SPRING MIGRATION (1914) AT HOUSTON, TEXAS.

BY GEORGE FINLAY SIMMONS.

For several years past, the writer has taken a particular interest in the migratory movements of the more common birds at Houston, Harris County, in southeastern Texas. During the spring migration of 1914, he made semi-weekly one-day trips into the woodlands and fields within a mile or two of the city limits with the special object of ascertaining as near as possible what relation, if any, existed between bird migration at Houston and the sudden changes of weather at that point.

It is to be regretted that trips could not be made each day during that season and the exact dates of arrival and departure ascertained. But the results obtained satisfy the writer that, as Prof. Wells W. Cooke has already stated, local weather conditions on the day of arrival are minor factors in determining the appearance of a species at that place and time, and that the major factors in the problem are the weather conditions far to the southward, where the night's flight began.

The writer does find, however, that local weather conditions greatly affect the dates of departure of our migrants for their more northern summer homes, thus further strengthening the theory set forth in the last clause of the preceding paragraph.

Faunal Position.—Harris County, of which Houston is the county seat, lies well within the semitropic or Gulf strip of the Austroriparian zone of southeastern Texas. Houston lies on Buffalo Bayou in the southeast-central part of the county.

With very few exceptions, the notes were all taken on the south side of Buffalo Bayou, a coastal prairie region with few farms or ranches; the only timber in this section lies in strips from a quarter to a half mile wide along Buffalo and Bray's

¹ Cooke, Wells W. The Relation of Bird Migration to the Weather. Auk, Vol. XXX, April, 1913, pp. 205-221. Cf. first paragraph, p. 205.

Bayous, both of which flow eastward toward Galveston Bay, the latter skirting the city on the south and joining the former a few miles to the east. The remainder of the country is flat, uncultivated prairie, sprinkled with small ponds or grassy marshes.

A line drawn north and south through Houston would be the center of the United States; the city itself is a little south of New Orleans, Louisiana, and St. Augustine, Florida, and more than 200 miles south of California's southern boundary.

The majority of the walks were taken in two directions; the first to the west of the city along the Buffalo Bayou woods, the timber to the right and the prairie to the left, and the second to the south of the city, passing Bray's Bayou and its narrow strips of timber just after leaving Houston, and then across the extensive prairie to Taylor's Ranch, 7½ miles south of Houston.

Weather Conditions.—It would be far too tedious and of no especial value to go into details of the weather conditions, but before the reader can realize the truth of Prof. Cooke's theories as seconded by this paper, he must appreciate the unusual conditions which accompanied the migration.

January was 4.9° warmer than is usual for this month, the mean temperature being 58° , with the lowest at 32° and highest at 79° .

February was 1.4° warmer than is usual, the mean for the month being 53°. Notwithstanding the fact that this condition occurred, on seven days the mercury dropped suddenly to 32°, on the 7th falling to 24°, the coldest day of the whole winter.

On the other hand, March was 4.2° colder than usual, the mercury ranging from 36° to 80° , with a mean of 59° .

The mean temperature for April was 68°, 1.7° below the general average; lowest 38° and highest 86°.

Although the winter was quite dry, the whole of the migration season was unusually rainy, and during the early part of May the region was nearly flooded by the unusually heavy downpours. When one takes into consideration that, though

over 50 miles from the Gulf of Mexico, Houston's altitude is but 53 feet, and that the country is flat and the drainage bad, one can understand how unfavorable to the student of birds were the general weather conditions. For weeks after even the slightest shower water stands in the woodlands and on the prairies, making it almost impossible during the rainy season to leave the graded roads.

The Migration.—Houston lies in the "fly-line" of birds which skirt the western coast of the Gulf of Mexico, following the tropical and semitropical coast regions northward, and proceed up the Mississippi Valley and across the great plains. Furthermore, it catches many of the migrants which reach the United States by flying across the Gulf of Mexico.²

Generally during the last week of February migrating Blackbirds, Meadowlarks and Grackles are observed, but this year on account of the unsettled condition of the weather none were noted until the first of March. In fact, only one migrant was noted before March 1, the Purple Martin. It was first observed February 22, but retreated immediately and was not seen again until the return of real spring weather, about March 15.

Though the season was late in commencing, and the weather colder than usual, when it did start it came with a rush, for the greater part of the migrants arrived slightly earlier. The colder weather and excessive rains, especially in the early part of May, seemed to have the effect of detaining for a longer period the birds which summer north of the region under consideration.

Few water birds were noted, for I had not the time to make extensive trips into the wilder sections of the county.

The following list graphically illustrates the migration of 1914 at Houston, the species being arranged according to the order of their arrival from the south:³

² The only papers on the birds of the region are: Nehrling, H. List of Birds Observed at Houston, Harris County. Texas, and Vicinity, and in the Counties Montgomery, Galveston and Fort Bend. Bull. Nutt. Orn. Club. Vol. VII, 1882, 3 parts. Singley, J. A. Notes on the Birds of Galveston Island. Texas Birds, Report of Texas Geol. Survey, Austin, 1893, pp. 355-363.
*S. R. denotes summer resident.

Arrival.	Departure.
Feb. 22.	Purple MartinS. R.
March 1.	Sprague's PipitMarch 28
March 14.	Mississippi KiteS. R.
March 14.	Sycamore WarblerS. R.
March 15.	Blue-gray GnateatcherS. R.
March 21.	Upland PloverMay 7
March 21.	Swallow-tailed KiteS. R.
March 21.	Crested FlycatcherS. R.
March 21.	Black and White WarblerApril 18
March 21.	Western Parula WarblerMay 7
March 21.	Northern Yellow-throat
March 21.	Wood ThrushS. R.
March 23.	Scissor-tailed FlycatcherS. R.
March 24.	Chimney SwiftS.R.
March 26.	Bank Swallow
March 26.	Rough-winged SwallowMay 7
March 28.	Ruby-throated HummingbirdS. R.
March 28.	KingbirdS. R.
March 28.	Yellow-throated VireoS. R.
March 28.	White-eyed VireoS. R.
March 28.	Cerulean Warbler
March 28.	Black-throated Green WarblerMay 16
March 28.	Hooded WarblerMay 9
March 28.	Redstart May 9
March 29.	Florida Red-wingS. R.
March 29.	Red-eyed VireoS. R.
March 30.	Cliff Swallow
April 4.	Least BitternS. R.
April 4.	Swainson's HawkApril 4
April 4.	WhippoorwillApril 11
April 4.	Summer TanagerS. R.
April 4.	Prothonotary WarblerS. R.
April 4.	Orange-crowned WarblerMay 3
April 4.	Yellow-breasted ChatS. R.
April 5.	Baltimore OrioleApril 11
April 11.	Green HeronS. R.
April 11.	Solitary Sandpiper
April 11.	Wood PeweeS. R.
April 11.	Orchard OrioleS. R.
April 11.	Painted BuntingS. R.
April 11.	Searlet TanagerMay 2
April 11.	Blue-winged WarblerApril 11
April 11.	Nashville WarblerMay 9
April 11.	Kentucky WarblerMay 10

Arrival.	Departure.	
April 12.	Chuek-will's-widow	
April 12.	Blue Grosbeak S. R.	
April 12.	Magnolia WarblerMay 16	
April 13.	Barn Swallow	
April 15.	Worm-eating WarblerApril 15	
April 18.	Yellow-billed CuckooS. R.	
April 18.	Least FlycatcherMay 10	
April 18.	Indigo BuntingMay 16	
April 18.	Yellow WarblerMay 23	
April 18.	Grinnell's Water Thrush	
April 18.	Catbird	
April 18.	Olive-backed Thrush	
April 19.	Florida NighthawkS, R.	
April 19.	Green-crested FlycatcherS. R.	
April 19.	DickscisselS. R.	
April 19.	OvenbirdApril 19	
April 21.	Virginia RailMay 2	
April 21.	Sora RailMay 9	
April 21.	Black RailApril 21	
April 21.	Blackburnian WarblerMay 2	
April 21.	Wilson's WarblerMay 2	
April 21.	Willow ThrushMay 9	
April 26.	BobolinkMay 2	
April 26.	Rose-breasted GrosbeakApril 26	
April 26.	Chestnut-sided WarblerApril 26	
May 2.	Maryland Yellow-throatS. R.	
May 2.	Canada WarblerMay 9	
May 2.	Bay-breasted WarblerMay 2	
May 9.	White-rumped Sandpiper	
The following list gives the winter resident species and the		
	which they were last seen:	
dates on	which they were may seem.	
Short-eared	Owl	
Fox Sparro	wMarch 28	
Bewick's W	VrenMarch 28	
Short-billed	Marsh Wren	
Brown Cre	eperMarch 28	
Sparrow H	awkMarch 29	
Tree SwallowMarch 29		
White-rumped Shrike		
SapsuckerApril 4		
PhoebeApril 4		
Red-winged BlackbirdApril 4		

Golden-crowned KingletApril 4
Marsh HawkApril 11
Slate-colored JuncoApril 11
White-breasted NuthatchApril 11
Hermit ThrushApril 11
Northern FlickerApril 26
White-crowned SparrowApril 26
Pipit
Brown ThrasherApril 26
Robin
Ruby-crowned Kinglet
Brewer's Blackbird
White-throated Sparrow
Towhee
Lark BuntingMay 3
Myrtle WarblerMay 3
Western House Wren

REMARKS ON CERTAIN SPECIES OBSERVED.

In the foregoing condensed migration report there are a few species that need explanation. In addition to these, there were species which could not be classified. For that reason this section is added.

Several species subspecifically doubtful have not yet been positively determined. Hylocichla fuscescens salicicola might be H. f. fuscescens (Veery). It is not certain that Sitta carolinensis carolinensis is the form of White-breasted Nuthatch that winters in southeastern Texas, but it is presumedly so. Geothlypis trichas trichas occurs as a summer resident, and G. t. brachidactyla as a migrant; I watched carefully the summer resident haunts of the bird and noted the day it was first observed there, giving that date as the arrival of G. t. trichas and considering all other birds as migrants and belonging to G. t. brachidactyla.

1. Larus franklini. Franklin's Gull.—April 18 a scattered flock of these Gulls was noted flying high overhead about a half mile west of the city. Eighteen were in sight at one time, some moving northward with slow, easy wing strokes, while others were floating, circling and shifting back and forth. During the course of that day I observed no less than eighty. On the 19th a few more were noted as they passed over the city. None were again seen until May 6, on which

day a flock of some thirty birds passed over the city. A third and last flight was witnessed on May 16, composed of perhaps seventy of these graceful birds.

- 2. Branta canadensis hutchinsii. Hutchin's Goose.—While walking along a shell road just west of the city on April 18, I was extremely surprised to observe a Goose of this species fly up from the prairie about two hundred feet from the road and go flapping off to the south, at no time rising over fifteen feet above the ground. It was probably due to my careless method of observation that I had not observed the bird before it took wing, for the only shelter in the prairie pasture from whence it flew was the scattered growth of "sage-brush" hardly a foot tall.
- Both B. c. canadensis and B. c. hutchinsii occur as migrants and are not uncommon in winter. Small flocks of from ten to thirty birds passed over the city on various dates in March and early April (March 3, 9, 11, 27; April 4).
- 3. Grus mexicana. Sandhill Crane.—On March 10 a flock of about thirty, and on March 18 a flock of eighteen, were noted as they passed northward over the western edge of the city. On April 11 I witnessed a truly astonishing flight. I was observing a number of small Warblers in a patch of tall oaks on the edge of the Buffalo Bayou woods about a mile west of the city limits, when my attention was attracted by strange noises which I could not for the moment locate. And then I discovered the source, a flock of about seventy Sandhill Cranes flying northward about a hundred yards overhead; following this flock at a distance of about three hundred yards came a second and larger flock, numbering perhaps two hundred birds. Yet a third flock followed at some distance, numbering approximately one hundred and twenty birds.
- 4. Creciscus jamaicensis. Black Rail.—On April 21, while beating around in the sedge and tall grass of a tiny marsh about eight miles south of Houston, looking for nests of the Louisiana Clapper Rail, I nearly stepped on a small Rail which I at first took to be an early downy bird of the Clapper variety. However, I soon recognized my mistake and saw that the bird was the rare Black Rail; it ran just ahead of me through the reeds and rushes for quite a distance, easily evading my attempts to lay hands on it, until the edge of the marsh was reached, there talsing wing and flying about a hundred yards before dropping into the next marsh.

The only other record for this region is that of Dr. Henry Nehrling, who states that one was taken April 29, 1879.

5. Gallinago delicata. Wilson's Snipe.—Common winter resident on the wet prairies and rice fields of the county; they began to move northward about March 1, and were not at all uncommon in suitable localities near the city from then until May 2, when the last two birds were observed. They were most abundant and more distinctly migrating on

April 18, when numbers were observed feeding along a shallow ditch just west of Houston.

- 6. Pisobia maculata. Pectoral Sandpiper.—Quite a rare migrant on the wet prairies and rice fields, but scarce near the city. Between March 7 and May 2, a few were noted feeding along the shallow ditch mentioned above, and a few in small flocks on the wet prairies.
- 7. Piscobia fuscicollis. White-rumped Sandpiper.—May 9 a small flock was noted on a small stretch of prairie just northeast of the city, and the following day (May 10) on visiting the prairie west of the city I observed numerous small flocks. That locality was well within the city limits and but a short distance from the edge of the residence district. Flock after flock passed and repassed me, their white rumps standing out plainly as they wheeled this way and that.
- 8. Pisobia minutilla. Least Sandpiper.—Three were observed April 18, in company with a few Solitary Sandpipers along the small ditch previously mentioned.
 - 9. Elanoides forficatus. Swallow-tailed Kite; and
- 10. Ictinia misisippiensis. Mississippi Kite.—These two Kites, though listed as summer residents, should more properly be stated to occur irregularly during summer, for they are both very rare. Whenever noted, the birds were seen singly and sailing rapidly overhead on motionless wings.
- 11. Buteo platypterus. Broad-winged Hawk.—From the few records I have, I can hardly state just how the bird occurs. Generally they are only noted during the spring migration, and then only rarely. This year (1914) one was noted on the edge of the Buffalo Bayou woods west of the city on March 21, and another in about the same locality April 18.
- 12. Asio wilsonianus. Long-eared Owl.—This year I had the pleasure of examining an odoriferous specimen of this bird shot March 19 in the deep woods on Buffalo Bayou a few miles west of the city, and called to my attention two days later by the negro who caused the avicide, though not until the body had been shorn of its wings and consigned to the scrap heap. This is my second record for the region.
- 13. Chordciles virginianus chapmani. Florida Nighthawk.—The migration of Nighthawks during my five years in the vicinity of Houston has been of particular interest to me because of the regularity of first arrivals. My belief that they arrive each year on the 19th of April has thus far held true, on that day a single bird being seen as it flew high over the city. For the first few days they were only noted by ones and twos. And then on the 24th came a closely packed flock, numbering about thirty birds, which flew low over the city and disappeared to the north. A few days later another such flock was observed. By the last of May the last straggling migrants had passed, leaving only our summer resident birds.
 - 14. Chactura pelagica. Chimney Swift.-My dates for the first

arrivals of Chimney Swifts at Houston for the past four years range from March 26 to 30, averaging March 29. This year (1914) two birds were observed on March 24. The next were noted on the 26th, but the birds did not become common until the 28th; after that they were seen each day, being common summer residents about the city.

- 15. Archilochus colubris. Ruby-throated Hummingbird.—Prof. H. P. Attwater first observed the Hummers in his garden in the city on March 28, but it was not until the 30th that I noted my first. By April 4 they were fairly common and remained so until about May 2, when the migration apparently ceased, leaving a very few birds as rare and irregular summer residents.
- 16. Dolichonyx oryzivorus. Bobolink.—Houston does not fall within the "fly-line" of the Bobolink, but a few are generally noted during each migration. This year two males were noted on the edge of the Buffalo Bayou woods about a mile west of the city on April 26. On May 2, four males and two females were observed on the south side of the city.
- 17. Molothrus ater ater. Cowbird.—During the winter months small flocks are not uncommon on the prairies near the city. About March 30 the last wintering flocks were observed, leaving only the summer resident birds. Whether these summer birds are M. a. ater or M. a. obscurus (Dwarf Cowbird) has not yet been determined, though I feel sure they are the latter.
- 18. Xanthocephalus xanthocephalus. Yellow-headed Blackbird.— Evidently quite rare in late years, for my only record for the past winter and spring is April 5, when three of these birds were noted in a small marshy spot near Webster, a station some 20 miles from Houston in the southeastern part of the county.
- 19. Sturnella magna argutula. Southern Meadowlark.—In several localities about the city Meadowlarks are not uncommon all winter, and though I have not determined by collecting the birds, I am convinced that they are S.m. magna, S.m. argutula and S. neglecta, the former probably predominating.
- March 1 the first migrating Meadowlarks were noted; during the whole of March flocks of considerable numbers were continually passing northward. By the end of that month the migration dwindled and the last straggling migratory flock was observed on April 4, after which date only the summer resident birds remained. Migrants and summer residents are S. m. argutula.
- 20. Euphagus carolinus. Rusty Blackbird.—This migrant Blackbird seems to become more common year by year. First arrivals (1914) noted March 1, after which date they were the most abundant of all the birds. Throughout the month they were migrating northward, and the last were observed April 5. During this period they were abundant in flocks on all prairie lands, especially to the west of the city, where I often

observed large droves following plows in company with the Brewer's Blackbird and two Grackles.

- 21. Quiscalus quiscula aeneus. Bionzed Grackle.—Quite rare in winter, arriving in large numbers with the preceding species on March 1. Throughout March and early April they were migrating through, after which period only the summer residents remained.
- 22. Astragalirus tristis tristis. Goldfinch.—Fairly common migrant and not uncommon in winter; migration apparently commenced about March 15 and ended April 25, when the last birds were noted. During this migration period the birds were not uncommon in and about the shade trees of the city.
- 23. Spinus pinus. Pine Siskin.—Quite a scarce and irregular winter visitor in this locality. None were noted from December, 1913, to March 28, 1914; on that date a flock of twenty was observed in a small patch of woods on the western edge of the city. Later during the day three more were noted. May 9 a few were observed in the woods on Buffalo Bayou about seven miles east of the city, and on May 23 a flock of six was noted.
- 24. Pooceetes gramineus gramineus. Vesper Sparrow.—Abundant migrant and scarce winter resident. Migration commenced March 1, and during the whole of March the birds were abundant in small flocks on the prairies and near the woods on Buffalo Bayou. Last observed April 4.
- 25. Passerculus sandwichensis saranna. Savannah Sparrow.—I was under the impression that both this form and P. s. alaudinus occurred in this locality, but a number of skins were sent Mr. Oberholser, and he kindly identified them for me as P. s. savanna.

Common migrant. The first were observed April 4, were common during April and were last observed May 2. They were observed in the newly planted shade trees of a prairie suburb on the western edge of the city, and were later (after April 4) observed on the open prairies in flocks of some numbers.

- 26. Ammodramus savannarum bimaculatus. Western Grasshopper Sparrow.—On March 14 Prof. Huxley and myself observed for some time a small Sparrow which we could not at the time identify, but which was later found to be this bird. But it was not until May 17 that I really became acquainted with the birds; that day Mr. I. R. Tannehill, an Ohio ornithologist, kindly accompanied me afield for the particular purpose of ascertaining whether or not the birds occurred near Houston. I felt sure they occurred, but that on account of their inconspicuousness I had overlooked them. Show them to me he did, and it did not take me long to find them common on all weedy prairies near the city, particularly those to the west, where they are summer residents.
- 27. Chondestes grammacus strigatus. Western Lark Sparrow.—Common summer resident; a few winter and in migrations a few are noted in

flocks of Pipits and Vesper Sparrows, feeding among the broom weeds on old plowed fields near the edges of timber. Summer residents arrived March 21, and were apparently settled down and ready for nesting March 28.

- 28. Spizella passerina passerina. Chipping Sparrow.—Scarce winter resident in the vicinity of Houston, and generally observed in clearings and along the edges of timber. Large flocks migrating northward during February and March. Quite rare in April. Last noted May 10.
- 29. Spizella pusilla pusilla. Field Sparrow.—Not uncommon winter resident; small flocks migrating northward during March. Last observed April 18.
- 30. Melospiza melodia melodia. Song Sparrow.—A few winter in thickets near the city, but they are very shy and difficult to observe. Generally during migrations we see large flocks as early as February 1; but this year, on account of the unusual cold of February, none were observed until March 1. During March scattered flocks were migrating, the birds being particularly common from the 8th to the 14th. A few noted on April 11, and the last, a flock of eight, on April 21. During migrations these birds leave their usual haunts and are soon in flocks on the prairies near edges of timber.
- 31. Zamelodia ludoviciana. Rose-breasted Grosbeak.—Two males on April 26 form my only record for this locality. They were in a small pear orchard of a farm several miles west of the city, and on being closely approached took refuge in a nearby thicket.
- 32. Hirundo crythrogastra. Barn Swallow.—This Swallow is listed in the condensed migration report as a summer resident, for the reason that nearly every summer a few are noted. This year they were common and migrating during the latter part of April and early May, but none were seen after May 30.
- 33. Stelgidopteryx serripennis. Rough-winged Swallow.—The last of these Swallows were noted May 7. Though I have heretofore recorded but few during the summer months, I am told by several competent observers that they occur quite regularly and breed in sand banks of Buffalo Bayou and Galveston Bay.
- 34. Bombycilla cedrorum. Cedar Waxwing.—None were observed during the winter and I had feared they were victims of pot hunters, when on March 1 I was surprised to note a flock of about fifty of these birds in the woods on Buffalo Bayou west of Houston. On March 8 Prof. J. S. Huxley and myself observed a flock of thirty-five on Bray's Bayou.
- On the 15th of March Mr. W. W. Westgate and myself observed numerous small companies in the cut-over timber lands on White Oak Bayon, north of the city. Generally the birds were to be observed sitting quietly in the topmost branches, their short tails, folded wings and crests giving them a rather conical appearance. Then one would fly and the

rest would straggle after, reminding us of a flock of Bluebirds. Their thin, beady, pulsating notes (pce-ee-ee-ee, reminding one of the screeching of a bearing that needs a visit of the oil-can) were almost continually heard while we were in that locality.

During the last of March a few more were observed, and a few during April, but rarely. Last observed May 9.

35. Nannus hiemalis hiemalis. Winter Wren.—On March 28, while wandering through the woodlands on Buffalo Bayou about a mile west of the city, I observed a single bird of this species in a tangled brush heap in a mixed portion of the woods where there was much underbrush. Though I watched it for some time, the bird was not heard to utter a sound.

On visiting the locality April 4 I again observed the bird, or another of the same species, and remained for some time to observe it. Finally it left the brush heap and crept out on an old pine log nearby, and, much to my surprise, sang a very pretty little song, reminding me of the song of the Ruby-crowned Kinglet, though not of such a warbling nature, containing more trills and tinkling notes.

36. Polioptila caerulea caerulea. Blue-gray Gnatcatcher.—To me the 1914 migration of Gnatcatchers was little short of wonderful. Heretofore they have been quite scarce, even during migrations, and were always observed in the tallest forest trees. This season they were especially abundant.

On March 15, while in the cut-over timber on White Oak Bayou, northwest of the city, Mr. Westgate and myself observed the first Gnat-catcher of the season. We were watching a number of Myrtle Warblers feeding, when near at hand we heard a familiar twanging note, very thin and purring, sounding like the *sping* of a .22 rifle. We soon located the bird, a male, in the branches of an oak near at hand.

That afternoon five males and two females were observed.

On March 21 I walked westward from the city along the edge of the timber which borders Buffalo Bayou on the south. Gnatcatchers were everywhere, attracting attention by their peculiar call note. Anywhere and everywhere I observed them: in the deepest parts of the woods, on the lower branches of trees, on the edges of clearings and woods, and even on the ground. Numbers were observed on the barbed wires of the fences along the country road. They were not at all shy, frequently allowing me to approach within two or three feet of them. On one occasion in a small clearing in the timber I was watching a Downy Woodpecker tapping on a dead bough in a pile of brushwood on the ground, when a pair of Gnatcatchers lit on the brush, hopped actively about and lit on the ground. As they moved along on terra firma they looked for the world like a pair of miniature Mockingbirds, their long tails and general color strengthening that impression.

In the distance of less than two miles along the old road I observed

one hundred and ten of the birds, always singly or in pairs. They were never seen away from timber.

A few more were noted during the latter part of the month, but by the end of March the migration had apparently ceased, leaving only a few, a very few birds as summer residents.

37. Planesticus migratorius migratorius. Robin.—A few winter with us, but they are becoming scarcer year by year (via pots). Frequent the woodlands along the bayous, where they are very shy. On March 1 a flock of some seventy-five was observed just west of the city, by far the largest flock I have noted in years. Then a few on the 21st and 28th of March and the 4th of April; and on April 26th the last, two lone birds, were observed.

THE PINE SISKIN BREEDING IN IOWA.

BY W. J. HAYWARD AND T. C. STEPHENS.*

Τ.

The joy of seeing and identifying a new bird is exciting and satisfying, but to find a pair of migratory birds building a nest in a tree in your front yard, when to the best of your knowledge the rest of the species were busy with this operation in the pine forests 500 or 1,000 miles to the north of us, is more exciting and more interesting. When my young neighbor, Ralph Whitmer, called my attention to a nest Monday, April 13, 1914, in a pine tree 15 feet from his father's front porch, I knew something unusual had happened in bird land.

In late February and early March a new bird song more musical than the Blue Bird's contralto carol and more inspiring than the Robin's "cheerily, cheerily," had come to me on the frosty morning air. It was a new song to me, as it not only had in it the freshness of the first south wind of spring, but the tenderness and sympathy of the summer bird songs as well. A half hour of quiet study with field glass and bird guide convinced me that my first harbinger of spring was the Pine Siskin (Spinus pinus). A flock of twenty-five or

^{*} Part I by Mr. Hayward, Part II by Mr. Stephens.