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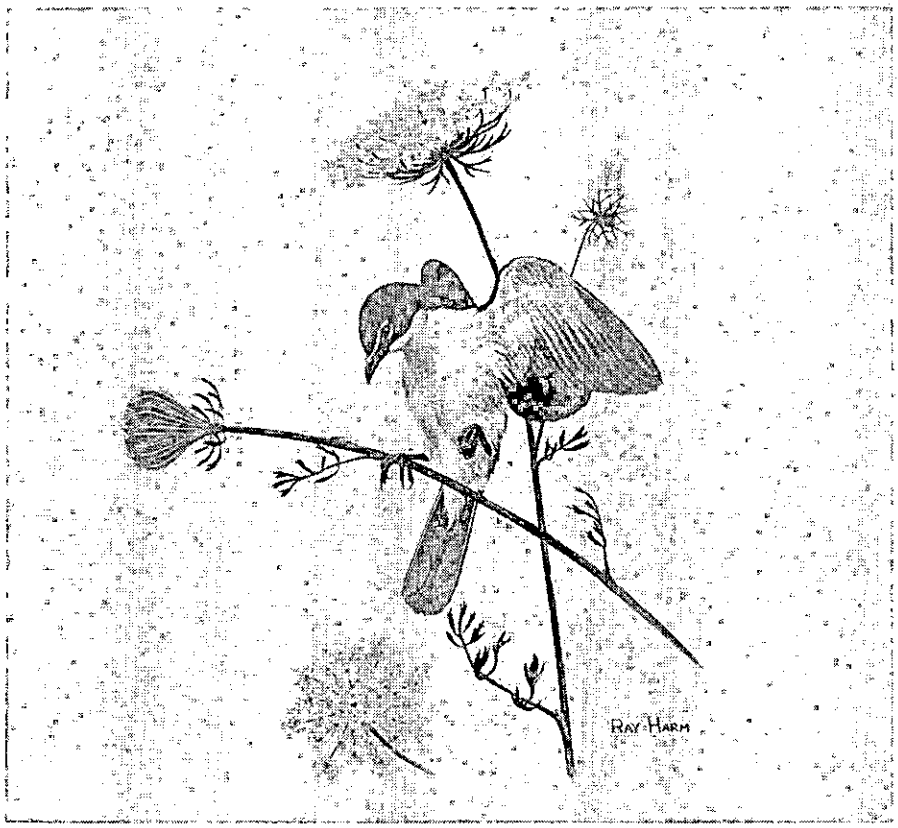

IN THIS ISSUE

THE KENTUCKY ORNITHOLOGICAL SOCIETY

Founded in 1923 by B. C. Bacon, L. Otley Pindar, and Gordon Wilson

THE KENTUCKY WARBLER

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Editor ..... H. E. Shadowen, Biology Department, Western Kentucky Univ., Bowling Green 42101

OUR COVER

Our thanks to Ray Harm for the reproduction of his painting of the Yellow-breasted Chat.

HABITAT SELECTION BY THE PARULIDAE DURING SPRING MIGRATION ALONG THE SOUTH FORK CREEK IN GLASGOW, KY.

WAYNE MASON

Parnell (1969) conducted studies of habitat selection by the wood warblers (Family Parulidae) and successfully demonstrated that while some species show little or no habitat preference during spring migration, others exhibit strong ties to specific habitats. Published here are the results of a similar though less extensive study designed to express the relationship between wood warblers and their habitat choice during spring migration.

This study deals intimately with habitat and how it relates to warbler behavior. Therefore, a rather thorough and precise description of the study area is vital to an understanding of the results. The South Fork Creek is a small stream which meanders through Barren County and empties into Beaver Creek. Along this stream and in the surrounding area are found several habitat types, all of which fall under one of two broad categories — Bottomland and Upland.

Bottomland is defined as the low-lying land adjacent to and surrounding South Fork Creek, a portion of which is periodically subjected to extensive flooding. Within this category are recognized two major habitats which are often frequented by migrating warblers; these are the floodplain forest and the wet thicket.

The floodplain forest is the oft-flooded forested area adjacent to the creek. Annual rains help to maintain an intermittent swampy area on the forest floor which persists well into July. White ash *(Fraxinus americana)*, sycamore *(Plantanus occidentalis)*, silver maple *(Acer saccharinum)*, and sweet gum *(Liquidambar styraciflua)*, comprise the major portion of the canopy, while box elder *(Acer negundo)*, osage orange *(Maclura pomifera)*, winged elm *(Ulmus alata)*, and willows *(Salix spp.)* dominate the understory. Ground cover is a dense bedding of various grasses. Moneywort *(Lysimachia nummularia)* is abundant in the wetter areas in and around the swamp.

The wet thickets are recognized by masses of multiflora rose *(Rosa* spp.*)*, greenbriar *(Smilax* spp.*)*, blackberry *(Rubus* spp.*)*, and honeysuckle *(Lunicere* spp.*)* which are intertwined among saplings, limbs, and felled trees in the fields of the bottomland. It also includes the thickets found near the edge of the floodplain forest. These thickets are usually surrounded by water.

The Upland is that land which is higher than the surrounding bottomland and includes four major habitats. The deciduous forests are strips of woodland which bissect cattle-grazing fields. Oaks *(Quercus* spp.,*)* hickories *(Carya* spp.*)*, and scattered beeches *(Fagus grandifolia)* make up the canopy of the woodlands at the tops of the hills and ridges; the understory trees are composed of dogwood *(Cornus florida)*, redbud *(Cercis canadensis)*, and ironwood *(Carpinus caroliniana)*. On the slopes, beech, tulip poplar *(Leriodendron tulipifera)* and a few sugar maples *(Acer saccharum)* comprise the canopy with ironwood, dogwood and redbud making up the understory. These slopes serve as transition zones from the bottomland to the upland; they are considered as upland is this study.

Old fields and cedar groves are self-explanatory habitats, and the dry thicket is much like the wet thicket except that moisture is lacking throughout most of the year.

The data gathered is the result of a five-year spring migration study which began in 1974 and concluded in 1978. A total of 25 field trips, (five per year), resulted in 2,478 recorded observations. All field trips took place between April 15 and May 15, beginning each morning at 7:00 a.m. and terminating near 11:00 a.m. This yields a total of approximately 100 field hours and nearly 25 recorded observations per hour. During 1977, a significant portion of the study area was greatly disturbed; construction crews destroyed a wooded area and an old field during the month of June. While this did not affect observation for that year, it greatly affected those in 1978. Only 381 observations were recorded that year as opposed to the previous four-year average of 524. Some species were not recorded enough to determine any habitat preference.

After examination of the data, it became apparent that habitat specificity for the wood warblers ranged from no apparent habitat preference in some species to a highly developed degree of selection by others. While the majority of the warblers appeared at least once in all six of the habitats, a few species appeared in only one or two. For example, the Prothonotary Warbler and the Northern Waterthrush occurred exclusively in the floodplain forest and wet thicket. The Prothonotary Warbler was found 79% of the time low in the trees of the floodplain forest, 21% of the time in the wet thicket. In all cases it was always very close to the water, never straying far from the creek or the intermittent swamp. The Northern Waterthrush was found 94% of the time on the floor or low in the trees of the floodplain forest, while occuring 6% of the time in the wet thicket.

Other highly selective species included the Black-and-White Warbler (93% on the larger limbs of the larger trees in the upland deciduous forest; the Kentucky Warbler (91%) and the Worm-eating Warbler (91%) preferred the upland deciduous forests; the Tennessee Warbler (80%) high in the trees of the upland deciduous forests; and the American Redstart (71%) in the floodplain forest. The Canada Warbler also showed some degree of habitat selection as it was found in the upland deciduous forest 72% of the time as opposed to the floodplain forest (28%). This contradicts Parnell's results; he stated that the Canada Warbler preferred the floodplain forest in his study in Raleigh, North Carolina.

Species which showed slight preferences to habitats (appearing in one habitat 50 percent or more of the time but never more than 70 percent) included the Hooded Warbler and the Yellow-throated Warbler, 64% and 60% respectively, in the floodplain forest; the Cerulean Warbler (57%) in the taller trees of the upland deciduous forest; and the Yellow Warbler (56%) in the floodplain forest. The Yellow Warbler is interesting in that it does not conform to Parnell's data either; he found that it occurred mostly in wet thickets, and rarely so in floodplain forest. In this study it was found to prefer the floodplain forest (56%) as well as occurring in wet thicket (37%), upland deciduous forest (5%), and dry thicket (2%).

Several species showed no preference to habitat at all during migration. The Magnolia Warbler, the Yellow-rumped Warbler, and the Blackpoll Warbler never occurred in any habitat more than 50% of the time.

Parnell offers a possible explanation for this; these warblers are primarily northern coniferous forest nesters and no such habitat is present in the study area. The only habitat similar to the coniferous forest was the cedar grove, but it was not frequented any more than the other habitats. With no habitat capable of providing for their needs, these warblers are forced to make the best of all habitats. While the Blue-winged Warbler, Prairie Warbler, Common Yellow-throat and the Yellow-breasted Chat never appeared in any one habitat more than 50% of the time, it should be noted that in those cases where they were reported in the floodplain forest, upland deciduous forest, and the cedar grove they were found in trees or brush bordering old fields or wet or dry thickets.

Several other interesting things were noted from this study. The Black-and-White Warbler was always found on the larger limbs of the larger trees, a fact well known by ornithologists. But these warblers were always more numerous in areas where the larger trees had been felled, split, or splintered by storm or other related phenomona. The large splinters and gaping holes left on the remains of the trees were at times literally crawling with these warblers. As many as 24 were counted at one time on a single felled beech tree! The Yellow Warbler was partial to willow trees growing near bodies of water, preferring the taller ones whenever a choice was available. The Worm-eating Warbler was partial to the slopes of hillsides while the Cerulean Warbler was found high in the taller trees growing along the slopes.

While it is known that vegetation governs the bird-life to be found in an area, it is the characteristics of this vegetation which still baffle scientists. MacArthur (1964) theorizes that the density of the vegetation at various levels may be a factor in determining avian diversity. He states that there are more niches available in areas that have a well developed series of strata. With more niches available, more species can occupy an area with less competition taking place between species. This study and the one by Parnell tend to support this theory; in both studies the floodplain forests contained the best developed strata, and in both studies these areas were more productive, species-wise, than any other. Life forms of vegetation are also factors to be considered, according to Odum (1971).

It is these seemingly insignificant factors which may account for the differences in this study and others like it. Factors such as forest height, age of the habitat, annual rainfall, elevation, type and amount of undergrowth, and insect form and abundance all have some bearing on the type of habitat chosen by a particular species. Small differences in seemingly similar habitats may yield very different results. Parnell (1969), for instance, noticed a strong correlation between warblers and ironwood groves. Upon inspection, he found a large population of insects (family Psyllidae) on which the warblers were feeding. No such relationship existed in the current study; no insects were present in large numbers in the ironwood groves of this study.

Regardless of the differences in this study and Parnell's, both have shown that Wood Warblers exhibit varying degrees of habitat selection during spring migration, some being highly selective of habitat while others show no apparent preference. Many factors are involved in this selection, some of which are more easily recognized than others. These

factors are based on characters of the vegetation; habitat selection by the wood warblers is dependent upon these factors.

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THE KOS BALD EAGLE COUNT, 1979

ANNE L. STAMM

The Kentucky Ornithological Society conducted it nineteenth annual One-Day Bald Eagle *(Haliaeetus leucocephalus)* Count on January 20, 1979. The count, as in previous years, was done in cooperation with Elton Fawks of the Mississippi River Valley Bald Eagle Survey. This year, for the first time, the census was moved from February to January, with January 20 as the count day and the following day as an alternate date in the event of inclement weather. As usual, the KOS members and the Fish & Woldlife biologists, who assisted in past years, were asked to check certain bodies of water across the state for eagles. This year, the on-going program of Mr. Fawks was expanded by the National Wildlife Federation Raptor Information Center to include the entire 48 contiguous states, with Mr. Fawks as joint coordinator.

The day of the count was one of the poorest to see eagles — a "day to remember." In some sections of the state a dense fog greatly reduced visibility. Intermittent rain, snow and sleet made traveling hazardous. In fact, some observers could not reach their assigned territories because of icy roads. The temperature ranged from 18 degrees (northern Kentucky) to the low 40's (Rough River area). A hurried message from Mr. Fawks stated that because of weather conditions the time to check for eagles had been extended through January 27. Although KOS had never taken the count over a period of a week, two parties did go on January 27 and were successful: one downstream from Cincinnati, Ohio, and one at Wolf Creek Dam. However, at the latter location it was necessary to shorten the observation period because of the snowfall which began covering the mountainous roads.

Despite the ghastly weather, the statewide eagle count was the highest since the surveys began in 1961 (see table I). If eagles were not present many observers found various hawks interesting to see and record. These hawk records were included in the "Winter Season of 1978-1979" report *(Ky. Warbler,* 55:29-31, 1979).

TABLE I

BALD EAGLES SIGHTED JANUARY 19-27, 1979 IN KENTUCKY

	Adults	Immatures	Not Aged	Total
Ky./Tenn. line north to where Ohio River enters Mississippi (ground & aerial)	16	11		27
Land Between the Lakes — aerial survey — TVA personnel	8	27		35
Ballard Waterfowl Management Area	10	1	3	14
Ohio River-Shawneetown to Uniontown	2	1		3
Rough River		4		4
Doe Lake-West Point on the Ohio River				0
Falls of the Ohio to Westport, Kentucky, along the Ohio				0
Leavenworth, Indiana to Rome, Ind. to see Kentucky side of Ohio River				0
Ohio River on Kentucky side opposite Lawrenceburg, Indiana	1	1		2
Laurel Lake				0
Wolf Creek Dam	2			2
Cave Run Lake-Fish Hatchery		1		1
Dam # 50-Ohio River			2	2
	39	46	5	90

Three Golden Eagles sighted: one at Ballard Waterfowl Management Area and two at LBL.

Bettie Sumara mentioned that Reelfoot Lake was "mostly ice" and "no eagles visible at the north end of Reelfoot Reserve." She and Mrs. James Weatherly reported seeing 11 Bald Eagles (7ad., 2 im., & 2 not aged) in a 45 minute period. The birds were found between Island #8 and Lake #9 in extreme western Kentucky. Aerial surveys were made in the area along the Mississippi River north of the Island up to the section of the river opposite Bardwell in 1977 and 1978 by KOS members Betty and Kenneth Leggett. However, they were unable to cover the territory this year. As always, Dr. Clell Peterson was asked to check and coordinate the count in Land Between the Lakes. KOS members and TVA personnel helped cover the area in previous years. In a telephone conversation with Dr. Peterson he said that Wendell Crews, manager, Reelfoot National Wildlife Refuge, made an aerial survey from Reelfoot Lake to where the Ohio River empties into the Mississippi — basically the same stretch previously taken by Leggett — and found 27 Bald Eagles. Therefore, Mrs. Sumara's count was sent to Dr. Peterson to check with the Crews' list for duplications. Dr. Peterson also said that Mr. John Mechler, supervisor of Fisheries & Wildlife Management LBL, TVA, took an aerial survey of Kentucky & Barkley Lakes on January 22, and reported seeing 8 adult and 27 immature Bald Eagles. The count in LBL was slightly lower than the previous year, but some eagles may have sought more open water along the Mississippi since the count there was much higher than in the past.

James Moynahan, our contact at Ballard Waterfowl Management Area, was unable to assist this year, but a staff member, Gordon Hughes, took the count and reported "a terrible day — overcast, with light rain." Although he sighted 14 Bald Eagles, he said that he "should have seen at least 15 more." Last year the total there was 23 Bald Eagles and *10* Golden Eagles.

Although W. G. Cambron had planned to participate in the count and go downstream from Henderson, the weather condition prevented him from doing so. However, previously he had spotted two adults and one immature Bald Eagle in the Ohio River Bottoms from Uniontown to Shawneetown. Also, Mrs. Herbert Clay's party found four immature Bald Eagles in the Rough River area: two at North Fork; one at Laurel Branch; and one at the Dam.

A fair number of eagles are usually sighted at Dam # 50, but this year Chastain and Jim Frazer spotted only two birds. Before the severe winters of 1977 and 1978 the Frazers frequently saw the Bald Eagles coming from a roost.

Lawrence Smith worked for 6½ hours along the Ohio from Leavenworth, Indiana, to Rome, Indiana, to observe the Kentucky side of the river more favorably. On occasion he found the river free of ice, but saw no eagles. The Stamm party checked West Point but could not reach the mouth of Otter Creek, or Rock Haven, along the Ohio because the steep hills leading there were thickly covered with ice. John Hoogerhide checked Doe Lake.

The Ohio River from Shippingport Island to Westport was checked by the Palmer-Ball party, but no eagles were found. Also, the river downstream from Cincinnati, Ohio, was checked on January 20 by the McNeely party but no eagles were seen. However, on January 27, when Edwin Larson checked the area, two Bald Eagles were found, opposite Lawrenceburg, Indiana.

According to Dennis Coskren, Wolf Creek Dam had its usual number of Bald Eagles. Although Laurel Lake had three adult Bald Eagles last year none were found by A. L. Whitt, Jr. and J. Hill Hamon this year. Dr. William Greene of Sandy Hook was rewarded by seeing at least one eagle at Cave Run Lake.

These one-day counts have been very meaningful. Prior to 1961 little was known about the Bald Eagle population in Kentucky during the winter months, with the exception of the records from the Mid-winter Bird Counts and these indicated there were no eagles east of Louisville. As I reviewed the counts, all published in the *Kentucky Warbler*, I found it interesting that at some time or another all of the major bodies of water had been covered, with the exception of the Ohio River upstream from Cincinnati. These counts have been extremely valuable in expanding our knowledge of where eagles are wintering and their numbers. Also, the counts reveal that the major concentration areas for wintering Bald Eagles are along the Ohio River downstream from Henderson; at Ballard Waterfowl Management Area; at Land Between the Lakes (Barkley & Kentucky Lakes); and perhaps along the Mississippi from the Tennessee line northward, although coverage along this section has not been extensive. The large river im-

poundments in eastern and southeastern Kentucky have at least a few eagles (2 to 5) on them during the winter, especially in February.

Below is a table in summary form of the results of the one-day counts and the number of locations covered during the period 1961-1979. It should be explained that during the early surveys only two to five areas were checked where eagles had been found on mid-winter bird counts. However, in 1965 KOS members were urged to cover all of Kentucky's major bodies of water in an effort to find out the number of wintering Bald Eagles. Also, observers were urged to check their respective territories periodically through the winter to determine variations of numbers, peaks of abundance, or evidence of migration.

TABLE II

SUMMARY OF ONE-DAY BALD EAGLE COUNTS IN KENTUCKY 1961-1979

Year	Date	Adults	Immatures	Not Aged	Total	Locations	G. Eagles
1961	Feb. 19	2	3		5	2	3
1962	Feb. 11	9	9		18	4	
1963	Feb. 17	5	9		14	5	
1964	Feb. 16	6	12	4	22	5	
1965	Feb. 13	13	18	6	37	11	
1966	Feb. 19	19	23	7	49	11	
1967	Feb. 18	13	31		44	7	2
1968	Feb. 17	12	29	1	42	8	4
1969	Feb. 15	10	19		29*	4	
1970	Feb. 21	22	47	1	70	8	1
1971	Feb. 20	28	43		71	14	2
1972	Feb. 19	18	28	10	56	12	12
1973	Feb. 17	13	24	7	44	15	1
1974	Feb. 16	23	22		45	14	5
1975	Feb. 8	19	29		48	16	2
1976	Feb. 14	15	16	9	40	16	2
1977	Feb. 5	19	22		41	13	10
1978	Feb. 11	24	56	1	81	14	12
1979	Jan. 20	39	46	5	90	13	3

*Heavy Sleet storm prevented censusing many areas.

The following members and guests participated in the 1979 eagle count: Lewis Adkisson, Alan Barron, W. G. Cambron, Mrs. H. L. Clay, Dennis Coskren, Wendell Crews, Walter Ellison, Chastain Frazer, Jim Frazer, William Greene, J. Hill Hamon, John Hoogerhide, Gordon Hughes, Edwin Larson, Lee McNeely, Linda McNeely, John Mechler, Mrs. Charles Mudd, Brainard Palmer-Ball, Jr., Clell Peterson, Lene Rauth, Lawrence D. Smith, Anne L. Stamm, Frederick W. Stamm, Bettie Sumara, Mrs. James Weatherly, A. L. Whitt, Jr. The coordinator wishes again to thank all who dared the weather to see and check for eagles.

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THE SPRING SEASON OF 1979

ANNE L. STAMM

Although the rainfall in March was below normal the flooding in February continued until the early part of March. The Ohio River, which had been over its bank, dropped below flood stage at Louisville on March 6. However, flooding continued farther downstream. The river at Uniontown was about 13 feet above flood stage on March 8 and crested at Dam #50 at 54.7 feet, 20.7 feet above flood stage on March 9. April rainfall was unusually heavy throughout the state and in some central areas was more than three inches above normal, while in May the rainfall was slightly below normal. The month of March was warmer than normal, but an inch of snow fell over most of the state on March 25 and temperatures tumbled below the freezing mark. April and May were cold and although some species of birds arrived unusually early (Great Egret, Solitary Vireo, Cerulean Warbler, and Northern (Baltimore) Oriole, the over-all migration was late. Some remained beyond the usual departure dates (Common Loon, Ruddy Duck, Bay-breasted Warbler, Mourning Warbler and Pine Siskin). A few species seemed noticeably scarce: Phoebe, Bewick's Wren, Carolina Wren, Eastern Bluebird, Yellow-throated Vireo, Orchard Oriole, Grasshopper Sparrow, Eastern Meadowlark and Field Sparrow.

Some of the rare or more unusual birds recorded this Spring included: Little Blue Heron, Great Egret, Snowy Egret, Wilson's Phalarope, Laughing Gull, Long-eared Owl, Alder Flycatcher, Connecticut Warbler, Blue Grosbeak, Lark Sparrow and Bachman's Sparrow.

Loons through Herons. — Common Loons remained rather late and singles were recorded at Loch Mary, Hopkins County, March 27 (PH); at Kentucky Lake, April 18 and May 22 (JEr); and one wintered on a small stretch of water in Cave Hill Cemetery, Jefferson County, but was found dead in mid-May (MS). Very few Pied-billed Grebe were seen or reported, with the exception of the 38 at the transient lakes at Bowling Green on April 14 (HS). The only Double-crested Cormorants reported were singles at Louisville's Ohio River basin, April 26 (JEl), Falls of the Ohio, May 13 (LR) and Salem Creek Lake, Larue County, April 27 (JEl). Although the Green Heron arrived as early as March 29 at McNeely Lake (DP) numbers appeared to be down in the Louisville (ALS) and Danville areas (FL). An adult Little Blue Heron at East Bend Bottoms in northern Kentucky, May 6, was exceptional (EL *fide* LMc). Only one report of the Cattle Egret was received: a single bird in a "cow lot" on May 13 and 14 in southern Jefferson County (DP, JEl). In spite of the cool weather three Great Egrets arrived unusually early at Kentucky Lake, March 29 (JEr); one at Lentz's Pond, Louisville, April 10, tied the early local record of 1958 (LR); the three at Danville, April 14 established the third local record (FL); and three were present at the Falls of the Ohio, May 1 (LR).

A single Snowy Egret at Hayes Kennedy Park, Louisville, May 13 was of interest since spring records are few (LR); one there May 18, possibly the same bird, although it was not seen during the intervening days (GA). Black-crowned Night Heron seemed late in returning, but

numbers appeared to be up to normal in late May when they were on territory at the Falls of the Ohio.

Waterfowl. — A flock of 150 Canada Geese gathered at the transient lakes in Bowling Green on March 4, which was unusual there (HS); some lingered well into Spring in the Louisville area (MS) and Oldham County (HO); four were recorded as late as April 27 at Danville (FL). The flock of 150 Snow Geese at Bowling Green, March 4, was considered noteworthy (HS). Duck migration was poor in Central Kentucky but "better than average" at Danville (FL) and at Bowling Green (HS). The Blue-winged Teal arrived slightly later than normal and numbers were below average at Danville (FL) and at Louisville (ALS). Wood Ducks were fairly well represented in the Louisville area, but none were seen during the period at Danville (FL). The "highest local count" of Redhead Ducks was established at Danville, March 10, with 105 birds present (FL); thirty were reported at McElroy Lake, Bowling Green on March 4 (HS). The flock of *800* Ring-necked Ducks at McElroy Lake, March 4, was thought noteworthy (HS). Also of interest was the sighting of 30 Common Goldeneye Ducks at the transient lakes, March 4 (HS); eight to fifteen were recorded at Loch Mary, Hopkins County from March 2 to 16 (JH, PH). A single Oldsquaw, rare in Kentucky, was reported at Bowling Green, March 4 (HS); another was brought to Dr. Herbert E. Shadowen by a hunter. The only White-winged Scoter reported was a female at Louisville, March 9 (BPB). A group of five Ruddy Ducks lingered until May 28 at the LaGrange Reformatory Lake, Oldham County (JEl). A large flock of 800 Common Mergansers was seen on Kentucky Lake on March 19 (JEr) and a flock of 125 Red-breasted Mergansers there on March 12 (JEr).

Raptors. — The 15 Turkey Vultures observed along Interstate 71 from Louisville to Cincinnati, Ohio, March 17, may have been migrants (ALS, FS); four were at Bernheim Forest on April 14 (BM) and five at Long Run State Park, Jefferson County, May 19 (ALS, FS). Some slight hawk migration was noted at Bernheim Forest from the lodge porch on April 14 when 20 raptors were recorded within a 90 minute period (BM). The only Sharp-shinned Hawks reported were singles at Kentucky Lake, March 26 (JEr); at Bernheim Forest, April 14 (BM); at Creason Park, Louisville, May 5 (JEl); at Long Run State Park, May 27 (ALS, FS) and "none" at Danville (FL). Few Cooper's Hawks were reported: one at Danville, May 19 (FL) and one at Kentucky Lake, March 25 (JEr). As expected, Red-shouldered Hawks were scarce. Broad-winged Hawks arrived fairly early this spring with singles at Glasgow, March 17 (RS) and Todd County, March 28 (PH); three at Bernheim Forest, April 14 (BM); four in Hart County, April 28 (ALS, FS, DS); and a "kettle" of 38 birds at Hamlin, April 26 (JEr). Rough-legged Hawks remained rather late: five at Danville on March 10 and last recorded there on March 19 (FL); one in the light color phase in south-central Jefferson County, March 10 (DP); and one at Fern Creek, April 21 (DoSu). An interesting find was an adult Bald Eagle which perched on a power line at the General Electric sludge pond, South Louisville, March 10 (DP). Ospreys appeared singly between March 28 and April 14 at the following locations: Kentucky Lake (JEr), Lentz's Pond (BM), Bernheim Forest (BM), and Boone County (LMc); three recorded as late as May 3 (JEr). The rare Merlin was recorded in the Louisville area on May 6 (BBC).

Galliformes and Gruiformes. — At least 10 Bobwhite continued to feed under a Bowling Green feeding station as late as the end of March (HS). A Common Gallinule was seen on Smith's Pond, Oldham County, May 6 (BM); one there, with an American Coot on May 14, possibly the same bird (ALS, FS); one at the Fish Hatchery at Frankfort, May 13 (DC). A flock of *600* American Coot gathered at McElroy Lake, Bowling Green, March 24, and 120 were still there on April 19 (HS); one in Oldham County, May 14 was a late straggler (ALS, FS); numbers were not as high at Madisonville as in previous years (JH).

Shorebirds. — The American Woodcock arrived late and "peenting" was heard at the following places: Falls of the Rough, March 1 (KWC); Christian County, March 11 (PH); Fern Creek, March 15 (DoSu); and six observed in Louisville, April 28, two on May 6 (DP); and one at Burlington area, May 6 (LMc). No large concentration of shorebirds was noted, with the exception of those at the transient lakes. Although the high water covered the rock ledge at the Falls of the Ohio, some inundated fields provided good shorebird feeding grounds; ten species recorded on May 6 in the Louisville area (BBC). Semipalmated Sandpipers, Solitary Sandpipers and Least were recorded in fair numbers at the transient lakes on May 17 (HS). Probably the most interesting birds recorded were the White-rumped Sandpipers observed at Frankfort Fish Hatchery (DC) and at Louisville (BBC). Also, the Wilson's Phalarope, a rare transient, found dead on May 9 in Harlan County, was the state's first eastern record (SM).

Gulls and Terns. — Two Laughing Gulls were at the Falls of the Ohio on April 24 (JEl, DP); and one at Hayes Kennedy Park on May 18 (LR). More than 100 Ring-billed Gulls fed in grassy fields in northeast Louisville on March 7 (ALS); 30 at Danville on March 13 provided a "local high record" (FL); a few remained unusually late and singles were recorded at Hayes Kennedy Park on May 14 (ALS) and at Bowling Green on May 31 (HS). Few Bonaparte's Gulls were reported: one at Danville, March 26 (FL); and 15 at Indian Hills along the Ohio River, April 12 (BM). Forester's, Caspian and Black Terns were reported in small numbers from April 22 to May 13.

Cuckoo through Owls. — Yellow-billed Cuckoos were considered "up" in Danville (FL) and in Louisville (ALS). Black-billed Cuckoos were recorded more frequently than usual all across the state. A Long-eared Owl at Cave Hill Cemetery, Louisville on April 30 was exceptional (DM). Also, a Short-eared Owl at Danville on March 17 was of interest (FL).

Flycatchers through Wrens. — Willow Flycatchers arrived rather early: birds present at Brigadoon Farm, Glasgow, May 12 (RS); and at Louisville on May 14 (LaS). The song of the Alder Flycatcher was heard on May 30 in the Louisville area (notes—BPB). Three reports of the Olive-sided Flycatchers were all from the Louisville area: one singing on May 13 (DP); one at Creason Park on May 26 (JEl) and one at Poplar Level Road area on May 28 (JEl). All species of swallows which breed in Kentucky were recorded during the period, but not in large numbers. Barn Swallows arrived in western Kentucky on March 23 (JEr) and in Christian County on March 30 (PH). Purple Martins arrived later than usual: first reported at Hamlin on March 17 (JEr) and in south-central

Jefferson County on March 29 (WJ). As expected, the Carolina Wren was extremely scarce in most areas, but it was encouraging that five were found at McNeely Lake on May 1 (DP). The House Wren was considered "below par" at Danville (FL) and in some sections of Louisville (ALS). No Bewick's Wrens were recorded at Danville or in the Louisville area. However, a pair was present on a farm, east of Nicholasville, since the summer of 1978 (DC). A Bewick's Wren was seen carrying nesting material on May 6 at Hamlin and remained for three weeks but apparently had no mate (JEr). A Short-billed Marsh Wren was seen at Louisville on May 5 (BPB).

Mimids through Shrikes. — Brown Thrashers arrived on schedule but numbers appeared to be below normal in the Louisville area. Thrushes arrived much later than usual: no Swainson's, Grey-cheeked, or Veerys were found at Bernheim Forest on April 22 (BBC); numbers were low for the Grey-cheeked. Eastern Bluebirds were exceedingly scarce everywhere this spring. Ruby-crowned Kinglets were "almost up to par" at Danville (FL) and were recorded as late as May 6 at Louisville (BBC) and Burlington (LMc). The only mention of Water Pipits was of the three birds in a plowed field in Jefferson County on March 31 (DP). Cedar Waxwings were common in the Louisville area from March 7 to April 15 (WJ, ALS). Loggerhead Shrikes were scarce: one at Danville (FL); one at Mammoth Cave National Park (KOS); and one in Jefferson County from March 14 to May 31. (DP).

Vireos and Warblers. — A few Philadelphis Vireos were reported: one at Lexington Cemetery, May 12 (DC); and two at Audubon Hospital area, Louisville, May 28 (JEl). A Solitary Vireo at Kentucky Lake on March 30 was unusually early and established an early state record (JEr). A Bell's Vireo was reported at Hamlin, near Kentucky Lake, April 25 (no details given—JEr). The warbler migration was rather drawn out, with no special days when individual numbers were high. Observers afield on April 22, 25, 28 and May 6 found the migration fairly good, although numbers were low. However, numbers of Worm-eating Warblers were considered to be "up" at Danville (FL). The Blue-winged Warbler arrived early at Anchorage—April 21 (BM). The rare Brewster's hybrid in the Louisville area on May 6 was exceptional (JEl); another at Surrey Hill Farm, Louisville, May 6 (BPB). A Tennessee Warbler on May 28 at Louisville was a late straggler (JEl). A few Orange-crowned Warblers were reported: one at Danville on April 16 provided the second local record (FL); one at Mammoth Cave National Park on April 29 (KOS); one at Glasgow on May 2 (RS); and one in south-east Jefferson County, April 30 (DP). A Cape May Warbler at Bernheim Forest on April 22 was an early local record (BM et al). Black-throated Blue Warblers were reported at three localities. The Yellow-rumped (Myrtle) Warbler migration was late and the species was most evident on May 5 and 6 in Louisville. A Cerulean Warbler at Anchorage on April 15 provided an early local record (BM). Some warblers remained later than usual and the two Blackburnians observed on May 27 were among them (KWC, VR); also a Bay-breasted Warbler at Anchorage on May 28 tied the late local record of 1949 (BM); and one at Creason Park on May 29 (JEl). Black-poll Warblers were thought to be unusually common in South Louisville (WE); a few came in earlier than usual. The rare Connecticut Warbler was seen in the Lexington Cemetery on

May 16 (DC) and one at Creason Park, May 27 (JEl). Mourning Warblers were reported from Lexington (DC) and at two locations in Louisville; at the latter place a late local record was established on May 30 (JEl).

Bobolinks. — Few Bobolinks were observed this spring. Orchard Orioles appeared fairly common at Mammoth Cave National Park on April 28 (KOS), but numbers were few in the Louisville area (ALS). The sighting of a Northern (Baltimore) Oriole on April 7 provided an early state record for the Louisville Region (DP); the species appeared to be more numerous at Danville (FL) and at Louisville; an estimated *150* moved by Kentucky Lake on May 3 (JEr). Both species of tanagers arrived later than usual; none were seen at Bernheim Forest on April 22 (BM et al).

Grosbeaks through Sparrows. — Rose-breasted Grosbeak migration was below par in the Louisville area and fewer were observed at Danville; a few remained until the third week of May in two localities. A Blue Grosbeak (male) on April 15 in east Louisville provided the earliest local record and was seen regularly through the 18th, and on occasion with a female (MI, *fide* ALS); other local records were on April 21 (DP) and on May 30 (BPB); another at Lake Pewee on April 13 (JH); one at Danville (no-date — FL); and one at Kentucky Lake, May 7 (JEr). At least four Pine Siskin remained throughout the period at one Louisville feeding station (KWC) and two at another (BPB). A few Henslow's Sparrows were heard in Oldham County on May 17 (ALS). A Lark Sparrow in Oldham County on May 27 was unexpected (ALS, FS); one observed at Surrey Hill Farm, Louisville (AB, BPB). A Bachman's Sparrow was seen and heard in the Nettleroth Sanctuary, Louisville, May 11 (ALS). Field Sparrows were down in Glasgow, Bowling Green, Danville, and Louisville. A LeConte's Sparrow observed in a brushy field at Hamlin on May 6 was an interesting find (no-details — JEr). Lincoln's Sparrows were reported in various localities from May 12 to May 30.

Contributors. — (GA) Garret Adams; (AB) Alan Barron; (HC) Herbert Clay; (KWC) Kathryn W. Clay; (DC) Dennis Coskren; (JEl) Jackie Elmore; (WE) Walter Ellison; (JEr) Joe T. Erwin; (JH) James Hancock; (PH) Phillip Hyatt; (MI) Mary Inwood; (WJ) Wilbur Jackson; (EL) Edwin Larson; (FL) Frederick Loetscher; (SM) Steve McKee; (BM) Burt L. Monroe, Jr.; (DM) Dotty Muntan; (LMc) Lee McNeely; (HO) Holly Oldham; (BPB) Brainard Palmer-Ball, Jr.; (DP) Donald Parker; (HS) Herbert Shadowen; (MS) Mabel Slack; (LR) Lene Rauth; (VR) Virginia Rommel; (LS) Linda Salmon; (LaS) Lawrence D. Smith; (ALS) Anne L. Stamm; (FS) Frederick W. Stamm; (DS) Donald Summerfield; (DoSu) Donna Sumpter. Other abbreviations: (BBC) Beckham Bird Club; (KOS) Kentucky Ornithological Society.

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BOOK REVIEW

VIRGINIA'S WILDLIFE — AN ANNOTATED CHECKLIST, prepared by the Checklist Committee of the Virginia Society of Ornithology, YuLee R. Larner, Chairman. Virginia Avifauna No. 2, May 1979. Paperbound, iv + 118 pp. Available for $4.50 from Treasurer, Virginia Society of Ornithology, 520 Rainbow Forest Drive, Lynchburg, Virginia 24502.

In 1952 the Virginia Society of Ornithology published J. J. Murray's "A Check-List of the Birds of Virginia"; the present work is essentially an updated version of the 1952 list with a new format. The revision was actually begun by John Grey, Jr. in the 1960's, but with his death in 1971 the work faltered; a Checklist Committee of the Society was established in 1977 to complete the list, which was released in May 1979.

The updated version contains an even 400 species, 20 of which are considered "hypothetical" (not validated by specimen, photograph or sound recording). Except for hypothetical, accidental or extinct species, each species account contains a separate entry for the three physiographic areas of the state: Coastal Plain (west to the Fall Line), Piedmont (Fall Line to eastern slope of Blue Ridge), and Mountains and Valleys (west of the Piedmont). Individual entries contain a statement as to status (abundance and seasonal occurrence), along with sets of inclusive dates and a listing (in most instances) of "peak counts"; often one or two phrases outlining some unusual report are also included.

Species are listed in taxonomic sequence following the "A.O.U. Checklist of North American Birds" (1957, 5th ed., plus 32nd and 33rd Supplements), with one additional modification of sequence in the shorebirds. All species appear in a single sequential list, with hypotheticals indicated by parentheses around the English name.

The initial line of each species account contains the English name (in boldface capitals) followed by the scientific name (in italics) and an entry indicating breeding status (in Roman type). Terms used for the latter are "breeder," "nonbreeder," "casual breeder," "former breeder," or "probable breeder"; hypothetical and accidental species have no entry for breeding status. I find this format mildly annoying (standard treatment is the use of asterisks or other symbols to indicate breeding status), especially in the use of the term "breeder" (sounds like a term lifted from the poultry industry).

Perhaps my most serious objection to the list is the manner in which inclusive dates for seasonally occurring species are given; although not mentioned in the introductory material, it is clear that these dates are approximations, not actual dates. One example will suffice: on page 16, the status for the Blue-winged Teal in the Coastal Plain begins "Common transient (15 Mar.-30 Apr., 25 Aug.-20 Oct.) . . ." Unless all extreme records of transients in Virginia have been made on days divisible by the number "five", these are roundings-off to the nearest "5" (but the method used is not indicated anywhere). Most detailed state lists annotated in this manner use precise extreme dates, not approximations; it would be better,

if one wishes to be approximate, to use such terms as "early," "mid" or "late" with the months. Precise dates are given, however, for accidental records.

A map of Virginia, outlining counties, the three physiographic regions and large towns, is included inside the front cover; however, one will need to refer to another source for some of the specific localities mentioned.

Despite the few shortcomings, the list is extremely useful for anyone interested in either birding or ornithological study in Virginia. Division into the three regions is most helpful, and the work shows extreme care in preparation; it is virtually free of typographical errors, even in the matter of difficult spellings of scientific names — BURT L. MONROE, JR., Department of Biology, University of Louisville, Louisville, Kentucky 40208.

FIELD NOTE

WILSON'S PHALAROPE IN HARLAN COUNTY

On May 9, 1979, Pauline Boggs found a dead female Wilson's Phalarope *(Steganopus tricolor)* outside of her house in Big Laurel, Harlan County. Being an enthusiastic student of natural history and a novice bird-watcher, she realized it was an oddity and delivered the bird to the Pine Mountain Settlement School Environmental Education Center. There, the bird, which was in excellent condition, was identified and frozen; it was in spring plumage. Mengel (*Birds of Kentucky*, 1965, pp. 256) classifies Wilson's Phalarope as a "very rare transient" and lists spring sightings from only Jefferson and Warren Counties. There were reported sightings in four Kentucky areas during the spring of 1978, but this appears to be the first Eastern Kentucky record. Weather conditions in southeastern Kentucky had not been unusual preceding the find, although there had been severe storms and tornadoes in Florida the day before. The specimen will be turned over to Dr. Burt L. Monroe, Jr., for the collection housed in the Biology Department, University of Louisville, Louisville, Kentucky. — STEVEN McKEE, 153 Redwood Road, Mansfield, Ohio 44907.