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BIG BALD BANDING STATION SUMMARY RESULTS FROM 1979 TO 2003: THE FIRST 25 YEARS

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Introduction

Dr. George R. Mayfield, Jr. loved the mountains of eastern Tennessee and western North Carolina all of his life. As a boy he hiked in the mountains with his father, George R. Mayfield, Sr., a founder of the Tennessee Ornithological Society who was instrumental in the formation of Great Smoky Mountains National Park. Considering his passion for bird study and the mountains, it was fitting that he would be a founder of one of the longest running research projects focused on migratory birds in the region.

In the mid 1970's George began to think about a way to combine his love for birds and mountains. After apprenticeship at Dolly Sods on the Allegheny Front of West Virginia and with Katherine Goodpasture at her banding station near Nashville, he obtained a bird banding permit. He planned to study the migration of birds in the mountains, as was being done at Allegheny Front (Venable 1996). In 1979 he and his wife Cleo cleared net lanes along the Appalachian Trail corridor near Big Bald Mountain at Wolf Laurel, a small resort outside of Mars Hill, Yancey County, North Carolina. Big Bald Banding Station (BBBS) was born.

At that time the area around Big Bald Mountain was in private ownership. When the resort developed access by road to the mountain, it became open to all visitors which enabled the easy transport of equipment to the banding site. Eventually the land was sold back to the U.S. Forest Service with the condition that the mountain should remain accessible to Wolf Laurel residents. The Mayfields bought land there and in 1983 constructed a home to use as a base of operations, cementing the connection to this place for the remainder of George's life. Today that home is still being used as a base of operations during the banding season and as an educational facility for youngsters in the summer.

Early in the station's history trips were a combination of vacation and camaraderie in

addition to the banding effort. Cleo accompanied George on these trips as did his children, Mark Mayfield, Rebecca Mayfield Pearson and I, some of those times. In the first few years we would camp or stay at the Wolf Laurel Lodge and visit the mountain each day to set up operations and band. Over the years casual visitors as well as many hard working volunteers attended the nets. During the 1990's I began a master's degree program in ornithology at East Tennessee State University and took a more active role in the operation of the station, especially on weekends. Eventually, as Dr. Mayfield's health declined in the late 1990's and early 2000's, I took over the operation of the station with the help of other volunteers during the week. In 2010 I moved to Maine with my family, and in 2012 Mark Hopey, who had already run the station for several years, became the bander of record at BBBS. It now operates as BBBS in tandem with Southern Appalachian Raptor Research. Rebecca Mayfield Pearson currently serves on the board of directors for this 501c3 organization, and Cleo and Rebecca continue to band there every year along with Rebecca's daughter, Julia Pearson (Figure 1).



Figure 1. George R.
Mayfield Jr.'s wife
Cleo, banding with
their grandaughter,
Julia Pearson in recent
years.

Methods and Study Area

The banding station at Big Bald Mountain lies to the northeast of Big Bald along the northbound Appalachian Trail corridor from Big Stamp Gap. Its elevation varies some, but is approximately 1,585 m. The habitat consists of open field along the ridge crest, with deciduous woodland, primarily American Beech (Fagus grandifolia), Yellow Birch (Betula alleghaniensis), hawthorne (Craetagus spp) and other northern hardwoods species intermittently crossing the ridgeline between Tennessee and North Carolina along the northernmost section of the ridge. Nearby are also large patches of blueberry (Vaccinium pallidum and V. corymbosum) in the open fields to the south towards Big Bald as well as many species of wildflowers. This area is maintained by cutting periodically with a brush hog to keep out woody growth. The eastern slope is steep, dropping precipitously into Yancey County and has dense thickets of rhododendron (Rhododendron maximum and

R.catawbiense) making up much of the understory. The outermost margins along the northwestern edge are bordered by a dense stand of primarily small second growth beech. The western slope is gentle and has patches of both open ground and hawthorne scrub with large patches of blackberry (*Rubus argustus*) interspersed. The edges of some of the open areas are bounded by rhododendron thickets. The trees that are there grow in dense tangles and are usually no taller than about 4.5 to 7.0 m along the ridgeline. Those that grow taller are ravaged back to this standard height by the wind storms and snow of winter. Their gnarled branches are testament to the winter's harsh climate (Figure 2).



Figure 2. The Big Bald Banding Station as seen from the top of Big Bald Mountain. The banding area is to the left of the end of the visible trail along the ridgeline.

This variety of habitat provides tremendous cover and food for passerines that are in need of refueling and a smorgasbord for the accipiters and other raptors that hunt them on their journey south. The winds from the west and north hitting this open ridge provide the propulsion many passerines and raptors need for their southerly journey through this region. The open ridgeline affords views of the Black Mountains to the east, the Pisgah Forest and Great Smokies to the south, and the Unaka Mountains and Roan Highlands to the north. This scenic beauty can hardly be described, especially on days when cool northerly breezes come in with cold fronts and clear dry air bringing waves of migrants to this recognized important migratory stopover site. This area is part of the Southern Blue Ridge Important Bird Area under criteria set by the Audubon Society in the United States (see http://www.tnbirds.org/IBA/SitePages/BigBaldMtn.htm).

Over the years the station varied in the number and location of nets. There were as many as 18 and as few as 10 nets. One year a few nets were set to the southwest at Big Stamp Gap, but the logistics of operation of a station spread out over nearly 1 km proved to be difficult.

For the majority of its existence the station has been operated from a small table placed in the shadow of "Greer Rocks" (named for an infamous hermit reported to have lived on the mountain) near what was a favorite picnic spot at Wolf Laurel. The majority of nets were placed just along the eastern edge of the Appalachian Trail or just into the woods on the gentler western slope. Generally, seven nets were placed on the North Carolina side and 6 to 11 nets placed on the Tennessee side at different times. All nets were 30-36 mm mesh mist nets with lengths from 9-12 m with a couple of longer nets that were intermittently set. For the majority of the station's existence no exact times of operation were recorded. As a result, net hours are largely only estimable based on the recollections of those who were present. Most days the station was operated from around 0800 until late in the day, usually at or near dusk. If weather was inclement, or afternoon banding was slow, nets were closed until conditions improved.

Results and Discussion

On the first day of banding, 1 September 1979, 10 nets were opened and 37 birds of 6 species were banded. An American Robin (*Turdus migratorius*) was the first bird banded. Tennessee Warblers (*Oreothlypis peregrina*) and Cape May Warblers (*Setophraga tigrina*) were the most commonly captured and banded birds. Over that first three day weekend, 94 birds of 12 species were captured and banded.

After completing the Labor Day weekend, Dr. Mayfield returned alone the first weekend in October for another three days of banding in "foul weather" (taken from personal notes on data sheets). This trip netted 82 birds of 13 species; Tennessee Warblers were again the most abundant species. Dr. Mayfield was badly injured in an accident in 1980; however, he did not allow his disability to interfere with the banding effort. No years were missed but the number of banding days decreased briefly. The days of banding increased following his retirement a few years hence, and the data set grew. In the late 1990's, due to a decline in health, the station's operation transitioned to me. Dr. Mayfield attended banding sessions through the fall of 2002 and died in spring of 2004.

Over the first 25 seasons of banding, BBBS recorded 17,769 captures, representing 76 species in 364 days of banding for an average of 48.8 birds per day (Appendix 1). Of these, 12,681 birds (72%) were hatch year birds. Less than 3% were of an indeterminate age, and 25% were identified as AHY (after hatch year), either as a second year bird or after second year (Figure 3). During fall migration banding, hatch year birds are consistently more abundant than adults because after the summer breeding season, many HY birds have fledged and survived to this point in migration and therefore outnumber surviving adults. The data collected here is in congruence with Ralph (1981), who reported ratios of adults to juveniles in migrating flocks of passerines.

Tennessee Warblers (*Oreothlypis peregrina*–TEWA) were the most abundant species banded over the years, comprising almost 50% of all birds banded, and ranged in average daily captures from nearly 3 per day in 1986 to nearly 70 per day in 2002 (Table 1).

Table 1 - Tennessee Warbler Banding Data with Number of Days Banded per Year

Year	Total	Banding Days	Birds/Day
1979	54	6	9.00
1980	17	4	4.25
1981	21	3	7.00
1982	31	4	7.75
1983	16	3	5.33
1984	279	11	25.36
1985	205	14	14.64
1986	35	13	2.69
1987	173	15	11.53
1988	403	16	25.19
1989	219	16	13.69
1990	309	14	22.07
1991	121	12	10.08
1992	196	17	11.53
1993	167	21	7.95
1994	124	20	6.20
1995	247	15	16.47
1996	261	19	13.74
1997	447	22	20.32
1998	687	19	36.16
1999	437	19	23.00
2000	632	26	24.31
2001	538	19	28.32
2002	1658	24	69.08
2003	1321	31	42.61

The data here reflect various time periods which may or may not have been outside of the peak migration period for Tennessee Warblers. In particular, the early years reflected time periods that almost certainly preceded the peak Tennessee Warbler migration, which, in general, has been from the second to third week of September (dependent on the weather). This information is reflected in the raw data (not presented here).

The second and third most abundant species were Black-throated Blue Warblers (*Dendroica caerulescens*) and Cape May Warblers (*Setophaga tigrina*), with each comprising

between 10% and 11% of total captures. Cape May Warblers were particularly notable in their rate of decline. They initially were nearly 75% as abundant as Tennessee Warblers, but over the years declined to one of the least captured species in some years (Figure 2). This is a decline that is also noted by the Cornell Lab of Ornithology on its species page (https://www.allaboutbirds.org/guide/Cape_May_Warbler/lifehistory). Despite a nearly 79% decline over the time period from 1966-2010, they are still considered to be common and a species of least concern. In general, Tennessee Warblers and Cape May Warblers are considered to be spruce budworm specialists. Venier et. al. (2009) cites numerous authors' works supporting this. Control of spruce budworm populations may explain the population decline of the Cape May Warblers but, seemingly, did not affect Tennessee Warbler populations. Holmes et. al. (2009) suggest that both species populations are slower to respond to changes in spruce budworm populations than other species, and that Cape May Warbler populations may decline quickly due to both feeding and nesting preferences for the tops of trees that die out following spruce budworm infestation. One study suggested that Tennessee Warblers populations may benefit from spruce budworm outbreaks, but because of their larger overall breeding range across Canada, they are not as apt to experience notable declines due to lack of spruce budworm (Venier and Holmes 2010).

Black-throated Blue Warbler numbers seem to be much more stable, experiencing gains and declines more likely due to the idiosyncrasies of the banding periods than to real increases or declines in population. If anything, there seems to be a slight increase across the period. Early in the migratory period, captured Black-throated Blue Warblers are likely local dispersers, but later in the season they are perhaps more often migrants from points north. We learned in the early years of banding that late season males could appear very much like adults, especially those from the more northerly populations of the Cairn's race, which usually has extensive black streaking on the back. When these birds began arriving we knew aging would rely on skulling more so than the early arriving Black-throated Blue Warblers that would have a remnant of juvenile green feathers in the back.

All in all, 28 species of wood warblers occurred over the period. This is all but 13 of the species recorded for the entire state of Tennessee. Of those not encountered, Louisiana Waterthrush (*Parkesia motacilla*) and Yellow Warbler (*Setophaga petechia*) are notably absent, as they both breed in good numbers in relative proximity to the mountain, albeit generally at lower elevations and near water. Swainson's Warbler (*Limnothlypis swainsonii*) is also a local breeder, but is relatively uncommon, generally sticking to the rhododendron thickets along mountain streams. Four warbler species that were not encountered are considered accidental in the state of Tennessee. These statistics highlight the importance of the area to what many consider our most beautiful migratory species.

Among local birds, the Slate-colored Junco (*Junco hyemalis*) tops the list at about 5% of all birds banded. Juncos were very likely to be resident individuals from the direct vicinity of BBBS, especially early in the banding season. It is also likely, though, that late in the season some of the Juncos were short-distance migrants from populations to the north. Abundance of Eastern Towhee (*Pipilo erythrophthalmus*) is not likely accurately reflected. This species was abundant in the vicinity. Its low numbers were probably a reflection of their habit of ground dwelling making capture difficult.



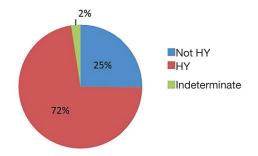


Figure 3 – Distribution of banded birds by age class from Big Bald Banding Station, 1979 – 2003.

Though not reported in full here, many birds, especially Tennessee Warblers, were recorded as recaptures within years over a period of as much as 10 days. The abundance of cover and food availability make this a good long term stopover site during migration when weather conditions dictate a longer stay. There were a few instances of recaptures across years for some of the more abundant migrants and more still, as would be expected, for local birds, especially Slate-colored Juncos.

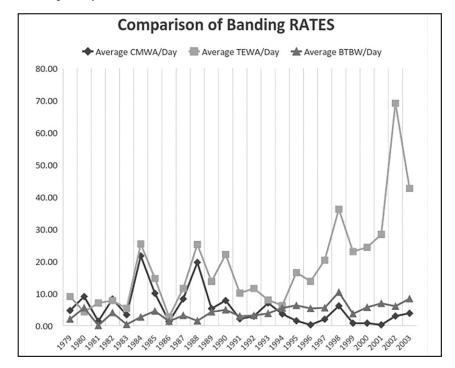


Figure 4. The figure shows the discrepancy between the banding rates of Cape May Warblers (CMWA) and Tennessee Warblers (TEWA) in the later years of the station's operation. The early years through 1983 probably reflect few days banded and are not likely meaningful data. After 1984, however, the numbers reflect longer banding periods within years and

clearly show a decline in bandings of Cape May Warblers. This is interesting in that both species occupy similar niches and habitats, though the Tennessee is slightly more of a generalist. Black-throated Blue Warbler (BTBW) bandings seem to have been on a slow, slight, steady, but perceptible increase across the period.

Acknowledgements

Big Bald Banding Station has provided a wealth of data about the birds that migrate along the ridges of the southern Appalachians. It has also provided the benefit of education (see Photo below) to passersby and visitors as well as bird enthusiasts, students and researchers. Attention has been drawn to the plight of our migratory birds as habitat degradation and destruction threaten their existence. It continues to do all that today and has added a raptor banding project - Southern Appalachian Raptor Research - and a breeding season MAPS (Monitoring Avian Productivity and Survivorship) station all currently under the direction of Mark Hopey. This effort has been entirely staffed and coordinated by volunteers and as such represents a major citizen science undertaking. The passionate concern for the birds of Tennessee fostered by years of intimate association with the Tennessee Ornithological Society inspired Dr. Mayfield to undertake this project. His wife Cleo and their children and grandchildren continue to take an active role and interest in its operation. There is no way to offer thanks to all the people who have made this possible so I will simply say thanks to family and friends who made so many trips to Big Bald fun. Thanks also to the US Forest Service offices of the Pisgah and Cherokee National Forests for both financial and logistical support over the years. Information about the station can be found at www. bigbaldbanding.org. Data inquiries for the first 25 years and for 2004-2012 can be directed to the author at radaves@gmail.com.



The author, with three of his students from East Rutherford High School, removing a bird from one of the mist nets at Big Bald Banding Station.

LITERATURE CITED

Holmes, S.B. and C. J. Sanders. 2009. Changes in a forest bird community during an outbreak cycle of the spruce budworm in Northwest Ontario. Bird Populations 9:13-28.

Ralph, C.J. 1981. Age ratios and their possible use in determining autumn routes of passerine migrants. Wilson Bull., 93(2):164-188.

Venable, N.J. 1996. Bird Banding Station. West Virginia Renewable Resources Unique Area Series 813, page 8. West Virginia University Extension Service, Romney, West Virginia.

Venier, L. A., J. L. Pearce, D. R. Fillman, D. K. McNicol, and D. A. Welsh. 2009a. Effects of spruce budworm (*Choristoneura fumiferana* (Clem.)) outbreaks on boreal mixed-wood bird communities. *Avian Conservation and Ecology* - Écologie *et conservation des oiseaux* 4(1): 3. [online] URL: http://www.ace-eco.org/vol4/iss1/art3/

Venier, L.A. and S.B. Holmes. 2010. A review of the interaction between forest birds and eastern spruce budworm. NRC Research Press Web site at er.nrc.ca on 14 July 2010.

Appendix 1 summarizes birds banded both by numbers and by percentage of all birds banded. Birds not known to occur outside of the migratory season in the vicinity of Big Bald are marked with an asterisk (*).

Species	Number banded	% of Total
*Tennessee Warbler	8598	48.388
Black-throated Blue Warbler	1905	10.721
*Cape May Warbler	1840	10.355
Slate-colored Junco	939	5.284
*Swainson's Thrush	834	4.694
*Magnolia Warbler	441	2.482
*Bay-breasted Warbler	314	1.767
Blue-headed Vireo	310	1.745
Blackburnian Warbler	308	1.733
Chestnut-sided Warbler	258	1.452
Ovenbird	254	1.429
American Redstart	192	1.081
*Western Palm Warbler	186	1.047
Black and White Warbler	168	0.945
*Ruby-crowned Kinglet	149	0.839
Black-throated Green Warbler	132	0.743

Red-eyed Vireo	122	0.687
Rose-breasted Grosbeak	113	0.636
Hooded Warbler	77	0.433
*Nashville Warbler	57	0.321
Veery	55	0.310
Scarlet Tanager	39	0.219
Sharp-Shinned Hawk	35	0.197
Eastern Towhee	33	0.186
Eastern Tufted Titmouse	30	0.169
*Philadelphia Vireo	26	0.146
Worm-eating Warbler	21	0.118
Red-breasted Nuthatch	20	0.113
Wood Thrush	20	0.113
Golden-crowned Kinglet	19	0.107
Eastern Phoebe	18	0.101
Carolina Chickadee	17	0.096
Eastern Wood-Pewee	15	0.084
Golden-winged Warbler	14	0.079
*Gray-cheeked Thrush	14	0.079
*Myrtle Warbler	14	0.079
Common Yellowthroat	12	0.068
Blue Jay	11	0.062
*Blackpoll Warbler	10	0.056
Yellow-throated Vireo	10	0.056
Gray Catbird	9	0.051
American Goldfinch	8	0.045
Canada Warbler	8	0.045
*Wilson's Warbler	8	0.045
Indigo Bunting	7	0.039
*Yellow-bellied Flycatcher	7	0.039
Yellow-bellied Sapsucker	7	0.039
Cooper's Hawk	6	0.034
Kentucky Warbler	6	0.034
Lincoln's Sparrow	6	0.034
Blue-winged Warbler	5	0.028

Hairy Woodpecker	5	0.028
*Orange-crowned Warbler	5	0.028
Northern Parula	5	0.028
American Robin	4	0.023
Cedar Waxwing	4	0.023
Downy Woodpecker	4	0.023
*Northern Waterthrush	4	0.023
Yellow-Billed Cuckoo	4	0.023
Least Flycatcher	3	0.017
Peregrine Falcon	3	0.017
Carolina Wren	2	0.011
House Wren	2	0.011
Pine Siskin	2	0.011
Prairie Warbler	2	0.011
White-eyed Vireo	2	0.011
Winter Wren	2	0.011
Acadian Flycatcher	1	0.006
Black-billed Cuckoo	1	0.006
Broad-winged Hawk	1	0.006
*Connecticut Warbler	1	0.006
*Gray-Cheeked/Bicknell's Thrush		
Complex	1	0.006
*Merlin	1	0.006
Northern Saw-whet Owl	1	0.006
Red-tailed Hawk	1	0.006
Summer Tanager	1	0.006
Total Birds Banded	17769	100

EDITOR'S NOTE: ONE HUNDRED YEARS AND THE CELEBRATION OF CITIZEN SCIENCE

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In the early 1900's a great awakening was sweeping across the nation. Americans were realizing that the natural resources of this vast continent were not limitless, and they were starting to act to conserve it. Theodore's Roosevelt's aggressive conservation agenda was being implemented, and the first national wildlife refuges for the protection of birds were established. John Muir was promoting the importance of wilderness while Gifford Pinchot was laying the foundation for sustainable forestry. Both of their wilderness and forestry philosophies would be accommodated on the nation's rapidly growing public land base. The Christmas Bird Count was replacing the annual killing of birds on Christmas Day, thanks to a newly formed organization, the National Audubon Society, and by 1916 the Migratory Bird Treaty Act was signed for international protection of birds.

It was in the context of these national events that the Tennessee Ornithological Society (TOS) was founded in 1915. The idea of a bird study organization for the state captured the energy and imagination of people from all walks of life; those who shared an enthusiasm for birds, bird study and outdoor adventure that ranged from their backyards to the state. In the following years, thanks to the observations of this small group of people, the body of knowledge about Tennessee's birdlife grew rapidly.

Today the TOS still calls to people from all walks of life that share an enthusiasm for birds, bird study and the outdoors. The body of knowledge about Tennessee's birdlife continues to grow. Outlets for sharing observations and information, however, have changed dramatically over the decades. In recent decades members of TOS have been active in Breeding Bird Surveys and Christmas Bird Counts, volunteered at banding stations, collected birds at tower and window kills, documented range extensions and irruptions by reporting rare birds, watched feeders for backyard bird studies, hiked miles to assist bird research projects and much more. Individual observations while out birding can be submitted instantaneously via smartphones to eBird. *The Migrant* publishes bird studies, seasonal observations, and bird notes unique to Tennessee.

Bird conservation has always relied heavily on observations provided by the "citizen scientist". Population trend, timing of nesting and migration, habitat suitability, and range expansion or contraction are only a few examples of important information that helps drive conservation actions. In the 2015 issues of *The Migrant*, articles will focus on the contribution of citizen science and the rich history of the TOS. As a result, readers will notice several changes in the 2015 issues, most of which are temporary. Our normal guidelines are relaxed to allow for a more personal style of writing so to document TOS history as well as the results of studies across the state. The cover art has been changed to

reflect the first cover used on *The Migrant* in 1930. The Season report will not appear in the June issue in order to give more space to the TOS spring meeting, but also to give regional compilers more time to collect records between seasons.

I express my gratitude to the many people who contribute to the 100 year anniversary of TOS, of which there are too many to mention here. Most importantly, I thank those citizen scientists who continue to contribute their observations, and their time compiling that information, that add to the body of knowledge about Tennessee's bird life and drives valuable conservation efforts.

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CANNIBALISM OF AN ADULT RED-TAILED HAWK

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On 6 November 2011 at approximately 1500 we observed and photographed an adult Red-tailed Hawk (*Buteo jamaicensis*) feeding on a large bird (Figure 1). The birds were on the ground in a winter wheat (*Triticum aestivum*) field in the southeast corner of Obion County, Tennessee, approximately 50 m from Crockett Road where we observed from our vehicle. We initially noticed an adult Red-tailed Hawk standing on the ground and plucking white feathers from another bird. Dozens of white feathers were visible against the green background of the wheat plants that were approximately 8-10 cm tall and blocked our view of the bird being consumed. The hawk continued removing feathers and feeding on the other bird as we moved our vehicle several times to get different viewing angles. We departed without flushing the hawk or identifying the bird it was eating.

At 1830, TDP returned to the site and found, in addition to scattered white feathers, the head, wings, feet and legs, and much of the mid-body skeleton of a Red-tailed Hawk. Virtually no muscle remained on the sternum or the other large bones. Rusty rectrices with indistinct bands and distinct black and white tips indicated the bird was an adult.

Red-tailed Hawks prey primarily on small to medium sized mammals, birds, and reptiles, but they commonly feed on carrion (Preston and Beane 2009), such as the beaver (*Castor canadensis*) carcasses where we photographed two Red-tailed Hawks, one adult and one juvenile, in Weakley Co., TN, in February, 2009.

We do not know the cause of death for the hawk we observed being eaten. The absence of any evidence of scavengers in the vicinity of the dead bird, the presence of hydrated flesh on the skeleton, and the absence of tissues on the plucked feathers support the hypothesis that the hawk had died shortly before it was consumed (Hygnstrom and Craven 2005). We found no evidence (but could not rule out the possibility) that the dead hawk died from gunshot injuries or as a result of collision with an automobile, both of which are causes of

raptor mortality near roads (TDP, personal observation). Numerous other causes of death are possible, including disease, parasites, and predation by another raptor. We have not observed, and are not aware of any published accounts of anyone else observing, a wild (i.e., not in captivity) adult Red-tailed Hawk attack and kill another wild adult Red-tailed Hawk. Clevinger and Roest (1974) described cannibalism of an adult Red-tailed Hawk that they suspected, but could not prove, was killed by the other adult Red-tailed Hawk.

Cannibalism of nestlings has been reported numerous times in various raptor species (Terres 1991), but cannibalism involving only adults apparently occurs less frequently. Preston and Beane (2009) noted that cannibalism by Red-tailed Hawks "may occasionally occur," but they cited only three references, the most recent being Steffen (1977) who reported cannibalism of an adult at a nest. In a survey of back issues of *The Migrant*, we found no references to cannibalism by Red-tailed Hawks in Tennessee. We conclude (based primarily on an absence of evidence from published literature, which may or may not be reliable) that cannibalism of adult Red-tailed Hawks is either rare or rarely observed and reported.



Figure 1. Red-tailed Hawk feeding on a large bird in Obion County, Tennessee.

Literature Cited

Clevinger, G. A., and A. I. Roest. 1974. Cannibalism in Red-tailed Hawk. Auk 91:639.

Hygnstrom, S. E., and S. C. Craven. 2005. Internet Center for Wildlife Damage Management: Hawks and Owls. Retrieved from: http://icwdm.org/handbook/birds/HawksOwls.asp

Preston, C. R., and R. D. Beane. 2009. Red-tailed Hawk (*Buteo jamaicensis*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu.bnaproxy.birds.cornell.edu/bna/species/052doi:10.2173/bna.52

Steffen, J. F. 1977. Cannibalism in adult nesting Red-tailed Hawks. Auk 94:593-594.

Terres, J. K. 1991. The Audubon encyclopedia of North American birds. Wings Books. New York.

THE 2014 TENNESSEE CHRISTMAS BIRD COUNT SUMMARY

by Ron Hoff 282 Hackworth Lane Clinton, Tennessee 37716

The 2014 Tennessee Christmas Bird Count (CBC) season was the 72nd consecutive compilation, and the 85th overall (no count was reported for 1943). On 30 counts, 527 observers logged 1,430 party hours and recorded 3,082,798 individuals representing 156 species. The average for the past 20 years is about 153 species and the all-time record is 163, in 2003.

Whooping Crane is a new species for the Tennessee CBC compilation. This brings the all-time total of species on Tennessee CBC's to 265 (plus 6 more count week only species). Other count highlights included Surf Scoter, Red-necked Grebe, Green Heron, Northern Goshawk, Rough-legged Hawk, Great Black-backed Gull, Long-eared Owl, Blue-headed Vireo, Northern Rough-winged Swallow (3rd record; all in the last 4 years), Black-and-white Warbler, and Harris's Sparrow. Species notably absent were Eared Grebe, Sedge Wren (the first time not recorded in 25 years), and Lincoln's Sparrow. Species recorded in unusaually low numbers included Red-breasted Nuthatches (11 outside of the Smoky Mountains), American Black Duck (lowest number recorded since 1956) and Song Sparrow (lowest number recorded in 31 years).

The following species were recorded in record or unusually high numbers for this compilation: Green-winged Teal, Canvasback (highest since 1960), Lesser Scaup, Bufflehead, Common Goldeneye (highest since 1964), Ruddy Duck, Red-breasted Merganser, Common Loon, Pied-billed Grebe, Horned Grebe, American White Pelican, Bald Eagle (3rd highest total ever), Lesser Black-backed Gull, Forster's Tern, Barred Owl, Northern Flicker, Pileated Woodpecker, Winter Wren, and American Robin (highest total since 1978).

COUNT SUMMARIES

cw = count week species (3 days before & 3 days after actual count date, but not on count day)

F/Y = feeder/yard watcher

BIG SANDY (no coordinates) - 14 December; no times given. Weather: 44-50° F. This was the inaugural Big Sandy CBC. A Great Black-backed Gull was notable. Observers: Ann Anouye, Adam Beachy, Chad Beachy, David Luth, John Noel, Bill Pulliam (compiler), Cyndi Routledge, Steve Routledge, Rick Shipkowski, Chris Sloan, Ruben Stoll, Victor Stoll, Alan Troyer, Chloe Walker, Nolan Walker, Melinda Welton, and Roy Zimmerman.

BRISTOL (36.583°, -82.1°) – 28 December; 0730-1730. Weather: cloudy with light rain all day; wind NW 0-8 mph; 45-49° F. Northern Rough-winged Swallow is a new species for this count. Ross's Goose, Barn Owl, and Gray Catbird are notable. Observers: Rob Biller,

Ron Carrico, Mary Clark (F/Y), Ruth Clark (F/Y), Wallace Coffey, Rack Cross, Clancy Deel, Sam Evans, Kevin Hamed, Victoria Hanson, Ron Harrington, Tom Hunter, Heather Jones, Rick Knight, Roy Knispel, Richard Lewis (compiler), Angela May, Larry McDaniel, Tom McNeil, Cathy Myers, Chris O'Bryan, Will Pollard, and Zac Poulton.

BUFFALO RIVER (35.3°, -87.467°) – 15 December; 0600-1700. Weather: clear in the morning and cloudy in the afternoon; wind SW 0-15 mph; 34-58° F. Brewer's Blackbird was noteworthy. Observers: Jud Johnston, Frances Markine, Gary Markine, Warren Massey, Royce Neidert, Bill Pulliam, Damien Simbeck (co-compiler), and Don Simbeck (co-compiler).

CADE'S COVE (35.6°, -83.833°) – 28 December; 0630-1730. Weather: light to moderate rain fell until early afternoon; 45-53° F. Observers: Jean Alexander, Mark Armstrong, Warren Bielenberg, Wanda DeWaard, Bob Haralson, Paul Hartigan, Boyd Hopkins, Joy Hopkins, Tom Howe, Susan Hoyle (compiler), David Johnson, Kristine Johnson, Tony King, Ron Oliver, Logan Rosenberg, Martha Rudolph, Robin Voorhis, Keith Watson, and June Welch.

CHATTANOOGA (35.1°, -85.233°) – 20 December; 0530-1830. Weather: Cloudy in the morning, turning partly clear in the afternoon; Wind 0-3 mph; 32-52° F. Blue-headed Vireo was a new species for this count. Observers: David Aborn, Tim Baker, Nelson Bennett, Harold Birch, Gary Brunvoll, Kevin Calhoon (compiler), John Dever, John Diener, Kay Florello, Danny Gaddy, Lizzie Goodrich, Bill Haley, Dennis Harris, Daniel Jacobson, Starr Klein, Gary Lanham, Pixie Lanham, Jonnie Sue Lyons, Barbara McMahan, Mike McMahan, Sally Michaul, David Patterson, Tommie Rogers, Jeff Schaarschmidt, Susan Schott, David Spicer, Scott Spicer, Carl Swafford, Cynthia Wilkerson, Jimmy Wilkerson, and Libby Wolfe.

CLARKSVILLE (36.5°, -87.383°) – 4 January; 0700-1645. Weather: cloudy with some light rain all day; wind SW 9-20 mph; 24-61° F. Two Cackling Geese were noteworthy. Observers: John Beasley, Kathy Dewein, Mike Dinsmore, Kevin Fitch, Elaine Foust, Joe Hall, Deborah Hamilton, Steve Hamilton, Nita Heilman, Wes Legge, Gloria Milliken, Daniel Moss (compiler), Whitney North, Cyndi Routledge, Jo Anne Routledge, Larry Routledge, Steve Routledge, Joe Schiller, Sally Schiller, Paul Schwab, Rick Shipkowski, Barbara Wilbur, Corinne Wilder, and Stefan Woltmann.

COLUMBIA (35.6°, -87.167°) – 20 December; 0500-1900. Weather: cloudy all day; wind 1-4 mph; 28-44° F. Observers: Tommy Edwards (compiler) and William Jernigan.

COOKEVILLE (36.15°, -85.467°) – 14 December; 0510-1700. Weather: cloudy; wind SW 0-15; 35-50° F. Observers: Sharon Brines, Wally Brines, Douglas R. Bruce, Daniel L. Combs, Douglas A. Downs, Ginger K. Ensor, Melinda S. Fawver, Janie C. Finch, Richard C. Finch, Linda Henderson, Merritt Ireland, Nancy S. Layzer, Edmund K. LeGrand, Mac McWhirter, Susan McWhirter, Susan E. Pirolo, Stephen J. Stedman (compiler), and Carol D. Williams.

CROSSVILLE (35.862°, -85.018°) – 23 December; 0500-1700. Weather: cloudy with some fog and drizzle in the morning, rain in the afternoon; wind SSE 5-12 mph; 49-54° F. Observers: Brad Beatty, Nan E. Beesley, Chester Bush, Douglas A. Downs, Annell S. Fields, Edmund K. LeGrand (compiler), Harry E. LeGrand, Joseph Mast, DJ Stanley, Stephen J. Stedman, and Ruben J. Yoder.

DeKALB COUNTY (36.02°, -85.83°) – 18 December; 0515-1630. Weather: overcast with light rain in the morning, clearing in the afternoon; 29-40° F. Observers: Richard Connors, Tommy Curtis, Virginia Curtis, Douglas A. Downs, Judy C. Fuson (co-compiler), Michael J. Hawkins, Nancy S. Layzer, Edmund K. LeGrand, Mac McWhirter, Susan McWhirter, Gail Miller, Mark Taylor, and Carol D. Williams (co-compiler).

DUCK RIVER (35.533°, -86.9°) - 3 January; 0200-1700. Weather: cloudy with heavy rain and wind in the afternoon; 51-59° F. Surf Scoter and Blue-gray Gnatcatcher are highlights. Observers: Adam Beachy, Chad Beachy, Evan Beachy, Jubal Beachy, Judith Beachy, Malon Beachy, Martha Beachy, Nathan Beachy, Rose Beachy, Ruthanna Beachy, Seth Beachy, Victor Beachy, Hannah Gammon, Hope Molner, Joanna Molner, Simeon Molner, Jericho Pershing, Bill Pulliam, James Schrock, Leo Schrock, Sharon Schrock, Joshua Stevenson, Ruben Stoll (compiler), Victor Stoll, Alan Troyer, and Leona Troyer.

ELIZABETHTON (36.333°, -82.123°) – 14 December; 0530-1700. Weather: clear before daybreak, then cloudy all day; wind W 5-10 mph; 20-40° F. Observers: Fred Alsop, Jim D. Anderson, Jerry Bevins, Kevin Brooks, Melissa Campbell, Thomas Clay, Gilbert Derouen, Glen Eller, Harry Lee Farthing, Jacki Hinshaw, David Kirschke, Rick Knight (compiler), Roy Knispel, Vern Maddux, Joe McGuiness, Tom McNeil, Charles Moore, Cathy Myers, Kathy Noblet, Brookie Potter, Jean Potter, Brian Rovira, Bryan Stevens, Kim Stroud, and Gary Wallace.

FAYETTE COUNTY (35.2°, -89.42°) – 18 December; 0645-1545. Weather: light rain, then overcast; 35-45° F. Common Yellowthroat and Brewer's Blackbird were notable. Observers: Ginny Bell, Lillian Durand, Fields Falcone (co-compiler), Kate Gooch (co-compiler), Ron Harbin, Van Harris, Kay Lait, Gaynell Perry, Dick Preston, Agnes Stark, Allen Trently, Martha Waldron, and Dick Whittington.

FRANKLIN/COFFEE COUNTIES (35.302°, -86.057°) – 15 December; 0200-0500; 0600-1600. Weather: clear; wind SW 0-10 mph; 30-60° F. Observers: Dwain Adams, Joyce Adams, Larry Bowers, Lois Bruner, Jonathon Carpenter, Laura Carpenter, Jim Harwell, Rachel Harwell, Janet Hill, John Lamb, Ruth Luckado, Kerry Syler, and Lisa Trail. Non-participating compiler: LouAnn Partington.

GREAT SMOKY MOUNTAINS N. P. (35.717°, -83.483°) – 20 December; no times given. Weather: cloudy with a trace of rain; wind 7-9 mph; 37-43° F. Observers: Ruth Barber, Tiffany Beachy, Warren Bielenberg (compiler), Wanda DeWaard, Troy Evans, Daniel Geleynse, Julianne Geleynse, Shawn Hatmaker, Tom Howe, Susan Hoyle, Kristine Johnson, Carey Jones, Tony King, Andrea Kupfer, Herb Kupfer, Becky Nichols, Ron Oliver, Joni Renner, Logan Rosenberg, Milly Rosenberg, Martha Rudolph, Kendra Straub, Andy Troutman, Debbie Troutman, Jeff Troutman, and Keith Watson.

HICKORY-PRIEST (36.2°, -86.667°) – 1 January; 0530-1730; 2215-2359. Weather: cloudy; 26-40° F. Ross's Goose, Lesser Black-backed Gull, and Blue-gray Gnatcatcher are new species for this count. Northern Goshawk is also notable (2nd record). Observers: Jim Arnette, Kristy Baker, Anne Choquette, Richard Connors (compiler), Michael Daniel (F/Y), Jerry Drewry, Richard Fox, Tarcila Fox, Mark Hackney, Joe Hall, Bob Ingle, Cyndi

Routledge, Steve Routledge, Chris Sloan, Mike Smith, Josh Stevenson, Joe Stone, Chloe Walker, and Nolan Walker.

HIWASSEE (35.367°, -84.9°) – 3 January; 0600-1700. Weather: cloudy with light rain; 45-52° F. Observers: David Aborn, Nelson Bennett, Harold Birch, John Dever, John Diener, Lisa Flores, Lizzie Goodrich, Starr Klein, Charles Murray, Tommie Rogers, Jeff Schaarschmidt, Cynthia Wilkerson, Jimmy Wilkerson, and Libby Wolfe. Non-participating compiler: Kevin Calhoon.

JACKSON (35.617°, -88.817°) – 3 January; 0630-1730. Weather: cloudy with light rain; wind SW 10-15 mph; 41-63° F. Lapland Longspurs are noteworthy. Observers: Charlie Barnett, Elizabeth Barnett, Phyllis Fawcett, Bob Ford, Mark Greene (compiler), Beth Peterson, Jennifer Smith, Mike Todd, and Allen Trently.

KNOXVILLE (35.917°, -84.083°) – 3 January; 0630-1730. Weather: cloudy with rain in the afternoon; wind N 0-20 mph; 42-55° F. Greater White-fronted Goose is a new species for this count. Tree Swallow and Black-and-white and Orange-crowned warblers are also notable. Observers: Jean Alexander, Stephen Lyn Bales, Robin Barrow, Doug Bruce, Billie Cantwell, Gail Clendenen, Steve Clendenen, Margaret Cumberland, Stephanie Durman, K. Dean Edwards (compiler), Rachel Elliot, Chuck Estes, Lola Estes, Melinda Fawver, Patty Ford, Cheryl Greenacre, Paul Hartigan, Tom Howe, David Howell, Susan Hoyle, James Human, David Johnson, Tony King, Edmund K. LeGrand, Denise Nauman, Charles P. Nicholson, John O'Barr, Ron Oliver, Joseph Pyle, Talissa Ralph, Jo Roy, Kelly Roy, Martha Rudolph, Elizabeth Schilling, Kurt Sickafus, Sara Stonaha, Jason Sturner, Colin Sumrall, Jimmy Tucker, June Welch, Chris Welsh, Eddy Whitson, and Corwin Witt.

MEMPHIS (35.15°, -89.933°) – 14 December; 0645-1700. Weather: clear; wind SE 1-14 mph; 42-66° F. Long-eared Owl is a new species for this count. Also notable was a Long-tailed Duck and American White Pelicans. Observers: Betty Blaylock, David Blaylock, Chad Brown, Lee Bryant, Michael Collins, Judy Dorsey, Jim Ferguson, Sue Ferguson, Van Harris, Robert Ilardi, Margaret Jefferson (compiler), Lisa Jorgensen, Keith Kunkel, Susan Maakestad, Melissa McMasters, George Payne, Gaynell Perry, Dick Preston, Ernest Restivo, Virginia Reynolds, Nancy Ridell, Stephan Schoech, Allen Sparks, Jared Swenson, Edwin Thomas, Allan Trently, Daniel Twedt, Steven Wagner, Jim Waldron, Martha Waldron, and Jay Walko.

MURFREESBORO (35.846, -86.392) - 27 December; 0600-1700. Weather: cloudy in the morning with rain in the afternoon; 30-40° F. The total for Black Vulture is a new high count for the state. Observers: Joe Hall, Mary Beth Hovies, Lyda Phillips, Scott Somershoe (compiler), Chloe Walker, Nolan Walker, Terry Witt, Jack Zipperer, and Steve Zipperer.

NASHVILLE (36.05°, -86.933°) – 20 December; 0430-1715. Weather: partly cloudy to cloudy; wind NNW 5 mph; 32-46° F. Observers: Susan Alsup, Aloshi Baker, Kristy Baker, Sasha Baker, William Baker, Melinda Bell, Sandy Bivens, Susan Bradfield, Trae Bradfield, Jean Buchanan, Ed Byrne, Margaret Cameron, Phillip Casteel, Clay Collins, Richard Connors, Deb Dreves, Bob English, Francis Fekel, Tarcila Fox, Bill Franks, John Froeschauer, Ed Gleaves, Chris Guerin, Jon Hoch, Susan Hollyday, Ann Inouye, John Kell, Trish Kittrell, Libby Knight, Margie Koehler (F/Y), Dennis Lovern, David Luth, Diana

McLusky, Michael Meister, Amy Potter, Marion Pratt, Victoria Rebeck, Cyndi Routledge, Steve Routledge, Jan Shaw (co-compiler), Kathy Shaw, Sheila Shay, Danny Shelton, Mike Smith, Josh Stevenson, Dee Thompson (F/Y), Vera Vollbrecht, LinnAnn Welch, Cindy Whitt, and Mary Zimmerman. Non-participating co-compiler: Scott Block.

NICKAJACK LAKE (35.067°, -85.517°) – 27 December; 0500-1745. Weather: cloudy with light rain in the morning, turning partly cloudy in the afternoon; 43-53° F. Marsh Wren is a new species for this count. Observers: Nelson Bennett, Harold Birch, Bob Butters, Danny Gaddy, William Haley, Tim Jeffers, Star Klein, Tommie Rogers, Jeffrey Schaarschmidt, David Spicer (compiler), Jonathan Spicer, Scott Spicer, Carl Swafford.

PERRY COUNTY (35.708°, -87.775°) - 27 December; 0415-1700. Weather: cloudy with showers in the afternoon turning to steady rain; 46-50° F. Observers: Adam Beachy, Chad Beachy, Evan Beachy, Jessikate Beachy, Mikey Beachy, Rose Beachy, Seth Beachy, Susanna Beachy, Hannah Gammon, Caleb Miller, Jericho Pershing, James Shrock, Leo Shrock, Sharon Shrock, Ruben Stoll (compiler), Victor Stoll, Alan Troyer, David Troyer, and Leona Troyer.

REELFOOT LAKE (36.417°, -89.383°) – 20 December; 0630-1730. Weather: cloudy to partly cloudy; wind NW 5-10 mph; 27-46° F. Observers: Jerry Drewry, Bob Foehring, Bob Ford, Mark Greene (compiler), Joe Hall, Rick Light, Nancy Moore, Scott Somershoe, Ruben Stoll, Joe Stone, Mike Todd, Allan Trently, and Donna Ward.

ROAN MOUNTAIN (36.106°, -82.111°) – 15 December; 0600-1645. Weather: clear; wind SE 0-10 mph; 21-56° F. Northern Goshawk is notable. Observers: Fred Alsop, Jim Anderson, Kevin Brooks, David Hall, Cristy Kendell, Rick Knight (compiler), Roy Knispel, and Brookie Potter.

SAVANNAH (35.133°, -88.15°) – 29 December; 0400-1800. Weather: mostly cloudy all day; wind NW 0-5 mph; 31-39° F. Observers: Dwight Cooley, Jeff Garner, Marcus Johnson, Jud Johnson, Frances Markine, Gary Markine, Warren Massey, Joe Mast, Bill Pulliam, Damien Simbeck (compiler), and Ruben Stoll.

SHADY VALLEY – MOUNTAIN CITY (36.5°, -81.85°) – 1 January; 0615-1600. Weather: clear to cloudy; wind N 0-15 mph; 13-42° F. Ross's Goose and American Coot are new species. Observers: Robert Biller (co-compiler), Ronald Carrico, Rack Cross, David Kirschke, Rick Knight, Roy Knispel, Richard Lewis, Joe McGinnis, Thomas McNeil, Cathy Meyers, and Kim Stroud.

WARREN COUNTY (35.667°, -85.767°) – 3 January; 0445-1645. Weather: cloudy with scattered light rain; wind 5-15 mph; 52-61° F. Gray Catbird is noteworthy. Observers: Judy Fuson, Gregg Garrison (compiler), Nancy S. Layzer, Mac McWhirter, Susan McWhirter, Stephen J. Stedman, and Carole Williams.

WHITE COUNTY (35.908°, -85.598°) – 20 December; 0455-1650. Weather: clear to partly cloudy; wind 0-10 mph, with gusts; 29-48° F. A Green Heron is notable. Observers: Douglas A. Downs (compiler), Janie C. Finch, Ric Finch, Tom Foster, Trevor Foster, Judy C. Fuson, Nancy S. Layzer, Edmund K. LeGrand, Allen Nabors, Kathryn Uziel, and Carol D. Williams.

2014	TENIN	IESEE	CRC
4014	LEINI	LOLL	c_{DC}

Count Names	Mem	Fay	Reel	Jcksn	Svnah	BgSndy	Dck Rvr	PerryCo	BufRiv	Clarkvl	Columb	Nash	Hck-Prst	Mfrboro
Species														
Greater White-fronted														
Goose	1	-	6479	-	2	473	891	-	7	-	-	-	-	-
Snow Goose	652	-	18130	-	8	40	3	-	1	-	-	-	-	-
Ross's Goose	4	-	11	-	-	16	-	-	2	-	-	-	1	-
Cackling Goose	-	-	-	-	-	29	30	-	-	2	-	-	-	-
Canada Goose	395	26	25	62	59	673	547	1	289	71	61	133	286	181
Mute Swan	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Wood Duck	15	5	1	7	19	4	37	21	4	-	5	1	13	4
Gadwall	378	40	232	10	140	7529	2179	14	-	61	15	21	259	20
American Wigeon	-	-	-	1	2	1470	855	12	-	-	-	1	27	-
American Black Duck	-	-	1	-	-	44	33	-	-	-	-	2	3	-
Mallard	172	5	1198	10	22	44202	1	46	14	44	60	74	306	101
Blue-winged Teal	-	-	-	-	-	-	9	-	-	-	-	-	-	-
Northern Shoveler	153	-	94	1	37	19	173	-	-	-	12	8	110	30
Northern Pintail	-	-	51	-	9	114	1214	85	-	-	-	-	-	1
Green-winged Teal	4	-	26	-	6	8232	1053	-	-	1	15	7	19	-
Canvasback	26	-	114	-	13	695	1135	-	-	-	-	-	-	-
Redhead	-	-	11	-	1	12	3	-	-	-	-	-	4	-
Ring-necked Duck	76	-	5	-	95	777	82	-	-	1	126	142	108	-
Greater Scaup	1	-	1	-	3	39	16	-	-	-	-	-	-	-
Lesser Scaup	143	-	8953	-	93	714	280	-	-	-	-	11	13	-
Scaup sp.	-	-	-	-	-	-	100	-	-	-	-	-	-	-
Surf Scoter	-	-	-	-	-	-	2	-	-	-	-	-	-	-
Long-tailed Duck	1	-	-	-	-	2	-	-	-	-	-	-	-	-
Bufflehead	2	-	98	-	127	366	600	-	-	-	3	55	116	-
Common Goldeneye	-	-	1	-	70	391	131	-	3	-	-	-	16	-
Hooded Merganser	214	-	196	6	-	91	112	4	7	-	-	-	94	2
Common Merganser	-	-	-	-	1	4	-	-	-	-	-	-	-	-
Red-breasted Merganser	-	-	4	-	23	509	1	-	-	-	-	-	-	-
Ruddy Duck	55	-	3755	-	1	415	11	-	5	-	-	30	86	-
Duck sp.	-	-	-	-	16	-	-	-	-	-	-	-	-	-
Northern Bobwhite	-	-	1	-	1	-	13	8	6	-	-	-	-	-
Ruffed Grouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wild Turkey	-	15	52	-	3	6	62	38	5	318	18	37	170	9
Common Loon	-	-	cw	-	39	450	2364	-	-	-	-	-	73	-
Pied-billed Grebe	28	1	99	4	306	258	3	2	5	3	2	1	91	7
Horned Grebe	-	-	33	-	73	435	-	-	2	-	-	-	292	-
Red-necked Grebe	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Double-crested Cormora	nt-	-	75	-	9	-	1358	2	-	-	1	2	-	-
American White Pelican		-	670	-	-	-	34	-	-	-	-	-	-	-
Great Blue Heron	28	3	14	4	83	56	90	34	9	23	12	15	58	5
Great Egret	-	-	-	-	-	-	14	-	-	-	-	-	1	-
-														

Frnk/Coff DeKalb Warrn White Nick Cook Chatt Crsvlle Hiwase Knox CadeCv GSMNP Eliz RoanMt Bristol ShdyVal TOTALS

-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	7855
-	-	1	-	-	-	-	-	-	13	-	-	-	-	-	1	18849
-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	36
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61
-	19	219	334	6	397	581	450	72	986	66	35	472	-	634	232	7312
-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	3
-	4	16	7	2	8	49	18	2	4	4	-	-	-	-	-	250
7	8	51	78	6	21	114	71	15	96	-	-	-	-	48	-	11413
-	-	-	1	-	-	-	5	2	-	-	-	-	-	14	-	2390
-	-	-	-	-	2	7	24	-	cw	-	-	-	-	5	5	126
2	53	32	118	7	166	396	188	303	219	38	55	286	3	290	117	48528
-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	15
-	-	-	23	-	8	87	6	3	9	-	-	-	-	-	-	773
-	-	-	-	-	1	-	-	6	3	-	-	cw	-	-	-	1484
-	4	-	1	-	2	139	-	176	4	-	-	-	-	4	-	9693
-	-	-	-	312	-	-	55	204	-	-	-	-	-	-	-	2554
-	-	-	8	19	-	7	115	-	1	-	-	-	-	-	-	181
-	-	46	145	139	6	20	698	10	56	42	-	2	-	61	-	2637
-	-	-	-	-	-	1	-	6	-	-	-	-	-	-	-	67
-	-	-	-	114	-	135	4	1	10	-	-	-	-	-	-	10471
-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	102
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
-	12	-	27	45	5	38	533	3	18	14	-	223	12	52	-	2349
-	-	-	-	2	1	11	-	-	2	-	-	cw	-	-	-	628
7	9	25	35	3	42	30	164	251	33	-	-	12	4	47	10	1398
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
-	-	-	-	-	-	1	6	-	-	-	-	-	-	-	-	544
-	-	-	-	35	6	18	155	-	3	-	-	-	-	3	-	4578
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
-	2	-	-	-	20	-	-	-	-	-	-	-	-	-	-	51
-	-	-	-	-	-	-	-	-	-	-	2	cw	cw	-	-	2
-	27	48	35	9	108	11	8	43	3	124	81	106	7	161	86	1590
41	44	-	1	4	-	85	3	-	1	-	-	2	-	-	-	3107
34	36	8	9	129	16	552	58	59	109	14	-	10	2	38	-	1884
900	231	-	-	10	2	131	2	-	3	-	-	8	-	110	-	2232
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
3	-	-	-	209	-	39	-	49	46	-	-	-	-	-	-	1793
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	710
9	20	4	14	31	19	84	10	77	166	6	4	21	3	22	4	928
-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	17

Count Names	Mem	Fay	Reel	Jcksn	Svnah	BgSndy	Dck Rvr	PerryCo	BufRiv	Clarkvl	Columb	Nash	Hck-Prst	Mfrboro
Green Heron Black-crowned Night-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heron	_	_	_	_	_	_	_	_	-	_	_	_	26	_
Black Vulture	1	128	87	2	71	11	13	59	54	446	26	203	116	1000
Turkey Vulture	30	109	41	7	238	67	31	148	93	266	-	15	9	43
Bald Eagle	1	-	56	_	14	29	50	10	1	5	_	1	6	-
Northern Harrier	4	2	17	_	16	3	14	2	3	3	_	2	1	1
Sharp-shinned Hawk	3	-	1	1	2	1	3	2	1	4	1	5	1	3
Cooper's Hawk	8	2	3	1	2	5	6	2	3	3	1	8	6	3
Northern Goshawk	-	-	-	-	_	-	-	_	-	-	1	-	1	-
Accipiter sp.	-	-	-	-	-	-	_	-	-	-	-	-	-	-
Red-shouldered Hawk	28	12	11	7	11	24	9	17	8	5	1	5	2	1
Red-tailed Hawk	42	29	48	11	40	24	39		20	17	3	32	13	
								28						10
Rough-legged Hawk	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Buteo sp.	-	-	-	-	-	-	-	-	-	2	-	-	-	-
Golden Eagle	-	-	1	-	1	-	1	1	-	-	-	-	-	-
Virginia Rail	-	-	-	-	2	-	-	-	-	-	-	-	-	-
American Coot	52	-	18	-	513	5730	983	-	-	-	-	-	353	-
Sandhill Crane	-	-	7	-	-	11	13	-	-	-	-	-	-	-
Whooping Crane	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Killdeer	235	60	1101	25	230	9	20	60	20	67	-	35	52	18
Dunlin	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Least Sandpiper	-	-	14	-	-	-	-	-	-	-	-	-	-	-
Wilson's Snipe	-	-	5	-	13	1	11	4	3	6	48	-	5	-
American Woodcock	-	-	1	-	9	1	2	2	3	-	1	8	6	1
Bonaparte's Gull	1	-	602	-	91	957	161	88	-	-	-	-	150	-
Ring-billed Gull	119	-	6997	-	2890	5008	2149	45	-	7	-	1	4233	3000
Herring Gull	-	-	4	-	35	89	44	-	-	-	-	-	13	21
Lesser Black-backed Gul	1 -	-	-	-	3	1	-	-	-	-	-	-	1	-
Great Black-backed Gull	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Gull sp.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Forster's Tern	-	-	-	-	-	7	4	-	-	-	-	-	-	-
Rock Pigeon	343	9	532	663	148	4	147	20	65	148	91	241	142	68
Eurasian Collared-Dove	69	4	9	2	23	-	8	2	7	-	1	2		4
Mourning Dove	362	121	314	105	535	178	73	201	407	229	10	106	78	170
Barn Owl	-	_	-	-	-	-	1	-	-	-	-	-	-	-
Eastern Screech-Owl	_	-	1	1	6	4	2	2	2	_	-	5	2	6
Great Horned Owl	-	-	11	1	6	13	6	2	_	1	-	1	-	2
Barred Owl	3	1	18	6	5	5	9	5	3	4	_	4	5	-
Long-eared Owl	1	_	_	_	_	_	_	_	_	_	_	_	_	_
Short-eared Owl	_	_	4	_	1	_	_	_	_	_	_	_	_	-
Rufous Hummingbird	_	_	_	_	-	_	_	_	_	_	_	_	_	-
Belted Kingfisher	16	3	11	7	12	18	21	7	10	10	1	16	16	3
Red-headed Woodpecke		25	46	-	88	70	18	3	20	4	-	6	cw	-
muaduooapeene	-					, ,		-		-		-	•	

	F 110 ff	D 17 II	**	Y. 71	NT: 1	0.1	G1	0 11	***	**	0.1.0	001 O VD	71.	D 16	D 1	01 1 1 1 1	mom. 1.0
01	Frnk/Coff	DeKalb	Warrn	White	Nick	Cook	Chatt	Crsvlle	Hiwase	Knox	CadeCv	GSMNP	Eliz	RoanMt	Bristol	ShdyVal	TOTALS
	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
	-	-	-	-	-	-	-	-	-	10	-	1	-	-	1	-	38
1	10	38	162	72	206	287	295	-	60	21	-	-	6	-	64	41	3479
	36	38	338	147	17	163	64	-	5	14	-	1	6	4	15	16	1961
	-	5	1	-	9	-	12	2	12	7	-	-	1	-	5	-	227
	1	2	3	3	1	2	-	3	-	1	2	-	-	-	1	-	87
	1	2	-	2	4	-	7	1	1	5	-	-	4	2	1	-	58
	2	2	1	3	4	4	5	1	-	7	2	2	9	1	4	2	102
	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2
	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
	-	5	3	13	12	20	17	7	3	10	4	1	cw	1	1	5	243
	13	35	12	54	16	36	24	5	4	24	2	3	23	7	18	19	651
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	5
	26	15	-	4	1977	54	983	525	80	3126	-	-	3	-	35	1	14478
	202	2	1	1704	-	80	121	-	11238	25	-	-	-	-	-	-	13404
	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
	230	293	10	61	12	65	50	15	145	268	12	2	3	-	8	9	3115
	-	-	-	-	-	-	-	-	25	-	-	-	-	-	-	-	25
	-	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	52
	-	6	1	31	-	1	3	24	43	6	1	-	7	-	3	-	222
	-	-	-	1	4	-	1	2	-	4	-	-	1	-	-	-	47
	300	1	-	-	61	8	335	-	7	214	-	-	-	-	-	-	2976
1	356	6	-	-	579	-	1230	2	606	2234	-	3	36	-	204	1	29706
	-	-	-	-	-	-	3	-	-	1	-	-	-	-	-	-	210
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
	-	-	-	-	-	-	-	-	-	-	-	-	- 	-	-	-	11
	12	76	54	100	109	271	1358	72	34	611	12	53	467	3	243	65	6161
	-	5	1	5	2	26	24	13	15	-	-	-	-	-	-	-	222
	118	224	311	292	170	320	535	162	218	587	37	28	282	46	370	329	6918
	-	-	-	-	-	1	-	-	-	-	-	-	- 14	-	1	-	3
	1 2	2	2 2	4	5 3	2 5	6	-	-	5	2	1	14 4	1	14	4	94
				6			2	-	-	1	-	-			5	-	73
	-	2	4	3	-	2	-	CW	1	1	2	-	1	3	-	1	88
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	5
	-	- 14	-	-	-	-	1	-	- 12	-	-	-	-	-	- 14	-	1
	-	14	3	9	18	8	25	8	12	44	2	3	17	2	14	6	336

Count Names	Mem	Fay	Reel	Jcksn	Svnah	BgSndy	Dck Rvr	PerryCo	BufRiv	Clarkvl	Columb	Nash	Hck-Prst	Mfrboro
Red-bellied Woodpecker	83	100	72	26	121	111	79	42	92	76	8	91	35	16
Yellow-bellied Sapsucker	22	14	21	5	46	20	22	24	22	16	2	36	15	4
Downy Woodpecker	68	45	50	19	57	66	45	27	25	38	11	74	25	13
Hairy Woodpecker	4	9	11	4	15	13	15	4	16	9	1	5	4	4
Northern Flicker	77	85	90	29	117	84	91	58	42	48	7	38	30	6
Pileated Woodpecker	24	19	31	4	31	44	30	28	35	17	3	19	7	1
American Kestrel	18	6	40	11	22	13	22	-	61	22	7	12	10	14
Merlin	-	-	-	-	1	1	-	-	-	-	-	-	3	-
Peregrine Falcon	-	-	cw	-	-	-	-	-	-	1	-	-	-	-
Eastern Phoebe	12	13	8	4	11	11	24	17	18	3	3	13	7	-
Loggerhead Shrike	1	-	12	-	-	-	-	-	9	-	-	-	-	-
Blue-headed Vireo	-	_	-	-	-	-	-	-	-	-	-	-	-	-
Blue Jay	141	232	37	49	314	99	75	67	134	106	16	255	79	20
American Crow	65	251	121	220	1276	142	420	845	285	173	32	281	265	56
Fish Crow	-	-	cw	2	-	-	-	_	-	-	-	-	-	-
Common Raven	-	-	-	-	-	-	-	_	-	-	-	-	-	-
Horned Lark	36	5	421	28	28	94	1	_	38	12	-	-	-	-
Northern Rough-winged														
Swallow	-	-	-	-	-	-	-	_	-	-	-	-	-	-
Tree Swallow	-	-	_	_	_	_	_	-	-	_	-	_	-	-
Carolina Chickadee	124	58	79	47	168	167	102	38	62	110	18	294	105	17
Black-capped Chickadee	-	-	_	_	_	_	_	-	-	_	-	_	-	-
Tufted Titmouse	74	91	82	45	193	134	64	51	119	92	8	219	79	12
Red-breasted Nuthatch	1	_	_	1	_	_	_	_	2	_	_	_	-	-
White-breasted Nuthatch	n 2	12	23	7	53	34	9	19	71	31	7	84	1	4
Brown-headed Nuthatch	_	_	_	_	16	_	_	_	_	_	_	9	-	-
Brown Creeper	9	3	6	2	10	7	4	3	4	3	1	_	2	2
House Wren	5	_	_	4	1	1	1	_	_	1	_	_	-	-
Winter Wren	6	13	8	6	31	26	33	13	12	2	_	3	2	1
Marsh Wren	_	2	cw	_	_	_	1	_	_	_	_	_	_	_
Carolina Wren	197	82	45	55	146	103	107	65	68	83	12	201	42	10
Blue-gray Gnatcatcher	_	_	_	_	_	_	1	_	_	-	_	_	1	_
Golden-crowned Kinglet	22	46	35	23	154	42	30	12	35	5	_	34	19	1
Ruby-crowned Kinglet	52	20	33	10	58	22	25	7	12	7	2	21	12	3
Eastern Bluebird	53	82	55	61	193	109	112	74	230	129	8	198	93	42
Hermit Thrush	25	15	20	2	79	47	12	17	22	3	8	21	14	2
American Robin		104	33	148	127	34	369	54	255	4601	422		11373	100000
Gray Catbird	-	_	-	_		-	-	-				_	-	-
Brown Thrasher	14	11	5	6	22	12	14	20	5	4	_	6	7	1
Northern Mockingbird	63	53	33	49	46	51	48	28	106	99	7	173	48	32
			23988		5370	377	869	359	2071	2312	5	7035		150000
American Pipit	3	-	10	2	60	1	31	-	23	6	-	-	1	-
Cedar Waxwing	-	185	cw	92	528	479	505	663	400	1339	_	354	731	270
Lapland Longspur	_	-	6845		1	-	-	-	-	-	_	-	-	-
Dapiana Dongopui	_	-	5045	-	1	_	_	-	_	_	_	_	-	_

01	Frnk/Coff	DeKalb	Warrn	White	Nick	Cook	Chatt	Crsvlle	Hiwase	Knox	CadeCv	GSMNP	Eliz	RoanMt	Bristol	ShdyVal	TOTALS
	9	125	30	70	28	66	69	45	19	153	24	18	46	1	35	16	1706
	-	41	9	15	23	21	36	3	12	54	7	9	10	3	4	4	520
	5	55	8	25	26	40	77	21	9	55	29	43	34	13	38	29	1070
	3	8	-	2	2	5	3	12	1	13	6	24	5	3	3	2	206
	8	90	17	45	33	48	65	33	25	57	16	9	42	5	31	20	1346
	3	41	4	16	20	25	18	16	1	18	27	54	28	7	18	13	602
	26	-	39	60	3	33	7	15	9	9	2	1	12	1	11	10	496
	1	-	-	1	-	-	1	-	-	4	-	-	-	-	-	-	11
	5	9	6	26	- 5	8	1 27	4	-	- 17	- 11	- 9	9	2	1 10	3	3
	1	cw	1	20	-	2	-	-	6	-	11	-	-	-	10	1	301 30
	-	-	-	-	-	-	1	-	-	-	-	-	_	-	-	-	1
	80	203	115	233	202	289	281	102	175	373	93	207	237	22	232	81	4549
	121	443	362	273	269	469	371	261	184	495	219	109	725	146	744	1092	10715
	-	-	-	-	-	-	1	-	-	4	-	-	-	-	-	-	7
	-	_	_	_	_	_	_	_	_	_	1	4	11	24	_	12	52
	43	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	708
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
	10	118	32	29	73	86	271	144	86	338	96	167	137	42	154	111	3283
	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	3
	12	144	45	50	100	119	183	120	66	203	90	125	74	29	110	92	2825
	-	1	-	-	-	1	-	1	-	-	-	13	-	1	1	2	24
	3	64	7	31	29	60	47	44	1	48	25	40	29	15	53	42	895
	-	-	-	-	4	4	16	-	9	21	-	-	-	-	-	-	79
	-	4	3	-	2	2	6	4	1	9	4	11	1	1	5	1	110
	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	15
	-	13	2	3	4	7	9	8	2	23	7	17 -	8	3	9	2	273
	13	100	40	44	1 59	- 89	181	- 75	- 57	- 297	51	53	- 121	25	109	- 59	4 2589
	-	-	-	-	<i>-</i>	-	-	-	-	-	- -	-	-	-	-	-	2
	-	20	7	8	13	9	48	26	27	39	28	84	17	10	29	11	834
	1	18	3	5	23	3	51	1	21	15	2	4	-	-	5	-	436
	96	154	102	172	74	260	162	112	30	318	82	31	140	16	85	77	3350
	3	40	2	17	9	5	27	13	3	33	4	11	9	1	10	7	481
0	184	614	580	121	366	120	465	47	552	3167	64	69	28	-	15	3	148293
	-	-	1	-	-	-	1	-	-	-	-	-	-	-	1	-	3
	7	6	4	4	18	17	38	9	8	11	3	1	-	-	-	-	253
	73	94	49	95	63	111	143	24	54	233	9	22	84	6	106	36	2038
0	1390	3487	3590	1107	377	3888	1719	2287	270	2329	429	248	2050	47	1877	685	357335
	47	73	-	12	-	-	-	-	99	10	-	-	-	-	-	-	378
	30	391	244	120	162	15	428	21	221	997	172	28	27	-	-	14	8416

Black-and-white Warbler	_
Orange-crowned Warbler 1	_
Common Yellowthroat - 1 3	_
Palm Warbler 1 - 1	_
Pine Warbler 9 2 - 6 12 2 1	_
Yellow-rumped Warbler 82 117 121 36 155 85 104 126 8 54 10 31 84	4
Eastern Towhee 35 74 5 29 123 126 33 21 42 58 2 73 14	7
American Tree Sparrow cw 1	_
Chipping Sparrow 6 7 3 5 150 3 21 66 1 1 - 2 -	_
Field Sparrow 27 86 15 43 225 69 35 134 233 50 2 118 36	20
Vesper Sparrow 3 6 1	_
Savannah Sparrow 98 17 47 21 146 41 10 21 17 8 2 2 4	_
Le Conte's Sparrow 2 - 1	_
Fox Sparrow 20 21 32 3 35 6 12 29 9 6 - 11 14	_
Song Sparrow 117 102 63 47 146 133 301 236 98 65 - 121 43	17
Swamp Sparrow 40 56 70 48 91 114 685 535 33 17 7 29 115	_
White-throated Sparrow 680 574 225 183 482 331 606 384 238 205 5 305 143	_
Harris's Sparrow	_
White-crowned Sparrow 43 18 64 34 2 22 22 9 56 53 - 15 111	_
Dark-eyed Junco 225 360 106 200 747 334 112 235 285 134 - 158 42	_
Northern Cardinal 309 225 228 163 332 234 182 181 179 280 28 314 106	_
Red-winged Blackbird 6799 136 7616 10208 1573 1140 6448 34 296 75 - 153 643	371
Eastern Meadowlark 63 108 150 20 216 22 113 90 131 9 2 31 9	7
Western Meadowlark 3	_
Rusty Blackbird 166 8 7 150 173 1 17 13 25 51 - 6 62	86
Brewer's Blackbird - 25 cw 40 3 2	_
Common Grackle 35095 28 2477 100000 6312 408 20065 8 909 120 12 199 18 200	00000
Brown-headed Cowbird 20 3 124 5000 191 52 146 3 5 25 - 3 384	700
Blackbird sp 500 300 200 5532 8	000
•	20
Purple Finch - 3 5 7 7 3 2 2 14 2 10	_
Red Crossbill	_
Pine Siskin 4 170 11 10 - 9 5 -	25
American Goldfinch 69 66 93 68 161 178 533 143 105 87 3 127 36	25
House Sparrow 170 2 149 46 22 27 51 75 5 68 3 8 9	14
Total individuals 64034 4291 54833 121339 26819 19521 40478 5703 7957 17860 882 36026 139922 22	64202
	64
Count Week species 7 1	-
Observers 31 13 13 9 11 16 26 19 8 20 2 50 18	10
Parties 8 6 56 5 9 - 8 6 5 7 1 12 45	2

4--5 6

4--5

Count Names	Mem	Fay	Reel	Jcksn	Svnah	BgSndy I	Ock Rvr	PerryCo	BufRiv	Clarkvl	Columb	Nash	Hck-Prst	Mfrboro
Party Hours	50	34.5	47.5	34.5	74.75	52.35	67	36	50.25	53.75	15	71.25	43.1	15
Hours by car	16	15	25.5	17	44.5	-	32	15	36.75	30.5	12	24.25	19	14
Hours by foot	34	19.5	22	17.5	30.25	-	29	21	13.5	23.25	3	47	24.1	1
Hours by boat or other	-	-	-	-	-	-	6	-	-	-	-	-	-	-
Miles by car	190	183	329	207	348.2	-	320	190	342.9	238	126	286	238.3	125
Miles on foot	37	16.5	8.5	13.5	13	-	30	23	6	17.9	3	35.5	17.65	3
Miles by boat or other	-	-	-	-	-	-	19	-	-	-	-	-	-	-
Hours Owling	1.8	-	2	0.5	4	-	-	-	0.5	-	-	3.75	4.3	2.75
Miles Owling	14.7	-	17	5	35.2	-	-	-	1.3	-	-	19	14.5	5
Feeder / yard watchers	-	-	-	-	-	-	-	-	-	4	-	-	1	-
Feeder / yard hours	-	-	-	-	-	-	-	-	-	20.5	-	-	1	-

Frnk/Coff DeKalb Warrn White Nick Cook Chatt Crsvlle Hiwase Knox CadeCv GSMNP Eliz RoanMt Bristol ShdyVal TOTALS 19.75 63.3 24 48.5 35.5 55.5 75 50.75 47 102.07 45.25 69.7 50 15.5 52.5 31.5 1430.77 19.5 21 36.5 19.5 43.25 33 29.32 15.95 24 5.5 21 45.5 36.5 28 17 24.5 721.52 0.25 17.8 3 12 16 12.25 19 72.75 28.25 53.75 26 10.5 650.9 42 14.25 10 28 6 254 367.7 203.7 375.5 230 334.1 344 235 286.3 91.5 182.5 314 76 327 209.9 7301.6 347 478.65 1 4 7 7.75 10.25 35 9.5 53.15 28 40.1 12 11 3.75 11.6 14 6 19 2 3 2 1.5 2 3 2.75 2.25 3 3.5 2.5 3.5 1.5 5 57.1 3 20.5 3 5 5 13 29.5 33 18.45 27.5 12.5 289.15 2 2 1 3 2 15

1.25

1

0.92

5

36.67

THE WINTER SEASON

Richard L. Knight, Editor



1 December 2014 - 28 February 2015

For the second straight winter, the eastern U.S. experienced conditions that were colder and with more snowfall than normal. Tennessee experienced it, too, although the full brunt of cold and snow did not arrive until mid-February. As happened last winter, the state received an influx of diving ducks that were fleeing frozen waters to our north. Particularly notable among these were White-winged Scoter (16 reports), Long-tailed Duck (7 reports), and Common Merganser (19 reports).

Loons and grebes were prominent this winter as well. Red-throated Loons occurred at four sites, and Pacific Loons occurred at three sites. Red-necked Grebes were reported at four sites, and there were single reports of both Eared and Western Grebes. Winter records of Great Egret continued their upward trend. Gull highlights this season include one adult Little, one Thayer's, an immature Iceland, two immature Great Black-backed, several Lesser Black-backed, and a rare-for-winter Franklin's. Notable raptors include two immature Northern Goshawks and numerous Golden Eagles, along with good numbers of Merlins and Peregrine Falcons. Long-eared Owls were reported at two sites.

The relatively new family *Calcariidae* provided three rarities; an individual Smith's and McCown's Longspurs occurred in northwest Tennessee, and a Snow Bunting was observed near Chattanooga. An influx of American Tree Sparrows occurred in West and Middle Tennessee, and a Harris's Sparrow was seen in Warren County. A Yellow Warbler at Clarksville was the second winter record in the state, while a Northern Rough-winged Swallow in Sullivan County was the state's fifth for winter. Also noteworthy for winter were Common Gallinule, Common Nighthawk, Blue-gray Gnatcatcher, Black-and-white Warbler, and Indigo Bunting. Boreal irruptives were represented by Purple Finches and Pine Siskins.

With this issue, Stephen Zipperer takes over as the compiler for the Highland Rim and

Basin Region. Welcome Stephen!

Standard Abbreviations

ad - adult max - maximum count
CBC - Christmas Bird Count m.ob. - many observers

Co. County Mtn. Mountain

Co - County Mtn - Mountain

Cr - Creek NWR - National Wildlife Refuge

ers - earliest reported sighting R - River et al. - and others SP - State Park

fide - reported by WMA - Wildlife Management Area

im - immature L - Lake

WESTERN COASTAL PLAIN REGION - - The winter season was marked by cooler and drier weather than normal throughout the western region. Precipitation was nearly six inches below normal for the period. Temperatures were close to normal in December and January, but several degrees colder in February. Light snow fell in late January and late February.

The bird of the season was a beautiful male Eurasian Wigeon at Hatchie NWR in Haywood County. While seen by many observers over its two week stay, the bird often proved elusive, disappearing for hours or even days at a time. Other nice finds included Northern Goshawk in Obion County, Long-eared Owl in Shelby County, and Thayer's Gull in Henry County. Three longspur species were reported, with a Smith's in Lake County and a McCown's in Obion County, along with the expected Lapland.

Waterfowl: Greater White-fronted Goose: 21 Jan (1200) Hop-In Refuge (MAG), max. Snow Goose: 21 Jan (10,000) Hop-In Refuge (MAG), max. Cackling Goose: 27 Feb (4) Gibson Co (MAG). Eurasian Wigeon: 6-18 Feb (1 male) Hatchie NWR (Gaynell Perry, RPF). Greater Scaup: 12 Feb (500+) TVA Lake (RS), max. Lesser Scaup: 12 Feb (5200) TVA Lake (RS), max. Surf Scoter: 10 Dec (1) Pace Point (SGS). White-winged Scoter: 27 Feb (2) Gibson Co L (MAG). Long-tailed Duck: 2 Dec - 18 Jan (1-2) Pace Point (RS, MCT); 14 Dec - 18 Jan (1 male) TVA Lake (John Walko, m.ob.); 2 Jan (1 female) Navy L, Shelby Co (DDP). Common Merganser: 14 Dec (4) Memphis CBC (Keith Kunkel); 14 Dec (4 females) Britton Ford (RS et al.), Big Sandy CBC; 14 Jan (3 males, 7 females) Pace Point area (MCT).

Loon - Falcon: Pacific Loon: 14 / 18 Jan (2) Pace Point area (MCT / KAC). Red-necked Grebe: 20 Dec (1) Reelfoot CBC (MCT, Bob Foehring); 14 Jan (2) Pace Point (MCT). Great Egret: thru season (2-4) Hatchie NWR (RPF), disappear when O'Neal L freezes over, then return; fairly reliable winter resident there for last 7-8 years (RPF). Northern Goshawk: 22 Jan (1 im) Obion Co (MAG). "Harlan's" Red-tailed Hawk: 19 Dec (1) Bogota WMA (MCT). Golden Eagle: 5-31 Jan (4 different individuals distinguished during season) Bennett's Cr, Henry Co (MCT, m.ob.); 14 Feb (1) Wolf River WMA, Fayette Co (Rob Harbin, Wayne Kirk). Sandhill Crane: 31 Dec / 21 Jan (1000+) Hop-In Refuge (MCT / MAG); 31 Jan (3)

near Britton Ford (MCT). Killdeer: 29 Dec (1500+) Obion Co (MAG), max. American Woodcock: 14 Feb (3) Millington airport, Shelby Co (DDP). THAYER'S GULL: 14 Jan (1 ad) Pace Point (MCT, photo). Lesser Black-backed Gull: 31 Jan (5) Paris Landing SP, Henry Co (MCT), max, matches the state high count from the same site. Great Black-backed Gull: 14 Dec (1 im) Britton Ford (RS et al.), Big Sandy CBC. Forster's Tern: 2-14 Dec (2-5) Lick Cr, Benton Co (RS, SGS et al.). Long-eared Owl: 14 Dec (1) Shelby Farms (George Payne, Dan Twedt, Steven Wagner, Judy Dorsey), Memphis CBC. Short-eared Owl: 17 Dec / 18 Jan (1 / 2) Bogota WMA (Daniel Estabrooks / KAC). Merlin: 2 Dec (1) Shelby Co (DDP). Peregrine Falcon: 18 Jan (1) TVA Lake (John Walko).

Vireo - Sparrow: Blue-headed Vireo: 14 Feb (1) Collierville, Shelby Co (Rob Harbin). Fish Crow: 3 Jan (2) Jackson CBC; 26 Feb (9) Horn's Bluff WMA, Crockett Co (MAG). Tree Swallow: 9 Feb (1) Hatchie NWR (MAG), ers. Smith's Longspur: 28 Feb (1) Lake Co (FJA et al.). McCOWN'S LONGSPUR: 29 Dec (1) Elam Rd, Obion Co (MAG), 3rd state record. Lapland Longspur: 29 Dec (5000+) Elam Rd, Obion Co (MAG), max. Orange-crowned Warbler: 19-20 Jan (1) East Memphis (Scott Heppel). Common Yellowthroat: 20 Dec (1) Reelfoot CBC (MCT, Bob Foehring). Palm Warbler: 10 / 12 Feb (1) Hatchie NWR (MCT / RS). American Tree Sparrow: 14 Dec (1) Big Sandy CBC; 19 Dec (2) Bogota WMA (MCT); 2 Jan (1) Shelby Co (DDP); 20 Jan (3) Reelfoot Lake SP (KAC); 27 Feb (2) Parker Branch WMA, Gibson Co (MAG); 28 Feb (1) Pace Point (TJW). Le Conte's Sparrow: 19 Jan (3) Bogota WMA (KAC); 14 Feb (2) Shelby Farms (DDP); 26 Feb (1) Horn's Bluff WMA, Crockett Co (MAG).

Locations: Bogota WMA - Dyer Co; Britton Ford - Henry Co; Hatchie NWR - Haywood Co; Hop-In Refuge - Obion Co; Pace Point - Henry Co; Reelfoot L - Lake and Obion Cos; Shelby Farms - Shelby Co; TVA Lake - Shelby Co.

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HIGHLAND RIM AND BASIN REGION - - Temperatures in Middle Tennessee in December and January were close to normal. Both months had below average rainfall. February started out about the same, but cold temperatures accompanied by snow and ice hit the area in mid-month. This brought widespread reports of Fox Sparrows and a couple of American Tree Sparrows to backyard feeders along with increased numbers of Purple Finches and Pine Siskins. Area lakes, which had already yielded Pacific and Red-throated Loons and a Western Grebe, experienced an influx of White-winged Scoters and Common Mergansers, along with large numbers of other ducks. Additional highlights include an Iceland Gull and a Little Gull.

Waterfowl: Greater White-fronted Goose: 3 Dec (6) Percy Priest Field Trial Area (SZ); 17 Jan (1) Drake's Cr (KO); 20 Feb (1) L Karen, Warren Co (SNM); 22 Feb (1) Perry Co (RS); 26 Feb (1) marsh on Walter S. Davis Blvd, Nashville (FF); 28 Feb (24) Cumberland

R, Trousdale Co (KO). Snow Goose: 3 Dec (2) Percy Priest Field Trial Area (SZ); 4 Jan (2) DeKalb Co (Tommy Curtis, Virginia Curtis); 5 Jan (9) Maury Co (Jud Johnston); 8 Jan (1) Davidson Co (Ed Schneider, m.ob.); 18 Jan (1) Warren Co (SNM, NPM); 19 Feb (1) Murfreesboro (TJW); 27 Feb (52) Cordell Hull L, Smith Co (Chris Agee). Ross's Goose: 3 Jan - 3 Feb (1) Murfreesboro (CW, TJW); 18 Jan / 20 Feb (1) Warren Co (SNM, NPM); 25 Jan (1) Overton Co (EKL, Stephen J. Stedman); 15 Feb (1) Perry Co (RS). Cackling Goose: 18 Jan (2) Coleman L, Davidson Co (MS, photo). Canvasback: 30 Jan (2100) Duck R Unit (RS), max. Redhead: 3 Dec (1000+) Percy Priest L (RHC), max. Greater Scaup: 1 Feb (18) Drake's Cr (MS); 26 Feb (5) Woods Reservoir (SNM, NPM). Surf Scoter: 3 Jan (2) Duck R Unit (fide RS). White-winged Scoter: 3 Dec (1) Cumberland R, Montgomery Co (Stanley York); 14 Jan (1) Center Hill L, DeKalb Co (EKL, Stephen J. Stedman); 22 Feb (17) Normandy L, Coffee Co (SZ); 27-28 Feb (10) Percy Priest L (RHC, m.ob.). Common Goldeneye: 14 Jan (23) Drake's Cr (MS); 26 Feb (19) Woods Reservoir (SNM, NPM). Common Merganser: 29 Dec (1 female) Pickwick L (RS), on Savannah CBC; 14 Jan (1 female) Old Hickory L, Sumner Co portion (MS); 19 Feb (1) L Tansi, Cumberland Co (EKL); 24-25 Feb (1 male, 1 female) L. Karen, Warren Co (SNM / SZ); 25-26 Feb (10-14) Cordell Hull L, Smith Co (Chris Agee, SZ); 25 Feb (3) Center Hill L, DeKalb Co (SZ); 26 Feb (10) Woods Reservoir (SNM, NPM); 27-28 Feb (24) Percy Priest L (RHC). Redbreasted Merganser: 26 Feb (36) Woods Reservoir (SNM, NPM), max.

Loon - Crane: Red-throated Loon: 11 Jan / 26 Feb (2 / 1) Woods Reservoir (SZ / SNM, NPM); 2-28 Feb (1, with 2 on last day) Percy Priest L (SZ, MS, m.ob.). Pacific Loon: 6-10 Dec / 1-4 Feb (4-5 / 1-2) Percy Priest L (FF, PDC, MS, SGS / RS), 4th straight year present; 25 Jan - 26 Feb (1) Woods Reservoir (CW, SNM, m.ob.). Red-necked Grebe: 30 Jan (1) Duck R Unit (RS); 4 Feb (1) Woods Reservoir (SNM). Eared Grebe: 3-15 Feb (1) Woods Reservoir (Evan Buck, photo / SNM). Western Grebe: 31 Jan - 28 Feb (1) Hamilton Cr Recreation Area, Percy Priest L (PDC, MS, m.ob.). Great Egret: 1 Jan (1) Hickory-Priest CBC; 3 Jan (13) Duck R Unit CBC. Black-crowned Night-Heron: 17 Jan (12) Drake's Cr (KO). Golden Eagle: 10 Dec (1 ad) Duck R Unit (SGS); 29 Dec (1 ad) Pickwick L (RS), on Savannah CBC; 3 Jan (1 im) Duck R. Unit CBC; 4 Feb (1) Murfreesboro (CW); 28 Feb (1 im) Montgomery Co (Stanley York). Sandhill Crane: 3 Dec (75, flying over) Percy Priest L (RHC); 16 Dec (400+, at roost) Coffee Co (SNM); 3 Jan (13) Duck R. Unit CBC; 19 Jan - 28 Feb (8 reports of flocks flying over, max 150) Davidson, Williamson, Robertson, and Montgomery Cos (m.ob.); 17 Feb (8) Perry Co (RS).

Sandpiper - Falcon: Least Sandpiper: 13 Jan (5) Old Hickory L, Wilson Co portion (Chris Agee). LITTLE GULL: 6-14 Feb (1 ad) Woods Reservoir (MCT, m.ob.). Lesser Blackbacked Gull: 29 Dec (1) Pickwick L (RS), on Savannah CBC; 1 / 20 Jan (2 / 1) Drake's Cr (Chris Sloan, m.ob.), on Hickory-Priest CBC; 3 Jan - 14 Feb (1 ad) Middle Point landfill, Rutherford Co (CW, SZ,, m.ob.); 22 Feb (1 ad) Percy Priest L (MS, PDC). ICELAND GULL: 3-10 Feb (1, first cycle, Kumlien's) Middle Point landfill, Rutherford Co (CW, photo, m.ob.). Great Black-backed Gull: 14-17 Jan (1, first cycle) Drake's Cr (MS, photo, FF, KO). Forster's Tern: 3 Jan (4) Duck R Unit CBC. Short-eared Owl: 12 Jan (2) Macon Co (RS).

Long-eared Owl: mid Jan (1, road-kill, wearing a band) White Co (fide SGS), had been banded at Whitefish Point, Michigan, on 27 Apr 2012. **Merlin**: thru season (1-3) Anderson Rd Recreation Area, Davidson Co (m.ob.); 3 Dec (1) Percy Priest Field Trial Area (SZ); 14 Jan (1) Lytle Cr Rd, Rutherford Co (CW); 15 Feb (1) Perry Co (RS).

Gnatcatcher - Siskin: Blue-gray Gnatcatcher: 3 Jan (1) Duck R Unit CBC. Marsh Wren: 3 Jan (1) Duck R. Unit CBC. Gray Catbird: 27 Dec (1) Murfreesboro CBC. Orange-crowned Warbler: 18 Dec (1) DeKalb Co (EKL). Common Yellowthroat: 24 Dec (1 female) Radnor L, Davidson Co (MS). YELLOW WARBLER: 21 Dec (1) Clarksville (Stefan Woltmann). Palm Warbler: 26 Jan (1) Clarksville (Adam Beachy, Jubal Beachy). Pine Warbler: 14 Jan (1, at feeder) Nashville (Jan Shaw). American Tree Sparrow: 23-26 Feb (1) Lewis Co (Bill Pulliam); 26 Feb (1) Nashville (Joshua Stevenson). Le Conte's Sparrow: 2 / 18 Feb (5 / 1) Hardin Bottoms, Perry Co (RS, Victor Stoll). Fox Sparrow: 20 Feb (5) Franklin, Williamson Co (Melinda Welton), max at feeders. Harris's Sparrow: 3 Jan (1) Warren Co (SNM, NPM). Brewer's Blackbird: 18-22 Feb (3-4) Depriest Bend, Perry Co (RS). Pine Siskin: 2 Feb (125) Bruton Branch, Hardin Co (RS), max.

Locations: Drake's Cr - portion of Old Hickory L Sumner Co; Duck R Unit - unit of Tennessee NWR, Humphreys Co; Percy Priest Field Trial Area - Rutherford Co; Percy Priest L - Davidson Co; Pickwick L - Hardin Co; Woods Reservoir - Franklin Co.

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CUMBERLAND PLATEAU / **RIDGE AND VALLEY REGION** - - The weather this season was rather unremarkable and essentially snow-free until the latter half of February. A series of quick moving storms combined with an extended blast of frigid temperatures to make life difficult for birds and birders. From 16 to 26 February, five separate storm systems produced 16-28 inches of total snowfall in the Tri-cities region. Snow cover persisted for most of this period. February was the coldest since 1978, and a reading of -10 degrees on the 20th was the fourth coldest day on record in the Tri-cities.

For the second straight winter bitterly cold temperatures and ice-covered lakes to our north pushed significant numbers of diving ducks into the region, especially Canvasback, Greater Scaup, White-winged Scoter, Long-tailed Duck, Common Goldeneye, and Common Merganser. This year the big push came in late February, with many birds lingering into March. Exceptional numbers of Greater White-fronted Geese (10 reports) and Snow Geese (~18 reports) also occurred.

Winter reports of Great Egret have been increasing in recent years, with the trend continuing this season. Also unexpected in winter were reports of Osprey, Common Gallinule, Common Nighthawk, Northern Rough-winged Swallow, and Black-and-white Warbler. All of these tardy lingerers were present before the worst of the winter weather had arrived. However, an Indigo Bunting in late February may have over-wintered nearby.

Geese: Greater White-fronted Goose: 6 Dec (1) John Sevier L (SHu); 17 Dec (2) Cove Lake SP (Nell Moore); 26 Dec (2) Greene Co (Wade GeFellers); 31 Dec - 3 Jan (1) Knox Co (Dean Edwards, m.ob.); 3 / 20 Jan (1) Camp Jordan, Hamilton Co (DRJ, m.ob.); 10 Jan (1) Steele Cr Park (LCM); 6 Feb (10) Greene Co (GDE, RRK, Peter Range); 10-16 Feb (7) Paddle Cr pond (BP, JP, m.ob.); 22 Feb (2) Boone L (RRK); 23-28 Feb (23-27) John Sevier L (SHu), a very large number for the region. **Snow Goose**: 1-3 Dec (2) Hamilton Co (HB); 4 Dec / 12 Feb (3 / 1) Limestone (RLK / FJA); 6 Dec (1) Bristol, Sullivan Co (Jerry Bivens, GDE); 7-31 Dec (1) Jefferson City, Jefferson Co (Sara Smith, Howard Chitwood); 7 Dec (1) Norris L (Nell Moore); 10-12 Dec (1) Warrior's Path SP, Sullivan Co (Neal Henson); 15-20 Dec (4) White Pine, Jefferson Co (Allen Welch); 19-20 Dec (1) Knox Co (fide Marcia Davis); 22 Dec / 20 Jan (1) Hamilton Co (BD / DRJ); 2 Jan (1) Steele Cr Park (Don Holt); 6 Feb (4) Greene Co (GDE, RRK, Peter Range); 10 Feb (39) Hiwassee Refuge (Charles Murray); 11 Feb (25) John Sevier L (SHu); 14-15 Feb (1) Middlebrook L (Kevin Blaylock); 25 Feb (8) Blount Co (TH); 27 Feb (18) Washington Co (RLK). Ross's Goose: 7 Dec - 8 Feb (1) Steele Cr Park (Don Holt, LCM, m.ob.); 8 Dec (1) Brainerd Levee, Hamilton Co (HB); 11 Dec (1) Douglas L, Jefferson Co (David Kirschke); 10 / 23 Jan (1) Soddy L, Hamilton Co (KAC / BD); 16-23 Feb (1) John Sevier L (SHu). Cackling Goose: 14 Dec (1) Steele Cr Park (LCM).

Ducks: Canvasback: 27 Dec (312) Nickajack CBC; 15-28 Feb (1-7) Paddle Cr pond (RLK, RBB, RMC); 19 Feb (125+) L Tansi (EKL); 19-28 Feb (8-24) John Sevier L (SHu); 20 / 28 Feb (14) Boone L (RLK); 22-27 Feb (1) Washington Co (RLK); 23 Feb (25) Norris L (RDH, DMy); 28 Feb (16) Fort Loudoun L, Blount Co portion (KW); 28 Feb (1) Middlebrook L (RLK); 28 Feb (25) South Holston R (RLK). Redhead: 19 Feb (75) L Tansi (EKL); 23 Feb (265) Norris L (RDH, DMy); 23-28 Feb (40-75) John Sevier L (SHu); 25 Feb (391) Fort Loudoun L, Blount Co portion (TH). Ring-necked Duck: 19 Feb (600) L Tansi (EKL), max. Greater Scaup: 20 Jan - 28 Feb (1-3) Paddle Cr pond (RRK, RMC, m.ob.); 22 Jan into Mar (8-16) South Holston R in Kingsport (GDE, Rick Phillips, m.ob.) 23-28 Feb (17-28) South Holston R (RLK); 23 Feb (29) Norris L (RDH, DMy); 28 Feb (25) Fort Loudoun L, Blount Co portion (KW); 28 Feb (10) Boone L (RLK). Surf Scoter: 19 Jan (1) Fort Loudoun L, Knox Co portion (CJW, m.ob.); 23 Feb (1) Norris L (RDH, DMy); 28 Feb (2) Chickamauga L (DRJ, Jeff Schaarsmidt). White-winged Scoter: 5 Dec (2) Fort Patrick Henry L, Sullivan Co (Bill Grigsby); 1 Jan / 31 Jan - 23 Feb (1-2) Chickamauga L (DRJ, John Diener / KAC); 2 Feb (1) Raccoon Mtn pumped storage lake (Tommie Rogers); 15-28 Feb (2-11) Boone L (RLK); 16 / 23 Feb (11 / 4) John Sevier L (SHu); 25 / 28 Feb (1) Fort Loudoun L, Blount Co portion (TH / KW); 25 Feb (3) Melton Hill L, Knox and Anderson Cos (RDH, DMy); 28 Feb (8) Fort Loudoun L, Knox Co portion (KW); 28 Feb (1) South Holston R (RLK). Black Scoter: 12-13 Dec (1) Chickamauga L (HB, photo). scoter sp.: 14 Dec (1) Norris L (Charles Nicholson, Harold Howell), on Norris CBC. Long-tailed Duck: 3 Jan (7) Cove Lake SP (Bob Howdeshell, photo); 17-19 Jan (2) Fort Loudoun L, Knox Co portion (Patty Ford, m.ob.). Common Goldeneye: 8 Jan (19) Chickamauga L (BD); 20-28 Feb (3-11) Boone L (RLK); 23 / 28 Feb (7) South Holston R (RLK); 28 Feb (22) Fort Loudoun L, Blount Co

portion (KW). **Common Merganser**: from late Nov - 22 Feb (1 female) upper Boone L (RLK, RMC); 1-28 Feb (max 49 on 27 Feb) John Sevier L (SHu); 19 Feb (1 female) L Tansi (EKL); 25-28 Feb (1-3 males) Fort Loudoun L, Blount Co portion (TH, KW); 28 Feb (8) Boone L (RLK); 28 Feb (3 males) Middlebrook L (RLK). **Red-breasted Merganser**: 28 Feb (22) Boone L (RLK), max.

Loon - Falcon: Red-throated Loon: 31 Dec - 5 Jan (1) Cove Lake SP (Bates Eastabrooks, Daniel Estabrooks, photo, m.ob.); 17 Jan / 23 Feb (1) Chickamauga L (Tim Jeffers, DRJ). Great Egret: 7 Dec (2) Fort Patrick Henry L, Sullivan Co (RBB, RMC); 20 Dec (1) Chattanooga CBC; 2-20 Jan (1) South Holston R (RLK, m.ob.), first Jan record in NE Tenn.; 3 Jan (3) Blount Co, on Knoxville CBC; 16 Jan (3) Hiwassee Refuge (David Aborn). Black-crowned Night-Heron: 30 Jan - 3 Feb (1 im) Brainerd Levee, Hamilton Co (Nick Siler, Simon Thompson, m.ob.), rare in SE Tenn. Osprey: 15 Dec (1) Tennessee R, Knox Co (Ron Shrieves); 19 Jan (1) Fort Loudoun L, Knox Co (CJW). Northern Harrier: 15 Jan (6, at roost) Washington Co (RLK). Virginia Rail: 20 Dec (3) Standifer Gap Marsh, on Chattanooga CBC. Sora: 20 Dec (1) Chattanooga CBC. Common Gallinule: 21 Jan -18 Feb (1-2 im) John Sevier L (SHu, photo), rare in winter. Sandhill Crane: 20 Dec (49) Jefferson Co (Allen Welch); 10 Jan (2) Rankin Bottoms, Cocke Co (Bob Cherry et al.); 26 Feb (9) John Sevier L (SHu); all east of usual corridor. Whooping Crane: thru season (1-7) Hiwassee Refuge (Charles Murray, m.ob.). Dunlin: 26 Dec (48) Upper Douglas L, Cocke Co (Michael Sledjeski); 3 Jan (77) Hiwassee CBC; 2 Feb (8) South Mouse Cr, Bradley Co (KAC). Least Sandpiper: 3 Jan (16) Hiwassee CBC; 2 Feb (2) South Mouse Cr, Bradley Co (KAC). Franklin's Gull: 10 Feb (1 ad) Douglas L, Jefferson Co (RLK). Ring-billed Gull: 20 Jan (2500) Middlebrook L (RRK); 15 Feb (2100) Boone L (RLK); large numbers in NE Tenn. Lesser Black-backed Gull: 23 Feb (1 ad) Fort Loudoun L, Knox Co portion (Steve Clendenen, Gail Clendenen). Common Nighthawk: 8 Dec (1) Knoxville (CJW). Merlin: 3 Jan (4) Knoxville CBC, with reports thru season; 31 Jan (1) Bristol (RLK); 3 Feb (1) Allandale, Hawkins Co (Rick Phillips); 12 Feb (1) John Sevier L (SHu); 24-25 Feb (1) Standifer Gap Marsh, Hamilton Co (BD, Libby Wolfe, m.ob.). Peregrine Falcon: 28 Dec (1) Paddle Cr pond, on Bristol CBC (RLK, RRK); 3 Jan / 22 Feb (3 / 1) Limestone (RLK), regular wintering site; 5 Jan thru season (1) downtown Maryville, Blount Co (TH), 4th straight winter present.

Shrike - Siskin: Loggerhead Shrike: reports from 3 separate sites in Washington Co (RLK); 25 Jan (1) Hawkins Co (SHu). Blue-headed Vireo: 20 Dec (1) Chattanooga CBC; 21 Jan (1) Amnicola Marsh, Hamilton Co (HB). Common Raven: 23 Dec - 12 Feb (1-2) Limestone (RLK, RRK); 16 Jan (2) Phipps Bend, Hawkins Co (SHu); 29 Jan (1) Boone Dam (RLK); 4 Feb (1) upper Boone L (RMC). Tree Swallow: 3 Jan (1) Haw Ridge, Anderson Co, Knoxville CBC (EKL), late; 8 Feb (3) John Sevier L (SHu), ers, with 2-8 thru 27 Feb. Northern Roughwinged Swallow: 28 Dec - 2 Jan (1) South Holston R (RLK, RRK), Bristol CBC, 5th winter record in the state (4 have occurred since 2009). Horned Lark: thru Jan and Feb (150-200) Limestone (RLK). Red-breasted Nuthatch: no reports. Marsh Wren: 27 Dec (1) Nickajack CBC. Gray Catbird: 20 Dec (1) Chattanooga CBC. Lapland Longspur: 10 Jan - 22 Feb

(max 8 on 10 Jan) Limestone (RLK), fairly regular wintering site. **SNOW BUNTING**: 7 Dec (1) Chickamauga Dam (Tommie Rogers, Mike McCloy, photo), 1st record in SE Tenn. **Black-and-white Warbler**: 3 Jan (1) Haw Ridge, Anderson Co, on Knoxville CBC (EKL). **Orange-crowned Warbler**: 3 Jan (1) Blount Co, on Knoxville CBC. Vesper Sparrow: 3 Jan (2) Hiwassee CBC. **Indigo Bunting**: 28 Feb (1) Cleveland, Bradley Co (Marty Paige, photo). **Brewer's Blackbird**: 2 Feb (3) Sequatchie Co (KAC), traditional wintering site. **Purple Finch**: widely scattered in small to moderate numbers. **Pine Siskin**: widely scattered in small to moderate numbers; 14 Jan (200+) Marion Co (Tommie Rogers), max.

Addendum: White-winged Dove: 3 Jun 2009 (1, at feeder) Greene Co (Nata Jackson, photo), somehow this record slipped through the cracks of the reporting system.

Locations: Boone L - Washington and Sullivan Cos; Chickamauga L - Hamilton Co; Cove Lake SP - Campbell Co; Hiwassee Refuge - Meigs Co; John Sevier L - Hawkins Co; L. Tansi - Cumberland Co; Limestone - Washington Co; Middlebrook L - Sullivan Co; Norris L - Union Co; Paddle Cr pond - Sullivan Co; South Holston R - eastern Sullivan Co (unless indicated otherwise); Steele Cr Park - Sullivan Co.

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EASTERN MOUNTAIN REGION - - December temperatures were about 3 degrees above normal while January had near normal temperatures. Precipitation was 3 inches above normal in December and 1 inch below normal in January. The worst part of winter did not hit until February. This month was very cold and snowy with temperatures averaging almost 10 degrees below normal and 12 days of measureable snowfall at lower elevations. The lowest temperatures reached -15 degrees on 8 January and -21 degrees on 20 February at Mt. Le Conte in the Smokies. The winter low temperature at lower elevations was -13 degrees on 20 February.

Waterfowl: Greater White-fronted Goose: 8 Dec - 9 Jan (1) Great Lakes Pond, Carter Co (TSM, m.ob.); 28 Feb (34) South Holston L (RLK), new high count in NE Tenn. Snow Goose: 6 Dec (1) South Holston L (RLK); 1 Jan (1) Shady Valley, CBC (RBB, RMC, RPL, Rack Cross), first valley record, seen together with the following bird. Ross's Goose: 1 Jan (1) Shady Valley, CBC (RBB, RMC, RPL, Rack Cross), first valley record. Canvasback: 19-26 Feb (3-11) Watauga R (Harry Lee Farthing, m.ob.). Redhead: 8-26 Feb (1-18) Fishery Park, Unicoi Co (TSM, CMy, m.ob.); 25 Feb (23) Watauga R (BP, JP); 28 Feb (10) South Holston R weir (RLK). Greater Scaup: 2 Dec (4) South Holston L (RLK); 19-26 Feb (1-2) Watauga R (Harry Lee Farthing, m.ob.); 28 Feb (1) South Holston R weir (RLK). White-winged Scoter: 28 Feb (6) South Holston L (RLK); 28 Feb (3) Wilbur L, Carter Co (BP, JP). Long-tailed Duck: 9 Jan (2) Roan Cr arm of Watauga L (RLK); 28 Feb (12) South Holston L (RLK). Common Goldeneye: 8 Jan (1) South Holston L (RLK); 13 Jan / 25-26 Feb (1-3) Watauga

R (TSM / BP, JP); 24 Jan (1) South Holston R weir (RBB, RMC). **Common Merganser**: 9 Jan (2) Roan Cr arm of Watauga L (RLK); 23-28 Feb (24-51) South Holston L (RLK). **Redbreasted Merganser**: 28 Feb (8) South Holston L (RLK). **Ruddy Duck**: 2 Dec (56) South Holston L (RLK), max.

Grebe - Falcon: Horned Grebe: 2 Jan (61) South Holston L (RLK); 4 Feb (55) Roan Cr arm of Watauga L (RLK); max. Northern Goshawk: 15 Dec (1 im) Hampton Cr Cove, Carter Co (FJA et al.), on Roan Mtn CBC. Golden Eagle: 10 Jan (2) Hampton Cr Cove, Carter Co (TSM, CMy, David Kirschke); 17 Jan (1) Shady Valley (trail camera photo by Charles McQueen fide Wallace Coffey); 18 Jan (1) Roan Mtn balds, Carter Co (Jacob Socolar). Sandhill Crane: 13 Feb (3) Cosby, Cocke Co (JoAnne Bratton). Merlin: 4 Dec (1) Elizabethton (FJA). Peregrine Falcon: 20 Jan (1) South Holston L (RRK, Gil Derouen); 23 Feb (1) South Holston R weir (RLK).

Shrike - Siskin: Loggerhead Shrike: 19 Jan (1) Holston Valley, Sullivan Co (RBB, RMC). Red-breasted Nuthatch: scarce this winter, with only one on Roan Mtn CBC, Carter Co. Gray Catbird: 18 Jan (1) Erwin, Unicoi Co (TSM, CMy). American Pipit: 22 Jan (30) near Elizabethton (FJA). Palm Warbler: 14 Dec (1) Butler, Johnson Co, on Elizabethton CBC (TSM, CMy). Chipping Sparrow: 4 Feb (18) near Elizabethton (RLK), max. Purple Finch: scattered small numbers (max 16). Red Crossbill: 28 Dec (11) Cades Cove CBC, only report. Pine Siskin: scattered in small to moderate numbers; 16 Jan (100) Holston Valley, Sullivan Co (RPL); 24 Jan (275) Pittman Center, Sevier Co (KW); 16 Feb (70) Simerly Cr, Carter Co (Bryan Stevens).

Locations: Elizabethton - Carter Co; Roan Cr arm of Watauga L - Johnson Co; Shady Valley - Johnson Co; South Holston L - Sullivan Co; South Holston R weir - Sullivan Co; Watauga R - in Carter Co.

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INSTRUCTIONS TO AUTHORS

The Migrant records observations and studies of birds in Tennessee and adjacent areas. SUBMISSIONS: The manuscript should be submitted electronically to Bob Ford at editorthemigrant@gmail.com. Submission of hard copies is optional. If so desired the original and two copies of the manuscript should be sent to the: Editor: Bob Ford, 808 Hatchie, Brownsville, TN 38012 editorthemigrant@gmail.com. Manuscripts that have been published in other journals should not be submitted.

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