

## BIRDS OF THE CHILLIWACK DISTRICT, B. C.

BY MAJOR ALLAN BROOKS.

THIS list should have been published many years ago. In presenting it at this late date the writer is influenced largely by the discrepancies of ranges given in the A. O. U. Check-List of 1910.

The compilers of this list were evidently under the delusion that Chilliwack was in southeastern British Columbia instead of extreme southwestern, west of all the mountain ranges, with nothing but fifty miles of level country between its western boundary (Sumas Lake) and the sea.

The area covered by the present list includes the Chilliwack and Sumas valleys, a wide alluvial flat, originally mostly forest country, on the south bank of the Fraser River, a district about thirty miles by eight at its widest part.

The Fraser River here bursts through the wall of the Cascade Range, forming a precipitous cañon about one hundred miles in length, running nearly north and south. However improbable it may appear this cañon must represent the route to the valley of many of its summer residents, which must return towards the south through its gloomy length after passing up the east side of the Cascade Range on their northward migration.

Also included in the list are the birds of the Cascade summits to the east of the valley, including the valley of the Chilliwack (or Chilliweyuk) River and Chilliweyuk Lake, the former a mountain torrent rising in the latter and flowing through a deep cleft in the Cascades for the greater portion of its course.

The town of Chilliwack is some seventy feet above sea level, the Fraser River being influenced by high tides as far up as Sumas, some eight miles down stream.

The valley is extremely flat and at one time mostly heavy forest of Douglas fir, cedar, and hemlock with a sprinkling of large leaf maple and heavy underbrush. The banks of the rivers sustain a heavy growth of cottonwood, alder and willow. Much of the primeval forest has suffered by fire and only the blackened shells

of the gigantic cedars remain, and the land then supports a dense growth of large alder, willow and maple.

Sumas Prairie, mentioned so often by John Keast Lord, is a flat alluvial plain covered with natural grass and intersected by many winding sloughs, the whole being under water at the time of the rise of the Fraser River in June and July.

Sumas Lake is the western boundary of the district — a very shallow body of water without vegetation, and at the time of extreme low water in mid-winter almost without water.

The Cascade Mountains rise for the most part like a wall from the floor of the valley, the peaks being from 6000 to 8000 feet altitude. The flanks of the mountains were clothed originally in a continuous coniferous forest, but this has been for the most part swept by fire, resulting in a dreary tangle of dead trees both standing and fallen, with a dense second growth of the typical Pacific slope character — a region singularly destitute of bird and animal life.

The Coast Range ends on the north bank of the Fraser, only two small isolated mountains of 2000 and 3500 feet elevation rising to the south of that river.

The district lies well within the humid coast belt, the average yearly precipitation being about fifty inches. Winters are very irregular, occasionally there may be one without any severe frost, but in most winters there occur two or three periods of severe cold when the temperature drops to near zero, accompanied by a howling north wind which invariably lasts for three days or more without cessation. The coldest recorded temperature was in the winter of 1908-09, when the thermometer registered thirteen below zero. Snow does not usually lie for long in the valley. On the mountain summits it sometimes attains a depth of thirty feet, and persists in patches on the highest peaks throughout the summer.

About the end of June, and in some years early in the month, the Fraser, swollen with the snows of the far interior, overflows its banks and inundates a large portion of the valley, drowning out the nests of many of the ground-nesting birds. Of late years much dyking has been done, but to balance this most of the marshes have been drained so the region will never accommodate breeding waterfowl to any extent. The bulk of the land is now cleared and given over to intensive agriculture.

In May, 1887, I arrived in this region with my father, the late W. E. Brooks, who had bought a farm close to the village of Chilliwack. I was then eighteen years of age and chuck full of enthusiasm. All my spare time in the intervals of ranch work was devoted to ornithology, and aided by my father the valley was worked in a systematic manner. After four years, my father sold his ranch and returned to the east and the writer took up zoölogical collecting as a profession.

Most of his subsequent bird collections went to the museum of Mr. William Brewster and later a good deal of material was supplied to Mr. Outram Bangs and to Drs. Dwight and Bishop, while working out the fauna of British Columbia in this and other portions of the Province.

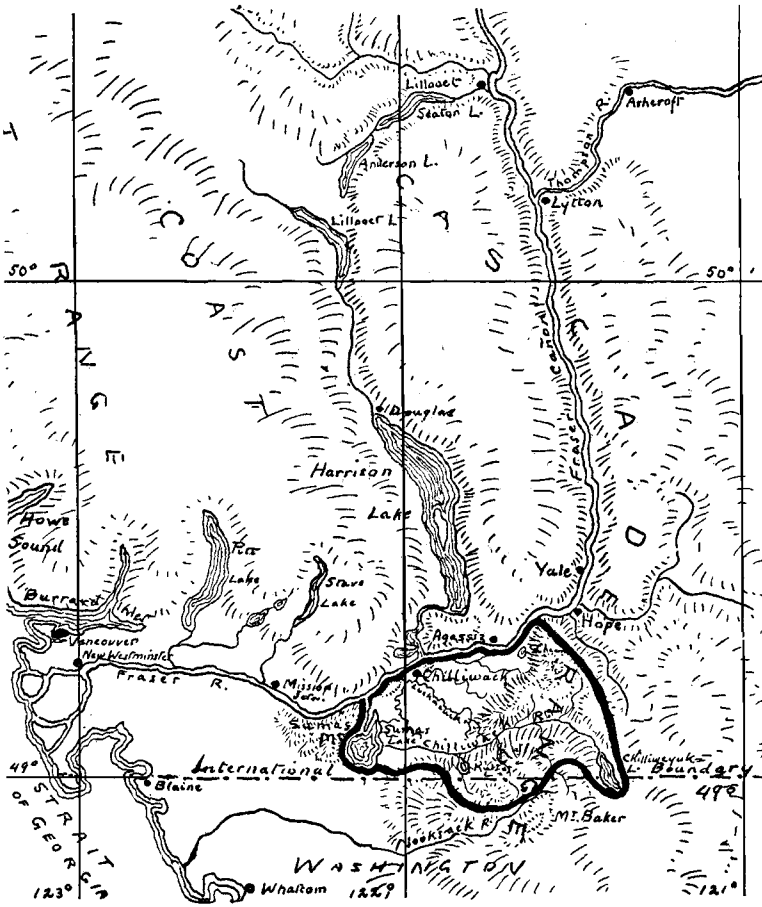
From 1894 when I returned to the west after a year or two in Ontario, most of my time was taken up in mammal collecting, some sixty species being recorded from the Chilliwack region, but a careful lookout was always kept for new birds. In all about eleven years were spent in this district resulting in the region being more thoroughly worked ornithologically than any other portion of the Province.

The sketch map which accompanies this list indicates the position of the locality. The region enclosed in the heavy black line embraces the entire area in which the observations here recorded were made. Species of which no specimens were taken or examined by the writer are preceded by an asterisk. It will be seen that there are only four in this category out of a total of 257.

In conclusion I must acknowledge my deep indebtedness to Messrs. Brewster, Ridgway, and Oberholser, and to Drs. Dwight and Bishop for their painstaking care in comparing and indentifying closely allied subspecies for me.

#### LIST OF THE BIRDS OF CHILLIWACK, B. C.

1. *Æchmophorus occidentalis*. WESTERN GREBE.— Common migrant.
2. *Colymbus holboëlli*. HOLBCELL'S GREBE.— Fairly common migrant and may breed in the Harrison Lake district to the north.
3. *Colymbus auritus*. HORNED GREBE.— Common migrant.



4. **Colymbus nigricollis californicus.** EARED GREBE.— Only once taken.
5. **Podilymbus podiceps.** PIED-BILLED GREBE.— Rather scarce resident. A few remained throughout the severe winter of 1908-'09, though in one case a bird must have survived underneath the ice of a frozen slough for about three weeks. There was probably plenty of air space where the water had fallen after the ice had formed.
6. **Gavia immer.** LOON.— Fairly common and breeds.
7. **Gavia pacifica.** PACIFIC LOON.— Straggler, only one taken.
8. **Gavia stellata.** RED-THROATED LOON.— A bird in full summer plumage in the shop of Mr. Wm. Hall in 1887, which was killed in the vicinity.
9. **Stercorarius longicaudus.** LONG-TAILED JAEGER.— I shot a fine white-breasted adult August 23, 1890, at Sumas Lake, and at other times saw several others, nearly always in September. This Jaeger certainly migrates overland as I have seen it doing so on several occasions — once in the Rocky Mountains. I have not yet seen it on the coast where the Parasitic Jaeger is common. The contents of the stomach of a young bird killed in September consisted mainly of half digested *Empetrum* berries indicating a very recent sojourn on the tundras.
10. **Larus glaucescens.** GLAUCOUS-WINGED GULL.— The commonest gull, ascending the smallest streams at the time of the salmon run and perching freely on tall dead trees.
11. **Larus argentatus.** HERRING GULL.— Much scarcer than the last. All the records so far published of *Larus occidentalis* for British Columbia refer to this gull. I had almost come to the conclusion that *occidentalis* had no right to a place on the British Columbian list when I came across the skin of a moulting adult in the Geological Survey's Collection at Ottawa, collected by Spreadborough on the south end of Vancouver Island.
12. **Larus californicus.** CALIFORNIA GULL. Scarce migrant.
13. **Larus delawarensis.** RING-BILLED GULL. Fairly common migrant.
14. **Larus brachyrhynchus.** SHORT-BILLED GULL. — At times abundant.
15. **Larus philadelphia.** BONAPARTE'S GULL.— Common migrant.
16. **Hydrochelidon nigra surinamensis.** BLACK TERN.— Two adults seen and one taken June, 1897, and one juvenal seen Sept. 1, 1899, all at Sumas Lake.
17. **Pelecanus erythrorhynchus.** WHITE PELICAN.— A straggler to Sumas Lake, usually seen in June or July at the time of the highest water.
18. **Merganser americanus.** AMERICAN MERGANSER.— Common resident.
19. **Merganser serrator.** RED-BREADED MERGANSER.— Scarce migrant in the late autumn and again in May.
20. **Lophodytes cucullatus.** HOODED MERGANSER.— Common resi-

dent. Both this species and the Goosander being tree nesting ducks do not suffer from the summer floods so disastrous to most of the ducks in the Fraser Valley.

21. **Anas platyrhynchos.** MALLARD.— An abundant resident.
22. **Chaulelasmus streperus.** GADWALL.— Scarce. I have seen the Gadwall at Sumas in June and July, but doubt if it breeds. A few remain all winter.
23. **Mareca americana.** BALDPATE.— Common resident and I think a few breed in the valley — or used to.
24. **Nettion carolinense.** GREEN-WINGED TEAL.— Common resident — breeds.
25. **Querquedula discors.** BLUE-WINGED TEAL.— The Blue-wing used to be a fairly common summer resident — very common in 1887 — but by far the greater portion of the nests were destroyed each year by the rise of the Fraser River in June. The last I saw was an adult male in June, 1896.
26. **Querquedula cyanoptera.** CINNAMON TEAL.— The Cinnamon Teal used to be common in the eighties, in fact, after the Mallard, the commonest breeding duck. Now very scarce on account of their nests being annually drowned out by the Fraser River floods. If the birds reared second broods they fell easy victims to duck shooters as the young, as a rule, could not fly when the season opened.
27. **Spatula clypeata.** SHOVELLER.— The Shoveller used to be a common breeder, now only a migrant owing to the draining of the upland swamps and the inundating of the lowlands. Two remained throughout the winter of '89-'90.
28. **Dafila acuta.** PINTAIL.— Common, resident, and used to breed.
29. **Aix sponsa.** WOOD DUCK.— The Wood Duck was rather scarce when I first came to British Columbia in 1887, becoming more common every year up to about '95 when it was very abundant. It has since decreased but is still a regular breeder in the Fraser Valley. Three remained throughout the winter of '89-'90, and I saw one in February, 1900, during exceptionally severe weather.
30. **Marila americana.** REDHEAD.— Scarce migrant. Four records.
31. **Marila vallisineria.** CANVAS-BACK.— Irregular migrant, sometimes common.
32. **Marila marila.** SCAUP.— Rather scarce winter visitant.
33. **Marila affinis.** LESSER SCAUP.— More common than the last.
34. **Marila collaris.** RING-NECKED DUCK.— Fairly common. One breeding record.
35. **Clangula clangula americana.** GOLDEN-EYE.— Common and possibly a pair or two may sometimes breed in the valley.
36. **Clangula islandica.** BARROW'S GOLDEN-EYE.— I only shot one undoubted Barrow's Golden-eye, but the species must be fairly frequent as it is a common breeder on the other side of the Cascades. At the time of my residence in this district I relied on the pattern of wing and color of

bill to distinguish the females and young males of the two Golden-eyes and undoubtedly passed over many Barrow's, as these characters are useless in determining the species.

37. **Charitonetta albeola.** BUFFLE-HEAD.— Common. One breeding record at Sumas Lake where I saw a female and three half grown young.

38. **Harelda hyemalis.** OLD-SQUAW.— I shot two females at Sumas Lake, November, 1894.

39. **Histrionicus histrionicus.** HARLEQUIN.— A number of pairs breed in the mountain streams tributary to the Chilliwack River. Never seen in fall or winter.

40. **Oidemia deglandi.** WHITE-WINGED SCOTER.—

41. **Oidemia perspicillata.** SURF SCOTER.— Huge flocks of Scoters pass through in May and early June, nearly all White-winged Scoters.

42. **Erismatura jamaicensis.** RUDDY DUCK.— Scarce migrant.

43. **Chen hyperboreus hyperboreus.** SNOW GOOSE.— Rather rare migrant.

44. **Anser albifrons gambeli.** WHITE-FRONTED GOOSE.— Usually scarce, but numerous in the fall of 1904, and possibly a few remained all winter. Latest spring record June 3.

45. **Branta canadensis canadensis.** CANADA GOOSE.— Common; remains throughout the coldest winters and a few can be seen on Sumas prairie all summer, but do not breed. I think it breeds at Chilliweyuk Lake at the head of the Chilliweyuk (or Chilliwack) River.

In the winter and early spring are seen flocks of a dark form of this species. At first I took these for *occidentalis* but the size and measurements of those shot were fully up to the maximum of *canadensis*. Several times I have had flocks of the light and dark "Honkers" feeding just out of gunshot of me and keeping apart from each other. The underparts of the dark form are often as dark as the upper surface and abruptly defined against the white of the ventral region. This is probably the breeding bird of the coast strip to the northward.

46. **Branta canadensis hutchinsi.** HUTCHINS' GOOSE.— Common and at times very abundant but getting scarcer, though few are killed. The vast flocks that used to remain on Sumas Lake and prairie every fall and spring mostly pass over now, as they are too much disturbed. A few remain with the "Honkers" all winter and one or two can usually be found throughout the summer, but of course do not breed.

Of the large numbers of Geese I have shot or handled I have never seen one that could in any way be called an intergrade between *canadensis* and *hutchinsi*, nor have I, once that I was well acquainted with the *minima*, seen an intergrade between that bird and *hutchinsi*, and I am convinced that when these three birds are carefully studied they will each be found entitled to full specific rank.

47. **Branta canadensis minima.** CACKLING GOOSE.— For long I mistook small dark birds of the preceding species for Cackling Geese but when I did get the real bird I found it easy to distinguish in the flesh.

It is not common in the valley and I have only taken it in the fall. I have also shot it east of the Cascades. Mr. Brewster wrote me when I sent him typical *minima* that they were the first undoubted examples of that bird he had received, and that he believed the majority of skins in other collections labeled *minima* were only *hutchinsi*.

48. **Olor columbianus.** WHISTLING SWAN.— At times large numbers visit Sumas Lake usually in the late fall. I found they decoyed very readily to an imitation of their call.

49. **Olor buccinator.** TRUMPETER SWAN.— Much scarcer than the last and I have only shot one in this district.

50. **Olor sp?**— In the spring of 1890 I examined a mounted swan in the shop of Mr. Wm. Hall that had been killed the preceding winter on Sumas Lake. It was an adult, a very small bird with the basal third of the bill yellow. I took it for the Whistling Swan. The other swans I had handled up to this time were considerably larger and had no yellow at the base of the bill. There was one of these in Mr. Hall's shop at the same time. Later I found that these black-billed Swans were only Whistlers as I did not shoot the true Trumpeter until the spring of 1895.

On November 5, 1894, large numbers of Whistling Swans were on Sumas Lake — about a dozen large flocks. Near them but always keeping separate were three swans of a very much smaller size, an adult and two young.

The cygnets were very dark, the necks especially so. On the mud flat at a little distance one only saw the white bird. I spent the entire day trying to get a shot at these. Ultimately I got up to within about two hundred yards and after watching the birds through my glass for a little while I fired and missed them, the bullet ploughing up the mud under the adult. Next day the Whistlers were still on the lake but the small swans had gone. Several times I had the latter in view close to a flock of Whistlers and the difference in size was very noticeable, also there were no cygnets among the Whistlers anything like as dark as the small swans. There is no doubt that these small birds, as well as the bird in Hall's shop (which I was later unable to trace), belonged to one of the small Asiatic species.

Swans have been protected at all seasons in British Columbia for the last ten years or so, so it is doubtful if a specimen of this interesting straggler will ever be taken in the Province.

51. **Plegadis guarana.** WHITE-FACED GLOSSY IBIS.— One specimen, a young bird, was shot some time in the summer of 1902 on the Luck-a-cuck River. This bird is now in the museum at Victoria.

52. **Botaurus lentiginosus.** BITTERN.— Common summer resident. I have seen several in mid-winter about 50 miles down the Fraser River from Sumas.

53. **Ardea herodias fannini.** NORTHWESTERN HERON.— Common resident but did not breed in the valley in my time. Mr. Outram Bangs informs me that skins I sent to him were typical of this form.

54. **Grus canadensis.** LITTLE BROWN CRANE.— Spring and fall migrant.



55. **Grus mexicana.** SANDHILL CRANE.— The large Crane bred regularly in a cranberry bog at Sumas up to 1902. It still breeds near the city of New Westminster in the large cranberry bogs.

56. **Rallus virginianus.** VIRGINIA RAIL.— Permanent resident. Scarce.

57. **Porzana carolina.** SORA.— Summer resident only. More common than the last.

58. **Fulica americana.** COOT.— Spring and fall migrant.

59. **Lobipes lobatus.** NORTHERN PHALAROPE.— Common fall migrant, never seen in the spring.

60. **\*Steganopus tricolor.** WILSON'S PHALAROPE.— On September 9, 1888, a large Phalarope which I took to be this species flew low over my head and settled in a swampy stream where it swam about in regular phalarope fashion.

61. **Gallinago delicata.** WILSON'S SNIPE.— Common resident — a few breed.

62. **Macrorhamphus scolopaceus.** LONG-BILLED DOWITCHER.— Common in fall. Very rare in spring.

63. **Micropalama himantopus.** STILT SANDPIPER.— Two birds of the year taken at Sumas Lake August 19, 1899.

64. **Tringa canutus.** KNOT.— Only once seen when I shot a young bird at Sumas Lake in August, 1890.

65. **Pisobia maculata.** PECTORAL SANDPIPER.— Common in fall and rare in spring.

66. **Pisobia bairdi.** BAIRD'S SANDPIPER.— Common, often in very large flocks, in fall. Rare in spring. I have never taken an adult in the fall to my knowledge.

67. **Pisobia minutilla.** LEAST SANDPIPER.— Common in fall and one of the few sandpipers that visit the valley regularly in spring.

68. **Pelidna alpina sakhalina.** RED-BACKED SANDPIPER.— The last sandpiper to arrive in the fall and remains all winter on Sumas Lake, though driven to the sea coast in very severe weather.

69. **Ereunetes pusillus.** SEMIPALMATED SANDPIPER.— Although I have sent numbers of this Sandpiper back to the large eastern collections, and yearly recorded it as a regular migrant, it is still quoted (A. O. U. Check-List, 1910) as "casual" in British Columbia. It is a tolerably common and regular fall migrant to the valley, arriving late in July, some two weeks before the next species. East of the Cascades it is the common *Ereunetes* outnumbering *mauri* one hundred to one.

70. **Ereunetes mauri.** WESTERN SANDPIPER.— Common in fall and rare in spring. In life this is a very different bird from *pusillus*; in that species the bill is straight or turns slightly upward like a Knot's or a Sanderling's. In *mauri* the bill turns slightly but pronouncedly downwards, like a miniature of the Red-backed Sandpiper. In fact in life the Western Sandpiper bears a stronger resemblance to the Least Sandpiper than to its close ally the Semipalmated.

71. **Calidris leucophæa.** SANDERLING.— Scarce fall migrant.
72. **Totanus melanoleucus.** GREATER YELLOW-LEGS.— Common migrant. Arrives early in spring.
73. **Totanus flavipes.** LESSER YELLOW-LEGS.— Common in fall. I have no spring record.
74. **Helodromas solitarius solitarius.** SOLITARY SANDPIPER.—
75. **Helodromas solitarius cinnamomeus.** WESTERN SOLITARY SANDPIPER.— Both forms of the Solitary Sandpiper occur, though the latter is the more numerous. Both are regular and fairly common in fall but rarely seen in spring.
76. **Tryngites subruficollis.** BUFF-BREADED SANDPIPER.— Scarce fall migrant. I have taken it about six times in August and September. I have never seen more than three together.
77. **Actitis macularia.** SPOTTED SANDPIPER.— Common. A few breed. A very late record for this latitude is December 3, 1895.
78. \* **Numenius americanus.** LONG-BILLED CURLEW.— I have only seen this bird four times, always in April.
79. **Squatarola squatarola.** BLACK-BELLIED PLOVER.— Common in fall, only once seen in spring.
80. **Charadrius dominicus dominicus.** GOLDEN PLOVER.— Common in fall, but only two spring records.
81. **Oxyechus vociferus.** KILLDEER.— Common, a few remain all winter.
82. **Ægialitis semipalmata.** SEMIPALMATED PLOVER.— I have taken this three times in the fall.
83. **Arenaria interpres morinella.** RUDDY TURNSTONE.— One record, Sumas Lake, August 19, 1899.
84. **Dendragapus obscurus fuliginosus.** SOOTY GROUSE.— Confined to the foothills and mountains.
85. **Bonasa umbellus togata.** CANADA RUFFED GROUSE.—
86. **Bonasa umbellus sabinii.** OREGON RUFFED GROUSE.— Typical examples of both forms occur as well as every possible intergrade. I have never seen the Ruffed Grouse above 2000 feet on the coast. In the interior it ascends at least to 6000 feet.
87. **Lagopus leucurus leucurus.** WHITE-TAILED PTARMIGAN.— Found on nearly all the high peaks of the Cascades to the east.
88. **Columba fasciata.** BAND-TAILED PIGEON.— Common, arrives in April (once in March) and leaves early in October. I have seen it in flocks in September at timber line on the high peaks feeding on *Vaccinium* berries.
89. **Zenaidura macroura carolinensis.** MOURNING DOVE.— Rather scarce. Breeds.
90. **Cathartes aura septentrionalis.** TURKEY VULTURE.— Common summer resident.
91. **Circus hudsonius.** MARSH HAWK.— Common resident.
92. **Accipiter velox.** SHARP-SHINNED HAWK.— Common. I have

found it breeding on the floor of the valley as well as in the mountains. Sometimes seen in midwinter.

93. **Accipiter cooperi**. COOPER'S HAWK.—Common and probably breeds.

94. **Astur atricapillus atricapillus**. GOSHAWK.—I find it very hard to distinguish adults of the two subspecies of Goshawk, but extremes of the young are very different, and I have killed several juveniles that were typical of this form — one, an extremely light colored female, the lightest Goshawk I ever saw in juvenile plumage.

95. **Astur atricapillus striatulus**. WESTERN GOSHAWK.—More common than the last, but I have never found Goshawks breeding in this district though they should do so. There was an invasion of Goshawks the winter of 1888-89, when they were very common — mostly adults.

96. **Buteo borealis calurus**. WESTERN RED-TAIL.—Tolerably common resident.

97. \***Buteo lineatus elegans**. RED-BELLIED HAWK.—I have only sight records for this species, two of these were at short range when the conspicuous markings of the under surface of the wings and tail were plainly seen and left no doubt in my mind as I am familiar with the eastern race.

98. **Buteo swainsoni**. SWAINSON'S HAWK.—Seldom seen in the valley but a common breeder in the park like country below timber line in the Cascades. I once observed a remarkable migration of Swainson's Hawk at Chilliwack in the spring of 1889. Hundreds of the birds were wheeling slowly about at various elevations and slowly drawing away to the northward. The flight lasted for about five hours. Nine-tenths of the birds were of the melanistic phase (as are all the breeding birds in the mountains). The hawks were accompanied by a few Herring Gulls in adult plumage.

99. **Archibuteo lagopus sancti-johannis**. ROUGH-LEGGED HAWK.—Irregular migrant, sometimes fairly common. A few usually remain all winter on Sumas Prairie.

100. **Aquila chrysaetos**. GOLDEN EAGLE.—Winter visitant to the valley, breeding in the high mountains only.

101. **Haliaeetus leucocephalus alascanus**. NORTHERN BALD EAGLE.—Tolerably common resident.

102. **Falco rusticolus rusticolus**. GRAY GYRFALCON.—One record only, an adult female shot by my father, February 14, 1890, on Sumas Prairie. This bird chased a Mallard that I had hit very hard. But before the Falcon made its final stoop the Mallard fell dead. The Falcon settled on the turf beside it but would not carry off its prize, or even touch it, though I kept hidden about a hundred yards away, and it eventually flew off and fell to my father's gun later in the day. This bird is now in the collection of Mr. William Brewster, who says of it "not quite typical (a trifle too dark), but much nearer to this form than to any other."

103. **Falco rusticolus gyrfalco**. GYRFALCON.—A regular winter visitant to Sumas prairie where I have taken several specimens. Two of

these in Mr. Brewster's museum he identifies as typical *gyrfalco*. Gyr-falcons arrive in November, usually about the 8th. The latest date I have seen one was March 7. They prey entirely on ducks and the smaller geese. It was seldom that there was more than one on the prairie at a time, and the smaller falcons worried them continually. I once saw a Prairie Falcon badger a Gyr-falcon for about two hours following it from tree to tree and striking at it continually.

104. **Falco mexicanus**. PRAIRIE FALCON.—At one time a regular fall and winter visitant, though always scarce. Of late years very rare. Last one taken July 27, 1896, a young bird.

105. **Falco peregrinus anatum**. PEREGRINE FALCON.—Scarce migrant. I have seen, but not taken, two or three very dark birds that may have been *pealei*. Young birds of those taken though dark had the light edging to the feathers of the upper surface typical of *anatum*.

106. **Falco columbarius columbarius**. PIGEON HAWK.—

107. **Falco columbarius suckleyi**. BLACK MERLIN.—

108. **Falco columbarius richardsoni**. RICHARDSON'S MERLIN.—Of the three Merlins *suckleyi* was the commonest, then *columbarius*, with *richardsoni* rare, only two of the latter taken and one of these not quite typical. Out of about thirty birds taken I saw no intergrades between *columbarius* and *suckleyi*. Since then I have taken two intergrades east of the Cascades. The Black Merlin is the only subspecies seen in the summer before August, but I never found it breeding.

109. **Falco sparverius phalæna**. DESERT SPARROW HAWK.—Permanent resident. Common.

110. **Pandion haliaëtus carolinensis**. OSPREY.—Common, leaving for the south early in the fall just when the streams are commencing to swarm with salmon.

111. **Asio wilsonianus**. LONG-EARED OWL.—Permanent resident. Scarce.

112. **Asio flammeus**. SHORT-EARED OWL.—Common resident, occasionally a few pairs remain to breed. A full grown young bird taken in July was very dark and rufous.

113. **Strix occidentalis caurina**. NORTHERN SPOTTED OWL.—Very rare. I purchased a very poor mounted specimen from Mr. Wm. Hall who got it at Mount Lehman, some fifteen miles down the Fraser River from Sumas, where a pair had reared a brood of young. During the eleven years I resided at Chilliwack and Sumas I worked very hard for this bird, visiting all likely localities and offering rewards for any owls brought me with dark brown eyes, but could get no trace of it. Returning for a brief visit in the winter of 1909, I was delighted to secure a fine specimen close to my old home. I had gone out on January 28 to try a little 22 pocket pistol on the jays and squirrels which were a pest, and after shooting a number of these I got first a Goshawk, and a little later this beautiful owl.

114. **Scotiaptex nebulosa nebulosa**. GREAT GRAY OWL.—Very rare. The last record I have was of one killed in January, 1890, at Sumas. Prior to that it was of fairly regular occurrence in the winter.

115. **Cryptoglaux funerea richardsoni**. RICHARDSON'S OWL.— One record only, a male taken by myself January 13, 1903.

116. **Cryptoglaux acadica scotæa**. NORTHWESTERN SAW-WHET OWL.— Resident, rather scarce. I list this as *scotæa* with some misgivings, as some of the specimens taken seemed to me to be quite light enough for the eastern bird. I have never heard the "saw-whetting" cry in the west from this owl, or any other note than a monotonous single whistle or hoot, kept up in constant repetition, now fast, now slow, for sometimes a quarter of an hour at a stretch. This is easily imitated by whistling the syllable "too" with the tip of one's tongue against the roof of the mouth. I have called the bird up in this way often — once one even settled on my head in the dusk.

117. **Otus asio kennicotti**. KENNICOTT'S SCREECH OWL.— Tolerably common resident.

118. **Bubo virginianus pallescens?** WESTERN HORNED OWL.—

119. **Bubo virginianus saturatus**. DUSKY HORNED OWL.— The Bubs of this valley present a great variety, from pale white footed birds almost pale enough for the Arctic subspecies, through rufous colored birds that looked like typical eastern birds when laid side by side, to the darkest *saturatus*. I have one of the light-colored birds still and it is lighter than any I have since taken in eastern B. C. *Saturatus* is the only breeding form.

120. **Nyctea nyctea**. SNOWY OWL.— Scarce though fairly regular visitant to the valley. Common in November and December, 1896. These are the only months I have seen it in here.

121. **Surnia ulula caparoch**. HAWK OWL.— Rare in the valley, earliest fall record October 16. I have reason to believe that it breeds in the mountains in the Hudsonian Zone.

122. **Speotyto cunicularia hypogæa**. BURROWING OWL.— Scarce straggler to Sumas prairie, two fall records and one in spring.

123. **Glaucidium gnoma californicum**. CALIFORNIA PIGMY OWL.— Common resident breeding in the valley, as well as in the high mountains. This may be the subspecies recently described by Grinnell from Vancouver Island (*swarthi*). The rolling whistle of this owl is the greatest of all aids to the collector in the west. An imitation of this, or the single call note, brings every small bird right up to you, even from the tops of the gigantic firs. It also brings up any Pigmy Owl that may be in the vicinity, and I once had one of these come down and carry off an Olive-sided Flycatcher that I had brought down from the treetops and shot.

124. **Coccyzus americanus occidentalis**. CALIFORNIA CUCKOO.— Tolerably common summer resident of late years. Formerly rare.

125. **Ceryle alcyon caurina**. NORTHWESTERN KINGFISHER.— Common resident.

126. **Dryobates villosus leucomelas**. NORTHERN HAIRY WOODPECKER.— I shot two stragglers of this woodpecker, one on March 7, 1895, but I cannot find the record of the other. One was quite typical

the other approached the next subspecies. Both are in the collection of Mr. Brewster.

127. **Dryobates villosus monticola.** ROCKY MOUNTAIN HAIRY WOODPECKER.— This is of regular occurrence in the valley and may breed there. It is the breeding Hairy Woodpecker of the adjacent mountains. Specimens sent to Mr. Brewster were identified as *hyloscopus*, but this was before *monticola* was described.

128. **Dryobates villosus harrisi.** HARRIS'S WOODPECKER.— Common resident.

129. **Dryobates pubescens gairdneri.** GAIRDNER'S WOODPECKER.— Common resident.

130. **Picoides americanus fasciatus.** ALASKAN THREE-TOED WOODPECKER.— Resident in the Hudsonian Zone on all the mountains. Never seen in the valley.

131. **Sphyrapicus ruber notkensis.** NORTHERN RED-BREASTED SAPSUCKER.— Tolerably common summer resident.

132. **Phloeotomus pileatus abieticola.** NORTHERN PILEATED WOODPECKER.— Common resident.

133. **Asyndesmus lewisi.** LEWIS'S WOODPECKER.— Tolerably common summer resident.

134. **Colaptes auratus luteus.** NORTHERN FLICKER.— Only one record, a bird taken by myself at Sumas, April 8, 1903. Its rarity is notable as I found it a regular migrant on Vancouver Island.

135. **Colaptes cafer saturator.** NORTHWESTERN FLICKER.— Common resident.

136. **Chordeiles virginianus virginianus.** NIGHTHAWK.— Breeding birds sent to Mr. Ridgway and to Mr. Brewster are identified as this form by both. "They certainly are not *henryi* or *sennetti*" (Brewster in *epist.*) *Henryi* and *hesperis* are constantly quoted as the British Columbian subspecies, but all I send back to be identified from different localities are typical *virginianus*. The last so identified are breeding birds from the dry interior (Okanagan) which Mr. Oberholser labels as *virginianus*.

137. **Cypseloides niger borealis.** BLACK SWIFT.— Common summer resident always appearing in the valley in moist or rainy weather. It breeds in the mountains, but the only place I have seen that looked likely is Che-am peak at the extreme head of the valley. Here I have seen a few dashing about the cliffs in July. A note for June 16, 1901, from my notebook reads, "One of the females had a fully formed egg with the shell soft, measuring 1.03 in.  $\times$  .66 in., an almost perfect oval." It is a mistake to suppose the females can always be told from the males by the rounded tail and white edges to the feathers of belly. These are only the younger birds. Old females probably two years and over have the forked tail and black under surface of fully adult males.

138. **Chaetura vauxi.** VAUX'S SWIFT.— Common summer resident.

139. **Archilochus alexandri.** BLACK-CHINNED HUMMINGBIRD.— Rare though regular summer resident.

140. **Selasphorus rufus**. RUFIOUS HUMMINGBIRD.— Common summer resident.
141. **Tyrannus tyrannus**. KINGBIRD.— Common summer resident.
142. **Tyrannus verticalis**. ARKANSAS KINGBIRD.— Scarce summer resident.
143. **Sayornis sayus**. SAY'S PHOEBE.— Straggler only. Two records. October 1, 1887, and March 26, 1896.
144. **Nuttallornis borealis**. OLIVE-SIDED FLYCATCHER.— Summer resident, from the floor of the valley up to 6000 feet. Not common.
145. **Myiochanes richardsoni richardsoni**. WESTERN WOOD PEWEE.— Common summer resident.
146. **Empidonax difficilis difficilis**. WESTERN FLYCATCHER.— Common summer resident.
147. **Empidonax trailli trailli**. TRAILL'S FLYCATCHER.— Common summer resident.
148. **Empidonax hammondi**. HAMMOND'S FLYCATCHER.— Scarce, breeding in the mountains and foothills only. On Vancouver Island (Cowichan) this species breeds right down to sea level.
149. **Empidonax wrighti**. WRIGHT'S FLYCATCHER.— Only one undoubted *wrighti* taken, April, 1888.
150. **Otocoris alpestris arctica**. PALLID HORNED LARK.— Common spring and fall migrant through the valley, and the breeding *Otocoris* above timber line in the Cascades. The smaller subspecies I have never seen at high altitudes.
151. **Otocoris alpestris strigata**. STREAKED HORNED LARK.—
152. **Otocoris alpestris merrilli**. DUSKY HORNED LARK.— Both of these are migrants only — *merrilli* is undoubtedly on its way to the arid plateau of Chilcotin via Harrison Lake, where it is a common breeder, but as I can find no record of *strigata* further north it is probably only a straggler to the valley. Mr. Brewster identifies five birds from the valley as *strigata* and one as *merrilli*. I have several of the latter in my own collection from Chilliwack.
153. **Pica pica hudsonia**. MAGPIE.— Common. Arrives in August and leaves in April. None breed.
154. **Cyanocitta stelleri stelleri**. STELLER'S JAY.— Common resident. Rare in the high mountains.
155. **Cyanocitta stelleri annectens**. BLACK-HEADED JAY.— A straggler from the east side of the Cascades. One taken at Sumas, October, 1891, with a conspicuous white eyelid. Another seen later but not secured.
156. **Perisoreus obscurus griseus**. GRAY JAY.— Common up to timber line and down to 700 feet, never seen in the valley.
157. **Corvus corax principalis**. NORTHERN RAVEN.— Rather rare. Breeds from 500 ft. to the summit of the highest peaks.
158. **Corvus brachyrhynchos hesperis**. WESTERN CROW.— Common resident.
159. **Corvus caurinus**. NORTHWESTERN CROW.— Common resident.

While *caurinus* seems to breed only along the Fraser or a little way back from it, *hesperis* is generally distributed through the valley. Both may be found breeding on Sumas Prairie. The notes of the two are distinct, and *caurinus* has in addition a musical laughing cackle, something like a Magpie's.

160. ***Nucifraga columbiana***. CLARK'S NUTCRACKER.— Rare straggler, I have only three records for the valley, all in the fall. More common in the Hudsonian Zone of mountains but does not breed there (?)

161. ***Dolichonyx oryzivorus***. BOBOLINK.— I have taken both adults and young in July and August but do not think it breeds west of the Cascades.

162. ***Molothrus ater ater***. COWBIRD.— One record only, Sumas, May 26, 1897, a female with ovaries not at all enlarged. This is probably *Molothrus ater artemisiæ* (Grin.).

163. ***Xanthocephalus xanthocephalus***. YELLOW-HEADED BLACKBIRD.— Straggler, only two records, both adult males, May 14, 1891, and June, 1895.

164. ***Agelaius phoeniceus caurinus***. NORTHWESTERN REDWING.— Common resident, a few remain all winter.

165. ***Sturnella neglecta***. WESTERN MEADOWLARK.— Common resident.

166. ***Icterus bullocki***. BULLOCK'S ORIOLE.— One pair nested regularly in some large birch trees growing in the open near our ranch at Chilliwack — these were the only ones in the valley then. Since, they have increased with the opening up of the forest and on my last visit to the valley I saw their nests or heard of them at several different points.

167. ***Euphagus cyanocephalus***. BREWER'S BLACKBIRD.— Common, but only rarely seen all winter.

168. ***Hesperiphona vespertina montana***. WESTERN EVENING GROSBEEK.— Sporadically abundant, during most years absent or rare. No breeding record.

169. ***Pinicola enucleator montana***. ROCKY MOUNTAIN PINE GROSBEEK.— A scarce winter visitant to the valley. The form breeding in the Hudsonian Zone (above 6000 ft.) in the Cascades to the east Mr. Oberholser has identified as *montana* from a juvenile sent to him. It is possible the birds found in the valley may belong to some other subspecies; but I have no specimens of these left for identification. The Queen Charlotte Island bird is typical *flammula*.

170. ***Carpodacus purpureus californicus***. CALIFORNIA PURPLE FINCH.— Common resident of the valley. I have seen no species of *Carpodacus* in the mountains.

171. ***Loxia corvirostra minor***. CROSSBILL.— Usually rare in the valley, but enormously common in the spring and early summer of 1890, passing through with Evening Grosbeaks in large flocks. Breeds plentifully in the Hudsonian Zone.

172. ***Loxia leucoptera***. WHITE-WINGED CROSSBILL.— I shot three



out of a flock of 20 at Sumas, February 4, 1896. The only ones I ever saw in this district.

173. **Leucosticte tephrocotis tephrocotis.** GRAY-CROWNED ROSY FINCH.— In the winter of '96-'97 I collected one or two typical *tephrocotis* from flocks of the next subspecies on Sumas prairie, also a good many of *littoralis* with brown feathers in the checks showing an approach to the former.

174. **Leucosticte tephrocotis littoralis.** HEPBURN'S ROSY FINCH.— Abundant the winter of '96-'97. Usually rare. Breeds on Mt. Che-am and other high peaks.

175. **Acanthis linaria linaria.** REDPOLL.— Irregular winter visitant. Sometimes common. Usually present during alternate winters. Latest spring record, April 6, 1896.

176. **Acanthis linaria exilipes.** HOARY REDPOLL.— One specimen taken, typical as to the bill but flanks and lower coverts slightly streaked. I must protest against the usage of classing the Hoary Redpoll as a subspecies of *hornemanni*, it is clearly a subspecies of *linaria*, as every intergrade both as to shape of bill and tone and pattern of plumage between the two can be found in any large series, but no intergrades between *exilipes* and *hornemanni*; and though absolutely typical examples of the former are almost exact miniatures of the latter the majority of *exilipes* show a far closer approach to *linaria*.

177. **Spinus pinus.** PINE SISKIN.— Common resident.

178. **Plectrophenax nivalis nivalis.** SNOW BUNTING.— Scarce though fairly regular winter visitant to Sumas prairie.

179. **Calcarius lapponicus alascensis.** ALASKAN LONGSPUR.— Common in the fall, rare in spring, one or two remain all winter.

180. **Rhynchophanes mccowni.** MCCOWN'S LONGSPUR.— Two records. An adult male in full breeding plumage taken on a little ridge of natural prairie on our ranch at Chilliwack, June 1, 1887, and two females taken at the identical spot three years later almost to a day, after watching them circle about high in the air for about quarter of an hour. All three of course were stragglers only. I have never seen the species in the dry interior though I have always been on the lookout for it. It goes very much against the grain for me to put this in a different genus from the Lapland and Chestnut-collared Longspurs. All three are so perfectly congeneric in structure, notes, and habits.

181. **Poocetes gramineus affinis.** OREGON VESPER SPARROW.— Very scarce migrant only.

182. **Passerculus sandwichensis sandwichensis.** ALEUTIAN SAVANNAH SPARROW.— Tolerably common migrant.

183. **Passerculus sandwichensis alaudinus.** WESTERN SAVANNAH SPARROW.— Abundant migrant, common breeder, and an occasional bird seen all winter. Some splitter will undoubtedly some day separate the small breeding form of the marshes and low meadows from the larger bird that passes through in great numbers when the small bird is sitting on eggs,

or in some cases feeding young. The small form is allied to *bryanti* and like it, is a bird of the lowlands and estuaries of the coastal strip.<sup>1</sup>

184. **Chondestes grammacus strigatus.** WESTERN LARK SPARROW.— First taken May 21, 1889. Another bird seen in spring of 1896. In 1899 I saw a breeding pair in the valley. It has recently become common in northern Okanagan and is probably also increasing at Chilliwack.

185. **Zonotrichia querula.** HARRIS'S SPARROW.— Two taken January 8, 1895, in which year there was an invasion of this sparrow as far west as Vancouver Island. Another seen in April, 1895.

186. **Zonotrichia leucophrys gambeli.** INTERMEDIATE SPARROW.— Common migrant. No specimens of Nuttall's Sparrow taken though it is the common breeding bird of the coast and islands.

187. **Zonotrichia coronata.** GOLDEN-CROWNED SPARROW.— Tolerably common migrant.

188. **Spizella monticola ochracea.** WESTERN TREE SPARROW.— Scarce winter visitant.

189. **Spizella passerina arizonæ.** WESTERN CHIPPING SPARROW.— Common summer resident.

190. **Junco oreganus oreganus.** OREGON JUNCO.— Breeding from the floor of the valley to the Hudsonian Zone.

191. **Junco oreganus connectens.** SHUFELDT'S JUNCO.— Common winter visitant. I cannot say with certainty that this subspecies is displacing *oreganus* as it is in the Seattle-Tacoma region.

192. **Junco hyemalis hyemalis.** SLATE-COLORED JUNCO.— Casual winter visitant. Two taken at an interval of about seven years, one other, at least, observed.

193. **Melospiza melodia morphna.** RUSTY SONG SPARROW.— Abundant resident.

194. **Melospiza melodia rufina.** SOOTY SONG SPARROW.— Winter visitant only (?). Specimens taken were not as dark as those from north-western Vancouver Island, nor even as dark as some from the dry interior in Okanagan.

195. **Melospiza lincolni lincolni.** LINCOLN'S SPARROW.—

196. **Melospiza lincolni striata.** FORBUSH'S SPARROW.— Many birds sent back to eastern collectors labeled *striata* passed unchallenged, including those sent to Mr. Brewster, but the only skin I have left from the valley is *lincolni lincolni*. Lincoln's Sparrow in one form or another breeds just below the Hudsonian Zone, and the species is a common migrant through the valley.

197. **Passerella iliaca unalascensis.** SHUMAGIN FOX SPARROW.—

198. **Passerella iliaca insularis.** KADIAK FOX SPARROW.—

199. **Passerella iliaca townsendi.** TOWNSEND'S FOX SPARROW.— Dr. Bishop and Mr. Oberholser have identified these three races from migrating Fox Sparrows I have sent back from Chilliwack. Dr. Bishop

<sup>1</sup> [cf. Bishop, Condor, Sept. 1915, p. 187.— Ed.]

has also identified two females taken April 11, 1905, as "*fuliginosa* approaching *townsendi*" but it has seemed safer to list them as the latter, as I know I have never seen in this valley the typical *fuliginosa* that breeds on the islands in the Gulf of Georgia, which is an extremely saturated form with *no yellow on the under mandible*. All three forms listed above are migrants, though I have once seen *townsendi* wintering in the valley.

200. ***Passerella iliaca schistacea***. SLATE-COLORED FOX SPARROW.— This is a scarce breeder in the Hudsonian Zone of the Cascades. I have never seen it in the valley. Identified by Oberholser.

201. ***Pipilo maculatus oregonus***. OREGON TOWHEE.— Common resident.

202. ***Zamelodia melanocephala***. BLACK-HEADED GROSBEAK.— Common summer resident in the valley.

203. ***Passerina amoena***. LAZULI BUNTING.— Tolerably common summer resident.

204. ***Piranga ludoviciana***. WESTERN Tanager.— Common summer resident up to upper edge of Canadian Zone (about 5000 ft.).

205. ***Petrochelidon lunifrons lunifrons***. CLIFF SWALLOW.— Scarce up to about 1895, since then more common and a colony breeds on a barn near the town of Chilliwack.

206. ***Hirundo erythrogastra***. BARN SWALLOW.— Common summer resident.

207. ***Iridoprocne bicolor***. TREE SWALLOW.—

208. ***Tachycineta thalassina lepida***. VIOLET-GREEN SWALLOW.—

209. ***Stelgidopteryx serripennis***. ROUGH-WINGED SWALLOW.— All three of these Swallows are common and breed, though when I first arrived in the valley there were no Violet-green Swallows breeding there.

210. ***Riparia riparia***. BANK SWALLOW.— Tolerably common and a colony must breed within fifty miles though I never found it breeding west of the Cascades.

211. ***Bombycilla garrula***. BOHEMIAN WAXWING.— Common and fairly regular winter visitant, the first arrivals usually seen towards the end of October.

212. ***Bombycilla cedrorum***. CEDAR WAXWING.— Common summer resident. Cedar Waxwings might be expected to winter on the coast of British Columbia, but I never saw them at that season in the Chilliwack Valley. Once I saw a flock in November, a very late date for the species.

213. ***Lanius borealis***. NORTHERN SHRIKE.— Fairly common migrant, a few remaining all winter. British Columbian birds are of large size with very large bills, doubtless Grinnell's new subspecies *invictus*.

214. ***Lanius ludovicianus gambeli***. CALIFORNIA SHRIKE.— One record only, a single bird shot by my father in April, 1888, and identified by Mr. Brewster.

215. ***Vireosylva olivacea***. RED-EYED VIREO.— Common summer resident.

216. *Vireosylva gilva swainsoni*. WESTERN WARBLING VIREO.— Tolerably common summer resident.

217. *Laniivireo solitarius cassini*. CASSIN'S VIREO.— Fairly common summer resident.

218. *Vireo huttoni obscurus*. ANTHONY'S VIREO.— One record, May, 1905, the only one I ever took on the mainland.

219. *Vermivora celata celata*. ORANGE-CROWNED WARBLER.— Regular migrant and not uncommon in the fall when the gray-headed young birds are easily distinguished from those of the next subspecies. Specimens identified by Oberholser.

220. *Vermivora celata lutescens*. LUTESCENT WARBLER.— Common and it may breed in the valley or the adjacent foothills, but I never actually found undoubted evidence of the fact.

221. *Dendroica aestiva rubiginosa*. ALASKA YELLOW WARBLER.— Common summer resident in the valley.

222. *Dendroica coronata*. MYRTLE WARBLER.— Fairly common migrant.

223. *Dendroica auduboni auduboni*. AUDUBON'S WARBLER.— Common migrant and a few remain to breed on the foothills. It is possible also that this Warbler may remain all winter as I have seen it as late as January 10, but I think the bulk, if not all, leave after that date and do not return until after the spring moult is completed.

224. *Dendroica nigrescens*. BLACK-THROATED GRAY WARBLER.— Common summer resident.

225. *Dendroica townsendi*. TOWNSEND'S WARBLER.— Tolerably common migrant but I never found it breeding in the valley, which is strange considering that it is a common breeder at sea level on Vancouver Island.

226. *Oporornis tolmiei*. MACGILLIVRAY'S WARBLER.— Common summer resident.

227. *Geothlypis trichas arizela*. PACIFIC YELLOW-THROAT.— Common summer resident.

228. *Icteria virens longicauda*. LONG-TAILED CHAT.— One record, a straggler taken on Sumas prairie, May 26, 1897.

229. *Wilsonia pusilla pileolata*. PILEOLATED WARBLER.—

230. *Wilsonia pusilla chryseola*. GOLDEN PILEOLATED WARBLER.— Both of these forms occur; it is probable that the latter is the breeding race. I have specimens of the former in my collection and Mr. Brewster identified two sent to him as belonging to the latter race though not extreme examples.

231. *Setophaga ruticilla*. REDSTART.— One record, an adult male taken in June, 1889.

232. *Anthus rubescens*. PIPIT.— Abundant migrant and a fairly common breeder at and above timber line.

233. *Cinclus mexicanus unicolor*. DIPPER.— Common resident, breeding in all the mountain valleys that have rushing streams and de-

scending to the larger rivers in October when the Dog Salmon are running, their ova forming the main diet of the Dipper at that season and through the winter.

234. **Dumetella carolinensis.** CATBIRD.— Scarce summer resident, probably about six pairs of birds breeding in the valley.

235. **Salpinctes obsoletus obsoletus.** ROCK WREN.— One record. I looked for this wren regularly every summer in what I took to be suitable localities in the mountains, and ultimately took one hopping about like a sparrow on a gravel bar in a river. This was late in November in very cold weather. I have never seen the species so late in its natural habitat east of the Cascades.

236. **Thryomanes bewicki calophonus.** SEATTLE WREN.— Common resident. In the severe winter of 1908–09 when the thermometer dropped to thirteen below with a howling wind for a week, this hardy little wren seemed to suffer no inconvenience and while Purple Finches and Juncos were dying in numbers, it trilled its cheery song from any sheltered nook. It is never found east of the Cascades, and the "Southern British Columbia" in the last A. O. U. Check-List should be corrected to southwestern.

237. **Troglodytes aëdon parkmani.** WESTERN HOUSE WREN.— Common summer resident.

238. **Nannus hiemalis pacificus.** WESTERN WINTER WREN.— Common summer resident from the floor of the valley to the Hudsonian Zone. Common throughout the winter in the valley.

239. **Telmatodytes palustris paludicola.** TULÉ WREN.— Breeding in suitable localities and a few probably remain all winter.

240. **Certhia familiaris occidentalis.** CALIFORNIA CREEPER.— Fairly common resident.

241. \***Sitta carolinensis aculeata.** SLENDER-BILLED NUTHATCH.— I include this on the authority of Macoun's Catalogue of Canadian birds. The record stands "One specimen taken on Sumas Prairie, B. C., October 10, 1894 (E. F. G. White)." Mr. White knows this bird well and the above constitutes the only record of the subspecies for Canada, as the form occurring east of the Cascades is now separated as *nelsoni*. It is quite likely the slender billed Nuthatch occasionally straggles over the border from northwestern Washington just as the Bush-Tit does. The nearest breeding record for this nuthatch is the neighborhood of Tacoma.

242. **Sitta canadensis.** RED-BREADED NUTHATCH.— Common resident from the floor of the valley to the Hudsonian Zone.

243. **Penthestes atricapillus occidentalis.** OREGON CHICKADEE.— Common resident.

244. **Penthestes rufescens rufescens.** CHESTNUT-BACKED CHICKADEE.— Common resident.

245. **Psaltriparus minimus minimus.** BUSH-TIT.— Two taken from a large flock in the brush along the eastern edge of Sumas prairie, Nov. 25, 1899, and a pair observed breeding at the same place March 23

following. I never saw the species before or since and this must have been only a sporadic northward movement. The Bush-Tit occurs as a resident some fifty miles nearer the coast at Boundary Bay.

246. **Regulus satrapa olivaceus.** WESTERN GOLDEN-CROWNED KINGLET.—Common breeder in Hudsonian Zone and common from September to May in the valley.

247. **Regulus calendula grinnelli.** SITKA KINGLET.—It is probable that both races of the Ruby-crown occur but I have neglected to get Chilliwack specimens identified, so only list the form that is most certain to be the resident subspecies.

248. **Myadestes townsendi.** TOWNSEND'S SOLITAIRE.—Fairly common migrant, nesting in the mountains and possibly to near the base of the foothills. A few winter.

249. **Hylocichla guttata guttata.** ALASKA HERMIT THRUSH.—One taken May 2, 1905.

250. **Hylocichla guttata nanus.** DWARF HERMIT THRUSH.—Scarce migrant.

251. **Hylocichla guttata sequoiensis.** SIERRA HERMIT THRUSH.—This is the breeding form of Hermit Thrush. I have not noticed it below the Hudsonian Zone. Identified by Oberholser.

252. **Hylocichla ustulata ustulata.** RUSSET-BACKED THRUSH.—Common summer resident from the floor of the valley up into the foothills. I have heard what I took to be this thrush well up into the Canadian Zone but have no specimens from there and the mountain bird is probably *swainsoni*.

253. **Planesticus migratorius migratorius.** ROBIN.—Specimens taken on both spring and fall migrations, the latter identified by Mr. Ridgway.

254. **Planesticus migratorius propinquus.** WESTERN ROBIN.—Abundant in summer and a few remain throughout most winters. Breeds up to the Hudsonian Zone.

255. **Ixoreus naevius naevius.** VARIED THRUSH.—Resident. A few breed in the cool hemlock and spruce forests on the floor of the valley and more commonly at higher elevations.

256. **Sialia mexicana occidentalis.** WESTERN BLUEBIRD.—Fairly common breeder in the valley. I have seen this bluebird as late as January 10, but doubt if any remain through the winter though they do so at salt water fifty miles westward.

257. **Sialia currucoides.** MOUNTAIN BLUEBIRD.—Common migrant.

#### HYPOTHETICAL LIST.

**Pelecanus californicus.** CALIFORNIA BROWN PELICAN.—A Pelican haunted the Fraser River at Sumas for some time in the fall of 1894, that was described to me as a "cross between a Pelican and a Sand-hill Crane." This suggests the young bird of this species.

**Chen rossi.** Ross's Goose.—A very small Snow Goose frequented Sumas prairie for about six weeks in the spring of 1896. It always associated with the same flock of Hutchin's Geese and kept clear of a small flock of Snow Geese that were always present on the prairie. It looked much smaller than the latter though I was never able to get them in close juxtaposition.

**Branta canadensis occidentalis.** WHITE-CHEEKED GOOSE.—Mr. Brewster identifies four geese, from a series I collected for him, as this subspecies. He says of them "Nos. 46179 and 47105 are typical, No. 46178 is fairly typical in every respect, No. 47104 is typical in respect to markings of head and neck but the underparts are as light colored as in extreme specimens of *canadensis*."

With all deference to so eminent an authority, I hesitate to include this subspecies in my regular list as I have since seen specimens of true *occidentalis* which seems to be larger, of a deeper brown coloration throughout, and with larger bills and feet.

**Dryobates pubescens**, subsp.?—I have twice seen at close quarters Downy Woodpeckers of pure black and white coloration quite different from *gairdneri*. From the quantity of white spotting on the wings I should take these for *nelsoni*.

**Vermivora rubricapilla gutturalis.** CALAVERAS WARBLER.—A singing male pursued for some time but not secured in April, 1889.

**Penthestes hudsonicus hudsonicus.** HUDSONIAN CHICKADEE.—Chickadees seen in the Hudsonian Zone which I took at the time for *rufescens* were probably of this species as I have found it a regular resident of the Cascades a little further east.

**Astragalinus tristis salicamans?** WILLOW GOLDFINCH.—Since I left the region I have had several reports of Goldfinches feeding on the thistles. I kept a very careful lookout for this bird during my residence there, and it certainly did not occur then, though I saw it further south in Washington state. The Chilliwack birds may be *pallidus* which is a common resident east of the Cascades in British Columbia.