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WINTER DISTRIBUTION OF THE GREAT BLUE HERON IN KANSAS

by
Eugene A. Young¹ and Maureen B. Pate²

The Great Blue Heron (*Ardea herodias*) is normally a rare resident during the winter months in Kansas (Thompson and Ely 1989) and Missouri (Robbins and Easterla 1992). In Oklahoma it is a rare to common winter resident (Baumgartner and Baumgartner 1992) and rare to uncommon in the eastern plains of Colorado (Andrews and Righter 1992). During warmer winter months it may be more common along rivers, ponds and major reservoirs throughout the central and southern Great Plains. Great Blue Herons breed throughout Kansas (Stephens 1980, Thompson and Ely 1989). Thompson and Young (1994, 1995), using Christmas Bird Count data, indicated that Great Blue Heron numbers may be increasing during the winter in Kansas. The objective of this study was to investigate the increase in Great Blue Herons wintering in Kansas.

MATERIALS AND METHODS

Data were collected from Christmas Bird Counts (CBC) published in the March issues of the Kansas Ornithological Society Bulletin from 1950-1995. CBCs frequently introduce several biases in analyzing data. Not all counties report a count every year, and there are differences in the number of party hours spent, habitat covered, weather, actual time of count etc. (Podrebarac and Finck 1991, Randall 1993). Few areas within the state have long-term data as provided by the CBCs on winter distributions.

Numbers were rounded to the nearest integer when determining averages. A Mann-Whitney

U-Test was used to test significance between the number of counts reporting Great Blue Herons.

RESULTS

Great Blue Herons were first reported on a CBC in 1955 when one was recorded from Baldwin (Baker and Thompson 1956). From 1955-1971 Great Blue Herons were seen during the 15 years with a mean 6.0 per year (Robins and Worthen 1973). Great Blue Herons were not common nor abundant through 1976 (Fig. 1). The greatest number of individuals, 26, was reported during the winters of 1967, 1971 and 1973. The largest single count during this period was 15 from Great Bend in 1967. In this 22-year period, only 244 had been observed, averaging 11 per year. Starting in 1977, with a count of 92, the number of herons being reported began to increase. Since 1977, at least 36 different counts have recorded 20 or more.

During the period 1977-1994, the average number of Great Blue Herons reported per year was 170 (3061 total). The all-time high was 333 recorded in 1988 (Thompson and Young 1995). In three of the last seven years over 300 herons have been recorded (Fig. 1). Only once in the last 14 years has the number fallen below 100 (Fig. 1). In addition, seven of nine sites with at least 15 years of CBC data, show an increase in the number of Great Blue Herons recorded (Table 1).

Preliminary analysis of weather data, as reported in CBCs, indicates that the number of wintering herons may be related to temperature. Average maximum and minimum temperatures were calculated for the years 1976-1978, 1981-1983, and 1987-1989, and these corresponded with the major peaks and valleys in Fig. 1. The peaks in each of these samples were associated with increases in both the average maximum and minimum temperatures from the previous year (Table 2). In each of the three years following the peaks of 1977, 1982, and 1988 there was a decrease in average temperature and an increase in the percent of counts with maximum temperature 0°C or below.

The number of CBCs reporting herons from 1966-1976, averaging 8 per year was significantly lower than the average of 22 per year from 1977-1994 ($U=3.5$; $P<0.01$). From 1966-1976, only once, in 1975, did at least 50% of the CBC counts report Great Blue Herons. During 1977-1995, all but two winters had more than 50% of the CBCs reporting Great Blue

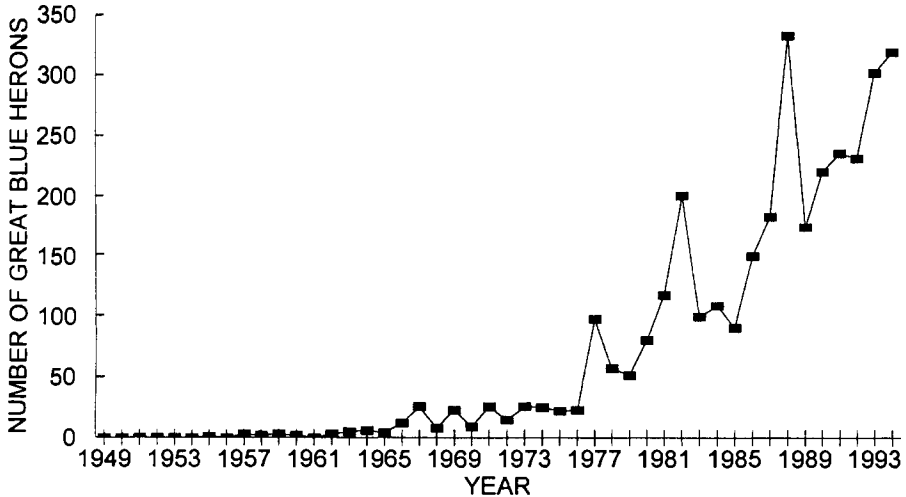


Figure 1. The number of Great Blue Herons reported on Christmas Bird Counts from 1949-1994 as printed in Kansas Ornithological Society Bulletins from 1950-1995.

Herons. In 1979, only 48% of the counts and in 1985, 41% of the counts, recorded Great Blue Herons. The greatest number of counts recording Great Blue Herons is 41 in 1994 (82% of counts). In 1981, the highest percentage of counts, 85% or 23 counts recorded Great Blue Herons.

Manhattan has recorded the most herons with 576 individuals and an average of 31 per year since 1977. Kingman/Byron Walker (30), Manhattan (27) and Udall/Winfield (29) counts have had the most CBCs when Great Blue Herons were recorded. The largest single count total is 81 individuals from Manhattan in 1993. Other large counts include 61 at Udall/Winfield in 1988, 59 from Manhattan in 1982, and 55 from Lawrence in 1993. Herons appear to be most highly concentrated in the northeastern and south-central portions of the state.

DISCUSSION

Although the Great Blue Heron is a rare winter resident in Missouri, Robbins and Easterla (1992) reported a high of >52 Great Blue Herons on 28 December 1989, in Benton County. CBCs in northeastern, north-central, and central Oklahoma frequently record Great Blue Herons (Baumgartner and Baumgartner 1992). The Great Salt Plains NWR averaged 103 Great Blue Herons per year from 1950-1960 with a high of 200 in 1951 and 1954 (Baumgartner and Baumgartner 1992). From 1971-1983 numbers decreased to 32.1 birds per year (Baumgartner and Baumgartner 1992). During these periods, CBCs in Kansas show opposite patterns of population changes with increases since the mid 1970's (Fig. 1). The few Great Blue Herons observed in Kansas from 1950-1960 and the large numbers at the Great Salt Plains NWR, northwestern Oklahoma, suggests that the main wintering populations at one time were south of Kansas.

Baumgartner and Baumgartner (1992) believed the decline in Great Blue Heron numbers during the winter may reflect the presence of DDT or other pesticides. Although aquatic birds have been susceptible to DDT contamination, causing population declines, it appears that the Great Blue Heron population has increased, or there has been a shift in the winter distribution of herons to the north. CBCs with long-term data suggest that numbers have increased throughout the eastern half of Kansas. Emporia, Lawrence, Linn County, Manhattan, Topeka, Arkansas City and Wichita, all show increases in the number of Great Blue Herons reported during CBCs (Table 1). It seems unlikely that pesticides have caused a marked decrease of Great Blue Herons in this region.

There are several possible explanations for the increase of Great Blue Herons during the winter months in Kansas. Kansas breeding populations may still be increasing, especially in northern Kansas as they did in the 1970's (Zimmerman 1979, Stephens 1980). They may also be increasing to the north in the Great Plains. The shift in breeding populations to the north may cause more birds to remain in the area during the winter. Kansas may be experiencing

Table 1. Number of Great Blue Herons reported on Christmas Bird Counts as selected sites from 1970-1994.

YEARS	EMPORIA	KINGMAN*	LAWRENCE	LINN	MANHATTAN	TOPEKA	WINFIELD**	ARKANSAS CITY	WICHITA
1970-79	16(1.6)	31(3.1)	19(1.9)	18(1.8)	71(7.1)	8(0.8)	14(1.4)	12(2.4)@	5(0.5)
1980-89	50(5.0)	43(4.3)	74(7.4)	89(8.9)	288(28.8)	32(3.2)	110(11.0)	132(13.2)	83(8.3)
1990-94	46(9.2)	13(2.6)	133(26.6)	58(11.6)	216(43.2)	59(11.8)	51(10.2)	67(13.4)	98(19.6)

* Kingman/Byron Walker

**Udall/ Winfield

() average per year

@ average for 5 yrs

milder winters, preventing the freezing of open water. The increase in the number of reservoirs may provide more open water in peripheral wetlands during winter months. Large concentrations of herons in both the northeastern and south-central portions of the state are located where many reservoirs occur and where most observers occur. Lastly, the increase in the number of counts and number of observers since the early 1980's has provided better coverage of the state. Annual fluctuations appear to be associated with the severity of winter temperatures.

ACKNOWLEDGMENTS

We would like to thank Gina McKown for her assistance in the tedious task of organizing data from the CBCs and Dr. Greg Zuck (Southwestern College Library) for his assistance in literature searches. Dr. Alan Maccarone kindly reviewed early versions of the manuscript and provided helpful suggestions.

YEARS	AVERAGE MAX. TEMP. (°C)	AVERAGE MIN. TEMP. (°C)	% OF COUNTS WITH MAX. TEMP. 0°C OR LESS	NUMBER OF GREAT BLUE HERONS
1976	6.9	-6.4	28	23
1977	7.1	-1.9	3	98
1978	4.0	-4.9	24	58
1981	0.6	-9.2	44	118
1982	7.9	-2.8	10	201
1983	-6.2	-12.6	68	100
1987	1.1	-6.4	29	184
1988	9.1	-3.9	3	333
1989	-1.2	-11.6	56	175

Table 2. Average maximum and minimum temperatures reported on Christmas Bird Counts for selected periods associated with major peaks of 1977, 1982 and 1988 in Figure 1.

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Department of Biology, Southwestern College, Winfield, Kansas 67156.

¹*Present address, 1707 North 7th St., Arkansas City, Kansas 67005*

²*6317 Kristin Dr., Corpus Christi, Texas 78414.*

1994 REPORT OF THE KANSAS BIRD RECORDS COMMITTEE

This report summarizes records received and evaluated by the Committee for the calendar year 1994, as well as any decisions pending from previous years. A total of 37 submissions were received by the Committee in 1994 and 30 were circulated for evaluation plus one from a previous year.

Record submissions are assigned a sequential number in the order in which they are received with the year (of receipt) as a prefix. Not all submissions that receive a number are circulated. Birds are listed in phylogenetic order under each of two categories: Records Accepted and Records Rejected. Taxonomy and nomenclature follow the A.O.U. Checklist of North American Birds (1983) and all subsequent supplements.

The KBRC record number follows the scientific name, with the number of individuals seen, date(s) of observation, locality, observer(s) documenting the record, any supporting physical evidence, and any significant change in status. Rejected records have the observer(s) names omitted and a brief explanation as to the reason for rejection.

RECORDS ACCEPTED

- Red-throated Loon** (*Gavia stellata*); 94-02; 1; 15 Nov. 1992; Clinton Lake, Douglas Co; Galen Pittman. 12th record.
- Red-Throated Loon** (*Gavia stellata*); 94-26; 1; 30 Oct 1994; Perry Lake, Jefferson Co; Robert Fisher. 14th record.
- Harris' Hawk** (*Parabuteo unicinctus*); 94-27 & 94-28; 1; 31 Oct-4 Nov. 1994; near Baldwin City, Douglas Co; Bill Busby, Chris Hobbs, and Galen Pittman; Photos. Sixth record.
- Common Black-headed Gull** (*Larus ridibundus*); 94-24; 1; 16 Oct 1994; Clinton Lake, Douglas Co; Lloyd Moore and Galen Pittman; Photos. Fourth record.
- Common Black-headed Gull** (*Larus ridibundus*); 94-30; 1; 12-13 Nov. 1994; Cheney Reservoir, Reno Co; Pete Janzen. Fifth record.
- Little Gull** (*Larus minutus*); 94-29; 1; 12-13 Nov. 1994; Cheney Reservoir, Reno Co; Pete Janzen. Tenth record.
- Little Gull** (*Larus minutus*); 94-31; 1; 22 Nov. 1994; Perry Lake; Jefferson Co; Lloyd Moore. 11th record.
- Little Gull** (*Larus minutus*); 94-34; 1; 3 Dec 1994; John Redmond Reservoir, Coffey Co; Lloyd Moore. 12th record.
- Black-legged Kittiwake** (*Rissa tridactyla*); 94-35; 1; 3 Dec 1994; John Redmond Reservoir, Coffey Co; Lloyd Moore. 11th record.
- Arctic Tern** (*Sterna paradisaea*); 94-20; 1; 3 Sept 1994; Perry Lake; Jefferson Co; Dan Gish and Glen Koontz. **First state record, added to the KOS Checklist as hypothetical.**
- Black-chinned Hummingbird** (*Archilochus alexandri*); 94-04; 1; 27 Aug - 3 Sept 1990; Liberal, Seward Co; Ruth Rahmlow; Photos. Second record.
- Black-chinned Hummingbird** (*Archilochus alexandri*); 94-16; 1; 18 July - 18 Aug 1994; Garden City, Finney Co; Marie Osterbuh. Third record.
- Black-chinned Hummingbird** (*Archilochus alexandri*); 94-19; 1; 12-20 July 1994; Garden City, Finney Co; Leonard and Betty Rich. Fourth record.
- Anna's Hummingbird** (*Calypte anna*); 94-32; 1; 21-23 Nov. 1994; near Winfield, Cowley Co; Max Thompson. Second record.

Anna's Hummingbird (*Calypte anna*); 94-33; 1; 24 Nov. 1994; near Winfield, Cowley Co; Max Thompson. Third record.

Costa's Hummingbird (*Calypte costae*); 94-01; 1; 5 Nov. 1993; near Lawrence, Douglas Co; Jan Hall and Lloyd Moore, Photos. Second record.

Ladder-backed Woodpecker (*Picoides scalaris*); 94-05; 1; 17 Jan 1991; Wichita, Sedgwick Co, video.

Red-naped Sapsucker (*Sphyrapicus nuchalis*); 94-21; 1; 16 Sept 1994; Cimarron River, Morton Co; Mick McHugh. Fourth record.

Red-naped Sapsucker (*Sphyrapicus nuchalis*); 94-23; 1; 2 Oct 1994; Middle Springs, Morton Co; Galen Pittman. Fifth record.

Vermilion Flycatcher (*Pyrocephalus rubinus*); 94-10; 1; 4 May 1994; Topeka, Shawnee Co; William Trelc.

Fish Crow (*Corvus ossifragus*); 92-45; 2; 8 Apr 1992; near Lowell, Cherokee Co; Lawrence Herbert. Record previously rejected, reconsidered and accepted in 1994. Fifth record.

Canyon Wren (*Catherpes mexicanus*); 94-07; 1; 30 Dec 1993; near Scott State Lake, Scott Co; Richard Rucker and Tom Shane, Photo. Second record.

Phainopepla (*Phainopepla nitens*); 94-17 & 94-18; 1; 3-4 Sept 1994; Middle Springs, Morton Co; John Rakestraw and Robert Fisher, Photos. Second record.

Phainopepla (*Phainopepla nitens*); 94-25; 1; 25-30 Sept 1994; Garden City, Finney Co; Leonard Rich and Tom Shane, Photo. Third record.

Pyrruloxia (*Cardinalis sinuatus*); 94-03; 1; 9-16 Jan 1994; Arkansas River near Syracuse, Hamilton Co; Arthur Nonhof. Third record.

Western Tanager (*Piranga ludoviciana*); 94-12; 1; 24 Jun 1994; near Elmdale, Chase Co; Mick McHugh.

Canyon Towhee (*Pipilo fuscus*); 1; 94-06; 8 Jan 1975; near Elkhart, Morton Co; Mick McHugh, Photo. First record verified with physical evidence, hypothetical status removed.

Golden-crowned Sparrow (*Zonotrichia atricapilla*); 94-08; 1; 30 Dec 1993; Camp Christy, Scott Co; Richard Rucker. 11th record.

RECORDS REJECTED

Scott's Oriole (*Icterus parisorum*); 94-11; 1; 27 May 1994; Elkhart, Morton Co; Identification questionable; insufficient details to eliminate Northern Oriole.

The following is a list of the members and alternates of the KBRC for the period covered by this report.

Position #1 : Mick McHugh, **Chairperson**, Position #2 : David Seibel, Position #3 : Christopher Hobbs, Position #4 : Max Thompson, Position #5 : Lloyd Moore, Alternate #1 : Pete Janzen, Position #6 : Galen Pittman, **Secretary**, Position #7 : Roger Boyd, Alternate #2 : David Rintoul.
Submitted 1 August 1995, Galen L. Pittman, KBRC Secretary

GREEN-WINGED TEAL NEST IN SOUTH-CENTRAL KANSAS

by
 Eugene Young

Green-winged Teal (*Anas crecca*) normally breed from western and northern Alaska across Canada, and south to Oregon, Nevada, Utah, Colorado, South Dakota, Minnesota, Ontario, Quebec, and Maine (AOU 1983). In Kansas, they occasionally breed at Cheyenne Bottoms Wildlife Management Area (CBWMA), which is south of their normal breeding range in the Great Plains (Hoffman 1987). Elsewhere in the state it occurs casually during the summer (Thompson and Ely 1989).

On 11 May 1995, I observed a female Green-winged Teal with eight young (about 1 week old) at Slate Creek Wetlands, Sumner County, Kansas (SCW). The Green-winged Teal were observed from about 50-100m with a 60x spotting scope between 1900-2000 (CDT). These birds were observed coming out of narrow-leaved cattails (*Typha angustifolia*), moving into open water before disappearing behind more cattails. In open water they passed in close proximity to four Mallards (*Anas platyrhynchos*) and several Blue-winged Teal (*Anas discolor*).

The Green-winged Teal is a common transient at SCW and was previously recorded as late as 26 May in spring and as early as 14 August in fall (Young 1993). The first nesting record for Kansas was at CBWMA in 1968, when three nests were found with eggs from 24 June-6 August, and chicks from 10 July-7 August (Schwilling and Kerr 1968, Thompson and Ely 1989). I am unaware of any other confirmed nesting locations within Kansas. In South Dakota, nests have been found as early as 4 May, which is within its normal breeding range (South Dakota Ornithologists' Union 1991).

There are no breeding records from nearby Oklahoma (Baumgartner and Baumgartner 1992) and Missouri (Robbins and Easterla 1992). In Colorado the Green-winged Teal is an uncommon to common summer resident primarily in the western half of the state (Andrews

and Righter 1992). This breeding record in southern Kansas, as far as is known, is the southern most nesting record in the Great Plains.

Acknowledgments - I thank Troy Jordan and Robin Hathaway for field assistance and M.C. Thompson and C.A. Ely for providing information on the significance of this observation. C.A. Ely kindly provided comments on earlier versions of the manuscript.

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NOTES ON SOME LARGE CONCENTRATIONS OF MIGRATING BIRDS IN SOUTH-CENTRAL KANSAS

by
Eugene A. Young¹ and Max C. Thompson²

Many species of birds concentrate in large numbers at staging or roosting areas before migrating. Shorebirds and other waterbirds are known to frequent the same staging areas annually during migration. The Cheyenne Bottoms Wildlife Management Area (CBWMA) in Kansas, is known to have significant numbers of waterbirds during both spring and fall migration. Red-winged Blackbirds also occur in large concentrations at CBWMA in the fall. Little has been published on large concentrations of migrating birds in areas other than large wetland complexes or reservoirs from within the state.

In this paper we report on six species of birds that have been observed in large concentrations in south-central Kansas (Sumner and Cowley County) since 1993.

Eastern Kingbird (*Tyrannus tyrannus*) - On 30 August 1994, we saw a large concentration of Eastern Kingbirds 8 mi S and .75 mi E of Oxford along the Sumner and Cowley County line (T33S, R2E, Sec. 13). We estimated that between 5,000-10,000 individuals were present. Birds were feeding over a milo field, while others were roosting in a hedge row (*Osage Orange*, *Maclura pomifera*) and near a house surrounded with a dense stand of trees (mostly American Elm, *Elmus americanus*). It was about 2000 hrs when we first noticed them and we watched for about 20-30 min. The following day a cold front moved through the area and most of the Kingbirds in the area moved out.

P. Janzen observed 110 Eastern Kingbirds in Sedgwick County on 28 August and 470 were observed by B. Walker on 11 September 1975, near Kingman, all of which were gone the next day after a cold front moved through the area (Thompson and Ely 1992). Zimmerman (1993) has observed flocks of 50-70 birds feeding on dogwood berries at the Konza Prairie. In Oklahoma, 100 were observed at the Great Salt Plains NWR on 19 August 1956 (Baumgartner and Baumgartner 1992). Robbins and Easterla (1992) reported highs in Missouri of 300 on 11 September 1983, and 150 on 21 August 1971. It appears that the major exodus of Eastern Kingbirds through the central plains is the last week of August through the first two weeks of September.

Barn Swallow (*Hirundo rustica*) - This species is a common transient and nesting resident in Sumner and Cowley counties (Seibel 1978). Slate Creek Wetlands (SCW), Sumner County, has had a large concentration of Barn Swallows that use the area during the nesting season and as a staging area in fall (pers. obs.). During the fall 1994, there was a large concentration with over 20,000 individuals being seen at SCW. Barn Swallow's started to concentrate in late

August and early September and reached a peak on 27 September with 21,700 individuals, almost 20,000 of which were located sitting and flying over a recently disked field. On this day, Young arrived at the site (8 mi S, 2 mi W Oxford, T33S, R2E, Sec 21 and 22) at about 0930 hrs when 10,000 birds were present. By 1027 hrs the number had grown to about 20,000 the largest concentration ever recorded from SCW. Birds moved into the area from all directions. Earlier in the morning birds were noted flying overhead at a banding station about .75 mi N along Slate Creek (Thompson and Young pers. obs.). Most individuals departed by mid-October although 2,020 were still present on 19 October.

Twenty-thousand have been recorded in the Tulsa, Oklahoma area on 4 October 1942 (Baumgartner and Baumgartner 1992). At Squaw Creek, northwestern Missouri, 10,000 were observed on 4 October 1978 with 5,000 still present on 21 October (Robbins and Easterla 1992). The peak migration of Barn Swallows in the region appears to begin in the last week of September and continue through the third week of October.

American Robin (*Turdus migratorius*) - Large concentrations of robins have been observed the last few years in Arkansas City, Cowley County during spring and fall migration. The main roosting area has been on the north edge of town in large stands of cedar trees located near Wal-Mart and the old drive-in-movie theater with a variety of shrubs and young trees. At first light, large swarms of robins can be seen circling over the area and heading in all directions and then returning at dusk. In February 1994, unusually large concentrations of robins used the area. On 18-20 February between 50-100,000 birds were observed with the peak being reached on the 21 February when there was an estimated 250,000-500,000 individuals. Throughout the remainder of the month, robins were common although numbers declined to several thousand through March. In 1995, robins used the area again with an estimated 10,000-20,000 being observed in the first couple weeks of March.

Robbins and Easterla (1992) recorded peak spring numbers of 1,500 on 25 March 1969 and 1,000 on 28 March 1982. In the Oklahoma panhandle, 10,000 were observed between 23 March and early April in 1951 feeding on army worms in wheat fields (Baumgartner and Baumgartner 1992). In Kansas, Oklahoma, and Missouri large concentrations of robins are more common at winter roosts. Betts (1958) recorded at least 29,757 robins near Baldwin, Douglas County, Kansas, from November through early December 1957 when most departed after a snow storm. In Missouri between 100,000-250,000 have been observed in late November 1988 (Robbins and Easterla 1992). At the Wichita Mountains NWR, 400,000 were observed on 23 December 1966, and a large roost of "thousands" occurred west of Stillwater during the winter, 1962-1963 (Baumgartner and Baumgartner 1992).

Dickcissel (*Spiza americana*) - This species is a common transient and summer resident in central Kansas (Thompson and Ely 1992). On 1 September 1994, about 5,000 were noticed as they came in to roost with Red-winged Blackbirds and Brown-headed Cowbirds (*Molothrus ater*) in a cattail marsh at the north edge of SCW (5 mi S, 2 mi W Oxford, T33S, R33S, SE/4 Sec. 4, Winfield Gun Club). Most of the birds were roosting in the cattails over water, although some were in cottonwood (*Populus deltoides*) and black willow (*Salix nigra*). From late August through mid-September Dickcissels could be heard flying overhead at sunrise at the banding station located to the south (2 mi) in the middle of the wetland complex.

Large numbers are not reported during fall migration from Missouri (Robbins and Easterla 1992) although flocks of 1,000 birds were seen in grain fields from 22-28 August 1962 in north-central Oklahoma (Baumgartner and Baumgartner 1992).

Red-winged Blackbird (*Agelaius phoeniceus*) - This species is one of the most common and abundant birds in the state and is well known for staging in wetland complexes, like CBWMA. Winter flocks at CBWMA have been estimated at 3.5 million (Thompson and Ely 1992). From 1974-1977 there was an average of 9,951,621 Red-winged Blackbirds per year recorded on Christmas Bird Counts (range 6,000,400 - 12,505,615 Thompson 1975, Ely 1976, 1977, 1978) with an additional 2,095,000 in 1969 (Ely 1970) and 3,252,660 in 1971 (Ely 1972). Major staging areas elsewhere in the state are less well known. At SCW, Red-winged Blackbirds have been staging in the area at least since 1987 when extensive surveys began (unpubl. data). This species along with Brown-headed Cowbirds and to a lesser extent Common Grackles and Great-tailed Grackles (*Quiscalus mexicanus*) have accounted for up to 1 million individuals at SCW in previous years (unpubl. data). In most years, the birds depart in early to late fall. In 1994, primarily Red-winged Blackbirds and Brown-headed Cowbirds remained in large concentrations through December. Up till the 21 November, 500,000-1,000,000 individuals were seen. Then during the Christmas Bird Count, 22 December, we observed 2,500,000 individuals (Thompson and Young 1995) coming into roost in a stand of cattails at the Winfield Gun Club (same area where Dickcissels roosted). Other large concentrations in the region include: 8,019,000 at Squaw Creek, Missouri, on 19 December 1978 (Robbins and Easterla 1992); in Oklahoma, 10,000,000 at Tishomingo NWR in December 1964; 10,000,000 at Lake Oberholser in December 1964 and 1,000,000 in December 1965; and 1,104,489 on the Oklahoma City Christmas Count in 1975 (Baumgartner and Baumgartner 1992).

Common Grackle (*Quiscalus quiscula*) - In Cowley County, large flocks of this species are

seen migrating and moving from roosting areas to feeding areas in both spring and fall. Frequently, birds can be seen in long linear flocks about 50-100 yds wide. It is not uncommon for these flocks to stretch from horizon to horizon. Exact numbers have been difficult to ascertain because of such movements, but "thousands" are not uncommon. In addition, few roosting areas have been observed. Several thousands have been observed roosting in the same locality that the robins used in Arkansas City (near Wal-Mart). They have also roosted in the southern portions of the town (near the high school football field on W. Madison), and the Kaw Wildlife area about 4 mi E of Arkansas City. In Arkansas City and Winfield, flocks have been observed continuously for over 45 minutes.

One million have been reported on Missouri, 26 October 1966 (Robbins and Easterla 1992) and 200,000 near Tulsa, Oklahoma, spring 1966 (Baumgartner and Baumgartner 1992).

It is the hope of the authors that persons concerned with avian conservation will monitor staging and roosting areas. If these areas are traditional and used annually, what better way to survey populations.

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¹1707 North 7th St., Arkansas City, KS 67005.

²Department of Biology, Southwestern College, Winfield, KS 67156-2499.

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