

52. BALD EAGLE—*Haliaeetus l. leucocephalus*.  
Recorded as flying over Buzzards Bay.
53. SWAMP SPARROW—*Melospiza georgiana*.  
One seen near Woods Hole.
54. PRAIRIE WARBLER—*Dendroica discolor*.  
A pair was reported as nesting near Woods Hole.  
Marshall, Mo., June 28, 1922.

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## NOTES ON THE BIRD LIFE OF ALLEGHENY COUNTY, PENNSYLVANIA

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Allegheny County lies in the southwestern part of the state and because of its varied topography offers an interesting field for bird study. A limited field, however, for the city of Pittsburgh occupies its center and one can cross the county line within twenty miles of practically any point at the edge of the city. As is more or less well known the Allegheny and Monongahela rivers unite here to form the Ohio, and these rivers unquestionably are an important factor in the distribution of the bird life of this region. This is not only true of the migrants which follow these streams in their journeys north and south but also of the breeding birds, for there are some species such as the Blue-gray Gnatcatcher which I have found only in the stretches of woods bordering these rivers or along their larger tributaries, and others show a decided preference for such localities. On the whole this region is rather hilly and what might be termed moderately rough for the rivers are bordered by high bluffs cut at irregular intervals by open valleys or ravines and it is necessary to go back some distance before reaching much level country. This last is more often than not merely low broad plateaus between the numerous streams so a walk of any duration necessitates the crossing of occasional valleys or gulleys. Much of the land is farmed, but there are numerous stretches of woods covering not only hillsides and the scattered ravines and gulleys but also some of the more level country. The timber consists largely of second growth hardwoods of which many species are represented, those predominating being the white oaks, black oaks, hickories, ash, black willow, beech, black locust, white elm, red maple and sycamore. Conifers are scarce and widely scattered. An occasional field will be found over-

grown with scrub pine (*Pinus virginiana*) and in some of the ravines there are still a few small hemlocks and white pines. Where protected these latter occasionally form small pure stands but this is an exception.

Living in Pittsburgh I was able to do extended field work only over the week-ends but the city parks afforded an opportunity for securing data of interest that in some cases I could not get elsewhere. Highland Park, probably the largest in the city, contains the two large reservoirs that supply the city with water and being within fifteen minutes walk of my home I was able to visit them frequently during the spring and fall migrations and record the water birds that found these bodies of water pleasant and safe spots to break their long flights. Schenley Park, possibly the second largest, lacks this attraction but it does possess a large golf course which is much favored by the Prairie Horned Larks and is the only place within the city limits where this species breeds. At the south end of the city, tucked away in a ravine on the far side of the Monongahela river, lies one of the smaller recreation spots of the city, McKinley Park. It is not very well known except to those living in its immediate vicinity but its brush covered hillsides, scattered large trees and the small stream running through it attracts a surprisingly large number of birds and I found it both pleasant and profitable to wander through it at intervals.

At some time or other I have covered practically all the open country about the city that lies within the county limits, but the one locality that I know best is that about Harmarville. This is a small town ten miles up the Allegheny river that can offer within reasonable walking distance as much varied topography and ideal conditions for bird study as I have ever found anywhere. Deer Creek, which flows into the Allegheny river here, is a stream some twenty feet across at its widest, and it offers enough water and shallows to attract such species as the Belted Kingfisher, Spotted Sandpiper and Green Heron. The wooded hillsides and open fields that border it, intermixed with fields overgrown with underbrush, old orchards, cat-tail swamps, alder thickets, low cliffs and sandbanks, offer inducements that cause the breeding birds here to be many and varied. Squaw Run is another spot which I have worked to some extent but the stream here is much smaller and dwindles away within five miles of

where it flows into the Allegheny river. The valley itself is not very wide and soon narrows into a rugged ravine, the sides of which are thickly wooded. Possibly I know it as well as I do because it is within three miles of the city limits and must be passed in order to reach Harmarville.

The following list may and undoubtedly is not complete as far as migration records go but I feel that as far as the breeding-birds are concerned that few additions will have to be made in the future. Bird life does change to some extent as time goes on but after working this section rather thoroughly for five years and at infrequent intervals for the next seven years there should be little room for error. Like all beginners I made no attempt at first to keep careful field notes and some of the data that I did record has been mislaid somewhere so some of my statements may seem unjustified, but they are all based on careful observation. To the best of my knowledge but little has ever been published concerning the bird life of this part of the state so these notes may be of some interest and value.

HOLBOELL'S GREBE—*Colymbus holboelli*.

I have but one record for the occurrence of this species here. On Sept. 13, 1913, one bird was seen on one of the deeper stretches of water on Deer Creek.

HORNED GREBE—*Colymbus auritus*.

During the spring of 1914 this species was frequently observed on the two reservoirs in Highland Park, and it probably is a fairly common migrant here. The first bird was seen April 1 and for the next month there were few days when one or two were not in evidence. They usually fed near the shore so there was seldom any question as to their identity. The last bird was seen May 2, on the upper reservoir. On April 8, 1917, nine birds were seen, the largest number I had ever recorded at one time, four being on the lower and five on the upper reservoir.

PIED-BILLED GREBE—*Podilymbus podiceps*.

I have but one record for the occurrence of this species here, although one might reasonably expect to find it a regular and fairly common migrant. October 27, 1913, one bird was seen on the lower reservoir.

LOON—*Gavia immer*.

A scarce spring migrant and seen invariably on the lower and larger reservoir. There, however, it evidently suited them pretty well for they usually lingered a few days before moving on. In 1914 one bird was present on the 8th and 9th of April, and again on the 27th, 28th and 29th of the same month. For 1916 I have but one record, one bird being seen on April 25, but in 1919 one bird appeared surprisingly late, May 22, and

remained for three days apparently little inclined to depart for its breeding grounds. None have ever been recorded during the fall migration.

HERRING GULL—*Larus argentatus*.

This species is a regular spring migrant but at best decidedly erratic. During 1912 it was unexpectedly plentiful, for first seen February 10 it gradually increased in numbers until on March 29 fully forty were found resting quietly on the water on the lower reservoir. They showed no haste to depart that year for they decreased in numbers very gradually until April 21, when two were seen for the last time. Before and since but few have been recorded and there is no fixed date when they can be expected to arrive and depart. In 1913 three birds were seen for the first time on Feb. 12 feeding on the Allegheny River and the last bird was seen March 29 on the lower reservoir. In 1917 two birds were found April 6 resting on a sand bar in the middle of the Allegheny River.

COMMON TERN—*Sterna hirundo*.

On April 20, 1914, four birds were seen, one on the lower and three on the upper reservoir, resting quietly on the water. This is my only record for the occurrence of this species here.

RED-BREASTED MERGANSER—*Mergus serrator*.

A scarce and irregular migrant, and seen entirely on the lower reservoir. In 1913 two birds were seen March 26, and during the fall migration one bird lingered for five days, from the 26th through the 30th of October. In 1914 but one bird, a male, appeared during the spring migration but it made up for the lack of its fellow voyagers by remaining for ten days, from the 3rd through the 12th of April.

BLACK DUCK—*Anas rubripes*.

A regular but scarce migrant, avoiding the larger open bodies of water and showing a decided preference for the smaller ponds and streams. My only record for 1913 is one bird seen Oct. 5. In 1914 two birds were flushed on the 11th and 12th of April from a small swamp, and again on the 3rd of September one bird was found on Deer Creek.

BALDPATE—*Mareca americana*.

What records I have show it to be a scarce spring migrant only. In 1914 I saw one bird on April 8, with a flock of Scaup Ducks on the lower reservoir, and in 1917 a flock of seven birds, three of them males, were seen April 6 on the upper reservoir.

SCAUP DUCK—*Marila marila*.

LESSER SCAUP DUCK—*Marila affinis*.

Sight identification of these two species being impracticable and shooting impossible within the city limits I have never definitely known which was the commoner migrant although both undoubtedly occur here. They are abundant during both the spring and fall migrations and are one of the first of the water birds to arrive and the last to go. I have found them only on the two reservoirs and never for some unknown reason on the Allegheny river. In 1913 the first birds, three males, were seen March 23 and they were then plentiful until April 14 when four birds were seen for the last time. In the fall a flock of sixteen birds

appeared Oct. 26, the first for the fall migration, and Oct. 29 seven birds, two of them males, formed the last record for the year. In 1914 a flock of seven birds was seen February 22, my earliest record for the spring migration, and by the latter part of March flocks of varying size were in evidence daily. The last bird was seen May 17, a single bird on the lower reservoir.

GOLDEN-EYE—*Clangula clangula americana*.

During the spring migration of 1914 only did I record this species. March 16 one bird was seen and April 4 a flock of eight, the latter all males.

BUFFLEHEAD—*Charitonetta albicollis*.

I have but one record for the occurrence of this species here. April 4, 1914, three birds, two of them males, were seen on the lower reservoir.

OLD-SQUAW—*Harelda hyemalis*.

This species is seemingly but a straggler here. I have recorded it but once, three birds appearing April 25, 1914, and remaining for three days on the lower reservoir.

WHITE-WINGED SCOTER—*Oidemia deglandi*.

This species I likewise have but one record for, one bird being seen May 13, 1914, on the lower reservoir.

RUDDY DUCK—*Erismatura jamaicensis*.

May 13, 1914, one bird was found on the upper reservoir. It was feeding near the shore and when approached dived quickly and remained under water for some time.

CANADA GOOSE—*Branta canadensis canadensis*.

Only once have I recorded this species here. November 1, 1913, while returning from a day's tramp through the woods a flock of fourteen birds was seen, flying noisily by overhead.

WHISTLING SWAN—*Olor columbianus*.

This was one species I had never expected to see within the city limits of Pittsburgh but April 8, 1914, I was pleasantly surprised to find two birds on the upper reservoir. They remained there the entire day and although they stayed well out from the shore they showed remarkably little concern over the people that frequently paused to watch them.

BITTERN—*Botaurus lentiginosus*.

My only record is a bird flushed May 4, 1914, from the edge of a small pond in an open ravine.

GREAT BLUE HERON—*Ardea herodias herodias*.

I have but one record for the occurrence of this species here. July 19, 1914, one bird was seen while following up Deer Creek for a short distance.

GREEN HERON—*Butorides virescens virescens*.

A common summer resident. My dates for the arrival of this species in the spring are April 21, 1912, April 21, 1916 and April 25, 1919. They are common within a few days after the first one is seen. My breeding records are May 20, 1911, five slightly incubated eggs, nest ten feet

from the ground in the outer upper branches of a haw; May 13, 1912, five fresh eggs, nest fifteen feet from the ground in the outer upper branches of a haw, and May 22, 1912, four slightly incubated eggs, nest thirty feet from the ground in the top of a slender elm. The nests are always in thick underbrush near water and never more than one pair of birds can be found in any one locality. My latest date for the occurrence of this species in the fall is one bird seen September 14, 1912.

SOBA RAIL—*Porzana carolina*.

My records would indicate that this species is a very scarce summer resident although it may, owing to its secretive habits, be much commoner than is supposed. On May 28, 1912, while hunting through a small cat-tail swamp at Harmarville I unexpectedly stumbled upon a nest that held twelve well incubated eggs. It was substantially built of broken pieces of cat-tails and was but a few inches above the water. This is my only record for even the occurrence of this species here and I know of no other breeding records for this section of the state.

WOODCOCK—*Philohela minor*.

A common summer resident, and found either in marshy fields overgrown more or less with scrubby underbush or about small streams in the scattered short stretches of woods. April 26, 1914, a nest was found near Oakmont that held four slightly incubated eggs. It was a hollow in the ground lined with dead leaves and was at the foot of a small tree at the edge of an open field. June 7, 1915, three young birds, almost fully grown, were flushed in some underbrush at Harmarville.

WILSON'S SNIFE—*Gallinago delicata*.

I have but one record for the occurrence of this species here, two birds being flushed April 11, 1914, from the edge of an open field.

LEAST SANDPIPER—*Pisobia minutilla*.

A scarce migrant. In 1912 one bird was seen August 15 and 16 at the lower reservoir and in 1914 one bird was seen at the same place May 11.

SOLITARY SANDPIPER—*Helodromas solitarius solitarius*.

This species is a common migrant here and has the distinction of being the first to reappear in the fall. The few dates I have for the spring migration are fairly uniform for in 1913 the first bird was seen April 26 and last seen May 24, and in 1914 the first bird was recorded April 25 and last seen May 16. My fall migration notes are even more meager for but little of the summer has ever been spent in Pittsburgh and this species is a remarkably early migrant. In 1913 I found a single bird feeding about a small pond on July 28 and my last record that year was one bird seen September 6.

SPOTTED SANDPIPER—*Actitis macularia*.

A common summer resident, breeding about all the more open streams and larger ponds. My records for the first birds seen in the spring are April 27, 1912, April 14, 1913, and April 19, 1914. They soon become plentiful and remain so until late in August when they gradually disappear and are usually gone by the end of the first week in September. In 1912 one bird lingered at the lower reservoir until September 29, by

far the latest I have ever found this species here, my other dates for the last bird seen being September 6, 1913, and September 8, 1916. May 26, 1915, a nest was found with four slightly incubated eggs, well concealed in the tall grass in an open field three hundred yards from a creek. This was undoubtedly a second attempt to rear young for that same day three young birds were seen barely out of the nest.

**KILLDEER—*Oxyechus vociferus*.**

A common summer resident, frequenting open pastures and fields under cultivation, often far from any water. My migration records are March 23, 1912, March 14, 1914, and November 16, 1912. September 16, 1916, a flock of fully seventy-five birds was seen, feeding at the edge of the Allegheny river. On May 21, 1910, a nest was found with four well incubated eggs, in the middle of an asparagus bed in an open field.

**SEMPALMATED PLOVER—*Egialitis semipalmata*.**

I have but one record for the occurrence of this species here. September 16, 1916, one bird was seen along the Allegheny river, feeding at the edge of the water.

**BOB-WHITE—*Colinus virginianus virginianus*.**

Resident, but decidedly scarce, and seldom seen or heard. The frequent hard winters probably have something to do with this but the hordes of hunters that invade the country during the fall unquestionably keep the birds from recuperating their diminishing numbers. I have at long intervals flushed single birds but I have yet to see my first covey in Allegheny county.

**RUFFED GROUSE—*Bonasa umbellus umbellus*.**

This species can be found throughout the year in the larger stretches of woods and at one time was fairly plentiful here, but each year has seen a decided decrease in its numbers and unless rigidly protected for a time it will soon be entirely wiped out.

Pittsburgh is producing too many hunters in proportion to the game available for a species such as this to long survive.

**RING-NECKED PHEASANT—*Phasianus torquatus*.**

December 20, 1915, one bird was flushed at the edge of a short stretch of woods. It was almost walked on before seen but once it had left the ground it flew quite a distance before coming to the ground again.

**MOURNING DOVE—*Zenaidura macroura carolinensis*.**

A very common summer resident. My dates for arrival in the spring are March 30, 1912; March 20, 1913, and March 26, 1914. In the fall the last bird was seen October 25, 1912, and October 26, 1913. Data on thirteen nests give April 18, 1912, as the earliest date on which a full set of fresh eggs was found, and June 9, 1912, the latest date. By the latter part of April the majority of the birds are incubating full sets, which invariably consist of two eggs. In situation the nests vary from five to fifteen feet from the ground, and have been found on horizontal limbs of apple trees in orchards, in thick grape vines, on the top of a stump, on a piece of bark that had fallen from a large dead tree

and lodged in another tree, in thick bushes and in crotches of the larger trees at the edge of short stretches of woods.

MARSH HAWK—*Circus hudsonius*.

A scarce and irregular migrant. My records for its occurrence here are single birds seen April 5, 1915, August 14, 1916, and January 27, 1917.

SHARP-SHINNED HAWK—*Accipiter velox*.

A scarce summer resident. June 11, 1916, a nest was found at Harmarville that held five well incubated eggs, twenty feet from the ground in a crotch of a wild cherry tree at the side of a path through a stretch of woods.

COOPER'S HAWK—*Accipiter cooperi*.

Resident throughout the year in small numbers. A nest with three fresh eggs was found April 26, 1919, in Squaw Run, sixty feet from the ground in an upper crotch of a large white oak toward the top of a wooded hillside. It was placed on the top of an old Crow's nest and was well built of sticks and twigs, with a lining of finer twigs and a few pieces of bark. The bird was incubating but on being flushed disappeared silently and was not seen again.

RED-SHOULDERED HAWK—*Buteo lineatus lineatus*.

Of irregular occurrence during the fall and winter, and frequently found nailed to the side of a farmer's barn.

BROAD-WINGED HAWK—*Buteo platypterus*.

A fairly common summer resident, showing a decided preference for well wooded ravines and hillsides. April 30, 1911, a nest was found at Harmarville that held four slightly incubated eggs, forty feet from the ground in a crotch of a large tree near the foot of a wooded hillside. Because of the early date and the unusually large set this record was several times questioned so the eggs were sent to Richard C. Harlow of State College, Pa., for verification and he pronounced them to be undisputably of this species.

SPARROW HAWK—*Falco sparverius sparverius*.

Resident, and fairly common throughout the year. The only nest found was in a large bird box on a private estate, and on May 22, 1915, held five small downy young.

OSPREY—*Pandion haliaetus carolinensis*.

I have but one record for the occurrence of this species here. In 1912 one bird lingered on Deer Creek for over a week, being seen at practically the same spot from the 27th of April through the 4th of May.

SCREECH OWL—*Otus asio asio*.

A common breeding bird, and seen or heard throughout the year in the scattered short stretches of woods and old apple orchards. I never actually found a nest but on May 19, 1912, and again on June 8, 1913, I saw four young birds that were well grown but were seemingly out of the nest but a short time. Each time one of the adult birds was present and showed real concern over my presence.

YELLOW-BILLED CUCKOO—*Coccyzus americanus americanus*.

A common summer resident. My dates for arrival in the spring are



May 17, 1913, and May 17, 1914, and for departure in the fall October 16, 1912, and October 1, 1913. My earliest breeding record is May 30, 1909, three slightly incubated eggs, and my latest August 26, 1910, two fresh eggs. The latter nest is by over two months the latest I have ever known this bird to have fresh eggs for a nest found June 20, 1917, with four incubated eggs is my next latest record. Nests average from four to twenty feet from the ground and are practically always built of coarse twigs, lined with fragments of dead leaves. A nest found June 16, 1916, however, was unusually well built of twigs and coarse grasses, having an outside height of fully two inches. It held on that date two half-grown young.

BELTED KINGFISHER—*Ceryle alcyon alcyon*.

This species is common during the summer months and of irregular occurrence during the winter. My dates for arrival in the spring are March 31, 1912, March 21, 1913, and March 28, 1914. In 1911 the last bird for the year was seen November 11 but other years individual birds lingered throughout the winter so I have no other dates for their departure in the fall. During the winter of 1913 Deer Creek froze almost entirely over, but on December 28 one bird was seen about a short stretch of open water. May 4, 1912, a nest was found with seven slightly incubated eggs in a three foot hole in a low bank at the side of Deer Creek, and on the 22nd of June of the same year another nest was found that held seven well incubated eggs.

HAIRY WOODPECKER—*Dryobates villosus villosus*.

A fairly common resident, showing a preference for the larger stretches of woods during the fall and winter but appearing in the spring in many of the old apple orchards to breed. A nest found April 24, 1914, held three slightly incubated eggs and was fifteen feet from the ground in a dead limb of an apple tree in an orchard.

DOWNY WOODPECKER—*Dryobates pubescens medianus*.

Resident, and common everywhere. A nest found May 14, 1910, held five slightly incubated eggs and was twenty feet from the ground in a limb of a large dead tree standing at the edge of an open field. On December 31, 1914, a bird was seen eating the berries of a large poison ivy vine.

YELLOW-BELLIED SAPSUCKER—*Sphyrapicus varius varius*.

A common migrant. My dates for arrival in the spring are March 31, 1912, March 22, 1913, and March 31, 1914, and for departure May 5, 1912, April 29, 1913, and May 2, 1914. It is usually a week or ten days before the birds really become plentiful but for a few days then they can be seen literally everywhere. In the fall the first bird appeared September 28, 1912 and September 22, 1913, and the last bird was seen October 3, 1912, and October 11, 1913. As in the spring there is a day or so when they are much in evidence but they never linger long on their way south.

RED-HEADED WOODPECKER—*Melanerpes erythrocephalus*.

A fairly common summer resident, and seen invariably about large dead trees standing well out in the open. My dates for arrival in the

spring are May 11, 1912, April 30, 1913, and April 29, 1914, and for departure in the fall September 13, 1912, and September 22, 1913. My two breeding records are June 1, 1911, nest with three slightly incubated eggs, thirty feet from the ground in a limb of a large dead tree at the side of a road and June 12, 1912, nest with three fresh eggs, thirty feet from the ground in a limb of a large dead tree at the edge of a short stretch of woods.

NORTHERN FLICKER—*Colaptes auratus luteus*.

Common during the summer months and of regular occurrence, but scarce during the winter. The following dates when single birds were seen will give a fair idea of just how many do linger through the winter months: 1912, February 10, November 30, December 30; 1913, January 11, January 20, February 2, February 12; 1914, December 31. My dates for the arrival of the first migrants in the spring are March 16, 1912, March 23, 1913, and March 15, 1914. Breeding records: May 15, 1912, six slightly incubated eggs; May 9, 1914, six fresh eggs.

NIGHTHAWK—*Chordeiles virginianus virginianus*.

A common summer resident, and far more plentiful within the city limits of Pittsburgh than in the open country about the city. These birds were not long in finding out that the gravel roofs of the larger buildings were ideal breeding sites and the English Sparrow is now no longer the only bird life found in the congested business districts. My dates for arrival in the spring are remarkably uniform, being May 4, 1912, May 5, 1913, and May 3, 1914. Last records for the fall are September 14, 1912, and September 20, 1913. All my breeding data is of eggs found on gravel roofs of the larger buildings in Pittsburgh; June 10, 1910, two incubated eggs; June 19, 1912, two fresh eggs; June 1, 1914, two fresh eggs; June 2, 1916, two slightly incubated eggs; June 29, 1917, two slightly incubated eggs; July 1, 1920, two well incubated eggs.

CHIMNEY SWIFT—*Chaetura petagica*.

A common summer resident, breeding to some extent within the city limits of Pittsburgh. For many years now a pair have nested in a chimney of a church within a hundred yards of my home and I know of several private residences where the birds return year after year. My records for the first birds seen in the spring are April 21, 1912; April 26, 1913, and April 25, 1914, and for departure in the fall September 7, 1912, and September 20, 1913.

RUBY-THROATED HUMMINGBIRD—*Archilochus colubris*.

A fairly common summer resident. My dates for arrival in the spring are May 17, 1913, and May 25, 1914, and for departure in the fall September 9, 1912, September 15, 1913, and September 16, 1916. June 20, 1914, a nest was found at Harmarville with two incubated eggs, twenty feet from the ground at the outer end of a limb of a large beech tree in a ravine in the woods.

KINGBIRD—*Tyrannus tyrannus*.

This is one species that has always puzzled me for while it should breed here I have yet to record it during the summer months. Even my migration data is meagre for my records for arrival in the spring

are May 5, 1912, and May 16, 1914, and for departure in the fall, August 11, 1912, and August 14, 1916. It may possibly breed sparingly but as far as my experience goes it is a decidedly scarce bird at all times.

CRESTED FLYCATCHER—*Myiarchus crinitus*.

A common summer resident, in the larger stretches of woods and more rarely about old apple orchards. My dates for arrival in the spring are April 29, 1912, April 26, 1913, and April 26, 1914, and for departure in the fall August 16, 1912, and September 8, 1913.

PHOEBE—*Sayornis phæbe*.

A very common summer resident and found wherever there is a suitable place for them to nest. Their arrival during the latter part of March is governed to a large extent by the weather and a backward spring causes them to appear much later than usual. My dates for the first bird seen in the spring are March 30, 1912, March 20, 1913, and March 15, 1914. In the fall I recorded the last bird October 21, 1912, and October 26, 1913. They nest indiscriminately under bridges, on ledges of cliffs and on beams in sheds and old buildings, and almost invariably the nests are made of green moss, a few grasses and considerable mud, lined with fine grasses and gray plant fibres. My earliest record for a full set of eggs is April 24, 1916, a nest being found that day with five fresh eggs and one of the Cowbird, and my latest, June 26, 1915, a nest with five well incubated eggs. Intermediate dates are April 26, 1913, five fresh eggs; May 16, 1914, five slightly incubated eggs; May 27, 1911, five incubated eggs, and June 7, 1915, five slightly incubated eggs.

WOOD PEWEE—*Myiochanes virens*.

A common summer resident in all the scattered stretches of woods. My dates for arrival in the spring are May 13, 1912, May 16, 1913, and May 16, 1914, and for departure in the fall September 13, 1912. A nest found June 17, 1912, held three slightly incubated eggs and was thirty feet from the ground in a horizontal crotch at the outer end of a limb of a large beech tree on an open hillside. Another nest found August 14, 1916, held small young and was twenty feet from the ground at the outer end of a large sugar maple at the side of a road.

ACADIAN FLYCATCHER—*Empidonax virescens*.

A common summer resident, but found only in wooded ravines where there is running water. My dates for arrivals in the spring are April 26, 1913, and May 4, 1914, and for departure in the fall September 20, 1912, and October 3, 1913. In nesting a decided preference is shown for a beech (*Fagus americana*), for of six nests found in 1916 and 1917 four were in beeches, one in a hemlock and one in a sugar maple. The nests are always half suspended from a fork at the extreme outer end of a lower limb, usually from ten to fifteen feet from the ground, and are shabby and often frailly built of fine twigs, weed stems, vine tendrils and coarse grasses, lined with fine grasses and at times gray plant fibres. As far as my experience goes three eggs are invariably laid, and full sets of fresh eggs can be found after the first week in June, June 11, 1916, being my earliest date and June 22, 1917, my latest.

LEAST FLYCATCHER—*Empidonax minimus*.

An irregular and scarce summer resident, haunting underbrush bordering roadsides. My dates for arrival in the spring are May 3, 1913, and May 2, 1914. There are but a few spots where I have found this species during the summer months and as the birds disappear early in the fall I have no actual dates for their departure.

PRAIRIE HORNED LARK—*Octocoris alpestris praticola*.

This species is common here throughout the year, roving about in small flocks during the winter and scattering out in pairs during early March to breed. In nesting they show a preference for open exposed hillsides and are never found where the grass is long or has not been cut or grazed off over the winter. A nest found April 18, 1913, held four well incubated eggs and was sunk flush with the ground in the middle of a golf course in Schenley Park.

BLUE JAY—*Cyanocitta cristata cristata*.

The exact status of this species here has always puzzled me, but from the little data I have I would consider it a common fall migrant and a very rare breeder. I have yet to see it during the spring or winter and the only evidence I have that it possibly breeds is the fact that I saw a flock of five birds at Harmarville July 19, 1914. It is quite common for a month during the fall, my records for its arrival being September 14, 1912, and September 20, 1913, and for its departure October 16, 1912, and October 11, 1913.

CROW—*Corvus brachyrhynchos brachyrhynchos*.

Resident, and common throughout the year. I know of one large roost on a hillside of second growth white pine and hemlock possibly ten miles from Harmarville that is used each winter but I have never had the opportunity to visit it and ascertain just how many birds do use it. Breeding data: April 24, 1911, five slightly incubated eggs; April 25, 1914, four fresh eggs. Nests average twenty-five to forty feet from the ground and are placed in crotches of the larger trees in short stretches of woods.

BOBOLINK—*Dolichonyx oryzivorus*.

A fairly common summer resident. My dates for arrival in the spring are May 17, 1913, and May 2, 1914. On May 26, 1915, two nests were found, one with six slightly incubated eggs and the other with five fresh eggs, both well concealed in thick clumps of grass in the middle of adjoining fields.

COWBIRD—*Molothrus ater ater*.

A very common summer resident, and one that probably does more toward retarding an increase in the smaller breeding birds than any other cause. I have often felt that this bird does more harm than all the other natural enemies of bird life put together for its eggs have been found in the nests of practically all the birds that it is possible for it to impose upon. The following data will give some idea of just what effect it does have on bird life:

May 21, 1910, Yellow Warbler, 3 eggs, plus one of the Cowbird.

June 10, 1911, one fresh egg in an empty Kentucky Warbler's nest.



eggs; May 14, 1914, four fresh eggs; both nests arched over and well concealed in deep grass.

BALTIMORE ORIOLE—*Icterus galbula*.

A common resident, many nesting in the larger trees in the residential section of Pittsburgh. My dates for arrival in the spring are May 2, 1912, April 28, 1913, and April 27, 1914, and for departure in the fall August 21, 1912, and August 20, 1913. A nest found May 28, 1910, held five slightly incubated eggs and was ten feet from the ground at the outer end of a limb of an elm overhanging a road.

RUSTY BLACKBIRD—*Euphagus carolinus*.

I have found this species a regular but scarce migrant, although it may be commoner than my personal experience would indicate. In 1912 I recorded it but once, three birds being seen April 30. In 1913 it was seen twice during the spring migration, a flock of ten birds March 29, and one bird April 9, and during the fall migration it was again recorded but twice, a single bird October 4 and November 23. In 1914, in the spring migration, two birds were seen April 4, and one bird April 7, and in the fall one bird was seen November 26.

BRONZED GRACKLE—*Quiscalus quiscula aeneus*.

A common summer resident, breeding in small colonies in many places within the city limits of Pittsburgh. That this species is becoming thoroughly civilized is easily seen from the fact that many nest each year in crevices in the spire of one of the larger churches in the middle of the city. My data for arrival in the spring are March 17, 1912, March 9, 1913, and March 16, 1914 and for departure in the fall, November 3, 1912, and October 31, 1913. In nesting the birds show considerable variation in selecting a suitable site for I have found nests on cross-beams of telephone poles, in cavities in old dead trees, in crotches of large dead trees with no attempt at concealment, and again well concealed at the tops of living trees from ten to forty feet from the ground. But one brood is raised a year, and by the first of May the majority of the birds are incubating full sets. My earliest date is April 26, 1912, five fresh eggs, and my latest May 9, 1912, five slightly incubated eggs. By the middle of June the birds have already gathered into small flocks and have begun foraging over the surrounding country.

PURPLE FINCH—*Carpodacus purpureus purpureus*.

A regular but rather scarce winter resident. Small flocks are seen at frequent intervals during the fall, winter and early spring, but there is no time when they can be definitely looked for. Some of my dates for the occurrence of this species here are February 22, 1912, a flock of ten birds, October 17, 1912, three birds, April 30, 1913, a flock of ten birds, October 18, 1913, one adult male, November 1, 1913, three birds, January 2, 1913, a flock of eight birds, three of them adult males.

REDPOLL—*Acanthis linaria linaria*.

I have but one record for the occurrence of this species here. During the winter of 1916-17 these birds were unusually plentiful in various parts of the state, and on November 30, 1916, I saw a flock of twelve flying noisily by overhead.

GOLDFINCH—*Astragalinus tristis tristis*.

Resident, and common throughout the year. During the winter they are always much in evidence for they rove the country in flocks of seventy-five to frequently one hundred or more birds, and they feed largely then in the tops of the larger sycamores. The majority of the birds are incubating full sets by the first week in August, but there are a few pairs that are always belated, so it is not uncommon to find fresh eggs as late as the first of September.

PINE SISKIN—*Spinus pinus*.

This species is of uncommon occurrence during the winter, small flocks being seen at infrequent intervals feeding usually on the seeds of weeds sticking above the snow. An unusually late record is May 9, 1914, a flock of ten birds being seen at the edge of an orchard.

SNOW BUNTING—*Plectrophenax nivalis nivalis*.

I have but one record for the occurrence of this species here. On December 28, 1915, one bird was seen feeding with a flock of twenty Prairie Horned Larks in the middle of a large field on the seeds of weeds sticking above the inch or so of snow on the ground.

ENGLISH SPARROW—*Passer domesticus*.

Abundant throughout the city of Pittsburgh, in all the smaller towns and about all the farms. An unusually interesting breeding record is an incomplete set of two fresh eggs taken January 8, 1912, in a cavity in a corner of the porch of an unoccupied house. The female was caught on the nest, but that she sat so tight was not surprising considering the fact that the temperature that day was eight degrees above zero, with four inches of snow on the ground. April 20 is the average date on which full sets of fresh eggs can be found. My latest breeding record is a nest found July 20 with four incubated eggs.

VESPER SPARROW—*Pooecetes gramineus gramineus*.

A fairly common summer resident about open fields and pastures. My dates for arrival in the spring are March 29, 1913, and March 28, 1914, and for departure in the fall, November 21, 1912, and November 1, 1913. The latter date is the usual time when these birds disappear, the former record being unusually late for the occurrence of one of this species here.

GRASSHOPPER SPARROW—*Ammodramus savannarum australis*.

A fairly common summer resident, and one easily overlooked, their short inconspicuous song being the only evidence of their occurrence in the scattered open fields.

WHITE-CROWNED SPARROW—*Zonotrichia leucophrys leucophrys*.

A scarce migrant, and seen only during the spring migration. It may possibly be present in the fall, but if so the birds are so few and far between that to date I have entirely overlooked them. My records for the occurrence of this species here are: 1913, May 13, two birds, May 18, one bird; 1914, May 12, one bird, May 14 three birds; 1919, May 22, one bird.

WHITE-THROATED SPARROW—*Zonotrichia albicollis*.

A common migrant, and found singly or in small flocks, feeding in

thickets and underbrush bordering short stretches of woods or open fields. My dates for arrival in the spring are April 14, 1912, March 21, 1913, April 18, 1914, and April 25, 1919, and for departure, May 7, 1912, May 8, 1913, and May 14, 1914. In the fall the first birds appeared September 29, 1912, and September 11, 1913, and the last bird was seen November 16, 1912, and November 2, 1913. I have but two records for the occurrence of this species here during the winter, one bird being seen December 14, 1913, near Squaw Run, and two birds being found in a thicket near the same spot January 4, 1915.

TREE SPARROW—*Spizella monticola monticola*.

A common winter resident, varying little in abundance during the hardest or the mildest winters, and seemingly unaffected by the deepest snows and lowest temperatures. My dates for arrival in the fall are November 1, 1912, and November 1, 1913, and for departure in the spring April 15, 1912, April 14, 1913, and April 11, 1914.

CHIPPING SPARROW—*Spizella passerina passerina*.

A common summer resident, showing a preference for old apple orchards and shrubbery about houses. My dates for arrival in the spring are March 31, 1912, April 1, 1913, and April 16, 1914, and for departure in the fall October 15, 1912, and October 30, 1913. My earliest breeding record is May 16, 1911, four fresh eggs, nest ten feet from the ground in a crotch of one of the limbs of an apple tree in an orchard, and my latest a nest found June 19, 1915, with three incubated eggs, twenty feet from the ground in a large black locust at the side of a road. A decidedly unusual nesting site was that of a nest found May 21, 1915, with three incubated eggs, it being four feet from the ground, well concealed in a mass of dead leaves, weed stems and such debris that had lodged during high water in a crotch of a large bush at the side of a creek.

FIELD SPARROW—*Spizella pusilla pusilla*.

A common summer resident in fields overgrown with scrubby underbrush and about thickets and underbrush bordering roads and open fields. My dates for arrival in the spring are March 31, 1912, March 20, 1913, and March 21, 1914, and for departure in the fall October 30, 1912, and October 31, 1913. My earliest breeding record is a nest found May 18, 1913, with four fresh eggs, almost flush with the ground in the middle of a thick clump of weeds at the edge of an orchard, and my latest a nest found July 19, 1914, with four slightly incubated eggs, two feet from the ground in a small haw at the edge of a field. Full sets of fresh eggs, however, usually four, but at times three, and rarely two, may be found at almost any time between these two dates. With rare exceptions the nests are placed in one of three situations, three feet up in blackberry bushes in small thickets, within one or two feet of the ground in small bushy haws in or at the edge of fields, or resting on the ground in thick clumps of weeds.

SLATE-COLORED JUNCO—*Junco hyemalis hyemalis*.

A common winter resident, and seen almost invariably in small flocks feeding about thickets or underbrush bordering open fields. In the spring migration the last birds were seen May 3, 1912, April 26, 1913, and May 2, 1914, and in the fall the first birds appeared October 3, 1912, and Sep-



tember 11, 1913. The last date is the earliest I have ever recorded this species here, the latter part of September being the usual time that these birds arrive.

SONG SPARROW—*Melospiza melodia melodia*.

Resident, and common throughout the year. Unlike most species it does not gather into flocks during the winter but can be found singly or two or three birds together in thickets or underbrush bordering short stretches of woods and open fields. Data on thirty-four nests gives April 30, 1912, as the earliest date on which a full set of fresh eggs was found, and August 6, 1915, as the latest date. As a general rule the first nests are found on the ground, while the later ones are almost invariably in bushes or small saplings, varying in height in proportion to the density of the foliage. It is probably just a coincidence, but the nest found August 6, 1915, was also higher from the ground than any I have ever found before or since, being twenty feet up in a red maple at the side of the road. There is seemingly no definite requirement as to a nesting site, for the birds nest indiscriminately between the two dates mentioned above and place their nests anywhere that there is suitable protection. One situation especially favored is in the thick barberry bushes that border the paths in all the city parks. The nests are built of weed stems and grasses, well lined with horse hair, and when off the ground are often quite bulky. Four eggs constitute a full set as often as five, rarely three, and just once have I found a set of six.

FOX SPARROW—*Passerella iliaca iliaca*.

A common migrant, appearing singly or in small flocks, and often singing during the spring migration. My dates for arrival in the spring are March 18, 1912, March 20, 1913 and March 16, 1914, and for departure April 13, 1912, April 18, 1913 and April 15, 1914. In the fall the first birds appeared October 16, 1912 and October 1, 1913, and were last seen November 16, 1912 and November 23, 1913. Usually this species is wary and hard to approach and as it likes dense underbrush it would often be overlooked were it not for the disturbance it makes as it scratches vigorously in the dead leaves.

TOWHEE—*Pipilo erythrophthalmus erythrophthalmus*.

A common summer resident in thickets and underbrush bordering upon fields and the edges of woods. My dates for arrival in the spring are March 31, 1912, March 20, 1913, March 28, 1914 and April 3, 1915. In 1913 the last bird for the year was seen October 31, and this is the average date for the departure of this species. It winters rarely for I have but two records for the occurrence of this species during the winter months. One bird was seen November 28, 1912 and again February 18, 1913 in a tangled thicket of grape vines in a wooded ravine, and two years later two birds wintered at this same spot, being seen November 26 and December 24 and 28, 1914, and January 4, 1915. My earliest breeding record is a nest found May 25, 1913 with three slightly incubated eggs, on the ground in an old apple orchard well concealed in the short grass, my latest a nest found June 22, 1912 with four incubated

eggs, two feet from the ground in a grape vine covering an old stump at the edge of a short stretch of woods.

CARDINAL—*Cardinalis cardinalis cardinalis*.

Resident and common throughout the year, usually occurring during the winter months in small flocks of five to a dozen birds. My earliest breeding record is a nest found April 16, 1910 with three fresh eggs, my latest a nest found July 9, 1915 with three slightly incubated eggs. Almost invariably the nests are found in thick grape vines, varying in height from five to fifteen feet from the ground, and with very few exceptions three eggs is a complete set. Rarely a bird will lay but two eggs and just once have I found four. A nest found May 5, 1912 with two newly hatched young and an infertile egg differed from any others I have ever seen by being built in a thick brush pile at the edge of an open field. In construction the nests vary little, being somewhat bulky and composed of weed stems, dead leaves, occasional bits of paper and strips of grape vine bark, lined with fine weed stems or rootlets.

ROSE-BREADED GROSBEEK—*Zamelodia ludoviciana*.

A common summer resident, being found in all the scattered stretches of woods. My dates for arrival in the spring are May 4, 1912, May 3, 1913 and April 28, 1914, and for departure in the fall Sept. 24, 1912 and Oct. 4, 1913. Usually they are plentiful within a few days after the first bird appears. A nest found May 18, 1912, with four fresh eggs, is my earliest breeding record, my latest a nest found June 22, 1915, with but two well incubated eggs. Underbrush bordering roads or at the edge of a short stretch of woods is generally selected as a suitable nesting site and here the nests may be found in bushes or saplings varying from five to fifteen feet from the ground. A full set may consist of three, four or five eggs, for of ten nests found four hold four eggs each, four three eggs and two five eggs each.

INDIGO BUNTING—*Passerina cyanea*.

A common summer resident in underbrush at the edge of stretches of woods. My dates for arrival in the spring are April 28, 1912, May 4, 1913, and May 10, 1914. The first week in June is the usual time for full sets of fresh eggs, although I did find one early nest on May 24, 1913, that held four slightly incubated eggs. My latest breeding record is a nest found June 16, 1916, with four fresh eggs. Almost invariably the nests are in small bushes within four or five feet of the ground, although I did come across one that was but a foot from the ground in a clump of tall weeds.

SCARLET TANAGER—*Pyrranga erythromelas*.

A common summer resident in the larger stretches of woods. My dates for arrival in the spring are May 4, 1913, and May 9, 1914, and for departure in the fall, October 4, 1913. A nest found May 30, 1913, held three incubated eggs and one of the Cowbird, and was fifteen feet from the ground in a horizontal crotch of one of the lower limbs of a large tree at the edge of a stretch of woods. Another found June 20, 1917, held four well incubated eggs and was fifteen feet from the ground

on top of a small blue beech at the side of a small stream in the woods.

PURPLE MARTIN—*Progne subis subis*.

A scarce and irregular migrant, and seldom seen during either the spring or fall migration. I have but one record for 1912, two birds being seen August 17, and but two records for 1914, two birds being seen April 19 and a flock of twenty birds September 1. Attempts have been made to attract this species by putting up large bird houses, but with as yet no success whatsoever.

CLIFF SWALLOW—*Petrochelidon lunifrons lunifrons*.

I have but one record for the occurrence of this species here. On May 13, 1914, a flock of fully two hundred and fifty of these birds was seen on a telephone wire at the side of a road.

BARN SWALLOW—*Hirundo erythrogastra*.

This species is probably a fairly common summer resident here, although I know of but two barns at Harmarville in which it nests. My dates for arrival in the spring are April 26 1913, and April 19, 1914, and for departure in the fall September 2, 1913. My earliest breeding record is a nest found June 19, 1915, with five incubated eggs, and my latest a nest found July 20, 1912, with five fresh eggs.

ROUGH-WINGED SWALLOW—*Stelgidopteryx serripennis*.

A common summer resident, nesting in the banks along the Allegheny River and even more commonly along Deer Creek. I have never known these birds to colonize, however, but a single pair being found in one spot. My dates for arrival in the spring are April 27, 1912, April 19, 1913, and April 18, 1914. The birds disappear almost as soon as the young are able to fly so I have no actual records for their departure in the fall. My earliest breeding record is a nest found May 22, 1915, with seven fresh eggs, my latest a nest found June 10, 1910, with five well incubated eggs.

CEDAR WAXWING—*Bombycilla cedrorum*.

This species is a common migrant here and possibly breeds sparingly, although I have no actual records of its ever having done so. I have never seen it during the winter and it usually arrives very late in the spring, my dates for its arrival being May 17, 1913, May 23, 1914, and, an unusually early date, April 3, 1915. In the fall the last birds were seen November 10, 1912, November 2, 1913, and November 26, 1915, the last being unusually late for the occurrence of this species here.

MIGRANT SHRIKE—*Lanius ludovicianus migrans*.

A very scarce migrant. I have but one record for its occurrence here, one bird being seen April 10, 1917, in the top of a small tree at the side of a road.

RED-EYED VIREO—*Vireosylva olivacea*.

A common summer resident in the scattered short stretches of woods. My dates for arrival in the spring are May 4, 1912 and May 2, 1914, and for departure in the fall October 3, 1913. Breeding data: June 9, 1912, three incubated eggs and one of the Cowbird; June 6, 1914, four incu-

bated eggs; June 6, 1915, four slightly incubated eggs and one of the Cowbird; June 20, 1917, three well incubated eggs. The nests average from four to eight feet from the ground and are almost invariably in saplings and not in the lower branches of the larger trees.

WARBLING VIREO—*Vircosylva gilva gilva*.

A common summer resident, with a decided preference for the larger willows found at the edges of the larger ponds and streams. My dates for arrival in the spring are April 24, 1913, and May 3, 1914. In early summer the birds stop singing and few are seen then before all have disappeared for the year.

YELLOW-THROATED VIREO—*Lanivireo flavifrons*.

A fairly common summer resident. They spend their time almost entirely in the upper branches of the larger trees at the edges of the woods, and they likewise nest well up from the ground, where their nests are hard to find and even harder to get at. One bird that I trailed for several hours was building in the very top of a large white oak at the side of a road and my limited experience would indicate that this is a situation often chosen for the nest. My dates for arrival in the spring are May 7, 1913, and May 2, 1914, and for departure in the fall September 4, 1912, and September 7, 1913.

BLUE-HEADED VIREO—*Lanivireo solitarius solitarius*.

This species is probably a regular and more or less common migrant here, although my records for its occurrence are rather meager. During the fall migration of 1913 birds were seen at infrequent intervals from the 4th through the 26th of October, and in the spring of 1914 one bird was seen on the 25th and 26th of April.

BLACK-AND-WHITE WARBLER—*Mniotilta varia*.

A common summer resident in ravines and on wooded hillsides. My dates for arrival in the spring are April 20, 1912, April 26, 1913, April 24, 1914, and April 21, 1916 and for departure in the fall September 17, 1912. I have seen young birds but recently out of the nest being fed by the old birds, but have never succeeded in finding a nest with eggs or young.

WORM-EATING WARBLER—*Helmitheros vermivorus*.

A common summer resident, but found nowhere but on wooded hillsides. My dates for arrival in the spring are May 3, 1913 and May 2, 1914, and for departure in the fall August 10, 1912, August 15, 1913, and, an unusually late date, September 5, 1914. A nest found June 3, 1911, held five newly hatched young and was in a depression in the ground at the foot of a small bush on a steep wooded hillside.

BLUE-WINGED WARBLER—*Vermivora pinus*.

I have but one record for the occurrence of this species here, two birds being seen May 9, 1914, feeding in underbrush at the edge of a short stretch of woods.

GOLDEN-WINGED WARBLER—*Vermivora chrysoptera*.

A common summer resident about old clearings or fields overgrown with shrubbery underbrush. They seem to prefer the vicinity of woods and the deeper in the woods a clearing may be the more probable it will

be that a pair of these birds will be found breeding there. My dates for arrival in the spring are May 5, 1912, May 3, 1913, and May 2, 1914, and for departure in the fall August 7, 1912, and August 13, 1913. A nest found May 25, 1913, at Harmarville held five fresh eggs and was well concealed in the deep grass near one end of an old deserted apple orchard.

NASHVILLE WARBLER—*Vermivora rubricapilla rubricapilla*.

This species is a fairly common migrant here but is one that is easily overlooked. This is specially true in the fall when its dull plumage is so much like that of many others of this family then much in evidence. April 26, 1914, is my earliest record for the spring migration and May 16 of the same year my latest. For the fall migration I have but two records, single birds being seen September 4, 1914, and September 16, 1916.

TENNESSEE WARBLER—*Vermivora peregrina*.

This species is probably a fairly common migrant here, although my records indicate that I pretty well overlooked it. My two records are both for the spring migration of 1914, two birds being seen May 12 and one bird May 13.

NORTHERN PARULA WARBLER—*Compsothlypis americana usneae*.

This species is fairly common during the spring migrations, but I have but one record for the fall. April 26, 1914, is the earliest I have ever seen it in the spring, and May 23, 1915, is the latest. My one fall record is a single bird seen October 4, 1913.

CAPE MAY WARBLER—*Dendroica tigrina*.

A regular but scarce migrant. My records for the spring migration are single birds seen May 13, 1913, and May 10 and May 14, 1914. My one record for the fall migration is a bird seen September 16, 1916.

YELLOW WARBLER—*Dendroica aestiva aestiva*.

A common summer resident in underbrush at the side of roads and bordering open fields. My dates for arrival in the spring are April 21, 1912, April 23, 1913, April 23, 1914, and April 21, 1916, and for departure in the fall August 10, 1912, and August 7, 1913. Nesting is started at almost the same time by practically all the birds, with the result that there is very little variation in the date when full sets of fresh eggs may be found. A nest found May 18, 1912, with five fresh eggs, is my earliest breeding record, my latest a nest found May 26, 1915, with five slightly incubated eggs. May 21 is the average date when the majority of the birds are incubating full sets. The nests vary from five to twenty feet from the ground and may be placed in elderberry bushes in thickets or in saplings or larger trees at the side of a road or at the edge of a field. One unusual situation was a nest built on the top of an old Goldfinch's nest, where it was remarkably well concealed. The nests are almost invariably compactly built of gray plant fibres and grasses, lined with plant down and horse hair.

(TO BE CONCLUDED IN OUR NEXT ISSUE)