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THE SUMMER BIRDS OF THE DOUGLAS LAKE
REGION, CHEBOYGAN COUNTY, MICHIGAN.

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INTRODUCTION.

The following list of birds, comprising one hundred twenty-eight species, was compiled by N. A. Wood from his own observations in 1915, and from those of Prof. Frank Smith and Dr. Frank C. Gates, who placed at his disposal their unpublished manuscript, and from a report by J. S. Compton.¹ The records of Prof. Smith and Dr. Gates were obtained in the summer of 1911, when the former was in charge of the work in field ornithology at the University of Michigan Biological Station and the latter was instructor in botany. Together

¹The Birds of the Douglas Lake Region, Wilson Bulletin, Vol. XXVI, Dec., 1914, pp. 173-180.

they recorded ninety-seven species, with a daily average of nineteen. In addition to his bird observations, Dr. Gates contributed the detailed ecological portion of this report. In 1912 Prof. Smith was again at the Biological Station and for eighteen days made observations on the bird fauna, which are incorporated in this paper. In 1913 and 1914, Mr. Compton was in charge of the bird work; his list includes one hundred eleven species, with notes on abundance and habitat preferences. Mr. Wood taught the course in field ornithology in 1915, and secured data on one hundred fifteen species, noting a daily average of twenty-two.

In the following paper, which has been partly designed to meet the needs of the students of the Biological Station, the authors have endeavored to present accurately the status of each species, with its activities and habitat so far as known.

LOCATION AND GENERAL DESCRIPTION OF THE REGION.

Douglas Lake is situated in Cheboygan County, about midway between Lakes Huron and Michigan, seventeen miles from the northern end of the Southern Peninsula. The extreme length of the lake is about four miles, the width one and one-half miles. In the vicinity are other lakes, of which Burt Lake, two and a half miles south of the station, is larger than Douglas Lake. The soil throughout the region is sand or sandy loam. There are few rivers and but three are worthy of mention—Maple River, draining Douglas Lake into Burt Lake by surface drainage, Carp Creek, draining Douglas Lake into Burt Lake by underground channels which come to the surface as the Big Springs, and Bessey Creek, emptying into Douglas Lake.

At the mouth of Bessey Creek there is a marsh of small extent, and the rest of the land either is or has been wooded.

Originally there were three types of vegetation—pine, hardwood and cedar bog. Following the destructive advent of man the pine nowhere exhibits any of its former glory, a few fair and several poor hardwood areas remain, while the cedar bogs, which can replace themselves easiest, predominate. An additional type of vegetation, the aspen, has been introduced. It occurs on any of the three types of land following fire or lumbering, and furnishes a favorable habitat for the birds characteristic of thickets.

THE ECOLOGICAL DISTRIBUTION OF BIRDS.

The Aquatic Association: According to the genetic order there are eight groups of birds present in the Douglas Lake region. One of these comprises the water birds, which were much less frequent than was anticipated, probably because of the spring hunting. No one of the lakes in the vicinity seemed to be favored by the different water birds.

The strictly aquatic species are Pied-billed Grebe, Loon, American Merganser, Red-breasted Merganser, Herring Gull, Bonaparte's Gull, Common Tern and Caspian Tern. The semi-aquatic species are Bald Eagle, Osprey and Belted Kingfisher. The non-aquatic species which feed over the water as well as the land are Nighthawk, Chimney Swift, Purple Martin, Cliff Swallow, Barn Swallow and Tree Swallow.

The Strand Association: The typical sand strand is present around each lake and along most of the streams of the region with but few exceptions. An abundance of food, especially insects and mollusks, is frequently present. The bird population during the summer is very scanty but is augmented somewhat during the fall migration. The summer birds of the sand strand association are, Pectoral Sandpiper, Semipalmated Sandpiper, Semipalmated Plover, Solitary Sandpiper,

Knot, Greater Yellowlegs, Lesser Yellowlegs, Spotted Sandpiper and Killdeer.

The Marsh Association: Marshes are so poorly developed in this region that no adequate description is possible. The one at the mouth of Bessey Creek is little more than an acre in extent. In it occurred a small colony of Great Blue Herons and one or more Marsh Hawks were not infrequently in the vicinity. After the migration had commenced bitterns were occasionally seen. At Smith's Bog, two miles east of the station, are several acres of typical marsh and here the Virginia Rail, Cooper's Hawk, Killdeer, Solitary Sandpiper and tracks of the Great Blue Heron were observed.

The Lowland Thicket Association: Distinctly hydrophytic thickets, such as the Salix-Cephalanthus association and the Alnus-Betula association, are represented by very narrow strips along the streams and lakes, and it is hard to detect a typical avian fauna. The birds most commonly seen in the thickets are the Song Sparrow, Swamp Sparrow, Indigo Bunting, Warbling Vireo, Maryland Yellowthroat, Catbird, Winter Wren, Black-capped Chickadee and Whip-poor-will.

The Cedar Bog Association: A considerable portion of the region is occupied by this type of vegetation, which occurs in low wet areas where there is usually little drainage. The cedar (*Thuja occidentalis*), balsam (*Abies balsamea*), tamarack (*Larix laricina*) and the spruce (*Picea mariana*) form a nearly impenetrable jungle.

Birds are really quite plentiful, though on account of their shyness and the ease with which they can hide in the dense coniferous growths, a different impression is usually received. Species of this group are much more likely to be discovered by note alone than birds of the other vegetational types. They are Ruffed Grouse, Broad-winged Hawk, Hairy Woodpecker,

Flicker, Crested Flycatcher, Olive-sided Flycatcher, Wood Pewee, Blue Jay, Crow, White-throated Sparrow, Song Sparrow, Red-eyed Vireo, Canadian Warbler, Redstart, Brown Creeper, Black-capped Chickadee, and Golden-crowned Kinglet.

The Aspen Association: About three-fourths of the area is characterized by this type of vegetation. Aspens occur on the cut-over and burned-over pine and hardwood land, but the birds did not seem to discriminate between them. The type of vegetation is an upland thicket formed by young trees, of which trembling aspen (*Populus tremuloides*) in the moister parts, large toothed aspen (*Populus grandidentata*) in the drier parts, white birch (*Betula alba papyrifera*) and pin cherry (*Prunus pennsylvanica*) form nearly the whole tree population. The ground vegetation is largely bracken (*Pteris aquilina*) and bush honeysuckle (*DierVilla lonicera*), growing fairly densely but not sufficiently so to hide the abundant sand.

Birds are rather plentiful in the aspens, particularly in June and July. Those particularly characteristic are the Vesper Sparrow, Chipping Sparrow, Towhee, Black-billed Cuckoo, Yellow-bellied Sapsucker, Flicker, Whip-poor-will, Night-hawk, Wood Pewee, Cedar Waxwing, Red-eyed Vireo, Blue-bird, Purple Finch, Brown Thrasher, Red-headed Woodpecker, Chestnut-sided Warbler, and Robin.

The Hardwood Association: The hardwood type of vegetation has been so nearly destroyed by fire and wasteful methods of lumbering that only a vestige of its former condition remains. Successions on the better types of land are leading to hardwood but as yet they are in the aspen stage. The hardwoods are typically dense high woods whose most important trees are sugar maple (*Acer saccharum*), beech (*Fagus grandifolia*) and hemlock (*Tsuga canadensis*). The ground vegetation is scanty on account of the lack of light.

The birds of the hardwoods are so typical that many of them are not found in any other habitat in the region. They are birds which inhabit the crowns of trees and many of them would ordinarily escape notice were it not for the song. They are the Red-tailed Hawk, Bald Eagle, Hairy Woodpecker, Downy Woodpecker, Ruby-throated Humming Bird, Crested Flycatcher, Wood Pewee, Least Flycatcher, Crow, Rose-breasted Grosbeak, Scarlet Tanager, Red-eyed Vireo, White-breasted Nuthatch and Red-breasted Nuthatch.

The Cultivated Areas: In the cultivated lands at the eastern boundary of the area under consideration flocks of bobolinks were seen during the course of the first two weeks of the 1911 fall migration. The habitat was not studied.

LIST OF SPECIES.

1. *Podilymbus podiceps*. Pied-billed Grebe.—Recorded in 1911 and 1912 by Gates and Smith. Observed on July 25, 1915, on the Indian River.
2. *Gavia immer*. Loon.—Observed by Gates and Smith in 1911 and 1912. In 1915 a pair came often to Douglas Lake to feed, flying from the direction of Burt Lake, where they probably nested. The call was heard at night and during the day.
3. *Larus argentatus*. Herring Gull.—A few Herring Gulls were reported by Gates and Smith. The species was observed twice in 1915, two adults on June 26 at Douglas Lake, and seven adults and young on August 29 at Burt Lake. These birds were probably only stragglers on the inland lakes as the nearest breeding place is Thunder Bay, Lake Huron.
4. *Larus philadelphia*. Bonaparte's Gull.—This species was not observed by the writers but has been previously re-

ported from the Biological Station, where it occurs only as a migrant.

5. *Sterna caspia*. Caspian Tern.—This rare species was not observed in 1911, but Smith lists it for 1912, and it was found in 1915 on both Burt and Douglas Lakes, where, after July 9, a pair came regularly for fish. On August 9, a flock of twenty appeared on Douglas Lake, which had increased to fifty by August 11. Most of them were birds of the year, able to fly but so young that they were still fed by the parent birds, and no doubt they came from Lake Michigan where they breed near the Beaver Islands.²

6. *Sterna hirundo*. Common Tern.—The common tern was not rare in 1911 and 1912. In 1913 Compton reports it "rare, beach and open water," and in 1915 the species was observed but twice, July 29 and once later.

7. *Mergus americanus*. Goosander.—Adults and young of this species were listed in 1911 and 1912. June 27, 1915, a pair of adults appeared, which nested and reared a brood of fourteen young. On August 20 the little birds were still unable to fly but could use both feet and wings in the water.

8. *Mergus serrator*. Red-breasted Merganser.—In 1915 a single pair of this species was observed, and but three young were raised. Compton reported the young to be common in 1913.

9. *Anas platyrhynchos*. Mallard.—The first record for this duck was June 26, 1915, on the Maple River. The species was again seen in August on Indian River, where it is said to breed.

10. *Anas rubripes*. Black Duck.—This species has been recorded from Douglas Lake for 1909 and 1910, but was not

² Barrows, Michigan Bird Life, p. 58.

again seen until August 11, 1915. It probably breeds in the wet marshes in the vicinity of Indian River.

11. *Querquedula discors*. Blue-winged Teal.—Not observed by the writers but reported by Compton.

12. *Aix sponsa*. Wood Duck.—Compton reports this species as "rare, on beach and open water." None seen by the writers.

13. *Charitonetta albeola*. Bufflehead. — Reported by Smith in 1913 and 1914, and by Compton.

14. *Botaurus lentiginosus*. Bittern.—Observed by Wood in 1915 on the Maple River. Reported by Smith, August 15, 1911, and by Compton.

15. *Ardea herodias herodias*. Great Blue Heron.—Found to be common by Gates, Smith, and Compton. A single bird was observed frequently during the summer of 1915, on the beaches, where it came to feed.

16. *Rallus virginianus*. Virginia Rail.—A rare resident. Compton records one nest, and a young bird was secured, July 27, 1915, in a wet marsh east of the lake.

17. *Philohela minor*. Woodcock.—A single specimen was reported by Smith, July 18, 1911, near the mouth of Bessy Creek and another was flushed from the same place on July 2, 1915.

18. *Tringa canutus*. Knot.—The Biological Station records show that this species was observed before 1911. It was not seen by the writers.

19. *Totanus melanoleucus*. Greater Yellow-legs.—Also reported before 1911 but not observed by the writers.

20. *Totanus flavipes*. Lesser Yellow-legs.—This species was reported previous to 1911. On July 29, 1915, a single specimen was secured.

21. *Helodromus solitarius cinnamomeus*. Solitary Sandpiper.—Listed by Smith on July 4, 6, 7, 19, 25, 26, August 1, 5, 6, 12, 13, and 18, 1911. In 1915 this was the first fall migrant; it was fairly common on the lake beaches after July 15.

22. *Actitus macularia*. Spotted Sandpiper.—This species was seen daily in 1915 and nested all around the lake. A nest with four young was found on June 29, and on July 1 another nest with four eggs was observed near the Station. Several families were reported in 1911 and 1912.

23. *Oxyechus vociferus*. Killdeer.—Reported by Gates and Compton. In 1915, four adults were observed on July 26; later their young increased the number to 11, which were still about the lake on August 20.

24. *Colinus virginianus*. Quail.—One pair of quail was reported by Gates in 1911, and the species was reported as rare by Compton.

25. *Bonasa umbellus umbellus*. Ruffed Grouse.—This species was found by the writers to be abundant in several habitats. Several broods of young were seen in 1911 by Gates and Smith.

26. *Bonasa umbellus togata*. Canada Ruffed Grouse.—Common in 1915, many being observed.

27. *Zenaidura macroura carolinensis*. Mourning Dove.—Recorded by Gates and Smith, July 1, 1911. In 1915 they were rare in aspens where they probably breed.

28. *Circus hudsonius*. Marsh Hawk.—Reported by Gates and Smith in 1911 and 1912. In 1915 the species was common in wet open marshes, and rare about the lakes and streams.

29. *Accipiter velox*. Sharp-shinned Hawk.—Recorded by Compton but not observed by the writers.

30. *Accipiter cooperi*. Cooper's Hawk.—A single specimen was seen on July 21, 1915, in the hardwoods.

31. *Astur atricapillus atricapillus*. Goshawk.—An adult female in breeding plumage was captured near Burt Lake, August 6, 1912.

32. *Buteo borealis borealis*. Red-tailed Hawk.—Probably a rare breeder in the region. Smith observed two in 1912 and 1911, and Wood records a single specimen, July 27, 1915, at Smith's Bog.

33. *Buteo lineatus lineatus*. Red-shouldered Hawk.—Wood records this species on July 20, 1915, in the beech-maple forest north of Douglas Lake.

34. *Buteo platypterus*. Broad-winged Hawk.—On July 21, 1911, young birds were seen being fed by the adult. The species was observed but once in 1915, on July 14, at the edge of Reese Bog.

35. *Haliaeetus leucocephalus leucocephalus*. Bald Eagle.—Gates and Smith record a nest near the Biological Station in 1911, with adults and young. This nest was abandoned in 1913. Adults were seen by Wood in 1915, on June 26, July 1, and later; on July 15, an immature bird was seen north of Douglas Lake.

36. *Falco sparverius sparverius*. Sparrow Hawk.—This is the most common breeding hawk of the region. On July 18, 1915, a nest was found in a dead pine in the open plain southeast of the Station.

37. *Pandion haliaetus carolinensis*. Osprey.—The Osprey was recorded once in 1911, twice in 1912, and on July 2, 1915, a specimen was seen catching a fish in Douglas Lake.

38. *Asio flammeus*. Short-eared Owl.—Not observed by the writers, but a single record is given by Compton.

39. *Strix varia varia*. Barred Owl.—This species was recorded but once, July 3, 1915, in the hardwoods.

40. *Otus asio asio*. Screech Owl.—A screech owl was heard calling near the Station on the night of June 26, 1915. Compton lists it as rare.

41. *Bubo virginianus virginianus*. Great Horned Owl.—This species was seen and heard several times in 1915.

42. *Coccyzus americanus americanus*. Yellow-billed Cuckoo.—Recorded before 1911, and on August 25, 1915, near the Maple River.

43. *Coccyzus erythrophthalmus*. Black-billed Cuckoo.—A rare breeder in the hardwoods. On July 18, 1911, a nest with three eggs was found. In 1915 the species was first observed on July 15, in the beech-maple forest, and it appeared later in the same habitat.

44. *Ceryle alcyon*. Belted Kingfisher.—Reported in 1911 and 1912. In 1915 two pair were observed daily, and on August 16 they were joined by five young.

45. *Dryobates villosus villosus*. Hairy Woodpecker.—Not uncommon in 1911 and 1912. The species was observed on July 3, 1915, on Fairy Island, and later in the beech-maple forests.

46. *Dryobates pubescens*. Downy Woodpecker.—Compton lists this species as abundant in all habitats, but the writers found it common only in the aspens and hardwoods.

47. *Sphyrapicus varius varius*. Yellow-bellied Sapsucker.—Common. In 1915 broods of young were observed after July 1. A birch tree thickly perforated with the square holes made by this species was found on Grapevine Point, and several young birds were noted making regular visits to this tree as late as August 1.

48. *Melanerpes erythrocephalus*. Red-headed Woodpecker.—Recorded by Gates and Compton. In 1915 they were found nesting occasionally in pine stubs in the burned area.

49. *Colaptes auratus auratus*. Flicker.—Gates and Smith found this species to be common among aspens. Compton lists it as abundant in all the habitats, an observation verified by Wood.

50. *Antrostomus vociferus vociferus*. Whip-poor-will.—Listed by Gates, Smith, and Compton as abundant. In 1915 it was common in all land habitats but the marshes, and the call was heard every evening at the Station.

51. *Chordeiles virginianus virginianus*. Nighthawk.—In 1911 and 1912 this species was abundant, flocking in August. In 1915, it was found to feed over all habitats, but it usually nested in the birch-aspen scrub-oak forests. A nest with two eggs was found, July 18, 1915, east of the Station. Although the species usually rests on the ground during the day, a few were observed on the limbs of tall hardwood trees on Grapevine Point. Their booming was frequently heard during the evening, and they flew, singly or in flocks of thirty or more, over the lake and shore.

52. *Chaetura pelagica*. Chimney Swift.—Chimney Swifts were not common in 1911, 1912, and 1915. Compton lists them as abundant in all habitats in 1913 and 1914.

53. *Archilochus colubris*. Ruby-throated Humming-bird.—Abundant. In July it is most often found in the open forests, and in August about the blossoming fireweed which covers the open plains.

54. *Tyrannus tyrannus*. Kingbird.—This species may be found in all land habitats, but it is most abundant in the aspens and open plains.

55. *Myiarchus crinitus*. Crested Flycatcher.—A rare breeder. Gates and Smith record one nest in Reese Bog. Observed on July 24, 1915, in the heavy forest near Bessey Creek.

56. *Sayornis phoebe*. Phoebe.—Common. Nests of this species were found everywhere, even on the porches of cottages on Fairy Island, where there are no open or cultivated areas.

57. *Nuttallornis borealis*. Olive-sided Flycatcher.—The species has been reported but three times. In 1915 a single specimen was seen on August 10 at the edge of Reese Bog.

58. *Myiochanes virens*. Wood Pewee.—Abundant in hardwoods, aspens and bogs. A nest was found in the aspens, July 2, 1911, by Smith, containing young which were nearly ready to fly on July 15.

59. *Empidonax vireescens*. Acadian Flycatcher.—Recorded by Gates and Smith, August 18 and August 23, 1911, and by Compton as rare. This is the most northern record for the species in Michigan.

60. *Empidonax minimus*. Least Flycatcher.—Observed once in June, 1911; not rare in 1915.

61. *Otocoris alpestris praticola*. Prairie Horned Lark.—Recorded at the Station before 1911 and given by Compton as rare.

62. *Cyanocitta cristata cristata*. Blue Jay.—In 1911, 1912, and 1915, this species was rather rare. Compton records it as common in the bogs in 1913 and 1914.

63. *Corvus brachyrhynchos brachyrhynchos*. Crow.—Observed daily in all habitats. A nest with young was found on Fairy Island, July 3, 1915.

64. *Dolichonyx oryzivorus*. Bobolink.—Gates and Smith saw flocks of this species in the cultivated areas east of the Station in August, 1911. On July 2, 1915, they were observed in meadows near Ingleside.

65. *Molothrus ater ater*. Cowbird.—Not common. Gates and Smith saw the young cowbirds fed by Pine Warblers and Red-eyed Vireos in 1911.

66. *Agelaius phoeniceus phoeniceus*. Red-winged Blackbird.—Occasionally seen on the lake shore and in the marshes. On July 24, 1915, a flock of twenty were feeding in the fields near Ingleside.

67. *Sturnella magna magna*. Meadow Lark.—In 1915 this species was recorded twice from the open plains between Pellston and the Station.

68. *Icterus galbula*. Baltimore Oriole.—A single specimen was seen, on July 18, 1915, east of the Station.

69. *Quiscalus quiscula aeneus*. Bronzed Gackle.—Rare. Young of the year were recorded on July 7 and 12, 1911, by Gates.

70. *Carpodacus purpureus purpureus*. Purple Finch.—This species bred in the region in 1911 and 1915, but it was not common. It was found only among the aspens where the young were observed on June 28, 1911.

71. *Astragalinus tristis tristis*. Goldfinch.—Gates and Smith reported this species from the aspens where the young appeared on August 2; Compton found it abundant in all habitats; Wood found it frequently in the aspens, but also in the cultivated areas.

72. *Poocetes gramineus gramineus*. Vesper Sparrow.—One of the most common species in the aspens and cultivated areas. The young appear in August.

73. *Passerculus sandwichensis savanna*. Savannah Sparrow.—Rare. Two were reported near Maple River, August 11, 1915.

74. *Zonotrichia albicollis*. White-throated Sparrow.—This species nested commonly in the edge of the hardwoods and bogs. In 1915, the first young appeared on July 17.

75. *Spizella passerina passerina*. Chipping Sparrow.—Common in the aspens and hardwoods, and in the cultivated areas about dwellings. A nest was found on July 4, 1911.

76. *Spizella pusilla pusilla*. Field Sparrow.—Probably a rare breeder in the region. In 1915, it was observed only once, July 22, near Maple River.

77. *Junco hyemalis hyemalis*. Slate-colored Junco.—Common among the aspens. A nest containing three incubated eggs was found in this habitat on July 23, 1915.

78. *Melospiza melodia melodia*. Song Sparrow.—Common about the marshes near water. A nest with four eggs was found on August 2, 1911. The eggs hatched on August 6 and the young had left the nest by August 16.

79. *Melospiza lincolni lincolni*. Lincoln's Sparrow.—Given by Compton as "young, rare, hardwoods". This is probably a case of mistaken identity, as the species has never been known to breed in Michigan, and the earliest fall record known for the species is September 6.

80. *Passer domesticus*. English Sparrow.—This species is occasionally seen around dwellings but is not common.

81. *Melospiza georgiana*. Swamp Sparrow.—Rare. Observed near the marsh at the edge of Maple River, July 22, 1915.

82. *Pipilo erythrophthalmus erythrophthalmus*. Towhee.—A common breeder in the aspens and at the edge of the hardwoods. Two eggs were found in a nest on July 27, 1911; they hatched on August 9, and by August 17 the young had left the nest.

83. *Zamelodia ludoviciana*. Rose-breasted Grosbeak.—Recorded on June 26, July 12, and July 16, 1915, in the hardwoods. In 1911, the young appeared on July 12.

84. *Passerina cyanea*. Indigo Bunting.—Not a common breeder in the region. In 1911, two nests were found, one on July 14, with four eggs, which hatched on July 21, another on August 1 with four eggs, one of which was a cowbird's. The species was observed on July 15, 1915, in the aspens, and later in the hardwoods near Burt Lake.

85. *Piranga erythromelas*. Scarlet Tanager.—Rare, in the hardwoods. Observed on July 1, 1915, and occasionally after this date.

86. *Progne subis subis*. Purple Martin.—A rare species in cultivated areas. Migrating flocks were recorded from August 1 to August 11, 1911. The species was observed on July 10, 1915, near Bryant's.

87. *Petrochelidon lunifrons lunifrons*. Cliff Swallow.—Although Compton lists this species as common, the writers found it to be only a rare breeder. In 1911, migrating flocks were observed from August 4 to August 14, and in 1915 it was recorded on July 22.

88. *Hirundo erythrogastra*. Barn Swallow.—Common in cultivated areas. Migrating flocks were seen from August 4 to August 14, 1911, over the lake. In 1915, a large colony nested at Ingleside and at a barn on the west side of Burt Lake.

89. *Iridoprocne bicolor*. Tree Swallow.—This species is found commonly nesting in old stubs near the lake beaches and feeding over the lake. Migrating flocks were observed from August 4 to 14, 1911.

90. *Riparia riparia*. Bank Swallow.—Rare on the beaches and open water.

91. *Bombycilla cedrorum*. Cedar Waxwing.—This was the most abundant and widely distributed species in the region, and nested everywhere. In 1911, four nests were recorded, one on July 9 with four eggs which hatched July 27, the young leaving the nest on August 9, another on August 4 which contained two young which had left the nest by August 5.

92. *Vireosylva olivacea*. Red-eyed Vireo.—Common in the aspens, bogs and hardwoods. In 1915 a nest was discovered in the latter habitat.

93. *Vireosylva gilva gilva*. Warbling Vireo.—Recorded in 1911 from the lowland thickets. In 1915, a few were observed among the white birches, aspens and hardwoods.

94. *Lanivireo flavifrons*. Yellow-throated Vireo.—Compton records one specimen in the hardwoods. The species was not seen by the writers.

95. *Lanivireo solitarius solitarius*. Blue-headed Vireo.—Rare. In 1915 a single individual was observed in the beech-maple forest west of Burt Lake.

96. *Mniotilta varia*. Black and White Warbler.—In 1911, this species was recorded after July 26. A few were observed in the hardwoods in 1915, but they were seen most frequently in the sphagnum bog, where they no doubt nested.

97. *Vermivora rubricapilla rubricapilla*. Nashville Warbler.—Recorded by Gates and Smith on July 17. In 1915, a pair was observed on July 10 among the aspens on a burned over area, another pair was seen on July 22 in the aspens west of Bryant's, and a family was found on July 30.

98. *Vermivora peregrina*. Tennessee Warbler.—Rare. In 1915 the species was observed but once, in the birch-pine forest on Fairy Island, on July 3.

99. *Dendroica aestiva aestiva*. Yellow Warbler.—Recorded from the lowland thickets on Grapevine Point, August

12, 1912. In 1915, it was listed twice, July 13, and August 14, from the willows along the Maple River.

100. *Dendroica caerulescens caerulescens*. Black-throated Blue Warbler.—Rare in the hardwoods and cedar bogs. Listed on July 12 and July 21, 1915, on the edge of the burned over beech and maple forest.

101. *Dendroica coronata*. Myrtle Warbler.—Rare. First observed in 1915 on July 22, when two juvenile birds were found in the forest near Maple River.

102. *Dendroica magnolia*. Magnolia Warbler. — Observed but once in 1915, on August 9, when a female was taken in the thick sphagnum bog west of Burt Lake.

103. *Dendroica pensylvanica*. Chestnut-Sided Warbler.—This was the most abundant warbler of the region and nested commonly among the aspens, birches and oaks. A nest with two eggs was found on July 15, 1915, at the edge of the forest north of Douglas Lake, and the eggs hatched on July 20.

104. *Dendroica striata*. Black-poll Warbler.—Compton lists the young as rare in the hardwoods. The species was not observed by the writers.

105. *Dendroica fusca*. Blackburnian Warbler.—Smith records this warbler but once, August 9, 1912, in Reese's Bog, and in 1915 a single male was seen on July 25 in a cedar bog.

106. *Dendroica virens*. Black-throated Green Warbler.—Common after July 1, 1915, in the beech-maple forest north of Douglas Lake.

107. *Dendroica vigorsi*. Pine Warbler.—This species probably bred in the pine trees along the east beach of Douglas Lake. Gates and Smith record it on July 12, 13, 16, 22, 26, August 2, 6 and 12, 1911. In 1915 it was seen twice in the forest on Fairy Island.

108. *Seiurus aurocapillus*. Oven Bird.—This bird nested commonly in the birches, aspens and red oaks.

109. *Oporornis philadelphia*. Mourning Warbler.—This species was not seen by the writers but Compton lists it as rare in the hardwoods and on the beach.

110. *Geothlypis trichas trichas*. Maryland Yellow-throat.—Gates and Smith recorded a few of this species early in the summer in the lowland thickets. In 1915, they were rather common in the birches, aspens and red oaks, where thickets of berry bushes furnished a thick cover. A mating pair was seen in this habitat on July 10.

111. *Wilsonia canadensis*. Canadian Warbler.—Recorded by Gates and Smith, July 21, 1911, in a bog. Compton lists it as rare.

112. *Setophaga ruticilla*. American Redstart.—A common breeder in the hardwoods and the birch-pine forests. Recorded on July 11, 1915.

113. *Dumetella carolinensis*. Catbird.—In 1911 and 1915, this species was common in the lowland thickets.

114. *Toxostoma rufum*. Brown Thrasher.—Not very common, in the hardwoods and aspens. Two nests were found in 1911, one on July 5 which contained three eggs which hatched July 11, the young leaving the nest on July 22, the other on July 12 with three eggs which hatched on July 23. On July 10, 1915, a nest with four eggs was discovered in the aspens.

115. *Troglodytes aedon aedon*. House Wren.—Gates and Smith recorded five nests between July 8 and July 16. In 1915 the species was common in the aspens and birches; a nest was observed near Bessey Creek on July 10.

116. *Nannus hiemalis hiemalis*. Winter Wren.—Often observed at the edge of sphagnum bogs and in lowland thickets.

In 1915, a nest with five eggs was found at the edge of a bog on July 15. It was made of green moss which was packed in a large crack in the bark of a fallen hemlock. The bulk of the nest hung suspended under the log two feet above the ground, and it was lined with grouse feathers.

117. *Certhia familiaris americana*. Brown Creeper.—July 18, 22, and 27, 1911, migrants were observed in a cedar bog, and Smith reported a single specimen on August 10, 1912. Compton saw the species but once.

118. *Sitta carolinensis carolinensis*. White-breasted Nuthatch.—Common in the cedar bogs, aspens and hardwoods.

119. *Sitta canadensis*. Red-breasted Nuthatch.—Smith reported three specimens of this species on August 8, 1912. Compton lists it as rare in the bogs.

120. *Penthestes atricapillus atricapillus*. Chickadee.—Recorded from the cedar bogs, aspens and hardwoods. In 1915 they were first observed on July 3 on Fairy Island.

121. *Regulus satrapa satrapa*. Golden-crowned Kinglet.—Not common. A few were recorded in 1911 from Reese's Bog. In 1915 the species was first observed on July 17 in the hemlock trees near Bryant's Bog, and later it was occasionally seen in Reese's Bog.

122. *Polioptila caerulea caerulea*. Blue-gray Gnatcatcher.—Recorded by Smith on July 11, 1911. Listed by Compton as rare.

123. *Hylocichla mustelina*. Wood Thrush.—Rare. Gates recorded a few in the cedar bogs in 1911, and Gates reported the song on July 3 and 12, 1912.

124. *Hylocichla fuscescens fuscescens*. Wilson's Thrush.—Usually found at the edge of the aspens and bogs. In 1915, it was observed on July 6 and 24, and later.

125. *Hylocichla ustulata swainsoni*. Olive-backed Thrush.
—Recorded from the hardwoods, July 1-11, 1911. In 1915,
the species was observed in the birches and aspens on July 3,
17, and August 20.

126. *Hylocichla guttata pallasi*. Hermit Thrush.—This
is the most common thrush of the region. The writers found
it in the hardwoods, birches, aspens and at the edge of the bogs

127. *Planesticus migratorius migratorius*. American
Robin.—Rather common in all habitats.

128. *Sialia sialis sialis*. Bluebird.—Common in cultivated
areas, birches, aspens and hardwoods. In 1915, they were
nesting in the old pine stubs on the brush covered plain.

