

5-2004

## Kentucky Warbler (Vol. 80, no. 2)

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# *The Kentucky Warbler*

(Published by Kentucky Ornithological Society)

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**THE KENTUCKY WARBLER**

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**THE COVER**

We thank Roseanna Denton for the photograph of a Yellow-billed Loon (*Gavia adamsii*) on Kentucky Lake, Marshall County, taken March 14, 2004 (See Field Note).

## WINTER SEASON 2003-2004

Brainard Palmer-Ball, Jr. and Lee McNeely

The winter 2003-2004 season was overall warmer-than-normal with lower-than-normal precipitation. However, a cold spell in late January and early February was one of the coldest periods in several winters and was likely responsible for several interesting reports. Despite the period of colder weather, snowfall was below normal, and in large part due to a good crop of natural foods (perhaps as a result of a mild, wet summer), many fruit-eating species lingered through winter in good numbers.

As expected, the banner fall season for *Selasphorus* hummingbirds continued with additional reports into early winter. In fact, for the first time ever – and despite the cold snap of late January and early February – *Selasphorus* hummingbirds (an unidentified bird in Lexington and a female Rufous south of Bowling Green) successfully wintered in Kentucky. Non-hummingbird rarities included Pacific Loon, Little and Great Black-backed gulls, Say's Phoebe, two Spotted Towhees and a Harris's Sparrow. Out-of-season birds included American Bittern, Spotted Sandpiper, Mourning Warbler and Wilson's Warbler. As expected, winter finches and Red-breasted Nuthatches lingered in generally small numbers, although numbers of Purple Finches appeared to be the highest in several years.

Publication of any unusual sightings in the seasonal report does not imply that these reports have been accepted as records for the official checklist of Kentucky birds. Observers are cautioned that records of out-of-season birds and all rarities must be accompanied with good details or documentation for acceptance. Documentation must be submitted to 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 – Miscellaneous:** county names appear in *italics*; when used to separate dates, the “/” symbol is used in place of “and”; “ph.” next to an observer’s initials indicates that the observation was documented with photograph(s); “vt.” next to an observer’s initials indicates that the observation was documented on videotape; “\*” next to an observer’s initials indicates that written details were submitted with the report; ad. = adult; imm. = immature; juv. = juvenile; yg. = young. **Place names:** Ballard = Ballard WMA, *Ballard*; Barkley Dam = Barkley Dam, *Lyon/Livingston*; Barren = Barren River Lake, *Allen/Barren*; Cave Run Lake = Cave Run Lake, *Bath/Rowan*; Cooley's Pond = Cooley's Pond, *Wayne*; Falls of the Ohio = Falls of the Ohio, *Jefferson*; Gibraltar = Gibraltar Unit Peabody WMA, *Muhlenberg*; Jonathan Creek = Jonathan Creek embayment of Kentucky Lake, *Marshall*; Ky Dam = Kentucky Dam, *Livingston/Marshall*; Lake No. 9 = Lake No. 9, *Fulton*; Lake Peewee = Lake Peewee, *Hopkins*; LBL = Land Between the Lakes, *Lyon/Trigg*; Long Point = Long Point Unit Reelfoot National Wildlife Refuge, *Fulton*; Mammoth Cave = Mammoth Cave National Park, *Edmonson* (unless otherwise noted); Riverqueen = Riverqueen Unit, Peabody WMA, *Muhlenberg*; Sauerheber = Sauerheber Unit Sloughs WMA, *Henderson*; Surrey Hills Farm = Surrey Hills Farm, *Jefferson*; Waitsboro = Waitsboro Recreation Area on Lake Cumberland, *Pulaski*; WMA = Wildlife Management Area.

**Greater White-fronted Goose:** small numbers were reported from several locales during the season. Peak counts at what have become traditional wintering locations for large numbers included 5390 at Ballard 11 February (CW); ca. 1000 at

Sauerheber 22 January (MM); and a mind-blowing tally of 21,650 counted on an aerial survey by the U.S. Fish and Wildlife Service in the vicinity of Long Point 8 January (CD). Also reported were 1000+ at Long Point 3 December (MT);

3000 at Long Point 18 December (CD); some 16,500 still at Long Point 12 January (KL); up to 7 at Buckner, *Oldham*, 21 December (MS); 2 in w. *Boone* 27 December (KC, et al.); and 2 in *Barren* 22 February (ph.SS, WW).

**Snow Goose:** peak counts included a new state high count of 125,000 estimated to be in the vicinity of Long Point 8 January (CD) and 76,000 in *Ballard* 3 February (CW); 14,500 were still at Long Point 12 January (KL). Small numbers were reported at a number of additional scattered locations as far e. as *Boone* (FR) and *Rowan* (LK, et al.).

**Ross's Goose:** small numbers were reported from several locales including 1 through the period in s. *Ohio* (JB, PB, et al.); 1 at *Ballard* 2 January (BP, et al.) and 24 January (SR); at least 1 at *Sauerheber* 19 January (BP, AC); 1-3 in *Warren* 21 January through the period (DR); and 1 in *Barren* 22 February (\*SS, WW). Only 1 could be found at Long Point as of 14 December (JDs), but at least 6 were there by 4 January (RD). In addition, 1 was reportedly shot by a hunter in *Rowan* in January (fide LK).

**Canada Goose:** with the lack of prolonged periods of inclement weather, numbers remained below average again this winter.

**Swans:** there were an unusually large number of reports of swans this winter, but with the difficulties in separating species, many of the reports could not be confirmed to species. In the summaries below, reports considered unconfirmed are qualified as to the level of certainty with which the birds were described.

**Mute Swan:** there were a number of reports of birds presumed to have come south from Great Lakes populations including 5 at *Bernheim Forest*, *Bullitt*, 28 December (JB, PB) - 16 February (RDv); 2 on the *Shelbyville* CBC 3 January (fide HB); an imm. on *Cave Run Lake* 9 January (LK, FB) [some details provided, but see

report of similarly aged *Tundra* below]; 8 on *Paintsville Lake*, *Floyd*, 24 January (SM); 2 at *Fishing Creek* embayment of *Lake Cumberland*, *Pulaski*, 2 February (RD); 8 at *Cooley's Pond* 11-14 February (RD); 1 at *Lentz' Pond*, *Jefferson*, 14 February (BBC); and 8 on the s. side of *Paducah*, *McCracken* 21 February (SR). In addition, one of the apparently resident pair along *Cypress Creek*, n. *Muhlenberg*, was observed during February (WR).

**Tundra Swan:** 1 imm. on *Cave Run Lake*, 22 December (CCv) [provided details do not rule out *Trumpeter* or *Mute*]; 4 on *Cave Run Lake* in late January (WM) [details convincing; yellow lores of ads. noted]; the flock at *Sauerheber* built up to a peak count of 25 during mid- to late January (CC, RDv, MM); 1 ad. at the *Falls of the Ohio* during the last week of January (BE, ph.AG) [photos seem indicative of *Tundra* but are not definitive]; 8 above *Meldahl Dam* 29 January (KR, SC) [no details] with 5 still there 2 February (CCv) [provided details do not rule out *Trumpeters*]; 1 near *Boston*, *Nelson*, 25 February - 1 March (ph.MH) [photos do not rule out *Trumpeter*].

**American Wigeon:** peak counts included an aerial count of 2256 in the vicinity of Long Point 8 January (CD) and 74 at *Cooley's Pond* 11 February (RD).

**Northern Shoveler:** peak count was from a U.S. Fish and Wildlife Service aerial estimate of 775 in the vicinity of Long Point 8 January (CD); other interesting reports included ca. 20 at *Buckner*, *Oldham* 31 January (BP, JE) and 130 at *Lake No. 9* on 1 February (KL, BLt).

**Northern Pintail:** peak counts included an aerial count of 2395 in the vicinity of Long Point 8 January (CD) and 160 at *Lake No. 9* on 1 February (KL, BLt).

**Green-winged Teal:** peak count was 150 at *Mitchell Lake*, *Ballard*, 29 December (BP, et al.).

**Canvasback:** peak counts included several hundred birds on *Lake Barkley* above the

dam, *Lyon*, 16 January (DR) and 65 on Barren 30 January (DR).

**Redhead:** 1-5 were reported on four CBCs; later in the season a sprinkling of birds showed up during January and early February; reports from the Great Lakes suggest that these birds are likely late migrants from areas that freeze up to our north; reports included 3 at Waitsboro 10 January (RD); 18 at Cedar Creek Lake, *Lincoln*, 11 January (RD); 7 at Clifty Pond, *Pulaski*, 18 January with 20 there 20 January and some lingering into March (RD); 4 at Honker Lake, LBL, *Lyon/Trigg*, 23 January (KB); 5 at Buckner, *Oldham*, 23 January (BP, JE); 5 on 31 January and a few on 9 February, both at Griffin Park, *Warren* (DR); and small numbers at McElroy Lake, *Warren*, 11/18 February (DR).

**Ring-necked Duck:** a flock of 175 at Petersburg, *Boone*, 10 January was unusually large for winter (LM).

**White-winged Scoter:** 1 was on Ky Lake, *Marshall*, 8 February (BP, MS) - 26 February (DR).

**Black Scoter:** a female was present on the Ohio River at the mouth of the Licking River, *Campbell/Kenton*, 17 January through the end of the period (FR, ph.LH).



Black Scoter, *Campbell/Kenton*  
31 January 2004  
Lana Hays

**Long-tailed Duck:** there were a few reports including 2 at Bernheim Forest, *Bullitt*, 6 December (MS); 2 at Waitsboro 1 Jan-

uary (SS, et al.); 1 on Lake Barkley, *Lyon*, 13 January (DR); and an impressive flock of 18 at Waitsboro 10 January (ph.RD, JD).

**Common Goldeneye:** peak counts included several hundred on Ky Lake 16 January (DR) and 200-250 on Ky Lake above the dam on 7 December (BP, BY).

**Hooded Merganser:** peak counts included 375 on Energy Lake, LBL, *Trigg*, 14 December (BL); 175-200 there 23 January (KB); and 150-200+ on Honker Lake, LBL, *Lyon/Trigg*, 7 December (BP, BY).

**Common Merganser:** the period of harshest winter weather in late January brought a sprinkling of birds to scattered locales across the state. Peak counts were from Honker Bay, LBL, *Lyon*, and included 75-100 there 23 January (KB) and 125 there 6 February (ME).

**Red-breasted Merganser:** peak count was 250 on Lake Barkley, *Lyon*, 16 February (BL).

**Ruddy Duck:** more than 300 were on Lake Peewee during late December and January, and a new state high count was established when 339 were counted there 21 January (AM).

**Wild Turkey:** relatively impressive was a single loose flock containing at least 239 birds in e. *Muhlenberg* 3 January (BP, AC).

**Red-throated Loon:** there were 3 reports from Ky Lake as follows: 1 above the dam, *Marshall*, 7 December (\*BP, BY); 2 in *Marshall*, 14 December (DR); and 1 at Birmingham Point, *Marshall*, 26 February (DR).

**Pacific Loon:** 1 was observed on Ky Lake at Birmingham Point, *Marshall*, 26 February (DR). KBRC review required.

**Common Loon:** 1-8 individuals (late migrants and lingering birds) were reported on five CBCs; a few birds likely lingered or wintered on larger reservoirs as indicated by 1 on Barren 9 January (DR); 1

on Lake Barkley 13 January (DR) and 15-20 on Ky Lake 16 January (DR).

**Horned Grebe:** lingering birds were observed on five CBCs; the peak late fall/early winter count was 75+ on Ky Lake above the dam 7 December (BP, BY) with 53 tallied on the LBL CBC 14 December (fide CM). Birds lingered through winter on a few of the larger reservoirs and reports included 60+ collectively on Lake Barkley/KyLake 16 January (DR) and 14 on Green River Lake, *Taylor*, 28 January (RD).

**Eared Grebe:** 1 was on Lake Peewee 6 December (\*BP, BY).

**American White Pelican:** a few birds lingered throughout the winter on Lake Barkley; mid-winter reports included 6 on Lake Barkley, *Trigg*, 1 January (BL); 15 on Lake Barkley at Kuttawa, *Lyon*, 13 January (ME, DR); 50 over Lake Barkley, *Trigg*, 6 February (KB); 100+ on a sandbar in the same area 7 February (KB); 17 on a sandbar in the same area 10 February (ME); and 30 on Ky Lake above the dam 21 February (BP, BY).

**Double-crested Cormorant:** peak count was 500+ on Lake Barkley at Silo Overlook, *Trigg*, 7 December (BP, BY).

**American Bittern:** 1 was seen at the Sinclair Unit of Peabody WMA, *Muhlenberg*, 14 February (\*MS); interestingly, this is the same location where 1 was seen in early January 2003 on the Paradise CBC.

**Green Heron:** a tardy individual was observed at Backbone Swamp, *Franklin*, on 6 or 7 December (RS).

**Black-crowned Night-Heron:** at least 2 birds spent the winter in St. Mathews, *Jefferson* (BW); birds were also reported in mid-December at the Louisville Zoo (BBC) and at Lexington (fide BM).

**Black Vulture:** peak counts included at least 137 in sw. *Ohio* 11 January (BP, et al.) and 60+ at East Bend Power Plant, *Boone*, 23 January (BP, KC).

**Osprey:** quite unusual for early January was a report of a bird on Ky Lake, *Calloway*, 3 January (JEr, WWb).

**Bald Eagle:** a new nest was discovered on Cave Run Lake in mid-January (fide WM).

**Red-tailed Hawk:** reports of western forms during the season included an adult light-morph *B. j. harlani* for the 3rd winter in a row (ph.DR); a *B. j. krideri* far e. of normal sightings in *Pike* 28 December (JC, LE); an ad. *B. j. krideri* near Bandana, *Ballard*, 29 December (BP); a *B. j. krideri* in *Logan* 29 December (DR); a dark morph ad. *B. j. calurus* at Gibraltar 3 January (BP, AC); a light morph adult *B. j. calurus* in *Muhlenberg* 7 January (DR); a dark morph adult *B. j. calurus* near Waverly, *Union*, 19 January (BP, AC); and an ad. dark morph *B. j. calurus* in *Allen* 21 January (DR) and a bird considered an adult intergrade *B. j. calurus/krideri* in *Warren* 18 February (DR).

**Rough-legged Hawk:** birds were reported as far s. as *Wayne* (2 individuals) 3 December (RD); Science Hill, *Pulaski*, 30 January (RD); s. *Warren* 10 January (DR); *Fulton* 4 February (KW); and *Trigg* 28 February (BW). Singles in *Campbell* 7 December (FR); *Gallatin* 20 December (fide LM); *Madison* 23 December (fide GR); *Pendleton* 23 January (FR); and *Boone* 31 January (LM, KC) were in areas the species is not regularly reported.

**Golden Eagle:** 1 ad. or sub-ad. was observed at the traditional Bernheim Forest area, *Bullitt/Nelson*, 6 December (BP, BY, MS, MV) and 2 were observed there 28 December (BP, et al.). An imm. was discovered unable to fly at Bernheim Forest in early February and was taken in for rehabilitation. The bird apparently had high levels of lead and pesticides (fide EW). Also reported were 1 along the Ohio River e. of Brandenburg, *Meade*, 23 December (MW, MWn); 1 at and near

Long Point 12 January and 27 February (KL); and 1 in *Martin* 12 January (CL).

**Merlin:** winter reports are really becoming too numerous to warrant listing, but all reported again this season are included as follows: 2 at Riverqueen 5 December (MV); 3 at Riverqueen 6 December (BP, BY); singles in *Warren* on 5 dates (including the Bowling Green CBC 20 December) 9 December – 27 February (DR); 1 on the LBL CBC 14 December (CM); 1 at Ano 20 December (RD, JD, SD); 1 at Riverqueen 30 December (BP, MS); 1 near St. Mathews, *Jefferson*, 30 December (BW); 1 on the Falmouth CBC 1 January (fide LM); 1 in *Trigg* 1 January (BL); 2 at Homestead Unit of Peabody WMA, *Ohio*, 3 January (JB, PB); 1 at Surrey Hills Farm 13 January (JB, PB) and 30-31 January (BP); and 1 nr. Worthington, ne. *Jefferson* 31 January (BP, JE, JB, PB).

**Peregrine Falcon:** the local pair at Louisville was seen on the waterfront 14 December (RG, et al.); 1 was also seen at the Falls of the Ohio in early February (GD) and 1 was seen near St. Mathews, *Jefferson*, during January (BW). Two different birds were observed at Meldahl Dam as follows: 23 January (imm. – FR), 29 January (ad. and imm. – KR, SC), and 2 February (ad. – CCv).

**Virginia Rail:** 2 birds answered a tape at Gibraltar 30 December (BP, MS) with at least 1 still there 3 January (BP, AC).

**Sandhill Crane:** as is becoming more and more common, southbound flocks continued well into early winter with reports from nine CBCs. Of special note is the report that apparently 100+ cranes have wintered in the vicinity of Guthrie, *Todd*, for about the last ten years (DM, fide BWi). There were a few mid-January records including 4 over Louisville 9 January (JB, PB); 12 (northbound) over Louisville 12 January (MS); and 4 at Walton's Pond and 25 over Barren (northbound) 21 January (DR). By early February, northbound flocks were being ob-

served regularly including up to 400 in *Hart* 11 February (MS); ca. 600 in the Ohio River bottoms near Maceo, *Daviess*, 16 February (MM); ca. 500 still in that area 18 February (DA); and 615+ at various points in *Barren* 22 February (SS, WW).

**Killdeer:** peak count was 420 at Barren 8 December (DR).

**Spotted Sandpiper:** certainly rare for winter was 1 along Lake Barkley at Eddyville Landing, *Lyon*, 13 January (\*ME).

**Least Sandpiper:** a few birds lingered into winter as follows: 1 at Jonathan Creek 14 December (HC, ME); 10 at Blood River embayment of Kentucky Lake, *Calloway*, 28 December (HC) and 8 still there 3 January (fide HC); 2 at Barren 8 December (DR), 4 there 4 January (DR), and 2 there 9 January (DR); and 4 in w. *Fulton* 4 January (RD). The species was also reported from Ky Lake 16 February (HC) and at Jonathan Creek 21 February (ME).

**Dunlin:** a few birds lingered into winter at Barren as follows: 6 on 8 December (DR); 5 still there 4 January (DR); and 1 still there 9 January (DR).

**Wilson's Snipe:** peak count was 35 at Canewood, *Clark*, 29 February (FR).

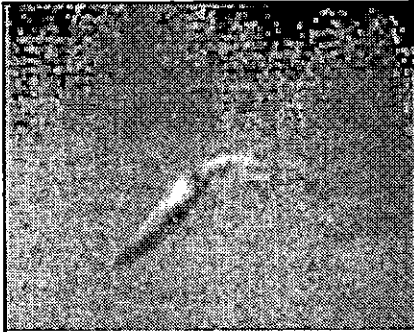
**American Woodcock:** warm December and early January weather resulted in several reports of performing individuals, and birds were reported on four CBCs (*Ballard*, *Hart*, LBL and Paradise).

**Laughing Gull:** latest lingering individual reported was a second-winter bird at Ky Dam 14 December (HC, DR, MB).

**Little Gull:** a first-year bird was present on Ky Lake above the dam 14 February (\*HC) through the end of the period (vt.DR, et al.). KBRC review required.

**Bonaparte's Gull:** a surprising number remained on Ky Lake this winter, especially in light of the cold snap of late January and arrival of large numbers of bigger gulls; 500+ were in the vicinity of Ky Dam 25 January (BP). Other impres-





Little Gull, Ky Lake, *Marshall*  
17 February 2004  
David Roemer

sive counts included 519 on Lake Cumberland, *Wayne*, 17 December (RD) and 500+ at Barren 9 January (DR).

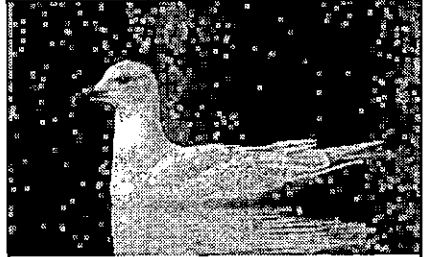
**Ring-billed Gull:** numbers peaked in the latter part of January when the following estimates were made: 10,000 in the vicinity of Ky Dam 23 January (BL) and 14,000 in the vicinity of Ky Dam 25 January (BP). Peak count on the Ohio River, *Campbell/Kenton*, was 380 birds on 6 February (FR).

**Herring Gull:** numbers around Ky Dam peaked in late January and early February, with at least 500 there 25 January (BP, HC).

**Thayer's Gull:** a number of birds were present during the season, all at or in the vicinity of Ky Dam and Barkley Dam as follows: an ad. at Barkley Dam 13/16/22 January (DR); an ad. and 2 first-years at Ky Dam 23 January (BL); a first-year below Ky Dam 24 January (BP); an ad. and a first-year below Ky Dam 25 January (BP, HC); an ad. at each of Ky Dam and Barkley Dam 8 February (DR, TD); an ad. along the Tennessee River at Calvert City, *Marshall*, 8 February (BP, MS, et al.); a first-year at Ky Dam 13 February (DR); and a first-year below Barkley Dam 21 February (BP).

**Iceland/Thayer's Gull:** a first-year bird below Ky Dam 25 January (ph.BP, HC)–

26 February (ph.DR) showed intermediate characters between 'typical' individuals of the two forms. It is unclear to which end of the continuum this individual was closest, but most authorities polled by D. Roemer suggested it was closer to Iceland (or probably or perhaps one). Insufficient knowledge concerning the variability in plumages likely renders this individual perpetually questionable concerning parentage.



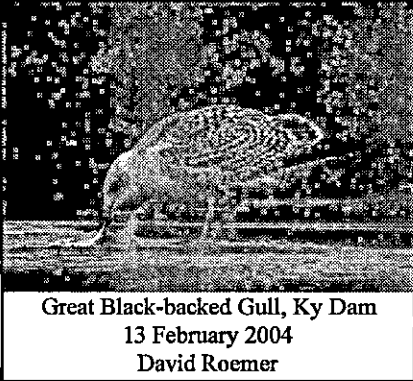
Iceland/Thayer's Gull, Ky Dam  
13 February 2004  
David Roemer

**Lesser Black-backed Gull:** birds in all age classes were observed during the period with up to 3-4 individuals observed as follows: an adult on Lake Barkley at Boyd's Landing, *Lyon*, 7 December (BP, BY); an adult below Ky Dam 28 December (HC, RD); an adult below Barkley Dam 4 January (RD); 2 ads. at Ky Dam 13 January (DR); 3 at Ky Dam 16 January (DR); 1 below Ky Dam 18 January (HC); 1 adult at Ky Dam 22 January (DR) and 23 January (BL); 1 sub-adult (third or fourth-year) bird below Ky Dam 24 January (BP); 3, maybe 4 separate birds (1 or 2 ads., 1 third-year, and 1 second-year) in vicinity of Ky Dam 25 January (BP); perhaps the same 3-4 individuals again in the vicinity of Ky Dam 8 February (BP, MS); 2 ads. at Ky Dam 13/17 February (DR); and an adult below Ky Dam 26 February (DR).

**Glaucous Gull:** 2 to possibly 3 or more first-year birds were present on Ky Lake and Lake Barkley during the period, most in the vicinity of Ky Dam but also at

Barkley Dam and as far s. on Ky Lake as Sherwood Shores, *Marshall*; first reported were 2 on Ky Lake above the dam 14 December (DR, et al.) and the same individuals were likely in part responsible for continuing reports into March.

**Great Black-backed Gull:** a first-year bird was present below Ky Dam 8 February (ph.DR, et al.) - 17 February (DR). KBRC review required



Great Black-backed Gull, Ky Dam  
13 February 2004  
David Roemer

**Forster's Tern:** 5 were still at Jonathan Creek 14 December (HC, ME) and while the species was not reported during January, 4 had returned to Jonathan Creek by 21 February (ME) with 9 there by 27 February (ME).

**Eurasian Collared-Dove:** the species was reported on five CBCs this year with peak counts of 37 on the Sorgho CBC, *Daviess*, 3 January (fide JH) and 34 on the Olmstead CBC, *Logan*, 29 December (MB).

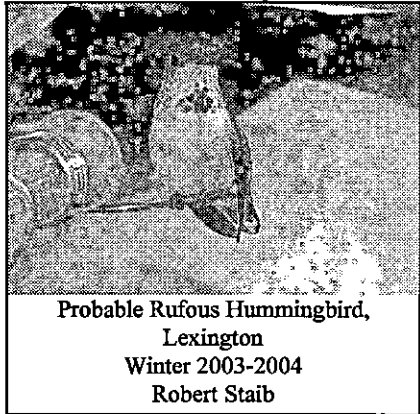
**Barn Owl:** the only ones reported were in *Logan* 1 January (BK, fide MB) and in *Calloway* 3 January (fide HC).

**Long-eared Owl:** only reports were for 1-2 at Riverqueen 6/30 December (BP, et al).

**Short-eared Owl:** it was not an impressive winter for large numbers, but interesting reports included 2 at Ano 20 December (RD, JD, SD); 2 at the Fort Campbell airfield, *Christian*, 29 December (DM), and 1 in w. *Wayne*, 10 January (RD).

**Northern Saw-whet Owl:** quite impressive was a total of 6 individuals that replied to taped calls at several points in the Little Lick area of Daniel Boone National Forest, *Pulaski*, 1 February (RD); likely 1 of these same individuals was also heard in the same area 28 February (BY).

**Rufous Hummingbird:** the winter 2003-2004 season was the best ever for lingering Rufous and *Selasphorus* sp. hummingbirds with 10 reports (see Table 1). In fact, by the end of February it appeared that 2 birds were about to become the first ever to conclusively survive a Kentucky winter, those being an adult female Rufous near Woodburn, *Warren* (ph.JE) and a probable female Rufous at Lexington (ph.RS).



Probable Rufous Hummingbird,  
Lexington  
Winter 2003-2004  
Robert Staib

**Red-headed Woodpecker:** wintering numbers were down in w. Kentucky as compared to the previous winter, but were still probably above-average (m.ob).

**Say's Phoebe:** a bird was observed approximately 1 mile w. of Buffalo, *Larue*, 26 December (ph.L&BA). KBRC review required.

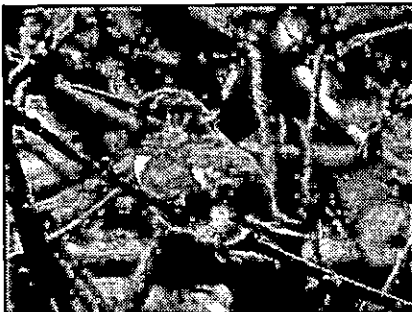
**Tree Swallow:** earliest report of spring migrants was for 2 over Ky Lake above the dam 21 February (BY, BP).

**Red-breasted Nuthatch:** as seemed apparent by the end of the fall season, only a modest movement occurred with small

Table 1. Winter 2003-2004 Hummingbird Summary

Species ID	Age/sex	Location	Date last observed
<i>Selasphorus</i> sp.	Prob. female (photos)	Nolin Lake, <i>Grayson</i>	mid-December 2003
Rufous	Ad. female (banded)	Russellville, <i>Logan</i>	12 December 2003
Rufous	Imm. female (specimen)	Nr. Verona, s. <i>Boone</i>	14 December 2003
<i>Selasphorus</i> sp.	Prob. ad. female (photos)	N. of Crestwood, <i>Oldham</i>	24 December 2003
Rufous	Ad. female (banded)	Rich Pond, <i>Warren</i>	6 January 2004
<i>Selasphorus</i> sp.	Prob. ad female (photos)	Se. <i>Jefferson</i>	11 January 2004
<i>Selasphorus</i> sp.	Prob. ad. female (photos)	Berea, <i>Madison</i>	16 January 2004
Rufous	Ad. male (photos)	Mt. Washington, <i>Bullitt</i>	26 January 2004
<i>Selasphorus</i> sp.	Female (photos)	Lexington, <i>Fayette</i>	24 March 2004
Rufous	Ad. female (banded)	N. of Rich Pond, <i>Warren</i>	7 April 2004

numbers of birds relatively widely dispersed during the season. One to 10 were reported on only seven CBCs. At least 3 birds were observed at the *Wolfe* breeding location 29 February (FR).



Rufous Hummingbird, *Bullitt*  
January 2004  
B. Palmer-Ball, Jr.

**House Wren:** there were a few reports of lingering individuals as follows: 2 at Mammoth Cave, 1 each in *Barren* and *Edmonson*, 2 December (MMn); 1 in w. *McCracken* 31 December (SR, MS) – 24 January (BP); and 1 at Gibraltar 3 January (BP, AC).

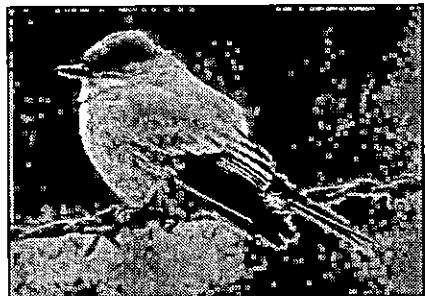
**Ruby-crowned Kinglet:** relatively unusual was a high count of 15 on the *Ballard* CBC 29 December (BP, et al.); numbers seemed well above average during the CBC period with 1-15 reported on 17 CBCs.

**Hermit Thrush:** above-average numbers were present during the winter with 1-17

birds reported on 17 CBCs.

**American Robin:** it was a good winter for 'berry eating' species including this one; peak counts included "many thousands" in *Hart* 27 December (SK); and 2000 at a roost at Louisville in December (BW).

**American Pipit:** as is becoming more the norm than the exception, significant numbers lingered into the winter period, especially in open farmland and along reservoir margins. Peak counts included 250+ in *Allen* 9 January (DR); 200+ n. of *Oscar*, *Ballard*, 31 December (SR); and 185 (150 in a single flock) in *Logan* 29 December (fide MB). The presence of a number of small groups became apparent during the cold, snowy period of late January and early February.



Say's Phoebe, *Larue*  
26 December 2003  
Lyn Atherton

**Cedar Waxwing:** this species seemed to be present in above average numbers, at

least in early winter. Peak counts included 180 at LBL, *Trigg*, 1 December (BL).

**Tennessee Warbler:** a late-departing bird was observed at Owensboro, *Daviess*, 1 December (MTh).

**Pine Warbler:** there were a few winter season reports including 1 at Riverqueen 30 December (BP, MS); 1 in *Pulaski* 1 January (KF); 1 in e. *Muhlenberg* 3 January (BP, AC); and 1 at a feeding station at Madisonville, *Hopkins*, throughout the winter (AM).

**Yellow-rumped Warbler:** it was a good winter for the species, either due to relatively mild conditions or a good food supply with 8-268 individuals reported on all 27 CBCs.

**Palm Warbler:** there were perhaps more reports of this species this winter than in any previous year. One to 11 birds were reported from six CBCs and several other locations in the following counties: *Allen* (flock of 7 on 30 January – DR); *Boone* (LM); *Boyle* (fide NE); *Fayette* (WS and fide BM); *Hart* (SK); *Larue* (DR); *Logan* (FL); *Madison* (fide GR); *Marshall* (DR); *Muhlenberg* (BP and flock of at least 5 on 30 December – BP, MS); *Warren* (DR) and *Wayne* (RD).

**Mourning Warbler:** extraordinarily late was an imm. female near Woodburn, *Warren*, 9 December (\*DR). To be reviewed by KBRC.

**Wilson's Warbler:** an adult male was observed at Berea, *Madison*, 13 December (\*A&TR) for one of only a few early winter records. To be reviewed by KBRC.

**Spotted Towhee:** 2 different birds – both males – were present this winter, 1 in w. *McCracken* 30 December thru the end of the period (ph.BP, et al.) and 1 along Rockport-Paradise Rd, *Muhlenberg* 3 January (\*BP, AC), which was still there 27 February (BP, SV). KBRC review required.

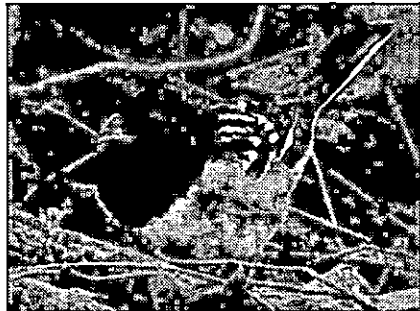
**American Tree Sparrow:** perhaps slightly

below average numbers were distributed across much of the state with 1-48 individuals reported on 11 CBCs; during the harshest part of the winter a few were at feeders.

**Chipping Sparrow:** this species continues to increase as a winter visitor/resident with an unprecedented number reported during the winter 2003-2004 season. A flock of 60-65+ birds began the winter at Surrey Hills Farm with at least 58 still there 7 February (BP); overall 1-91 were reported on 11 CBCs. Also reported later in winter were 2-3 elsewhere in e. *Jefferson* 31 January (BW); up to 30 at Shaker Mill through the period (DR); 1 in s. *Warren* 25 February (JE); 1 in w. *McCracken* 1 January (MS); 2 in *Calloway* 16 January (ME); and flocks of 8 at Lake Cumberland State Resort Park, *Russell*, 21 January (RD) and 15 in *Wayne* 11 February (RD).

**Vesper Sparrow:** very rare for winter were 3 in *Trigg* 1 January (\*BL).

**LeConte's Sparrow:** at least 3 birds were observed adjacent to the West Ky WMA, *McCracken*, 29 December (BP, RD) – 1 January (MB, SR).



Spotted Towhee, *McCracken*  
24 January 2004  
B. Palmer-Ball, Jr.

**Fox Sparrow:** it was a relatively good winter for the species with 1-12 individuals reported on 17 CBCs; there were also numerous reports from feeding stations including 8+ at Fisherville, *Jefferson*, during February (AL, fide BW).

**Lincoln's Sparrow:** there were three separate reports of this very rarely documented in winter sparrow as follows: 1 at Lexington 20 December (\*SM); 1 in *Pulaski* 29 January (\*RD), and 1 in *Barren*, 9 February (DR).

**Harris's Sparrow:** an immature was present in a yard in Lovelaceville, *Ballard*, mid-February into March (ph.RH, et al.).

**White-crowned Sparrow:** an impressive tally of 310 was observed in a relatively small part of *Boone* 20 December (NK); and a record count for the Danville CBC of 155 was tallied 20 December (fide NE).

**Lapland Longspur:** the species was fairly well distributed in small numbers across much of c. and w. Kentucky during the period with peak numbers occurring during the harshest weather in late January and early February. Peak counts included 25-30 near Worthington, ne. *Jefferson*, 31 January (JB, PB, et al.) and 25+ near Oscar, *Ballard*, 29 December (BP, SR, RD) and 10 January (BP, AC). Only 10 were seen in w. *Fulton* where the species is normally present in greater numbers, 4 January (RD).

**Snow Bunting:** for the first time in several years, decent numbers showed up—albeit for only a few days—during the snowiest part of an otherwise relatively mild winter. First observed were 36 in *Campbell* (FR) and 5 at Falls of the Ohio (BP) 30

January followed by 3 at Surrey Hills Farm (BP, JE), 4 near Worthington, ne. *Jefferson* (JB, PB, et al.), and 50+ near Petersburg, *Boone*, all 31 January (KC, LM); and finally 75-80 near Worthington, ne. *Jefferson*, 1 February (BY).

**Rusty Blackbird:** peak count was ca. 200 at Cooley's Pond 14 February (RD).

**Brewer's Blackbird:** a flock of 19 birds was present n. of Oscar, *Ballard*, 30 December (MS, BP) with 14 at the same location 31 December (SR).

**Purple Finch:** generally small numbers were well distributed across all parts of the state with moderate to high numbers reported in a few locales. One to 56 birds were reported on 18 CBCs. Although there were a few at feeders throughout the season, the incidence of birds seemed to peak during February, perhaps as natural food supplies began to diminish. Peak counts included 100+ at Mammoth Cave 2 December (MMn); 15 in *Trigg* (BL); 75 s. of Fisherville, *Jefferson* 14 February (E&JH); and ca. 60 at Fisherville, *Jefferson* during February (AL, fide BW).

**Pine Siskin:** very small numbers were widely distributed across most of the state. Peak counts were unimpressive and included up to 7 at Surrey Hills Farm through December and early January (BP) and at least 12 at Pine Mountain State Park, *Bell*, 29 February (BY).

**Undocumented reports:** the following Winter 2003-2004 CBC reports published in *The Kentucky Warbler*, Vol.80, No. 1 should be qualified as follows: Blue-winged Teal, 13 on Lexington CBC—details were solicited but none were received; Yellow-throated Vireo, Lexington CBC—details were solicited but none were received; Veery, Falls of Rough CBC—details were solicited but none were received.

**Observers:** Lyn & Brooks Atherton (B&LA); David Ayer (DA); Jane Bell (JB); Pat Bell (PB); Mark Bennett (MB); Karon Broadbent (KB); Horace Brown (HB); Fred Busroe (FB); Kathy Caminiti (KC); Joan Carr (JC); Craig Carver (CCv); Hap Chambers (HC); Suzanne Clingman (SC); Amy Covert (AC); Charlie Crawford (CC); Julie Denton (JD); Roseanna Denton (RD); Steve Denton (SD); Jay Desgrosellier (JDs); Robert Dever (RDv); Clarke Dirks (CD); Gary Dorman (GD); Tom Durbin (TD); Melissa Easley (ME); Neil Eklund (NE); Jackie Elmore (JE); Joe Tom Erwin (JEr); Les Estep (LE); Bett Etenohan

(BE); Kim Feltner (KF); Rod Goforth (RG); Alan Goldstein (AG); Michael Hardin (MH); Lana Hays (LH); Renee Hooks (RH); Janet Howard (JH); Eddie and Jennifer Huber (E&JH); Ned Keller (NK); Betty King (BK); Steve Kistler (SK); Lew Komman (LK); Betty Leggett (BLt); Ken Leggett (KL); Aurilla Lesley (AL); Bill Lisowsky (BL); Charlie Logsdon (CL); Frank Lyne (FL); Scott Marsh (SM); Wes Mattox (WM); Lee McNeely (LM); Mark Monroe (MMn); Ann Morgan (AM); Bob Morris (BM); Mike Morton (MM); Daniel Moss (DM); Carl Mowery (CM); Brainard Palmer-Ball, Jr. (BP); Scott Record (SR); Frank Renfrow (FR); Art & Tina Ricketts (A&TR); Gary Ritchison (GR); Keith Robinson (KR); David Roemer (DR); Wayne Rosso (WR); Woody Schat (WS); Ron Scott (RS); Bob Staib (BS); Stephen Stedman (SS); Matt Stickel (MS); Marilee Thompson (MTh); Mike Todd (MT); Mark Vukovich (MV); Winston Waldon (WW); Mary Walter (MW); Major Waltman (MWn); Wendell Webb (WWb); Eileen Wicker (EW); Katie Wilding (KW); Charlie Wilkins (CW); Barbara Woerner (BW); Ben Yandell (BY); Beckham Bird Club (BBC); many observers (m. ob.).

– 8207 Old Westport Road, Louisville, KY, 40222 (brainard.palmer-ball@ky.gov) (Palmer-Ball) and P.O. Box 463, Burlington, KY, 41005 (lkmc9@netscape.net) (McNeely).

**Kentucky Ornithological Society**  
**2004 Spring Meeting**  
**April 23 through 25**  
**Kentucky Dam Village State Resort Park**

The spring meeting of the Kentucky Ornithological Society was held April 23-25 at Kentucky Dam Village. President Hap Chambers called the meeting to order at 7:20 p.m. CDT on the 23rd. Following Hap's introductory comments, Elizabeth Ciuzio of the Kentucky Department of Fish and Wildlife Resources (KDFWR) gave a brief presentation on an environmental impact study on the effects of Double-crested Cormorants on the two islands in Kentucky Lake where they breed. These two islands provide important fish spawning habitats, and the activities of the cormorants cause a loss of trees that could potentially damage this habitat. The environmental impact study would determine the best way to manage the cormorant population to protect these islands. The Double-crested Cormorant is considered an endangered breeding bird in Kentucky, with only 15-20 breeding pairs. However, the nationwide cormorant population is not endangered.

After Ms. Ciuzio's presentation, Vice-President Mark Bennett introduced Phyllis Niemi, who challenged the KOS members present at the meeting with a bird trivia contest. The contest was won by Lee McNeely.

Next, Mark Bennett introduced Bill Lisowsky, area Director of the Land Between the Lakes National Recreation Area, who gave a presentation entitled *LBL – Birds Between the Lakes*. Mr. Lisowsky's presentation included some background information on the history and geography of the LBL area, current proposals for the management of the area, ongoing research projects and efforts to attract visitors, and concluded with a slide show featuring birds and wildlife from the LBL area.

Following Mr. Lisowsky's presentation, Rick Huffines of Clarks River N.W.R. and Pat Brandon of KDFWR made a presentation of the 2003 Kentucky Warbler Migratory Songbird Award to KOS member Dr. Gary Ritchison. The award was presented in recognition of his many avian conservation research efforts, as well as for the inspiration that he has given

to others. Dr. Ritchison accepted the award, and offered his thanks for the support of his students and his wife, Tammy.

Mark Bennett then turned the meeting over to Brainard Palmer-Ball, who announced to the KOS membership that the newly revised KOS field cards were now available for sale for 25¢ each, or 5 for \$1.00.

Mark then concluded the Friday evening meeting with a discussion of changes to the published meeting program and a description of Saturday's planned field trips. The meeting closed at 8:36 p.m., and was followed by refreshments and a social hour.

The rain on Saturday morning did not seem to dampen the KOS members' enthusiasm. Although the scheduled Ed Ray cruises to view Osprey nests on Lake Barkley had to be cancelled due to the weather, there were four other field trips that left from the Lodge Saturday morning. These included: a walk around the lodge and campgrounds led by Fred Busroe, a trip around the upper dam area to look for waterfowl and migrants led by David Roemer, two trips for the LBL area leaving at 6:15 and 8:30 a.m. led by Bill Lisowsky and Maurica Toon, and a trip to Fulton County to look for shorebirds led by Hap Chambers.

The KOS Executive Board met from 2:30 to 4:13 p.m..

The Saturday night general meeting was called to order at 7:05 p.m.. Hap Chambers made several introductory announcements, including a request for leaders for a bird walk scheduled for May 8 at Shaker Village of Pleasant Hill, and an announcement to the KOS membership that sales of birdhouses from the Boggs Groups website (<http://www.theboggs-group.com>) would benefit KOS.

Following Hap's introductory comments, Blaine Ferrell conducted the species tally for the meeting. As of Saturday night, 162 total species had been observed by KOS members in the LBL area.

The first speaker of the night was Dr. Jeff Hoover of the Illinois Natural History Survey. Dr. Hoover's presentation, *Swamping out the Negative Effects of Habitat Fragmentation: Avian Ecology and the Restoration of Bottomland Forests*, outlined his research efforts to study the effects of habitat fragmentation on breeding bird populations. Dr. Hoover spoke on the causes of habitat fragmentation and how fragmentation impacts breeding bird success by increasing predation by animals such as Raccoons and brood parasitism by Brown-headed Cowbirds, and how this information can be used to improve songbird conservation efforts. The next presentation of the evening, *Increases in Nesting Osprey at Lake Barkley and Kentucky Lakes*, was given by Ed Ray and Tammie Sanders. Mr. Ray presented information on the history of the Osprey in the LBL area, and outlined the efforts of his organization, Kentucky Environmental Education Projects, Inc. (KEEP), to involve local schools in the conservation of Ospreys and other birds. Following the main presentation, Miss Sanders and Mr. Ray provided KOS members with literature about their ongoing projects, answered questions, and displayed other materials, such as Eastern Bluebird nest cams, that they use to educate school children about bird conservation.

The meeting concluded at 9:00 p.m. following closing statements from Hap Chambers regarding the upcoming Fall, 2004 KOS meeting at Pine Mountain State Resort Park and the announcement of the schedule for field trips on Sunday.

Sunday's field trips were a trip to the Clarks River Wildlife Management Area led by Hap Chambers, and the area around the dams and upper Lake Barkley led by Brainard Palmer-Ball.

### BIRDS OBSERVED AT THE SPRING 2004 KOS MEETING

Bird species observed in the vicinity of the Land Between the Lakes were: Canada Goose, Wood Duck, Mallard, Blue-winged Teal, Northern Shoveler, Green-winged Teal, Canvasback, Redhead, Lesser Scaup, Bufflehead, Hooded Merganser, Common Merganser, Red-breasted Merganser, Ruddy Duck, Wild Turkey, Northern Bobwhite, Common Loon, Pied-billed Grebe, American White Pelican, Double-crested Cormorant, Great Blue Heron, Great Egret, Snowy Egret, Little Blue Heron, Cattle Egret, Green Heron, Black-crowned Night-Heron, Black Vulture, Turkey Vulture, Osprey, Mississippi Kite, Bald Eagle, Sharp-shinned Hawk, Cooper's Hawk, Red-shouldered Hawk, Broad-winged Hawk, Red-tailed Hawk, American Kestrel, Peregrine Falcon, Virginia Rail, Sora, American Coot, Killdeer, Greater Yellowlegs, Lesser Yellowlegs, Solitary Sandpiper, Willet, Spotted Sandpiper, Least Sandpiper, Pectoral Sandpiper, Wilson's Snipe, Laughing Gull, Franklin's Gull, Bonaparte's Gull, Ring-billed Gull, Herring Gull, Caspian Tern, Forster's Tern, Rock Pigeon, Eurasian Collared-Dove, Mourning Dove, Yellow-billed Cuckoo, Eastern Screech-Owl, Great Horned Owl, Barred Owl, Chimney Swift, Ruby-throated Hummingbird, Belted Kingfisher, Red-headed Woodpecker, Red-bellied Woodpecker, Downy Woodpecker, Hairy Woodpecker, Northern Flicker, Pileated Woodpecker, Eastern Wood-Pewee, Acadian Flycatcher, Eastern Phoebe, Great Crested Flycatcher, Eastern Kingbird, Scissor-tailed Flycatcher, Loggerhead Shrike, White-eyed Vireo, Yellow-throated Vireo, Blue-headed Vireo, Warbling Vireo, Philadelphia Vireo, Red-eyed Vireo, Blue Jay, American Crow, Horned Lark, Purple Martin, Tree Swallow, Northern Rough-winged Swallow, Cliff Swallow, Barn Swallow, Carolina Chickadee, Tufted Titmouse, Red-breasted Nuthatch, White-breasted Nuthatch, Carolina Wren, House Wren, Ruby-crowned Kinglet, Blue-gray Gnatcatcher, Eastern Bluebird, Swainson's Thrush, Wood Thrush, American Robin, Gray Catbird, Northern Mockingbird, Brown Thrasher, European Starling, Blue-winged Warbler, Tennessee Warbler, Orange-crowned Warbler, Nashville Warbler, Northern Parula, Yellow Warbler, Chestnut-sided Warbler, Cape May Warbler, Yellow-rumped Warbler, Black-throated Green Warbler, Yellow-throated Warbler, Pine Warbler, Prairie Warbler, Palm Warbler, Blackpoll Warbler, Cerulean Warbler, Black-and-white Warbler, American Redstart, Prothonotary Warbler, Worm-eating Warbler, Swainson's Warbler, Ovenbird, Northern Waterthrush, Louisiana Waterthrush, Kentucky Warbler, Common Yellowthroat, Hooded Warbler, Yellow-breasted Chat, Summer Tanager, Scarlet Tanager, Eastern Towhee, Chipping Sparrow, Field Sparrow, Savannah Sparrow, Henslow's Sparrow, Song Sparrow, Swamp Sparrow, White-throated Sparrow, Northern Cardinal, Rose-breasted Grosbeak, Blue Grosbeak, Indigo Bunting, Dickcissel, Red-winged Blackbird, Eastern Meadowlark, Rusty Blackbird, Common Grackle, Brown-headed Cowbird, Orchard Oriole, Baltimore Oriole, House Finch, American Goldfinch, and House Sparrow for a total of 164 species for the weekend.

### ATTENDANCE AT THE SPRING MEETING, 2004

<b>ALEXANDRIA:</b>	Mary Beth Lusby and Ron Lusby.
<b>BOWLING GREEN:</b>	Blaine Ferrell, David Roemer and Joan Roemer.
<b>BURLINGTON:</b>	Kathy Caminiti, Joe Caminiti, Joey Caminiti, Lee McNeely and Lynda McNeely
<b>CORYDON, IN:</b>	Mary Walter
<b>COX'S CREEK:</b>	Dona Coates and Roger Coates
<b>CUNNINGHAM:</b>	Matthew Toon and Maurica Toon
<b>DYERSBURG, TN:</b>	Betty Leggett and Ken Leggett



<b>EDDYVILLE:</b>	John Niemi and Phyllis Niemi
<b>FALLS OF ROUGH:</b>	Joyce Porter
<b>FRANKFORT:</b>	Will Carlisle, Elizabeth Ciuzio, and Amy Covert
<b>INDIANAPOLIS, IN:</b>	Lou Anne Barriger and Larry Peavler
<b>LEXINGTON:</b>	Bruce Cryder and Jim Williams
<b>LOUISVILLE:</b>	Pat Bell, Jane Bell, Kathryn Clay, Bonnie Dever, Robert Dever, Katharine Fulkerson, Eddie Huber, Katharine Griswold, Celia Lawrence and Brainard Palmer-Ball, Jr.
<b>MOREHEAD:</b>	Fred Busroe and Joanna Busroe
<b>MORGANTOWN:</b>	Carroll Tichenor and Doris Tichenor
<b>MT. STERLING:</b>	Gerald Robe
<b>MURRAY:</b>	Happy Chambers and Elizabeth Raukes
<b>PROSPECT:</b>	Win Ahrens
<b>RICHMOND:</b>	Brandon Ritchison, Brianna Ritchison, Gary Ritchison, Tammy Ritchison, Brenda Thompson, and Pete Thompson
<b>RUSSELLVILLE:</b>	Mark Bennett
<b>SCIENCE HILL:</b>	Roseanna Denton
<b>SOMERSET:</b>	Gay Hodges and Connie Neeley
<b>TAYLOR MILL:</b>	Gary O'Hair

### Potential Impacts of Climate Change on the Summer Distributions of Kentucky's Nongame Birds

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#### Introduction

Imagine returning to your car after birding on a hot summer's day. Opening the door, you stagger back as a wave of superheated air blasts out. That videotape of *Rare Birds* you forgot to return now looks like a snowman left in a greenhouse – because it was. The windows of your car acted very much like the glass in a greenhouse, trapping some of the incoming infrared wavelengths of light that then heated up the inside of the car. If the greenhouse effect didn't exist then the temperature inside your car would be no higher than the maximum outside temperature that day.

Water vapor, carbon dioxide (CO<sub>2</sub>), methane, and other trace gases in the Earth's atmosphere act much like the glass in a greenhouse (or your car), helping to retain heat by trapping and absorbing infrared radiation. This "greenhouse effect" acts to keep the Earth's surface temperature significantly warmer than it would otherwise be, allowing life, as we know it, to exist. However, since pre-industrial times, there have been significant increases in the amount of these greenhouse gases in the atmosphere. The current levels of the two primary greenhouse gases are now greater than at any time during at least the past 420,000 years (likely much longer) and are well outside of the bounds of natural variability (IPCC 2001).

Accompanying the increases in greenhouse gases has been an increase in temperature. The 1990s were the warmest decade and the 1900s the warmest century of the last 1000 years. Of the more than 100 years for which instrumental records are available, 1998 was

the warmest year on record and 7 of the top 10 years all occurred in the 1990s. The annual global mean temperature is now 1.1°F (0.6°C) above that recorded at the beginning of the century. Limited data from other sources indicates that the global mean temperature for the 20th century is at least as warm as any other period since approximately 1400 AD (IPCC 1996, 2001). And, *"There is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities"* (IPCC 2001). These activities include the burning of fossil fuels, increases in agriculture and other land use changes (such as deforestation). Increases in greenhouse gases (past and projected), coupled with the length of time these gasses remain in the atmosphere, are expected to cause a continued increase in global temperatures. Models estimate that the average global temperature, relative to 1990 values, will rise by 2.5°-10.4°F (1.4°- 5.8°C) by the year 2100 (IPCC 2001).

Warming due to increases in greenhouse gases is expected to be even greater in some areas, especially Northern Hemisphere land areas. Models based on various scenarios for population growth, economic well being, improvements in technology, and fossil fuel use project annual average temperature increases of 3°-18°F (1.7°C - 10°C) for the United States; 4°-10°F (2.2°C - 5.5°C) for the southeastern U.S. (including Kentucky). These temperature changes are projected to be highest in the north (Arctic) and in winter with lesser increases in the south and in summer (NAST 2000). However, more recent models are projecting even greater temperature increases with more of the change occurring in summer than previously thought. For example, these new models project average temperature increases in neighboring Illinois of 7-13°F in winter and 9-18°F in summer by 2100 (Kling et al. 2003).

#### **How might these changes impact the summer distributions of Kentucky's Passerine birds?**

*"Recent regional changes in climate, particularly increases in temperature, have already affected hydrological systems and terrestrial and marine ecosystems in many parts of the world"* (IPCC 2001). For example, there have been changes in growing season, earlier spring green-up and earlier arrival and breeding in some birds (Root et al. 2003). If these changes have been observed with only a small rise (1°F) in the global average temperature, what might happen if temperatures continue to rise? In addition to rising temperatures, many climate models also project an overall increase in evaporation - leading to increases in precipitation (mostly in storms) but also to overall declines in soil moisture. Shifts in the timing of precipitation and snowmelt are also possible. Even after emissions are reduced, CO<sub>2</sub> concentrations, temperature and sea level will all continue to rise for a period ranging from decades/centuries (CO<sub>2</sub> stabilization, temperature rise) to millennia (sea-level rise). Thus, climate change will likely have a continuing impact on Kentucky's birds and their habitats.

#### **Projected habitat changes -**

Temperature, precipitation and soil moisture are important factors limiting the distribution of both plants and animals. As the climate changes so will plant and animal distributions. In general, the geographic range of North American plants and animals will tend to shift poleward and/or upwards in elevation in response to temperature changes. Range shifts in plants will be dependent upon factors such as soil types, migratory pathways (e.g., no cities blocking the way), seed dispersal mechanisms and pollinator availability. Range shifts of wildlife populations will be dependent upon factors such as the availability of migration corridors, suitable habitats and the concurrent movement of forage and prey. It is very unlikely that plant and animal species will respond in the same manner to climate change. The best available evidence from paleoclimatic studies, models and observations suggests

that each plant and animal species will move independently. Thus, communities as we now know them will look different in the future. Indeed, there is evidence indicating that many ecosystems have already begun to change in response to observed climatic changes (Root et al. 2003).

Models project possible major changes in the suitable climates of many vegetative communities occurring over the next 75-100 years. For example, these models estimate that climate suitable for elm-ash-cottonwood and maple-beech-birch forests will potentially become more suitable for a spread of oak-hickory forests (NAST 2000). Models developed for individual species project potential complete loss of sugar maple, yellow birch and northern red oak; potential major declines in the extent of American beech and white ash; and potential eventual gain or spread of species like loblolly pine, mockernut hickory, winged elm, and post and water oaks (Iverson et al. 1999).

As many tree species are long-lived and migrate slowly it could potentially take decades to centuries for species in some vegetative communities to be replaced by others (Davis and Zabinski 1992). However, as increased temperatures and drought stress plants they become more susceptible to fires and insect outbreaks. These disturbances could play a large role in the conversion of habitats from one type to another. There could very well be instances where existing plant communities are lost to disturbance but climatic conditions and migration rates limit the speed at which they are replaced. Thus, invasive species, grasslands and shrublands may transitionally replace some of these areas.

#### **Projected changes in bird distributions –**

Summer bird ranges are often assumed to be tightly linked to particular habitats. This generalization is only partially true. While certain species are usually only found in specific habitats (e.g., Kirtland's Warbler breeding in jack pines), others are more flexible in their habitat use. Species found in a particular habitat type throughout their summer range may not be found in apparently equivalent habitat north or south of their current distribution. Birds are also limited in their distributions by their physiology and food availability. The link between physiology and the winter distributions of many species is well established (Kendeigh 1934, Root 1988a, 1988b). Research shows that physiology plays a role in limiting summer distributions as well (Dawson 1992, T. Martin, pers. comm.). Often, the choice of a specific habitat may actually be to provide a microclimate suitable for a species' physiology. While habitat selection, food availability, and competition may all play a role in influencing local distributions of a given bird species, looking at a species' overall distribution often yields different results. This study examined the association between summer bird distributions and climate and how these distributions may change with a changing climate.

#### **Methods**

Logistic regression was used to develop models of the association between bird distributions (from Breeding Bird Survey data) and climate - the climate variables acting as surrogates for the many factors possibly limiting a species distribution (e.g., physiology, habitat, food availability). One way of determining how 'accurate' these models are is to compare how well the predicted species distribution map based on climate (Fig. 1b) matches a map of the actual distribution (Fig. 1a) based on similar bird data (Price et al. 1995). This comparison (and various statistical tests) indicates that at least a portion of the summer distributions of many North American birds can be modeled accurately based on climate alone.

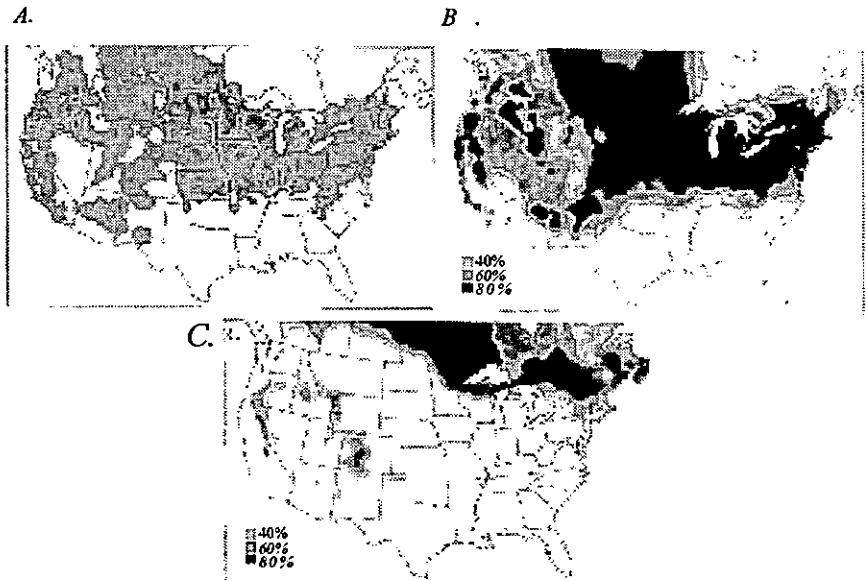
To determine how bird distributions might change in response to climate change, climate projections from the Canadian Climate Center (CCC) were used to determine what the average climate conditions might be once CO<sub>2</sub> has doubled, sometime in the next 75-100

years. For example, for a given point the difference in average summer temperature between the "current" and "future" (both model derived) climate might be  $+2^{\circ}\text{C}$ . This value is then added to the actual average summer temperature at that point to estimate what the climate at that point might be with a doubling of  $\text{CO}_2$ . A more complete explanation of methods used to develop the models and maps has been published elsewhere (Price 1995, Price in press).

These results were then used to create maps of the projected possible future climatic ranges for almost all North American passerine birds (e.g., Fig. 1c). What these maps actually show are areas projected to have the proper climate for the species, or climatic range, under conditions derived from the CCC model. While the results of the models cannot be used to look at the fine points of how a given species' distribution might change, they can provide an impression of the possible direction and potential magnitude of the change in the suitable climate for the species. These maps of projected summer climatic ranges of birds were then compared with the information found in *The Kentucky Breeding Bird Atlas* (Palmer-Ball Jr. 1996) to determine how Kentucky's avifauna might change under this climate change scenario.

**Figure 1. A. Map depicting the distribution of House Wren as detected by the Breeding Bird Survey. This map is based on one found in Price et al. (1995). B. Map depicting a model of the distribution of House Wren based solely upon the climate of 1985-1989. The scale represents the probability of the species' occurrence with shaded areas depicting the distribution of the species (i.e., areas with suitable climate). C. Map depicting the possible distribution of House Wren under the doubled  $\text{CO}_2$  climate conditions projected by the CCC. The scale represents the probability of the species' occurrence - shaded areas depicting the distribution of the species (areas with suitable climate for the species).**

### House Wren



## Results

*Species whose future climatic summer ranges might exclude Kentucky (i.e., possibly extirpated as summer residents)* – Acadian Flycatcher, Willow Flycatcher, Least Flycatcher, Blue-headed Vireo, Yellow-throated Vireo, Warbling Vireo, Tree Swallow, Bank Swallow, Cliff Swallow, House Wren, Gray Catbird, Blue-winged Warbler, Golden-winged Warbler, Yellow Warbler, Chestnut-sided Warbler, Black-throated Blue Warbler, Black-throated Green Warbler, Blackburnian Warbler, Cerulean Warbler, American Redstart, Ovenbird, Kentucky Warbler, Canada Warbler, Scarlet Tanager, Vesper Sparrow, Savannah Sparrow, Grasshopper Sparrow, Song Sparrow, Dark-eyed Junco, Rose-breasted Grosbeak, Bobolink, Baltimore Oriole, Pine Siskin and American Goldfinch.

*Species whose future climatic summer ranges in Kentucky might contract* – Red-eyed Vireo, Carolina Chickadee, White-breasted Nuthatch, Brown Thrasher, Prairie Warbler, Black-and-White Warbler, Louisiana Waterthrush, Hooded Warbler, Summer Tanager, Chipping Sparrow, Field Sparrow and Indigo Bunting.

*Species whose future climatic summer ranges in Kentucky might expand* – Loggerhead Shrike, Bell's Vireo, Prothonotary Warbler, Bachman's Sparrow, Lark Sparrow and Dickcissel.

*Species whose future climatic summer ranges might eventually include Kentucky* – Western Kingbird, Scissor-tailed Flycatcher, Painted Bunting and Great-tailed Grackle.

## Discussion

These lists are not all-inclusive, since results obtained from models of some species were not adequate to assess how their climatic ranges might change. Nor do the lists include those species whose climatic ranges in Kentucky may undergo little change. Finally, these lists are based on output from a single commonly used climate model. Using output from different climate models may yield somewhat different results. In addition, the geographic scale of these models, like those of the underlying climate change model, is relatively coarse. As such, the models are unable to take into account localized topographic changes and the possible existence of suitable microclimates (e.g., along rivers or on north-facing mountain slopes). Therefore, some of the species whose climatic ranges are projected as shifting out of Kentucky may be able to persist in refugia if suitable microclimates are available.

Since these models were originally developed, Scissor-tailed Flycatcher has bred in Kentucky. It is difficult, if not impossible, to say with any certainty whether this breeding event is tied to regional climate change. It is only by collecting data on many species changing in many areas that any degree of confidence can be placed on whether the changes can be attributable to climate (i.e., Root et al. 2003). However, this is the sort of change expected with a warming climate. It is helpful to consider how species' ranges might change to know what sorts of changes to look for in the future. As the average temperature (climate) increases, weather will still occur - some years being cooler and others warmer than otherwise expected. So, colonization will most likely occur in fits and starts before a species can truly be considered to be established as part of Kentucky's breeding avifauna. In some cases, a species may start appearing as a vagrant, off and on, for several years before breeding is attempted. In other cases a species may start breeding in an area, then become extirpated, and then resume breeding – possibly in greater numbers than before.

How quickly distributional changes might occur is unknown - the rate of change will largely depend on whether limits to a given species' distribution are more closely linked with climate (especially temperature), vegetation, or some other factor. The rate of change will also likely be tied to the rate of change of the climate itself. If the climate changes relatively slowly, then species may be able to adapt to the new climate. However, many changes could occur (and are occurring) relatively quickly.

One pilot study found that the average latitude of occurrence of some species of Neotropical migrants has already shifted significantly farther north in the last 20 years, by an average distance of almost 60 miles (100 km) (Price and Root 2001; Price, unpublished data). In another study, the arrival date of 20 species of migratory birds in Michigan was found to be 21 days earlier in 1994 than in 1965 (Price and Root 2000; Root, unpublished data). Many other species have been found to be arriving and breeding earlier, not only in the US but also in Europe and elsewhere (Root et al. 2003).

### Conclusion

Projected future rapid climate change is of major concern, especially when viewed in concert with other population stresses (e.g., habitat conversion, pollution, invasive species). Research and conservation attention needs to be focused not only on each stressor by itself, but also on the synergies of multiple stressors acting together. These synergistic stresses are likely to prove to be the greatest challenge to wildlife conservation in the 21st Century. Because anticipation of changes improves the capacity to manage, it is important to understand as much as possible about the responses of animals to a changing climate.

Society may ultimately need to adapt not only to changes in ranges but also to the loss of ecological services normally provided by wildlife. For example, it may be necessary to develop adaptations to losses of natural pest control, pollination and seed dispersal. While replacing providers of these services may sometimes be possible, the alternatives may be costly. Finding a replacement for other services, such as contributions to nutrient cycling and ecosystem stability/biodiversity are much harder to imagine. In many cases any attempt at replacement may represent a net loss (e.g., losses of the values of wildlife associated with recreation, subsistence hunting, cultural and religious ceremonies).

In summary, a high probability exists that climate change could lead to changes in bird distributions. Even a relatively small change in average temperature could impact bird distributions within the state. Some of these changes could occur (and may be occurring) relatively quickly. While these changes may have some ecological and, possibly, economic effects, the magnitude of these effects is unknown. Ultimately, the greatest impact on wildlife and vegetation may not come from climate change itself, but rather from the rate of change. Given enough time, many species would likely be able to adapt to climatic shifts, as they have done in the past. However, the current projected rate of warming is thought to be greater than has occurred at any time in the last 10,000 years (IPCC 1996). This rate of change could ultimately lead to many changes in Kentucky's nongame avifauna.

Birders can help scientist look for and document changes in bird ranges and populations. Besides participating in regular events like the Breeding Bird Survey or Christmas Bird Count, information is also needed on nesting, arrival and departure. If you, or your club, have 10 or more years of data please contact me at the address listed above.

### Acknowledgments

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## FIELD NOTE

## FIRST KENTUCKY RECORD FOR YELLOW-BILLED LOON

The Yellow-billed Loon (*Gavia adamsii*) is a large, heavy-bodied loon that breeds locally along the Arctic coastline and interior from north-central Canada westward across northern Alaska to eastern Siberia (North 1994). In North America, the species winters primarily along the Pacific coastline of western Canada but small numbers are found farther south along the Pacific coastline and inland across the intermountain western United States (North 1994). In addition, a few individuals are now found annually on reservoirs across the Great Plains, with a few valid records now distributed across the eastern United States. Most inland, mid-continental United States reports have occurred during November and December, but several individuals have appeared to overwinter and there are reports from early August to mid-May (Domagalski 2003).

On the late afternoon of 13 March 2004, the authors were birding at Kentucky Lake in the vicinity of Birmingham Point, Marshall County, when we found a Yellow-billed Loon in basic plumage. The bird was loosely associated with a small group of 5-10 Common Loons (*Gavia immer*). We watched the bird for more than an hour as it loafed on the water. We notified Ben Yandell, who was also birding in the area; Yandell concurred with our identification, and the three of us watched the bird until the evening light faded.

The Yellow-billed Loon was similar in appearance to the nearby Common Loons, although the tones of its upperparts were more brownish than the coal gray colors of the Commons. The sides of the face were decidedly lighter in color than the Commons, with the relatively small eye surrounded by whitish. Noticeably darker areas on the face appeared as a vertically oblong auricular patch and a malar stripe. The back was relatively uniformly colored, although light buffy or grayish edgings could be clearly seen on some feathers. The underparts appeared entirely whitish. The bill was mostly a chalky yellow-white in color, especially the distal half, but more grayish basally. The culmen was rather straight-edged, and the lower mandible was sharply angled at the gonyx with a thick basal half in profile. When combined with the bird's behavior of often holding the bill somewhat above horizontal, the bill appeared decidedly upturned. Based on the pattern of the face and the pale color of the margins of some of the back feathers, we judged the bird to be in its first year.

On the morning of 14 March 2004, the Yellow-billed Loon was observed in the same area, and several images, including one excellent profile shot taken by Roseanna Denton (see cover photo), were obtained showing all characteristic field marks. On one occasion it floated in among the nearby Common Loons and it was notably - perhaps one-half again - larger in body size than the Commons (Fig. 1). The bird lingered on this part of the lake for more than two weeks and was observed by many birders. As far as we are aware, it was last observed by Larry Peavler on 30 March 2004.

Interestingly, this Yellow-billed Loon appeared immediately subsequent to the disappearance of two Yellow-billed Loons that had been observed on Kentucky Lake in Henry and Stewart counties, Tennessee, approximately 35 air miles to the south. It is unknown if this individual could have been one of the two Tennessee birds, but Jeff Wilson (discoverer of the Tennessee birds) saw the Kentucky individual and definitely thought that it was a different individual.

This observation represents the first record of Yellow-billed Loon in Kentucky. It is unclear if the occurrence of the species in the eastern United States was simply overlooked until recent years or if there has been an increase in its frequency in the region. Whatever is



going on, it appears that this loon should be considered to be a relatively regular possibility on large reservoirs.

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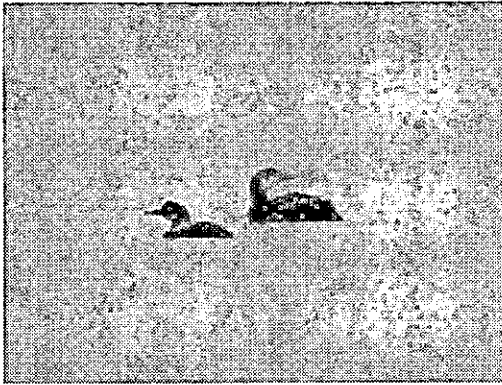


Figure 1. Yellow-billed Loon (on right) next to a Common Loon showing larger size. Taken 14 March 2004 on Kentucky Lake at Birmingham Point, Marshall Co., KY.

By Brainard Palmer-Ball, Jr.

### NEWS AND VIEWS

#### Kentucky Bird Records Committee

Rare bird sightings and birds observed out of season should be well documented and the documentation should be sent to Lee McNeely, Secretary of the KBRC, P.O. Box 463, Burlington, Kentucky 41005, for consideration by the committee for official state record status.

#### Reminder of the Kentucky Rare Bird Alert Hotline

The number for the Kentucky Rare Bird Alert Hotline is (502)-326-0878. Please report any unusual sightings in order to provide others with the opportunity to see rare birds.

#### K.O.S Web Page

Visit the Kentucky Ornithological Society's web page at [www.biology.uky.edu/kos.htm](http://www.biology.uky.edu/kos.htm).