessee and has been responsible for the purchase of 58,600 acres across the state.

Posting Action Alerts on TN Birds: In order to engage more TOS members in conservation actions, the Conservation Policy Committee agreed to start posting Action Alerts from time to time on TN Birds. These alerts will clearly state the action requested with background information on the issue. The action will usually be a phone call or letter

to one or several state representatives, members of the TN delegation to Washington, or a government agency.

Appalachian Restoration Act S. 696: TOS sent a letter to Senator Alexander thanking him for being a co-sponsor of S. 696, the "Appalachian Restoration Act." This bill would protect streams from being polluted and buried by waste created during mountaintop removal coal mining. Passage of this bill could curb this destructive mining method and directly benefit several declining forest bird species including the rapidly declining Cerulean Warbler. A similar letter was sent to Senator Corker asking him to become a co-sponsor.

Petition to Revoke Import Tolerances of 13 Pesticides: TOS sent a letter to the Environmental Protection Agency (EPA) in support of an American Bird Conservancy petition to ban the importation of crops containing any residues of 13 pesticides known to be highly toxic to birds.

Comments on new use for Kaput-D (diphacinone and imidacloprid) EPA -HQ-OPP-2009-0625): TOS submitted comments to the EPA concerning use of Kaput-D bait for prairie dog elimination. This rodenticide is not selective to the target species and non-target mammals and birds are at risk of being poisoned.

Green Forest Works for Appalachia Program: At the request of the Bird Conservation Alliance (BCA), TOS sent a letter to Senator Alexander asking his support for \$15 million in the FY 2011 Interior appropriations bill to begin implementing the Green Forest Works for Appalachia program.

Proposed Suspension and Modification of Nationwide Permit (NWP) 21: The TOS submitted comments in support of the Proposed Suspension and Modification of Nationwide Permit (NWP) 21. This program was originally established to streamline the permitting process for certain types of minor fill deposits created during surface mining.

Melinda presented a report about the Watchable Wildlife website. She said that it will include species descriptions of most of the birds found in Tennessee and photographs for identification. Members can click and go to e-bird, with information specific for Tennessee. There is also a site panel to click places to see wildlife in Tennessee, and the areas are divided by region. An interactive Google map is included in order to help birders find directions to explore different areas of the state.

Dick commented that the Conservation Policy Committee members have done an outstanding job in representing the TOS. Dick also noted that the Conservation Policy Committee has written letters to support full Interior Department funding. The Interior Department budget has increased to include an amount of 105 million dollars over the past three years. He noted that the TOS often receives requests from the American Bird Conservancy, asking that members e-mail or write state legislators with concerns regarding conservation. He expressed that communication from individuals was more effective than from group letters.

Dick announced that he received a message from a former Nashville resident and TVA employee, who would like to donate some original Alexander Wilson and Audubon prints to the TOS. They are museum-quality prints, and Dick recommended that the prints be placed on display at the Radnor Lake Visitor Center in Nashville.

FINANCE COMMITTEE: Ron Hoff commended Treasurer Mac McWhirter for the outstanding job that he does as Treasurer of the TOS.

PUBLICATIONS COMMITTEE: No report.

COLLATERAL MATERIALS: Donna Ward announced that the TOS patches and decals, along with copies of John Robinson's *Annotated Checklist of the Birds of Tennessee*, were available for sale on the back table.

TN-BIRD MODERATOR: No Report

NOMINATING COMMITTEE: Dick reported that the Nominating Committee consists of the following persons: Darryl Gaddy from East Tennessee, Amy Potter from Middle Tennessee, and Van Harris from West Tennessee. He expressed that the next TOS president would be selected from East Tennessee.

CONSTITUTION AND BY-LAWS REVIEW COMMITTEE: The following are members of the Constitution and By-Laws Review Committee: Danny Gaddy, Richard Connors and Susan McWhirter. Richard Connors suggested that a review needs to be made of the constitution and asked that the members of the committee make recommendations about any modifications to the Constitution and By-Laws.

OLD BUSINESS

Duck Stamps: Dick explained that the sale of duck stamps is a very effective method of helping fund conservation programs in the wildlife refuge system. He stated that he obtained 50 of the stamps on consignment for the TOS. He said that the price of a duck stamp is \$15.00 and that he will have them available at each TOS meeting.

Spring Meeting: The Spring 2010 meeting will be held in Knoxville, and Ron Hoff reported that the meeting will be centered at the Knoxville Zoo. The hotel is eight miles from the zoo at the Strawberry Plains exit on the eastern side of Knoxville. Ron said that this location is accessible to several birding sites.

Dick noted that the Spring 2011 Meeting will be located in Memphis.

NEW BUSINESS

TWRA/TOS Liaison: Melinda Welton was appointed TOS liaison to the TWRA. Dick encouraged continued cooperation of TWRA and the TOS. Bob Hatcher stated that since 1995, the TWRA has sold 200,000 Watchable Wildlife license plates. It was noted that Bob Hatcher is the person most responsible for the Bluebird license plate.

Winter Meeting: Dick reported that the location of the winter meeting will be Reelfoot Lake, and that the date will be January 29-31, 2010. He noted that Knox Martin will be presenting a program on raptors on Saturday night, January 30.

Non-members of TOS on the Tennessee Bird Records Committee: Dean Edwards, secretary of the Tennessee Bird Records Committee, stated that presently there are no requirements that members of the committee be also members of the TOS. Recently, a non-member of the TOS has requested participation on the Bird Records Committee. After extensive discussion by the Board of Directors, Dick asked Danny Gaddy, Richard Connors, and Susan McWhirter to formulate a policy regarding participation by non-members of the TOS on the TBRC and to vote on it at the spring meeting.

Distinguished Service Award Nominations: Dick asked that members select nominees for Distinguished Service Award selections and present them at the Spring Meeting. The meeting was adjourned.

Respectfully submitted by Donna Ward, Acting Secretary

TOS 2009 FALL SYMPOSIUM

DO YELLOW-BELLIED SAPSUCKERS HAVE BACTERIAL SYMBIONTS THAT AID IN DIGESTING CELLULOSE?

H. DAWN WILKINS and LINDA HUSMANN
Department of Biological Sciences
University of Tennessee at Martin

Yellow-bellied Sapsuckers excavate into trees creating sap wells that they use to harvest sap for food during the summer. During the winter, they continue to excavate sap wells, but since the trees are dormant, there is very little movement of sap. Phloem, the tissue that transports sugars in plants, has been found in the gut of Yellow-bellied Sapsuckers suggesting that they consume plant tissues rich in the carbohydrate cellulose. Vertebrates, such as sapsuckers, do not produce the enzymes necessary to breakdown cellulose to release sugars that can be used for nutritional gain. Vertebrates that have diets high in cellulose are known to have symbionts such as bacteria that produce these enzymes and aid in digestion. In order to detect the presence of cellulose degrading bacteria residing in the digestive tract of sapsuckers, we have developed a screening process that can be used to detect cellulose degrading bacteria.

During the spring of 2008, a window-killed sapsucker was recovered, and we were able to use a sterile swab to collect bacteria from the sapsucker. We then used our screening method to isolate those bacteria that were producing cellulose-degrading enzymes. We are currently working to identify and characterize the bacteria.

NICHE PARTITIONING AND OVERLAP BETWEEN RED-HEADED WOODPECKERS AND RED-BELLIED WOODPECKERS DURING THE WINTER IN A BOTTOMLAND HARDWOOD FOREST

CATILIN GUSSENHOVEN and H. DAWN WILKINS
Department of Biological Sciences
University of Tennessee at Martin

The competitive exclusion principle states that no two species can have exactly the same niche. Red-headed Woodpeckers (*Melanerpes erythrocephalus*) are irruptive migrants that occasionally winter in the same forests as Red-bellied Woodpeckers (*Melanerpes carolinus*). Our goal was to determine niche breadth and niche overlap between these two species. Behavioral observations were made every 30 seconds for 15 minutes. Red-headed Woodpeckers spent most of their time vigilant and foraging, whereas, Red-bellied Woodpeckers spent most of their time communicating or hitching. Red-headed woodpeckers preferred main branches, 40 to 80 feet high,

whereas, Red-bellied Woodpeckers preferred to be on the trunk above the lowest living branches, 20 to 30 feet high. Several aggressive encounters and some niche partitioning were observed suggesting that these two species may be competing for resources during the winter. Future work will contrast Red-bellied Woodpecker niche use in the presence and absence of Red-headed Woodpeckers.

BIRD STUDY SKINS FROM SALVAGED SPECIMENS: EVIDENCE TO SUPPORT MURPHY'S LAW

T. DAVID PITTS

Department of Biological Sciences
University of Tennessee at Martin

One version of Murphy's Law states, "If something can go wrong, it probably will." Birds cannot escape the effects of Murphy's Law. The bird skin collection at the University of Tennessee at Martin (UTM) contains numerous Tennessee specimens that met accidental deaths. The species involved and the cause or location of death sometimes seem improbable. Examples include: an American White Pelican that died in a hail storm in Dyer County; a Turkey Vulture that collided with a Volkswagen windshield (Weakley County); a Red-tailed Hawk that was banded in Wisconsin 4 years before being killed by an automobile in Carroll County; an adult Goshawk that apparently collided with a tree on the Bethel College campus in McKenzie (Carroll County); a Cooper's Hawk that did not make a 90-degree turn, as did the American Robin it was pursuing, and hit a glass door in Cooper Hall on the UTM campus (Weakley County); a Sharp-shinned Hawk that died while entangled in vines at Reelfoot Lake (Obion County); a Yellow Rail that struck a UTM greenhouse (Weakley County); an American Coot that was observed falling from the sky at Martin (Weakley County) on 2 April 2006, the day deadly tornadoes hit northwest Tennessee; a Common Ground-Dove that flew into a window (Weakley County); a Whip-poor-will that entered the Martin WalMart and could not find an exit (Weakley County); and, a Short-eared Owl that was shot when it "attacked" a hunter (Obion County). Several Tennessee schools have bird skin and/or skeletal collections and would welcome specimens, especially those that provide evidence for noteworthy occurrences or unusual causes of death.

ORNITHOLOGICAL INVESTIGATIONS IN THE CONASAUGA RIVER VALLEY

MORRIS WILLIAMS

Division of Martin Methodist College

[No abstract available]

THE 2009 TENNESSEE CHRISTMAS BIRD COUNTS

RON HOFF
282 Hackworth Lane
Clinton, Tennessee 37716

The 2009 Tennessee Christmas Bird Count (CBC) season was the 66th consecutive compilation of CBC's in Tennessee, and the 79th overall (no count was reported for 1943). This year's results produced 152 species (Table 1), plus 1 more found during the count week (cw = three days before and three days after the actual count date, but not on count day). The average for the past 15 years is 152, and the all-time record is 163, in 2003. No new species were found this year, leaving the all-time species total for the Tennessee CBC compilation at 259 (plus 7 more count week only species). This season, 455 observers put in 1565 party hours and located 469,402 individuals. Eighteen species were represented by a lone individual.

The weather throughout the CBC season varied as usual. Nine counts experienced some snow, and a few other counts had some rain. Several counts also had breezy conditions that affected their counts. Temperatures ranged from a chilly 11° F at Kingsport to a pleasant 60° F at Fayette. This was one of the colder winters recently, with many areas having a cold snap that held temperatures below freezing for 9-10 straight days. In the Knoxville area, this was the coldest period in over 100 years.

Count highlights included 28 of the possible 31 species of waterfowl (missing only Surf and Black scoters and Common Merganser), Ruffed Grouse, Western Grebe, American Bittern, Little Blue Heron (first record in 16 years), Green Heron, Rough-legged Hawk, Golden Eagle, Sora, Northern Saw-whet Owl, Vermilion Flycatcher (2nd count record), Blue-gray Gnatcatcher, Wood Thrush (cw – first record since 1978), Common Yellowthroat, American Tree Sparrow, Western Meadowlark, and Red Crossbill. Notable misses for this count included Common Merganser, Osprey, Peregrine Falcon (3rd miss in the last 16 years), Black-capped Chickadee (first miss in 12 years), and Lincoln's Sparrow (first miss in 11 years and second miss in 30 years).

The following species were recorded in record or unusually high numbers for this compilation: Snow Goose, Bufflehead, Wild Turkey, Common Loon, Horned Grebe, Red-shouldered Hawk, Spotted Sandpiper, Eurasian Collared-Dove, Northern Saw-whet Owl (tie), Eastern Phoebe, Vermilion Flycatcher (tie), Tufted Titmouse, and Northern Mockingbird.

Species recorded in record or unusually low numbers for this compilation included Ruffed Grouse (lowest since 1976), Loggerhead Shrike (lowest since 1944), Common Grackle (lowest since 1970), and Pine Siskin (after 2295 last year, only 16 this year).

New record high totals for any individual CBC ever in Tennessee were as follows: Snow Goose – 46,970, Reelfoot; Bufflehead – 356, Crossville; Wild Turkey – 563, Clarksville; Common Loon – 228, Hickory Priest; Horned Grebe – 766, Franklin-Coffee County; Eurasian Collared-Dove – 515, Memphis; Northern Saw-whet Owl – 1, Nickajack; Yellow-bellied Sapsucker – 73, Knoxville; Eastern Phoebe – 52, Buffalo River; Vermilion Flycatcher – 1, Savannah; and White-breasted Nuthatch – 136, Crossville.

COUNT SUMMARIES

(FW = yard/feeder watcher)

BRISTOL (36° 35' N, 82° 06' W) – 27 December; 0730-1730. Weather: clear in the morning turning cloudy in the afternoon with winds SW 0-15 mph; 22-44° F. This count was first held in 1931. The total of 82 species found this year is very near the recent 10-yr average. The count record is 91, set in 2004. Count highlights included Blue-winged Teal, Long-tailed Duck, Eared Grebe, Herring Gull, Common Raven, Red-breasted Nuthatch, Gray Catbird, Palm Warbler, Purple Finch (cw), and Pine Siskin. Observers: Rob Biller, Ron Carrico, Ruth Clark, Carolyn and Wallace Coffey, Gary Cooper, Rack Cross, Greg Harris, Jackie Hinshaw, Don Hunter, Andrew Jones, Jennifer Kennedy, Richard Knight, Phillip Lewis, Richard Lewis (compiler: 407 V.I. Ranch Rd., Bristol, TN 37620; mountainbirds@email.com), Larry McDaniel, Tom McNeil, John Moyle, Chris O'Bryan, Charlie and Ellen Parker, Trey Slagle, and Michele Sparks.

BUFFALO RIVER (35° 18' N, 87° 28' W) – 2 January; 0630-1715. Weather: partly cloudy with snow flurries in the morning turning clear in the afternoon; winds were NW 5-15 mph; 15-28° F. Most waterfowl were absent with only 5 species recorded. Count highlights included Northern Bobwhite, American Woodcock, 14 Loggerhead Shrikes, House Wren, Gray Catbird, a pink-sided form of Dark-eyed Junco, Lapland Longspur, and Purple Finch. Species found in record high numbers included Eastern Phoebe (state record for a Tennessee CBC), Tufted Titmouse, House Wren, American Robin, Northern Mockingbird, and Dark-eyed Junco. Notable misses included Wilson's Snipe and Barn Owl. Observers: Francis and Gary Markine, Royce Neidert, Bill PULLIAM, Polly Rooker, Andrew Salhaney, Donette Sellars, Damien Simbeck (secondary compiler), Don Simbeck (compiler: 424 Riddle Ln., Loretto, TN 38469; dnks@lorettotel.net), and Jane Worn.

CADE'S COVE (35° 36' N, 83° 50' W) – 27 December; 0715-1640. Weather: partly cloudy in the morning but turning windy later in the day, with gusts from the southwest up to 30 mph; 25-45° F. This was the 11th consecutive year for this CBC. American Woodcock, Common Yellowthroat, and Brown-headed Cowbird were all new species for this count, bringing the all-time species total to 96. Other count highlights included Ruffed Grouse, Common Raven, and Pine Warbler. Record high numbers were recorded for Canada Goose, Wild Turkey, Black Vulture, Red-tailed Hawk, Eastern Phoebe, and Field Sparrow. Species appearing in record low numbers included Northern Flicker, Blue Jay, Carolina Wren, Golden-crowned and Ruby-crowned kinglets, and American Robin. Eastern Towhee was missed for the first time ever on this count. Other notable misses included Pine Siskin and Red Crossbill. Observers: Jean Alexander, Mark Armstrong, Warren Bielenburg, Paul Hartigan, Tom Howe, Susan Hoyle (compiler: P. O. Box 11752, Knoxville, TN 37939; hoyle@eecs.utk.edu), Jim Human, David Johnson, Kristine Johnson, Tony King, Karen Petrey, Martha Rudolph, and Benjamin Zank.

CHATTANOOGA (35° 06' N, 85° 14' W) – 19 December; 0500-1800. Weather: cloudy all day; 40-44° F. The species total this year (95) was below recent averages (100). No new species were found this year, leaving the all-time species count at 169. Highlights this year included Red-breasted Merganser, Virginia Rail, American Woodcock, Barn Owl, Marsh Wren, American Pipit, Orange-crowned Warbler, and 272 Rusty Black-

birds. Species usually found on this count but missed this year included Greater Scaup, Northern Bobwhite, Purple Finch, and Pine Siskin. Observers: David Aborn, Tim Baker, Harold Birch, Clyde Blum, Katherine Boyles, Kevin Calhoun (compiler: 934 Craven's Terrace, Lookout Mtn., TN 37409; kac@tennis.org), Danny Gaddy, Bill Haley, John Henderson, Daniel Jacobson, Starr Klein, Matt Lea, Sharon Lea, Barbara and Mike McMahan, Heidi Messerly, David Patterson, Susan Schott, David Spicer, Kyle Waggener, and Dan Williams.

CLARKSVILLE (36° 30' N, 87° 22' W) – 19 December; 0700-1630. Weather: cloudy all day with light rain in the morning and then light rain and light snow in the afternoon; 32-40° F. The total for Wild Turkey (563) set a new all-time high for a Tennessee CBC. Other count highlights included Northern Bobwhite, Bald Eagle, Red-breasted Nuthatch, and American Tree Sparrow. Observers: Suva Bastin, Alan Bottomlee, Kathy DeWein, Kevin Fitch, Elaine Foust, Deborah Hamilton (compiler: 290 Ardmoor Dr., Clarksville, TN 37043; ammonite@charter.net), Steve Hamilton, John and Rebecca Johansen, Gloria Milliken, Kathy Moore, Daniel Moss, Michelle Rogers, Polly Rooker, Joe Schiller, Paul Schwab, and Donald Subrink.

CLAY COUNTY (36° 30' N, 85° 22' W) – 16 December; 0500-1830. Weather: clear in the morning, turning partly cloudy in the afternoon; 25-42° F. This was the 11th consecutive year for this CBC. No new species were recorded this year, leaving the all-time species total at 104. Count highlights this year included Ruddy Duck, Bald Eagle, Wilson's Snipe, American Woodcock, Herring Gull, Red-headed Woodpecker, Horned Lark, American Pipit, Pine and Palm warblers, Lapland Longspur, Rusty Blackbird, and Purple Finch. Observers: Terry M. Campbell (compiler: 1886 New Hope Rd., Celina, TN 38551; Terry_Campbell@fws.gov), Roscanna Denton, Thomas M. Saya, Barbara H. and Stephen J. Stedman, and Winston A. Walden.

COLUMBIA (Mayfield-Gray chapter) (35° 59' N, 87° 16' W) – 19 December; 0530-1720. Weather: mostly cloudy with morning rain and winds N 5-10 mph; 38-42° F. Count highlights included Ruddy Duck, Loggerhead Shrike, Horned Lark, American Pipit, Fox Sparrow, Rusty Blackbird, and Purple Finch. Observers: Phyllis Coble, Tommy Edwards (compiler: 896 Iron Bridge Rd., Columbia, TN 38401; Tommy.Edwards@state.tn.us), William Jernigan, Allyn Lay, and Bill Pulliam.

COOKEVILLE (36° 09' N, 85° 28' W) – 19 December; 0515-1635. Weather: overcast with drizzle and some rain all day; winds NW, 0-5 mph; 35-42° F. This was the 48th Cookeville CBC. Mute Swan, Double-crested Cormorant, and Wood Thrush (cw) were recorded for the first time ever for this CBC this year, which increases the all-time total species to 135. The 91 species found on this year's count tied the all-time high total for this CBC (set last year). The Virginia Rail represented the first Christmas season record ever for the upper Cumberland region. Totals for Red-breasted Merganser, American Woodcock, Tufted Titmouse, and Northern Cardinal were record high numbers for this count. Totals for Mute Swan (tie), Mallard, and Wild Turkey represented record high counts for this count and Putnam County. Other notable observations included Herring Gull, Loggerhead Shrike, Red-breasted Nuthatch, and Palm Warbler. White-crowned Sparrow and Brown-headed Cowbird were missed this year. Observers: Wally

Brines, David Chaffin, Daniel L. Combs, Douglas A. Downs, Betty Doyle (FW), Janie C. Finch (FW), Michael J. Hawkins, Linda Henderson, Nancy S. Layzer, Edmund K. LeGrand, Handley "Ozzie" Oswald (FW), Thomas M. Saya, Richard W. Simmers, Jr., Barbara H. Stedman, Stephen J. Stedman (compiler: 2675 Lakeland Dr., Cookeville, TN 38506; sstedman@nttech.ed), Winston A. Walden, and Carol D. Williams.

CROSS CREEKS N. W. R. (36° 28' N, 87° 45' W) – 30 December; 0630-1430. Weather: cloudy all day; 33-45° F. Count highlights included Tundra Swan, Rough-legged Hawk, and Fox Sparrow. Observers: Joe Casey, Melodie Cunningham, Blake Hunt, Madge Lawrence, Joyce North, Gary T. and Susan Rice, Peter Shen, Katie Sylvis, and Sarah Welker (compiler: P.O. Box 485, Dover, TN 37058; swelk50@yahoo.com).

CROSSVILLE (38° 86' N, 85° 02' W) – 23 December; 0430-1705. Weather: partly cloudy in the morning, turning mostly cloudy later with winds SE 0-13 mph; 36-50° F. This was the 4th Crossville CBC, which covers the southern part of Cumberland County. Numerous count highlights this year included Redhead, Western Grebe, American Woodcock, Herring Gull (cw), Loggerhead Shrike, Red-breasted Nuthatch, House Wren, Blue-gray Gnatcatcher, Pine and Palm warblers, and Rusty Blackbird. The totals for Bufflehead and White-breasted Nuthatch were new all-time highs for a Tennessee CBC. Other species found in record high numbers for this count included Hooded Merganser and Pine Warbler. Species found in record low numbers for this count included Turkey Vulture and Red-headed Woodpecker. Main misses included Sharp-shinned Hawk (cw only), Great Horned Owl, and Brown-headed Cowbird. Observers: J. D. Becker, Nan E. Beesley, Douglas A. Downs, Michael J. Hawkins, Edmund K. LeGrand (compiler: 1631 Leffle Webb Rd., Crossville, TN 38572; elegrand@frontiernet.net), Harry E. LeGrand, Jr., Warren Massey, Joseph E. Mast, Michael P. O'Rourke, DJ Stanley, Barbara H. and Stephen J. Stedman, David Vogt, Winston A. Walden, and Carol D. Williams.

DeKALB COUNTY (36° 00' N, 85° 49' W) – 26 December; 0630-1700. Weather: cloudy in the morning with some light snow, turning clear in the afternoon with some light snow; 28-48° F. Count highlights included Green-winged Teal, Northern Bobwhite, Wilson's Snipe, Loggerhead Shrike, Fox Sparrow, and Purple Finch. Observers: Danny Bryan, Richard Connors, Judy C. Fuson, Michael Hawkins, Mary Hayes, Stephen J. Stedman, Winston A. Walden, and Carol D. Williams (compiler: 3909 Cookeville Highway, Smithville, TN 37166; cdenson@dtccom.net).

ELIZABETHTON (36° 20' N, 82° 08' W) – 1 January; 0530-1700. Weather: cloudy with 1-2" snow in the morning, turning partly cloudy in the afternoon with winds NW 5-20 mph; many mountain roads were inaccessible; 17-25° F. This was the 67th consecutive Elizabethton CBC. The total of 70 species was slightly below the past 20-yr average of 71.3. The all-time high count for this CBC was 79 (1995 & 2001). Eurasian Collared-Dove was found for the first time ever on this CBC. Other highlights included Bald Eagle, Northern Harrier (6th count record), Red-headed Woodpecker, American Pipit (3rd count record), Chipping and Fox sparrows, and Pine Siskin. Other notable statistics included: Canada Goose (1 shy of all-time record), Great Blue Heron (lowest in 20 years), Cooper's Hawk (first miss since 1988), Killdeer (has declined recently on this count), Ring-billed Gull (lowest since 1998), Rock Pigeon (record high), Blue Jay

(lowest since 1999), American Crow (highest since 1995), Brown Creeper (missed this year), Field Sparrow (ties lowest since 1996), and Dark-eyed Junco (most since 1993). Observers: Jim Anderson, Clyde Bacon (FW), Jerry Bevins, Rob Biller, Gilbert Derouen, Glen Eller, Jackie Hinshaw, Jennifer Kennedy, Rick Knight (compiler: 804 N. Hills Dr., Johnson City, TN 37604; rknight8@earthlink.net), Roy Knispel, Joe McGuinness, Tom McNeil, Charles Moore, Eric and Kathy Noblet, Brookie and Jean Potter, Michele Sparks, Bryan Stevens, Kim Stroud, and David Thometz.

FAYETTE (35° 06' N, 90° 35' W) – 18 December; 0645-1630. Weather: Partly cloudy to clear; 40-60° F. Count highlights included Bald Eagle, both Harlan's and Krider's subspecies of Red-tailed Hawk, American Woodcock, Barn Owl, Blue-headed Vireo, Sedge Wren, Pine Warbler, and Vesper Sparrow. Observers: Lillian Durand, Kate Gooch (compiler: 2900 Garden Ln., Memphis, TN 38111; goochpb@att.net), Van Harris, Jim Johnson, Susan McWhirter, Dick Preston, Agnes Stark, Allan Trently, Martha Waldron, and Dick Whittington.

FENTRESS/MORGAN COUNTIES – 29 December; 0515-1700. Weather: partly cloudy to start, then turning clear with winds 0-7.5 mph; 25-37° F. This count was a non-annual BirdBlitz and not an official Audubon CBC, but the count followed the normal CBC format and guidelines. The area covered was southern Fentress County and western Morgan County. A Virginia Rail, found in a wet meadow east of the town of Clarkrange, represented the first winter record ever for the Upper Cumberland Region. Other count highlights included a "Krider's" form of Red-tailed Hawk, Sandhill Crane, Horned Lark, American Pipit, and Fox Sparrow. Observers: Judy C. Fuson, Michael J. Hawkins, Edmund K. LeGrand, Stephen J. Stedman (compiler: 2675 Lakeland Dr., Cookeville, TN 38506; sstedman@mttech.edu), and Winston A. Walden.

FRANKLIN/COFFEE COUNTIES (Highland Rim) (35° 18' N, 86° 3' W) – 21 December; 0430-1515. Weather: clear all day; 20-50° F. Count highlights included Greater White-fronted Goose, Redhead, Greater Scaup, Red-breasted Merganser, Spotted Sandpiper, Least Sandpiper, American Woodcock, Loggerhead Shrike, Red-breasted Nuthatch, and Purple Finch. The total for Horned Grebe was a new all-time high for a Tennessee CBC. Record low numbers were recorded for Red-winged Blackbird, Common Grackle, and Brown-headed Cowbird. Observers: Dwain and Joyce Adams, Larry Bowers, Tom Burleson, Tom Burleson, Jr., Don Davidson, Janet Hill, John Lamb, Ruth Luckado, LouAnn Partington (compiler: 92 Maple Ave., Tullahoma, TN 37388; louannpartington@yahoo.com), Jim Pierce, Dale Swant, and George Wyckoff.

GREAT SMOKY MOUNTAINS N. P. (35° 43' N, 83° 29' W) – 20 December; 0900-1645. Weather: cloudy all day with some light snow in the morning; 33-36° F. Some of the higher elevation areas were impassable because of snow. Count highlights included Wood Duck, Cooper's Hawk, Hairy Woodpecker, and Pine Siskin. Observers: Robert Gofreed, Susan Hoyle, Kristine Johnson, Tony King, Jerry Ledbetter, Denise Nauman, Mike Nelson, Martha Rudolph, Jay Singer, and Keith Watson. Non-participating compiler was David Trently: 1029 Morrow Dr., Knoxville, TN 37923; dtrently@utk.edu.

GREENEVILLE (36° 10' N, 82° 51' W) – 19 December; 0700-2100. Weather: overcast with snow flurries all day; winds calm in the morning and 0-5 mph in the afternoon; 31-34° F. Count highlights included Little Blue Heron, Rufous Hummingbird, Red-breasted Nuthatch, Purple Finch, Red Crossbill, and Pine Siskin. Observers: Mark and Phine Britton, Jim Holt (compiler: 311 Colonial Circle, Greeneville, TN 37745; jimboh@comcast.net), Nata Jackson, Don Miller, and JoAnn and Larry Routledge.

HICKORY-PRIEST (36° 12' N, 86° 40' W) – 1 January; 0500-1715. Weather: partly clear in the morning, then turning partly cloudy in the afternoon; 22-37° F. Count highlights this year included Snow Goose, 228 Common Loons (highest ever total for a Tennessee CBC), Merlin, American Woodcock, House Wren, Pine Warbler, and Rusty Blackbird. Record high numbers for this count (in addition to the Common Loon) were tallied for Bald Eagle, Wilson's Snipe, Eastern Screech-Owl, Eastern Phoebe, Eastern Bluebird, Northern Mockingbird, Brown Thrasher, and Eastern Towhee. Observers: Richard Connors, Jerry Drewry, Karl Erisman, Richard and Tarcila Fox, Mark Hackney, John Noel, Ken Oeser, Sarah Scott, Jan Shaw, Wanda Shotwell, Chris Sloan (compiler: 512 Old Hickory Blvd., Apt. 1203, Nashville, TN 37209; chris.sloan@comcast.net), Scott Somershoe, Joe Stone, Sabin Thompson, and Melinda Welton.

HIWASSEE (35° 22' N, 84° 54' W) – 1 January; 0500-1800. Weather: clear in the morning, turning partly cloudy in the afternoon; 36-41° F. Participation this year was below normal, likely resulting in below normal total species for this count, which averages about 99. Count highlights included Snow Goose, Cackling Goose, American Bittern, Great Egret, 26 Bald Eagles, Merlin, over 10,000 Sandhill Cranes, Vesper Sparrow, and Purple Finch. Notable misses this year included Northern Pintail, Northern Shoveler, Lesser Scaup, Herring Gull, Pine Warbler, Palm Warbler, and White-crowned Sparrow. Observers: David Aborn, Neslon Bennett, Harold Birch, Clyde Blum, Kevin Calhoon (compiler: 1185 Mountain Creek Rd., Apt. 715, Chattanooga, TN 37045; kac@tennis.org), Jon Dever, Danny Gaddy, William Haley, Starr Klein, Susan Schott, Jimmy Wilkerson, and Libby Wolfe.

JACKSON (35.6167° N, 88.8167° W) – 2 January; 0700-1730. Weather: partly cloudy all day with winds NW 10-20 mph; 18-31° F. The all-time species total for this count stands at 118. Count highlights included Redhead, Horned Lark, Red-breasted Nuthatch, House Wren, Pine Warbler, and Rusty & Brewer's blackbirds. All-time high totals for this CBC were recorded for Rock Pigeon, Eurasian Collared-Dove, Yellow-bellied Sapsucker, Brown Creeper, Eastern Towhee, Chipping Sparrow, Savannah Sparrow, Song Sparrow, and White-throated Sparrow. Observers: Charlie and Elizabeth Barnett, Bob Ford, Mark Greene (compiler: 194 Mount Orange Road, Trenton, TN 38382; greensnake@yahoo.com), Rick Light, Michael Todd, and Allan Trently.

KINGSPOUR – 3 January; 0645-1730. Weather: clear to partly cloudy with winds W 0-15 mph; 11-25° F. Cold temperatures and wind contributed to significantly lower than normal bird numbers and observer participation, as did high water levels on the Holston River. Count highlights included Redhead, Black-crowned

Night-Heron, Virginia Rail, Spotted Sandpiper, Herring Gull, Brown Thrasher, Fox Sparrow, and Purple Finch. Observers: Rob Biller, Gary Cooper, Glen Eller, William Grigsby (compiler: 1405 Brightridge Rd., Kingsport, TN 37664; wgrigs@gmail.com), Tom Hunter, Rick Knight, Roy Knispel, Tom McNeill, John Moyle, Rick Phillips, Mike Sanders, Michele Sparks, David Taylor, Debbie Taylor (FW), Lisa Tyler, and Sybil Williams (FW).

KNOXVILLE (35° 55' N, 84° 05' W) – 2 January; 0620-1800. Weather: partly cloudy and cold with snow flurries; winds NE 0-10 mph; 21-27° F. The 92 species found this year was about the average for the past 10 years, but below the last 2 years when the species count hit 100 or more. The number of participants set a new high this year. The compiler stated that observers found most of the expected species but turned up no rarities. Count highlights included Redhead, Common Goldeneye, Great Egret, 5 Bald Eagles, Sandhill Crane, American Woodcock, Herring Gull (cw), Red-breasted Nuthatch, House Wren, Pine and Palm warblers, and Purple Finch. Record high numbers were recorded for Canada Goose, Mallard, Northern Pintail (tie), Great Egret (tie), Black Vulture, Bald Eagle, Barred Owl, Red-bellied Woodpecker, Yellow-bellied Sapsucker (also a new state record for a Tennessee CBC), Eastern Phoebe, Tufted Titmouse, Hermit Thrush, and Pine Warbler. Notable misses included Common Loon, Northern Bobwhite (disappearing from this count, being found only five times in the past 20 years and twice in the past 10), Northern Harrier, Red-headed Woodpecker, Loggerhead Shrike (only one territory known in the count circle but three different parties missed it this year), no hummingbirds found this year for the 5th time since the first hummingbird (an Allen's) was found 14 years ago, Fish Crow (after being found the previous 3 years), Rusty Blackbird (only four times in the past 10 years), and Pine Siskin. Observers: Stacy and Steve Adair, Jean Alexander, Mark Armstrong, Lyn Bales, Deedee Blaine, Gail and Steve Clendenen, K. Dean Edwards (compiler: 1615 Meadow Chase Lane, Knoxville, TN 37931; kde@utk.edu), Charles and Lola Estes, Patty Ford, Reid Gerhardt, Carole Gobert, Paul Hartigan, Angela Hoffman, Tom Howe, Susan Hoyle, Jim Human, Daniel Jenkins, David Johnson, Tony King, Jerry Ledbetter, Ed LeGrand, Ed Manous, Seth McChonchie, Janet Lee McKnight, Frederick Miller, Chuck Nicholson, Mark Reeves, Jo and Kelly Roy, Martha Rudolph, Michael Ryan, Gerri Sellers, Carolyn Snow, Phil Snow, David Trently, Merikay Waldvogel, Stephanie Wayland, June Welch, Chris and Deb Welsh, and Corwin Witt.

LEBANON (36° 25' N, 86° 36' W) – 26 December; 0700-1630. Weather: cloudy early, then clearing up later; 27-45° F. This count is run according to Audubon format and guidelines, but it is not an official Audubon CBC. Boxwell Reserve and Gallatin Steam Plant areas were closed this year. Count highlights included Eurasian Collared-Dove and Red-headed Woodpecker. Observers: Kay Brinkhurst, Ralph Brinkhurst (compiler: 3570 Cainsville Rd., Lebanon, TN 37090; ralphbrinkhurst@att.net), Jane Farris, Mildred Gaston, Marilyn and Wayne King, and Dean and Jerry Walker.

MEMPHIS (35° 09' N, 89° 56' W) – 20 December; 0630-1730. Weather: cloudy all day; 31-35° F. This year's count highlights included Cackling Goose, Greater Scaup, Bald Eagle, Rough-legged Hawk, Spotted Sandpiper, Herring Gull, Blue-headed Vireo, House Wren, American Pipit, Orange-crowned & Pine warblers, and Purple

Finch. The total for Eurasian Collared-Dove was a new all-time high for a Tennessee CBC. Observers: Carolyn Bullock, Gary and Susan Davis, Jim Demere, Gregg Elliott, Jim and Sue Ferguson, Van Harris, Robert Iardi, Margaret Jefferson (compiler: 349 Hawthorne Ave., Memphis, TN 38112; mjefferson100@hotmail.com), Lisa Jorgensen, Keith Kunkel, Jo Levy (FW), George and Jeanne Payne, Dick Preston, Ernest Restivo, Virginia Reynolds, Edwin Thomas, Allan Trently, Martha Waldron, Jay Walko, Anthony Whitted, and Barbara Wilson.

NASHVILLE (36° 03' N, 86° 56' W) – 20 December; 0500-1600; 1630-1730. Weather: cloudy in the morning turning partly cloudy in the afternoon with winds SW 5-10 mph; 33-41° F. The species total was the same as last year, but both were lower than in previous years. Highlights included Greater White-fronted Goose, Green Heron, Bald Eagle, Red-headed Woodpecker, Fox Sparrow, and Purple Finch. Record high totals for this CBC were tallied for Black Vulture, Eastern Phoebe, Eastern Bluebird, Northern Mockingbird, and Chipping Sparrow. Observers: Sandy Bivens, Scott Block, Susan and Trae Bradfield, David and Jean Buchanan, Ed Byrne, Margaret Cameron, Richard Connors, Francis Fekel, Tarcila Fox, John Froeschauer, Ed Gleaves, Susan Hollyday, Margaret Howell, Linda Kelly, Tony Lance, Brendan Lanpher, Jill Neblett, Matthew Palmeri, Amy Potter, Ed and Rachel Schneider, Sarah Scott, Jan Shaw (compiler: 5019 Timberhill Dr., Nashville, TN 37211; JanKShaw@aol.com), Kathy Shaw, Sheila Shay, Danny Shelton, Dee Thompson, Rita Venable, and Linn Ann Welch.

NICKAJACK LAKE (35° 04' N, 85° 31' W) – 26 December; 0515-1700. Weather: partly cloudy all day; 24-43° F. A Eurasian Collared-Dove was a new species for this CBC. Other count highlights included Bald Eagle, Golden Eagle, American Woodcock, Northern Saw-whet Owl (ties the all-time high total for a Tennessee CBC), Gray Catbird, and Pine Warbler. Notable misses included American Black Duck, Loggerhead Shrike, House Wren, and Orange-crowned Warbler. Record high numbers for this CBC were recorded for Canvasback and Ring-billed Gull. The count compiler also noted that kinglet numbers were down and starling numbers were up compared to previous years. Observers: Nelson Bennett, Harold Birch, Clyde Blum, Katherine Boyles, Danny Gaddy, John Henderson, Star Klein, Tommie Rogers, David Spicer (compiler: 9446 Cheri Beth Circle, Ooltewah, TN 37363; dspicer@chattanooga.net), Jonathan Spicer, and Cynthia and Jimmy Wilkerson.

NORRIS (36° 13' N, 84° 05' W) – 19 December, 2009; no times given. Weather: no weather data submitted. Count highlights included Red-breasted Merganser, Bald Eagle, Brown-headed Nuthatch, and Fox Sparrow. Notable misses included American Coot and Purple Finch. Observers: Carole Gobert, Susan Hoyle, Tony King, Jerry Ledbetter, Ed Manous, Denise Nauman, Charles Nicholson (compiler: P. O. Box 402, Norris, TN 37828; cpnichol@bellsouth.net), Frances Oates, Martha Rudolph, and Merikay Waldvogel.

REELFOOT LAKE (36.4167° N, 89.3833° W) – 19 December; 0615-1730. Weather: partly cloudy with light rain in the morning, turning partly cloudy in the afternoon; winds were NW 10-20 mph; 27-40° F. White-winged Scoter was a new count day species for this count (previously only recorded as a count week species). Other count

highlights included Ross's Goose, Redhead, Greater Scaup, Red-breasted Merganser, American White Pelican, Merlin, Lesser Yellowlegs, Least Sandpiper, Barn & Short-eared owls, Fish Crow, Red-breasted Nuthatch, House Wren, Palm Warbler, American Tree Sparrow (cw), Vesper Sparrow, LeConte's Sparrow, Western Meadowlark, and Brewer's Blackbird. Record high totals were tallied for Snow Goose (also a new state record for a Tennessee CBC), Wild Turkey, and Barn Owl (tie). Observers: Jerry Drewry, Bob Foehring, Mark Greene (compiler: 194 Mt. Orange Rd., Trenton, TN 38382; magrcene@usit.net), Joe Guinn, Gail King, Nancy Moore, John Noel, Chris Sloan, Joe Stone, Sabin Thompson, Michael Todd, Allan Trently, Donna Ward, Melinda Welton, and Jeff Wilson.

ROAN MOUNTAIN (36° 06' N, 82° 07' W) – 30 December; 0645-1630. Weather: cloudy all day with 2-8" snow cover; winds were light and variable; 27-41° F. This was the 57th time in 59 years this count was conducted. This count was weathered out in 1959, 1961, and 1972, and this year it was held later than usual after being weathered out by heavy snow earlier. The species count this year was slightly higher than the recent 20-yr average of 45.2. The all-time high species total for this CBC is 55 (in 1987). Highlights this year included American Black Duck, Wild Turkey (5th record), Red-shouldered Hawk (3rd record and highest ever count), Red-tailed Hawk (record high count), Red-bellied Woodpecker (unusual at this elevation), Ruby-crowned Kinglet (8th record), Chipping Sparrow (2nd record), and Purple Finch (first record since 1999). Observers: Jim Anderson, Rob Biller, Rick Knight (compiler: 804 N. Hills Dr., Johnson City, TN 37604; rknight8@earthlink.net), Roy Knispel, Mandy, Nico, and Bryan Lorch, Tom McNeil, and Michele Sparks.

SAVANNAH (35° 08' N, 88° 09' W) – 30 December; 0415-1745. Weather: clear all day with winds NE 5-15 mph; 19-42° F. Count highlights this year included Merlin, Virginia Rail, Sora, Least Sandpiper, American Woodcock, Short-eared Owl, Vermilion Flycatcher (2nd record ever for a TN CBC and ties all-time high total for a Tennessee CBC), Blue-headed Vireo, Sedge Wren, Palm Warbler, 17 Vesper Sparrows, LeConte's Sparrow, Brewer's Blackbird, Purple Finch, and Pine Siskin. Record high totals were tallied for Northern Shoveler, Pied-billed Grebe, Virginia Rail, Wilson's Snipe, Herring Gull, Red-bellied Woodpecker, Yellow-bellied Sapsucker, Eastern Phoebe, Blue Jay, Winter Wren, and Hermit Thrush. Record low numbers were tallied for Red-winged Blackbird. Notable misses included Northern Bobwhite, Loggerhead Shrike, Fish Crow (probably present but not vocal), House and Marsh wrens, White-crowned Sparrow, and Lapland Longspur. Observers: Dwight Cooley, Jeff Garner, Marcus Johnson, Francis and Gary Markine, R. J. Moore, Jack Paul, Bill Pulliam, John Ross, Andrew Salhaney, Floyd Sherrad, Damien Simbeck (compiler: 4905 County Rd. 33, Killen, AL 35645; tnbarredowl@aol.com), Andrew Suddith, and Shirley Wayland.

SHADY VALLEY – MOUNTAIN CITY (36° 30' N, 81° 51' W) – 1 January; 0600-1700. Weather: cloudy all day with some light snow in the morning; 24-37° F. This year's total of 62 species was a bit above the past 10-yr average of 60.4 and a bit below the all-time record count of 66 in 2000. This was the 13th year for this count,

and a record 21 observers participated. Count highlights included Northern Pintail, Hooded Merganser, 2 Virginia Rails, Wilson's Snipe, Common Raven, Marsh Wren, Fox Sparrow, Rusty Blackbird, and Brown-headed Cowbird (unusual on this count). Species appearing in all-time high numbers for this count were Red-shouldered Hawk, Red-tailed Hawk, Common Raven, Hermit Thrush, and Yellow-rumped Warbler. Species appearing in all-time low numbers included Hairy Woodpecker and Brown Creeper. Observers: Robert Biller (compiler: 1500 Bell Ridge Rd., Apt. 5, Johnson City, TN 37601; rbiller@charter.net), Ron Carrico, Carolyn and Wallace Coffey, Gary Cooper, Tom Hunter, Andy Jones, Jennifer Kennedy, Rick Knight, Roy Knispel, Don Leech, Michelle Leighty, Thomas McNeil, Chris O'Bryan, Joe Ortola, Ellen Parker, Mike Sanders, John Shumate, Michele Sparks, Lisa Tyler, and Michele Villeneuve.

WARREN COUNTY (35° 40' N, 85° 46' W) – 4 January. Weather: cloudy with light snow in the morning turning partly cloudy with light snow in the afternoon; 13-22° F. Highlights included Snow Goose, Horned Lark, and Fox Sparrow. Observers: Gregg Garrison (compiler: 225 Cadillac Lane, McMinnville, TN 37110; ggarrison@mccc.edu), Michael Hawkins, Judy C. Fuson, Nancy S. Layzer, Michael P. O'Rourke, and Winston Walden.

WHITE COUNTY (35° 91' N, 85° 60' W) – 21 December; 0500-1745. Weather: local fog in the morning, turning partly cloudy in the afternoon; winds were 0-10 mph; 27-51° F. This is the 6th year for this count. No new species were found this year, leaving the all-time total species at 96. Count highlights included Ruddy Duck, Northern Bobwhite, Merlin, American Woodcock, Loggerhead Shrike, Blue-headed Vireo, Red-breasted Nuthatch, House Wren, Pine and Palm warblers, and Purple Finch. Record high totals for this CBC were recorded for Canada Goose, Northern Shoveler, Green-winged Teal, Hooded Merganser, Wild Turkey, Red-shouldered Hawk, Killdeer, Eurasian Collared-Dove, Mourning Dove, Red-headed Woodpecker, Downy Woodpecker, Northern Flicker, Pileated Woodpecker, Eastern Phoebe, Loggerhead Shrike, Blue Jay, American Crow, Tufted Titmouse, Golden-crowned Kinglet, Ruby-crowned Kinglet, American Pipit, Rusty Blackbird, American Goldfinch, and House Sparrow. Observers: Diane and George Bartold, Douglas Downs (compiler: 403 Gillen Dr., Sparta, TN 38583; douglas_downs@hotmail.com), Judy C. Fuson, Michael J. Hawkins, Nancy S. Layzer, Edmund K. LeGrand, Michael P. O'Rourke, Scott Somershoe, Barbara H. and Stephen J. Stedman, Winston A. Walden, and Carol D. Williams.

Corrigenda:

1. The all-time high count ever for a Tennessee CBC for Belted Kingfisher (142) has been found to be in error. The new high count is now 66, found on the Hiwassee Count in 1999.

2. The all-time high count ever for a Tennessee CBC for Pileated Woodpecker (112) has also been found to be in error. The new high count is now 60, found on the Reelfoot count in 1982.

Species	Bristol	Buff Riv	CadeCv	Chatt	Clarksvl	Clay Co	Columb	Cook	CrsCrk	Crsville	DeKalb	Eliz	Fay	Fent/Morg
Green Heron	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Black-cr. Night-Heron	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Black Vulture	76	50	43	16	141	147	138	70	67	-	100	-	62	1
Turkey Vulture	133	56	69	15	107	296	5	101	62	1	49	4	129	5
Bald Eagle	1	-	-	4	1	2	-	-	13	1	4	3	1	-
Northern Harrier	-	7	3	-	cw	-	1	2	2	4	1	1	8	3
Sharp-shinned Hawk	1	2	-	6	2	3	2	2	4	cw	2	1	-	2
Cooper's Hawk	7	1	2	8	4	3	2	6	1	2	4	cw	-	2
<i>Accipiter sp.</i>	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Red-shouldered Hawk	2	5	8	13	4	16	2	14	10	17	1	-	16	12
Red-tailed Hawk	21	28	9	16	22	24	29	26	29	17	33	12	17	13
Rough-legged Hawk	-	-	-	-	-	-	-	-	1	-	-	-	-	-
<i>Buteo sp.</i>	-	-	-	-	1	-	-	1	-	-	-	-	-	-
Golden Eagle	-	-	-	-	-	-	-	-	-	-	-	-	-	-
American Kestrel	18	44	1	6	12	30	24	46	5	40	28	14	6	28
Merlin	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Virginia Rail	-	-	-	4	-	-	-	-	-	-	-	-	-	1
Sora	-	-	-	-	-	-	-	-	-	-	-	-	-	-
American Coot	51	1	-	336	-	1	-	58	8	957	222	2	-	-
Sandhill Crane	-	-	-	236	-	715	-	246	-	7	-	-	-	2
Killdeer	14	113	14	38	2	51	71	99	27	165	171	3	101	7
Spotted Sandpiper	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lesser Yellowlegs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Least Sandpiper	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peep sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wilson's Snipe	3	-	-	3	1	1	5	2	-	15	1	-	-	-
American Woodcock	-	2	1	5	-	1	-	4	-	3	-	-	1	-
Bonaparte's Gull	1	-	-	831	-	114	-	-	-	8	6	-	-	-
Ring-billed Gull	309	-	-	860	19	179	-	1	155	47	79	1	-	-
Herring Gull	2	-	-	1	-	2	-	1	-	cw	-	-	-	-
Gull sp.	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Rock Pigeon	563	38	40	268	385	81	458	204	-	9	34	649	36	58
Euras. Collared-Dove	-	1	-	14	-	2	16	3	-	-	27	4	-	-
Mourning Dove	208	245	48	239	269	133	69	540	107	343	260	225	299	254
Barr Owl	-	-	-	1	-	-	-	-	-	-	-	-	1	-
Eastern Screech-Owl	4	3	-	1	-	5	7	6	1	13	3	2	4	4
Great Horned Owl	-	3	-	6	-	1	3	8	-	-	2	2	-	-
Barred Owl	-	3	-	-	-	2	4	2	2	3	2	1	2	-
Short-eared Owl	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N. Saw-whet Owl	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rufous Hummingbird	1	-	-	2	-	-	-	-	-	-	-	-	-	-
<i>Selasphorus sp.</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belted Kingfisher	14	6	3	28	14	6	3	11	10	9	8	9	2	2
Red-head Woodpecker	-	11	-	16	2	2	5	6	4	3	7	1	37	2
Red-bell. Woodpecker	27	77	11	43	95	51	43	66	47	76	59	26	66	34
Yellow-bell. Sapsucker	3	19	7	17	21	23	12	15	5	8	20	10	19	6
Downy Woodpecker	33	33	19	49	47	34	25	42	23	45	28	20	41	21
Hairy Woodpecker	4	9	6	5	4	6	4	8	7	18	16	5	-	5

Frnk/Cof	GSMNP	Green	Hck-Prst	Hiwas	Jacksn	Kngspt	Knox	Leb	Mem	Nash	Nick	Norris	Reel	Roan	Savh	ShVI	Warr	White	Totals
-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
-	-	-	11	-	-	4	11	-	-	-	-	-	-	-	-	-	-	-	27
121	-	16	165	40	29	86	127	74	-	372	32	139	cw	-	15	29	34	405	2595
115	2	6	4	24	45	47	62	2	4	8	9	18	cw	-	66	17	38	71	1570
1	-	-	5	26	-	3	5	-	3	2	4	1	94	-	11	-	-	2	187
5	-	-	1	-	1	-	-	-	-	1	-	-	20	-	26	1	2	4	93
1	-	1	9	4	-	-	2	-	2	1	3	-	5	-	2	-	-	2	59
2	1	3	7	3	1	4	2	-	8	12	4	1	2	1	1	4	3	4	105
-	1	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	4
4	-	-	9	6	6	2	6	-	21	2	14	8	8	4	9	5	5	16	245
31	7	2	26	20	18	25	43	6	59	42	25	5	48	13	48	18	13	45	790
-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	2
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
51	1	6	10	7	7	15	14	7	19	19	20	2	25	-	11	15	31	69	631
cw	-	-	2	1	-	-	-	-	-	-	-	-	1	-	1	-	-	1	6
-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	3	2	-	-	11
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
149	-	-	246	19	2	56	68	-	26	1	6871	-	143	-	2057	-	-	-	11274
1202	-	-	-	10248	-	-	18	-	-	-	127	-	-	-	-	-	-	146	12947
202	22	-	55	518	334	89	133	-	205	49	42	20	88	-	767	1	24	165	3590
1	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	3
-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	2
9	-	-	-	-	-	-	-	-	350	-	-	-	1	-	13	-	-	-	373
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2
-	-	-	14	3	14	1	8	-	32	-	-	-	48	-	142	3	-	1	297
3	-	-	5	2	-	-	1	-	-	-	4	-	4	-	4	-	-	1	41
154	-	-	61	25	-	20	131	-	-	-	58	65	700	-	31	-	-	1	2206
371	-	-	3975	681	3	640	1893	33	843	40	2991	81	10806	-	857	-	-	3	24867
3	-	-	6	-	-	1	cw	-	2	-	4	-	4	-	65	-	-	-	91
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
14	225	348	250	65	886	268	401	50	638	148	116	110	147	-	89	22	101	186	6887
-	-	-	-	-	22	-	-	6	515	4	1	-	11	-	15	-	-	36	677
189	103	142	86	181	239	121	319	24	618	151	85	131	96	3	283	148	127	853	7138
1	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	4
-	-	1	14	-	-	3	1	-	1	2	5	-	2	-	2	2	3	5	91
1	-	2	4	3	1	1	2	-	2	6	5	1	6	2	4	-	2	8	75
1	-	-	6	3	2	-	4	-	6	3	1	-	4	1	3	-	3	3	61
-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	2	-	-	-	8
-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
7	2	-	14	20	5	10	35	4	8	18	18	2	7	4	21	6	3	13	322
5	-	-	-	19	1	1	-	3	3	3	6	-	3	-	56	-	-	11	207
33	3	16	31	48	34	35	151	6	127	94	40	41	29	1	108	6	28	94	1646
8	6	-	19	13	7	9	73	1	29	38	25	15	18	1	41	2	7	31	528
19	7	5	30	22	18	38	70	6	52	70	16	14	31	8	34	13	10	58	981
2	1	1	6	3	5	1	15	-	11	5	3	2	7	4	4	1	1	8	177

Species	Bristol	Buff Riv	CadeCv	Chatt	Clarksvl	Clay Co	Columb	Cook	CrsCrk	Crssvllie	DeKalb	Eliz	Fay	Fent/Morg
Northern Flicker	22	25	2	49	29	16	19	68	29	54	26	38	70	16
Pileated Woodpecker	9	20	19	9	14	32	10	24	17	37	20	11	6	7
Eastern Phoebe	12	52	20	9	8	26	9	16	6	19	11	4	18	16
Vermilion Flycatcher	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loggerhead Shrike	-	14	-	-	-	-	1	1	-	-	2	-	-	-
Blue-headed Vireo	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Blue Jay	92	405	9	232	235	253	122	463	149	256	237	68	229	90
American Crow	768	393	154	611	229	431	99	631	406	557	346	750	274	320
Fish Crow	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common Raven	5	-	1	-	-	-	-	-	-	-	-	3	-	-
Horned Lark	-	58	-	-	-	7	13	-	-	57	80	-	-	2
Carolina Chickadee	103	56	96	168	150	103	47	94	39	267	113	96	62	65
Tufted Titmouse	77	322	54	173	156	132	52	248	89	263	122	62	61	104
Red-breasted Nuthatch	1	cw	7	-	1	2	-	3	-	4	-	1	-	4
White-breast. Nuthatch	57	49	41	23	38	64	16	62	18	136	51	24	14	51
Brown-head. Nuthatch	-	-	-	31	-	-	-	8	-	-	-	-	-	-
Brown Creeper	2	9	2	2	7	8	4	5	5	12	2	-	2	8
Carolina Wren	88	106	27	99	136	115	88	151	41	108	98	60	46	41
House Wren	-	2	-	-	-	-	-	-	-	1	-	-	-	-
Winter Wren	4	13	17	3	4	5	15	8	3	15	11	2	8	6
Sedge Wren	-	-	-	-	-	-	-	-	-	-	-	-	3	-
Marsh Wren	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Golden-cr. Kinglet	72	14	31	31	7	28	14	21	1	102	27	27	24	28
Ruby-crowned Kinglet	10	8	3	75	6	11	12	13	7	17	19	5	26	1
Blue-gray Gnatcatcher	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Eastern Bluebird	196	430	95	112	180	303	107	400	52	338	220	148	172	154
Hermit Thrush	4	32	12	24	1	32	5	17	3	46	25	10	12	13
Wood Thrush	-	-	-	-	-	-	-	cw	-	-	-	-	-	-
American Robin	35	1714	2	874	42	222	419	194	1	431	196	19	79	176
Gray Catbird	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Northern Mockingbird	70	166	2	70	121	60	57	152	25	79	69	49	49	21
Brown Thrasher	-	11	-	10	1	6	-	14	2	10	-	-	13	3
European Starling	923	2417	102	775	2100	1444	1809	4314	525	2147	5986	1788	1025	1747
American Pipit	-	41	-	2	-	1	16	50	-	23	-	1	100	6
Cedar Waxwing	72	4	45	446	171	147	19	206	15	226	44	94	46	26
Orange-cr Warbler	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Yew-rumped Warbler	83	12	6	109	97	210	25	88	70	177	55	128	121	7
Pine Warbler	-	-	1	13	-	1	-	-	-	2	-	-	7	-
Palm Warbler	1	-	-	-	-	1	-	1	-	1	-	-	-	-
Common Yellowthroat	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Eastern Towhee	17	99	-	61	59	36	31	62	8	53	53	10	57	15
Amer. Tree Sparrow	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Chipping Sparrow	38	97	-	50	20	55	-	50	-	31	62	1	118	2
Field Sparrow	8	426	110	91	18	190	89	125	25	153	76	9	86	55
Vesper Sparrow	-	-	-	-	-	-	-	-	-	-	-	-	2	-
Savannah Sparrow	-	18	cw	3	4	6	9	21	-	22	10	-	78	17
LeConte's Sparrow	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fox Sparrow	2	3	4	9	2	2	1	12	5	5	4	1	9	1

Ernk/Cof	GSMNP	Green	Hck-Prst	Hiwas	Jacksn	Kngspt	Knox	Leb	Mem	Nash	Nick	Norris	Reel	Roan	Savh	ShVl	Warr	White	Totals
24	1	2	52	60	41	36	75	2	101	43	35	18	111	2	80	11	23	87	1267
6	1	5	11	5	7	2	12	-	25	20	11	20	21	7	21	8	3	29	449
11	8	1	5	29	3	11	35	1	4	13	15	6	9	2	42	8	10	37	476
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
5	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	5	37
-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	1	4
219	6	49	125	303	199	154	420	54	198	335	284	99	21	33	499	38	226	551	6653
460	36	88	166	305	440	236	2798	47	57	340	476	95	67	257	546	1167	238	730	14518
-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	10	-	-	21
58	-	-	-	-	12	-	-	-	46	-	-	-	341	-	53	-	40	34	801
20	19	35	131	82	41	117	340	21	87	230	49	52	53	48	130	50	33	124	3121
36	8	40	69	51	49	91	392	15	103	244	76	81	48	32	168	29	87	269	3803
1	-	6	2	-	1	-	1	-	-	-	-	-	1	4	7	-	-	2	48
9	12	12	2	15	7	21	68	2	19	43	16	24	6	13	27	22	7	63	1032
-	-	-	-	4	-	-	16	-	-	-	5	1	-	-	4	-	-	-	69
1	-	-	8	4	6	-	4	-	16	13	3	2	11	2	18	1	1	3	161
46	21	27	62	50	30	81	271	8	163	156	54	67	110	9	149	31	27	140	2706
-	-	-	1	-	1	-	1	-	2	-	-	-	2	-	-	-	-	1	11
3	-	-	8	5	6	4	12	-	13	4	2	2	23	2	18	-	1	6	223
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	4
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2
13	3	5	34	24	20	14	60	-	30	26	12	7	23	28	48	7	1	41	823
1	1	-	11	39	8	5	45	-	52	18	28	12	18	1	47	-	1	23	523
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
79	30	43	163	207	63	80	438	31	72	331	82	125	51	10	208	88	77	417	5502
5	4	-	18	22	5	6	49	-	21	14	12	12	13	2	36	10	10	30	503
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	cw
7	12	167	1908	627	243	204	2573	6	1701	4664	167	120	23	1	668	3	174	105	17777
-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	3
144	3	27	172	83	55	104	237	23	98	328	75	48	15	5	74	27	100	176	2784
4	-	-	20	15	12	1	19	-	32	5	16	1	8	-	12	-	18	8	241
1860	7	8116	9430	2965	2100	1059	2432	1340	1124	17453	1695	794	2290	190	3875	648	6835	5517	96832
8	-	-	-	49	-	-	61	-	9	-	-	-	12	-	150	cw	-	145	674
18	-	22	28	231	8	70	432	-	39	57	204	20	10	-	169	10	37	70	2986
-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	3
7	4	48	141	281	18	266	523	2	145	75	65	29	7	-	107	35	28	97	3066
-	-	-	1	-	2	-	10	-	2	-	5	-	4	-	17	-	-	1	66
-	-	-	-	-	-	-	2	-	-	cw	-	-	1	-	2	-	-	2	11
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
37	1	2	41	50	42	28	135	9	67	57	44	14	7	1	61	8	34	61	1260
-	-	-	-	-	-	-	-	-	-	-	-	-	cw	-	-	-	-	-	1
9	-	-	-	20	90	37	57	-	74	58	118	17	-	1	101	-	72	52	1230
28	6	1	106	98	88	24	224	-	32	126	90	51	30	25	184	13	127	177	2891
-	-	-	-	2	-	-	-	-	-	-	-	-	4	-	17	-	-	-	25
26	-	-	15	4	81	-	55	1	78	1	5	-	37	-	319	2	4	21	837
-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	2	-	-	-	9
3	-	-	19	5	15	2	11	-	19	6	-	1	42	-	19	1	1	4	208

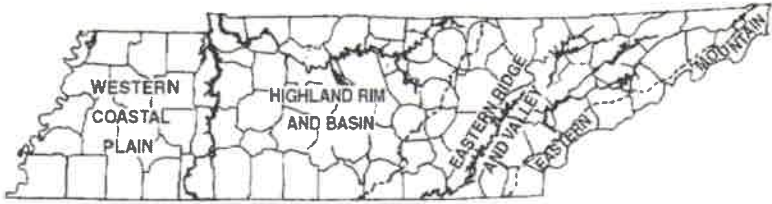
Species	Bristol	Buff Riv	CadeCv	Chatt	Clarksvl	Clay Co	Columb	Cook	CrsCrk	Crsvllc	DeKalb	Eliz	Fay	Fent/Morg
Song Sparrow	121	191	188	157	77	236	59	261	41	258	92	96	207	184
Swamp Sparrow	5	22	53	14	11	19	3	42	11	8	10	2	122	17
White-throated Sparrow	134	541	44	157	383	264	128	361	109	183	456	123	274	124
White-crowned Sparrow	12	30	-	2	24	7	26	-	-	20	4	3	7	5
Dark-eyed Junco	88	789	44	78	323	202	33	195	166	197	146	246	345	97
Lapland Longspur	-	30	-	-	-	1	-	-	-	-	-	-	-	-
Northern Cardinal	138	521	34	191	404	207	287	397	176	266	191	209	167	83
Red-winged Blackbird	-	209	1	163	11	50	237	26	500	30	5301	-	552	22
Eastern Meadowlark	6	234	27	3	26	175	80	102	-	206	196	13	48	68
Western Meadowlark	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rusty Blackbird	-	2	-	272	-	10	12	-	-	1	-	-	79	-
Brewer's Blackbird	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common Grackle	-	64	-	2286	122	-	44	19	375	4	-	-	1230	-
Brown-headed Cowbird	-	319	4	1	1	-	72	-	-	-	7	-	2	-
Blackbird sp.	-	170	-	-	135	-	-	-	-	-	-	-	-	-
Purple Finch	cw	6	-	-	-	18	2	5	-	8	4	-	-	1
House Finch	46	28	8	37	104	27	16	187	3	57	45	74	16	10
Red Crossbill	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pine Siskin	6	-	-	-	-	-	-	-	-	-	-	2	-	-
American Goldfinch	67	176	36	175	260	169	67	164	52	168	136	92	169	50
House Sparrow	27	89	1	46	99	45	18	174	2	113	59	29	21	97
Total individuals	6777	11391	1899	13399	7699	7861	5546	12199	53714	10754	16263	5999	7054	4345
Total Species	82	79	60	95	65	85	77	91	71	90	79	70	72	69
Count Week species	1	1	2	-	1	-	-	1	-	3	-	1	-	-
Effort:														
Observers	23	10	13	21	17	6	5	14	10	15	8	20	11	5
Parties	6	5	6	7	7	5	5	7-8	6	8	7	6	4	4
Party Hours	54	48.25	45.5	57	58	48.25	38.7	66	64	77.75	51.5	48	33	38.5
Hours by car	28	30.5	10.5	18	33	42.75	27.5	54.5	55.5	55.5	47.75	32	20	30
Hours by foot	26	17.75	35	37	25	5.5	11.2	11.5	8.5	22.25	3.75	16	13	8.5
Hours by boat or other	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miles by car	314	335.7	111	210	300	368	261.7	462	256	468	373	329	197	277
Miles on foot	10	9	35.4	18	18.75	2	9.5	7	2	12	3.5	9	20	7.25
Miles by boat or other	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hours Owling	3.25	1.5	-	4	-	3.75	3.2	3.25	-	6.25	1	2	1	1.25
Miles Owling	36	5.4	-	13	-	40.5	37.4	41.25	-	71	5	2	15	24
Feeder / yard watchers	-	-	-	-	4	-	-	3	-	-	1	1	-	-
Feeder / yard hours	-	-	-	-	11.5	-	-	8	-	-	2	1	-	-
Count date	27-Dec	2-Jan	27-Dec	19-Dec	19-Dec	16-Dec	19-Dec	19-Dec	30-Dec	23-Dec	26-Dec	1-Jan	18-Dec	29-Dec

Count codes: Buff Riv = Buffalo River, CadeCv = Cades Cove, Chatt = Chattanooga, Clarksvl = Clarksville, Columb = Columbia, Cook = Cookeville, CrsCrk = Cross Creeks, Crssvllc = Crossville, Eliz = Elizabethton, Fay = Fayette Co., Fent/Morg = Fentress/Morgan Co., Frnk/Cof = Franklin/Coffee Co., GSMNP = Great Smoky Mtns Nat. Park, Green = Greenville, Hck-Prst = Hickory-Priest, Hiwas = Hiwassee, Jacksn = Jackson, Kngspt = Kingsport, Knox = Knoxville, Leb = Lebanon, Mem = Memphis, Nash = Nashville, Nick = Nickajack Lake, Reel = Reelfoot, Savh = Savannah, Shvl = Shady Valley, and Warr = Warren Co.

Frnk/Cof	GSMNP	Green Hck-Prst	Hiwas	Jacksn	Kngspt	Knox	Leb	Mem	Nash	Nick	Norris	Reel	Roan	Savh	ShVI	Warr	White	Totals	
46	40	174	43	246	159	172	384	-	177	113	89	65	131	43	399	103	236	330	5118
5	-	1	23	132	55	26	70	-	39	9	5	-	146	-	150	17	-	55	1052
69	17	43	248	293	381	181	684	14	883	394	216	75	317	53	550	24	150	343	8216
45	-	9	4	-	7	7	14	-	33	4	10	-	70	-	-	20	13	78	454
26	201	8	140	25	404	54	110	10	262	169	89	88	318	71	477	99	76	139	5715
-	-	-	-	-	-	-	-	-	-	-	-	-	114	-	-	-	-	-	145
100	42	110	242	170	217	154	619	22	216	585	147	135	265	17	318	49	231	336	7246
41	-	-	47	76	52	108	38	-	318	32	1425	15	5981	-	83	95	3	7	15423
59	-	17	30	30	54	20	94	-	300	17	58	3	112	-	349	19	120	291	2757
-	-	-	-	-	-	-	-	-	-	-	-	-	13	-	-	-	-	-	13
-	-	-	1	-	1	-	-	-	234	-	-	-	15	3	27	9	-	110	776
-	-	-	-	-	2	-	-	-	-	-	-	-	1	-	15	-	-	-	18
132	-	-	29	46	434	-	cw	2	3467	288	1331	-	1595	-	85	2	-	-	11555
5	-	-	26	-	47	-	33	2	150	78	-	-	550	-	49	15	-	-	1361
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	305
5	-	21	3	1	-	1	2	-	1	7	-	-	-	2	1	-	-	3	91
23	1	36	59	14	35	20	174	25	75	85	18	27	82	-	47	46	14	59	1498
-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
-	4	3	-	-	-	-	-	-	cw	-	-	-	-	-	1	-	-	-	16
81	47	13	57	50	53	157	233	15	127	301	74	59	93	17	182	53	17	190	3600
52	6	16	107	5	14	67	53	42	253	41	21	4	39	35	59	19	62	181	1896
7942	1055	9930	20366	22094	7462	6057	20225	2041	17255	28488	18737	3064	54283	997	16435	3573	10128	14370	469402
95	45	55	89	86	75	75	92	40	88	78	89	64	112	48	104	62	62	90	152
1	-	-	-	-	-	1	2	-	1	2	-	-	5	1	2	-	-	-	1
13	10	4	16	12	7	14	41	6	24	31	12	10	15	9	14	21	6	12	455
9	3	4	5	8	4	6	21	3	9	10	5	4	5	2	7	4	-	7	192
49	13.25	12.5	53.25	45	32.25	51.25	129.93	12	52.5	61.5	39.5	22.45	48.25	14.5	71.5	31.5	30.25	65.75	1565.08
47	5	9.5	24.25	22	24	31.5	39.8	7.5	16.5	33	27	9.2	36.5	4.5	33	23	-	60.5	939.25
2	8.25	3	28	19	8.25	19.7	90.13	4.5	36	28.5	12.5	13.25	11.75	10	38.5	8.5	-	5.25	588.03
-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
317	55	97.7	294.6	241	316	354.5	532.8	145	177.1	230	225.4	103	312	84	337.6	213	-	605.5	8903.6
4.1	6.5	2.25	19.5	25	7.75	15	60.05	6	34.3	22.5	5	10.75	9.5	4	24.1	5	-	3.5	428.2
-	-	-	-	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
2	-	-	23.5	2	0.25	1.25	1.167	-	0.5	2.75	3	1	2	0.75	4	1	-	4	79.617
14	-	-	12.7	13	2	1	30	-	0.3	6.5	3.65	2	38	1	16.3	2	-	51	483.8
-	-	4-7	-	-	-	2	3	3	1	2	-	-	-	-	1	-	-	-	21
-	1	15.5	-	-	-	6.5	8.45	6	0.5	4	-	-	-	-	1	-	-	-	65.45
21-Dec	20-Dec	19-Dec	1-Jan	1-Jan	2-Jan	3-Jan	2-Jan	26-Dec	26-Dec	26-Dec	26-Dec	19-Dec	19-Dec	30-Dec	29-Dec	1-Jan	4-Jan	21-Dec	

THE WINTER SEASON

RICHARD L. KNIGHT, Editor



1 DECEMBER 2009 - 28 FEBRUARY 2010

A very active El Nino-influenced weather pattern this winter brought a relentless series of storms and precipitation events to the state. Temperatures were below average for the season as a whole, while precipitation was above average. A prolonged deep freeze gripped the entire eastern U.S., even well south into Florida, during the first two weeks of the new year. Snowfall was above average in all parts of the state. Hardest hit were the northern mountain counties along the North Carolina border, where over 100 inches of snowfall was recorded for the season. Snowpack lingered into early April on some of the highest peaks (e.g., Roan Mountain). By spring it was apparent that some resident birds, such as Carolina Wrens, had suffered losses in portions of their mountain range due to the extended cold and snow cover.

Rarity highlights this season included a female Barrow's Goldeneye, a Yellow-billed Loon, and a Vermilion Flycatcher. Kentucky Lake and Reelfoot Lake produced several notable gulls. Two sites in West Tennessee hosted Trumpeter Swans. As reintroduced Midwestern and Great Lakes populations of this species continue to grow, observers statewide need to scrutinize all swans, scarce as they are, and not assume any are Tundras. Western Grebes occurred in two regions, although the two sites were not very far apart. Could the individual at Center Hill Lake have been one of the two present at Lake Tansi a month earlier? Eared Grebes were reported from all four regions. Not that long ago any report of Eared Grebe would have been remarkable in the state. Virginia Rails and Spotted Sandpipers were found in three regions apiece. Winter records of these two species have been increasing in recent years.

A few "half-hardy" species lingered into the Christmas Bird Count period, most notably a Wood Thrush in Putnam County. However, few of these tardy migrants were seen afterwards, not surprising given the weather that ensued. Boreal irruptives were scarce. Four sightings of American Tree Sparrow occurred in the two eastern regions, where the species is not annual. Three Smith's Longspurs in Middle Tennessee were quite unexpected.

Standard Abbreviations

ad - adult	Is. - Island
CBC - Christmas Bird Count	L. - Lake
Co - County	max - maximum count
Cr. - Creek	m.ob. - many observers
ers - earliest reported sighting	NWR - National Wildlife Refuge
et al. - and others	R. - River
fide - reported by	SP - State Park
im - immature	WMA - Wildlife Management Area

WESTERN COASTAL PLAIN REGION — Like the rest of the state, the western counties had an interesting series of winter events. Most of the region experienced temperatures similar to the Memphis area: December was 2.5 degrees below normal, January was 2.8 degrees below normal, and February was 7.5 degrees below normal. This three-month period was the 14th coldest winter on record. We had a significant amount of snow during the last weekend of January and significant amounts on three occasions during the first week of February.

Waterfowl: **Ross's Goose**: 5 Dec (82+) Lauderdale Refuge, Lauderdale Co (JRW, MJW), max. **Cackling Goose**: 26 Dec (32) Britton Ford, Henry Co (JRW); 8 Jan (5) Gibson Co L. (MAG); 10 Feb (22) Shelby Farms (JRW); 25 Feb (1) L. Graham (SGS). **Trumpeter Swan**: 23 Jan - 25 Feb (3 im) Phillipy, Lake Co (NaM, m.ob.); 13 Feb - 1 Mar (1 im) L. Graham (Elizabeth Barnett fide MAG, m.ob.), apparently had been there for 3 weeks prior to this. **Greater Scaup**: 21 Dec (214) TVA Lake, Shelby Co (JRW), max. **Surf Scoter**: 21 Dec (1) Robco L., Shelby Co (JRW); 28 Dec (1) Paris Landing SP, Henry Co (MCT). **White-winged Scoter**: 19 Dec (2) Reelfoot CBC (JRW, MAG, Gail King). **Long-tailed Duck**: 5 Dec (1) Reelfoot L. (JRW, MJW); 30 Dec - 1 Jan (1) Pace Point (DCC, m.ob.). **Common Goldeneye**: 30 Dec (1275+) Pace Point area (SGS, TL), max. **BARROW'S GOLDENEYE**: 26 / 28 Dec (1 female) near Pace Point (JRW / MCT), 2nd state record. **Common Merganser**: 26 Dec (1) Britton Ford, Henry Co (JRW); 11 Jan (5) Pace Point (MCT).

Loon - Falcon: **Red-throated Loon**: 5 Dec (1) Reelfoot L. (JRW, MJW); 25 Dec (1) Pickwick L. (JRW); 27 / 31 Dec (1) Pace Point (JRW / MCT). **Pacific Loon**: 25 Dec (1) Pickwick L. (JRW); 27 / 31 Dec (1) Pace Point (JRW / MCT). **YELLOW-BILLED LOON**: 26 Dec (1 im) Pace Point (JRW), about 4th state record. **Red-necked Grebe**: 26 Dec - 2 Jan (2) Pace Point (JRW, MCT). **Eared Grebe**: 30 Dec - 11 Jan (1-2) Pace Point (SGS, TL, m.ob.). **Northern Goshawk**: 5 Jan (1 im) Henry Co (MCT). **"Harlan's" Red-tailed Hawk**: 1 Dec (1) western Crockett Co (Glenn Stanly fide MAG), "has been coming to this area every winter since about 2003"; 30 Dec - 10 Feb (1) Shelby Farms (JRW); 22 Jan (1) Phillipy, Lake Co (SGS). **"Kriders" Red-tailed Hawk**: 6 Feb (1) Tipton Co (JRW). **Golden Eagle**: 15-31 Dec (1) Hatchie NWR, Haywood Co (Mike Chouinard). **Peregrine Falcon**: 30 Dec (2) Paris Landing SP, Henry Co (SGS, TL).

Crane - Owl: **Whooping Crane**: 6-10 Dec (20) Carroll Co, "Operation Migration"

class of 2009. **Spotted Sandpiper:** 20 Dec (1) Memphis CBC; 27 Feb (1) Ensley, Shelby Co (JRW). **Lesser Yellowlegs:** 19 Dec (2) Reelfoot CBC. **Least Sandpiper:** 20 Dec (350) Memphis CBC. **Dunlin:** 11 Jan (1) Pace Point (MCT). **Laughing Gull:** 1-2 Jan (1) Pace Point (JRW). **LITTLE GULL:** 12-13 Dec (1 ad) Reelfoot L. (JRW, NaM), holdover from Nov. **Ring-billed Gull:** 5 Jan (25,000) Pace Point area (MCT), max. **Lesser Black-backed Gull:** 5 Feb (1) Pickwick L. (JRW). **THAYER'S GULL:** 26 Dec (1 im, 1 ad) Pace Point (JRW). **GLAUCOUS GULL:** 13 Dec (1 im) Reelfoot L. (JRW, NaM). **GREAT BLACK-BACKED GULL:** 31 Dec (1 im) Reelfoot L. (JRW). **Barn Owl:** 18 Dec (1) Fayette Co CBC; 19 Dec / 20 Jan (2) Lake Co (NaM / DDP). **Long-eared Owl:** 19 Feb (1) Moss Is. WMA (WMP), heard calling in pre-dawn. **Short-eared Owl:** 10 Dec - 30 Jan (1-6) Lake Co (NaM, JRW, DDP, m.ob.); 18 Feb (1) Moss Is. WMA (WMP).

Vireo - Siskin: **Blue-headed Vireo:** 18 Dec (1) Fayette Co CBC (MGW, SNM); 20 Dec (1) Memphis CBC. **Fish Crow:** 19 Dec (1) Reelfoot CBC. **Tree Swallow:** 22 Feb (5) L. Graham (Allan Trently), ers. **Red-breasted Nuthatch:** scattered in very small numbers. **Sedge Wren:** 18 Dec (3) Fayette Co CBC. **Orange-crowned Warbler:** 20 Dec (2) Memphis CBC. **Palm Warbler:** 19 Dec (1) Reelfoot CBC. **Vesper Sparrow:** 31 Dec (7) Bogota WMA, Dyer Co (JRW). **LeConte's Sparrow:** 19 Dec (7) Reelfoot CBC; 31 Dec (1) Bogota WMA, Dyer Co (JRW). **Indigo Bunting:** 28 Jan (1) Fayette Co (Judy Andreoli fide MGW), at feeder. **Western Meadowlark:** 6 Dec (6) Ensley, Shelby Co (JRW); 19 Dec (13) Reelfoot CBC. **Brewer's Blackbird:** 21 Jan (80) near Black Bayou WMA, Lake Co (SGS); 30-31 Jan (2) Gibson Co (MAG), at feeder in snow. **Baltimore Oriole:** 9 Jan (1 female) Oakland, Fayette Co (Theresa Graham); 24 Jan - 15 Feb (1 female) Memphis (Eric Wilson, photo). **Purple Finch:** widespread, but in small numbers; max 32 at feeder in Tipton Co (DDP). **Pine Siskin:** scarce; max 15.

Addenda: The following were received late: **Bald Eagle:** 27 Nov & 17 Dec 2007 (2 ad) Wolf River WMA, Fayette Co (David Smith, DDP, MGW). **Sandhill Crane:** 17 Dec 2007 (13) Stanton, Haywood Co (James Stiford fide MGW). **American Avocet:** 27-28 Mar 2007 (10 / 8) Shelby Farms (Virginia Reynolds / MGW). **COMMON GROUND-DOVE:** 3 Mar 2008 (2) Moss Is. WMA (Robert P. Ford), details provided. **Fish Crow:** 6 Nov 2007 (20) Shelby Farms (MGW). **House Wren:** 28 Oct (1) Shelby Farms (MGW).

Locations: L. Graham - in Madison Co; Moss Is. WMA - in Dyer Co; Pace Point - in Henry Co; Pickwick L. - in Hardin Co; Reelfoot L. - Lake Co portion; Shelby Farms - in Shelby Co.

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HIGHLAND RIM AND BASIN REGION — The winter months in the Nashville area started with a near normal December in both temperature and precipitation. However, the first half of January produced a record cold snap for Middle Tennessee

which was partially offset by warmer than normal temperatures during the latter part of the month. Even though the average temperature of February was one degree warmer than January, it was, relatively speaking, a much colder month than expected, being nearly seven degrees below normal. Precipitation in January and February was roughly typical, but the airport at Nashville received a total of over seven inches of snow, making this winter much whiter than the past several.

Goose - Heron: **Greater White-fronted Goose**: 16 Dec (1) Clay Co. CBC (Terry Campbell); 20 Dec (1) Radnor L. on Nashville CBC (Scott Block). **Surf Scoter**: 11 Feb (2) Percy Priest L. (SGS, ES). **Long-tailed Duck**: 21-27 Feb (2) Percy Priest L (Scott Block, m.ob.). **Common Goldeneye**: 13 Feb (19) Percy Priest L (SGS). **Common Merganser**: 27 Jan (9) Woods Reservoir, Franklin Co (Terry Witt). **Eared Grebe**: 10-24 Feb (1) Percy Priest L (Terry Witt, m.ob.). **Western Grebe**: 27 Jan (1) Center Hill L., DeKalb Co (Michael Hawkins, Judy Fuson, Carol Williams). **American White Pelican**: 12 Dec (40+) Duck R. Unit, Humphreys Co (Steve Routledge). **Green Heron**: 20-21 Dec (1) Brookmeade Park on Nashville CBC (Dec Thompson, Tarila Fox, photo).

Hawk - Owl: **"Harlan's" Red-tailed Hawk**: 2 Feb (1, light morph) Davidson Co (ES, photo). **Rough-legged Hawk**: 7 Jan (1) Ft. Campbell (DMo). **Bald Eagle**: 22 Jan (1 ad) Petersburg, Marshall Co (John Sanders). **Merlin**: thru season (2) Anderson Rd. Recreation Area, Davidson Co (SGS, m.ob.), a regular wintering site; 21 Dec (1) White Co CBC; 29 Dec (1) Savannah CBC. **Virginia Rail**: 29 Dec (1) Clarkrange, Fentress Co (EKL); 29 Dec (3) Savannah CBC. **Sora**: 29 Dec (1) Savannah CBC. **Sandhill Crane**: 5 Dec (31, flying over) Robertson Co (TL, Ken Oeser); 21 Feb (300+) Maury Co (fide Tommy Edwards). **Whooping Crane**: 6-14 Feb (1) White Co (Douglas Downs, SJS), with Sandhills. **Dunlin**: 16 Jan (1) Percy Priest L (NTOS). **American Woodcock**: 27 Feb (3) Palmyra, Montgomery Co (Stanley York, Jr.). **Bonaparte's Gull**: 13 Feb (3500) Percy Priest L (SGS), max. **Ring-billed Gull**: 13 Feb (23,000) Percy Priest L (SGS), max. **Barn Owl**: 31 Dec (1) Warren Co (SNM). **Short-eared Owl**: 29 Dec (2) Savannah CBC; 17 Feb (4) Ft. Campbell (DMo). **Long-eared Owl**: 9 Jan (1) Lewis Co (WMP).

Flycatcher - Siskin: **VERMILION FLYCATCHER**: 29 Dec (1) Savannah CBC. **Loggerhead Shrike**: 23 Feb (2) Warren Co (SNM). **Blue-headed Vireo**: 21 Dec (1) White Co CBC (EKL, SGS); 29 Dec (1) Savannah CBC. **Red-breasted Nuthatch**: very few, scattered; 13 / 19 Jan (8 / 5) separate Lewis Co sites (WMP), max. **Brown-headed Nuthatch**: thru season (1) Tullahoma, Coffee Co (Ruth Luckado), for 2nd straight winter. **Sedge Wren**: 29 Dec (1) Savannah CBC; 16 Dec / 7 Jan (5 / 2) Ft. Campbell (DMo). **Gray Catbird**: 1-5 Dec (1) Lewis Co (WMP); 2 Jan (1) Buffalo River CBC, Lawrence Co. **WOOD THRUSH**: from late Nov thru 17 Dec (1) City L., Putnam Co (SJS, Barbara Stedman, photos), apparently 2nd winter record in state. **Orange-crowned Warbler**: 23 Jan (1) Bellevue, Davidson Co (Francis Fekel). **Palm Warbler**: 1-2 on CBCs at Clay Co, Cookeville, White Co, Crossville, & Savannah. **Vesper Sparrow**: 29 Dec (17) Savannah CBC; 29 Dec (3) Warren Co (SNM). **LeConte's Sparrow**: 29 Dec (2) Savannah CBC; 20 Feb (3) Duck R. Unit, Humphreys Co (Steve Routledge). **SMITH'S LONGSPUR**: 17-20 Feb (3-2) Ft. Campbell (DMo, m.ob.). **Lapland Longspur**: 16 Dec (1) Clay Co CBC; 2 Jan (30) Buffalo River CBC, Lawrence Co. **Summer**

Tanager: 31 Dec - 25 Jan (1, at feeder) Clarksville (Nita Heilman, photo). **Brewer's Blackbird:** 29 Dec (15) Savannah CBC. **Purple Finch:** 25 Dec (12) Williamson Co (ES), max. **Pine Siskin:** none reported.

Locations: Ft. Campbell - in Montgomery Co; Percy Priest L. - in Davidson Co; Savannah - in Hardin Co.

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CUMBERLAND PLATEAU / RIDGE & VALLEY REGION — This winter was colder and wetter than average. Temperatures were near normal in December, but below average in January and February. From 2-12 January, the Tri-cities area experienced a record-setting 11 straight days during which temperatures remained below freezing. Modest snow cover persisted there through this prolonged cold snap. Although there was a seasonal surplus of precipitation throughout the region, February was about an inch deficient. This was the snowiest winter in many years. Hardest hit were the northern portions of the region. The seasonal total of over 25 inches of snow in the Tri-cities was 10 inches above average.

It was a lackluster season for ducks and geese, with low numbers for most species and less diversity than might be expected in a winter this cold. Two Western Grebes in Cumberland County during mid December represent about the 18th state record of an *Aechmophorus* grebe. Five of these occurred before the taxon was split in 1985. Subsequent sightings have consisted of 10 reports of Western, two of Clark's, and one probable Clark's. A Pacific Loon and Eared Grebe near Chattanooga were notable. Several sightings of Merlin and Peregrine Falcon continued the improving trend for these speedy raptors. Virginia Rails were reported from three sites, with a Sora also found at one. A Spotted Sandpiper was present for its fifth consecutive winter at Kingsport, while three other sightings were surprising given the cold and snow.

A Blue-gray Gnatcatcher, a Dickcissel, and four reports of Vesper Sparrows highlighted the poor showing by "half-hardy" lingerers. It was an off-year for the typical boreal irruptives (finches & Red-breasted Nuthatch); but, there were two reports of Northern Saw-whet Owl and three of American Tree Sparrow. As has become the norm in recent years, the first wave of returning Tree Swallows appeared in February.

Waterfowl: **Greater White-fronted Goose:** 15-16 Feb (6) Blount Co (WB et al.), only report. **Snow Goose:** 1 Jan (1) Hiwassee CBC; 16 Jan (1 blue) Greene Co (DHM); 16 Jan - 1 Feb (1) Hamilton Co (Dennis Harris); 23 Feb (1) Hwy 411, Polk Co (DCC); 28 Feb (1) Cove Lake SP (Kelly Roy); only reports. **Ross's Goose:** no reports this season after occurring each of the last 8 winters. **Cackling Goose:** 1 Jan (2) Hiwassee CBC, only report. **Blue-winged Teal:** Nov thru Feb (5) Leesburg, Washington Co (RLK, m.ob.), 2nd local overwintering record, at same spring-fed pond where 1 overwintered 3 years ago. **Redhead:** 13 Dec (61) L. Tansi (EKL); 22 Feb (228) Cove Lake SP (Nell Moore). **Ring-necked Duck:** 13 Dec (900) L. Hiawatha, Cumberland Co (EKL), max. **Surf Scoter:** 5 Dec (2) Breckenridge L., Cumberland Co (JEM, DJ

Stanley), 1st record in Co. **White-winged Scoter**: 14 Feb (1) John Sevier L. (SHu); 20 Feb (2) Bennett L., Marion Co (TLR, Libby Wolfe). **Bufflehead**: 17 Dec (400) L. Tansi (EKL), max. **Common Goldeneye**: 21 Feb (8) Cherokee Dam (Charles Nicholson), max; few reports this winter. **Common Merganser**: 8-11 Jan (1-2 females) John Sevier L. (SHu); 7 Feb (3 males) Cove Lake SP (Nell Moore); only reports. **Red-breasted Merganser**: 2 Dec (95) Boone L., Sullivan & Washington Cos (RLK), max.

Loon - Falcon: **Pacific Loon**: 13 Feb (1) Chickamauga L. (DRJ, m.ob.), 2nd SE Tenn record. **Horned Grebe**: 12 Dec (54) L. Tansi (JEM, DJ Stanley); 7 Feb (1) Greene Co (DHM), in flooded field. **Eared Grebe**: 20 Feb (1) Chickamauga L. (Gary Brunvoll, DRJ), 2nd record for Co. **Western Grebe**: 12-23 Dec (2, only 1 on last date) L. Tansi (JEM, m.ob., photos). **American Bittern**: 1 Jan (1) Hiwassee CBC. **Great Egret**: 1 Jan (2) Hiwassee CBC and 1 still there 6 Feb (RPL); 2 Jan (4) Knoxville CBC; 18 Feb (2) Brainerd Levee, Hamilton Co (DCC). **Black-crowned Night-Heron**: thru season (1-4) Kingsport (RLK et al.); 18 Jan (1) John Sevier Fossil Plant, Hawkins Co (DHM). **Black Vulture**: 19 Jan (300) Warrior's Path SP, Sullivan Co (Glen Eller), new high count in NE Tenn. **Rough-legged Hawk**: 13 Feb (1, dark morph) Cumberland Co (EKL), same site where seen last March. **Golden Eagle**: 26 Dec (1) Nickajack CBC. **Merlin**: 6 Dec (1) Knoxville (Dean Edwards); 23 Dec / 16 & 23 Jan (1 each) separate Greene Co sites (Ben Britton / DHM); 23 Dec (1) Limestone (RLK); 1 Jan (1) Hiwassee CBC; 24 Feb (1) Anderson Co (Kelly Roy); 27 Feb (1) Hiwassee Refuge (RPL). **Peregrine Falcon**: 6 Dec - 16 Jan (1) Limestone (DHM, TSM, RLK et al.), 1-2 have been present at this site for 7 of last 8 winters; 12 Dec / 18 Jan (1) Greene Co (DHM); 18 Dec (1) Hamilton Co (Kevin Calhoon); 26 Jan (1) Meigs Co (DCC).

Rail - Owl: **Virginia Rail**: 19 Dec (4) Standifer Gap Marsh, on Chattanooga CBC; 3 Jan (1) Fordtown Marsh on Kingsport CBC (TSM, Rob Biller); 17 Jan (1) Meadowview Marsh, Kingsport (RLK). **Sora**: 27 Jan (1) Standifer Gap Marsh, Hamilton Co (DCC). **Sandhill Crane**: 11 Dec (7) John Sevier L. (SHu); 15 Dec (23) Greene Co (DHM); 22 Feb (7) Washington Co (RLK); all well east of usual migration corridor. **Whooping Crane**: 15 Dec (1) Greene Co (DHM), a banded 4 year old bird originating from Necedah NWR, Wisconsin. **Spotted Sandpiper**: thru season (1) Kingsport (Bill Grigsby, JSM, RLK), wintering for 5th straight year; 23 Dec (1) Upper Douglas L., Cocke Co (Michael Sledjeski); 18 Jan (1) Holston R., Hawkins Co (DHM); 20 Feb (1) Chickamauga L. (Gary Brunvoll, DRJ). **Least Sandpiper**: 17 Dec (7) Greene Co (JSM, Bill Grigsby). **American Woodcock**: 22 Jan (1) Greeneville (DHM). **Ring-billed Gull**: 27 Feb (8,000+) Cherokee Dam (DHM), max. **Northern Saw-whet Owl**: 15 Dec thru period (1, calling) Sequatchie Co (Clyde Blum); 26 Dec (1, calling) Nickajack CBC.

Shrike - Siskin: **Loggerhead Shrike**: reported at 3 Washington Co sites (m.ob.); only 1 report each in Greene Co (DHM) & Hamilton Co (DCC). **Common Raven**: 19 Jan (1) Kingsport (JSM); 26 Jan (1) Blountville, Sullivan Co (Mary Erwin); 31 Jan (1) Limestone (DHM); 12 Feb (1) Johnson City (DHM). **Horned Lark**: 5-10 Jan (300) Limestone (TSM, DHM, RLK), max. **Tree Swallow**: 14 Feb (1) Lackey Cr., Blount Co (WB); 21 Feb (3) Cherokee Dam (Charles Nicholson); 22 Feb (6) Austin Springs, Washington Co (RLK); 27 Feb (10) Hiwassee Refuge (RPL); early migrants.

Red-breasted Nuthatch: few reports. **Marsh Wren:** 12 / 26 Dec (1) Wal-Mart Dist. Center, Greene Co (DHM); 19 Dec (1) Chattanooga CBC. **Blue-gray Gnatcatcher:** 23 Dec (1) Crossville CBC. **Gray Catbird:** 26 Dec (1) Nickajack CBC; 27 Dec (1) Bristol (RLK), on CBC; 18 Feb (1) Hamilton Co (DCC). **Orange-crowned Warbler:** 19 Dec (1) Chattanooga CBC; 7 Feb (1) Marion Co (TLR); 26 Feb (1) Cove Lake SP (Carole Gobert). **"Audubon's" Yellow-rumped Warbler:** 22 / 25 Jan (1) Knoxville (Dean Edwards). **Pine Warbler:** 5 Jan (1, at feeder) Johnson City (Kathy Noblet), rare in winter in NE Tenn.; 20 Feb (1) Hawkins Co (DHM), early migrant. **Palm Warbler:** 2 Jan (2) Knoxville CBC; 14 Feb (1) Knoxville (Carole Gobert); 25 Feb (1) Bristol (Lloyd Jones); below average showing. **American Tree Sparrow:** 1-7 Jan (1, at feeder) Pikeville, Bledsoe Co (David Vogt); 13 Feb (1, at feeder) John Sevier L. (SHu); 19 Feb (1) Bridgestone-Firestone WMA, White Co (EKL). **Chipping Sparrow:** thru season (1-8) Kingsport (JSM); 12 Dec (5) Greene Co (DHM); 2 Feb (23) Hawkins Co (JWC). **Vesper Sparrow:** 1 Jan (2) Hiwassee CBC; 18 Jan / 2 Feb (1 / 2) Phipps Bend / Christian Bend, both in Hawkins Co (Rick Phillips / JWC); 21 Feb (1) Washington Co (RLK). **Lapland Longspur:** 4-6 Dec / 10 Jan (3-4) Limestone (RLK, DHM), a semi-regular site in recent years. **Dickcissel:** 23 Feb (1, at feeder) Chattanooga (Jim Pfitzer, DRJ). **Brewer's Blackbird:** 19 Feb (1) Bridgestone-Firestone WMA, White Co (EKL). **Purple Finch:** scattered small numbers. **Pine Siskin:** 2 Feb (6) Hawkins Co (JWC); 6 Feb (1) Marion Co (TLR); only reports.

Locations: Cherokee Dam - in Jefferson & Grainger Cos; Chickamauga L. - in Hamilton Co; Cove Lake SP - in Campbell Co; Hiwassee - primarily in Meigs Co; John Sevier L. - in Hawkins Co; L. Tansi - in Cumberland Co; Limestone - in Washington Co; Nickajack - in Marion Co.

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EASTERN MOUNTAIN REGION — Average temperatures were three degrees below normal in January and nearly six degrees below normal in February. Precipitation was slightly above normal for the period. It was one of the snowiest winters in many years. The weather station in Blountville (Sullivan County) recorded snow on 37 days during the season, with over 25 inches of snow measured. The higher mountains received up to four times that amount of snowfall.

There was little movement of winter irruptive species. Siskins, goldfinches, and Purple Finches were all in low numbers. Red-shouldered Hawks seem to be expanding their presence in the northern part of the region.

Goose - Rail: **Snow Goose:** 25-29 Dec (1 white) Shady Valley (JLS), 1st valley record. **Northern Pintail:** 26 Feb (4) South Holston R. (JWC); 27 Feb (2) South Holston L. (RLK et al.). **Redhead:** 10-17 Jan (4-8) Wilbur L. (B&J), max. **Long-tailed Duck:** 26-27 Dec / 1 Jan (1) South Holston R. (JWC et al. / DHM). **Bufflehead:** 27 Dec (278) Wilbur L. (DHM), max. **Red-breasted Merganser:** 5 Dec (38) Cades Cove, GSMNP (WB); 5

Dec (28) South Holston L. (RLK); 10 Jan (4) Wilbur L. (B&JP). **Horned Grebe:** 5 Dec (115) South Holston L. (RLK), fallout of migrants; 23 Jan (13) Watauga L., Johnson Co portion (RLK), wintering flock. **Eared Grebe:** thru season (1-3) South Holston L. (RLK, m.ob.). **Bald Eagle:** thru season (1-3) Wilbur L. (B&JP). **Red-shouldered Hawk:** thru Dec (1) Holston Valley (RPL); 26 Dec (1) Wilbur L. (RLK); 1 Jan (5) Shady Valley - Mountain City CBC; 27 Feb (1) South Holston R. weir (RLK et al.). **Golden Eagle:** 26 Dec (1) Del Rio, Cocke Co (Michael Sledjeski). **Virginia Rail:** 1 Jan (2) Quarry Bog in Shady Valley (RMC, JLS), on CBC.

Dove - Siskin: **Eurasian Collared-Dove:** 2 / 17 Jan (4) near Elizabethton (TSM), continued presence there. **Rufous Hummingbird:** thru 11 Jan (1) South Holston L. (m.ob.). **Red-headed Woodpecker:** 2 Jan (1 ad) Elizabethton CBC (Joe McGuiness, Kathy Noblet et al.). **Marsh Wren:** 1 Jan (1) Quarry Bog in Shady Valley (RMC, JLS), on CBC. **Gray Catbird:** 19 Dec (1) Holston Valley (RPL). **Pine Warbler:** 13 Feb (1) South Holston L. (JWC, m.ob.), ers in northern Cos.; 24 Feb (1) Wilbur L. (B&JP). **Common Yellowthroat:** 27 Dec (1) Cades Cove, GSMNP, on CBC. **American Tree Sparrow:** 7 Feb (1) below South Holston Dam (Mike Sanders, photo). **Chipping Sparrow:** 23 Jan (4) Dry Hill, Johnson Co (RLK). **Vesper Sparrow:** 4 Jan (1) Holston Valley (RLK), just 2nd Jan. record in NE Tenn. **Purple Finch:** thru mid-Jan (10+) Holston Valley (RPL), max. **Pine Siskin:** very few reports.

Locations: GSMNP - Great Smoky Mountains National Park; Holston Valley - in Sullivan Co; Shady Valley - in Johnson Co; South Holston L. & R. - in Sullivan Co; Wilbur L. - in Carter Co.

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