OBERLIN ALL DAY WITH THE BIRDS. 1904.

Two somewhat different styles of "All Day" work were attempted during the past remarkable May migrations. one followed the general lines of previous work, for the purpose of determining what one man, or two working as one, could do in a single day in recording the birds of this region; the other attempted to cover practically all the different regions and sorts of topography and physical features by working in companies of two persons each, the combined lists so made determining the day's record. This work may be called the "Company All Day" record. It is clear that such cooperative work would result in a much larger list, given the same conditions, than individual work, provided the individnal be unable to cover the same territory in a day. ments enter into individual work of this sort which seriously hinder the searching of certain haunts of some birds; these are the time available in a single day, and physical endurance. If one could be certain what species were to be found in certain regions it would be possible to clean such region up and pass on to the next, but since this is almost never true, he must determine how much time it will be profitable to spend here and there and yonder, seeking to make each stop count There must be no actual stop in the lookout for the most. for species, for at no time and in no place out of doors is there no possibility of making some new record for the day. must be on the keen edge constantly.

It has already been hinted that the present May migrations have been remarkable in many ways, in northern Ohio, if not elsewhere. Elsewhere will be found an article which attempts to give some conception of the conditions prevailing in Lorain County during April and May.

For the sake of continuity the "Company All Day" on May 7 is given first. The accompanying table groups the participants, giving to each group credit for the records made. In the same table will be found the writer's personal record, two days later, and two records by Mr. Dawson and the writer, at later dates, when foliage and the progress of the migrations proved unfavorable for more than ordinary lists. The total of 131 species for the "Company All Day," and of

128 for the writer's personal record fully attest the crowded character of this period of the migrations. It will be noticed that no less than 18 species were recorded later which should have been recorded by the company, and that seven other species were certainly in the region covered but were not seen on that day. Some of these would almost certainly have been found had the writer's original plan been carried out, but circumstances made that impossible.

The first group, consisting of Mr. R. L. Baird and Mr. S. D. Morrill, spent Friday night at Oak Point, in order to be ready for work at earliest dawn. Their work included a careful survey of the lake and its shore line in the immediate vicinity of Oak Point, the marshes at the mouth of Beaver Creek in the regions of slack water, and the woods and fields within a radius of a mile or less with the Oak Point grounds as a center. Mr. Baird visited Chance Creek during the evening, but without success.

Messrs. D. E. Nye and H. H. Skinner composed the second group. Mr. Nye spent the early morning in the gorges of Black River at Elyria, while Mr. Skinner spent the early morning hours in the Black Swamp woods, three miles northeast of Oberlin, later meeting Mr. Nye in Elyria. After spending some time with the warblers in the woods in that vicinity, they took trolley to Lorain, and finally to Oak Point, supplementing the work there of the first party, returning home, with Mr. Morrill, by trolley.

The third group, Mr. Harold Vincent and the writer, spent the early morning in the old South Woods, a mile south of Oberlin, and since neither could continue the work after noon, they practically exhausted the possibilities of that woods before leaving it at ten o'clock, visiting an orchard in the outskirts of town, the water-works reservoir, Arboretum and cemetery, finally returning with a list of exactly 90 species for the morning. During the afternoon two more species were accidentally added. The original plan of this third group contemplated a visit, during the afternoon, to a region where Broad-winged Hawks, Ruffed Grouse, Barred Owls and Carolina Wrens were nesting, none of which were seen during the day.

The accompanying table clearly indicates that the Oak Point region is by far the richest single region of the vicinity. This is more clearly proven when it is known that of the writer's personal list of 128 species 120 were recorded at Oak Point. Here are combined lake shore, marsh, muddy flats, wet woods, open woods, heavy woods, brushy tangles, rolling fields and flat wet fields. Farm houses and extensive orchards entice some birds which usually remain several miles inland.

The day was more nearly ideal than any succeeding day when work of this sort was attempted. The temperature ranged from 57 degrees at 3 o'clock in the morning to 80 degrees during the middle of the day. The air was decidedly chilly during the early morning hours, but the sky was clear until near noon, when threatening clouds appeared, later breaking away to fair. The wind was s. e, light to brisk, dying away in the evening

Species marked A were abundant, C, common, T. C. tolerably common, F, few in numbers Figures indicate the number seen.

May 9th was a very different day. Three o'clock in the morning found the writer at Oak Point, a half-hour too early for the first bird, which proved to be the only Screech Owl of the day. When the Whip-poor-wills began, a few minutes later, the Nighthawks, Cardinals, Catbirds and Field Sparrows were aroused for their first sleepy songs. Within half an hour most birds were singing or calling. At 1:30 a.m. the sky was half cloudy, with a brisk southwest wind to help push the wheel over the dozen miles of road. At 6:30 the wind had shifted to west by south and increased to heavy, driving dark clouds before it, accompanied by a dash of fine rain and a perceptible drop in the temperature. By 10 o'clock the temperature had dropped from 70 degrees at the starting to 54 degrees, the heavy wind and dark sky continuing, but without rain. At the approach of the storm all birds dropped from the tree-tops or higher branches to the ground, or near it, and remained low down during the day. They lost their timidity, most warblers permitting an approach within ten feet or less. It was during the last of the fine rain that a fine male of Kirtland Warbler stopped near me and remained within twenty feet, often within eight, for at least ten min-

utes, but he refused to sing. Later the rare Prairie and about noon the still rarer Hooded, were found in the low foliage. In a swampy woods half a mile south of Oak Point, the first Prothonotary Warbler for Lorain County was feeding and singing, permitting a close approach and excellent study. This would have amply atoned for the cold and wet of the day, but a little later a Yellow-bellied Flycatcher, which has eluded me for a dozen years, darted into view from a fringing thicket of the woods. Many other birds which do not ordinarily seek the shelter of the woods were found in the lea of the thickets, where the wind did not reach them. The abundance of all thrushes except the Hermit, exceeded anything which the county has seen during my stay in it. The weather seemed impossible, but since the birds were here the record depended only upon field work under adverse conditions.

The evening of May 13th did not give promise of anything worthy during the following morning, but a determination born of necessity found expression in a trolley ride to Oak Point during that evening, and a search for the soft side of a reasonably clean plank, in a cold, bleak drizzle. plank proved to be a convenient broken-down bedstead, with dilapidated springs-and mattress, under cover! Being too case-hardened to fear microbes, we slept peacefully until early morning twilight. Clearly, the weather had gone mad, but during its few lucid intervals the birds sang and sported about in spite of rain and cold. The day began at 45 degrees and did not reach 60 during even the noon hour. Rain fell rather more than half the day. The walk overland to Oberlin added but five species to the day's list, thus equalling the largest list previous to this year—113 species.

Not satisfied with the previous record, Monday, May 16, found us again in the field, reversing the course of study by beginning, as in previous years, at the old South Woods at three in the morning. Leaving this usually favored place shortly after 7 o'clock, and home an hour later, we wheeled leisurely to Oak Point, making many stops by the way. The list had reached 94 when the wheels were cached at 11:30, a mile south of the lake. Here the physical strain of two days before began to affect our ability to do effective work. The keen edge had worn off. Shortly after dinner Dawson was

obliged to move homeward. Rather hasty work in the two swamps which had not yet been touched, a brief visit to the lake shore, and a hurried search through a half mile of woods, closed the day at 5:30. Dawson had recorded Cooper Hawk on the way home, making the combined list reach 114. The morning opened with a light frost in low places, but clear until late in the afternoon. The temperature reached 60 degrees during the day, with a brisk westerly wind dropping completely down before night. The foliage seriously interfered with rapid identification, but was little more troublesome than on the 14th. Up to the 11th neither blossoms nor leaves were far enough advanced to give trouble.

The work of the 16th closed a series of record breaking all day studies. While it was serious work, sapping the vitality, it yet gave full value in return in showing the exceptional character of the season of migration. Three times within ten days the previous best record was broken, and the fourth day equalled. A new high-water mark was made, which nothing but another exceptional season can hope to equal, while a new record for co-operative work has been established as the beginning of a long series of such studies, we may well hope. A series of such co-operative studies in any given region can hardly fail to throw light upon some of the vexing questions of local migration, and furnish material for the broader study when made in connection with similar studies in contiguous regions.

	May 7. Company.			May 9	May 14	May 16
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Pied-billed Grebe	1	1				
Herring Gull	1	1		. 2	7	4
Bonaparte Gull	$ \cdots $	10			1	19
Black Tern	<u>~</u> .	10			$\frac{\dots}{2}$	12
Red-breasted Merganser	1					
Mallard				1		1
Lesser Scaup Duck	1	1				
American Bittern	4	1				<u>.</u> .
Least BitternGreen Heron						1 1
King Rail	$egin{array}{ccc} 2 & 1 \end{array}$	1	• • • • •	3	• • • • • •	$\begin{vmatrix} 3 \\ 1 \end{vmatrix}$
Virginia Rail	3	1		3	4	$\frac{1}{2}$
Sora	í			$\frac{3}{2}$. 4	5
American Woodcock	3		2	$\bar{3}$	$\hat{5}$) š
Wilson Snipe	. 1	[]		7		1
Least Sandpiper	,			10	٠	, .
Greater Yellow-legs	1	<i>.</i>		2	<u>.</u> .	1
Yellow-legs	3	٠٠٠.		3	1	
Solitary SandpiperBatramian Sandpiper	f e	2	$egin{array}{c} 1 \\ 1 \end{array}$	$rac{\mathrm{c}}{2}$	$_{1}^{\mathrm{c}}$	$\frac{\mathbf{c}}{2}$
Spotted Sandpiper	te	c	$\frac{1}{2}$	e e	c	e e
Killdeer	te	$\begin{bmatrix} \ddot{3} \end{bmatrix}$. е	. c	c
Bob-white	fе	2	1	2	ĩ	i
Mourning Dove	te	te	c	c	e	c
Turkey Vulture.	3	1	·			1
Marsh Hawk	1					
Sharp-shinned Hawk	1	1			1	
Cooper Hawk	1			$\frac{1}{9}$	$egin{array}{c} 1 \ 1 \end{array}$	· 1
Red shouldered Hawk		1	2	$\begin{array}{c c} & 2 \\ 2 & \end{array}$	$\frac{1}{2}$	$\frac{1}{2}$
Broad-winged Hawk				ĩ		
Am. Rough-legged Hawk	1					
Bald Eagle	2]			I	
Am Sparrow Hawk	fе	1	3	3	3	1
Am. Osprey	1	f				
Barred Owl		····t		$egin{array}{c} 2 \ 1 \end{array}$	1	1
Great Horned Owl	····i	۱.		1	1	
Yellow-billed Cuckoo	1	1		1	1	
Black-billed Cuckoo	1		2	4		
B lted Kingfisher	fе	2	1	2	1	
Hairy Woodpecker	1	2	2	1	3	5
Downy Woodpecker	f e	2	3	4	t e	t c
Yellow-bellied Sapsucker		tc		1		· · · · · ·
Red-headed Woodpecker	e	te	c	c	c	c
	- 1	1 1				
Red-bellied Voodpecker		$\frac{1}{5}$			1	
Northern Flicker	c	$\begin{bmatrix} 1 \\ 5 \\ 1 \end{bmatrix}$	e 1	e 7	1 e 10	 e 1

	May 7	May 7	May 7	May 9	Мау 14	Mav 16
Chimney Swift	- A	c	e	c	c	
Ruby-throated Hummingbird	2	. 2		$\ddot{3}$	$\ddot{3}$	c
Kingbird	fе	te	c	6	t c	3
Crested Flycatcher	c	te	$\frac{\circ}{2}$	c	c	c
Phoebe.	fe	te	$\tilde{2}$	c	c	c
Wood Pewee	fe	te	X	c		c
Yellow-bellied Flycatcher	10		Α.	1	c	С
Green-crested Flycatcher	fе	$ \cdots _{2}$		5	\mathbf{F}	
Alder Flycatcher.	f e	_	e 1	$\frac{3}{7}$	F	te
Least Flycatcher	tc	t c				\mathbf{F}
Prairie Horned Lark			4	e 4	F	c
	te	te		4	_	F
Blue Jay	c	$\begin{bmatrix} 3 \\ 6 \end{bmatrix}$	c	c	e	Ć
American CrowBobolink	e	- 1	c	. с	c	· e
	A	c	c	c	e	c
Cowbird	C	tc	c	c	e,	e
Red-winged Blackbird	A	c	c	c	c	c
Meadowlark	e	е	c	c	c	e
Orenard Oriole	1	1	4	6	\mathbf{F}	F
Baltimore Oriole	f c	c	c	c	c	c
Bronzed Grackle	c	c	c	,c	¢	c
Purple Finch			X	2		
American Goldfinch	c	tc	c	c	c	c
Vesper Sparrow	c	C	c	c	С	c
Grasshopper Sparrow	e	3	10	4.	4	\mathbf{F}
White-crowned Sparrow	15	7		e	c	. е
White-throated Sparrow	t c	3	e	\mathbf{c}	c	e
Chipping Sparrow	f e	c	e	e	c	e
Field Sparrow	tc	c	c	\mathbf{e}	c	c
Song Sparrow	c	c	c	c	e.	c
Lincoln Sparrow						1
Swamp S arrow	te	2	8	e	c	c
Towhee	t e	c	c	\mathbf{c}	c	e
Cardinal	f e	3	2	3	t c	te
Rose-breastedGrosbeak	fе	te	x	10	t c	tc
Indigo Bunting	fе	2	e	\mathbf{e}	e	c
Dickeissel				2		
Scarlet Tanager	fе	te	e l	c	. c	e
Purple Martin	1	1	2	5	F	F
Cliff Swallow	fе	1	<i></i>	t e	: F	F
Barn Swallow	A	c	e	e	· c	è
Tree Swallow	<i>.</i>			2	F	F
Bank Swallow	A	2		e	c	ċ
Rough-winged Swallow	A	3		t c	te	te
Cedar Waxwing		7		ő	7	20
Migrant Shrike	1	•		ĭ	i	1
Red-eyed Vireo	-		c	c	c	e
Warbling Vireo	c	2	c	· č	e	c
Yellow-throated Vireo	fe	3	x	te	te	te
Blue-headed Vireo	fe	5	x	te	te	F
Black and White Warbler	fe	te	c	C	F	F
Prothonotary Warbler	1,0	0.0	V	1	$\stackrel{\Gamma}{1}$	r
Blue-winged Warbler	2	с	x	-	1	F
Golden-winged Warbler			$\hat{1}$,	r
Nashville Warbler	te	te	c	c		
TIGGET VIIIC WAT DICL	L C	ιo	ן ט		c	C
				1	1	
Orange-crowned Warbler Tennessee Warbler		'	· · · · · c	1 c	1 e	<u>-</u>

	May 7	May 7	May 7	May 9	May 14	May 16
Northern Parula Warbler					$-{1}$	
Cape May Warbler		1			_	2
Yellow Warbler	c	c	c	c	c	e
Black-throated Blue Warbler	te	c	e:	Č	c	c
Myrtle Warbier	te	c	c	c	te	F
Magnolia Warbler	l c	c	c	c	c.	
Cerulean Warbler		c	c	ĭ		c
Chestnut-sided Warbler	e	c	c.	c		C
Bay-breasted Warbler	1	5	te	te	c f	c 4
Black-poll Warbler		_		1	1	4
Blackburnian Warbler	c	c	c			
Black-throated Green Warbler	1 -	c	c	c	·c	c
Kirtland Warbler	С			C 1	·c	te
Palm Warbler			1	. 1		
Prairie Warbler	c	2				
Oven-bird				1		
	C.	c	2	c	C	c
Water-Thrush	6†		2	7	4	6
Louisiana Water-Thrush		1		2	4	2
Connecticut Warbler		2	1	2		
Mourning Warbler			1	te	• • • • • '	1
Northern Yellow-throat	C	c	C	·c	c	,c
Yellow-breasted Chat	2	1	2	7	te	te
Hooded Warbler	1			1		
Wilson Warbler	f e	.3	1	i	l	1
Canadian Warbler	te	3	2	te	te	F
American Redstart	c	c	C	c	·C	·c
American Pipit	5†		c	c	c	t e
Catbird	te	c	C	C	c	c
Brown Thrasher	fe	3	tc	te	te	to
House Wren	. 2	c	·c	Ċ	e	c
Winter Wren	5	<i></i>		1		
Short-billed Marsh Wren					2	2
Long-billed Marsh Wren	5†			2	4	4
White-breasted Nuthatch	fe	3	f	5	f	F
Red-breasted Nuthatch	te	te	2	c	·c	te
Tufted Titmouse	tc	3	4	5	f	F
Chickadee		3	4	7	f	F ^u
Ruby-crowned Kinglet	fe		'e	e		•2
Blue-gray Gnatcatcher	Тe	1	'c	e	te	te
Wood Thrush	tc	c	·c	c	c	c-
Wilson Thrush	c	c	c	c	Č	·c·
Gray-cheeked Thrush	1	3	c	e ·	e	ě.
Olive-backed Thrush	Ā	c	·e	č	c	e.
Hermit Thrush		ĭ	2	$\tilde{2}$		
American Robin	c	Ā	c	e	c	e
Bluebird	f e	c	c	c	c	·c
			<u> </u>			
Totals	115	105	92	128	113	114
Grand Total		131				

Total for May 7 to 16, inclusive, 152.