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The Kentucky Warbler

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GREAT HORNED OWL

IN THIS ISSUE

THE KENTUCKY ORNITHOLOGICAL SOCIETY

THE KENTUCKY WARBLER

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Editor ..... Anne L. (Mrs. F. W.) Stamm, 9101 Spokane Way, Louisville 40222

Assistant Editor ..... Joseph E. Croft, 2366 Gladstone Avenue, Louisville 40205

OUR COVER

This month's cover shows Ray Harm's interesting portrait of the Great Horned Owl (*Bubo virginianus*). This owl, a resident species in Kentucky, is usually found in dry, forested uplands.

BLACKBIRD ROOSTS IN THE BOWLING GREEN AREA

HERBERT E. SHADOWEN

Large concentrations of wintering birds have been located in Warren County, Kentucky for several years. According to Warren County Extension Agent, Kelcy Driskell, the concentration has varied between 3,000,000 and 6,000,000 birds since first being discovered more than a decade ago along the Barren River. The birds moved to a wooded area southeast of Bowling Green on the Scottsville Road and since 1968 have occupied a cedar forest northwest of Bowling Green, near the Morgantown Road. The birds usually arrive on or about October 31 and remain four months. In the autumn of 1971 they did not arrive until November 9 — possibly due to the unusually warm autumn — and departed February 26.

Although referred to as a Starling (*Sturnus vulgaris*) roost, birds other than that species roost in the area. After more than a month of observation it was estimated that the roost contained approximately 5,000,000 birds of which 50% were Common Grackles (*Quiscalus quiscula*), 40% were Starlings, and 10% were Red-winged Blackbirds (*Agelaius phoeniceus*), Brown-headed Cowbirds (*Molothrus ater*), and other species. At twilight on January 17, 1972, 221 birds were collected at random by firing with shotguns into the roost area. The birds consisted of 94 Grackles, 45 Starlings, 31 Cowbirds, 37 Red-winged Blackbirds, and 14 Rusty Blackbirds (*Euphagus carolinus*). The birds were collected in order to continue studies previously reported in *The Kentucky Warbler* (45:27-28, 1969, and 47:35-38, 1971). Property owners and citizens living near the roost area would like to see the birds dispersed or destroyed for the following suggested reasons: the birds are regarded as pests; they consume large amounts of stock feed and grain; they are known carriers of TGE, an intestinal virus of young pigs; their roosts can harbor histoplasmosis, a fungous disease which can infect the lungs of humans; they are keen competitors of other birds for food and nesting sites; they sometimes destroy trees in which they roost; and they create pollution problems at their roosting sites.

In December, 1971, a local committee was formed to study the roost problem and make recommendations. Efforts were made to gather information concerning the Starling, its beneficial and detrimental aspects, and to explore all possible control measures. As of this date no action has been taken, but information continues to be gathered. Studies in progress by M. Boyken and L. P. Elliott of Western Kentucky University appear to indicate considerable soil pollution but little if any air and water pollution. Also, on July 14, 1972, a survey of the roost area revealed little evidence of dead trees, although some of the smaller saplings appeared to be dead. The lower limbs of the larger cedar trees were barren, but the crowns appeared healthy. One of the owners is removing the trees from his land, preferring treeless land to the roost. The effect of this clearing will be studied in the autumn if and when the birds return. At present the area is covered with a lush undergrowth of weeds and grasses — as might be expected under the conditions of heavy fertilization by the feces of the birds.

When the forest floor was examined in the spring of 1972 it was obvious that grains comprised a large proportion of the food of many birds. The stomach contents of some of the birds were removed, and an attempt was made to separate the plant matter and animal matter and estimate the percentage of each. The results were as follows:

Common Grackle: 22 birds contained 100% plant matter, including much corn; three birds contained 98% plant matter (a few beetle fragments).

Brown-headed Cowbird: 15 birds contained 100% plant matter consisting of small entire seeds; five birds contained 99% plant matter (a few insects and spiders.

Red-winged Blackbird: 19 birds contained 100% plant matter (pieces of corn and seed fragments); six contained 95-99% plant matter.

Rusty Blackbird: 10 birds contained 100% plant matter; three birds contained 95-99% plant matter (beetles and snails); one bird contained 75% animal matter (many beetle fragments and one snail).

Starling: 26 birds contained 91-100% plant matter; six contained 75-90% plant matter; five contained 51-74% plant matter; and six contained 50% or more animal matter (insects, mostly beetle fragments, and snails).

Large amounts of corn were obvious in the stomachs of the Common Grackles and Red-winged Blackbirds, but no effort was made to identify the various kinds of seed. It is noteworthy that Starlings are able to locate as many insects as they do in the middle of January, in Kentucky.

I wish to thank Dr. L. P. Elliott for his assistance in this study.

—Biology Department, Western Kentucky University, Bowling Green 42021.

INVESTIGATION OF BIRD ROOST AS A SOURCE OF ENVIRONMENTAL POLLUTION

M. Boyken and L. P. Elliott

An estimated five million birds migrate from northern points to settle in the Bowling Green, Kentucky, area during the winter months (Shadowen, 1972). Such a massive number of birds is believed to be a significant source of environmental pollution within the region. Since Starlings (*Sturnus Vulgaris*) make up a large proportion of this migratory population, they were chosen as the subject of this investigation.

Materials and Methods

Coliform Isolation. When grown on Difco Eosin Methylene Blue agar (EMB), coliforms (coli-aerogenes bacteria) exhibit a characteristic growth. *Escherichia* colonies are reddish-purple in color with dark purple or black centers and a green metallic sheen. The large, mucoid *Enterobacter* colonies are a pinkish-red color with dark centers and no metallic sheen. EMB streak plates are streaked through a three-streak pattern and the abundance of growth is recorded according to the number of streaks through which coliform colonies appear. If colonies are present throughout all three streaks, the growth is said to be abundant (+++). Growth through two streaks is moderate (++), and through one streak is slight (+). In some cases there may be no growth (−) of coliforms.

Coliform Isolation From Fresh Specimens. Fifty Starlings were collected and tested immediately to detect the presence of coliforms in the

intestinal tract. The feathers were plucked from the abdominal region and the exposed area swabbed with iodine. An incision was then made with a sterile scalpel to expose the intestinal content. A loopful of this material was removed and mixed thoroughly with 1 ml. of 0.86% sterile saline (Witty and Elliott, 1971). A loopful of the saline mixture was streaked on EMB agar for colony isolation. This procedure was repeated for each of the fifty birds. The EMB plates were incubated at 35°C for 24 hours and observed for growth of colonies exhibiting a green sheen. Such colonies were chosen at random from the EMB plates, streaked onto Difco Tergitol-7, and incubated at 35°C for 24 hours and then room temperature for 24 hours. They were observed for colonial morphology. The Tergitol-7 medium is used to characterize enteropathogenic *Escherichia coli* (Scherer, 1966).

Coliform Isolation From Frozen Specimens. Seventeen birds were killed and frozen for 48 hours to determine if freezing affected the viability of coliforms. The intestinal tract was exposed and samples of the intestinal material were streaked on EMB in the manner described previously. Representative colonies exhibiting the green metallic sheen on EMB after 24 hours incubation at 35°C were streaked on Tergitol-7 as described above.

Water Samples. Water samples were collected at three different points along a stream running through the wooded area where the birds roost during the winter months. The stream, called Dry Branch, runs into Jennings Creek, which in turn connects to Barren River, the water source for the Bowling Green area. A set of three water samples was taken at a point along Dry Branch outside the woods and served as a control. A second set of three samples was taken downstream from the control at a point estimated to be half-way through the woods. The third set was taken further downstream just before the stream left the wooded area. Water samples were collected in sterile 99 ml. dilution bottles, immediately placed in an ice bath and returned to the laboratory for analysis. A 100 ml. portion of each sample was filtered through millipore membrane filter and plated on a millipore pad saturated with 1.8-2.0 ml. MF-Endo broth. After 24 hours incubation at 35°C a count was taken of colonies exhibiting the green metallic sheen characteristic of coliforms (Millipore, 1969). The entire procedure was repeated four times.

Air Samples — High-Volume Air Sampler. An effort was made to determine if birds increase the amount of particulate matter in the air. Particulate matter is an indicator of air pollution. A high-volume air sampler, which consists of a vacuum pump designed to pull air through an 8″ x 10″ glass-fiber filter (Jones, 1966), was used to determine the amount of particulate matter in the air within the bird roost.

The air sampler was placed in the roosting area of the birds and enclosed in a metal shelter with a hinge roof. Samples were taken late in the evenings for 2½ hours after the birds had arrived. A portable generator was used as a power supply. The glass-fiber filter paper used was weighed before and after sampling and the difference in the weight of the paper was used in calculating the amount of particulate matter per cubic meter of air. A flow meter was used to determine the amount of air being pulled through the filter. Five samples were collected on different dates in this same manner.

As a control, the air sampler was placed in a nearby open field. Again, air was sampled for 2½ hours. This was also repeated five times.

Soil Samples. Samples of soil were collected from the roosting area of the birds in order to obtain an estimation of the number of coliforms present.

As a comparison, soil samples were collected from a field adjacent to the roosting area.

Five random samples of soil were collected within each area. Two sterile tongue depression blades were used to collect each sample. The blades were inserted to a depth of about two inches into the soil to form a pie-shaped wedge. They were then pulled out of the soil while holding the two blade ends together to allow a pie-shaped specimen of soil to be removed. This was placed into sterile cups and the samples were immediately returned to the laboratory. A one gram portion of each sample was weighed out and mixed with a sterile 99 ml. phosphate buffer diluent. Samples of 0.1 ml. from the dilutions were spread with sterile "hockey sticks" onto plates of EMB. These were incubated 24 hours and observed for colonial growth. A count was made of those colonies with dark blue centers (coliforms). This procedure was repeated three times.

Results and Discussion

Coliform Isolation. When streaked on EMB, 95.5% of the specimens taken from the intestinal tract of Starlings were found to be positive for coliforms. Table I indicates the abundance of coliform growth based on the appearance of coliform types through a three-streak pattern. The data indicates that coliforms are normally found in the intestinal tract of Starlings and may, therefore, be used as an indicator of fecal contamination by the Starlings. It also appears that freezing the birds for a 48 hour period will not kill the coliforms since 100% of the plates prepared from frozen birds were coliform positive. This may be of significant importance if it is necessary to collect the birds several days before performing tests involving coliforms. This incidence of coliforms in fecal material from Starlings was much higher than that reported by Franks and Davis in an article by Glantz and Jacks (1967). Franks and Davis obtained 159 cloacal swabs from wild birds in the immediate and surrounding areas where waste water effluent irrigation was occurring. Of the swabs taken, only 60.43% were positive for bacteria that would grow on violet red bile agar, a medium used to enumerate coliform bacteria in water, milk, dairy and other food products.

TABLE I
COLIFORM ISOLATION FROM STARLINGS

Fecal Material	Amount of Coliform Growth on EMB				Total
	−	+	++	+++	Observed
Fresh Specimens	3	9	17	21	50
Frozen Specimens	0	8	7	2	17

Of those 95.5% of the specimens positive for coliforms, 55.22% gave the green metallic sheen indicative of *Escherichia coli* on EMB agar. Certain serotypes of *E. coli* have been found to cause diarrhea in infants, and these are termed enteropathogenic. They were observed for colonial morphology and classified according to Scherer (Table II). Serological typing would be necessary to confirm which of these are enteropathogenic *E. coli.* Scherer found that only the mucoid-type cultures could not be serologically typed.

TABLE II
MORPHOLOGY OF COLIFORMS ON TERGITOL-7

Type of Colony	Number of Plates Exhibiting Colony Type		
	Fresh Specimens	Frozen Specimens	Total
Rough	7	2	9
Intermediate-rough	1	0	1
Intermediate-smooth	14	2	16
Tetrazolium reducer	13	3	16
Mucoid	14	4	18
			60

Presumably, 42 out of 60 (70%) of the *E. coli* isolates in this study would have serologically typed. Glantz and Jacks (1967) definitely found 16 birds that carried enteropathogenic *E. coli* in their intestinal tracts.

TABLE III
COLIFORMS OBTAINED FROM WATER SAMPLES

Replications	Control	Sample 1	Sample 2
I	*89	23	32
	58	53	35
	67	41	41
	$\overline{X}$=71.33	$\overline{X}$=39.00	$\overline{X}$=36.00
II	16	45	73
	35	53	69
	23	43	57
	$\overline{X}$=24.67	$\overline{X}$=47.00	$\overline{X}$=66.33
III	12	59	57
	106	136	35
	109	84	22
	$\overline{X}$=75.67	$\overline{X}$=93.00	$\overline{X}$=38.00
IV	42	52	54
	44	38	58
	44	39	55
	$\overline{X}$=43.33	$\overline{X}$=43.00	$\overline{X}$=55.67
	£X=645.00	£X=666.00	£X=588.00
	$\overline{\overline{X}}$= 53.75	$\overline{\overline{X}}$= 55.50	$\overline{\overline{X}}$= 49.00

*Values represent the number of colonies per 100 ml. of water which exhibited a green metallic sheen on MF-Endo broth.

$\overline{X}$=Mean £X=Sum of variables $\overline{\overline{X}}$=Overall mean

Water Samples. As is evident from the data presented in Table III, there was considerable variability within the replications of the samples taken. However, the overall mean coliform counts obtained for three sampling areas along the stream do not appear to be significantly different. According to the Kentucky Water Control Commission, 1971, public water supplies should not exceed five thousand coliforms per one hundred milliliters of water for a monthly arithmetic average. Therefore, it appears that the presence of the Starlings within the wooded area does not significantly contribute fecal contamination to Dry Branch of Jennings Creek.

Air Samples — High-Volume Sampler. The amount of particulate matter detected for the Experimental and Control areas is indicated in Table IV. This data was analyzed as a Completely Random Design according to Steele and Tory, 1960. A highly significant difference was found between those values obtained for the "Experimental" treatments taken within the birds' roosting area and those obtained for the "Control" samples taken in the open field. However, it would be invalid to attribute this difference in suspended particles solely to the birds. The experiment was not conducted to rule out other factors, e.g. atmospheric conditions, which might influence the amount of particulate matter.

TABLE IV
PARTICULATE MATTER

Air Samples	Increase in Weight of Filter Paper (mg)	Amount of Particulate Matter (ug/M^3)*
Experimental		
1.	0.0251	97.66
2.	0.0231	78.81
3.	0.0201	68.47
4.	0.0318	125.54
5.	0.0197	101.36
		$\overline{X}$=94.37
Control		
1.	0.0085	32.86
2.	0.0087	32.13
3.	0.0121	44.68
4.	0.0141	49.54
5.	0.0230	80.81
		$\overline{X}$=48.00

*Microgram per cubic meter.

Soil Samples. According to the data of Table V, the overall mean coliform count obtained from the soil within the roosting area is about 170 times greater than that obtained for the soil from the area which was uninhabited by birds. This evidence indicates that these birds do greatly affect the soil and can be said to be a significant source of soil fecal contamination within their roosting area.

TABLE V
NUMBERS OF COLIFORMS ISOLATED FROM SOIL

Replications	Sites	CFU/g* Soil	
		Control X 10^4	Roost X 10^5
I.	1.	36.67	256.70
	2.	43.00	606.70
	3.	55.67	130.00
	4.	32.67	1260.00
	5.	30.67	51.33
		$\overline{X}$=39.74	$\overline{X}$= 460.95
II.	1.	37.00	3000.00
	2.	25.67	546.70
	3.	5.00	3000.00
	4.	31.66	236.70
	5.	82.00	336.70
		$\overline{X}$=36.27	$\overline{X}$=1424.02
III.	1.	59.00	7.33
	2.	46.67	320.00
	3.	18.67	86.33
	4.	74.00	210.00
	5.	44.67	51.66
		$\overline{X}$=48.60	$\overline{X}$= 135.06
		$\overline{\overline{X}}$=41.53	$\overline{\overline{X}}$= 673.34

*CFU/g = Colony forming units per gram of soil.

Summary

Data gathered in this study failed to produce any distinct proof that the Starlings in the Bowling Green area contribute significantly to environmental pollution. Fecal contamination of the soil within the roosting area was shown to be significantly greater than was that of the soil from a nearby area where there were no birds. However, there was no evidence that the coliform count of Dry Branch of Jennings Creek was increased as a result of running through the roosting area. A difference was indicated for the amount of particulate matter detected within the roosting area as opposed to that of a nearby field.

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—Department of Biology, Western Kentucky University, Bowling Green, Kentucky 42101.

FORTY-NINTH ANNUAL FALL MEETING

October 13-15, 1972

The Kentucky Ornithological Society met at Lake Cumberland State Park, the weekend of October 13-15, 1972. The Friday evening meeting was held in the Convention Center. The meeting was opened at 7:30 p.m., with president Raymond Nall presiding. Dr. Burt Monroe, Jr., vice-president, served as program chairman for the evening. The program consisted of a discussion on rearing Barn Owls by Professor A. L. Whitt and a nesting study of Barn Swallows by Anne L. Stamm. Approximately sixty members and guests attended the evening meeting. Field trips were announced for the next morning, and the meeting was adjourned.

A large proportion of the membership participated in the field trips Saturday morning. At 3:30 in the afternoon there was a general business meeting, with approximately thirty-five members present. Dr. Nall presided at the meeting. He asked if there were any corrections to the minutes of the 1972 Spring Meeting as published in *The Kentucky Warbler*. Since there were none, they were approved as printed.

Mrs. Mary Louise Daubard gave the treasurer's report which was approved for filing.

In the absence of Leonard Brecher, KOS representative and chairman of the advisory committee on the Falls of the Ohio, Dr. Burt L. Monroe, Jr. gave the report. He opened his remarks by stating that the news from the Falls is good. The committee had asked the Corps of Engineers to redesign the Dam on the Indiana side in order to remove the silt that accumulates, and to redesign the Dam wall itself. The status of the Falls as a bi-state park has not changed, but it looks promising.

There was a report from the editor of *The Kentucky Warbler*, Mrs. Anne L. Stamm, who gave some interesting facts concerning that publication. She also reminded observers to send in their Cornell Nest-Record cards.

Dr. Clell Peterson gave a report on the Wilson Ornithological Society and announced the dues of that organization as $8.00 annually should KOS members be interested in joining.

Dr. Nall reported on a letter received from Mrs. Avis Newell requesting KOS support for the Manomet Bird Observatory in Massachusetts. This had been presented to the KOS board earlier in the afternoon, and although the cause appeared to be worthy, the Board declined to recommend funds. The yearly membership dues were reported as $7.50 in case members were interested on an individual basis.

Dr. Clell Peterson, chairman of the bylaws committee read the proposed changes in the bylaws. A copy of these changes had been mailed previously to all members along with the program for the Fall Meeting. A motion was made that these changes be accepted as a block and not voted on individually. The motion was seconded and then passed by the membership.

The changes as approved are listed as follows:

ARTICLE II, Section A. The annual dues for Active Membership shall be $3.00, for Contributing Membership $5.00, for Student Membership $2.00. The fee for Life Membership shall be $50.00. The fee for Family Membership for an Active or Contributing Member shall be $1.00 annually in addition to that member's regular dues; the fee for Family Membership for a Life Member shall be $1.00 annually, to continue for the life of that member.

ARTICLE III, Section A. The governing body of this corporation shall be a Board of Directors composed of eight elective officers, two appointed officers, the chairman of the two standing committees, and all living past presidents of the Society. The elected officers shall be a President, a Vice-President, a Recording Secretary, a Corresponding Secretary-Treasurer, and four Councilors, two of whom shall be elected each year. The appointed officers shall be the Editor and the Curator.

Also, the following additions were approved by the membership:

ARTICLE III, Section F. There shall be two standing committees, to be appointed by the President: (1) a Committee on Resolutions, consisting of a Chairman and two additional members; and (2) a Committee on Conservation, consisting of a Chairman, who shall also be the Society's delegate to Kentuckians for Environmental Planning, and two or more additional members.

ARTICLE IV, Section I. The duties of the Committee on Resolutions shall be to prepare and distribute written resolutions appropriate to the activities of the Society as recommended by the members at an official business meeting.

ARTICLE IV, Section J. The duties of the Committee on Conservation shall be to endeavor to be informed of conservational and environmental issues that concern the Society; to serve, through its Chairman, as a clearing house for such matters for the entire membership; to present relevant issues at business meetings; and to suggest action that in its opinion is desirable and consonant with the purposes of the Society as stated in the Articles of Incorporation, item 3.C.

Dr. Herbert Shadowen, chairman of the nominating committee, presented the following slate of officers:

President ..... Dr. Burt L. Monroe, Jr., Louisville
Vice-President ..... Prof. A. L. Whitt, Richmond
Corr. Secretary-Treasurer ..... Mrs. Mary Louise Daubard, Louisville
Recording Secretary ..... Sister Casimir Czurles, Owensboro
Councillors: Mrs. Wendell Kingsolver, Carlisle; Mr. Ramon R. Iles, Owensboro

Dr. Nall asked for nominations from the floor. There were none, and the slate was approved unanimously by the membership.

A change in the date and location of the Spring Meeting was announced by Dr. Nall. Originally it had been scheduled for April 13-15, 1973, in Bowling Green; but the KOS Board of Directors had voted to change it to Louisville, for May 11-13, 1973, to observe the fiftieth anniversary of the founding of the Kentucky Ornithological Society in that city.

Dr. Herbert Shadowen, acting recording secretary for the meeting of the Board of Directors, which had been held just prior to the general business session, gave items of business discussed in that meeting. He announced that the Fall Meeting of the KOS will be held at Lake Barkley State Park on September 21-23, 1973, as voted by the Board, if reservations can be made.

Mr. Frederick Stamm commended the outgoing officers as having done an excellent job and asked the general membership to join him in this commendation. The membership gave the officers a standing ovation.

The dinner meeting was held in the Convention Center at 6:30 Saturday evening. Dr. Nall presented those at the speaker's table and then introduced Mrs. William Krieger (Amelia Klutey), a Life Member now living in New Jersey. He acknowledged Mrs. Krieger's gift to the KOS of a complete file of 15 years (1958-72) of the *New Jersey Nature News*. Dr. Frederick Loetscher, Center College, gave an interesting talk, "Impressions of Australian Birds," illustrated with colored slides and recordings of bird songs.

Howard Jones, who served as compiler for the day, reported seventy-five species. Field trips for Sunday morning were announced for 8:00 a.m., following breakfast at Lure Lodge.

At the completion of the field trips, Mr. Jones gave the final count for the weekend as 83 species, including a Bald Eagle.

Emily H. Wilson, Recording Secretary

REPORT OF THE TREASURER

October 1, 1972

GENERAL FUND

Balance brought forward, October 1, 1971			$1262.44
Receipts			
Membership Dues:		$1265.00	
Interest Income, Jefferson Federal Savings & Loan Assn. on Full-Paid Shares	$ 44.00		
Gordon Wilson Fund for Ornithology Interest Income	13.78		
Endowment Fund, Interest Income	13.78		
Total Interest		71.56	
Contributions:			
Gordon Wilson Fund for Ornithology		10.00	
Investments:			
Gorden Wilson Memorial Fund from Greater Louisville Savings & Loan Assn.	1000.00		
Endowment Fund from Jefferson Federal Saving & Loan Assn.	1000.00		
Total Investments		2000.00	
Sales: Publications, Checklists Cards, etc.	101.11		
Fall Meeting, 1971	220.00		
Spring Meeting, 1972	243.00		
Pre-Registration, Fall Meeting, 1972	68.80		
Total Receipts		632.91	3979.47
TOTAL			$5241.91

Disbursements

Printing: The Kentucky Warbler, 3 Issues	$ 832.53	
K.O.S. Bills and Envelopes	97.95	
Supplies and Postage	80.00	
Contribution: Cumberland Falls Preservation Assn.	10.00	
Dues: The Nature Conservancy	10.00	
Transferred to Gordon Wilson Fund for Ornithology	20.00	
Investments:		
Savings Certificate, Gordon Wilson Fund	1000.00	
Savings Certificate, Endowment Fund	1000.00	
Expenses, Fall Meeting, 1971	280.08	
Expenses, Spring Meeting, 1972	221.20	
Transferred to Endowment Fund (3 Life Memberships)	150.00	
Total Disbursements		$3701.76
Balance on hand, First National Bank, Louisville, Ky.		1540.15
TOTAL		$5241.91

ENDOWMENT FUND

Balance in Savings Account, Jefferson Federal Savings & Loan Assn., Louisville, Ky. October 9, 1971		$1675.12
Seven Full-Paid Shares @ $100.00		700.00
		$2375.12
Receipts		
Interest on Full-Paid Shares	$ 44.00	
Interest on Savings Account	64.62	
Three Life Memberships	150.00	
Total Receipts		258.62
TOTAL		$2633.74
Disbursements		
Transfer of Interest on Full-Paid Shares to General Fund	44.00	
Total Disbursements		44.00
Balance in Fund		2589.74
TOTAL		$2633.74
Balance in Savings Account, October 1, 1972	889.74	
Seven Full-Paid Shares	700.00	
Investment: One Savings Certificate #D 282 @ 5¾ %, Colonial Federal Saving and Loan Assn.	1000.00	
TOTAL	$2589.74	

THE GORDON WILSON FUND FOR ORNITHOLOGY

Balance in Savings Account, Greater Louisville Savings & Loan Assn., Louisville, Ky. October 1, 1972		$1242.08
Receipts		
Contributions to the Fund	20.00	
Interest on Savings Account	52.26	
Total Receipts		72.26
TOTAL		$1314.35
Disbursements		
Withdrawal for Purchase of One Savings Certificate, #D 281, @ 5¾ % from Colonial Federal Savings & Loan Assn.		1000.00
Balance in Savings Account, October 1, 1972		314.35
Balance in Savings Account		314.35
Certificate #D 281 in Colonial Federal Savings & Loan Assn., Louisville, Ky.		1000.00
TOTAL		$1314.35

BALANCE SHEET

October 1, 1972

Assets:		
Cash in General Fund, First National Bank, Louisville, Ky.		$1540.15
Endowment Fund, Jefferson Federal Savings & Loan Assn. Louisville, Ky.	1589.74	
Savings Certificate in Colonial Federal Savings & Loan Assn.	1000.00	2589.74
Gordon Wilson Fund for Ornithology		
Greater Louisville Savings & Loan Assn.	314.35	
Colonial Federal Savings & Loan Assn.	1000.00	1314.35
Total Assets: October 1, 1972		$5444.24

Mary Louise Daubard, Treasurer

ATTENDANCE AT THE FALL MEETING, 1972

ANCHORAGE: Dr. and Mrs. Burt L. Monroe, Jr. and Burt L. Monroe, III.

BOWLING GREEN: Dr. and Mrs. Herbert Shadowen, Mr. and Mrs. Eugene Wilson.

CARLISLE: Dr. and Mrs. Wendell Kingsolver and daughter Ann.

DANVILLE: Mr. and Mrs. W. C. Alcock, Dr. and Mrs. Frederick Loetscher, Margaret Myers.

FRANKFORT: Mr. and Mrs. Howard Jones.

GLASGOW: Mrs. James Gillenwater, Mrs. Russell Starr.

LEXINGTON: Mr. and Mrs. G. L. Burns, Mrs. Ruth Davis, Mr. and Mrs. A. L. Reese, Mr. and Mrs. Andrew Uterhart, Conley Webster.

LOUISVILLE: Amelia Alford, Al Byrd, Kathryn Clay, George Crabtree, Mrs. M. L. Daubard, Doris Garst, Mrs. Harry Hummell, Dr. and Mrs. Kenneth P. McConnell, Mrs. Max Moore, Mrs. J. V. Muntan, Mrs Burt L. Monroe, Sr., Mrs. H. V. Noland, Ann Norman, James Pasikowski, Evelyn Schneider, Mabel Slack, Lawrence Smith, Mr. and Mrs. F. W. Stamm, Mr. and Mrs. A. G. Susie.

MACEO: Mr. and Mrs. A. L. Powell.

MURRAY: C. Wesley Kemper, Dr. and Mrs. Ray Nall and daughters Sherry, Susan, and Tracy, Dr. Clell Peterson.

OWENSBORO: Mrs. J. E. Bickel, Mrs. Edward Bowne, Sister Casimir Czurles, Mr. and Mrs. Ramon Iles, Wynema Sims.

PROSPECT: Anna Deacon Hook.

RICHMOND: Mr. and Mrs. W. A. Householder, Prof. A. L. Whitt, Jr.

WILLIAMSBURG: Mr. and Mrs. Humphrey Olsen.

HAWORTH, N. J.: Mr. and Mrs. William Krieger.

PEORIA, ILL: Ester Kasper.

BIRDS RECORDED ON THE FIELD TRIPS AT LAKE CUMBERLAND STATE PARK

Pied-billed Grebe, Ring-necked Duck, Lesser Scaup, Common Merganser, Turkey Vulture, Black Vulture, Sharp-shinned Hawk, Red-tailed Hawk, Red-shouldered Hawk, Broad-winged Hawk, Bald Eagle (adult), Sparrow Hawk, American Coot, Killdeer, Greater Yellowlegs, Herring Gull, Mourning Dove, Yellow-billed Cuckoo, Belted Kingfisher, Yellow-shafted Flicker, Pileated Woodpecker, Red-bellied Woodpecker, Red-headed Woodpecker, Yellow-bellied Sapsucker, Hairy Woodpecker, Downy Woodpecker, Eastern Phoebe, Least Flycatcher, Eastern Wood Pewee, Blue Jay, Common Crow, Carolina Chickadee, Tufted Titmouse, White-breasted Nuthatch, Red-breasted Nuthatch, Brown Creeper, Winter Wren, Carolina Wren, Mockingbird, Catbird, Brown Thrasher, Robin, Wood Thrush, Hermit Thrush, Swainson's Thrush, Gray-cheeked Thrush, Eastern Bluebird, Golden-crowned Kinglet, Ruby-crowned Kinglet, Starling, White-eyed Vireo, Yellow-throated Vireo, Solitary Vireo, Black-and-white Warbler, Tennessee Warbler, Magnolia Warbler, Myrtle Warbler, Black-throated Green Warbler, Blackburnian Warbler, Bay-breasted Warbler, Pine Warbler (singing), Prairie Warbler, Palm Warbler, Ovenbird, House Sparrow, Eastern Meadowlark, Red-winged Blackbird, Common Grackle, Brown-headed Cowbird, Summer Tanager, Cardinal, Rose-breasted Grosbeak, Indigo Bunting, Pine Siskin, American Goldfinch, Rufous-sided Towhee, Savannah Sparrow, Slate-colored Junco, Chipping Sparrow, Field Sparrow, White-crowned Sparrow, White-throated Sparrow, Song Sparrow.

NEWS AND VIEWS

As in the past, the editor wishes in concluding another volume to thank Joseph E. Croft and the editorial staff (see inside cover-page) for their efficient assistance. Also, additional members have given advice and been generous with their help in a number of ways. Here to be mentioned are the following: Burt L. Monroe, Jr., Evelyn J. Schneider, and Frederick W. Stamm.

NESTING CARDS

May we have your nesting cards which you have completed for the bird nests you have found during the spring and summer? Many of you have failed to return to your coordinator or editor the nest cards for 1971. We trust you will fill out duplicate copies and return them to us, with the original cards. If you need a supply of duplicate forms, please write. If you haven't time to make up the duplicates, please forward the originals anyway.—Editor.

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BERNICE B. SHANNON

Because of lack of space, it has been thought advisable to omit the names of participants in Christmas Bird Counts and Big Spring Lists. These can be found under the place names in the issues concerned. Also, the names of species in such counts and of species in longer articles do not appear in this index unless accompanied by significant notes. The capital letter R is used in the index to indicate a book review.

LOCALITIES

GENERAL