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THE COVER

We thank Frank Lyne for the image of the Harris's Sparrow (*Zonotrichia querula*) taken 20 February 2015 on his farm near Dot in Logan County (see p. 56). Financial support for color reproduction in this issue provided by the Daniel Boone National Forest.

EFFECT OF PREDATOR TYPE, SEASON, BROOD SIZE, AND WEST NILE VIRUS INFECTION ON THE NEST DEFENSE BEHAVIOR OF MALE AND FEMALE EASTERN BLUEBIRDS (*SIALIA SIALIS*)

Kayde L. Gilbert and Gary Ritchison

INTRODUCTION

Parent birds may benefit by defending nests from potential predators if such behavior increases the likelihood that their young will survive. However, such behavior may also be costly, with some risk of injury or even death. Thus, because birds seek to maximize life-time reproductive success rather than current reproductive success, parents must assess the danger posed by a potential nest predator and then choose appropriate responses (Radford and Blakey 2000).

The intensity of nest defense by birds can be influenced by many factors. For example, females defend nests more vigorously than males in some species (Weatherhead 1989), males more vigorously than females in other species (Winkler 1992), and males and females with equal vigor in still other species (Nealen and Breitwisch 1997). Similarly, the intensity of nest defense has been found to increase with brood size in some species (Radford and Blakey 2000), but not others (Halupka 1999), and intensity varies with stage of the breeding season in some species (Redmond et al. 2009), but not others (Hobson et al. 1988).

Another factor that can influence the nest defense behavior of birds is the type of predator. For example, Tree Swallows (*Tachycineta bicolor*) defended nest sites more vigorously against a ferret (*Mustela putorius*) than a black rat snake (*Pantherophis obsoleta*) (Winkler 1992), and Brunton (1990) found that Killdeer (*Charadrius vociferous*) defended nests more intensely against ground-based predators than aerial predators. Such differences in response might be influenced by the relative risk posed by a predator to both parents and offspring (Brunton 1990).

Another factor that may affect nest defense behavior is a bird's physical condition and, specifically, whether a bird has been exposed to a pathogen and is immune-challenged. Previous studies suggest that birds responding to induced immune challenges (i.e., caused by injecting non-pathogenic antigens) may increase reproductive investment (Bonneaud et al. 2004). Exposure to a pathogen could potentially influence nest defense behavior because birds and other animals invest more in current reproductive effort if the chance of surviving to reproduce again is low, i.e., the terminal investment hypothesis (Clutton-Brock 1984).

Because previous studies have produced conflicting results concerning the effects of factors such as sex, brood size, stage of the breeding season, and predator type on the nest defense behavior of birds, additional studies are needed to better clarify how and why such factors influence behavior. In addition, although investigators have induced immune challenges to study how such challenges might influence reproductive investment (e.g., clutch sizes and likelihood of re-nesting), no one to date has examined the possible effect of a viral infection on avian nest defense behavior. Thus, our objectives were to determine the effect of adult sex, brood size, stage of the breeding season, predator type, and infection with West Nile Virus on the nest defense behavior of male and female Eastern Bluebirds (*Sialia sialis*).

METHODS

Eastern Bluebirds were studied from March through August 2003 at the Blue Grass Army Depot (BGAD), located in Madison County, Kentucky. The BGAD consists of 5907 ha (14,597 ac) of open grassland and scattered woodlots. Lab work was conducted at the University of Kentucky from August 2003 through December 2004.

Prior to nest building and territory establishment by male Eastern Bluebirds, we placed

nest boxes (n = 100) in open habitats on the BGAD. Once territories had been established and nest boxes occupied, we captured bluebirds by using mist nets. Bluebirds were lured into nets either by using playback of the songs of Eastern Bluebirds or by placing nets near occupied boxes. A blood sample (40–70 μl) was collected from each captured bird and bluebirds were banded with a U. S. Geological Survey aluminum band plus a unique combination of three colored plastic bands.

Nest boxes were monitored every two to three days to determine their status. Blood samples were also collected from nestlings when 7–12 days old. For each nest, we determined the number of nestlings. All blood samples were analyzed to determine the presence of West Nile Virus (WNV). Blood samples were analyzed for the virus by using a reverse transcription-nested polymerase chain reaction (RT-nPCR) assay. This assay had been used previously to detect WNV in several species, including birds (Lanciotti et. al. 2000, Johnson et. al. 2001). A blood sample testing positive with the RT-nPCR indicated that the bird had WNV.

Nest defense behavior of adult bluebirds was examined when nestlings were 15–18 days old. Pairs of bluebirds were presented with two predators. During separate trials, at least 24 hrs apart, a human and a live, non-releasable Eastern Screech-Owl (*Megascops asio*) were presented at each nest. Predators moved to or were placed 0.5 m (1.6 ft) in front of nest boxes when the adults were not present. Trials began when at least one adult came within 30 m (98 ft) of the nest. Nest defense behavior was recorded for 3 min. Behaviors recorded for each bluebird included (1) the closest distance of approach to the predator (± 0.5 m [1.6 ft]), (2) mean distance from the predator (with distances recorded every 30 sec), (3) number of songs, (4) number of alarm calls ('chit' calls; Gowaty and Plissner 1998), (5) number of flights (number of times each adult flew within 3 to 30 m (1.6 to 98 ft) of the predator), (6) number of flybys (number of flights within 1 to 2 m (1.6 to 3.2 ft) of the predator), (7) number of attacks (number of flights within 1 m (1.6 ft) of the predator), and (8) number of hits (number of times a bluebird struck the predator). For variables 1 and 2, we assumed larger numbers (i.e., staying farther from the predator) indicated a weaker response, whereas, for variables 3 through 8, we assumed higher numbers indicated a stronger response. We also assumed that attacks and hits represented the strongest response and bluebirds engaging in such behavior, by approaching a potential predator so closely, were taking the greatest risk. As such, for analysis, we used this formula:

Nest defense intensity (NDI) = (number of songs + number of calls + number of flights + number of flybys + number of attacks x 2 + number of attacks x 3) – (closest distance + mean distance),

to generate a single variable that quantified the intensity of nest defense by male and female Eastern Bluebirds.

We examined the possible effect of predator type (human vs. screech-owl), month (May, June, July, and August), and brood size (3, 4, or 5 young) on the nest defense behavior of Eastern Bluebirds. In addition, to examine possible effects of WNV infection on bluebird behavior, we compared the intensity of nest defense of (1) bluebirds infected with WNV to that of bluebirds not infected, and (2) bluebirds with at least one nestling infected with WNV to that of bluebirds with no nestlings infected. All analyses were conducted using analysis of variance, and all analyses were conducted using the Statistical Analysis System (SAS Institute 1989). Significance was accepted at $P < 0.05$, and values are presented as means ± SE.

RESULTS

We conducted predator trials with 65 pairs of Eastern Bluebirds. For all variables examined, analysis revealed no differences in the responses of bluebirds with different-aged nestlings (all $P \geq 0.08$; all trials were conducted with pairs that had 15–18 day-old nestlings) so nestling age was not included in subsequent analyses. The intensity of nest defense

differed with predator type, with bluebirds responding more aggressively to an Eastern Screech-Owl (mean NDI = 35.9 ± 3.5) than a human (mean NDI = 0.1 ± 2.8; Tables 1 and 2). Male bluebirds defended with greater intensity (mean NDI = 23.1 ± 3.3) than females (mean NDI = 13.2 ± 3.8; Table 1), but further analysis revealed that the only significant difference between males and females was the number of songs (Table 3). The number of young (3, 4 or 5) did not influence the intensity of nest defense (Table 1). Similarly, the intensity of nest defense did not vary among months (May, June, July, and August), and no interactions were significant (Table 1).

Table 1. Effects of sex, month, predator type, and number of young on the intensity of nest defense by male and female Eastern Bluebirds defending nestlings near fledging age (15-18 days old).

Variable	SS	df	MS	*F*	*P*
Sex	4844.9	1	4844.9	5.0	0.03
Month	6047.5	3	2015.8	2.1	0.11
Predator	51908.8	1	51908.8	53.1	<0.01
Number of yg.	707.9	2	354.0	0.1	0.70
Month x number of yg.	3459.3	4	864.8	0.9	0.47
Month x predator	1695.3	3	565.1	0.5	0.65
Number of yg. x predator	3083.2	2	1541.6	1.6	0.21
Sex x predator	612.8	1	612.8	0.6	0.43
Sex x month	5590.6	3	1863.5	1.9	0.13
Sex x number of yg.	503.7	2	251.9	0.3	0.77
Sex x predator x month	1962.5	6	327.1	0.3	0.92
Sex x number of yg. x month	487.2	4	121.8	0.1	0.97
Month x number of yg. x predator	1003.5	6	250.9	0.2	0.91
Error	256021.5	187			

Of the 130 adult bluebirds, 10 were infected with WNV (7.7%; 5 males and 5 females, with the other member of the pair not infected in all cases). In addition, at least one nestling was infected with WNV in nine of the 65 nests (14%). We found no difference in the intensity of nest defense (NDI) between pairs where one adult was infected with WNV and pairs where neither adult was infected ($F_{1, 212} = 1.4$, $P = 0.24$). Similarly, for pairs where one adult was infected and the other was not, we found no difference between them in the intensity of nest defense ($F_{1, 27} = 0.1$, $P = 0.72$). Finally, the intensity of nest defense did not differ between pairs with no infected nestlings and pairs with at least one infected nestling ($F_{1, 212} = 0.1$, $P = 0.86$).

DISCUSSION

Adult sex

Our results indicate that male and female Eastern Bluebirds defended nests with equal intensity. Although males uttered more songs than females during nest defense trials, that difference may have been more the result of the tendency of males to sing more than females (Gowaty and Plissner 1998) than a different response to nest predators. Previous studies have provided conflicting results concerning the relative intensity of nest defense by males and females. As with Eastern Bluebirds in our study, male and female Northern Cardinals (*Cardinalis cardinalis*; Nealen and Breitwisch 1997) and male and female Northern Flickers (*Colaptes auratus*; Fisher and Wiebe 2006) defended nests with equal intensity. In contrast, studies of a number of other species have revealed that males defend nests more vigorously than females (Hogstad 2005, Gibson and Moehrenschlager 2008, Redmond et al. 2009, Kryštofková et al. 2011). In yet other species, females defend nests more vigorously than males (Weatherhead 1989).

Males in some species may defend nests more vigorously and take more risks than females because only females incubate eggs and brood young and, as a result, are essential for nest success (Redmond et al. 2009, Kryštofková et al. 2011). Being injured would be

Table 2. Responses of Eastern Bluebirds (males and females combined) to two potential nest predators (a human and an Eastern Screech-Owl).

	Responses to Eastern Screech-Owl		Responses to human	
Variable	**Mean**	**SE**	**Mean**	**SE**
Closest approach (m)***	4.0	0.5	12.1	0.9
Mean distance (m)***	8.8	1.1	16.5	0.9
Number of songs **	5.4	0.6	3.3	0.5
Number of calls**	22.8	0.8	19.9	1.0
Number of flights**	1.8	0.2	3.3	0.3
Number of flybys***	2.9	0.4	0.5	0.2
Number of attacks***	7.4	1.0	0.2	0.2
Number of hits*	0.1	0.1	0.0	–

Key to probabilities: *$P < 0.05$, **$P < 0.01$, and ***$P < 0.0001$

maladaptive for both sexes (Montgomerie and Weatherhead 1988), but, if a female is severely injured or killed, nest failure would be inevitable. However, the likelihood of nest failure if a female is injured or killed varies with nest stage. During incubation and early in the nestling period when young must be brooded, the loss of a female in species where only females incubate eggs and brood young would almost certainly mean the loss of the nest. However, we conducted trials when young bluebirds were near fledging (15-18 days post-hatching). For young near the age of fledging and for species like Eastern Bluebirds where both adults provision young and fledglings (Gowaty and Plissner 1998), injury or death of the adult female would likely not result in nest failure. In such cases, females may defend nests as vigorously as males.

Table 3. Comparison of the responses of male and female Eastern Bluebirds to potential nest predators (a human and an Eastern Screech-Owl).

	Males		Females	
Variable	**Mean**	**SE**	**Mean**	**SE**
Closest approach (m)	7.3	0.8	8.7	0.9
Mean distance (m)	11.7	0.9	13.9	1.3
Number of songs*	5.4	0.6	2.6	0.5
Number of calls	19.9	1.1	17.9	1.1
Number of flights	2.2	0.2	2.1	0.3
Number of flybys	1.7	0.4	1.2	0.3
Number of attacks	3.2	0.7	3.0	0.7
Number of hits	0.05	0.04	– [a]	–

Key to Probability: *$P < 0.0001$

[a] One female hit a screech-owl during one trial (out of 99 trials)

Predator type

Eastern Bluebirds in our study defended nests more vigorously in response to an Eastern Screech-Owl than a human. Other species of birds also respond differently to different potential nest predators (Veen 1977, Kleindorfor et al. 2005, Morrison et al. 2006). For example, Tree Swallows defending nest sites responded more vigorously to a ferret (*Mustela putorius*) than a black rat snake (*Elaphe obsoleta*; Winkler 1992). Brunton (1990) reported that Killdeer defending nests responded more intensely to ground-based predators than aerial predators.

Several factors may influence how birds respond to different potential nest predators, including nest stage (eggs vs. nestlings), the likelihood that predator defense can be effective, and the degree of threat a potential predator poses to adults. Eastern Bluebirds in our study may have responded more aggressively to an Eastern Screech-Owl than to a human because an avian (aerial) predator represents a threat not only to nestlings, but to adults as

well. Similarly, the intensity of nest defense by Black-billed Magpies (*Pica pica*) was also found to vary with type of predator, with the most vigorous defense directed toward raptors regardless of nest stage (Buitron 1983). Such aggression toward raptors may be beneficial because they represent a threat to adult magpies as well as nestlings (Buitron 1983). In addition, raptors would also represent a greater threat to young birds than terrestrial predators, like humans, after they fledge. For cavity-nesting species like Eastern Bluebirds, a raptor like an Eastern Screech-Owl may not represent a serious threat to nestlings because they would likely be too large to enter most bluebird nest cavities. However, we examined the behavior of Eastern Bluebirds defending nests with young near fledging age and an Eastern Screech-Owl would pose a threat to young bluebirds after they leave nests. Thus, if an aggressive response by Eastern Bluebirds toward an Eastern Screech-Owl causes the owl to leave the area (move-on hypothesis; Curio 1978) then the risk of predation for both adults and fledglings might be reduced.

One possible explanation for the reduced response of bluebirds to a human in our study is that nest boxes were checked every two to three days once brooding began. As a result, bluebirds were exposed to a human approaching nests and checking nest contents as many as five or six times before predator trials were conducted. Bluebirds, therefore, may have habituated to human presence and activity and perceived a human as a less threatening predator. Similarly, Lord et al. (2001) found that New Zealand Dotterels (*Charadrius obscures aquilonius*) nesting on beaches with more human activity exhibited a decreased intensity of response to a human approaching nests than did dotterels at more remote beaches. In contrast, Knight and Temple (1986) suggested that repeated visits by humans to bird nests can result in an increased intensity of response, i.e., after repeated visits by a human where no adults or nestlings are harmed, adults can 'lose fear of the predator' and, as a result, increase the intensity of their responses. Other investigators, however, have reported that repeated visits by humans to nests do not affect the intensity of responses by adult birds (e.g., Weatherhead 1989, Winkler 1992). Given the conflicting results of previous studies, the possible effect of our repeated visits to nests on the responses of adult Eastern Bluebirds during nest defense trials remains unclear.

Another possible explanation for the less vigorous response by Eastern Bluebirds to a human near their nests is that bluebirds may make judgments concerning their ability to successfully drive different predators away from nests and respond accordingly. Thus, because a large predator like a human is unlikely to be driven from nests, bluebirds may exhibit a less vigorous response. Similarly Patterson et al. (1980) suggested that the responses of White-crowned Sparrows (*Zonotrichia leucophrys*) to potential nest predators varied with their ability to drive them away. For example, adult White-crowned Sparrows exhibit reduced responses to snakes, possibly because sparrows are unable to drive snakes away from nests (Patterson et al. 1980).

Brood size

We found that brood size did not influence the intensity of nest defense by Eastern Bluebirds. Similar results have been reported for several other species of birds (Winkler 1992, Sandercock 1994, Halupka 1999, Tryjanowski and Golawski 2004). In other species of birds, the intensity of nest defense has been found to increase with increasing brood size (Wallin 1987, Wiklund 1990, Radford and Blakey 2000). Montgomerie and Weatherhead (1988) suggested that the intensity of nest defense should increase with increasing brood size because the benefits of deterring a predator increase with the number of young. At least two factors may contribute to differences among species in the effect of brood size on the intensity of nest defense. First, the value of a given number of young may vary with the reproductive potential of parents (Montgomerie and Weatherhead 1988) and, therefore, parents capable of raising fewer young might be expected to defend their smaller brood as intensively as parents with greater reproductive potential defend their larger brood. As a

result, the results of studies where only natural variation in brood size is considered may not reveal any differences in the intensity of nest defense among pairs with different brood sizes (Montgomerie and Weatherhead 1988).

A second factor that might explain differences among studies in the effect of brood size on nest defense behavior is the type of predator used in experiments. As noted previously, some predators represent a threat to both adults and young (e.g., Eastern Screech-Owl in our study) and, because inducing such predators to leave the area is beneficial to adults, responses to such predators may be similar regardless of brood size. In contrast, given that the benefits of deterring a predator increase with the number of young, the intensity of nest defense by adults may be more likely to vary with brood size when responding to predators that only threaten young.

Stage of breeding season

We found no seasonal (monthly; May–August) variation in the intensity of nest defense by Eastern Bluebirds. Similar results have been reported for Redwings (*Turdus iliacus*; Bjerke et al. 1985) and Yellow Warblers (*Dendroica petechia*; Hobson et al. 1988). However, previous studies have revealed a decline in the intensity of nest defense as the breeding season progresses for some species of birds (Weatherhead 1989, Halupka and Halupka 1997, Redmond et al. 2009), whereas others have reported an increase in intensity as the breeding season progresses (Regelmann and Curio 1983). A possible explanation for a decline in intensity of nest defense later in the breeding season is the declining value of nestlings later in the season (in terms of adult fitness) because of the reduced likelihood of successful recruitment of such nestlings into the breeding population late in the season (Montgomerie and Weatherhead 1988). In contrast, an increase in the intensity of nest defense as the breeding season progresses may occur because of a decline in re-nesting potential, i.e., with a reduced likelihood of being able to re-nest later in the season, adults should be willing to take greater risks to defend current nests (Montgomerie and Weatherhead 1988). For species like Eastern Bluebirds and others where the intensity of nest defense remains constant throughout the breeding season, Weatherhead (1989) proposed that the declining value of offspring as the season progresses may be balanced by the effect of declining re-nesting potential. However, another possible explanation is that, as with responses by parents with different-sized broods described previously, responses to predators like Eastern Screech-Owls that threaten both adults and young may remain constant throughout the breeding season because, regardless of time of year, inducing such predators to leave the area is always beneficial for adults as well as offspring.

Effect of WNV infection

The nest defense behavior of Eastern Bluebirds infected with WNV did not differ from that of non-infected bluebirds and, in addition, the behavior of adult bluebirds with an infected nestling did not differ from that of adults with no infected nestlings. Previous studies suggest that birds responding to induced immune challenges (i.e., caused by injecting non-pathogenic antigens) may increase reproductive investment (e.g., Bonneaud et al. 2004, Hanssen 2006, Velando et al. 2006, Bowers et al. 2012). Because increased effort in current reproduction can negatively impact future reproduction, animals should generally restrict current efforts to maximize lifetime reproductive success (Curio 1983). However, Clutton-Brock (1984) suggested that animals should invest more in current reproductive effort if the chance of surviving to reproduce again is low, i.e., the terminal investment hypothesis. Our results suggest that WNV infection, at least during the viremic stage, did not affect the physical condition of Eastern Bluebirds enough to affect their nest defense behavior. Similarly, Hill et al. (2010) found that being seropositive for WNV had no negative effects on the reproduction or survival of Eastern Bluebirds in Alabama.

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WINTER 2014-2015 SEASON

Brainard Palmer-Ball, Jr., and Lee McNeely

Climatic conditions during winter 2014-2015 were not quite as severe as during the previous winter, but they definitely affected the region's birdlife significantly. The winter began relatively uneventfully, with average temperatures running slightly above normal during December. Precipitation during December was a bit more variable with normal totals recorded in the central part of the state, but drier conditions occurring in the east and south, where Bowling Green received less than one-half normal precipitation during the month. Temperatures during January remained close to normal, but relatively dry conditions developed at most major recording stations, where from one-third (Louisville) to two-thirds (Paducah, Jackson) normal precipitation occurred. In contrast, conditions during February turned quite cold, with major recording stations compiling average temperatures 10-12°F below normal and temperatures dipping well into the negative single digits Fahrenheit on a few occasions during the month. Precipitation during February varied from slightly above to slightly below normal statewide with only one significant snow event across the northern half of the state mid-month.

A prolonged period of dreary weather during 2-3 December combined with an excellent movement of southbound waterbirds to result in an unprecedented fallout of several species on the state's reservoirs. The progressively worsening conditions during late winter apparently resulted in some mortality in several species, particularly Carolina Wrens and Eastern Bluebirds. However, the extremely cold weather did result in some excellent gatherings of rare gulls and for the second winter in a row, a late winter flight of waterfowl off the Great Lakes, particularly White-winged Scoters. Rarity highlights included multiple Red-throated Loons and Red-necked Grebes, California Gull, multiple Iceland and Great Black-backed Gulls, Prairie Falcon, Black-and-white Warbler, and Common Redpoll.

Publication of any unusual sightings in the seasonal report does not imply that these reports have been accepted for inclusion in the official checklist of Kentucky birds. Reports of out-of-season birds and rarities should be accompanied by written and/or photographic documentation. This documentation is reviewed by the Kentucky Bird Records Committee (KBRC). Decisions regarding the official Kentucky list are made by the KBRC and are reported periodically in *The Kentucky Warbler*.

Abbreviations – County names appear in *italics*; when used to separate dates, the "/" symbol is used in place of "and"; "ba" next to an observer's initials indicates that the bird was banded; "ph." next to an observer's initials indicates that the observation was documented with photograph(s); "†" next to an observer's initials indicates that written details were submitted with the report; **Place names**: Ballard WMA, *Ballard*; Barkley Dam, *Lyon* (unless otherwise noted); Barren River Lake, *Allen*/*Barren* (unless otherwise noted); Blood River = Blood River embayment, Ky Lake, *Calloway*; Cave Run Lake, *Bath*/*Rowan*; Cecilia, *Hardin*; CVG = Cincinnati/Northern Kentucky airport, *Boone*; Falls of the Ohio, *Jefferson*; Freeman Lake, *Hardin*; Green River Lake, *Adair*/*Taylor* (unless otherwise noted); Jacobson Park, Reservoir #4 at Jacobson Park, Lexington; Jonathan Creek = Jonathan Creek embayment, Ky Lake, *Marshall*; Ken Unit, Peabody WMA, *Ohio*; Ky Dam = Kentucky Dam, *Livingston/Marshall*; Kentucky Dam Village SRP, *Marshall*; Ky Lake = Kentucky Lake, *Calloway*/*Marshall*/*Trigg*; Lake Linville, *Rockcastle*; Lake Peewee, *Hopkins*; LBL = Land Between the Lakes National Recreation Area, *Lyon*/*Trigg*; Lexington, *Fayette*; Long Point = Long Point Unit Reelfoot NWR, *Fulton*; Meldahl Dam, on the Ohio River, *Bracken*; Minor Clark = Minor Clark Fish Hatchery, *Rowan*; Reformatory Lake, nr. Buckner, *Oldham*; Sauerheber = Sauerheber Unit Sloughs WMA, *Henderson*; Sinclair Unit, Peabody WMA, *Muhlenberg*; Sledd Creek = Sledd Creek embayment of Ky Lake, *Marshall*; Somerset, *Pulaski*; Spindletop Farm = University of Kentucky Spindletop Farm, *Fayette*; SNP = State Nature Preserve; SRP = State Resort Park; Waitsboro = Waitsboro Recreation Area, Lake Cumberland, *Pulaski*; WMA = Wildlife Management Area; Wolf Creek Dam, Lake Cumberland, *Russell*.

Greater White-fronted Goose – local peak counts included 11,000 at Sauerheber 10 December (CP) with 16,000 there 31 December (CP), 15,000 there 5 January (TY), and 10,050 there 14 January (CP); and 7300 at Ballard WMA during the second week of December (RCo). Other reports of interest included 8 w. of Cecilia 3 December (BP, JBa, MY); 3 near Elkton, *Todd*, 31 December (RS); 2 at the J.C. Jones Sinkhole Ponds, *Hart*, 3 January (JSo); up to 6 at Spindletop Farm during early January (RO et al.) with 1 lingering there to the end of February (DSv, m. ob.); 17 at the Reformatory Lake 10 January (BP et al.) with 12 there 15 January (BP, EHu, BWu); 11 at the Larue County Sportsman's Lake 13 January (RD); 40 on Lake Peewee 16 January (BC); 2 at Norton Commons, *Jefferson*, 6-10 February (JBe, PB, et al.); 8 at Science Hill, *Pulaski*, 17 February (RD); 1 at the State Game Farm Lake, *Franklin*, 21 February, with 6 there 24 February (RCh); 2 on Shippingport Island, *Jefferson*, 24 February (DSt, TB, CBe, DCr); and 8 at Winchester, *Clark*, 27 February (AX).

Snow Goose – reports of interest included peak counts of 21,000 at Sauerheber 26

November (CP) with 10,250 there 23 December (CP); 110 at Green River Lake, *Adair*, 5 January (TEs); 34 at the Reformatory Lake 15 January (BP, EHu, BWu); and 32 at Spindletop Farm 17 February (TN).

Ross's Goose – reports of interest included 4 at the J.C. Jones Sinkhole Ponds, *Hart*, 1 December (ph. JSo); 1 at Jacobson Park 3 December (JSo, ph. DP); 1 at Spindletop Farm 15 January/17 February (SP/DSv, LCo); 1 at Zion, *Todd*, 31 December (†RS); 3 at Freeman Lake 15 January (RH); 1 on Ky Lake above the dam 16 January (BP, JBa, BWu, SG, TG) with 2 there 8 February (ph. JP); and 1 at Honker Lake, LBL, *Lyon*/*Trigg*, 31 January (ph. MC).

Cackling Goose – reports of interest included 4 at Jacobson Park 14 December–13 January (RO, ASK, m. ob.) with 1 last seen there 29 January (DCn), 1 along US 60, e. *Fayette*, 15 January (AX), and 1-2 at Spindletop Farm 13 January (RO)–25 February (SP) with 6 there 27 February (ph. BWu); 6 at Zion, *Todd*, 31 December (RS); up to 22 (19 January) at the Reformatory Lake during January (BDa, BP et al.); 2 on Lake Linville 8 January (ph. RD); 1 at Somerset 20 January (ph. RD); 1 at Hays Kennedy Park, *Jefferson*, 27 January (ph. BP et al.) with likely the same bird continuing there and nearby to 8 February (RFa, m. ob.); 2 at Norwood, *Pulaski*, 19 February (RD); and 2 along River Road downstream from the mouth of Harrods Creek, *Jefferson*, 26 February (BP).

Mute Swan – 1-3 were reported at six scattered locales in the central part of the state during the season; 9 on a gravel pit s. of Petersburg, *Boone*, 17 January (LM) represented the peak count for the season; the resident family group at the Sinclair Unit was observed twice during early January (SG, TG, et al.).

Tundra Swan – the wintering flock at Sauerheber numbered 48 by 3 December (CP) and peaked at 216 on 31 December (CP) and 207 on 21 January (CP); there were only three additional reports: 1 on McDougal Lake, *Larue*, 11 January (BP, EHu, MS); 7 on Cave Run Lake 11 January (MWr et al.) with 14 there 13 January (MWr); and 1 on Green River Lake, *Taylor*, 13 January (†RD).

Gadwall – 250 at Sauerheber 15 December (CC) represented a very modest peak count for the season.

American Black Duck – peak counts of interest included 80 at Cravens Bay, LBL, *Lyon*, 14 December (JHa, DCs, et al.); and ca. 500 at Sauerheber 19 February (KMi).

Blue-winged Teal – a very tardy male was reported at the J.C. Jones Sinkhole Ponds, *Hart*, 1 December (†JSo).

Northern Shoveler – local peak counts of interest included 400 at Sauerheber 6 December (CC) and ca. 50 on the Reformatory Lake 15 January (BWu).

Northern Pintail – local peak counts of interest included 24 on Barren River Lake 2 December (MBy, JBy) and 120 at Long Point 17 January (RD)

Green-winged Teal – local peak counts of interest included 60 at Hays Kennedy Park, *Jefferson*, 7 December (SW) with 108 counted there 3 January (PB, JBe); 45 on the Reformatory Lake 15 January (BWu); and up to 1000 along the Tennessee River s. of Ledbetter, *Livingston*, during late January (DD).

Canvasback – local peak counts of interest included 145 on Barren River Lake 2 December (MBy, JBy); 200 on Goose Lake, Sinclair Unit, 15 January (SG, TG); 150 on the Ohio River at Uniontown, *Union*, 16 January (CC); and 122 at the Falls of the Ohio 29 January (DSt) with at least 200 on the Ohio River at Louisville during last two weeks of February (DSt et al.).

Redhead – an unprecedented fallout occurred 2-3 December with the following peak counts reported: 70 at Winchester, *Clark* (AX), at least 74 on the Ohio River at Louisville (EHu et al.), 315 at Waitsboro (RD), and 1400 on Barren River Lake (MBy, JBy), all 2 December; and 107 on Freeman Lake and 205 on Lake Peewee (BP, JBa, MY), ca. 800 on Lake

Vega, Bluegrass Army Depot, *Madison* (TEd), a total of 1430 (counts from three locales) on Lake Cumberland, *Russell* (RD), and a survey estimate of an incredible 8100 [60% of 13,500 diving ducks] on Barren River Lake (WT), all 3 December. Additional reports of interest from later in the season included 150 on Goose Lake, Sinclair Unit 15 January (SG, TG); 60 on Lake Linville 17 January (MP); and at least 150 on the Ohio River at Louisville during the last two weeks of February (DSt et al.) with a peak count of 175 there 26 February (BP et al.).

Ring-necked Duck – local peak counts of interest included 450 at Sauerheber 9 December (JMg), 400 on Goose Lake, Sinclair Unit, 15 January (SG, TG); and 325 along Old Henry Road, *Jefferson*, 17 January (MA).

Greater Scaup – small numbers were present at traditional locales, mostly along the Ohio River and in the LBL area; reports of interest included 45-50 on Barren River Lake 2 December (MBy, JBy) and 100+ on the Ohio River at Louisville during the last week of February (m. ob.) with a peak count of 150 there 26 February (BP et al.).

Lesser Scaup – a nice fallout also occurred for this species 2-3 December with the following peak counts reported: 100 at Winchester, *Clark* (AX), 150 at Waitsboro (RD), and 165 on Barren River Lake (MBy, JBy), all 2 December; and 125 on Freeman Lake and 330 on Lake Peewee (BP, JBa, MY), 200 above Wolf Creek Dam (RD), and a survey estimate of 2700 [20% of 13,500 diving ducks] on Barren River Lake (WT), all 3 December. Additional reports of interest included relatively modest peak counts of 430 on Ky Lake, *Calloway*, 4 January (HC) and most of 4000 scaup sp. on Lake Barkley above the dam 16 January (BP, JBa, SG, TG).

Surf Scoter – it was an excellent season with reports from eight locales as follows: 4 on the Ohio River at Louisville 2 December (EHu et al.) with 5 there 3 December (TBe, DSt) and 1 lingering there 4-6 December (EHu et al.); 6 above Wolf Creek Dam (RD), 4 on Freeman Lake (BP, JBa, MY), and 2 on Lake Peewee (BP, JBa, MY), all 3 December; 1 on the Ohio River at Uniontown, *Union*, 12 December (CC); 1 at Somerset 29 December–2 January (ph. RD); 2 on Green River Lake, *Taylor*, 30 December (JSo, ph. EHu) with 1 still there 3 January (JSo); an ad. male on the Ohio River at Newport, *Campbell*, 17-18 February (ph. JW et al.); and an ad. male on the Ohio River at Louisville 22 February (CBs, MWa, et al.) with a pair there 25-26 February (BP et al.).

White-winged Scoter – it was another good winter for the species with all reports being included. An early fallout occurred during early December and included 2 on the Ohio River at Louisville 2 December (DSt, KB) with 1 still there 3 December (TBe); 1 on Barren River Lake 2 December (MBy, JBy); 6 above Wolf Creek Dam (RD) and 1 on the Flemingsburg Reservoir, *Fleming* (ph. BWu), both 3 December (ph. BWu); and 8 on Lake Linville 4 December (ph. RD). Then, another wave of birds appeared during mid-January and included the following reports: 3 on Dunham Lake, *Metcalfe*, 14 January (LCu); 1+6 on the Ohio River at Louisville 14 January (BP, RFa, et al.) with 1 lingering there to 31 January (BP et al.) and 2 there 17 February (BP, RLa), 4 there 22 February (BP et al.), 7 there 25 February (BP et al.), 13 there 26 February (BP et al.), and 16 there 28 February (BP et al.); 2 at Jonathan Creek 5 February (HC) with 6 there 6 February (ME); 2 on the Ohio River below the mouth of the Little Miami River, *Campbell*, 22 February (BWu); an ad. male on a lake along Hammons Lane, London, *Laurel*, 22 February (ph. KVe); 1 on the Ohio River off Charlestown, IN, State Park, *Oldham*, 25 January/24 February (BJ/TBe, CB); and 3 on the Ohio River upstream from Newport, *Campbell* (JW), and 4 on the Ohio River at Greenup, *Greenup* (JK), both 28 February.

Black Scoter – there were reports from three locales as follows: 13 on the Ohio River at Louisville 2 December (EHu et al.) with at least 10 still there 3 December (TBe et

al.), 3 there 4 December (EHu et al.) and 2 there 6 December (MA, BBC, et al.); 1 on Lake Peewee 3/4 December (BP, JBa, MY, SG, TG/DSi); 4 on the Ohio River at Ashland, *Boyd*, 18 December (VS); and an imm. male that was present on the Ohio River at Louisville 1 January into March (ph. BJ et al.). A report of 24 on the Ohio River at Ashland, *Boyd*, 3 December (eBird data) is not considered confirmed herein.

Long-tailed Duck – there were reports from five(six) locales as follows: 1 on the Ohio River at Louisville 2 December (EHu, et al.); 8 on Lake Cumberland, *Russell*, 5 January (TEs); an ad. male at Jacobson Park 30 January (SM, RBr); 1 on Lower Douglas Lake, Ft. Knox, *Hardin*, 31 January–3 February (ph. MLe); 2 at Jonathan Creek 5/6 February (HC/ME); a female/imm. on the Ohio River at Louisville 25 February (PB, JBe, BJ) with an ad. male there (and possibly a second nearby) 27 February (ph. PS, PB, JBe, et al.); and an ad. male on Ky Lake above the dam 28 February (ph. JP).

Bufflehead – peak counts of interest included 137 at Waitsboro (RD) and 144 on Barren River Lake (MBy, JBy), both 2 December; and a total of 190 on Lake Cumberland, *Russell*, 3 December (RD);

Common Goldeneye – peak counts of interest included ca. 500 on Lake Barkley, *Lyon*, 16 January (BWu, JBa, BP, et al.) and up to 75+ on the Ohio River at Louisville during the last week of February (m. ob.) with a peak count of 90 there 26 February (BP et al.).

Hooded Merganser – tallies of 414 on Lexington Reservoirs #2/#3 and 137 at Jacobson Park (BWu), both 1 January, represented the peak counts for the season.

Common Merganser – the species was relatively widespread in small numbers; reports of interest included 7 on the Ohio River at Uniontown, *Union*, 7 December (CC); 11 on the Ohio River at Catlettsburg, *Boyd*, 14 January (RLe); 5 on Green River Lake, *Taylor*, 11 January (BP, EHu, MS); 6 on Lake Peewee 16 January (SG, TG) with 8 there 17 January (SG, TG); 23 on Paintsville Lake, *Johnson*, 17 February (TLu); and 9 on the Ohio River at Newport, *Campbell*, 27 February (JW).

Red-breasted Merganser – this species was part of the remarkable fallout 2-3 December with the following peak counts reported: 65 on the Ohio River at Louisville (EHu et al.), 230 at Waitsboro (RD), and 1042 on Barren River Lake (MBy, JBy), all 2 December; 156 on Freeman Lake (JSo et al.) and 350 on Lake Peewee (BP, JBa, MY, SG, TG), both 3 December; 810 total on Lake Cumberland, *Russell*, and 301 total on Lake Cumberland, *Wayne* (RD), both 3 December; 300-400 on Barren River Lake 3 December (WT); and 88 on Green River Lake, *Adair*, 5 December (RD).

Ruddy Duck – 80 on Barren River Lake 2 December (MBy, JBy) and 142 on Lake Peewee 3 December (BP, JBa, MY, SG, TG) represented the peak counts for the season.

Red-throated Loon – there were five reports: 1 on Freeman Lake 3 December (ph. BP, JBa, MY); 1 on Green River Lake, *Taylor*, 9-10 January (RD, ph. BP, et al.); 1 on the Ohio River upstream from Warsaw, *Gallatin*, 15 January (BP, ph. EHu); 1 on the Cave Run Lake 17 January (†SP); and 1 on the Ohio River just upstream from Louisville 24-28 February (ph. BJ et al.).

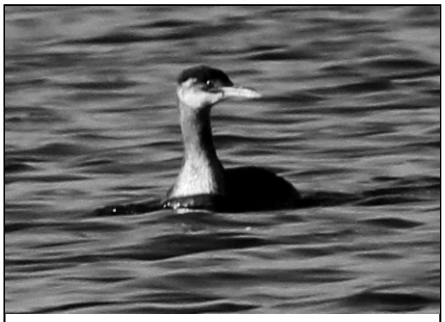
Red-throated Loon, *Jefferson*
25 February 2015
Brian Johnson

Common Loon – modest local peak counts included 4 on the Ohio River at Louisville 2 December (EHu et al.); 6 on Freeman Lake 3 December (BP, JBa, MY); 10 on Cedar Creek Lake, *Lincoln*, 4 December (RD); 18 on Green River Lake, *Adair*, 5 December (RD); and 15 on Ky Lake, *Marshall*, 19 December (ME).

Pied-billed Grebe – at least 100 on Lake Peewee 3 December (BP, JBa, MY) and 4 January (JSo), and 100+ on Green River Lake, *Taylor* 30 December/11 January (JSo/BP, EHu, MS) represented the peak counts for the season.

Horned Grebe – an excellent fallout occurred during 2-3 December and included the following peak counts: ca. 125 on the Ohio River at Louisville (EHu et al.), 146 at Waitsboro (RD), and 280 on Barren River Lake (MBy, JBy), all 2 December; 156 on Freeman Lake (JSo et al.) and at least 305 on Lake Peewee (BP, JBa, MY, SG, TG), both 3 December; nearly 300 total on Lake Cumberland, *Russell*/*Wayne*, 3 December (RD); and 189 on Green River Lake, *Adair*, 5 December (RD). Also of interest from later in the season were 159 on Green River Lake, *Taylor*, 30 December (JSo, EHu).

Red-necked Grebe – there were four reports: 1 on the Ohio River at Louisville 2 December (ph. EHu, JBa, et al.); 1 above Wolf Creek Dam 3 December (†RD); 1 on Lake Peewee 3-11 December (ph. SG, TG, BP, JBa, MY, et al.); and 1 on Cravens Bay, Lake Barkley, *Lyon*, 14 December (†JHa et al.).



Red-necked Grebe, *Hopkins*
11 Dec 2014
Steve Graham

Eared Grebe – there were two reports: 1 on the Ohio River at Louisville 4-6 December (ph. EHu, MA, et al.) and 1 on Green River Lake, *Taylor*, 26 December–17 January (ph. MLu, ph. JSo et al.).

Eared Grebe, *Jefferson*
4 Dec 2014
Brainard Palmer-Ball, Jr.

American White Pelican – 1 was on the Ohio River at Craig's Creek, *Gallatin*, 2 December (ph. BP, EHu); ca. 275 had returned to Ky Dam by 25 February (HC).

Great Egret – 1 lingered at the Sinclair Unit to 5 December (SG, TG) and a very tardy bird was seen adjacent to Ballard WMA 16 December (ph. SG, TG, BP, EHu).

Black Vulture – 193 at the Conley Bottom Resort, *Wayne*, 18 December (RD) represented the peak count for the season.

Northern Harrier – 15 at the Sinclair Unit 8/28 December & 14 January (SG, TG) and 14 at Sandy Watkins Park, *Henderson*, 5 January (CC) represented the peak counts for the season.

Osprey – an individual at Lake Reba, *Madison*, 14 December (†DBn, DBr) was exceptionally tardy.

Red-tailed Hawk – the darkish morph Harlan's Hawk that has wintered along Clear Creek, *Hopkins*, for several successive winters was back 3 December (BP, JBa, MY); other reports of western forms of interest included an ad. darkish morph *B. j. calurus* along US 68/KY 80 w. of Russellville, *Logan*, 31 December (RS) and a dark-intermediate adult *B. j. calurus* along Rockport-Paradise Road, *Muhlenberg*, 1 January (BP).

Great Egret, *Ballard*
16 December 2014
Eddie Huber

Rough-legged Hawk – there were only three reports: 1 at the Eastpark Industrial Park, *Greenup*, 23-24 December (RCa, SFy); 1 along the Audubon Parkway ene. of Curdsville, w. *Daviess*, 4 January (JSo) and 1 at CVG 17-31 January (LM et al.).

Golden Eagle – there were reports from at least eight locales: a juv. continued at LBL, *Lyon*, into mid-December (ph. MC, HC, et al.); an ad. at Owsley Fork Lake, *Madison*, 14 December (GR et al.); a likely adult at Ballard WMA 16 December (BP, ph. SG, TG, EHu); single ads., perhaps the same individual, over the Long Creek Unit Barren River WMA, *Allen*, 18 January (MBy) and at Fountain Run, *Monroe*, 19 January (MBy); an ad. along Flatwood Road near Laurel River Lake, *Laurel*, 29 January (DCn); 2 and possibly 3 captured on a trail cam e. of Dewey Lake, *Floyd*, 15 February (ph. SFr); and a juv. along Middle Fork Clarks River just s. of Murray, *Calloway*, 28 February (HC, ME). Review of trail cam photos revealed the presence of at least 3 at Bernheim Forest, *Bullitt*/*Nelson*, by mid-December (AB) and possibly as many as 7 total there during the season (KVo).

Virginia Rail – singles were heard at two traditional wintering locales in se. *Muhlenberg* and 2 were heard on the Ken Unit, all 1 January (BP).

American Coot – local peak counts of interest included 1300 on Cedar Creek Lake, *Lincoln* (TN), and 775 on Lake Reba, *Madison* (RBa, RFo), both 8 December, and 1600 on Ky Lake, *Calloway*, 4 January (HC et al.).

Sandhill Crane – a summary of the numbers at the state's two main wintering/staging areas follows. At Barren River Lake, 1200 were there by 1 December (WT) with 8600 there 8 December (WT), 5400 there 15 December (WT), 2300 there 22 December (WT), 5600 there 5 January (WT); 6800 there 12 January (WT), only 900+ there 9 February (WT), but a return of ca. 5000 birds 23 February (WT) due to the arrival of a period of frigid weather. West of Cecilia, 1500 were there by 4 December (CL), with 1200 there 4 January (JSo), only 33 there 6 January (EHa); 1700+ there 20 January (EHa), 4000 there 28 January (TN), initial peak counts of ca. 8000 there 2 February (EHa) and 12,100 there 4 February (CL) before a drop to 4400 there 10 February (EHa, AX), but a return to a new peak count for that locale of 15,300 on 24 February (EHa) as a result of the late February cold snap.

Lesser Yellowlegs – a presumed early migrant was at Ballard WMA 10 February (GB).

Dunlin – 16 were reported on the Walnut Creek embayment of Barren River Lake 26 December (JF).

Least Sandpiper – again this year a few birds appeared to winter at Blood River (HC).

Bonaparte's Gull – reports of interest included 380 at Blood River 19 December (HC) and 1000 at Barren River Lake 2 January (MBy).

Ring-billed Gull – local peak counts of interest included ca. 1500 on the Ohio River at Louisville during late January and early February with 1000+ continuing into March (m. ob.); 3500 on Barren River Lake 1 December (MBy, JBy) with ca. 3000 there 2 January (MBy); an estimate of 20,000 on Ky Lake above the dam 15-

16 January (RD, BWu, et al.); 2750 at Cave Run Lake/Minor Clark 7 February (SP/RD); and 1000+ on Green River Lake, *Taylor*, 17 January (BWu).

California Gull – an ad. was at the Falls of the Ohio 28 February–1 March (ph. BP, et al.). KBRC review required.

Herring Gull – noteworthy counts included 63 at Waitsboro (RD), 17 at Lexington Reservoirs #2/#3 (RO), and 19 at the Falls of the Ohio (BP et al.), all 14 January. Numbers increased dramatically on the Ohio River at Louisville during the latter part of January with the following impressive peak counts: 50+ on 15 January (BP, EHu); 100+ on 28 January (BP et al.); 580+ on 25 February (BP et al.); 500+ on 26 February (BP et al.); and 516+ on 28 February (BP et al.). Also quite impressive was an estimate of ca. 2000 at Ky Dam 15-16 January (RD, BWu, et al.) but with only 125-150 still there 12 February (BP, JBa).

Thayer's Gull – there were at least two reports: a third-year bird at Ky Dam 31 January/12 February (HC, JP/ph. BP, ph. JBa) that was pale enough that it could have been an intergrade with Iceland Gull; an ad. at Ky Dam 12 February (BP, ph. JBa) with perhaps the same individual lingering to 24/26 February (HC); and a second adult bird there 24 February (HC) that was either a paler Thayer's or perhaps the intergrade reported 16 January and noted in the next account.

Thayer's Gull (ad.), Ky Dam
12 February 2015
Jamie Baker

Thayer's Gull x Iceland Gull – an ad. that appeared to be an intergrade or a pale Thayer's Gull was present at Ky Dam 16 January (ph. BP, et al.); a first-year bird that appeared to be an intergrade was seen on the Ohio River at Louisville 2 February (†BP et al.).

Iceland Gull – there were two reports: a very pale wing-tipped first-year bird was present on the Ohio River at Louisville 28 January (†BP, RLa) with likely the same bird on the Ohio River at Louisville including at the Falls of the Ohio 22 February into March (BP, ph. JBa, et al.); and a first-year bird at Ky Dam 8-12 February (ph. HC, JP, et al.). KBRC review required.

Lesser Black-backed Gull – it was an unprecedented season for the species in central Kentucky with a summary of all reports included. On the Ohio River at Louisville, an ad. was first noted 2 December (EHu, JBa, BP) with an ad. there 15-28 January (BP, EHu, BWu, et al.), but with 3 (2 ads. and a second-year bird) there 30 January (BP et al.), 4 (2 ads. and 2 second-year birds) there 31 January (BP et al.), 2 ads. there 2 February (BP et al.); 3 (1 ad. and 2 second-year birds) there 4 February (BP et al.); a third-year bird there 17 February (BP, RLa); and an ad. continuing in the area including at the Falls of the Ohio on several dates to 28 February (BP et al.). Also reported was an ad. on the Ohio River at the mouth of the Licking River, *Kenton*/*Campbell*, 24 February (BWu); 1-2 in the general vicinity of Ky Dam (including Sledd Creek) 14 December through February (HC, ME.) with peak counts of 3 at Ky Lake, *Marshall*, 16 January (BP et al.) and 3 in the immediate vicinity of Ky Dam 24 February (HC).

Glaucous Gull – there were reports from two locales: an ad. on Ky Lake above the dam 15 January (ph. RD, SD); a first-year bird at Ky Dam 16-17 January (RD, BP, BWu, JBa, SG, TG) with possibly a second there 16 January (BWu, BP, JBa, et al.) and possibly one of the same birds there 12-15 February (BP, JBa, BM); and

2 first-year birds on the Ohio River at Louisville 28-31 January (†BP et al.) with an ad. and a third-year bird there 22 February into March (†BP, ph. BJ, et al.).

Great Black-backed Gull – there were reports from five locales: a first-year bird at Ky Dam 14 December (BLi, HC, ME); on the Ohio River at Louisville, a first-year bird was present 27-30 January (ph. BLo, et al.) with 2 first-year birds there 31 January (ph. BJ et al.) and 1 and possibly the second also continuing through February (BJ, BP, et al.) as evidenced by 2 first-year birds at the Falls of the Ohio 28 February (BP et al.); a second-year bird at Meldahl Dam 18 February (ph. JSt) with perhaps the same individual on the Ohio River at New Richmond, OH, *Campbell*, 23 February (DM); and a first-year bird on the Ohio River below Rabbit Hash, *Boone*, 22 February (†LM).

Great Black-backed Gull (first-year)
Ohio River at Louisville, 2 February 2015
Brainard Palmer-Ball, Jr.

Forster's Tern – as is the norm, a few birds lingered into early December at Jonathan Creek (HC) with a few apparently wintering at Blood River (HC, ME).

Barn Owl – there were four reports: 1 in s. *Todd* on the Elkton CBC 31 December (*fide* AT); 1 adjacent to Perry Battlefield State Park, *Boyle*, 17 January (SHk); 1 at the traditional nesting locale se. of Murray, *Calloway*, 13 February (HC, ME); and 1 along Sullivan Lane, n. *Franklin*, 27 February (ph.BDe).

Short-eared Owl – it was not a particularly good winter for the species, with reports from only three locales: up to 4 at the Sinclair Unit 28 December–25 February (SG, TG, et al.); up to 7 (5 January [JSo]) at Sandy Watkins Park, *Henderson*, 14 December–18 January (CC, EM); and 2 at Spindletop Farm 27-28 February (ph. BWu et al.).

Rufous Hummingbird – the ad. female in s. *Scott* lingered into the first week of February (LH).

Merlin – there were reports from nearly twenty locales as follows: 1 wintered again this year at Cox's Park, Louisville (m. ob.) with 2 birds there 7 February (DSw, BWo, BBC); 1 along Frostburg Road, e. *Hopkins*, 3 December (BP, JBa, MY, SG, TG); 1 at the Sinclair Unit 11 December–14 January (P&SF, SG, TG, BP); 1 just n. of Surrey Hills Farm, *Jefferson*, 14 December (ph. BP); 3 at different locales in suburban Lexington on the CBC there 20 December (SR, ph. DL, ph. JSo/ph. TN, JSw/DSv) with singles observed at different locales in Lexington 8 January (TLu) and 25 January (ph. TN); 1 at Joe Creason Park, Louisville, 1 January (SW); 1 on the Somerset CBC 1 January (*fide* RD); 2 on the Ken Unit and a 3rd near Schulztown, s. *Ohio*, all 1 January (MS, EHu); 1 at the J.C. Jones Sinkhole Ponds, *Hart*, 3 January (JSo); 1 at Spindletop Farm 14 January–24 February (AX, RO, et al.); 1 along I-75 sw. of Sadieville, n. *Scott*, 16 January (AC); 1 at Honker Lake, LBL, *Lyon*, 27 January (ph. MC); 1 at CVG 31 January (JW); 1 at Douglass Hills, *Jefferson*, 10 February (MM); and 1 at Schochoh, *Logan*, 13 February (ph. ST).

Peregrine Falcon – birds reported away from known nesting territories included 2 at the now traditional wintering territory on the Ky Lake bridge w. of Fenton, *Trigg*, 2 December (MC, HC) and through the season; 1 at Jacobson Park 14 December (RO, ASK); 1 at McConnell Springs, *Fayette*, 17 January (MT); and 1 at Spindletop Farm 24 January (SM, RBr).

Prairie Falcon – 1, possibly the returning bird from last winter, was seen at the end of Frostburg Road, e. *Hopkins*, 3 Decem-

ber (TG, SG, ph. MY, JBa, BP). KBRC review required.

***Empidonax* sp.** – an *Empidonax* flycatcher was present at Green River State Forest, *Henderson*, 21-30 December (ph./vt. CC). Opinions regarding the identification of the bird have been mixed and it will likely remain unidentified.

Empidonax flycatcher, *Henderson*
21 December 2014
Charlie Crawford

White-eyed Vireo – after being initially observed during late November, the lingering or wintering individual on the Anchorage Trail, *Jefferson*, was also seen 21 December (PB, JBe) and 5 January (ph. PS).

Fish Crow – a calling bird at Ky Dam Village SRP 16 January (BP, ph. JBa, BWu, SG, TG) represented a first for the state during January.

Horned Lark – 300 at Spindletop Farm 17 February (TN, et al.) represented a modest peak count for the season.

Tree Swallow – a presumed tardy bird was at Ballard WMA 19-20 December (†GB); 1 at Jonathan Creek 24 February (HC) was the earliest returning bird to be reported.

Black-capped Chickadee – 3-4 were reported to be banded at Ashland, *Boyd*, late November–mid-December (RCa).

Red-breasted Nuthatch – the species was nearly absent this winter with single birds reported on only three CBCs and only a few additional reports (eBird data).

Brown-headed Nuthatch – 1-2 continued at the Ky Dam Village SRP territory through the season (m. ob.).

Carolina Wren – the harsh, late winter weather appeared to be hard on this species with a diminished number of reports during the latter part of February (m. ob.).

House Wren – there was one report: 1 on the Hopkinsville Greenway, *Christian*, 3 January (SHa *fide* DCs).

Marsh Wren – there was one report: 1 on the former Gibraltar Mine, *Muhlenberg*, 1 January (BP).

Eastern Bluebird – the harsh, late winter weather appeared to be hard on those wintering with few reports during the latter part of February (m. ob.).

Gray Catbird – there were four reports: 2 on the Lexington CBC 20 December, 1 along Dry Branch Road, *Fayette* (†MT, KH) and 1 along Polo Club Blvd. on the se. side of Lexington (ph. TN, JSw); 1 along KY 565 nw. of Coburg, w. *Taylor*, 30 December (†RK); and 1 at the Pikeville City Lake, *Pike*, 17 January (†JBl).

American Pipit – a total of 305 along KY 102 between Elkton and Allensville, *Todd*, 31 December (RS), and 200 along KY 517 near Barren River Lake, *Allen*, 2 January (MBy) represented the peak counts for the season.

Cedar Waxwing – 250 at Morehead, *Rowan*, 3 December (BWu) represented an early season peak count; the species departed during mid-winter with very few reports during the late winter season and most of those in the sw. portion of the state.

Lapland Longspur – generally small numbers were present at traditional locales early in the season; a relatively modest wave arrived with the cold weather of

mid-winter; local peak counts included 90 a few miles se. of Adairville, s. *Logan*, 4 December (JA, TLa); a remarkable total of 3921 along KY 102 between Elkton and Allensville, *Todd*, 31 December (RS); and at least 100 along Chamberlain Lane, ne. *Jefferson*, 24 February (PB, JBe, et al.) with ca. 80 still there 25 February (BJ).

Black-and-white Warbler – 1 at Raven Run Sanctuary, *Fayette*, 20 December (†JC) was a first for the state during winter. Under KBRC review.

Common Yellowthroat – a female was observed adjacent to the Doe Valley Lake dam, *Meade*, 27 December (†EHu, JHu).

Palm Warbler – it was a poor season for wintering numbers with 1-2 reported on only two CBCs and singles reported at only a couple of additional locales during the season.

Pine Warbler – it was a poor season for wintering numbers with 1-2 reported on only three CBCs and singles reported at only a couple of additional locales during the season.

American Tree Sparrow – the species was widespread in small to moderate numbers during the season with 1-56 on 14 CBCs.

Chipping Sparrow – the species was present in relatively normal numbers for recent years with 1 to 17 on 15 CBCs.

Vesper Sparrow – there were two reports: 1 along Bethel Church Road, *McCracken*, 30 December (KMc, ph. BP); and 1 at the jct. of Wix Hollow Road and Highland Church Road, s. of Mt. Zion, *Allen*, 16 February (MBy).

Grasshopper Sparrow – a lingering bird near Dot, *Logan*, was last seen 8 December (ph. FL).

Le Conte's Sparrow – there were two reports: 2 on the former Gibraltar Mine, *Muhlenberg*, 1 January (BP); and 1 along the Middle Fork Clarks River just s. of Murray, *Calloway*, 13 February (HC, ME).

Harris's Sparrow – an ad. was present near Dot, *Logan*, 8 December into March (ph. FL et al.). KBRC review required.

Dark-eyed Junco – a very nicely marked "Oregon Junco" was present at Long Run Park, *Jefferson*, 2 February (ph. KB).

Eastern Meadowlark – a flock of 86 along Red Hill Road, *Allen*, 21 February (MBy) was quite impressive.

Rusty Blackbird – reports of interest included 95 at the Jenny Hole Unit Sloughs WMA, *Henderson*, 14 December (JMg); 40 at Cave Lake, *Wayne*, 18 December (RD); and 200 at the Highland Creek Unit Sloughs WMA, *Union*, 20 January (CC).

Brewer's Blackbird – there were five reports: 8-10 along Frostburg Road, e. *Hopkins*, 3 December (BP, JBa, MY, SG, TG); 20 adjacent to Sauerheber 4 December (†DSi); and 6 along Sinking Creek ne. of Adairville, *Logan*, 6 January (ph. RD) with 5 there 10 January (RFa, MBi).

Common Redpoll – 2 (a male and a female) were first seen in a Lexington yard during mid-January with the female seen by many and lingering into March (AH, CV, et al.). KBRC review required.

Purple Finch – the species lingered through the season in small numbers with 1-19 on 14 CBCs constituting a relatively normal winter presence for recent years.

Pine Siskin – a second wave of birds arrived during early December with moderate numbers remaining locally distributed into late December with small numbers lingering through the season; most were reported at feeding stations with the highest numbers in e. Kentucky (e.g., *Johnson* [TLu] and *Pike* [JBl] [eBird data]).

Addenda to the Fall 2014 Report:

Black Scoter – a female/imm. was on Barren River Lake 14 November (†RD).

Bonaparte's Gull – 1600 were on Barren River Lake 14 November (RD).

Addenda to the Summer 2013 Report:

American Bittern – quite unusual was 1 observed in flight along Mosby Ridge Rd, e. of Edmonton, *Metcalfe*, 11 June (†RD).

Lark Sparrow – 1 was observed along Old Glasgow Road s. of Horse Cave, *Barren*, 1 June (ph. RD).

Observers: Jim Arnett (JA), Audubon Society of Kentucky (ASK), Michael Autin (MA), Jamie Baker (JBa), Rebecca Bates (RBa), Jamin Beachy (JBy), Matthan Beachy (MBy), Beckham Bird Club (BBC), Colleen Becker (CBe), Tom Becker (TB), Jane Bell (JBe), Pat Bell (PB), Andrew Berry (AB), Carol Besse (CBs), Melissa Bishop (MBi), Josh Blackmon (JBl), Karen Bonsell (KB), Dustin Brewer (DBr), David Brown (DBn), Rhonda Bryant (RBr), Gerald Burnett (GB), Ron Canterbury (RCa), Beverly Carrico (BC), Robert Chadwick (RCh), David Chaffin (DCn), Hap Chambers (HC), Allen Chartier (AC), David Chiles (DCs), Robert Colvis (RCo), Lisa Combs (LCo), John Cox (JC), Charlie Crawford (CC), David Crouch (DCr), Melodie Cunningham (MC), Lloyd Curry (LCu), Brian Davis (BDa), Brenda Dean (BDe), Roseanna Denton (RD), Steve Denton (SD), Dan Dolack (DD), Melissa Easley (ME), Tom Edwards (TEd), Terri Estes (TEs), Rand Falls (RFa), J.C. Finch (JF), Preston & Shari Forsythe (P&SF), Rob Foster (RFo), Steve Fraley (SFy), Scott Freidhof (SFr), Steve Graham (SG), Teresa Graham (TG), Joe Hall (JHa), Scott Hall (SHa), Scott Hankla (SHk), Erin Harper (EHa), Richard Healy (RH), Kevin Hopper (KH), Alice Howell (AH), Eddie Huber (EHu), Jennifer Huber (JHu), Lori Hudson (LH), Brian Johnson (BJ), Richie Kessler (RK), Janet Kiser (JK), Tony Lance (TLa), Rob Lane (RLa), David Lang (DL), Marjorie Lehman (MLe), Roger Lemaster (RLe), Bill Lisowsky (BLi), Charlie Logsdon (CL), Brian Lowry (BLo), Terri Lusk (TLu), Mikey Lutmerding (MLu), Frank Lyne (FL), Scott Marsh (SM), Kelly McKay (KMc), Lee McNeely (LM), Elizabeth McWilliams (EM), Bob Meier (BM), John Meredig (JMg), Keith Michalski (KMi), Mark Monroe (MM), Donald Morse, Jr. (DM), multiple observers (m. ob.), Tina Nauman (TN), Ronan O'Carra (RO), Brainard Palmer-Ball, Jr. (BP), Sydney Penner (SP), Michael Plaster (MP), Charlie Plush (CP), Joshua Powell (JP), David Pritchard (DP), Spencer Reinhard (SR), Gary Ritchison (GR), Vicki Sandage (VS), Damien Simbeck (DSi), Jeff Sole (JSo), Pam Spaulding (PS), Jack Stenger (JSt), Dave Stewart (DSw), Matt Stickel (MS), Ruben Stoll (RS), Del Striegel (DSt), Dave Svetich (DSv), Joe Swanson (JSw), Wayne Tamminga (WT), Mark Tower (MT), Alan Troyer (AT), Steve Tyson (ST), Kayla Veitch (KVe), Carl Vogel (CV), Kelly Vowels (KVo), Major Waltman (MWa), Sean Ward (SW), James Wheat (JW), Barbara Woerner (BWo), Mike Wright (MWr), Brian Wulker (BWu), Antonio Xeira (AX), Mary Yandell (MY), Thomas Young (TY).

K.O.S. SPRING 2015 MEETING
Cumberland Falls State Resort Park
April 24-26, 2015

Blaine R. Ferrell

Pat and Jane Bell led a field trip at 2:30 p.m. on Friday. Vice President Pat Bell called the Friday evening meeting to order at 7:05 p.m. She welcomed everyone and recognized new members from Greenville, Lexington, Bowling Green, and Hopkinsville, as well as a student from Eastern Kentucky University. Pat turned the meeting over to President Steve Kistler who presented a diabolical bird quiz. He showed a small piece of each bird and challenged the audience to identify it.

Pat Bell introduced the speaker, Kate Heyden of the Kentucky Department of Fish and Wildlife Resources (KDFWR). She gave a presentation titled "Barn Owls in Kentucky: Current Management and Research". Barn Owls are a rare species in Kentucky and are listed as species of greatest conservation need in Kentucky's State Wildlife Action Plan. The KDFWR has been working with Barn Owls since the 1990s with more intense research and management beginning in 2010. Ms. Heyden discussed the past, present and future conservation and management efforts. The pre-settlement population was likely limited but as land was cleared their numbers rose. Data from Mengel's "Birds of Kentucky" implied they were once widespread and common, but by the 1990s the Barn Owl had become rare. Clean farming practices and environmental contaminants may have led to their decline, despite the availability of suitable habitat. Reintroduction efforts have not been successful. More success has been achieved through a program providing nest boxes. After placing numerous boxes in preferred habitats, the number of pairs almost doubled between 2010 and 2013. The KDFWR is currently tracking Barn Owls using radio transmitters and is testing carcasses for contaminants to further our understanding of the species and its conservation needs. Ms. Heyden acknowledged and thanked the Beckham Bird Club and KOS

along with two Kentucky Audubon chapters for their financial support of the Barn Owl radio-telemetry tracking efforts.

Pat Bell announced the field trips that would begin at 8:00 a.m. Saturday morning and introduced each leader. Lee McNeely would lead a field trip along the Cumberland Falls Trail; Blaine Ferrell would lead a trip along Trail 2; Rob Lane would lead a trip along Trail 4, and Steve Kistler would lead a beginners trip to the Campground.

Saturday afternoon field trips included a plant and flower walk to be led by Steve Kistler and Park Naturalist Steve Gilbert that would leave the lodge at 1:30 p.m.; a trip along the road to the Campground led by Win Ahrens; and a trip along Dog Slaughter Road led by Carol Besse beginning at 2 p.m. The Friday evening meeting adjourned at 7:55 p.m. and was followed by a social hour.

The Saturday evening meeting commenced at 7:02 p.m. President Steve Kistler opened the meeting, welcomed the large group, and encouraged those in attendance to urge others to join KOS and attend meetings. Steve introduced Linda Craiger, membership chairperson, and thanked her for her work. He mentioned the new KOS display that Mary Yandell designed and had produced for use at events to recruit members. He thanked Mary and encouraged members to use it in recruiting members. Steve next introduced Hap Chambers who explained that promises have not been kept with regard to land acquisition for the Clarks River National Wildlife Refuge in western Kentucky. Hap asked KOS members to write their Congressional representatives to ask them to honor the legislative promise to set aside more land for this refuge. She offered a letter for members to use. Steve announced that the Fall 2015 meeting will be at Barren River State Resort Park. Two new Councilors will be elected at that meeting and Steve encouraged members to send nominations to him. Carol Besse asked the audience to recognize Steve's work on revamping the KOS web site, which they did with enthusiasm.

Blaine Ferrell led the compilation of the day's bird list. Members observed a total of 78 species with an additional two birds, a cuckoo and an *Accipiter* listed as unidentified species. Steve Kistler introduced the evening speaker, Chris Wood, who presented a talk on "Bird Migration, Birding, and Conservation." Chris is the project leader for eBird and Neotropical Birds at the Cornell Lab of Ornithology. He is also head of Team Sapsucker, which will be competing to raise funds for the lab on the Global Big Day on May 9th. In 2013, Team Sapsucker observed 294 species in 24 hours in Texas and set a new record. Chris is a leading authority and has published several articles on bird identification. In his presentation he explained how we use birds to understand the natural world and ecosystems. He talked about various migratory routes, eruptions in certain years, and how conservation begins with understanding abundance and movement across broad geographic areas and long periods of time. He explained the idea behind eBird was to use volunteers to collect data that can then be used to address conservation issues. Hiring professional staff to gather data on such a massive scale is far too expensive. Cornell Lab and others are using the data for computer modeling to link with information on land cover and climate in collaboration with NASA and the XSEDE super computer to test conservation outcomes. The Nature Conservancy is looking into how to merge human needs with bird needs so they can co-exist. Chris mentioned the Global Big Day which is sponsored by the Cornell Lab and will seek to see how many birds can be tallied globally in a single day. He also discussed the various strategies Cornell Lab is using to monetize eBird in order to make it sustainable. Currently all data are free and downloadable. He also introduced a new effort, Merlin, an eBird powered online tool and smart phone app, to help people with bird identification.

Jeff Sole urged more people to become involved in eBird. The Nature Conservancy, where Jeff works, is trying to get Kentucky farmers to help manage water levels for shorebirds similar to a program used in California. He indicated that Kentucky needs more eBird data before they can implement this concept. Steve Kistler thanked Pat Bell for her work in putting together the meeting which was also acknowledged by the audience.

Pat Bell announced the field trips for Sunday at 8:00 a.m. Jeff Sole would lead a trip of approximately three miles looping around the lodge. Roseanna Denton would lead a trip to the old fire tower on Pinnacle Knob and along a section of Dog Slaughter Road. David Lang would lead a trip along Trail 4, the Civilian Conservation Corps Memorial Trail. The Saturday evening meeting adjourned at 8:37 p.m. and was followed by a social hour. Saturday night storms yielded to a nice morning on Sunday with the additional of several species on the morning's field trips.

Attendance at the Spring 2015 K.O.S. Meeting

Alexandria:	Mary Beth & Ron Lusby
Bowling Green:	Valerie Brown, Lisa Dalporto, Blaine Ferrell, John Forman, Ken Kuehn, Marilyn Mattingly
Burlington:	Lee & Lynda McNeely
Frankfort:	Jeff Sole
Georgetown:	David Lang
Glasgow:	Linda Craiger, Grace Waller
Greenville:	Steve & Teresa Graham, Brenda Pendley
Hopkinsville:	Sarah Bell
Independence:	Derek Iles, Don Martin
Lawrenceburg:	Kate Heyden
Lexington:	Ramesh & Suzanne Bhatt, James Hodge, David & Terri Lusk, Marie Sutton, Joe Swanson, Jim Williams, Antonio Xeira
Louisville:	Jane Bell, Pat Bell, Carol Besse, Dick & Kathy Dennis, Cheryl & Scott Jones, Rob Lane, Ben & Mary Yandell
Morehead:	Fred Busroe, Katie Busroe
Murray:	Hap Chambers, Bonnie & Sam McNeely
Munfordville:	Steve Kistler
Owensboro:	Marilee & Wendell Thompson
Prospect:	Win Ahrens
Richmond:	Dustin Brewer, Brenda & Pete Thompson
Science Hill:	Roseanna Denton
Somerset:	Gay Hodges
Upton:	Bonnie & Sam Avery
Floyd Knobs, IN:	Colleen & Tom Becker

Birds Observed at the KOS Spring Meeting at Cumberland Falls State Resort Park and Vicinty, April 24-26, 2015

The following species were observed by KOS members during the weekend of 24-26 April 2015 at Cumberland Falls State Resort Park and vicinity: Wild Turkey, Black Vulture, Turkey Vulture, *Accipiter* sp., Red-shouldered Hawk, Broad-winged Hawk, Spotted Sandpiper, Solitary Sandpiper, Mourning Dove, cuckoo sp., Eastern Whip-poor-will, Chimney Swift, Ruby-throated Hummingbird, Red-headed Woodpecker, Red-bellied Woodpecker, Downy Woodpecker, Hairy Woodpecker, Northern Flicker, Pileated Woodpecker, Olive-sided Flycatcher, Eastern Phoebe, Great Crested Flycatcher, Eastern Kingbird, White-eyed Vireo, Yellow-throated Vireo, Blue-headed Vireo, Red-eyed Vireo, Blue Jay, American Crow, Purple Martin, Tree Swallow, Northern Rough-winged Swallow, Bank Swallow, Cliff Swallow, Barn Swallow, Carolina Chickadee, Tufted Titmouse, White-breasted Nuthatch, Carolina Wren, Blue-gray Gnatcatcher, Eastern Bluebird, Wood Thrush, Hermit Thrush, American Robin, Gray Catbird, Brown Thrasher, European Starling, Ovenbird, Worm-eating Warbler, Louisiana Waterthrush, Tennessee Warbler, Nashville Warbler, Blue-winged Warbler, Black-and-white Warbler, Swainson's Warbler, Kentucky Warbler, Common Yellowthroat, Hooded Warbler, American Redstart, Northern Parula, Blackburnian Warbler, Cape May Warbler, Yellow Warbler, Magnolia Warbler, Chestnut-sided Warbler, Palm Warbler, Pine Warbler, Yellow-rumped Warbler, Yellow-throated Warbler, Cerulean Warbler, Bay-breasted Warbler, Black-throated Blue Warbler, Prairie Warbler, Black-throated Green Warbler, Eastern Towhee, Chipping Sparrow, Field Sparrow, Song Sparrow, White-throated Sparrow, Summer Tanager, Scarlet Tanager, Northern Cardinal, Rose-breasted Grosbeak, Indigo Bunting, Red-winged Blackbird, Brown-headed Cowbird, Orchard Oriole, Baltimore Oriole, American Goldfinch, and House Sparrow. The total number of species was 90.

Dark-eyed "Oregon" Junco, Jefferson Co.
2 February 2015
Karen Bonsell

Common Redpoll, Lexington
28 February 2015
Mary Yandell

White-eyed Vireo, Jefferson Co.
5 January 2015
Pam Spaulding

Iceland Gull (first-year), Kentucky Dam
12 February 2015
Brainard Palmer-Ball, Jr.

Red-throated Loon (juv.), Gallatin Co.
15 January 2015
Eddie Huber

Vesper Sparrow, McCracken Co.
30 December 2014
Brainard Palmer-Ball, Jr.