

numbers of eggs laid by the Sooty Grouse is about eight, and occasionally as many as ten are found in a set. Their ground color varies from a pale cream color to a creamy buff, the latter predominating; in a single set before me it is a pale cinnamon. The eggs are more or less spotted over their entire surface with fine dots of chocolate or chestnut brown; these spots vary considerably in size in different sets of eggs, ranging from the size of a No. 3 shot, to that of mustard seed. These markings are generally well rounded, regular in shape, and pretty evenly distributed over the entire egg. They never run into irregular and heavy blotches such as are frequently found in the eggs of the Canada Grouse (*Dendragapus canadensis*), which approach the pattern found amongst the eggs of the Willow Ptarmigan (*Lagopus lagopus*) much nearer than the former. In the eggs of the Sooty Grouse all these markings, as well as the overlying ground color, can be readily washed off when the eggs are still quite fresh, leaving the shell of the egg a very pale creamy white in reality. The largest egg in the series in the National Museum collection measures 2.08×1.35 inches; the smallest 1.78×1.28 inches. Average size about 1.86×1.31 inches. The shape of the majority of these eggs is ovate; some may be called short ovate and others elongate ovate. There is no perceptible difference between the eggs of the Sooty Grouse and those of *Dendragapus obscurus*, the Dusky Grouse, as well as those of *Dendragapus obscurus richardsonii*, Richardson's Grouse; their habits are also essentially the same.

ON THE SUMMER BIRDS OF BERKSHIRE COUNTY, MASSACHUSETTS.

BY WALTER FAXON.

DURING the summer of 1888 I spent a month (June 17 to July 16) in Berkshire, and made as complete lists as possible of the birds found in the extreme southern part of the county, and near the northern border, especially on the Saddle-Back or Graylock range of mountains. These lists, together with Mr. William

Brewster's* account of a nine days' exploration of the region about Graylock in June, 1883, will, I believe, give a fair notion of the summer Passerine birds of the County.

Southern Berkshire. Ten days were spent in Sheffield, a southern border town, whence excursions were made into the neighboring towns of Massachusetts and Connecticut. The village of Sheffield lies along the Housatonic River, 675 feet above the sea, in an alluvial interval, seven miles in breadth. The valley is abruptly closed on the west by the massive wall of the Taconic Mountains, which here culminate for southern Berkshire in the Dome, or Mount Everett, at 2624 feet. On the east the valley is bounded by the lower and less precipitous range of the Hoosacs. The valley of the Housatonic, trending north and south, like that of the Connecticut, has attracted several birds that give a distinctly southern cast to the fauna. I refer to the presence of such birds as the Yellow-breasted Chat and Orchard Oriole, and to the comparative abundance of the Grasshopper Sparrow, Mourning Dove, etc. The likeness to the avifauna of the Connecticut Valley at Springfield† is further shown by the rarity of the White-eyed Vireo, White-bellied Swallow, and Redstart, so common in the eastern counties of Massachusetts.

The mountains of southern Berkshire nowhere much exceed an altitude of 2600 feet, and are nearly destitute of spruce and fir. Their sides are for the most part clothed with a heavy second growth of chestnut, oak, birch, maple, etc. The loftiest summits are barren ledges of mica-schist and quartz, sparsely covered by low, prostrate pitch pines, gray birches, red oaks, scrub oaks, and mountain ashes. Such conditions of vegetation would doubtless attract but few Canadian birds, even if the height of the mountains were much greater than it is. Nevertheless, the presence of a few northern forms leaves a perceptible Canadian impress on the fauna of these mountains, when compared with that of the underlying valley. The Wood Thrushes of the valley are supplanted in a large measure by Hermit Thrushes. Nashville Warblers and Blue-headed Vireos, seldom seen in the low country, become tolerably common, while the dense undergrowth of moun-

*Notes on the Summer Birds of Berkshire County, Massachusetts. By William Brewster. *Auk*, I, Jan. 1884, pp. 5-16.

† Catalogue of the birds found at Springfield, Mass., etc. By J. A. Allen. *Proc. Essex Inst.*, IV, 1864.

tain laurel affords a congenial home to the Black-throated Blue and Canadian Warblers. Indeed I have nowhere found the former bird more abundant than in the mountains of southwestern Berkshire and northwestern Connecticut. On the highest mountain tops, such as the Dome of the Taconics and Bear Mountain,* the Snowbird breeds in company with the Hermit Thrush, Chestnut-sided and Nashville Warblers and Towhee. The Towhee is very common on all the barren summits of the Taconic range in southern Berkshire, much more so than in the valley below.

Northern Berkshire. During my stay in northern Berkshire, from June 28 to July 16, I lived at a farmhouse in the Notch Road, near the boundary line between North Adams and Adams. Most of the time spent here was devoted to exploring the Saddle-Back Mountains. By this name I designate the well-defined range midway between the Taconics and Hoosacs, which culminates in Graylock Peak in Adams, 3505 feet above the sea, the loftiest mountain in the State. A good carriage road was built in 1885 to the summit of Graylock. Leaving the Notch Road in North Adams, the way ascends for about a mile and a half through open pasture land, entering the forest on the northwestern flank of Mt. Williams, from which point it passes through an almost unbroken forest on the western side of the crest of the main ridge to the summit of Graylock, a distance of about four miles. After crossing Money Brook, nearly three miles from the summit (altitude, 2480 feet), the forest is the primeval growth of black spruce, with some admixture of yellow and canoe birch, sugar maple, etc., and, towards the summit, balsam fir. The Graylock turnpike has thus opened an easy path through the most interesting part of the Saddle-Back range, but ere long there will be reason to deplore the construction of this avenue which is to the lumberman only an invitation to strip the crest and western slope of the range. With the destruction of this forest some of the most interesting birds of the region will, doubtless, abandon Massachusetts as a breeding-ground for ever.

When one considers the very moderate elevation of the Saddle-Back range and the comparatively small area of coniferous forest offered by it, the number of northern birds that breed there is rather surprising. I believe the only truly migratory Canadian species

*The highest mountain in Connecticut, 2354 feet.

found during the breeding season in the White Mountains of New Hampshire that have not been detected in Berkshire are the Blackpoll and Bay-breasted Warblers, and the Philadelphia Vireo. The Red-bellied Nuthatch, Brown Creeper, Mourning Warbler, Blackburnian Warbler, and Hairy Woodpecker quite unexpectedly proved to be much commoner about Graylock than I have found them among the White Mountains. Others, on the contrary, are comparatively rare, as the Yellow-bellied Flycatcher,* Yellow-rumped Warbler, Golden-crowned Kinglet, and Bicknell's Thrush.

From an ornithological point of view the Saddle-Back range is but an outlier of the Catskills. On reading Mr. Bicknell's notes on the summer birds of the southern Catskills† I was struck with their oppositeness to the Graylock list. I believe the only Catskill bird not yet found on Graylock to be the Blackpoll Warbler, discovered about the summit of Slide Mountain, the highest peak of the Catskills (4205 feet). After finding the Bicknell's Thrush on the summit of Graylock I confess to having looked with some confidence for another waif from the Catskills in the shape of a Blackpoll Warbler. Though unsuccessful, I believe that this bird will yet be found on Graylock by some future explorer.‡ The absence of the White-throated Sparrow and Nashville Warbler from Mr. Bicknell's list is surprising.

Perhaps not even in the Catskills do two distinctly typical faunæ come into such sharp contact as on the Saddle-Back range of northern Berkshire. The top of Graylock is only about 2800 feet above the Hoosac River at North Adams. Yet within this narrow vertical range we pass from a pure Alleghanian fauna characterized by such birds as the Bluebird, Wood Thrush, House Wren, Brown Thrasher, Yellow Warbler, Yellow-breasted Chat, Field Sparrow, Towhee, Scarlet Tanager, Baltimore Oriole, and Quail to a Canadian assemblage which includes the Hermit, Swainson's, and Bicknell's Thrushes; the Golden-crowned Kinglet, Winter Wren, and Red-bellied Nuthatch; the Black-

*A pair of Yellow-bellied Flycatchers was seen on Graylock by Mr. Brewster, June 28, 1883. I neither saw nor heard this bird in 1888.

†A Review of the Summer Birds of a part of the Catskill Mountains, etc. By Eugene Pintard Bicknell. Trans. Linn. Soc. N. Y., I, 1882.

‡"Dendrocæ striata has been seen in North Adams in August with young so immature that they must have been of local origin." T. M. B[rewer]. Bull. Nuttall Orn. Club, III, July, 1878, p. 138.

burnian, Black-throated Blue, Black-and-yellow, Yellow-rumped, Tennessee, Mourning, and Canadian Warblers; the White-throated Sparrow, Snowbird, Pine Finch, and Red Crossbill; the Olive-sided Flycatcher, and the Yellow-bellied Woodpecker. Under such conditions of compression there is naturally some intermingling of species representative of the two faunæ. Mr. Brewster* justly questions whether altitude be the sole factor regulating the distribution of birds on mountain slopes, and whether artificial causes, like the destruction of forests or the replacement of coniferous by deciduous trees, may not lead to a re-adjustment of faunal lines. This must be true especially in the case of a mountain of such moderate height as Graylock. I think that any one who has ascended this mountain by several routes will admit that the character of the surface and the vegetation have more to do with the distribution of the birds than temperature or other purely climatic conditions. If one should draw a line around the Saddle-Back range to indicate in a general way the limit of the Canadian faunal area, it would bear no closer relation to the altitudinal contour lines than do the isothermal lines across a continent to the parallels of latitude. On the North Adams side of the mountain the Canadian birds descend to a much lower level than they do in Williamstown. Not far from the North Adams Reservoir I found in some spruce and hemlock woods the Hermit Thrush, Black-throated Blue, Black-and-yellow, and Canadian Warblers, and Snowbird, evidently on their breeding-ground, within about half a mile of, and on the same level with the Yellow-breasted Chat, Towhee, and Brown Thrasher. The Wood Thrushes of the beech forest in the northern ravine of the Hopper compared with the Hermit Thrushes and other northern birds found at the same altitude on the opposite side of the 'Mountain Pasture' or height-of-land, afford another illustration of the influence of vegetation on the distribution of birds. When these mountains were in their primitive state and uniformly covered with forest, the correspondence between altitude and faunal regions was without doubt much closer than it is now.

LIST OF BIRDS OBSERVED IN SOUTHERN BERKSHIRE (SHEFFIELD,
AND VICINITY), JUNE 17-26, 1888.

1. *Actitis macularia*. SPOTTED SANDPIPER.—A few seen on the Housatonic River.

*Auk, I, p. 16.

2. *Bonasa umbellus*. RUFFED GROUSE.—Common, especially on the mountain sides.
3. *Zenaidura macroura*. MOURNING DOVE.—Rather common.
4. *Circus hudsonius*. MARSH HAWK.—Two seen.
5. *Buteo borealis*. RED-TAILED HAWK.—Two seen.
6. *Falco peregrinus anatum*. DUCK HAWK.—A pair established on Black Rock, a high cliff in the Taconic mountains, northwest of Isaac Spurr's.
7. *Coccyzus erythrophthalmus*. BLACK-BILLED CUCKOO.—Not rare.
8. *Ceryle alcyon*. BELTED KINGFISHER.—Three or four seen.
9. *Dryobates pubescens*. DOWNY WOODPECKER.—One seen, in the village of Sheffield.
10. *Colaptes auratus*. GOLDEN-WINGED WOODPECKER.—Common.
11. *Anrostomus vociferus*. WHIP-POOR-WILL.—Common.
12. *Chordeiles virginianus*. NIGHTHAWK.—Common.
13. *Chætura pelagica*. CHIMNEY SWIFT.—Common.
14. *Trochilus colubris*. RUBY-THROATED HUMMINGBIRD.—Two or three seen.
15. *Tyrannus tyrannus*. KINGBIRD.—Common.
16. *Myiarchus crinitus*. CRESTED FLYCATCHER.—Not rare.
17. *Sayornis phœbe*. PEWEE.—Abundant.
18. *Contopus virens*. WOOD PEWEE.—Abundant.
19. *Empidonax pusillus traillii*. TRAILL'S FLYCATCHER.—Three or four seen in alders near water-courses.
20. *Empidonax minimus*. LEAST FLYCATCHER.—Abundant.
21. *Cyanocitta cristata*. BLUE JAY. Rather common.
22. *Corvus americanus*. AMERICAN CROW.—Common.
23. *Dolichonyx oryzivorus*. BOBOLINK.—Abundant.
24. *Molothrus ater*. COWBIRD.—Not uncommon.
25. *Agelaius phœniceus*. RED-WINGED BLACKBIRD.—Common.
26. *Sturnella magna*. MEADOWLARK.—Not rare in the interval meadows of Sheffield.
27. *Icterus spurius*. ORCHARD ORIOLE.—Three or four, in full song, in Sheffield. A male, in second-year plumage, seen in Pittsfield, June 27.
28. *Icterus galbula*. BALTIMORE ORIOLE.—Common.
29. *Quiscalus quiscula (æneus?)*. CROW BLACKBIRD.—Not uncommon. The impropriety of using a gun in the places where I saw the Crow Blackbirds prevented a positive determination of the subspecies.
30. *Carpodacus purpureus*. PURPLE FINCH.—Common.
31. *Spinus tristis*. AMERICAN GOLDFINCH.—Common.
32. *Poocætes gramineus*. BAY-WINGED SPARROW.—Common.
33. *Ammodramus sandwichensis savanna*.—SAVANNA SPARROW.—Abundant.
34. *Ammodramus savannarum passerinus*. GRASSHOPPER SPARROW.—Common.
35. *Ammodramus henslowi*. HENSLOW'S SPARROW.—Two pairs in a low, wet piece of ground in Sheffield. They were not shy. The males sometimes sang in the grass and sedge, wholly out of view, at other times

mounted on tall weeds, shrubs, or low trees. Mr. Maynard compares the song to the syllables *see-wick*, but to my ear there was a liquid sound in the first part—*flee-sic*, with a strong accent upon the first syllable. When heard at a very short distance it seemed almost tri-syllabic—*f^l-lee-sic*. The song is delivered rapidly, the head thrown back as the notes are emitted.

36. *Spizella socialis*. CHIPPING SPARROW.—Abundant.
37. *Spizella pusilla*. FIELD SPARROW.—Common.
38. *Junco hyemalis*. SNOWBIRD.—Not uncommon on the summit of the Dome of the Taconics (or Mt. Everett), 2624 feet above the sea-level. Also found on the top of Bear Mt., Salisbury, Conn. (altitude, 2354 feet), June 24.
39. *Melospiza fasciata*. SONG SPARROW.—Abundant.
40. *Melospiza georgiana*. SWAMP SPARROW.—Not uncommon in suitable localities.
41. *Passer domesticus*. HOUSE SPARROW.—Common in the village of Sheffield.
42. *Pipilo erythrophthalmus*. TOWHEE.—Common, especially on the barren summits of the Taconic Mts.
43. *Habia ludoviciana*. ROSE-BREASTED GROSBREAK.—Rather common.
44. *Passerina cyanea*. INDIGO-BIRD.—Common.
45. *Piranga erythromelas*. SCARLET TANAGER.—Rather common. Known in Berkshire as the 'English Robin.'
46. *Petrochelidon lunifrons*. EAVE SWALLOW.—Common.
47. *Chelidon erythrogaster*. BARN SWALLOW.—Common.
48. *Clivicola riparia*. BANK SWALLOW.—Common, breeding in the banks of the Housatonic River.
49. *Ampelis cedrorum*. CEDARBIRD.—Common.
50. *Vireo olivaceus*. RED-EYED VIREO.—Abundant.
51. *Vireo gilvus*. WARBLING VIREO.—Common.
52. *Vireo solitarius*. BLUE-HEADED VIREO.—Not very common. Met with at Guilder's Pond, on the west side of the Dome, and in some other places.
53. *Vireo noveboracensis*. WHITE-EYED VIREO.—Only two specimens observed.
54. *Mniotilta varia*. BLACK-AND-WHITE WARBLER.—Common.
55. *Helminthophila ruficapilla*. NASHVILLE WARBLER.—Rare at lower levels, not rare on the mountains.
56. *Compsothlypis americana*. BLUE YELLOW-BACKED WARBLER.—Not common.
57. *Dendroica æstiva*. YELLOW WARBLER.—Common along the willed shores of streams near the village. Seldom observed elsewhere.
58. *Dendroica cærulescens*. BLACK-THROATED BLUE WARBLER.—Common on the Taconic Mts. from their base to summit. Wherever the mountain sides presented a fine growth of maple, chestnut, etc., with a dense under-growth of mountain laurel (*Kalmia latifolia*), the drawing notes of this bird were sure to be heard. Indeed I have nowhere found them more abundant than here. They are equally common in similar places in the northwestern part of Connecticut.

59. *Dendroica pensylvanica*. CHESTNUT-SIDED WARBLER.—Common, extending up to the highest summits of the Taconic Mts.

60. *Dendroica blackburniæ*. BLACKBURNIAN WARBLER.—But one specimen observed, a male in full song, in a grove of white pines in Sheffield, June 20.

61. *Dendroica virens*. BLACK-THROATED GREEN WARBLER.—Not rare in pine woods.

62. *Seiurus aurocapillus*. GOLDEN-CROWNED THRUSH.—Common wherever there are woods.

63. *Seiurus noveboracensis*. WATER-THRUSH.—One observed, June 17, on the edge of a small stream near the village of Sheffield. Although the place was often visited afterward, I failed to see or hear the bird again. I did not meet with this species later in northern Berkshire.

64. *Geothlypis trichas*. MARYLAND YELLOW-THROAT.—Common.

65. *Icteria virens*. YELLOW-BREADED CHAT.—One pair, Sheffield.

66. *Sylvania canadensis*. CANADIAN WARBLER.—Not uncommon on the Taconic Mts. of southwestern Berkshire and Litchfield Co., Conn.

67. *Setophaga ruticilla*. AMERICAN REDSTART.—Rare.

68. *Galeoscoptes carolinensis*. CATBIRD.—Common.

69. *Harporhynchus rufus*. BROWN THRASHER.—Not rare, although not nearly so common as in eastern Massachusetts.

70. *Troglodytes ædon*. HOUSE WREN.—Common.

71. *Parus atricapillus*. CHICKADEE.—Not many were seen.

72. *Turdus mustelinus*. WOOD THRUSH.—Common.

73. *Turdus fuscescens*. WILSON'S THRUSH.—Common. A few observed well up towards the summit of the Dome.

74. *Turdus aonalaschkæ pallasii*. EASTERN HERMIT THRUSH.—Common on the Taconic Mountains where it replaces to a great extent the Wood Thrush which is found only sparingly on the mountain sides. Also found to be abundant on Bear Mt., Salisbury, Conn.

75. *Merula migratoria*. AMERICAN ROBIN.—Abundant.

76. *Sialia sialis*. BLUEBIRD.—Common.

(To be continued.)

REMARKS UPON ABNORMAL COLORING OF PLUMAGE OBSERVED IN SEVERAL SPECIES OF BIRDS.

BY GEO. N. LAWRENCE.

As it might be of interest and call forth similar observations by others, I have concluded to put on record the instances that have