

**Sitta canadensis.** RED-BREASTED NUTHATCH.—One or more Red-breasted Nuthatches were seen nearly every day from June 8 to 23, 1918. They were also not uncommon during the last week of August, 1917.

**Penthestes atricapillus atricapillus** CHICKADEE.—Only moderately common, June 5 to 23, 1918, when a few, usually in pairs, were seen nearly every day. From August 23 to 28, 1917, they were more plentiful and were frequently observed, particularly in birch-aspen second-growth or at the border of hemlock-maple timber.

**Hylocichla guttata faxoni.**<sup>1</sup> HERMIT THRUSH.—Fairly common at Mamie Lake, where one or two were seen daily, and where several were heard singing each morning and evening, June 5 to 24, 1918. They preferred the environs of tamarack-spruce bogs, though a few were found in birch-aspen thickets.

**Turdus<sup>2</sup> migratorius migratorius.** ROBIN.—Common from June 5 to 24, 1918. A few were seen August 23 and 25, 1917.

**Sialia sialis sialis.** BLUEBIRD.—Speaking relatively to other regions of similar environment in northern Wisconsin, this bird was not common in the Mamie Lake region. From 2 to 4 or 5 individuals were seen each day, June 5 to 24, 1918.

*U. S. Biological Survey, Washington, D. C.*

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## THE BIRDS OF WELLINGTON AND WATERLOO COUNTIES, ONTARIO.

BY J. DEWEY SOPER.

THE conclusions arrived at, and the notes embodied in the following annotations are the result of ten years' bird-study in the counties of Wellington and Waterloo, Ontario. The greater portion of this time was spent in the southern part of both counties, principally at Rockwood, Speedside, Guelph and Preston; and was divided into two periods—from 1908 to 1912 and 1915 to 1921. Innumerable short driving trips at all seasons radiating into nearly every part of the country north of Kitchener, Bresleau, Elora and Fergus contributed greatly to my knowledge and conception of bird problems and conditions in that additional belt. Other outings penetrated quite to the northern end of the counties, but I can by no means claim familiarity with the avifauna of the extreme northern part.

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<sup>1</sup>*pallasi* of A. O. U. Check-List.

<sup>2</sup>*Planesticus* of A. O. U. Check-List.

Even with these many years residence and the greater or less familiarity with the birds of the region which it implies, I am only too conscious of the many gaps in my personal experience. It perhaps but points eloquently to the inexhaustible nature of the subject, for verily ten years, where a life time is needed, is but a humble offering. Was it not Fabre who said that that place is richest in natural history which is most studied? I have, however, used every care to represent the birds of these counties in their true relations, or to that extent at least which this time has served to make clear to me. Where I have been unable to supply data for a species from my own journals, I have quoted others whose testimony has brought the record within the prescribed region. In most instances my own independent entries are founded upon specimens which I have myself collected; those sent to me by resident friends, or those which I have mounted for local sportsmen. In each such case, of course, the evidence by virtue of its nature is unimpeachable. Where the record is not so founded on a specimen or specimens the entry is so made as to leave no question as to the quality of the statement or conclusion.

As will be readily appreciated, I have not attempted to make use of all the data pertinent to the subject at my command, which is quite unnecessary, but have contented myself with giving a brief, clear and concise statement or summary for each species in respect to relative abundance, occurrence, distribution, etc. Behind these plain statements, however, giving it abundant credence, is a wealth of amassed data covering the years above mentioned. Although knowledge and nature are their own sufficient rewards, I have always practised the systematic writing of my observations with no thought of its use beyond my purposes and satisfaction, but it has since occurred to me somewhat as a moral duty to give what I have for the use of other rising students in the counties. For this reason I have made it as complete and up-to-date as circumstances permit. I have had in mind especially the young students to whom I trust it will be of material benefit. This is the first list of birds of Waterloo county to my knowledge, and for both counties is a correlation in brief of all that is known in respect to the points which it attempts to cover. There is much new material; new records; and several added species which

now brings the avifauna of the two counties up to the grand total of 206 species.

To glimpse the extent and character of the treated region in relation to the birds, it will perhaps be well to include the following description; Wellington and Waterloo counties lie about 42 miles north of Lake Erie and 52 miles east of Lake Huron and are among those counties of the southwestern peninsula which are so nearly completely encircled by the lower system of the Great Lakes. The area of the two counties, whose outline is very irregular, is approximately 1600 square miles—the combined average length north and south being roughly 54 miles and average width east and west, 30 miles. They are drained on the north by the headwaters of the Conostoga and Maitland rivers; centrally, and in the south by the Grand River, the Speed, and its chief tributary the Eramosa. Innumerable springs give rise to a network of small streams throughout the counties. Ponds and lakes are very rare, which accounts for the relative paucity of waterfowl and waders.

The country is gently and heavily rolling according to locality and rises gradually towards the north where it attains a maximum elevation above sea level of 1526 feet. In the south the maximum is 1183 and minimum 895 feet respectively. It is underlain by fossil-bearing limestone of Palaeozoic age, and where it is faulted, shows as escarpments or is cut into gorges by the streams, gives rise to very picturesque and charming scenery. Notable examples are the gorges at Elora, and the gorges, caves, potholes etc., at Rockwood. The whole area in the remote past has been heavily glaciated and is characterized by the usual glacial deposits such as drumlins, till, drift, erratic boulders and long, low eskers. The region is wholly within the Transition Zone, and is agriculturally of first rank; raising abundant crops of wheat, rye, oats, barley, peas, corn, potatoes, hay, apples, pears, plums and cherries. It is also noted for its thorough-bred stock.

The region originally was densely timbered but only a tenth of the former area, I should judge, is now wooded. About forty species of trees are known to occur within the two counties, the most characteristic being: hard, soft and silver maple; white and bur oak; basswood; white and black ash; white pine; white spruce; hemlock; balsam fir; white cedar; trembling and large-toothed

aspen; balsam poplar; paper and yellow birch; ironwood; blue and common beech; red, white, and rock elm; black cherry; tamarack; black walnut; butternut; bitternut hickory, and several species of willows.

In making this paper as complete as it is, I feel deeply indebted to Prof. Klugh on whose observations I have freely drawn. His notes now, too, are of particular interest and value because compiled at a time in the history of Wellington County when the waterfowl were perhaps in greater abundance than obtains today. However, as elsewhere mentioned, the lack of lakes in this inland area has always rendered it a poor one relatively for the study of the waders and waterfowl. Prof. Klugh's notes, unless otherwise stated, have been taken from the 'Catalogue of Canadian Birds' or from his paper on the 'Birds of Wellington County,' (Ontario Natural Science Bulletin, No. 1, 1905). I have had access also, to the migration records compiled by the Wellington Field-Naturalists Club for the years 1905, 1906 and 1912.

Mr. W. E. Saunders, Mr. P. A. Taverner and Mr. C. W. Nash have assisted me more with my bird work during the past six or seven years than perhaps any of them can now readily recall, and their genial aid and inspiration is infused more deeply into the present work than is possible for anyone to know but myself. I make this acknowledgement of their generous help as a token of my long-harbored gratitude and esteem.

1. **Colymbus holboellii.** HOLBOELL'S GREBE.—I have never myself observed this species. Mr. Klugh refers to the species in Wellington County as a scarce migrant most often seen in spring. Arrives in spring about April 15.

2. **Colymbus auritus.** HORNED GREBE.—A fairly common migrant both spring and fall but more often observed during the latter season. They frequent ponds, rivers and mill dams for many days at a time. Arrives in the spring about April 15, and remains often until first week in May. Reappears in late September and lingers until mid-November. Klugh notes one individual collected as late as December 30, 1904 at Guelph. Not known to breed.

3. **Podilymbus podiceps.** PIED-BILLED GREBE.—Tolerably common migrant, arriving in spring about April 12 and in the fall by the first of October. Possibly breeds.

4. **Gavia immer.** LOON.—Scarce migrant. Occasionally observed about the last week in April, sometimes earlier.

5. **Gavia lumme.** RED-THROATED LOON.—Mentioned by Klugh as a rare migrant.

6. **Larus marinus.** GREAT BLACK-BACKED GULL.—Klugh refers to Allan Brooks as having seen three in April 1893.

7. **Larus argentatus.** HERRING GULL.—Very common spring migrant arriving about March 26. Scarce in the fall. A few in winter. The Grand River is a favorite trysting place and here in April all along its course these beautiful birds may be seen dabbling about the shores or winging up and down stream. I have seen over fifty here in a single flock standing about in shallow water. During the spring of 1916, which was unusually wet, large numbers of Herring Gulls resorted to the temporary ponds in the fields throughout the country. It was a daily sight for two weeks to see various sized flocks flying and wheeling about over the farms, even at a considerable distance from the river.

8. **Larus delawarensis.** RING-BILLED GULL.—I make this entry tentatively. On March 25, 1918, I saw four Gulls travelling northwestward near Preston, which seemed in every way to answer to this species. As McIlwraith records them as very common on the western end of Lake Ontario during the winter, and Saunders and Fleming report them breeding on Georgian Bay and Muskoka Lakes, it would be not at all improbable to expect the species to migrate across country between the two points.

9. **Sterna hirundo.** COMMON TERN.—Mentioned by Klugh as a scarce migrant.

10. **Mergus americanus.** AMERICAN MERGANSER.—Two flocks which I identified as belonging to this species flew over northwestward on March 18 and 19, 1918. Klugh does not mention them as spring migrants but does as fall migrants, stating also that they sometimes winter on the Speed River.

11. **Mergus serrator.** RED-BREASTED MERGANSER.—Referred to by Klugh as a rare migrant.

12. **Lophodytes cucullatus.** HOODED MERGANSER.—Mentioned by Klugh as a scarce migrant. I mounted a female that was shot on the Grand River October 30, 1918.

13. **Anas platyrhynchos.** MALLARD.—Occasional migrant in the spring but oftener noted about the first week in November.

14. **Anas rubripes.** BLACK DUCK.—Frequently observed as a migrant. A few breed on a series of small lakes just south of Preston. During the year of 1918, I saw odd ones in this locality in early July and a flock of seventeen on July 25. On every occasion that I visited the place I saw Black Ducks throughout August and early September. On August 19, I shot a specimen. Arrives about March 28.

15. **Nettion carolinense.** GREEN-WINGED TEAL.—Recorded by Klugh as a scarce migrant.

16. **Spatula clypeata.** SHOVELLER.—One seen by Brooks (Klugh).

17. **Dafila acuta.** PINTAIL.—Twice seen by Brooks (Klugh).

18. **Aix sponsa.** WOOD DUCK.—Klugh speaks of it as a rare migrant—once breeding in Wellington County. Arrives about May 1.

19. **Marila americana.** REDHEAD.—Mentioned by Klugh as a frequent migrant.

20. **Marila marila.** SCAUP DUCK.—Common migrant and said by Klugh to be the commonest Duck. On May 6, 1918, I followed a wounded individual of this species about with the canoe on the Grand River. There seemed to be something wrong with one wing, but although I could approach closely, it was still able to dive exceedingly well and being without a gun it escaped me. Spring arrival about April 12.

21. **Marila affinis.** LESSER SCAUP DUCK.—Frequent migration at Mt. Forest (Klugh) passes over in the spring about mid-April.

22. **Marila collaris.** RING-NECKED DUCK.—Frequent migrant at Mount Forest (Klugh).

23. **Glaucionetta clangula americana.** AMERICAN GOLDEN-EYE.—This species is a tolerably common migrant, appearing first week in April and again about the first of November. I have frequently observed them along the Grand River, but rarely on the smaller streams. Sometimes they winter on both Grand and Speed Rivers.

24. **Charitonetta albeola.** BUFFLE-HEAD.—A frequent migrant, arriving in spring about April 15, and in the fall by October 28. Tarries often for a week or two on secluded mill-ponds, deep expansions of the rivers, and small lakes.

25. **Clangula hyemalis.** OLD-SQUAW.—Observed by Klugh as a scarce migrant.

26. **Oidemia deglandi.** WHITE-WINGED SCOTER.—Mentioned by Klugh as a scarce migrant.

27. **Oidemia perspicillata.** SURF SCOTER.—“A small flock seen at Puslinch Lake September 22, 1904, and one taken by the writer” (Klugh).

28. **Erismatura jamaicensis.** RUDDY DUCK.—Frequent migrant; arrives about April 25; and in the fall about the first week in October. Occasionally loiters about the river until early in November.

29. **Branta c. canadensis.** CANADA GOOSE.—Occurs as a frequent migrant, going over about April 10. Not so often seen in the fall. The first week in December 1920, a single individual of this species loitered about the Speed River below Guelph for several days.

30. **Botaurus lentiginosus.** AMERICAN BITTERN.—Common summer resident, breeding in many of the small marshes, ponds etc., throughout both counties. Its unique spring vocal performance is one of the characteristic sounds of rural nature through May and June. Arrives about April 25. I collected a specimen on April 5, 1918, a surprisingly early date for this species. Its crop contained ten small minnows ranging from 1½ to 2 inches in length. The stomach contained the same in a macerated condition, in addition to small gravels and many water soaked leaves.

31. *Ixobrychus exilis*. LEAST BITTERN.—Rare summer resident (Klugh).

32. *Ardea h. herodias*. GREAT BLUE HERON.—Fairly common summer resident. Nearly every stream in the country has its Blue Herons. Some years ago there was a colony about ten miles north of Rockwood. Klugh cites two colonies near Guelph some years ago, the second begun in 1903. Appears in spring about March 28, and remains until early November.

33. *Butorides v. virescens*. GREEN HERON.—Rare summer resident a number of years ago, but now fairly common in the southern part of the counties at least. Klugh mentions two which remained all summer at Puslinch Lake as long ago as 1904. I know them to breed in the south western corner of Waterloo County and in a series of small ponds west of Galt. Frequently observed along the Speed River on both sides of Guelph and are known to breed. Arrives about May 16, and leaves about September 16.

34. *Nycticorax n. naevius*. BLACK-CROWNED NIGHT HERON.—Klugh records one taken in adult plumage at Guelph about 1894.

35. *Grus mexicana*. SANDHILL CRANE.—Apparently the only occurrence on record is one cited by Klugh, as seen by Brooks in April, 1893—a single individual migrating in company with three Great Black-backed Gulls.

36. *Rallus virginianus*. VIRGINIA RAIL.—Rare summer resident. A few noted each spring about May 10, for the first. Collected a specimen on May 13, 1918.

37. *Porzana carolina*. CAROLINA RAIL.—Arrives about May 10. Rare breeders in the southern part of the counties. Klugh speaks of it as a common summer resident in the northern portion of Wellington.

38. *Coturnicops noveboracensis*. YELLOW RAIL.—Klugh records one taken in Wellington County by Mr. S. Walker.

39. *Ionornis martinica*. PURPLE GALLINULE.—One taken by Mr. Holliday near Guelph about 1894 (Klugh).

40. *Fulica americana*. AMERICANA COOT.—Scarce migrant at Mount Forest (Klugh).

41. *Philohela minor*. WOODCOCK.—Scarce migrant, appearing briefly about April 12. Klugh speaks of it for Wellington County as a scarce summer resident.

42. *Gallinago delicata*. WILSON'S SNIBE.—Scarce migrant in the southern portion of the counties. More frequently noted during the fall—late October and early November. Klugh mentions it as a scarce summer resident at Mount Forest.

43. *Limnodromus g. griseus*. DOWITCHER.—One taken by Holliday at Guelph.

44. *Pisobia maculata*. PECTORAL SANDPIPER.—Rare migrant. May be looked for about April 5. My journal for 1911 records the collection of a single specimen from a flock feeding on a ploughed field on August 24. I

cannot now find this specimen and feel disinclined at this date to accept the record as unimpeachable.

45. *Pisobia bairdi*. BAIRD'S SANDPIPER.—Rare migrant. Taken once by Mr. Holliday at Guelph.

46. *Pisobia minutilla*. LEAST SANDPIPER.—Rare migrant. Taken by Mr. Holliday at Guelph, May 19, 1895.

47. *Pelidna alpina sakhalina*. RED-BACKED SANDPIPER.—Rare migrant. Arrives in spring about May 23. Klugh records a specimen that had collided with a telegraph wire near Guelph on October 12, 1905.

48. *Ereunetes pusillus*. SEMIPALMATED SANDPIPER.—Rare migrant; has been collected by Holliday.

49. *Totanus melanoleucus*. GREATER YELLOW-LEGS.—Frequent migrant along the Grand River. Have seen several specimens collected. One shot on October 10, 1918 is now in the possession of a resident at Blair. Arrives about May 1.

50. *Totanus flavipes*. LESSER YELLOW-LEGS.—Scarce migrant. Arrives in spring about May 5.

51. *Tringa s. solitaria*. SOLITARY SANDPIPER.—Scarce migrant. Spring appearance about May 10. Probably breeds in the northern end of the counties as Mr. Saunders and I found them on two occasions in Proton Township between the sixth and ninth of August, 1920. I saw a flock of eight near Guelph, same year, on August 21. Klugh records it as common near Guelph from July 19, to September 1, 1903.

52. *Bartramia longicauda*. BARTRAMIAN SANDPIPER.—Herbert Groh of Preston records this species for the first time, in the year 1911. A pair bred and successfully reared their young. In the O. N. S. Bulletin No. 7, 1912, he says: "This record of the occurrence and breeding of the Bartramian Sandpiper near Preston appears to be the first for the district surrounding Guelph. It fails by a little of being in Wellington County, being west of Puslinch Lake nearly three miles, and distant from Guelph about eleven miles."

It is morally a Wellington County record if we but close our eyes for a moment to political boundary. Mr. Groh gives the following additional account in the O. N. S. B., No. 8, 1913: "The Bartramian Sandpiper or Upland Plover which was recorded for this locality the past two seasons has again returned in 1913 to the same neighborhood. Its cry was first heard on April 22, and frequently since. There is no evidence to indicate that more than one pair breeds here, the young reared in 1911 and 1912 doubtless going elsewhere."

53. *Actitis macularia*. SPOTTED SANDPIPER.—Common summer resident. Arrives about April 28; departs early in October. A very familiar species about ponds and streams throughout the region. I have found nests in nearly every quarter of the southern part.

54. *Pluvialis d. dominica*. AMERICAN GOLDEN PLOVER.—A rare spring migrant; more often seen in the fall but still scarce and uncertain. Has been reported to me by local gunners.



55. **Oxyechus v. vociferus.** KILLDEER PLOVER.—Common summer resident. Arrives about March 24, departs late in October. Breeds commonly throughout the region. Nest completed and eggs laid by May 27. I have found downy chicks running about as early as June 2, and others of like age as late as July 21. In 1910, I found a nest containing four eggs on April 20. The following year near the same place I found another with four eggs on April 26. Their nesting period varies widely.

56. **Charadrius semipalmatus.** SEMIPALMATED PLOVER.—A scarce migrant. Has been taken by Holliday at Guelph. Arrives about May 15. I collected a specimen at Speedside on May 17, 1910.

57. **Colinus v. virginianus.** BOB-WHITE.—Formerly occurred in the southern part of the counties as I have time and again been told by old residents. Has been exterminated for at least twenty years. Klugh records one seen by Brooks for Wellington Co.

58. **Canachites canadensis canace.** CANADA SPRUCE GROUSE.—Klugh records the Canada Grouse being once taken near Guelph on November 25, 1898.

59. **Bonasa umbellus togata.** CANADA RUFFED GROUSE.—Fairly common permanent resident. They begin to lay about mid-April. I have several times seen downy young about the first of June. On May 6, 1920, I found a nest in a thick cedar swamp near Guelph containing fourteen eggs. The young hatched late in May.

60. **Ectopistes migratorius.** PASSENGER PIGEON.—Once abundant but now extinct.

61. **Zenaidura macroura.** MOURNING DOVE.—Tolerably common summer resident. Arrives about April 15. Departs about October 20. The Wellington Field Naturalists Club records one seen in 1905 as early as March 25, and as late as November 3. One of the characteristic sounds of the April and May woods is the soft and mournful cooing of this species. On June 30, 1915, I found a nest containing one egg. It was a flimsy structure of interlaced twigs planted on the top rail of a snake fence thickly overhung with cedars.

62. **Cathartes aura septentrionalis.** TURKEY VULTURE.—Klugh records one taken in Wellington County, September, 1910.

63. **Circus hudsonius.** MARSH HAWK.—Common summer resident in the south. Klugh mentions it as a scarce resident at Mount Forest. Arrives about April 5. I have one record as early as March 18, in 1918. Leaves in late October. W. F. N. Club records one for November 8, in 1905. A nest found on May 17, 1918 contained five eggs. Young hatched out on June 6.

64. **Accipiter velox.** SHARP-SHINNED HAWK.—Scarce summer resident. Arrives about April 8, although sometimes ten days earlier. Leaves sometime in October. Klugh records it as a common summer resident at Mount Forest.

65. **Accipiter cooperi.** COOPER'S HAWK.—Scarce summer resident. Arrives early in April. Occasionally remains throughout the winter.

I have myself seen it more frequently during the winter than the summer. On December 12, 1914, I was within a few feet of a Cooper's Hawk in the city of Guelph as it pursued a flock of English Sparrows around a small barn. Took a specimen near Rochwood about February 10, 1917, as it was manoeuvring around a barnyard. Specimen now in collection of Geological Survey, Ottawa. A specimen in my collection was shot in the woods north of Preston on January 15, 1918, (No. 234). I know of but one nesting record, a brood of young which I saw out of the nest just south of Preston in an oak woods early in August, 1918.

66. **Astur a. atricapillus.** AMERICAN GOSHAWK.—Irregular winter visitor. Sometimes fairly frequent and again entirely absent. Generally a few are observed or shot during the fall as they make themselves conspicuous about farm yards, often openly attacking poultry. I mounted a specimen, which was shot on October 27, 1916, while in the act of flying upwards with a good sized chicken which it had seized.

67. **Buteo b. borealis.** RED-TAILED HAWK.—Scarce migrant at Guelph; very rare at Mount Forest (Klugh). Arrives about March 15.

68. **Buteo l. lineatus.** RED-SHOULDERED HAWK.—Common summer resident. Arrives about March 19, and departs early in October. I have a number of nesting records. I collected a breeding male on May 8, 1917, which is now in the Geological Survey collection.

69. **Buteo platypterus.** BROAD-WINGED HAWK.—Frequent migrant, arriving about April 24, and again observed in late September. I believe a few breed, as I collected a male in a thick swamp on May 21, 1915—No. 33,—now in collection of Geological Survey. This supposition is in no way improbable when it is remembered that the species breeds in Ontario on an average about May 24, and has been known to have eggs as early as May 8.

70. **Archibuteo lagopus sancti-johannis.** AMERICAN ROUGH-LEGGED HAWK.—Rare migrant. W. F. N. Club records an individual for Wellington on October 31, 1905.

71. **Haliaeetus leucocephalus alascanus.** BALD EAGLE.—Rare migrant. (Klugh). W. F. N. C. records one May 2, 1905.

72. **Falco islandus** WHITE GYRFALCON.—Rare. One seen by Brooks in February, 1893.

73. **Falco c. columbarius.** PIGEON HAWK.—Scarce migrant. (Klugh). W. F. N. C. records one October, 15, 1905

74. **Falco s. sparverius.** SPARROW HAWK.—Common summer resident. Arrives by April 5, occasionally a week earlier. Leaves early in October.

75. **Pandion haliaëtus carolinensis** AMERICAN OSPREY.—Infrequent migrant. A specimen in Preston was shot nearby on the Grand River. W. F. N. Club records one ov September 30, 1903; April 22, and September 28, 1905.

76. **Asio wilsonianus** AMERICAN LONG-EARED OWL.—Rare resident. (Klugh). This species is so retiring by nature, that it is perhaps a much more frequent migrant and breeder than is supposed.

77. *Asio accipitrinus*. SHORT-EARED OWL.—Rare migrant (Klugh).
78. *Syrnium varium*. BARRED OWL.—This species is a rare resident in the region and scarce at Mount Forest. I know of a specimen in Preston which was shot in the month of September, 1916, near Blair.
79. *Cryptoglaux r. richardsoni*. RICHARDSON'S OWL.—One taken by Brooks in Wellington County, (Klugh).
80. *Cryptoglaux acadica*. SAW-WHET OWL.—Probably a frequent migrant, but a scarce summer resident. Has been taken by Holliday.
81. *Otus a. asio*. SCREECH OWL.—Common resident. It is most noticeable during the fall and a common thing at that time to hear their weird screeching calls on clear nights coming from the woods. I have seen them on many occasions throughout the year, but most frequently in barns during the winter. Klugh remarks that the gray phase predominates at Guelph, red at Elora, and gray at Mount Forest.
82. *Bubo v. virginianus*. GREAT HORNED OWL.—Common resident throughout both counties. I have flushed this species in thick woods nearly every month in the year and collected several specimens. It is a frequent experience to see the Crows in the spring mobbing the Horned Owl. There was a heavy migrational wave of this species in November, 1918, when it was not uncommon to see several on a single walk. They sat listlessly about in the weak sunshine, openly exposed on the limbs of beech and maple. Nests late in March. In a female that I collected on March 21, 1918, the ovaries were about the size of No. 6, shot.
83. *Nyctea nyctea*. SNOWY OWL.—Very irregular in its movements. Occasionally observed during severe winters. I have seen two or three mounted specimens in the counties which were shot during a noted southern movement of the species about 1901–02.
84. *Surnia ulula caparoch*. AMERICAN HAWK OWL.—Rare winter visitant at Mount Forest (Klugh).
85. *Coccyzus a. americanus*. YELLOW-BILLED CUCKOO.—Scarce summer resident. Recorded once by W. F. N. C. on May 12, 1905.
86. *Coccyzus erythrophthalmus*. BLACK-BILLED CUCKOO.—Common summer resident. Arrives about May 25 and disappears in late September. Young are hatched from June 15 until well into July. I have seen them feeding young just from the nest on July 11.
87. *Ceryle a. alcyon*. BELTED KINGFISHER.—Common summer resident. Appears about April 10. Normally disappears in November. I have myself seen them on the Speed River near Guelph until December 7, 1920. Occasionally winter on the Speed and Grand Rivers.
88. *Dryobates v. villosus*. HAIRY WOODPECKER.—Frequent resident. According to my experience they are commoner in Wellington than Waterloo. Have collected specimens on March 6, 1917, and June 14, 1915. More frequently met during fall and winter.
89. *Dryobates pubescens medianus*. DOWNY WOODPECKER.—Fairly common resident; most noticeable during the spring.

90. **Picoides arcticus.** ARCTIC THREE-TOED WOODPECKER.—Rare visitor at Guelph. One taken May 2, 1904 by the writer. One taken by Brooks at Mount Forest in October, 1893; others seen there (Klugh). Recorded by W. F. N. C. on May 1 and 2, 1905.

91. **Sphyrapicus v. varius.** YELLOW-BELLIED SAPSUCKER.—Common migrant, arriving about April 12. Scarce summer resident. Last seen in late September.

92. **Phloeotomus pileatus abieticola.** NORTHERN PILEATED WOODPECKER.—Rare. The only record I have is an individual that I saw in pine woods near Blair on March 28, 1915.

93. **Melanerpes erythrocephalus.** RED-HEADED WOODPECKER.—Fairly common summer resident. Arriving about May 6. Saw one on April 13, 1918. Klugh records Mr. A. A. Davidson finding twenty-six in a swamp at Elora in February, 1899.

94. **Colaptes auratus luteus.** NORTHERN FLICKER.—A very common summer resident, appearing in spring about April 10. Leaves early in October. Young are hatched about June 1, and leave the nest three weeks later. Rarely remains all winter in thick woods if the season is favorable.

95. **Antrostomus v. vociferus.** WHIP-POOR-WILL.—Tolerably common summer resident. Arrival about May 5; departs early in September.

96. **Chordeiles v. virginianus.** NIGHTHAWK.—Common summer resident. Arrives about May 20, leaves early in September.

97. **Chaetura pelagica.** CHIMNEY SWIFT.—Common summer resident, arriving about April 28; departing early in September, or late August. Eggs laid by June 17 and young about ready to leave the nest by July 28.

98. **Archilochus colubris.** RUBY-THROATED HUMMINGBIRD.—Frequent summer resident. First seen about May 18. Disappears about September 25. Breeds in the middle of June. Two nests which I have seen were built on the limbs of poplars surrounding an orchard near Speedside.

99. **Tyrannus tyrannus.** KINGBIRD.—Very common summer resident. Arrives about May 8. Departs early in September. Nest completed and eggs laid by June 10. Young ready to leave the nest about July 24.

100. **Myiarchus crinitus.** CRESTED FLYCATCHER.—Common summer resident. First observed about May 10; leaves in mid-September. Breeds in late May to early June.

101. **Sayornis phoebe.** PHOEBE.—Common summer resident, arriving April 1; departing about the middle of October. Males precede females by several days. Eighteen days after female arrives the nest is usually completed, and by May 6, the full clutch of eggs laid. Young leave the nest about June 12. Probably a second brood is often raised as I have seen young just from the nest on July 23.

102. **Nuttallornis borealis.** OLIVE-SIDED FLYCATCHER.—Klugh mentions the species as a rare migrant at Guelph and a frequent summer resident at Mount Forest.

103. **Myiochanes virens.** WOOD PEWEE. —Common summer resident. First observed about May 17, leaves about September 15. Breeds in mid-June; young leave the nest early in July.

104. **Empidonax flaviventris.** YELLOW-BELLIED FLYCATCHER. —Scarce migrant. Arrives about May 19. On May 20, 1916, I collected a specimen which was frequenting bushes over a small pond in the woods. Reported as a common summer resident at Mount Forest by Klugh.

105. **Empidonax t. trailli.** TRAILL'S FLYCATCHER. —“Scarce at Mount Forest. Specimens were sent by Brooks to Wm. Brewster who pronounced them ultra-typical of the subspecies. Brooks says that this is a bird of the dry upland copses of small maple, beech, etc., while *E. t. alnorum* inhabits the swales. The notes are quite distinct from those of *alnorum*.” (Klugh).

106. **Empidonax trailli alnorum.** ALDER FLYCATCHER. —Fairly common migrant and frequent summer resident. Arrives very regularly about May 24, and appears to leave early in September. I collected a specimen north of Preston on May 24, and two on June 6 following, 1916. Their notes are very distinctive, sounding like *twa-che-a*, with the accent on the second syllable, and cannot be mistaken for any other species. I have heard them nearly every year, especially during late May. I knew of two resident pairs near Guelph in the summer of 1920. They frequented wet depressions of swamp land grown to cedar, tamarack, willow etc., and were very shy and seclusive.

107. **Empidonax minimus.** LEAST FLYCATCHER. —Tolerably common summer resident frequenting woodland, particularly, of trembling and large-toothed aspen and balsam poplar. Occasionally nests in apple orchards. Arrives about May 6. The song is an emphatic *che-ec*, markedly diagnostic of the species and therefore easily distinguished. I collected a female on May 27, 1915. Produces its eggs about the first of June.

108. **Otocoris alpestris praticola.** PRAIRIE HORNED LARK. —Common summer resident. Usually the first species to arrive in the spring, reaching us in late February or early March as a rule, enlivening the frozen ploughed fields with their rattling, pebbly songs. They leave about November 10. On May 5, 1915, I found a nest in a meadow containing four eggs. A young one apparently just from the nest was found on May 18, 1917. Of the many specimens which I have collected in the two counties all have proven to be *praticola*.

109. **Cyanocitta c. cristata.** BLUE JAY. —Common resident; markedly abundant during the fall when the woods resound with their loud brazen calls. Frequently at this time they travel about in small bands of from three to five. Nests about the middle of May. One pair that I watched building on May 2, 1915, went about their work with unbroken silence, save for a few low *crooks*, as they approached each other near the nest. The latter was situated on a limb of a tall white pine about twenty feet from the ground.

110. **Perisoreus c. canadensis.** CANADA JAY. —“Frequent from October 24, to November 17, 1904, in Wellington County” (Klugh)

111. **Corvus b. brachyrhynchus.** AMERICAN CROW.—Very common summer resident, arriving about February 25. Congregate in great flocks October 5 to 25 and leave soon after. An odd straggler remains often far into November and even December. They are very scarce winter residents. Eggs are laid by about May 10 and young out of nest by June, 12.

112. **Dolichonyx oryzivorus.** BOBOLINK.—This sweet rollicking resident of clover-fields and meadows arrives with wonderful regularity about May 5, each year. Vanishes toward the middle of August. Lays eggs in mid-June. A second brood appears to be raised in July. I have seen well-grown juveniles arrayed on wire fences between August 7 and 10.

113. **Molothrus a. ater.** COWBIRD.—Common summer resident. Appears about March 25 and leaves early in October. The young hatched and reared by other species of small birds leave the nest the forepart of June. The males frequently band together in small flocks by the last of June.

114. **Agelaius phoeniceus phoeniceus.** RED-WINGED BLACKBIRD.—Fairly common summer resident. First seen about March 20; the majority disappearing by mid-September. An odd one lingers on somewhat longer. In the migration records of the W. F. N. Club is the entry of a "last seen" on November 3, 1912. Full compliment of eggs is laid by about May 22, and the young have left the nest by June 17. Young of a second brood, apparently, are often observed about August 2.

115. **Sturnella m. magna.** MEADOWLARK.—Common summer resident. Arrives about March 20, occasionally as early as the 13th. There is a little flocking tendency often in early August. The majority of the birds are gone by mid-October. Many remain into November. W. F. N. C. records one on December 3, 1905. Breed in early May and young have vacated nest by June 10-16.

116. **Icterus galbula.** BALTIMORE ORIOLE.—A common summer resident of door-yard trees and orchards everywhere. Arrival about May 10; departure about September 1.

117. **Euphagus carolinus.** RUSTY BLACKBIRD.—Not very common as a spring migrant. Arrives about April 10. Sometimes not seen at all during the spring but usually a common fall migrant, appearing in late September and lingering for a couple of weeks.

118. **Quiscalus q. aeneus.** BRONZED GRACKLE.—A very common summer resident in certain localities. Appears from March 18 to 23, leaves by the 20th of October. I have known a few to remain along the Speed several days later than this. Breeds in the forepart of May, eggs hatched by about May 28, and young able to fly by June 20. They sometimes flock as early as July 6 and by August 20, the movement is very pronounced, huge flocks driving over towards evening in every direction from day to day. There is a characteristic fall element in these late August aggregations.

119. **Hesperiphona v. vespertina.** EVENING GROSBEEK.—Rare winter visitor. Occasionally during a severe winter these beautiful northerners make their way into the south. A few were observed during the winter of 1919–20. Klugh mentions the species as seen in considerable numbers during February, 1902—a flock of 75 being seen on the 6th of that month by Prof. M. W. Doherty.

120. **Pinicola enucleator leucura.** PINE GROSBEEK.—This species is an irregular winter visitor, some seasons being tolerably common. During the winter of 1910–11 they were frequent callers in our orchard, where they fed for a period almost daily on the rotten frozen apples which still hung to the limbs. On February 16, 1917, I saw a single female; also single birds on October 20, 1918, and January 5, 1919, Klugh records them for the winter of 1903–04 from November 5, until March 24.

121. **Carpodacus p. purpureus.** PURPLE FINCH.—Fairly common spring migrant. An infrequent summer resident and very often a winter resident. I have seen them every month in the year within the counties. They are particularly noticeable during April, for then they flock together and the males are in full song. Small flocks are occasionally seen frequenting conifers in heavy woods during the winter.

122. **Loxia curvirostra minor.** AMERICAN CROSSBILL.—Irregular winter visitor (Klugh).

123. **Loxia leucoptera.** WHITE-WINGED CROSSBILL.—Irregular winter visitor. Observed a small flock in a hemlock wood near Speedside in December, 1910.

124. **Acanthis l. linaria.** REDPOLL.—Common winter visitor. Very numerous during the winters of 1911–12 and 1916–17. One of the largest flocks I ever saw flew into some apple trees in an orchard near Preston on March 9, 1917. There were at least four hundred in the gathering and they literally darkened the trees. On March 30 following I saw a flock of about one thousand in an open field. Of numerous specimens taken all were *linaria*.

125. **Astragalinus t. tristis.** AMERICAN GOLDFINCH.—Common summer resident; scarce winter resident. Make their appearance in summer plumage about May 6, when they are of course more noticeable. On November 26, 1917, I collected a specimen in winter plumage from a flock of about fifty. Have seen them in flocks frequenting thick cedar woods in December. Saw a flock in winter plumage on March 3, 1918. On April 18, following, I observed a small flock feeding on the ground about little pools among the hardwoods. The males were then arrayed in their distinctive summer livery. The Goldfinch is a relatively late breeder, nesting in July and August. The earliest birds are out of the nest about July 20, and others are considerably later. The males are particularly voluble about August 18. For three weeks a number of Goldfinches sang lustily day after day about a row of lofty white spruces during August. The male launches out from one tip to another on rapidly

beating wings, singing in the most ecstatic manner. The whole performance is frequently prolonged into a wide circling flight accompanied by a continuous wild overflow of song. The females were doubtless incubating in the spruces, or tending young. After August 24, the young were much in evidence in the vicinity calling incessantly in tones resembling *chee heep* or *chee he heep*. Were it not for the sweet quality of the calls, the persistency of the numerous performers would render the air after a time rather monotonous.

126. **Spinus p. pinus.** PINE SISKIN.—A very irregular winter resident. My own record of the species is very meagre. I observed them commonly during the winter of 1910–11 and they were tolerably common in 1914–15. Not many were seen during January and February, 1915, but the records show them to be in fair evidence during the last half of March and for a few days in early April. The W. F. N. Club records them on March 29, and November 1, 1905, and in January 1906. That year they are recorded as breeding commonly in the vicinity of Guelph.

127. **Plectrophenax n. nivalis.** SNOW BUNTING.—This species is observed nearly every winter; arriving about November 15 and disappearing commonly towards the end of March, usually by the 17th. Some winters these Buntings are quite numerous, banding in large sociable flocks and are to be seen sweeping up and circling above the snowy fields or settling among the weed-tops to feed. During severe weather in January it is not unusual to see them feeding among chaffy refuse which the farmers have thrown out on the gangways in front of the barns. At such times they are not very shy.

128. **Calcarius l. lapponicus.** LAPLAND LONGSPUR.—Rare winter visitor (Klugh).

129. **Poecetes g. gramineus** VESPER SPARROW.—A very common summer resident. Appears in spring by April 5, and leaves about October 24. They show a marked tendency to flock in small bands late in September. Abundant breeders in early June, an odd nest containing young by June 11. I have seen young awing on June 13. Some are earlier, but the majority later.

130. **Passerculus sandwichensis savanna.** SAVANNAH SPARROW.—A common summer resident. Arrives about April 13; leaves late in September. It nests in May, June and July.

131. **Ammodramus savannarum australis.** GRASSHOPPER SPARROW.—Before me as I write is a specimen of this Sparrow constituting as far as I know the first record for either county. I collected this bird four miles north of Preston in Waterloo County, on June 14, 1917—catalogue No. 180. It was frequenting a hay meadow such as is used by Bobolinks and Meadowlarks. It seemed very shy and only after considerable stalking did I finally come within range. I was attracted to it by its song which I recognized at once as a strange one to me. The year before I heard the same, but failed to secure a specimen. It appealed to me as resembling the syllables—*chu-chuc-che*—rapidly repeated and forming a



single delivery. On June 20, 1919, I again discovered the species on a low meadow not a mile distant from the spot where I collected my 1917 specimen. The species is evidently increasing its range northwards in Ontario. Mr. Saunders says of it in Macoun's 'Catalogue of Canadian Birds' published in 1909; "Fairly common in the two southwestern counties of Ontario: increasing steadily in numbers in the London district. I now meet it every year and sometimes locate five or six pairs in a single season though I have not yet found a nest." This is a fore-shadowing of their ultimate appearance in Waterloo County several years later.

132. *Zonotrichia l. leucophrys*. WHITE-CROWNED SPARROW.—Frequent spring migrant, less common in fall. Dates of spring arrivals in the counties run from as early as April 28 to as late as May 25. These two extreme dates are those from the migration records of the W. F. N. C. At Speedside in 1910 I saw one on May 2, saw and heard one singing on the 13, and another on the 21. Saw a single individual the following year on May 13. Collected a male on May 8, 1916, and again observed a single bird only on May 21, 1917. The W. F. N. C. observes the species on September 22, 1905. On October 3, 1920, I saw two White-crowns in company with Song, White-throated and Swamp Sparrows; the company was frequenting a tangled thorn hedge by the side of a field near a swamp. I heard the White-crowns twice whistle their entire songs but much subdued. A number of additional "part-songs" were also heard when the singer in modest undertones sang correctly the forepart of the melody, but broke off abruptly before the proper ending.

133. *Zonotrichia albicollis*. WHITE-THROATED SPARROW.—Common summer resident. Arrives about April 25. My earliest record is April 15, 1921; the W. F. N. Club has an entry for April 5, 1906. They tend to band together and with other Sparrows late in September and early October. They finally disappear about September 15, although an occasional bird may be seen several days later. Nests in late May and in June.

134. *Spizella m. monticola*. TREE SPARROW.—Frequent winter resident. Sometimes common, other winters apparently absent. They appear early in November, and are sometimes to be seen in abundance as early as October 18. They disappear about April 20.

135. *Spizella p. passerina*. CHIPPING SPARROW.—Common summer resident. Arrives about April 15, occasionally as early as April 8. Leaves about October 14. The nest completed and eggs laid by late May. Young are full fledged by June 12. I have seen young in the nest as late as August 2. Many doubtless raise a second brood.

136. *Spizella p. pusilla*. FIELD SPARROW.—Recorded by the Wellington Field-Naturalists' Club on 1912 between May 3 and 7. Again seen in 1919 by Prof. Crow near the Ontario Agricultural College, Guelph. The bird is very rare.

137. *Junco h. hyemalis*. SLATE-COLORED JUNCO.—Abundant migrant. Breeds sparingly. Spring migration reaches the counties about March 15; in 1920 it was five days earlier. They are common for sixweeks,

then all gradually disappear but the very few that remain to breed. Found nests in late May of years 1909 and 1911. The species again becomes abundant about October 3, reaching the high tide in ten days and gradually thinning out and disappearing again towards the end of the month. Small parties are sometimes to be seen even into the middle of November. An occasional bird winters.

138. *Melospiza m. melodia*. SONG SPARROW.—Abundant summer resident. Arrives about March 18; departs about October 23. Eggs are produced as early as April 29 and still laid as late as early August.

139. *Melospiza georgiana*. SWAMP SPARROW.—Common summer resident. First noted about April 16; last seen about October 10. A nest found on May 14, 1911, contained two eggs; when next visited on the 21st of the month it contained five. On June 17, the nest was empty.

140. *Passerella i. iliaca*. FOX SPARROW.—This bird is a scarce migrant; very rarely seen in spring but commoner during the fall migrations. Twice noted it at Speedside in October, 1910 and 1911. Saw a pair of Fox Sparrows a few miles north of Preston in hardwoods on April 7, 1918. W. F. N. Club records the species on September 27, 1906; and April 23 and October 28 to November 5, 1905.

141. *Pipilo e. erythrophthalmus*. TOWHEE.—Tolerably common summer resident. Quite common during spring migrations, showing up first about April 8 and are numerous by May 6. Leaves about October 10. I heard the familiar nasal, *swape* call of this species on October 22, 1920. It was, however, a very mild season; a long spell of weather during the month being as mild and languid as August, inducing the species to remain longer. On November 7, of the same fall I saw a Towhee in Muskoka along the Moon River; an unusual date—the mild season again being responsible. A nest which I found near Preston on June 30, 1918 contained four slightly incubated eggs.

142. *Cardinalis c. cardinalis*. CARDINAL. One taken at Salem, near the middle of Wellington county January 3, 1898. One seen at Guelph December 20; 22; and 27, 1898, by F. N. Beattie (Klugh).

143. *Zamelodia ludoviciana*. ROSE-BREADED GROSBREAK.—Frequent summer resident. Arrives about May 10, and leaves in late August. Breeds in late May.

144. *Cyanospiza cyanea*. INDIGO BUNTING.—Common summer resident. Appears about May 18 and leaves early in September.

145. *Piranga erythromelas*. SCARLET TANAGER.—Tolerably common summer resident. Spring arrival about May 15; departure about September 10.

146. *Progne s. subis*. PURPLE MARTIN.—Mr. Klugh says in 'Catalogue of Canadian Birds,' 1909: "A few breed in the cities, and an odd pair in some of the villages around Guelph; arrives about May 10 and leaves about August 1" The species has evidently become very rare of late years as I have never seen it in either county.

147. **Petrochelidon l. lunifrons.** CLIFF SWALLOW.—Frequent summer resident, but very local in distribution. Arrives about May 17, and leaves in late August. Several pairs bred on our barn during June and July 1915 in Waterloo County.

148. **Hirundo erythrogastra.** BARN SWALLOW.—Common summer resident. Makes its appearance about April 25; departs September 5–8. Nest completed and eggs laid by the end of May. Young are awing early in July. Two broods are frequently raised.

149. **Iridoprocne bicolor.** TREE SWALLOW.—Common summer resident, arriving about April 23 and leaving in late August and early September. Breeds in late May and in June. Two nests which I found in early June in Waterloo County, were located in the tops of decayed fence posts.

150. **Riparia riparia.** BANK SWALLOW.—Not an uncommon summer resident but very local. I have seen the species in different parts of the counties but most frequently along the Grand River where they nest in colonies in sand banks. Arrives early in May and leaves sometime during the latter half of August. Breeds in late May and in June.

151. **Stelgidopteryx serripennis.** ROUGH-WINGED SWALLOW.—It is difficult to be sure just how plentiful this species really is on account of its similarity to the Bank Swallow. Certainly it has been frequently overlooked. I have several times observed the species associating with Bank Swallows in the southern part of the counties, and most frequently along the Grand River in Waterloo County. On May 13, 1916, I collected a male from a colony of mixed Banks and Rough-wings, near Freeport on the Grand River. Arrives about May 2, and leaves in late August.

152. **Bombycilla garrula.** BOHEMIAN WAXWING.—Once observed by Prof. Crow near the Ontario Agricultural College at Guelph.

153. **Bombycilla cedrorum.** CEDAR WAXWING.—Common summer resident. Arrives about May 26; leaves about September 24. Some times unusually common in early June. They breed about June 10, and the young are on the wing by July 1. Some birds are very late builders. I have seen them nest building on July 10; eggs in the nest on July 23 and young still in the nest on August 6.

154. **Lanius borealis.** NORTHERN SHRIKE.—Scarce winter visitor (Klugh).

155. **Lanius ludovicianus migrans.** MIGRANT SHRIKE.—Scarce summer resident. Arrives about March 20, and leaves early in September.

156. **Vireosylva olivacea.** RED-EYED VIREO.—Common summer resident. Arrives about May 12, and leaves about September 25. Breeds in June.

157. **Vireosylva philadelphia.** PHILADELPHIA VIREO.—“Rare migrant. One taken by Brooks in May 1894; one by writer August 27, 1903, and another September 6, 1904” (Klugh).

158. **Vireosylva g. gilva.** WARBLING VIREO.—Common summer resident. Arrives about May 6, leaves in the latter part of September. A nest that I found near Blair on June 25, was in a big maple twenty-five feet up and contained four eggs.

159. **Lanivireo flavifrons.** YELLOW-THROATED VIREO.—Uncommon migrant usually; occasionally numerous during the spring migrations. First seen about May 9. Again observed about mid-September, often earlier. My latest record of the species is for one seen near Guelph on October 10, 1920. It was travelling in company with Ruby-crowned Kinglets and Myrtle Warblers. It will be remembered that the fall of 1920 was one of exceptional mildness, which doubtless retarded the southern movement.

160. **Lanivireo s. solitarius.** SOLITARY VIREO.—Scarce migrant. Arrives about May 8. Again observed from about September 10, until early October. I once collected a specimen near Preston as late in the spring as May 17. The last have normally passed on days before this date.

161. **Vireo g. griseus** WHITE-EYED VIREO.—One taken at Mount Forest on September 28, 1902, by Howard Scales (Klugh).

162. **Mniotilta varia.** BLACK AND WHITE WARBLER.—Common summer resident. Arrives about May 3, leaves about the middle of September. W. F. N. Club records the species as late as the 22nd of the month.

163. **Vermivora r. ruficapilla.** NASHVILLE WARBLER.—Abundant spring migrant. Arrives about May 10, and leaves about September 25. A few remain and breed. In the years 1915–16, north of Preston, I knew of the presence of Nashville Warblers through June, July and August which certainly bespeaks the breeder although I was never able to find a nest. All through June and July of 1920 I knew where to find a pair of Nashvilles in a bit of swamp land near Guelph. On one or two occasions one of the birds persistently carried about a green worm and was much disturbed over my presence. The nest was undoubtedly near, but my best efforts failed to discover it.

164. **Vermivora peregrina.** TENNESSEE WARBLER.—Included in the Wellington list by Klugh as a scarce migrant. I have completely overlooked the species myself.

165. **Compsothlypis americana usneae.** NORTHERN PARULA WARBLER.—Tolerably common migrant. Appears about May 12, and again observed in early September. Some years very scarce, and even apparently entirely absent. More common during the spring.

166. **Dendroica tigrina.** CAPE MAY WARBLER.—A rare migrant. Klugh records the taking of three specimens in the fall of 1904.

167. **Dendroica a. aestiva.** YELLOW WARBLER.—Common summer resident. Arrives about May 5, leaves about August 20. The most abundant of the Warblers. In June one seems to meet them everywhere. Breeds early in June.

168. ***Dendroica c. caerulescens***. BLACK-THROATED BLUE WARBLER.—Some years not an uncommon migrant, arriving about May 15. Occasionally breeds, leaving about the middle of September. Certainly less common during the fall. Some years I have failed to record it at all.

169. ***Dendroica coronata***. MYRTLE WARBLER.—A very common Warbler in early spring some years; April 25 until about the middle of May. The first of our Warblers to arrive. In 1917 they commenced to appear on April 24, which was then fine weather. Then it turned raw and cold and the next bird seen was on May 21, and on May 25 my journal says "they were trooping through the woods in great bands every where to be seen." Breeds rarely. Fall migration first shows up about October 2; are common by the 10th and disappear about October 18.

170. ***Dendroica maculosa***. MAGNOLIA WARBLER.—A moderately common migrant, arriving May 10 to 24; again observed for a couple of weeks in mid-September. W. F. N. C. records the species as a rare breeder in 1905-06.

171. ***Dendroica pensylvanica***. CHESTNUT-SIDED WARBLER.—Common spring migrant; a few breeding every year. Arrives about May 8; leaves early in September. Breeds early in June.

172. ***Dendroica castanea***. BAY-BREASTED WARBLER.—Usually not a common spring migrant, but some years, such as in 1915, quite common or even abundant. On May 27, after a period of windy days and cold nights, I went to the woods about 5:30 A. M. and the Bay-breast's were flitting about everywhere in the shrubbery. The morning was warm and bright and seemed to give impetus to migration, for all species were very active, and Warblers of several species were swarming about in abundance. On the other hand, some seasons go by without seeing them at all. Frequently seen again in early September, some years more common then than during the spring.

173. ***Dendroica striata***. BLACK-POLL WARBLER.—Scarce spring migrant; more common in fall. Arrives about May 27 and is again noted during the forepart of September. The W. F. N. Club records the latest date seen in 1905 as September 27.

174. ***Dendroica fusca***. BLACKBURNIAN WARBLER.—Moderately common migrant, arriving about May 10, and again noted during the last of August and early September. Breeds very sparingly.

175. ***Dendroica virens***. BLACK-THROATED GREEN WARBLER.—Abundant during migrations and a fairly common summer resident. Arrives about May 2 and as early some years as April 25. Leaves late in September. Breeds throughout the month of June.

176. ***Dendroica vigorsii***. PINE WARBLER.—"Rare migrant. Seen on April 28, 1896 by P. A. Taverner" (Klugh).

177. ***Dendroica p. palmarum***. PALM WARBLER.—A scarce migrant. First observed about May 6 and again noted from about September 15, until early October. The Wellington Field-Naturalists' Club recorded the

species in 1912 as late as October 13. On May 3, 1915, I collected a specimen north of Preston in a swamp of spruces, birch, tamarack, etc.

178. *Seiurus aurocapillus*. OVENBIRD.—Common summer resident. Arrives about May 5, and in a day or two is very numerous. In ten days it is less common as the migration wave subsides. Leaves about September 25. My latest record is for October 3, 1920 near Guelph. Breeds in June; my earliest date is for a nest of four eggs is June 5, 1915.

179. *Seiurus n. noveboracensis*. WATER-THRUSH.—Moderately common summer resident. Notably common during the spring migration when his wild, ringing song may be heard from every swamp-land. Arrives from April 26 to May 8 according to season. Departs about September 23; usually the majority have disappeared before this date. Breeds in late May and early June.

180. *Oporornis agilis*. CONNECTICUT WARBLER.—Rare migrant. One collected by A. B. Klugh on September 9, 1904.

181. *Oporornis philadelphia*. MOURNING WARBLER.—As a rule, a fairly common spring migrant arriving about May 18. Breeds sparingly. Last seen in early September.

182. *Geothlypis t. trichas*. NORTHERN YELLOW-THROAT.—Common summer resident. Arrives about May 8, leaves about September 15. Breeds in early June.

183. *Icteria v. virens*. YELLOW-BREASTED CHAT.—John Allan Jr., of Alma writes concerning this species in O. N. S. Bull No. 7, 1912: "On December 12, 1911, Mr. Wm. French (at his house about two miles south of Alma, Well. Co. Ont.) picked up the head and body of a decapitated bird on his veranda. He says it was not there on the 10th, but that it may have been on the roof and been blown down by the wind. In this case he could not say how long it had been there. It could not have been there long, as the feathers and body looked quite fresh when found. He sent the bird to me and I identified it as a Yellow-breasted Chat and sent it to Prof. A. B. Klugh of Queen's University who confirmed my identification." This apparently is the only record for the counties.

184. *Wilsonia p. pusilla*. WILSON'S WARBLER.—Rather scarce migrant. A few usually noted about May 25, and sometimes again in late August. A number of years I have failed to find it at all, either spring or fall. According to my experience it is much more apt to be met during the spring migrations.

185. *Wilsonia canadensis*. CANADA WARBLER.—Common summer resident. Arrives about May 10 and leaves about September 5. Breeds in late May and early June.

186. *Setophaga ruticilla*. AMERICAN REDSTART.—Common as a migrant; a number remain to nest. Arrives about May 10, and leaves early in September. W. F. N. C. records the species as late as September 19, 1905. Nests about June 10, although I once found a nest near Speedside as early as June 3, (1911) containing four eggs.

187. **Anthus rubescens.** AMERICAN PIPIT.—Usually a common migrant, arriving in spring about May 9, in small flocks. They resort to the fresh ploughed and seeded fields and linger occasionally for a couple of weeks. An odd straggler will often remain almost to the first of June. They appear again in the fall about September 22, usually in greater numbers than in the spring and commonly remain until about October 18. It is a common sight to see them walking about on the freshly ploughed ground in autumn.

188. **Dumetella carolinensis.** CATBIRD.—Common summer resident. Appears about May 10, and leaves as late as October 5. Lays eggs late in May, young deserting the nest about June 18.

189. **Toxostoma rufum.** BROWN THRASHER.—Breeds sparingly; arriving about May 6, and leaving early in September. I have found a number of nests; those with eggs about June 2. I have seen them carrying nesting material as early as May 7, near Guelph. Much more common in southern Wellington than in Waterloo County.

190. **Troglodytes a. aëdon.** HOUSE WREN.—Common summer resident. Arrives about May 6, and disappears, or becomes markedly scarce by early September, although many remain much longer. My latest record for a single bird on October 3, 1920 near Guelph. Breeds early in June. Young are able to fly by July 5.

191. **Nannus h. hiemalis.** WINTER WREN.—Fairly common summer resident. Arrives from April 2, until the end of the month. Commonly disappears sometime in October but in 1920, I saw one in a dense cedar swamp beside the Speed River west of Guelph as late as December 7. Have seen them nest building as early as April 28. They produce eggs about the second week in May. In 1911, I saw young still being fed by parents on July 16.

192. **Telmatodytes p. palustris.** LONG-BILLED MARSH WREN.—Klugh writes: "This is a species we have long looked for in the county but never with success until June 29, 1905, when I saw one in a marsh halfway between Guelph and Puslinch Lake. On July 19, I took one and saw another in a small marsh east of Puslinch Lake. These are so far the only records for the county." I have, myself, never seen it in either county.

193. **Certhia familiaris americana.** BROWN CREEPER.—Scarce resident. Common during migrations and frequently seen throughout the winter. Breeds sparingly. Most frequently noted during March and April and towards the end of the latter month I have repeatedly heard them in full song, which is a faint wavering trill lasting for two or three seconds. They nest in the month of June.

194. **Sitta c. carolinensis.** WHITE-BREADED NUTHATCH.—Tolerably common resident, but much more frequent in winter, spring and fall. Seem to reach their maximum abundance in late March and early April and again in late September and early October.

195. *Sitta canadensis*. RED-BREASTED NUTHATCH. —Frequent migrant. Observed in spring from March 15, until late in May and again during October. Some years not seen at all. Klugh records a pair seen breeding by F. N. Beattie near Guelph during 1901.

196. *Penthestes a. atricapillus*. CHICKADEE. —Common resident. I have found a nest with a full clutch of seven eggs as early as May 24. They breed also in June and July.

197. *Penthestes h. hudsonicus*. HUDSONIAN CHICKADEE. —The only record I have here for this bird is a solitary individual seen in company with the common Chickadees in November, 1910, near Rockwood. The little company was frequenting a thick cedar swamp by the roadside.

198. *Regulus s. satrapa*. GOLDEN-CROWNED KINGLET. —A common bird during migrations, frequently wintering. Maximum abundance during April, sometimes in May and again in October. Often their faint lispings calls in the cedars form the dominant attraction on a bright warm morning in early April. Klugh found a pair breeding south of Guelph in 1904.

199. *Regulus c. calendula*. RUBY-CROWNED KINGLET. —Common migrant. In spring they begin to appear about April 21, and in a few days they are common; the woods colored with their sweetest of songs. The Kinglet migration of spring is one of the real bird events of the year. They disappear about the middle of May. Again observed in the fall from mid-September until late October. Often they are to be heard singing in October with all the vivid sweetness and beauty of their spring productions. The first record of the species nesting was a pair discovered by Prof. Crow on June 24, 1920 with their nest swung high up in a white spruce on the College campus, at Guelph. I watched the parents feeding the young several times in late June and early July. The brood was successfully raised. I wrote a full account of the incident to the 'Canadian Field Naturalist' Vol. XXXIV, No. 4.

200. *Hylocichla mustelina*. WOOD THRUSH. —Common during migrations, particularly during the spring. A few remain to nest. Arrives about May 6, and leaves about September 10.

201. *Hylocichla f. fuscescens*. VEERY. —Common summer resident. Arrives about May 5, departs early in September. Nests during late May and June. A nest which I found on June 23, 1915, still had unhatched eggs, three in number.

202. *Hylocichla a. aliciae*. GREY-CHEEKED THRUSH. —Frequent migrant. Arrives from April 25, until the middle of May. In 1921 I saw one as early as April 5. The weather was calm and summer-like and I sat in the woods and watched the bird at close range for ten minutes. Again observed about September 15.

203. *Hylocichla ustulata swainsoni*. OLIVE-BACKED THRUSH. —Frequent migrant. Arrives about May 16 and is again observed about the middle of September. I collected a male on each of the dates—May 17, 1915 and May 20, 1916.



204. *Hylocichla guttata pallasi*. HERMIT THRUSH.—Common migrant; frequent summer resident at Mount Forest. Arrives about April 18, and lingers about for ten days. Again seen from late September until the middle of October.

205. *Planesticus m. migratorius*. AMERICAN ROBIN.—Common summer resident. Arrives from March 2 until the 14th. Leaves from late October until November 18. They begin to flock early in August. Eggs are laid early in May and from then until July. Two to three broods are often reared. First young desert the nest about May 20–June 1; second brood is awing about July 10.

206. *Sialia sialis sialis*. BLUEBIRD.—Common summer resident. Arrives about March 12 and leaves about October 20. Breeds in May and June. The first brood leaves the nest about May 28; the second sometime in July.

*Edmonton, Alberta.*

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## EIGHTEENTH SUPPLEMENT TO THE AMERICAN ORNITHOLOGISTS' UNION CHECK-LIST OF NORTH AMERICAN BIRDS.

SINCE the appearance of the Seventeenth Supplement to the A. O. U. Check-List<sup>1</sup> the Committee on Nomenclature has passed on a considerable number of cases. These opinions are presented in the following pages. They are made up chiefly of ornithological cases, though some of purely nomenclatural bearing are introduced. The number of additions is 55; of accepted changes in nomenclature or status 32; of rejections 6; and of eliminations 7; total, 100.

Committee	{	WITMER STONE, <i>Chairman</i>
	{	HARRY C. OBERHOLSER, <i>Secretary</i>
	{	JONATHAN DWIGHT
	{	T. S. PALMER
		CHARLES W. RICHMOND

### ADDITIONS AND CHANGES.

- 52.1. *Larus thayeri* Brooks. THAYER'S GULL. Bull. Mus. Comp. Zoöl., LIX, No. 5, September, 1915, p. 373 ("Buchanan Bay, Ellesmere Land," Canada). New species. Range: Arctic coasts and islands of North America west of Greenland; south in winter to southern British Columbia, and casually to Delaware Bay.

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<sup>1</sup> Cf. 'The Auk,' XXXVII, No. 3, July 14, 1920, pp. 439–449.