BIRDS OF MADISON COUNTY, INDIANA.1

SIDNEY R. ESTEN, Indiana University

Madison County is situated about 50 miles northeast of the center of the state. The land area of the county is 288,000 acres or 450 square miles, distributed as follows:

	Acres
Waste land	21,635
Timber land	12,139
Permanent pasture land	25,819
Temporary pasture land	19,904
Orchards	1,861
Fallow lands	11,397
Total land not in crops	
Total land in crops	183,067

The average elevation of the county above mean sea level is 855 feet, with a minimum of 780 feet and a maximum of 975 feet.

The population of the county according to the 1920 census was 69,151, making an average of about one person to every four acres or 153 persons to every square mile.

Madison County has no lakes but has the following waterways: west fork of White River from east to west with a total length in the county of 20 miles; Fall Creek, 22 miles; Pipe Creek, 25 miles; Lick Creek, 22 miles; Kilbuck Creek, 12 miles; Duck Creek, 15 miles, and ten smaller creeks totaling about 50 miles.

The trees of Madison County include chestnut, shellbark hickory, pignut hickory, hornbeam, hop, beech, white oak, tulip, red bud, boxelder, sugar maple, buckeye, dogwood, black and swamp maple, elm, willows and a few white birches.

These records were taken during the years 1921 to 1924 and while they are as accurate as time would permit they are by no means complete. Observations have been confined to the southern part of the county especially in the vicinity of Anderson. (See figure 1.)

Arrangement and scientific names of the birds in the following list conform to the A.O.U. abridged check list of 1910.

I. Order PYGOPODES, Diving Birds.

1. (6) Podilymbus podiceps (L), Pied-billed grebe. Rare migrant. Only one record. In one of the pools beyond the old Arvac

In the preparation of this manuscript much valuable aid has been received from Miss Margaret A. Wade and Miss Kate A. Chipman of the Anderson Public Library, and Miss Estella Wolf of the Indiana University Library in securing introductory information and the map of Madison County; from Professors Will Scott and Fernandus Payne of the Zoological Department of Indiana University in revision and helpful advice; and from my wife, in proof reading. To these friends and others who have made possible the publication of "Birds of Madison County" I wish to acknowledge my sincere and grateful appreciation.

¹ In gathering the material for "Birds of Madison County" much assistance was given by Carl Gilpin of Anderson, who was my companion in the field and for whose assistance and faithful companionship I express my sincere thanks.

[&]quot;Proc. Ind. Acad. Sci., vol. 34, 1925 (1926)."

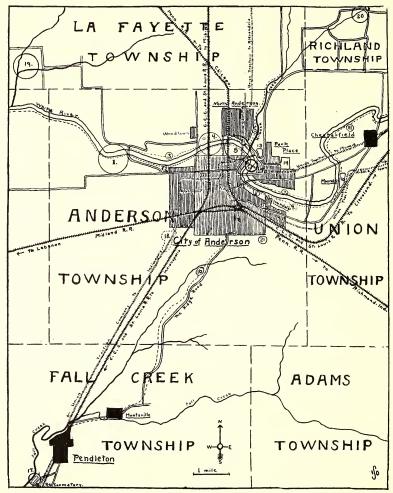


Fig. 1—Southern part of Madison County, including the city of Anderson. See explanation.²

² Explanation of Figure 1. 1, Moss Island, a wooded area on both sides of White River, with much underbrush. Several small wooded islands. The area along river flanked by cultivated fields and open meadows; 2, Flats, flooded in spring. Woods and bush, flanked by corn fields; 3, Woodlawn. Rolling hills and gullies, heavily wooded; 4, Country Club. Rolling hills, a sand bank, open woods, heavy bushes and open fields; 5, Wooded hills and cliffs on north side of White River. Wooded flats flooded in spring on the south side; 6, Open woods; 7, Woods, hills, corn fields, low swampy land; 8, Similar to preceding except that this area is flat; 9, Irondale. Low lands, flooded in spring, fields and open woods, several gravel pits; 10, The Mounds. A large chestnut grove, cliffs, gullies, and rolling hills; 11, Woods, corn fields, low swampy land, some flat and some rolling hill land; 10, May's Estate. Open grove of several acres through which runs a small brook, located near the center of town; 13, Old Maplewood Cemetery. Evergreen trees with swamp land beyond; 14, New Maplewood Cemetery. Woods and fields beyond; 15, City park. Rolling land, meadows, hills and shaded gullies; 16, Road between Anderson and Pendleton running for some distance along a wooded

(Remy Plant No. 2) on the right of the traction line to Pendleton. March 10, 1922.

2. (7) Gavia immer (Brün.), Loon. Rare migrant. Only one record. April 25, 1924. Flying above Maplewood Cemetery.

II. Order LONGIPENNES, Long-winged Swimmers.

Family LARIDAE, Gulls and Terns.

3. (54) Larus delawarensis Ord, Ring-billed gull. A rare to frequent winter visitant. One was shot December 26, 1924, on the farm of J. E. Barrett, five miles south of Pendleton, upon being mistaken for a hawk. It was an immature bird having the black band near the end of the tail. It measured 54 inches from tip to tip. It has been mounted and is now in the possession of Ward McCarty, Pendleton. Another, evidently an immature bird of the same species, was seen flying low over the same place the next day.

III. Order ANSERES, Lamellirostral Swimmers.

- 4. (132) Anas platyrhynchos L, Mallard. Rare to frequent migrant. According to the reports of the older residents of Madison County, this bird was common or abundant within the last 25 years, but I have only two records: Woodlawn, April 10, 1922; and Irondale, April 25, 1923.
- 5. (147) Marila valisineria (Wils.), Canvas-back duck. Rare to frequent migrant. This species has been in years past a very abundant migrant, but I have only one record, that of April 25, 1923, at Irondale.
- 6. (149) *Marila affinis* (Eyt.), Lesser scaup duck. Rare to frequent migrant. Only one record, that of two lesser scaup ducks flying north, low over the river near the Mounds, just before dusk on April 1, 1924.
- 7. (172) Branta canadensis canadensis (L), Canada goose. Rare to frequent migrant. One record, near the Mounds on April 1, 1924.

IV. Order HERODIONES, Herons, Stocks and Ibises.

- 8. (190) Botaurus lentiginosus (Mont.), American bittern. Rare migrant. May 17-June 2. Two records: May 17, 1924, in an old swampy sand pit to the right of the Ridge Road just after the road crosses the ridge, and June 2, 1924, in the reeds in White River between the 12th Street Bridge and Irondale on the west side of the river.
- 9. (191) Ixobrychus exilis (Gmel.), Least Bittern. Frequent migrant. May 10-20. Seen May 10, 1924, on the way from the Mounds to Irondale on the west side of the river and again May 12, 1924, and May 13, 1924, 12th Street Bridge and Irondale. The fourth record of this bird was May 20, 1924, at the Mounds.
- 10. (194) Ardea herodias herodias L., Great blue heron. A very rare migrant. Although I have not seen this bird in Madison County, I

ridge; woods, open fields and several old gravel pits half filled with water, reeds and cat-tails; 17, Idlewold Park along Fall Creek. Golf course, wooded areas, gullies, low brush-covered flats on north side of the creek; 18, Area with many low bushes, trees, several swamps and ponds; 19, Rose Hill. Rolling hill land, brook, many low bushes and vines, with meadows and cultivated fields surrounding; 20, Miller Farm. Flats heavy with trees and underbrush, rolling hills with open fields beyond.

have received several authentic reports of the bird in spring migrations as being seen near Anderson during the last 10 years, usually in April.

- 11. (200) Florida caerulea L., Little blue heron. A very rare bird seldom found in Indiana. Carl Gilpin and I saw this bird on May 24, 1924, between Irondale and Glen Echo Bridge.
- 12. (201) Butorides virescens virescens L., Little green heron. A frequent to common summer resident. April 17-September. The earliest dates seen were: April 17, 1921, and May 10, 1924, and then seen regularly all summer practically anywhere along the White River.

V. Order PALUDICOLAE, Cranes and Rails.

- 13. (214) Porzana carolina (L.), Sora rail. Rare migrant. This species may rarely be seen during May working its way north from pond to pond. Two records, one May 2, 1924 (female), in one of the ponds beyond the Arvac (Remy plant No. 2) on the right side of the Anderson-Pendleton Traction Line, and the other May 17, 1924 (male), in the marshy pond in the old sand pit to the right of the road of the Ridge Road after it crosses the ridge on the way to Pendleton.
- 14. (216) Creciscus jamaicensis (Gmel.) Little black rail. A very rare migrant. One record, in the same place and at the same time that the preceding species was seen May 17, 1924.
- 15. (221) Fulica americana (Gmel.), Coot. A rare imgrant. One record. May 16, 1924, Carl Gilpin and I found a ten-year-old lad dragging a coot along the edge of the water of the White River in Irondale. He said that he caught it in one of the pools of the Stillwell gravel pit in Irondale and that it was rather common there. We made a number of trips to the gravel pit but never were able to get another record of this species.

VI. Order LIMICOLAE, Shore Birds.

- 16. (228) Philohela minor (Gmel.), Woodcock. A rare migrant and a possible rare summer resident. Although no records have been personally taken in Madison County, I have found the woodcock near Madison County and find, from a number of inquiries, that the bird is seen rarely during the spring and fall migrations and very rarely during the summer.
- 17. (230) Gallinago delicata (Ord), Wilson's snipe. A rare migrant. Two records, one at Pendleton near Idlewold, April 22, 1922, and another in one of the ponds beyond the Arvac (Remy Plant No. 2) May 2, 1924, when four individuals were seen.
- 18. (248) Calidris leucophaea (Pal.), Sanderling. A rare migrant. One record, May 5, 1924, near Irondale.
- 19. (256) Helodromas solitarius solitarius (Wils.), Solitary sandpiper. A rare migrant. One record, on the edge of a pool (in the hollow of a farm lot during the spring rains) beyond the New East Maplewood Cemetery, on May 11, 1922.
- 20. (263) Actitis macularius (L.), Spotted sandpiper. A common summer resident along White River and along any of the pends of the county April 17 to October 10.

21. (273) Oxyechus vociferus (L.), Killdeer plover, Common summer resident, Mar. 14 to Nov. 30.

VII. Order GALLINAE, Gallinaceous Birds.

22. (289) Colinus virginianus virginianus (L.), Bob-White or quail. Frequent to common permanent resident. Seen and heard in all parts of the county. It seems to be increasing in numbers during the last few years.

VIII. Order COLUMBAE, Pigeons and Doves.

23. (316) Zenaidura macroura carolinensis (L.), Mourning dove. Common summer resident. Found in all parts of the country Mar. 18 to Oct. 20. On May 4, 1923, a nest with 2 eggs, was found on the ground on a side hill near the Ridge Road.

IX. Order RAPTORES, Birds of Prey.

- 24. (325) Cathartes auro septentrionalis Wied, Turkey vulture. A frequent summer resident or possibly a rare permanent resident. One record of the "buzzard" in Madison County near Perkinsville in October, 1919. However, I have had a number of reports from farmers residing outside of Anderson that show that the "buzzard is frequently seen in summer and very rarely seen in the winter."
- 25. (333) Accipiter cooperi (Bon.), Cooper's hawk. Common resident, found in all parts of the county.
- 26. (337) Buteo borealis borealis (Gmel.), Red-tailed hawk. Frequent permanent resident. Usually seen outside of town, although frequently observed flying high over Anderson or Pendleton. On Apr. 12, 1924, Carl Gilpin and I saw five of these birds flying low over Woodlawn Heights.
- 27. (339) Buteo lineatus lineatus (Gmel.), Red-shouldered hawk. Frequent permanent resident. Seen at Miller's farm, and in or over woods outside of Anderson. Usually seen at great heights soaring lazily along.
- 28. (360) Falco sparverius sparverius (L.), Sparrow hawk. Rare to frequent summer resident. Near Nicholson File Company, Apr. 15, 1922; Ridge Road, Apr. 21, 1923; Irondale, May 3, 1924; Mounds, June 12, 1924.
- 29. (365) Aluco pratincola Bon., Barn owl. A very rare visitant. A farmer living between Anderson and Alexandria said that he had had a barn owl (gave a good description of it) living in his barn during winter of 1920. I have not seen the bird in Madison County.
- 30. (368) Strix varia varia Bart., Barred owl. Frequent permanent resident. Very few records of this species in the county. In the spring of 1922, Henry Klus, living on Alexandria Pike, reported one that had lived in his water-tower for two years. Identified the bird on June 12, 1922, as he came out of the tower just before dusk. Mr. Klus said that the bird came out at the same time every evening and after sitting on the top of the water tower for a short time flew to the woods to the east of the road. The bird was never seen to go into the tower, so evidently it went in before daybreak.

- 31. (373) Otus asio (L.), Screech owl. Common permanent resident. The number of records that I have are best represented by two records, one in Pendleton Nov. 23, 1923, when I found a brown phase screech owl in mid-day and another on June 12, 1924, also in Pendleton (just at dusk) when I found a gray phase screech owl family of five, with the three young nearly grown. They were in a large maple tree on the edge of town. The adults were feeding them.
- 32. (375) Bubo virginianus virginianus (Gmel.), Great horned owl. A rare permanent resident. The only record I have was received from a farmer near Middletown in the fall of 1919. He said that the year before an owl that he well described as the great horned owl (from size, coloration and ear tufts) lived in the woods on the back part of his farm.
- 33. (376) Nyetea tyetea (L.), Snowy owl. Rare winter resident, very rare permanent resident. I have one record of this bird in the county. When returning to Anderson from a farm northeast of the city with Dr. C. A. Walton in October, 1921, we saw something fly in front of us, so we stopped to investigate and found this large snowy owl perched on a fence post across the road.

X. Order COCCYGES, Cuckoos and Kingfishers.

- 34. (387) Coccyzns americanus americanus (L.), Yellow-billed cuckoo. A frequent to common summer resident. May 1 to Sept. 25. I have the following records of yellow-billed cuckoos in Madison County: Sept. 25, 1921, at Woodlawn; May 20, 1922, at the Mounds; May 27, 1922, along Kilbuck Creek; June 10, 1922, on way to Mounds, Miller's Farm; June 17, 1922, Rose Hill; June 24, 1922, and May 1, 1923, at Moss Island. None were seen in 1924.
- 35. (388) Coccyzus erythrophthalmus (Wils.), Black-billed cuckoo. May 6 to June 12. Woodlawn, May 6, 1922, Kilbuck, May 27, 1922; Irondale, June 10, 1922; Mounds, June 12, 1924.
- 36. (390) Ceryle alcyon alcyon (L.), Belted kingfisher. Common permanent resident. Rarely found away from the river but very common along the entire White River in the county at any time of the year.

XI. Order PICI, Woodpeckers.

- 37. (393a) Dryobates villosus leucomelas (L.), Northern hairy woodpecker. Frequent permanent resident. This bird is frequently seen in the city of Anderson during the winter but as soon as food becomes more abundant and nesting season approaches the hairy woodpecker retires to the thick woods and is seldom seen. The latest date seen in town is Apr. 12, 1924. Found at Woodlawn Apr. 19, 1924 and from that time on only in the deep woods at Idlewold, Moss Island, Kilbuck, Irondale, Mounds, and Miller's Farm.
- 38. (394c) Dryobates pubescens medianus (L.), Downey woodpecker. A common permanent resident. Much like the previous species in habit although much more common in numbers. One of the most common species in the city during the winter but an inhabitant of deeper woods for nesting. Nesting occurs most commonly at the Mounds, Moss

Island, Shadyside Park along Kilbuck Creek, Miller's Farm or any wooded areas in the county.

- 39. (402) Sphyrapicus varius varius (L.), Yellow-bellied sapsucker. Frequent migrant. Apr. 3 to May 11 and Sept. 20 to Oct. 20. Most often found at the Mounds and at Woodlawn.
- 40. (406) Melanerpes erthrocephalus (L.), Red-headed woodpecker. A common summer resident. Apr. 3 to Oct. 1. This woodpecker is adapting himself to changing conditions, for nearly 80 per cent of red-headed woodpeckers' holes are now made in telegraph poles along roadways while 50 years ago the red-head's holes were to be found in dead trees.
- 41. (409) Centurus carolinus (L.), Red-bellied woodpecker. A rare permanent resident. In four years I have found only two pairs of these birds, the first in heavy woods along the right-of-way of the Anderson-Muncie Traction Line about two miles beyond East Maplewood Cemetery, and the other at Idlewold, near Pendleton, on Apr. 3, 1924, and later at the same place June 9, 1924. I have no report of anyone else ever having found the red-bellied woodpecker in the county.
- 42. (412a) Calaptes auratus luteus Bangs, Northern Flicker. A common to abundant summer resident. Apr. 4 to Oct. 20. Fifty miles south the flickers may be a permanent resident but I have been unable to find any staying all winter in Madison County.

XII. Order MACROCHIRES, Goatsuckers, Swifts, and Humming-birds.

- 43. (417) Antrostomus vociferus vociferus (Wils.), Whip-poorwill. A rare to frequent summer resident. Although I have heard the whip-poor-will in Madison County on innumerable occasions, I have never been able to actually see it.
- 44. (420) Chordeiles virginianus virginianus (Gmel.), Nighthawk. A common summer resident. May 5 to Sept. 18. Often seen at all times of day or night flying over the Farmer's Trust Building.
- 45. (423) Chaetura pelagica (L.), Chimney swift. Common summer resident. Apr. 15 to Oct. 1. Many of them nest in the chimneys of the large factories on the edge of the city.
- 46. (428) Archilochus colubris (L.), Ruby-throated hummingbird. Frequent summer resident. May 7 to Sept. 25. Found both in the city and in the country.

XIII. Order PASSERES, Perching Birds.

Family Tyrannidae, Tyrant Flycatchers.

- 47. (444) *Tyrannus tyrannus* (L.), Kingbird. Frequent to common summer resident. Apr. 12 to Sept. 10.
- 48. (452) Myiarchus crinitus (L.), Crested flycatcher. Frequent summer resident. Maplewood Cemetery, Apr. 29, 1922; Ridge Road, May 17, 1924, and Woodlawn, May 21, 1924.
- 49. (456) Sayornis phoebe (Lath.), Phoebe. Common summer resident. Apr. 4 to Oct. 20. Found most frequently along the waterways.
- 50. (459) Nuttallornis borealis (Swains.), Olive-sided flycatcher. Rare migrant. Four records as follows: Pendleton, Apr. 25, 1923;

Ridge Road, Apr. 21, 1923; Irondale, May 16, 1924; Ridge Road, May 17, 1924.

- 51. (461) Myiochanes virens (L.), Wood pewee. Common to abundant summer resident. Apr. 3 to Oct. 1.
- 52. (463) Empidonax flaviventris Baird, Yellow-bellied flycatcher. Rare to frequent migrant. May 3 to 24. Three records of this species as follows: May's Estate, May 3, 1922; Mounds, May 3, 1923; and Mounds. May 24, 1924.
- 53. (465) Empidonax virescens (Vieill.), Acadian flycatcher. Often called the green-crested flycatcher. Rare summer resident. Four records of this species as follows: Mounds, May 7, 1922; Irondale, May 2, 1923; Irondale, May 7, 1924; Idlewold, May 24, 1924.
- 54. (466a) Empidonax trailli alnorum Brew., Adler flycatcher. The eastern form of the western trails flycatcher. Rare migrant May 17 to June 17 and very rare summer resident. Four records as follows: Miller's Farm, June 17, 1922; Ridge Road, May 17, 1924; Mounds, May 24, 1924; 12th Street to Irondale, May 28, 1924.
- 55. (467) Empidonax minimus Baird, Least flycatcher. Frequent migrant and rare summer resident. Zones 2b and 3b. Apr. 15 to June 2 and Sept. 5 to Sept. 21.

Family Corvidae, Crows and Jays.

- 56. (477) Cyanocitta cristata cristata (L.), Blue Jay. Common permanent resident. I know of one pair that lived in the same tree on 12th Street for over six years. During nesting season from latter part of March to latter part of May the Blue Jays usually withdraw to the thicker woods outside the city. Many can be seen at these times at Woodlawn and from 12th Street to and beyond the Mounds. Idlewold is another favorite place of the Blue Jays.
- 57. (488) Corvus brachyrhynchos brachyrhynchos Brehm, American crow. Common permanent resident. More common in summer than winter and usually more common in spring and fall when great flocks of them, often over a hundred, go through in migration. March and September are the months that I have seen the largest flocks. The nesting season is April and May.

Family STURNIDAE, Starlings.

(493) Sturnus vulgaris L., Starling. There have been, as far as I know, no reports of the starling in Madison County but during 1924 there have been a number of reports of this bird in the western part of Ohio, so with all probability the starling will be considered a resident within five years.

Family ICTERIDAE, Blackbirds and Orioles.

- 58. (494) *Dolichonyx cryzivoris* (L.), Bobolink. Frequent to common summer resident. May 12 to Sept. 5. Some years this bird is fairly common, then again it does not seem to be more than frequent.
- 59. (495) Molothrus ater ater (Bodd.), Cowbird. Common summer resident. Apr. 6 to Oct. 20. The most common nests in Madison County in which I have found cowbird's eggs have been, the song sparrow, brown thrasher and towhee. I found a nest of a towhee at

Woodlawn Heights during the first week of May with eight eggs of which three were those of the cowbird. At Riverside Park in Indianapolis May 20, 1922, I found a song sparrow's nest with three stories, one upon the other, in each of the two nests upon which the final nest was built were two cowbird's eggs and in the top nest where the female song sparrow was sitting were four eggs, one of which was a cowbird's.

- 60. (498) Agelaius phoeniceus phoeniceus (L.), Red-winged blackbird. A common summer resident and a possible permanent resident. Apr. 3 to Nov. 25. This bird is very abundant during migration during the later part of March and April but during the first part of May they seem to be gone. The best places to find these birds during nesting season are the ponds beyond the old Arvac plant, the pond and reeds near the Mounds. the pond east of Moss Island and the swamps in the old quarries on the Ridge Road.
- 61. (501) Sturnella magna magna (L.), Meadowlark. Very abundant summer resident and rare permanent resident. Feb. 10 to Oct. 10. They can be found at Woodlawn as early as February and as late as October but greater numbers do not come in migration until March and April.
- 62. (506) Icterus spurius (L.), Orchard oriole. Rare summer resident. Three records of the orchard oriole as follows: near Moss Island, June 10, 1921; May's Estate, May 3, 1922; near Glen Echo Bridge near the Mounds, May 24, 1924.
- 63. (507) Icterus galbula (L.), Baltimore oriole. Abundant summer resident. May 6 to Sept. 1. This species may be heard in full song in Anderson during May, June and July and often in August after the nesting season.
- 64. (509) Euphagus carolinus (Müll.), Rusty blackbird. A rare migrant. My few records of this bird are as follows: April 6, 1921, a flock of 11 along Kilbuck Creek; March 18, 1922, a flock of about 20 beyond Maplewood Cemetery; Apr. 29, 1922, a flock of eight at the same place; April 18, 1923, 12 were seen beyond the cemetery but none in 1924.
- 65. (511b) Quisculus quiscula aenus Ridg., Bronzed grackle. An abundant summer resident and possible rare permanent resident. Jan. 23 to Nov. 11. These birds roost by the hundred during spring and fall in the shade trees of Anderson. Their greatest roost in the county is at Maplewood Cemetery near Anderson, where on several occasions during April, May and June there were over 400, as many as 50 roosting in a single tree.

Family FRINGILLIDAE, Finches and Sparrows.

66. (517) Carpodacus purpureus purpureus (Gmel.), Purple finch. Rare migrant. While I have been on the watch for this bird for years I have been able to make only two records of it. Both were made at East Maplewood Cemetery in the spring, the first, Apr. 29, 1922, when a flock of about 10 were seen, and the second was obtained on Apr. 30, 1924, during a rather heavy rain when 15 of them, both male and female, were seen.

- 67. (529) Astragalinus tristis tristis (L.), American goldfinch. An abundant summer resident and rare permanent resident. Apr. 19 to Oct. 10.
- 68. (—) Passer domesticus (L.), English or house sparrow. Very abundant at all times of the year. Nearly as abundant in the country, where they are driving native birds away.
- 69. (540) Pooceetes gramineus gramineus (Gmel.), Vesper sparrow. Rare summer resident. While the vesper sparrow is a common summer resident in many places I have in the last four years only three records as follows: Moss Island, May 24, 1922; along White River southeast from the 12th Street Bridge, April 29, 1924; and May 24 at the Mounds.
- 70. (542a) Passerculus sandwichensis savanna (Wils.), Savannah sparrow. Rare migrant. One record, Woodlawn on May 12, 1924. I believe that this sparrow may be found more plentiful in the country if special search be made.
- 71. (546) Anmodramus savannarum australis May., Grasshopper sparrow. Rare summer resident. The two records are as follows: Anderson, June 11, 1922, and the Mounds, May 24, 1924.
- 72. (547) Passerherbulus henslowi henslowi (And.), Henslow's sparrow. Rare migrant or possible summer resident Apr. 25 to May 6. I saw a pair of these birds in an alley in town where they stayed for about two weeks and then disappeared. They were seen Apr. 25, May 2 and May 6, 1924.
- 73. (553) Zonotrichia querula (Nutt.), Harris Sparrow. A very rare migrant. May 27 to 30. I never expected to see this sparrow in Madison County but I have two records, the first made in the eastern part of the county beyond Park Place May 30, 1922, and then again on the Ridge Road May 27, 1923. In the first case we saw a flock of about a dozen, some males and some females, and in the second case two males and three females together.
- 74. (554) Zonotrichia leucophrys leucophrys (Forst.), White-crowned sparrow. A frequent migrant. Apr. 19 to May 16 and Oct. 7 to 20.
- 75. (558) Zonotrichia albicollis (Gmel.), White-throated sparrow. A common migrant, much more common than the previous species. Apr. 15 to May 20 and Oct. 7 to 20. When the white-throat migration begins it descends in numbers and while it lasts, a great many will be seen both in the spring and fall until the disappearance, which is as sudden as the appearance.
- 76. (559) Spizella monticola monticola (Gmel.), Tree sparrow. Common winter resident. Oct. 10 to May 3.
- 77. (560) Spizella passerina passerina (Bech.), Chipping sparrow. A common summer resident. Apr. 5 to Oct. 20.
- 78. (563) Spizella pusilla pusilla (Wils.), Field sparrow. A common to abundant summer resident. Apr. 1 to November.
- 79. (567) Junco hyemalis hyemalis (L.), Slate-colored junco. An abundant winter resident. Sept. 28 to May 2.
- 80. (581) Melospiza melodia melodia (Wils.), Song sparrow. Abundant migrant and common summer resident. Possible permanent

resident. Mar. 14 to Nov. 6. I banded a song sparrow at Pendleton Dec. 24, 1924.

- 81. (583) Melospiza lincolni lincolni (And.), Lincoln's sparrow. A rare migrant. Three records at Woodlawn, April 29, 1922, May 14, 1923, and April 4, 1924.
- 82. (584) Melospiza georgiana (Lath.), Swamp sparrow. A rare migrant. Only one record, May 24, 1924, when two were seen on the flats beyond the Mounds.
- 83. (585) Passerella iliaca iliaca (Merr.), Fox sparrow. A common migrant. Apr. 1 to May 13.
- 84. (587) Pipilo erythrophthalmus erythrophthalmus (L.), Towhee. Abundant summer resident. Apr. 1 to Nov. 22.
- 85. (593) Cardinalis cardinalis cardinalis (L.), Cardinal. Common permanent resident. Found in winter near the old mill near the Delaware Bridge.
- 86. (595) Zamelodia ludoviciana (L.), Rose-breasted grosbeak. Rare to frequent migrant. May 7 to 17 and Sept. 17. Usually found along the White River Valley.
- 87. (598) Passerina cyanea (L.), Indigo bunting. A common summer resident. Apr. 18 to Oct. 20.
- 88. 604) Spiza americana (Gmel.), Dickcissel. Frequent to common summer resident. May 15 to Oct. 1.

Family Tangaridae, Tanagers.

- 89. (608) Piranga erythomelas (Vieill.), Scarlet tanager. A frequent to common summer resident. May 3 to fall (?). These birds have been seen consistently in two places, at the Mounds and at Woodlawn Heights.
- 90. (610) *Piranga ruba ruba* (L.), Summer tanager. A very rare migrant. Only two records, Apr. 6, 1921, and Sept. 17, 1921, both found at Woodlawn.

Family HIRUNDINIDAE, Swallows.

- 91. (611) Progne subis subis (L.), Purple martin. A common summer resident in certain localities of Madison County. Apr. 15 to Sept. 10. The oldest record in the county that I have is the colony that is to be found at present at Mr. William Morches' home at the File Works. He tells me that his mother put out several houses 20 years ago and had some difficulty for several years in drawing the martins to them, but they finally came and kept coming until in 1922 the colony had three big houses and consisted of over 200 martins. There are a number of other smaller colonies in the county.
- 92. (612) Petrochelidon lunifrons lunifrons (Say.), Cliff swallow. A rare summer resident. Two records, one June 10, 1922, at Chesterfield where six were observed and April 29, 1924, when four were seen flying over the river near Irondale.
- 93. (613) Hirundo erythrogastra (Bodd.), Barn swallow. A rare to frequent summer resident. On June 4, 1921, south of Pendleton a pair was seen; also south of Pendleton on June 19, 1922, four were seen; a male was seen Apr. 20, 1923, within a mile of Pendleton; and May 13, 1924, a pair was seen flying over the river near Irondale.

- 94. (614) *Iridoprocne bicolor* (Vieill.), Tree swallow. A very rare migrant. Only two records; Apr. 7, 1921, a flock of about 20 was seen south of the Mounds and April 10, 1923, a flock of about 35 was seen on telephone wires near Markleville.
- 95. (616) Riparia riparia (L.), Bank swallow. An abundant summer resident. Apr. 12 to Oct 1. Found all along White River. Some of the best nesting places being: the old bank south of the Country Club, the banks at the Mounds, a number of banks along the Ridge Road and the banks across the river beyond Chesterfield.
- 96. (617) Stelidopteryx serripennis (And.), Rough-winged swallow. A rare summer resident. One record, May 14, 1923, when five of these birds were identified over the river near Woodlawn.

Family BOMBYCILLIDAE, Waxwings.

97. (619) Bombycilla cedrorum (Vieill.), Cedar waxwings. Erratic rare or frequent summer resident. No records in 1921. In 1922 the first record was May 13 at Mounds when a pair was seen. June 3 of the same year five were seen together "kissing" near Shadyside Park, and two were seen June 12 near Irondale on way to Mounds. In 1923 three were seen near the Madison Avenue Bridge on May 7. Other observers reported several in 1924 but I did not see any that year.

Family LANIIDAE, Shrikes.

98. (622e) Lanis ludovicianus migrans (Palm.), Migrant shrike. Frequent summer resident. In the southern part of the county, June 19, 1922; near Fortville, Mar. 1, 1923; on the outskirts of town near Irondale, Apr. 30, 1924; three were seen on a wire in the southern part of the county on the way to Newcastle, May 17, 1924. Mr. Charles Nuckols reported 40 to 50 of these birds in groups of twos in all parts of the county in 1922. Mr. Charles Henninger reported a pair living south of Pendleton during the spring and summer of 1924.

Family VIREONIDAE, Vireos.

- 99. (624) Vireosylva olivaceo (L.), Red-eyed vireo. Common summer resident. May 2 to Oct. 1.
- 100. (626) Vireosylva philadelphica (Cass.), Philadelphia vireo. Rare migrant. Only one record obtained, at Woodlawn May 21, 1924.
- 101. (627) Vireosylva gilva gilva (Vieill.), Warbling vireo. Frequent to common summer resident. May 1 to Oct. 7.
- 102. (628) Lanivireo flavifrons (Vieill.), Yellow-throated vireo. Frequent migrant and rare summer resident. May 6 to 13 and Sept. 5 to Oct. 10.
- 103. (629) Lanivireo solitarius solitarius (Wils.), Blue-headed vireo. Rare to frequent migrant. Apr. 30 to May 21. Sept. 20, 1921, is the only fall record of this bird but the spring records are as follows: May 12, 1922, at May's; Apr. 30, 1923, at Maplewood; and the following in 1924: May 4, east side of river from 12th street, south; May 5, at the same place; May 7, from 12th street to Irondale on the west side of the river; May 17, on the Ridge Road; and May 21, at Woodlawn.
- 104. (631) Vireo griseus griseus (Bodd.), Red-eyed vireo. Frequent summer resident. May 2 to September 21.

Family MNIOTILTIDAE, Wood Warblers.

The second and third weeks in May is the real warbler migration period. About 30 species of warblers may be seen in Madison County.

105. (636) *Mniotilda varia* (L.), Black and white warbler. Common migrant. Apr. 29 to May 28 and Sept. 5 to 21. Maplewood Cemetery is one of the best places to find them.

106. (637) Protonotaria citrea (Bodd.), Prothonotary warbler. A rare migrant and very rare summer resident. Only three records—at the Mounds May 10, May 21 and June 12, 1924.

107. (639) Helmitheros vermivorus (Gmel.), Worm-eating warbler. A rare migrant. Two records: the first, June 3, 1922, at Chesterfield, when three males were seen, and on April 21, 1923, about a dozen were seen along the Ridge Road.

108. (641) Vermivora pinus (L.), Blue-winged warbler. Frequent to common migrant. In 1922 this species was seen on the low ground along the river just beyond Mounds on May 7. This place is one of the best places for warblers in the county. In 1924 four were seen May 4 on the east side of the river south of the 12th Street Bridge; four were seen May 10 along the west side of the river between 12th Street Bridge and the Mounds, and four others were seen May 12 between the 12th Street Bridge and Irondale.

109. (642) Vermivora chrysoptera (L.), Golden-winged warbler. A rare to frequent migrant. Seen for the first time on the flats beyond the Mounds on May 7, 1922, and then in 1924, 20 were seen together on May 11 between the Mounds and Irondale, and four were seen at Woodlawn on May 21.

110. (645) Vermivora rubricapilla rubricapilla (Wils.), Nashville warbler. A very rare migrant. One record, that of May 11, 1924, when ten of them were seen along the river between the Mounds and the 12th Street Bridge.

111. (650) Dendroica tigrina (Gmel.), Cape May warbler. Rare to frequent migrant. May 7 to 17. On May 16, 1922, at Moss Island several were seen. In 1924 five records as follows were made—May 7, ten were seen along river near Irondale; May 11, ten were seen on the way to the Mounds; May 12, six were seen near Irondale; May 17, four were seen on the Ridge Road.

112. (652) Dendroica aestiva aestiva (Gmel.), Yellow warbler. A common summer resident. Apr. 27 to Aug. 23. A nest with four eggs was found the first of May, 1923, near the Delaware Street Bridge within ten feet of where several boys were fishing. The next year a similar nest, occupied, was found in the same tree on May 4.

113. (654) Dendroica caerulescens caerulescens (L.), Black-throated blue warbler. Rare to frequent migrant. On Apr. 30, 1923, at East Maplewood Cemetery, about 30 were seen. One year later to the day, several were seen at the same place.

114. (655) Dendroica coronata (L.), Myrtle warbler. Common to abundant migrant. Apr. 5 to May 21 and Sept 10 to 21.

115. (657) Dendroica magnolia (Gmel.), Magnolia warbler. Common migrant. May 7 to 28 and Sept. 5 to Oct. 1.

- 116. (658) Dendroica cerulea (Wils.), Cerulean warbler. Rare migrant. Only once have I seen this species, on Apr. 22, 1922, at the Mounds, where I saw three males.
- 117. (659) Dendroica pensylvanica (L.), Chestnut-sided warbler. Frequent migrant. May 6 to 28. I have one fall record, that of Sept. 20, 1921, at Woodlawn, when nearly a dozen were seen. Three spring records show that two were seen at New East Maplewood Cemetery on May 6, 1924; eight on May 21 of the same year at Woodlawn, and four were seen along the river from the 12th Street Bridge to Irondale on May 28, 1924.
- 118. (660) Dendroica castanea (Wils.), Bay-breasted warbler. Rare to frequent migrant. Two records: at Woodlawn May 7, 1923, several were seen and on may 17, 1924, 12 were seen.
- 119. (661) Dendroica striata (Forst.), Black-poll warbler. A rare to frequent migrant. On May 3, 1922, several were seen at Woodlawn. In Sept., 1923, a male was seen in town. In 1924, on May 4, two were seen near Irondale and on May 7, eight of both sexes were also seen there.
- 120. (662) Dendroica fusca (Müll.), Blackburnian warbler. A frequent to common migrant. May 10 to 21. On May 12, 1922, two were seen in town. Another was seen May 12, 1923, at Woodlawn. No fall records have been made, but in 1924 the following spring records were secured: May, over 50 were seen in a grove north of the Mounds; on May 11 about 39 were seen between the Mounds and Irondale; on May 13 six were seen between 12th Bridge and Irondale; on May 17 on the Ridge Road ten different species of warblers were seen togethr in a grove, among them being Chestnut-sided, Magnolias, Cape-Mays and ten Blackburnian warblers; on May 21 ten Blackburnian warblers were seen at Woodlawn and on May 24 a male was caught in the engine room of a local light plant.
- 121. (667) Dendroica virens (Gmel.), Black-throated green warbler. Common migrant. May 3 to 19. Several were seen May 19, 1923, at Woodlawn. On May 3, 1924, four were seen between the Mounds and Irondale; on May 10, 30 were seen between the same places; on May 17, two were seen with the other warblers on the Ridge Road, and two more were seen on May 28 along the river beyond 12th Street Bridge southeast.
- 122. (671) Dendroica vigorsi vigorsi (And.), Pine warbler. A very rare migrant. On Apr. 8, 1922, several were seen at Woodlawn.
- 123. (672) Dendroica palmarum palmarum (Gmel.) Palm warbler. Frequent migrant. Apr. 21 to May 15. Seen Apr. 21, 1923, on Ridge Road; May 2, 1923, at Pendleton; May 2, 1924, at the Arvac; May 4, 1924, near 12th Street Bridge, and May 5, near Irondale.
- 124. (674) Seiurus aurocapillus (L.), Oven bird. Frequent summer resident. Seen Sept. 25, 1921, and May 3 and 10, 1924, near Mounds.
- 125. (675) Seiurus noveboracensis noveboracensis (Gmel.), Waterthrush. Rare migrant. Seen May 17, 1922, at Moss Island; Apr. 20, 1923, at Pendleton; and May 3, 1924, at the Mounds and at Irondale.

- 126. (676) Seiurus motaeilla (Vieill.), Louisiana water-thrush. A rare migrant. Seen May 7 and 24, 1923, at Mounds and May 21, 1923, at Woodlawn.
- 127. (678) Oporornis agilis (Wils.), Connecticut warbler. A very rare migrant. Two were seen May 3, 1924, at the Mounds.
- 128. (679) Oporornis philadelphia (Wils.), Mourning warbler. A very rare migrant. Seen May 14, 1924, at Kilbuck Creek; May 20 and 24, 1924, at the Mounds.
- 129. (681) Geothlypis trichas trichas (L.), Maryland yellow-threat. A common to abundant resident. Apr. to Oct 10.
- 130. (683) *Icteria virens virens* (L.), Yellow-breasted chat. A rare summer resident. Seen Sept 22, 1921, at Woodlawn, and May 7, 1922, at the Mounds.
- 131. (685) Wilsonia pusilla pusilla (Wils.), Wilson's warbler. Frequent migrant or possible rare summer resident. Seen at the Mounds May 20 and 24 and June 2, 1924; also June 12, 1924, at Woodlawn.
- 132. (686) Wilsonia canadensis (L.), Canadian warbler. A common migrant. Seen May 7, 1922, at the Mounds; May 5, 1924, near 12th Street Bridge; May 10, 20 and 24, 1924, near the Mounds.
- 133. (687) Setophaga ruticilla (L.), American redstart. A common migrant and rare to frequent summer resident. May 3 to June 15 and Aug. 28 to Sept. 17.

Family MIMIDAE, Thrashers, Mockingbirds and Catbirds.

- 134. (704) Dumetella carolinensis (L.), Catbird. An abundant summer resident. Apr. 3 to Sept. 28. Both this and the following bird often nest in bushes on lawns in town.
- 135. (705) Toxostoma rufum (L.), Brown thrasher. Common summer resident. Apr. 4 to Oct. 8.

Family TROGLODYTIDAE, Wrens.

- 136. (718) Thryothorus ludovicianus ludovicianus (Lath.), Carolina wren. Rare permanent resident. Several seen beyond Chesterfield on June 10, 1922, and a pair in Anderson May 7, 1924.
- 137. (719) Thryomanes bewicki bewicki (And.), Bewick's wren. A very rare summer resident. One record, Apr. 30, 1923, at Woodlawn.
- 138. (721) Troglodytes $a\ddot{e}don$ $a\ddot{e}don$ (Vieill.), House wren. Common to abundant summer resident. Apr. 8 to Sept. 18.
- 139. (724) Cistothorus stellaris (Naum.), Short-billed marsh wren. A rare summer resident. Seen Apr. 15, 1922, May 2 and 10, 1924, in swamp near Arvac.
- 140. (725) Telmatodytes palustris palustris (Wils.), Long-billed marsh wren. A rare summer resident. Seen June 16, 1922, at Miller's Farm and May 1, 1923, at Moss Island.

Family Certhidae, Creepers.

141. (726) Certhia familiaris americana (Bon.), Brown creeper. A common winter resident. Sept. 10 to May 20.

Family SITTIDAE, Nuthatches.

- 142. (727) Sitta carolinensis carolinensis (Lath.), White-breasted nuthatch. A common winter resident and frequent summer resident. Sept. 18 to June 12. On June 12, 1924, Carl Gilpin and I found a pair with three young in an old oak near the Mounds. Very common in Anderson during winter.
- 143. (728) Sitta canadensis (L.), Red-breasted nuthatch. A rare migrant and winter resident. Seen Apr. 1, 1924, near the Mounds.

Family Paridae, Titmice.

- 144. (731) Baeolophus bicolor (L.), Tufted titmouse. A frequent to common permanent resident. Not as common in winter and summer as they are during the migrations. More have been seen in April, May and September than any of the other months.
- 145. (735) Penthestes atricapillus atricapillus (L.), Black-capped chickadee. A rare permanent resident and common winter resident. Sept. 1 to May 1. A number of nests have been found at the Mounds and at Woodlawn.
- 146. (736) Penthestes carolinensis carolinensis (And.), Carolina chickadee. A frequent to common resident. June 10, 1921, at Chesterfield, May 12, 1923, at Woodlawn, and from May 3 to June 12, 1924, at both Woodlawn and the Mounds.

Family Sylvidae, True Warblers.

(Commonly known as the old-world warblers, kinglets and gnatcatchers.) 147. (748) Regulus satrapa satrapa (Licht.), Golden-crowned

kinglet. A common migrant. Apr. 3 to May 1. No fall records.

148. (749) Regulus calendula calendula (L.), Ruby-crowned kinglet. A common migrant. Apr. 6 to May 6 and Sept. 18 to Oct. 18.

149. (751) Polioptila caerulea caerulea (L.), Blut-gray gnatcatcher. Rare to frequent migrant. Apr. 29 to May 4.

Family TURDDIDAE, Thrushes and Bluebirds.

- 150. (755) Hylocichla mustelina (Gmel.), Wood thrush. A common summer resident. Mar. 14 to Oct. 1.
- 151. (756) Hylocichla fuscescens fuscescens (Steph.), Veery or Wilson's thrush. Frequent migrant. Apr. 15 to May 27. Only one fall record, that of Sept. 13, 1923, at Woodlawn.
- 152. (757) Hylocichla aliciae aliciae (Baird), Gray-cheeked thrush. A frequent migrant. Apr. 25 to May 24. Woodlawn, Maplewood Cemetery and the Mounds are very good for all the thrushes during migration.
- 153. (758a) Hylocichla ustulata swainsoni (Tsch.), Olive-backed thrush. Frequent migrant. Apr. 30 to May 10.
- 154. (759b) Hylocichla guttata pallasi (Cab.), Hermit thrush. A frequent to common migrant. Apr. 4 to May 6 and Oct 1 to Nov 10.
- 155. (761) Planesticus migratorius migratorius (L.), Robin. An abundant summer resident and not infrequent permanent resident. Feb. 23 to Dec. 28.
- 156. (766) Sialia sialis sialis (L.), Bluebird. Frequent to common summer resident and rare permanent resident. Feb. 23 to Oct. 20.

SUPPLEMENTARY LIST.³ Order HERODIONES, Herons and Bitterns.

1. (196) (?) Herodias egretta Gmel., American egret. Accidental visitant. A pair was seen flying over Anderson July 30, 1925. One of the pair, in attacking an aeroplane broke its wing and was secured in a swamp southwest of the city. It was placed in the veterinary hospital of Dr. H. A. Smith where it died four days later. It was identified by Mrs. H. P. Cook of Anderson. There is some doubt as to this being the egret. Possibly it might have been an immature little blue heron.

Order RALLIDAE, Rails and Gallinules.

2. (208) Rallus elegans (And.), King Rail. Rare migrant. One was seen in a marsh beyond the old Arvac Plant (Remy Plant No. 2) May 8, 1925, by Carl Gilpin.

Order LIMICOLAE, Shore Birds.

- 3. (239) Pisobia maculata (Vieill.), Pectorial sandpiper. Rare to frequent migrant. Several were recorded by Carl Gilpin on May 2, 1925, and later on May 14, 1925, near the ponds beyond the old Arvac Plant (Remy Plant No. 2).
- 4. (255) Tatanus flavipes (Gmel.), Yellow-legs. Frequent cigrant. Reported by Carl Gilpin between Apr. 25, when the first ones were seen, and May 15, 1925. Seen both near the ponds beyond the old Arvac Plant (Remy Plant No. 2) and the stone quarry near Moss Island.

Order RAPTORES, Birds of Prey.

5. (331) Circus hudsonius (L.), Marsh hawk. Rare summer resident. One was seen by Carl Gilpin south of Anderson Mar. 24, 1925.

Order PASSERES, Perching Birds.

Family Troglodytidae, Wrens.

6. (722) Nannus hiemalis hiemalis (Vieill.), Winter wren. Rare migrant or possible winter resident. One seen at the New Maplewood Cemetery Apr. 22, 1925, by Carl Gilpin.

³ Secured from other observers in 1925.

