The matter as presented in the foregoing sketch does not pretend to list all of the species and varieties of North American land birds. It is only a sketch or outline of a most attractive subject and was written partly for the purpose of gathering together what knowledge we have of the history and origin of our more familiar bird names.

SUMMER BIRDS OF IRON COUNTY, MICHIGAN.

BY ELIOT BLACKWELDER.

The birds in the following list were seen in Iron County, Michigan, and adjacent portions of Dickinson and Menominee Counties during June, July and August, 1908. The writer was engaged in geological surveying, in the course of which he spent nearly three months in the woods and traversed the region somewhat thoroughly in different directions. The notes on birds were kept in the form of a daily record, or a "roll-call," as we often referred to it in the field.

The region is one of low hills and plains of glacial drift, through which small rocky knobs protrude here and there. The entire district was once heavily forested, but the coniferous woods have been largely cut off and the remaining "slash" has been repeatedly burned. Where fires have not been excessively damaging, the original forest is being replaced by thickets of birch and poplar with dense undergrowth of blackberry bushes and other shrubs. The clay ridges, such as the glacial moraines and drumlins, were clad with dense forests of hard maple, birch and hemlock. Only a small portion of this hardwood forest has been lumbered, although the rate of cutting is constantly increasing. Where the forests are untouched they are generally open below,—the large trees, with their dense shade, preventing the growth of underbrush. Where the timber has been removed, however, the second growth is hazel and maple brush with dense berry bushes. The pine forests were largely on the sand plains, and those localities have generally been burned so often that even the sod and herbage has been killed, leaving a relatively barren waste, with a few charred stubs rising above it. Scattered throughout the area there are many swamps, bristling with cedar and tamarack, only small portions of which have as yet been cut by the lumbermen. Many scattered lakes connected by crooked streams, complete the list of topographic features. Around settlements there are, of course, cleared farms and orchards, but these cover only a small part of the district.

The bird population may be readily classified into several societies, which are relatively distinct from one another. It would be possible to refine this classification considerably, but the data gathered last summer hardly make this advisable.

In the open hardwood forests birds are not abundant. The characteristic species there are the Red-eyed Vireo, the Wood Pewee, the Hermit and other Thrushes, the Rose-breasted Grosbeak, an occasional Scarlet Tanager, and several warblers of the genus *Dendroica*. While walking through these open park-like woods, one is seldom out of hearing of the peaceful notes of the Vireo and Pewee.

It is doubtful if any considerable area of the original pine forest remains in the district. At least our zigzag travels did not happen to lead us into any such. What its bird fauna may have been can not therefore be stated here. In the tangles of brush and charred stumps that mark the trail of the lumbermen through either the hard wood or the coniferous forests, birds are generally abundant. The most characteristic denizen of these wastes is the Whitethroated Sparrow, whose plaintive note is well known to everyone who has had experience in the northern woods. In the brushy tangles, the Towhee, the Junco, and the Winter Wren are characteristic birds. Where some of the original trees are left, the Flicker, the Robin, and the Ruffed Grouse are commonly met with. Pileated Woodpecker, doubtless originally an inhabitant of the great pine forests, may now be found occasionally in those parts of the lumbered area where fires have not been too destructive. Northern Raven is another not uncommon member of this society.

The dense cedar and tamarack swamps are generally silent places and seem to have but few bird inhabitants. Only the Chickadee and Kinglets are characteristic, although the Canada Nuthatch is occasionally found in the same somber thickets.

Along the lakes and rivers a very different but tolerably numerous bird population makes its home. Perhaps the most common of all the river birds is the Kingfisher, for although they are almost always found singly or in pairs, scarcely any stretch of river or lake shore is without them. An occasional Blue Heron may be seen stalking along the banks of the more sluggish streams and lakes; and wherever there are sandbars or beaches the Spotted Sandpiper is often encountered. The Osprey was observed on one or two occasions and may be more common than is apparent from our record. On the lakes and ponds the Loon is by all means the most characteristic bird, though there are never many in one locality. Along swampy borders the Bittern and doubtless other marsh birds are characteristic. The Horned Grebe is another member of the lake fauna but seems not to be common in summer. Several species of ducks were observed but the only one positively identified, the Red-breasted Merganser, frequents chiefly the rivers. summer, pairs of old birds with broads of half-grown young may often be chased for long distances on swift streams from which the fledglings find it impossible to escape by flying.

In the cleared areas and farms, and around the towns, birds are more common than elsewhere, but they are probably less typical of this particular region. In a sense they must be considered as invaders from regions less densely forested than this district was originally. In the cities there is the inevitable House Sparrow, and in his vicinity but few other birds care to remain. Around the farms the Barn Swallow, the Purple Martin, the Cowbird, the Song and Field Sparrows, and the Phœbe, are familiar birds. The Indigo Bunting finds its most congenial home along road-sides through the woods; and the Crow, although it prefers the woods, does not seem to go far from the settled districts. On the open fields the Horned Lark is among the recent immigrants, and the Meadowlark is not uncommon, although not the characteristic bird it is farther south. Here also the Sparrow Hawk and Buteos may be found occasionally.

Annotated List.

- 1. Colymbus auritus. Horned Grebe.— A single pair of grebes was seen early in August on the upper course of the Menominee River.
- 2. **Urinator immer.** Loon.— One of the characteristic birds of the many lakes. On the small bodies of water only single pairs were seen and they are rarely numerous at any one place.
- 3. Mergus serrator. Red-breasted Merganser.—Birds with broads of young were frequently encountered along the large streams such as the Michigamme and Menominee Rivers.
- 4. **Botaurus lentiginosus.** American Bittern.— Doubtless a common resident of the open cat-tail marshes which border many of the lakes. The birds are not often seen, however, unless their special haunts are invaded.
- 5. Ardea herodias. Great Blue Heron.—Single birds are seen not infrequently, especially along the larger rivers.
- 6. Actitis macularia. Spotted Sandpiper.— This sandpiper is the only common representative of the shore birds and it is confined to those stretches of river banks and lake shores where there are sand bars or mud banks. Since these conditions are not often fulfilled in this part of northern Michigan, the bird is not particularly common.
- 7. Oxyechus vociferus. KILLDEER.— The Killdeer was seen occasionally in low pastures in the better settled farming districts. Elsewhere there is but little suitable territory for it.
- 8. Bonasa umbellus. Ruffed Grouse.—A common denizen of portions of the hard wood forests which are well provided with undergrowth and are sufficiently remote from towns.
- 9. Accipiter velox. Sharp-shinned Hawk.—A few of these small hawks were seen in August and September in the more open country, in the vicinity of towns and villages.
- 10. Buteo borealis. Red-tailed Hawk.—A common species in the open country. Not a few of them frequent the plains once forested with pines, but now transformed by repeated fires into barren wastes.
- 11. Buteo platypterus. Broad-winged Hawk.—Two of these hawks were seen at sufficiently close range to be recognized; one on the Menominee River in August, and another on the upper course of Iron River in September.
- 12. Falco sparverius. American Sparrow Hawk.—Sparrow Hawks are fairly common on the burnt-over plains and in the neighborhood of farms
- 13. Pandion haliaëtus carolinensis. American Osprey.—A few Ospreys nest along the larger rivers where they are wooded and not bordered by settlements. Several were seen on the lower Michigamme River.
- 14. Strix varia. Barred Owl.— Large owls, believed from their note to belong to this species, were heard repeatedly in the dense hardwood forests in southeastern Iron County in July.

- 15. Ceryle alcyon. Belted Kingfisher.— The Kingfisher is one of the characteristic birds of the river banks, but is somewhat less numerous about the lakes.
- 16. **Dryobates villosus**. Hairy Woodpecker.— Not very common. It was clearly recognized on two occasions in more open portions of the hardwood forests.
- 17. **Dryobates pubescens**. Downy Woodpecker.—The commonest of the woodpeckers in summer. It is generally found in more open parts of the maple and birch woods.
- 18. Sphyrapicus varius. Yellow-bellied Sapsucker.— A few were seen in the hardwood forests in July and early in September.
- 19. **Ceophlœus pileatus**. Pileated Woodpecker.— This largest of the woodpeckers of the northern States is still fairly common in the deeper recesses of the woods away from towns. It seems to prefer the edges of the balsam and cedar swamps when surrounded with forests of hardwood and hemlocks. The bird itself may be recognized by its large size and its sweeping undulating flight. It is more often heard than seen, for its rappings on tall dead stubs are easily audible at a distance of nearly a mile, if not more.
- 20. **Melanerpes erythrocephalus**. Red-headed Woodpecker.— This woodpecker is less common than in the settled region farther south. We found it generally in the open burned-over areas where scattered dead stumps are numerous.
- 21. Colaptes auratus luteus. FLICKER.— The Flicker is one of the characteristic birds of the partly cleared lands and around the settlements.
- 22. Antrostomus vociferus. Whip-poor-will.— Heard several times in August and July in the thick hard-wood forests along the Michigamme River.
- 23. Chordeiles virginianus. NIGHTHAWK.— Nighthawks are abundant in midsummer throughout the district. Large numbers of them may be seen scattered overhead in the afternoon and early evening. It is at this time that their peculiar bellowing note may be heard as they dive hundreds of feet from the heights they have reached in soaring.
- 24. Chætura pelagica. Chimney Swift.— Fairly common throughout the district but especially in the settled portions.
- 25. Archilochus colubris. Ruby-throated Hummingbird.— A few Hummingbirds were observed near farms and in open glades in the hardwood forest where there were attractive flowers.
- 26. **Tyrannus tyrannus**. Kingbird.—Common only in the cleared and settled portions of the district.
- 27. Sayornis phœbe. Phœbe.— This is a bird preëminently of the farms and road-sides, rather than of the deep forest.
- 28. **Myiochanes virens.** Wood Pewee.— One of the most characteristic birds of the deep hardwood forest, especially where the trees are large and high, and the forest is free from undergrowth.
- 29. **Empidonax minimus**. Least Flycatcher.— Apparently not common here in summer. We saw one in the hardwood forest in August.

- 30. Otocoris alpestris praticola. Prairie Horned Lark.— Evidently an immigrant from the prairie country to the south. A few were seen on the barren burned plains but favorable localities are still few, and must have been quite lacking a generation ago.
- 31. **Cyanocitta cristata**. Blue Jay.— A fairly abundant bird, particularly in the hardwood forest and around settlements.
- 32. **Perisoreus canadensis.** Canada Jay.— Rare in summer. A few were seen early in September in the second-growth scrub pines, in the north-western part of Iron County.
- 33. Corvus corax principalis. Northern Raven.—The Raven, like the Pileated Woodpecker, is a bird of the deep recesses of the forest. It seems to be confined to no particular situation and is not common anywhere, although single pairs are seen at frequent intervals.
- 34. Corvus brachyrhynchos. American Crow.— The Crow is much less common here than farther south. It seems to prefer the cleared portions of the district around the edges of the forest.
- 35. **Molothrus ater.** Cowbird.—A common bird around the farms and pastures, but not elsewhere.
- 36. **Agelaius phœniceus.** Red-winged Blackbird.—Characteristic of the cat-tail marshes bordering the lakes.
- 37. Sturnella magna. Meadowlark.—Like the Horned Lark and several other species, this is apparently a recent immigrant. We saw but few and those only in the cultivated parts of the district.
- 38. Scolecophagus carolinus. Rusty Blackbird.— A few seen, chiefly along road-sides in the vicinity of farms.
- 39. Quiscalus quiscula æneus. Bronzed Grackle.— Not particularly common. We saw a few in the wooded plains northeast of Crystal Falls in August.
- 40. Carpodacus purpureus. Purple Finch.— A single small flock was seen in July in the hemlock woods on the western edge of Dickinson County.
- 41. **Astragalinus tristis**. American Goldfinch.—Common almost everywhere, especially in the cleared portions.
- 42. **Spinus pinus.** PINE SISKIN.—The Siskins may be seen in small bands in the latter part of the summer, and are especially characteristic of cedar swamps.
- 43. Passer domesticus. English Sparrow, or House Sparrow.—As everywhere, the House Sparrow is confined to the towns and villages, but has made its way all over the district wherever conditions are suitable.
- 44. Poœcetes gramineus. Vesper Sparrow.— Found throughout the district along road-sides and in clearings.
- 45. **Zonotrichia albicollis**. White-throated Sparrow.— Probably the most characteristic single species of the region. The plaintive whistle of the "Peabody" Bird is heard everywhere except in the deepest solitudes of the woods and swamps. Often a belated singer may be heard long after dark, when other sounds are still.
- 46. Spizella passerina. Chipping Sparrow.— Seen on several occasions in the brushy clearings.

- 47. **Spizella pusilla**. Field Sparrow.—Common only in the more settled regions where there are open fields and hedges.
- 48. Junco hyemalis. Slate-colored Junco.— A characteristic bird of the brushy clearings and isolated farms.
- 49. **Melospiza melodia**. Song Sparrow.—Scattered throughout the district, but commonest along roads through partly cleared hardwood.
- 50. Pipilo erythrophthalmus. Towhee.— The Towhee finds a suitable habitation in the abundant brushy clearings throughout the region.
- 51. Zamelodia ludoviciana. Rose-breasted Grosbeak.—This is confined to the open birch and maple forest, and there it is one of the characteristic birds.
- 52. Passerina cyanea. Indigo Bunting.—Tolerably common along the brushy road-sides through hardwood forests and along the edges of the settled districts.
- 53. Piranga erythromelas. SCARLET TANAGER.—The Tanager is found with the Grosbeak in the lofty hardwood forests, but is considerably less common.
- 54. **Progne subis.** Purple Martin.—Common in the smaller towns, but not often seen elsewhere.
- 55. Hirundo erythrogastra. Barn Swallow.— Characteristic of the cultivated regions where there are farms and bridges.
- 56. Riparia riparia. Bank Swallow.— The Bank Swallow is found wherever there are suitable clay banks. These are not particularly numerous, however, except along some of the larger rivers.
- 57. **Bombycilla cedrorum**. Cedar Waxwing.—Small companies of Waxwings are often seen or heard in the forests, where they seem to be confined to no particular situation.
- 58. Vireosylva olivaceus. Red-eyed Vireo.—There is no sound more familiar in the generally silent recesses of the hardwood forest than the quiet warble of this vireo.
- 59. Mniotilta varia. Black and White Warbler.— In midsummer a few were seen in the hemlock and maple forests.
- 60. **Dendroica æstiva**. Yellow Warbler.—Common among the willows and other undergrowth along the river banks.
 - 61. Dendroica striata. BLACK-POLL WARBLER.—
- 62. **Dendroica virens**. Black-throated Green Warbler.—Both of these warblers were seen in July among the hemlocks and maple woods. Doubtless there are more species but they were difficult to see clearly through the leaves.
- 63. Seiurus aurocapillus. Oven-Bird.—An abundant bird in the damp portions of the hardwood forests. Its loud crescendo whistle is one of the characteristic sounds in such places.
- 64. Seiurus noveboracensis. Water-Thrush.— Fairly common among the willows and shrubs along the river banks.
- 65. **Geothlypis trichas**. Maryland Yellow-throat.— Frequents especially the edges of lakes where there is undergrowth with willows.

- 66. Wilsonia canadensis. Canadian Warbler.—Seen only late in August and therefore perhaps not a summer resident.
- 67. Setophaga ruticilla. American Redstart.— Like the Dendroicas, the Redstart is not uncommon in the hardwood forest.
- 68. **Dumetella carolinensis.** Catbird.— Decidedly uncommon, considering the inviting character of the brush heaps and undergrowth which are scattered throughout the district. Not more than a dozen were seen during the entire summer.
- 69. Toxostoma rufum. Brown Thrasher.—Rather more common than the last, but still not abundant.
- 70. Troglodytes aëdon. House Wren.— A single wren of this species was seen in recent clearings in the hardwood forest in August.
- 71. Nannus hyemalis. WINTER WREN.—The Winter Wren seems to be the common member of the family in this region, and is frequently seen dodging in and out among brush heaps and wood piles.
- 72. Sitta canadensis. Red-Breasted Nuthatch.— Fairly common, especially among the balsams and hemlocks on the borders of swamps. Its relative, the Carolina Nuthatch, was not seen.
- 73. Penthestes atricapillus. CHICKADEE.— Hardly a day can be spent in the woods without seeing a few Chickadees. They seem to prefer the edges of the cedar swamps but are not uncommon in the hardwood forest as well.
 - 74. Regulus satrapa. Golden-crowned Kinglet.--
- 75. Regulus calendula. Ruby-crowned Kinglet.— Occasionally seen in the midst of the cedar swamps. The Ruby-crowned Kinglet is the more common of the two. In July its delicate and ecstatic little song may be heard if one is fortunate enough to be close by and not too disturbing.
- 76. Polioptila cærulea. Blue-gray Gnatcatcher.— A few seen with the kinglets in July.
 - 77. Hylocichla mustelina. Wood Thrush.-
 - 78. Hylocichla fuscescens. Wilson's Thrush.-
 - 79. Hylocichla ustulata. OLIVE-BACKED THRUSH.—
- 80. Hylocichla guttata pallasi. HERMIT THRUSH.— The thrushes are all denizens of the hardwood forests, especially where undergrowth is not thick. They seem to be rather more common in the damper portions than on higher ground. Of the four, the Hermit Thrush is perhaps the most common, and its beautiful song is one of the familiar sounds of the deep woods and is heard especially toward evening.
- 81. Planesticus migratorius. Robin.—Common not only along roads and about the farms, but in the more open portions of the woods far from settlements.
- 82. Sialia sialis. Bluebird.— Less common than the last, with which it is often associated. We found it chiefly in open burned areas in the forest where it seems to find nesting sites in holes in the charred stumps.