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NOTES ON THE BIRDS OF THE CARIBOO DISTRICT, BRITISH COLUMBIA.

BY ALLAN BROOKS.

Plate X.

DESIRING to study the fauna of the northern interior of British Columbia, I spent fifteen months, from June, 1900, to October, 1901, in the Cariboo district, a large portion of the time being devoted entirely to collecting. The first eleven months were spent in the heavily timbered country in the northern portion of the district, Quesnelle Mouth, Willow River, and the mountains southeast of Barkerville. From May, 1901, till the following October I made my headquarters at the 158-Mile House, in the southwestern corner of the district, just north of the 52d parallel. Excursions were made from this point to the Chilcotin plateau, Lac la Hâche and Horsefly River.

The country around Quesnelle, on both banks of the Fraser, and north to Fort George, is entirely covered with forest, mostly coniferous, — spruce, balsam, Murray pine and Douglas fir, with a good deal of birch and poplar. The altitude of the Fraser at Quesnelle is 1600 feet.

The mountains in this region are mostly low, level plateaus, but towards Barkerville they merge into the Cariboo Range, rugged and snow-capped, with timber line at about 5500 feet.

Towards the southern portion of this range the climate becomes more humid and the valleys, such as the upper Horsefly, possess a forest growth very similar to that of the coast region, — hemlock, cedar, Douglas fir, yew, etc., with a heavy growth of underbrush, red dogwood, devil's club, etc.

The southwestern corner of the Cariboo district, like the Lilloet district to the southwest, is diversified with a good deal of open and partially timbered country; the 158-Mile House is situated on a plateau of about 3000 feet altitude (Carpenter's Mountain). Here there is a good deal of natural prairie, with numerous lakes and ponds, and scattered groves of timber and brush, the fauna and flora having many of the characteristics of the plains to the east of the Rockies.

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The whole district has a very cold winter climate and a moderately warm summer. Mosquitoes and blackflies swarm, and birdnesting in the swamps and woods is generally anything but a pleasure.

1. Colymbus holbœllii. Holbœll's Grebe.

2. Colymbus auritus. HORNED GREBE.

Both these grebes were abundant, breeding on nearly every pond and lake. The larger species wages incessant war upon the smaller one, the larger birds diving and coming up beneath the smaller ones time and again to the terror of the poor little fellows, who often desert their nests in consequence.

3. Podilymbus podiceps. PIED-BILLED GREBE. — Rare.

I kept a good lookout for the Western Grebe (Æchmophorus occidentalis), but never saw one, not even during migrations. Their line of migration is probably straight eastward from southern British Columbia, where they are common.

4. Gavia imber. Loon. — Abundant; the only species of loon observed.

5. Larus philadelphia. BONAPARTE'S GULL.— The only gull observed during the breeding season. Breeds in the neighborhood of Quesnelle Lake.

6. Merganser americanus. AMERICAN MERGANSER.— Breeding on the streams and the larger lakes but absent from the smaller lakes that are devoid of fish.

7. Lophodytes cucullatus. HOODED MERGANSER.-- Scarce.

8. Anas boschas. MALLARD.

9. Mareca americana. BALDPATE.

10. Nettion carolinensis. GREEN-WINGED TEAL.

These three species are all abundant breeders.

11. Querquedula discors. BLUE-WINGED TEAL.

12. Spatula clypeata. SHOVELLER.

13. Dafila acuta. PINTAIL.

These three ducks are rather scarce breeders in the neighborhood of 158-Mile House.

I did not observe the Gadwall, the Cinnamon Teal, nor the Redhead, which are probably not found north of Lac la Hâche.

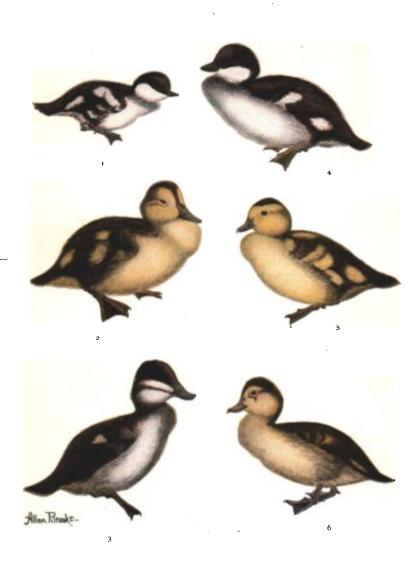
14. Aythya vallisneria. CANVAS-BACK.— Common breeder. The nests are bulky platforms of reeds, similar to a Coot's, found generally on small swampy ponds, away from the larger lakes, where the males associate in flocks. Eggs were taken from 21st of May to 6th June.

15. Aythya marila. SCAUP DUCK.—Observed only during its migrations.

16. Aythya affinis. LESSER SCAUP DUCK.— Abundant, breeding much later than the Canvas-back or Ring-necked. The nests were

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Plate X.



YOUNG DUCKS.

- 1. Charitonetta albeola.
- Aythya vallisneria.
 Erismatura jamaicensis.

- 4. Glaucionetta islandica.
- 5. Aythya collaris.
- 6. Aythya affinis.

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usually in coarse grass, with a waterway, generally a muskrat's runway, connecting with the nearest open water. Clutches varied from seven to eleven eggs each. First eggs taken on 21st June.

17. Aythya collaris. RING-NECKED DUCK.—A rather scarce breeder. I was able to take only one set of eggs, evidently a second laying, as there was no down. This was on the 27th June. The nest was in a tussock of grass, in eight inches of water; it was composed of coarse green grass and arched over with the drooping blades of the tussock. The nine eggs contained small embryos.

Young broods of this species were observed before the Lesser Scaups (A. affinis) had started to lay. The young in down are very light colored, resembling the young of the Canvasback and Redhead, and quite different from the dusky, unspotted young of the Lesser Scaup. (See Pl. X.)

18. Clangula clangula americana. AMERICAN GOLDEN-EYE. — Common during migrations, but not observed during the breeding season. 19. Clangula islandica. BARROW'S GOLDEN EYE. — A rather scarce breeder in the neighborhood of 158-Mile House, but common in La Hâche Valley. One set of eggs was taken from a hole in a dead Douglas fir, fifty feet from the ground, probably the deserted nest of a flying squirrel. The tree stood about four hundred yards from the nearest water. The eggs (seven) at this date (17th June) contained large embryos. I saw another nesting hole but was unable to reach it. The female brought fourteen young ones out from this.

20. Charitonetta albeola. BUFFLE-HEAD .- Almost every lake has one or more pairs of these charming little ducks. Unlike Barrow's Goldeneye, the nests were always in trees close to, or but a short distance away from water. These nests were invariably the deserted nesting holes of flickers, and in most cases had been used several years in succession by the ducks. The holes were in aspen trees, from five to twenty feet from the ground, and the entrance was not more than three and a quarter inches in diameter. The number of eggs ranged from two to nine, eight being the average; in color they resemble old ivory, without any tinge of green. I have several times seen the eggs of this duck described as "dusky green," but these have evidently been the eggs of some species of Teal. The female Bufflehead is a very close sitter, never leaving the nest until the hole was sawed out, and in most cases I had to lift the bird and throw her up in the air, when she would make a bee-line for the nearest lake, where her mate would be slowly swimming up and down unconscious of the violation of his home. In many cases the eggs had fine cracks, evidently made by the compression of the bird's body when entering the small aperture.

21. Harelda hyemalis. OLD-SQUAW.— Common on the larger lakes, but by June they had all gone North, with the exception of a single female which remained on a small lake near the 158-Mile House throughout the summer.

22. Histrionicus histrionicus. HARLEQUIN DUCK. — A scarce summer resident on some of the mountain streams.

23. Oidemia deglandi. WHITE-WINGED SCOTER. — Numbers of these scoters remained on the larger lakes near the 158-Mile House throughout the summer, and to all appearances they were paired and breeding, yet I never found a nest, nor saw any broods of young.

24. Oidemia perspicillata. SURF SCOTER. — Seen throughout the summer but does not breed.

25. Erismatura jamaicensis. RUDDY DUCK. — A common breeder. While watching the curious antics of the males, through a binocular at very close range, I was struck with the peculiar formation of the head, there being distinct elevations over each eye resembling those of a frog. These were evidently caused by inflation from the inside of the skin. Young when first hatched are, as might be expected, very large, and dive for their food, unlike all other young ducks, which take their food from the surface for several weeks.

26. Branta canadensis. CANADA GOOSE. — Common. This is the only goose that breeds in Cariboo, Chilcotin, etc. I failed to find any evidence of the breeding of Hutchins's Goose, and all residents whom I questioned asserted positively that they had never seen any of the smaller geese breeding, though a few may remain through the summer, as they do in southern British Columbia, evidently non-breeding birds.

Many sets of the eggs of Canada Geese are taken and set under hens; these often produce undersized birds, which has led to the statement, so often made, of the breeding of Hutchins's Goose in British Columbia.

27. Olor buccinator. TRUMPETER SWAN. — Swans of this species breed in northern Chilcotin.

28. Botaurus lentiginosus. AMERICAN BITTERN.—Breeds in the southern portion of the district.

29. Grus mexicana. SANDHILL CRANE. — Breeds in suitable localities. The smaller species (G. canadensis) passes through on migrations only.

30. Rallus virginianus. VIRGINIA RAIL.

31. Porzana carolina. SORA.

32. Fulica americana. AMERICAN COOT.

All three are common and breed.

33. Phalaropus lobatus. NORTHERN PHALAROPE. — This phalarope may breed in northern Chilcotin, though I could find no evidence of its doing so near the 158 Mile House.

34. Gallinago delicata. WILSON'S SNIPE. — Common summer resident.

35. Tringa maculata. PECTORAL SANDPIPER.

36. Tringa minutilla. LEAST SANDPIPER.

These two sandpipers were frequently seen throughout the summer, but were evidently non-breeding birds.

37. Tringa bairdii. BAIRD'S SANDPIPER.

38. Ereunetes pusillus. SEMIPALMATED SANDPIPER.

39. Calidris arenaria. SANDERLING.

All were taken at Quesnelle during migrations.

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40. Totanus melanoleucus. GREATER YELLOW-LEGS. — Breeding in many localities but all efforts to find the nest were unsuccessful, owing to the extreme watchfulness of the male bird, which kept constant watch from the extreme summit of some tall spruce. Young were first observed on 15th June.

41. Helodromas solitarius cinnamomeus. WESTERN SOLITARY SAND-PIPER. — I think the Solitary Sandpiper breeds in the district, as I took young with the down still adhering to their plumage.

42. Bartramia longicauda. BARTRAMIAN SANDPIPER. — Frequently seen on both spring and autumn migrations. Mr. Sidney Williams took one specimen at Quesnelle and I shot another at the 158-Mile House.

43. Actitis macularia. SPOTTED SANDPIPER. — Common breeder. 44. Numenius longirostris. LONG-BILLED CURLEW. — Breeding in the La Hâche valley, but not observed in the Cariboo district proper.

45. Squatarola squatarola. BLACK-BELLIED PLOVER.

46. Charadrius dominicus. AMERICAN GOLDEN PLOVER. — Seen only during fall migrations.

47. Ægialitis vocifera. KILLDEER.—Common, breeds.

48. Dendragapus obscurus richardsonii. RICHARDSON'S GROUSE. — Common in partially wooded country in La Hâche valley, Chilcotin, and at Soda Creek, and again on the summits of the mountains of the Cariboo Range, but not in the intervening heavily wooded country. All those secured showed faint traces of a terminal tail bar.

49. **Canachites franklinii**. FRANKLIN'S GROUSE.— Abundant in all suitable localities. Towards the northern portion of the district many show an approach to typical *canadensis*.

50. Bonasa umbellus togata. CANADIAN RUFFED GROUSE.

51. Bonasa umbellus umbelloides. GRAY RUFFED GROUSE.

Most of the Ruffed Grouse of the district are intermediate between these two races, but ultra-typical examples of each were taken.

52. Lagopus leucurus. WHITE-TAILED PTARMIGAN.— The only Ptarmigan observed. I could find no record of *L. rupestris*, although it occurs further south.

53. Pediæcetes phasianellus columbianus. COLUMBIAN SHARP-TAILED GROUSE.— Abundant at 158-Mile House; scarce at Quesnelle. Those taken at the latter locality show a close approach to typical phasianellus.

54. Zenaidura macroura. MOURNING DOVE.—Scarce; in the southern portion of the district only.

55. Nyctala tengmalmi richardsoni. RICHARDSON'S OWL.---Quesnelle.

56. Glaucidium gnoma californicum. CALIFORNIA PYGMY OWL. — Taken as far north as Willow River.

57. Dryobates villosus leucomelas. NORTHERN HAIRY WOOD-PECKER.— Common at Quesnelle and in the mountains.

58. Dryobates villosus hyloscopus. CABANIS'S WOODPECKER. — Breeding at 158-Mile House.

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60. **Picoides arcticus.** ARCTIC THREE-TOED WOODPECKER.— Not uncommon. As far as could be judged without actual comparison, all the specimens taken were fully as large as eastern birds. The subspecies lately described by Mr. Outram Bangs occurs in the Okanagan district to the southward.

61. Picoides americanus.—Taken from Willow River to Clinton; breeds throughout this region.

63. Ceophlœus pileatus. PILEATED WOODPECKER.-- Resident; observed as far north as Willow River.

64. Colaptes auratus. FLICKER.

65. Colaptes cafer collaris. RED-SHAFTED FLICKER.

In the neighborhood of the 158-Mile House both species occur and interbreed. From one nest hole I took seven nestlings, which varied from typical *cafer collaris* to nearly typical *auratus*.

66. Cypseloides niger. BLACK SWIFT.— Observed in the southern portion of the district.

67. Selasphorus alleni. ALLEN'S HUMMINGBIRD.—Breeding near 158-Mile House.

68. Stellula calliope. CALLIOPE HUMMINGBIRD.— Breeding in the mountains west of Clinton in the Lilloet district.

69. Empidonax traillii alnorum. ALDER FLYCATCHER.—Breeding birds taken at Quesnelle were closer to *alnorum* than to typical *traillii*; the latter is the species breeding in the southern portion of the district.

70. Otocoris alpestris leucolæma. PALLID HORNED LARK.— Breeding above timber line near Barkerville. The spotted young are darker in coloration than would be expected from the color of the adult.

71. Otocoris alpestris merrillii. DUSKY HORNED LARK.— Breeding on Chilcotin plateau.

73. Carpodacus cassini. CASSIN'S PURPLE FINCH.— Summer resident at Soda Creek, and probably also at Quesnelle.

74. Leucosticte tephrocotis. GRAY-CROWNED LEUCOSTICTE.— Breeding above timber line near Barkerville. The young were fully fledged the last week in July.

75. Leucosticte tephrocotis littoralis. HEPBURN'S LEUCOSTICTE.— After identifying the typical species as the species breeding in the district, I was surprised to find *littoralis* the common winter visitant around Quesnelle, where no *tephrocotis* were then seen.

76. Acanthis hornemannii exilipes. HOARY REDPOLL. I took one nearly typical example at Quesnelle, and also have several taken by Mr. Sidney Williams at that place.

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77. Poœcetes gramineus. VESPER SPARROW.— The Vesper Sparrows of Cariboo scem closer to the typical species than to either of the subspecies *affinis* or *confinis*. They were common at 158-Mile House, and were also breeding at timber line near Barkerville.

78. Ammodramus sandwichensis? — The Savanna Sparrows of Cariboo belong to the large, small-billed race, found throughout the interior of British Columbia, and are quite distinct from the small gray form breeding in the Lower Fraser Valley and generally identified as *alaudinus*. I suspect the former is closer to *alaudinus* and that the latter is an undescribed subspecies.

79. Spizella monticola ochracea. WESTERN TREE SPARROW. - Breeding near Barkerville.

80. Spizella breweri. BREWER'S SPARROW. - Two males taken at 158-Mile House, 3d July, 1901.

81. Melospiza lincolni striata. FORBUSH'S SPARROW. — Tolerably common breeder; one set of five eggs taken at 158-Mile House, 5th June.

82. Ampelis garrulus. BOHEMIAN WAXWING. - Breeding from 158-Mile House northward. I arrived at Quesnelle too late for eggs, but kept a sharp lookout for Waxwings the following spring at 158-Mile House. I first noticed them there on 11th June, when I came across a small flock and shot one which proved on dissection to be a female about to lay. On returning to the same spot I found the Waxwings, consisting of a colony of five pairs of birds, still there, and soon discovered a nest in a Murray pine, near the end of a limb and about twenty-five feet up, this then (12th June) contained two eggs. On the 15th I took this set, which then consisted of four eggs. The nest was loose and bulky, composed of Usnea moss, drv grass and weed stems, and lined with fine material, with a few green aspen leaves in the lining, no doubt to render the eggs less conspicuous. On the 26th June I carefully looked over all the trees in the neighborhood with my binocular, and found three more nests, all in tall Douglas fir trees; two of these I was able to climb to; each contained four eggs within a few days of hatching. The nests were similar to the first but without the green aspen leaves, probably due to the fact that the nests were better concealed from above. I was unable to reach the fourth nest, nor could I find that of the remaining pair of birds.

83. Ampelis cedrorum. CEDAR WAXWING. — Not observed at 158-Mile House, but found breeding at Quesnelle, where it evidently laid its eggs later than the larger species.

84. Helminthophila celata. ORANGE-CROWNED WARBLER. — A scarce summer resident; specimens of old and young birds showed this to be the typical *celata* and not *lutescens*.

85. Helminthophila peregrina. TENNESSEE WARBLER. — This was a common breeder at 158-Mile House, where its sharp insistent song was to be heard from every copse in the partially wooded district. An account of its nesting has already been given in 'The Auk' for January, 1902 (Vol. XIX, pp. 88, 89).

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86. Dendroica auduboni. Audubon's WARBLER. — Tolerably common breeder.

87. Dendroica maculosa. MAGNOLIA WARBLER. — Several seen at Quesnelle during fall migration.

88. Dendroica striata. BLACK-POLL WARBLER. — I shot a Black-poll Warbler in the first plumage at Quesnelle but was unable to find it in the thick brush. I am very well acquainted with the species and am positive of the identity, as when first seen the bird was within five feet of me, and I had a good look at it.

89. Sieurus noveboracensis notabilis. GRINNELL'S WATER-THRUSH. -- Breeding at Quesnelle, and less commonly at 158-Mile House.

90. Setophaga ruticilla. AMERICAN REDSTART. — Breeding throughout the district.

91. Galeoscoptes carolinensis. CATBIRD. — Breeding as far north as Soda Creek.

92. Regulus calendula. RUBY-CROWNED KINGLET. — Breeding near 158-Mile House. On the 11th June I found a nest in a small spruce not four feet high; the nest was close to the stem and about two feet from the ground; it was a very deep cup, almost a vertical cylinder. The sitting bird must have been entirely concealed. It contained five eggs, a sixth imperfect one was sticking in the foundation of the nest; it had evidently been pushed through the lining and a fresh floor built over it.

The owners were raising a great outcry over the intrusion of a wandering brood of Whiskey Jacks; two grouse feathers were carefully put over the entrance to the nest, which made me think that it had been rifled by the jays and the lining pulled out.

93. Hylocichla ustulata swainsoni. OLIVE-BACKED THRUSH. — A common breeder from Clinton to Quesnelle.

94. Hylocichla guttata pallasii HERMIT THRUSH.—This was the form of Hermit Thrush occurring at Quesnelle; a skin from 158-Mile House seems closer to the typical form.

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