

COOPER ORNITHOLOGICAL CLUB

**PACIFIC COAST AVIFAUNA
NUMBER 17**

**A DISTRIBUTIONAL LIST OF THE
BIRDS OF BRITISH COLUMBIA**

By
ALLAN BROOKS
and
HARRY S. SWARTH

CONTRIBUTION NO. 423 FROM THE
MUSEUM OF VERTEBRATE ZOOLOGY
OF THE UNIVERSITY OF CALIFORNIA



BERKELEY, CALIFORNIA
Published by the Club
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QUEEN CHARLOTTE SAW-WHET OWL. YOUNG AND ADULT

Edited by
JOSEPH GRINNELL
and
HARRY S. SWARTH
at the
Museum of Vertebrate Zoology
University of California

NOTE

Pacific Coast Avifauna No. 17 is the seventeenth in a series of publications issued by the Cooper Ornithological Club for the accommodation of papers whose length prohibits their appearance in *THE CONDOR*.

For information regarding either series of Cooper Club publications address W. Lee Chambers, Business Manager, Drawer 123, Eagle Rock, Los Angeles County, California.

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INTRODUCTION

A list of the birds of British Columbia was written by John Fannin, Curator of the Provincial Museum, Victoria, about 1889. The senior author of the present publication recalls having had it submitted to him by Fannin for corrections and additions. Fannin's "Check-List of British Columbia Birds" appeared in 1891. These two papers comprised the first lists of the birds of the entire province of British Columbia. The much earlier publication of J. K. Lord (1866) covers only such species as were personally collected or observed by that author. Fannin's 1891 list includes 307 species and subspecies; in the present publication 409 species and subspecies are catalogued, exclusive of introduced species.

The territory covered by the present distributional list is that contained within the political boundaries of the province of British Columbia; the list includes all of the bird species now known to occur within the province. Practically, however, we have been obliged to exclude from consideration the extreme northeastern corner of the province, that portion lying east of the Rocky Mountain divide (see zone map, plate II). There is a dearth of definite information regarding the birds of that section, either published or within our own personal experiences; nothing has been written upon the ornithology of that immense region. The area referred to, roughly triangular in shape, is, in its southern portion, a northwestern extension of the Great Plains region, of entirely different faunal affinities from any other part of British Columbia. There is no doubt that investigation there would disclose the presence of many species, mostly eastern birds, that are not included in this list. The northern extremity of this *terra incognita* forms part of the great sub-Arctic forest.

The plan of treatment of the present list is essentially that of certain previous publications in the Pacific Coast Avifauna series (A Distributional List of the Birds of Arizona, by Harry S. Swarth, 1914; A Distributional List of the Birds of California, by Joseph Grinnell, 1915). In cataloging the species, the order, and, for the most part, the nomenclature of the American Ornithologists' Union *Check-List*, has been adopted. Following the accepted name of each species is a list of the synonyms by which it has been known in literature covering occurrence in British Columbia. Then follows a statement of the "status" of the bird, that is, a brief outline of the manner of occurrence, as exact, it is to be hoped, as the present state of our knowledge permits. In the most important features of the distribution of each species authorities are given for the statements made, these referring sometimes to publications (all listed in the appended Bibliography), sometimes to specimens in collections, sometimes ("MS") to unpublished notes of different individuals.

The bibliography contains the titles of such publications as have been consulted by the authors in connection with the work in hand. The main criterion for the inclusion of a title is, of course, that the book or paper relates definitely to the ornithology of British Columbia, but certain additional restrictions have also been observed. Thus, no book of a general nature is included unless containing data not previously published. No popular or semi-popular, or sporting, books or papers are included. There is a long list of such publications, including colonizing propaganda, accounts of big game shooting, and travels, containing more or less casual reference to birds in various parts of British Columbia. Inclusion of such titles would have trebled the size of the bibliography, rendered difficult reference to titles of more importance in the present connection, and added little to the value of this list of titles.*

Work upon the manuscript of this list was concluded December 31, 1923. No records published since that date have been utilized, nor any titles of later date included in the bibliography.

Finally, it may not be amiss to insert here a word of explanation in regard to the authorship of this list and its effect upon the treatment of certain species. This is a joint production, of two individuals, who, although generally in agreement as to the status of species, found themselves occasionally clinging to different opinions. In such cases compromises were effected, or, as in several instances, fairly thorough studies of certain species were instituted which served to bring us into agreement, sometimes to the modification of the previous views of both. This is the explanation of the appearance here of certain bird names in apparent contradiction to the usage of one or the other of the authors in other papers. In some such cases we were glad to avail ourselves of the A. O. U. *Check-List*, as arbiter, despite the manner in which we have (in the chapter on life zones and faunal areas) maligned some parts of that generally excellent work.

ALLAN BROOKS,
HARRY S. SWARTH.

*For an excellent bibliography of publications relating to travel and exploration in British Columbia, as well as to other classes of books and papers, see *Water Powers of British Columbia*, by Arthur V. White (Commission of Conservation, Ottawa, Canada, 1919, pp. 1-644, many plates, maps, and charts).

ACKNOWLEDGMENTS

The preparation of this publication was accomplished almost entirely at the Museum of Vertebrate Zoology; to the facilities offered by the Museum is due, more than to any other one factor, the production of the finished contribution. Field work carried on by the junior author for the Museum in various parts of British Columbia furnished him with the necessary background for a proper understanding of the problems involved, while the specimens and field notes thus acquired formed an important part of the material upon which the list is based. The senior author spent many months at the Museum studying these same collections. All expenses involved in the preparation of this list have been met by the Museum of Vertebrate Zoology, as part of the Museum's program in furthering the study of the vertebrate life of western North America.

Other institutions and individuals have responded most cordially to requests for aid of various sorts, and it is a pleasure here to acknowledge the assistance thus contributed. To the Commission of Conservation, Ottawa, through Mr. James White, Deputy Head, we are indebted especially for the maps upon which are based the "distribution maps" produced herewith, and also for certain publications and information.

To the Forestry Branch, Department of the Interior, Ottawa, we are indebted for photographs used in our chapter on "Life Zones and Faunal Areas."

From the Victoria Memorial Museum, Ottawa, through Mr. P. A. Taverner, Ornithologist, we received the loan of many specimens. Mr. Taverner freely accorded us his assistance in gaining information from the collections in his charge, he loaned us certain manuscript notes of Wm. Spreadborough, field collector for the Victoria Memorial Museum, and he also aided in putting us in touch with other individuals and with other departments of the Canadian Government where assistance and information were forthcoming.

From the Provincial Museum, Victoria, British Columbia, through Mr. F. Kermodé, Director, we received the loan of specimens, freely and promptly granted on each of the many occasions on which they were asked for. Mr. Kermodé gave generous assistance in following up lines of enquiry regarding certain species, as is detailed in the body of the list beyond, and he also supplied information regarding some of the earlier workers in British Columbian ornithology.

To the Bureau of Biological Survey, United States Department of Agriculture, through Dr. E. W. Nelson, Chief, we are under a peculiarly heavy debt of gratitude, for the loan of specimens, for a manuscript list of all British Columbia bird skins in the Biological Survey collection, and for the use of unpublished notes of field collectors in British Columbia, on file in the offices of the Survey. The individuals whose notes were thus made available to us are the following: E. A. Preble, N. Hollister, J. Alden Loring, W. H. Osgood, E. Heller, A. Wetmore, C. P. Streater, and F. K. Vreeland. Their unpublished observations, where quoted in the text, are credited in the following form: "(E. A. Preble, MS)."

To Mr. James H. Fleming, of Toronto, we are indebted for items of information of various sorts, and, in particular, to citations pertaining to British Columbia birds that appeared in publications which otherwise we would have overlooked.



FIG. 1. DOUGLAS FIR AND WESTERN HEMLOCK ALONG THE ROAD BORDERING CAMERON LAKE, VANCOUVER ISLAND.

Courtesy of Forestry Branch, Department of the Interior, Ottawa.

PREVIOUS ORNITHOLOGICAL WORK IN BRITISH COLUMBIA *

Apparently the earliest references to birds in British Columbia are those found in Captain Cook's "A Voyage to the Pacific Ocean" (1784), where mention is made of various species seen at Nootka Sound. A little later Gmelin (1788-1789) named certain species of birds as from Nootka Sound, upon the basis, presumably, of specimens or descriptions brought back by Cook's expedition.

In 1866 there was published "The Naturalist in Vancouver Island and British Columbia" by John Keast Lord, naturalist to the British North American boundary commission. This book, based upon collections and observations made years prior to the date of its publication, has enjoyed popularity and high standing beyond its merits. Lord did collect a great many birds, as is shown by the specimens listed in the "Catalogue of Birds" of the British Museum, but the localities of capture are but loosely indicated; there is, in fact, a dearth of definite information concerning them. The whole book contains relatively little pertaining to British Columbia; much of it is devoted to a trip to California, and much of it to collections and observations made at Colville, in the state of Washington. Lord visited Victoria, Fort Rupert (at the



FIG. 2. FRIENDLY COVE, NOOTKA SOUND; PHOTO TAKEN AUGUST 6, 1910.

north end of Vancouver Island), Sumas, Chilliwack, Hope, Osoyoos, and East Kootenay. Nowhere in his book is there any explicit statement of his itinerary, and there are practically no dates given.

Some years later than Lord, in the sixties, Robert Brown, famous as a botanist, made some observations on birds; the results of notes taken in various parts of Vancouver Island were summarized in his excellent "Synopsis of the Birds of Vancouver Island" (Ibis, 1868). About 1870 began the activities as an ornithologist of John Fannin, later and for many years Director of the Provincial Museum, Victoria. Fannin collected at Burrard Inlet (near Vancouver), Victoria, Sicamous, and in the Cariboo District.

Regarding J. Hepburn, who did some ornithological collecting in British Columbia in the sixties and seventies, we have been able to learn almost nothing. *Leucosticte tephrocotis littoralis*, known since its discovery as the Hepburn Rosy Finch, was collected by him at Port Simpson, B. C. Baird (in Cooper's Ornithology of California, 1870, p. 163) states that he was "an eminent English naturalist, long time resident at San Francisco and Victoria."



FIG. 3. SITKA SPRUCE AND WESTERN RED CEDAR, IN THE VALLEY OF THE TOBA RIVER ON THE SOUTHWESTERN MAINLAND COAST. TYPICAL WOODS OF THE HUMID COASTAL REGION.

Courtesy of Forestry Branch, Department of the Interior, Ottawa.

Following is a brief resumé, roughly, in chronological order, of later collectors and students of birds, with a general statement of the regions covered by each one.

William Edwin Brooks, beginning about 1870, collected at Chilliwack and Sumas.

Alphonse Forrer collected on Vancouver Island, probably in the 70's or 80's (see Bull. Cooper Orn. Club, 1, 1899, p. 66), but particulars of his work are unknown to us. Specimens of birds collected by him are listed in the British Museum "Catalogue of Birds."

Allan Brooks (the son of W. E. Brooks), beginning in 1887, has collected on Vancouver Island at Victoria, Comox, Cowichan, and Quatsino; on Graham Island, of the Queen Charlotte group; in the Okanagan Valley from Vernon to Osoyoos; the Gold Range; Midway; Newgate; Crow's Nest Pass; Cariboo and 158-mile House; Porcher Island and mouth of the Skeena River.



FIG. 4. WESTERN RED CEDAR AND WESTERN HEMLOCK, IN THE TOBA RIVER VALLEY.

Courtesy of Forestry Branch, Department of the Interior, Ottawa.

Clark P. Streator, in the interests of the American Museum of Natural History, visited southern British Columbia in 1889. His itinerary was as follows: Westminster Junction, April 21 to May 28; Mt. Lehman, May 29 to June 15, and September 4 to 23; Ashcroft, June 16 to July 15; Ducks, July 16 to September 3; Duncan's Station, Vancouver Island, September 27 to October 10. (See Chapman, 1890, pp. 123-124.)

Streator, collecting for the United States Biological Survey, made other trips to southern British Columbia, as follows: In 1894, Port Moody, July 18 to August 2; Ashcroft and Kamloops, August 18 to 28; Shuswap, August 29 to September 11; Kamloops to Cariboo Lake and return, September 11 to 18; Sicamous, September 21 to October 4. In 1895, Goldstream, Vancouver Island, May 8 to 23; Wellington, Vancouver Island, May 23 to 29; Comox, Vancouver Island, May 29 to June 14; Port Moody, October 24 to November 8; Hastings, Burrard Inlet, November 9 to 23; Agassiz, November 26 to December 10.

Field work conducted by John Macoun in connection with his "Catalogue of Canadian Birds," apparently began, in so far as British Columbia is concerned, in 1887, on Vancouver Island (see Macoun, 1900, p. iv). Then followed for a number of years extensive field work by W. Spreadborough, covering many points from the Skeena Valley southward. Localities visited by him are listed in some detail by Macoun and Macoun (1909, pp. iv-vi).

Mr. Francis Kermode, Director of the Provincial Museum, Victoria, successor to John Fannin in that position, has carried on field work, since 1890, in various parts of Vancouver Island, on Graham Island of the Queen Charlotte group, and on the mainland at Chilliwack, Vernon, Ducks and Atlin. Reports dealing with certain of these trips have appeared in Annual Reports of the Provincial Museum.



FIG. 5. VALLEY OF THE UPPER STIKINE RIVER, NEAR TELEGRAPH CREEK. THE FOREST COVERING OF THE LOWLANDS, AS HERE SHOWN, IS MOSTLY COMPOSED OF POPLAR, WITH SOME SCATTERED CONIFERS. THIS IS TYPICAL OF THE SEMI-ARID INTERIOR IMMEDIATELY EAST OF THE COAST RANGES.

Samuel N. Rhoads pursued field work in southern British Columbia in 1892, as follows: Victoria and Goldstream, Vancouver Island, May 3 to 25; Lulu Island, May 26 to June 1; Ashcroft, June 2 to 12; Bonaparte, June 13 to 17; Clinton and Lac La Hache, June 18 to July 7; Kamloops, July 12 to 15; Sicamous, July 16 to 19; Vernon, July 21 to August 11; Nelson, August 16 to 23; Field, August 27 to September 3. (See Rhoads, 1893, pp. 21-65.)

In 1897 began the extensive field work of E. A. Preble, for the United States Biological Survey. From July 1 to September 4, 1897, he visited Port Moody and Langley, in the lower Fraser Valley, Gibson's Landing, Howe Sound, Malaspina Inlet, Rivers Inlet, Port Simpson, and Inverness, mouth of Skeena River. In 1910 (July 9 to October 13) he ascended the Stikine River to Telegraph Creek, and from there traveled southeast to Klappan Mountain, Thudade Lake, and down the

Peace River into Alberta. In 1913, starting at Hazelton, upper Skeena River (July 20), he visited the Babine Mountains, Tacla Lake, Bear Lake, Thudade Lake, Tatletuey Lake, and southward again to Hazelton.

The important contributions to our knowledge of the ornithology of extreme northwestern Canada made by Roderick MacFarlane, officer of the Hudson's Bay Company, are, of course, well known, but his experiences in British Columbia, published upon much later (see Mair and MacFarlane, 1908) have hardly been cited at all. From E. A. Preble's biography of MacFarlane (*Auk*, vol. 39, 1922, p. 209) we learn that in 1886 or 1887 "he was transferred to New Caledonia District, in British Columbia, with headquarters at Fort St. James, Stuart Lake, where he remained until 1889. Here he made a small but varied collection which was forwarded to the U. S. National Museum. This collection, as far as we know, was



FIG. 6. VALLEY EMPTYING INTO THE VALLEY OF THE NORTH THOMPSON RIVER NEAR KAMLOOPS. IN THIS REGION, A NORTHERN EXTENSION OF THE GREAT BASIN, IS REACHED THE EXTREME OF ARIDITY FOUND IN BRITISH COLUMBIA. THE BARREN VALLEY FLOOR, NEARLY DESTITUTE OF TREES AND BUSHES, IS ALMOST DESERT-LIKE IN APPEARANCE.

Courtesy of Forestry Branch, Department of the Interior, Ottawa.

the first made in central British Columbia, and naturally constituted a valuable addition to our knowledge of this remote section."

Others who have carried on ornithological field work in British Columbia are, briefly summarized, as follows: A. H. Maynard, Victoria; Rev. J. H. Keen, Masset, Queen Charlotte Island, and Metlakatla; J. Alden Loring (for the United States Biological Survey), Selkirk Mountains, July and August, 1894; E. H. Forbush, Comox, Vancouver Island, and islands in the Gulf of Georgia, 1888; W. B. Anderson, Comox, Vancouver Island, and Port Simpson, 1875 to 1895; L. B. Bishop, Bennett, June, 1899; W. H. Osgood (for the United States Biological Survey), Fort Rupert, Vancouver Island, May and June, 1900; Queen Charlotte Islands, June and July, 1900; N. Hollister (for the United States Biological Survey), Bennett, May and June, 1903; E. M. Anderson (for the Provincial Museum, Victoria),

Lower Okanagan Valley, Lillooet, Atlin, and Graham Island; C. de B. Green, Enderby, Osoyoos, Queen Charlotte Islands, Porcher Island; Miss Annie M. Alexander, Miss Louise Kellogg, and H. S. Swarth (for the University of California Museum of Vertebrate Zoology), localities from Nanaimo to Nootka Sound, Vancouver Island, April to October, 1910; H. S. Swarth and J. Dixon (for Mus. Vert. Zool.), Stikine River, May to September, 1919; H. S. Swarth and W. D. Strong (for Mus. Vert. Zool.), upper Skeena River, May to September, 1921; J. H. Riley and N. Hollister (for United States National Museum), Yellowhead Pass region, July and August, 1911; A. Wetmore (for the United States Biological Survey), Nanaimo, Vancouver Island, May, 1911; J. A. Munro, Okanagan Valley, Similkameen, Boundary Bay, Saanich and Barkley Sound, Vancouver Island, and Masset, Queen Charlotte Islands; P. A. Taverner (for the Victoria Memorial Museum, Ottawa), Comox and Alert Bay, Vancouver Island, Hazelton and Osoyoos; C. H.

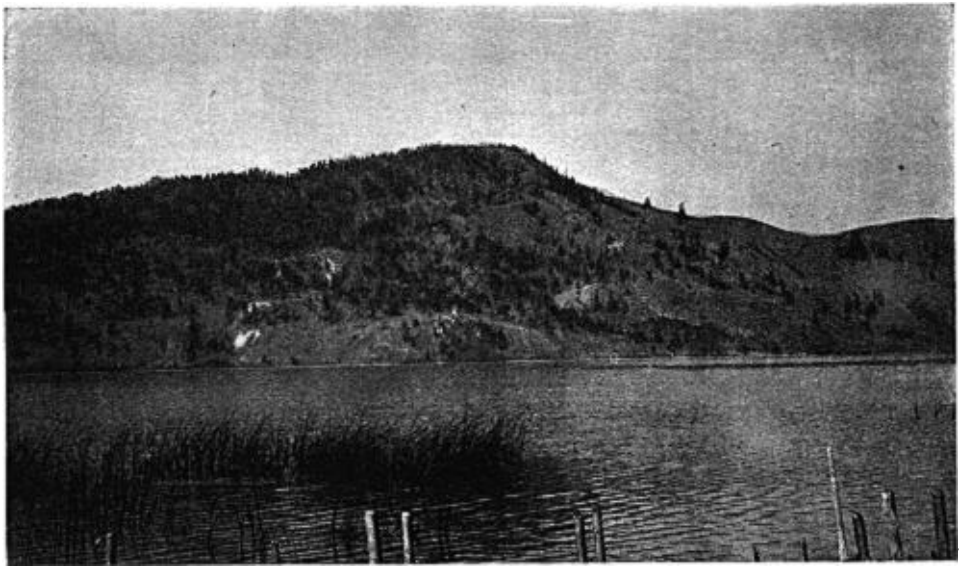


FIG. 7. LOOKING ACROSS OKANAGAN LAKE AT OKANAGAN LANDING, TO THE HILLS ON THE WEST SIDE. THE WOODS HERE SHOWN ARE MOSTLY OF YELLOW PINE, WITH LITTLE OR NO UNDERBRUSH BENEATH.

Young and Wm. Spreadborough (for the Victoria Memorial Museum), Brackendale, Lillooet and Macgillivray Creek, 1916; C. L. Patch (for the Victoria Memorial Museum), Barkley Sound, Vancouver Island, December, 1915; W. W. Brown, Masset, Queen Charlotte Islands; Sidney Williams, Quesnelle, Vancouver, Lulu Island, northwest coast; E. E. White, Vancouver, Lulu Island, Sumas, Kamloops; H. M. Laing, Osoyoos, and Comox, Vancouver Island; Kenneth Racey, Boundary Bay, mouth of Fraser River, region north of Vancouver; W. B. Johnstone, Edgewood, the Gold Range; Dr. J. E. Kelso, Edgewood; C. B. Garrett, Cranbrook, Atlin; E. Heller (for the United States Biological Survey), Shesley Mountains, 1914; F. K. Vreeland (for the United States Biological Survey), heads of the Parsnip and Big Salmon rivers, summer of 1915.

The above summary is doubtless guilty of omissions, but it includes the more

important ornithological work that has been done in British Columbia. It will be noted that certain localities have been visited by many observers. On the other hand, consultation of a map will show what vast areas there are in the province concerning which there is no information of the bird life. Perhaps the most noticeable of such gaps (aside from the extreme northeastern section) exists along the coast. Of the ornithology of the mainland coast, from Burrard Inlet north to Prince Rupert, there is practically nothing known; we found hardly a single record, published or unpublished, from this long stretch of coast line.



FIG. 8. VASEAUX LAKE, SOUTHERN OKANAGAN VALLEY. PINES ARE MOSTLY *Pinus ponderosa*. BRUSH AT EXTREME LEFT AND ON OPPOSITE SHORE IS *Kuntzia tridentata*, HERE AT ABOUT ITS NORTHERN LIMIT. A SURPRISING MIXTURE OF CANADIAN AND UPPER SONORAN ZONE BIRDS BREED HERE. ARCTIC THREE-TOED WOODPECKER AND LONG-TAILED CHAT WERE FOUND NESTING ON THE FLOOR OF THE VALLEY AT THE FOOT OF THE BIG CLIFF; DUCK HAWK, WHITE-THROATED SWIFT AND CANYON WREN IN THE CLIFF; AND FIVE PAIRS OF CANADA GEESE ON THE ISLAND IN THE LAKE. A PAIR OF DICKCISSELS WAS SEEN AT THIS POINT. TRUMPETER SWANS WINTER HERE EACH YEAR; THE LAKE DOES NOT FREEZE OVER IN MOST WINTERS.

Courtesy of P. A. Taverner.



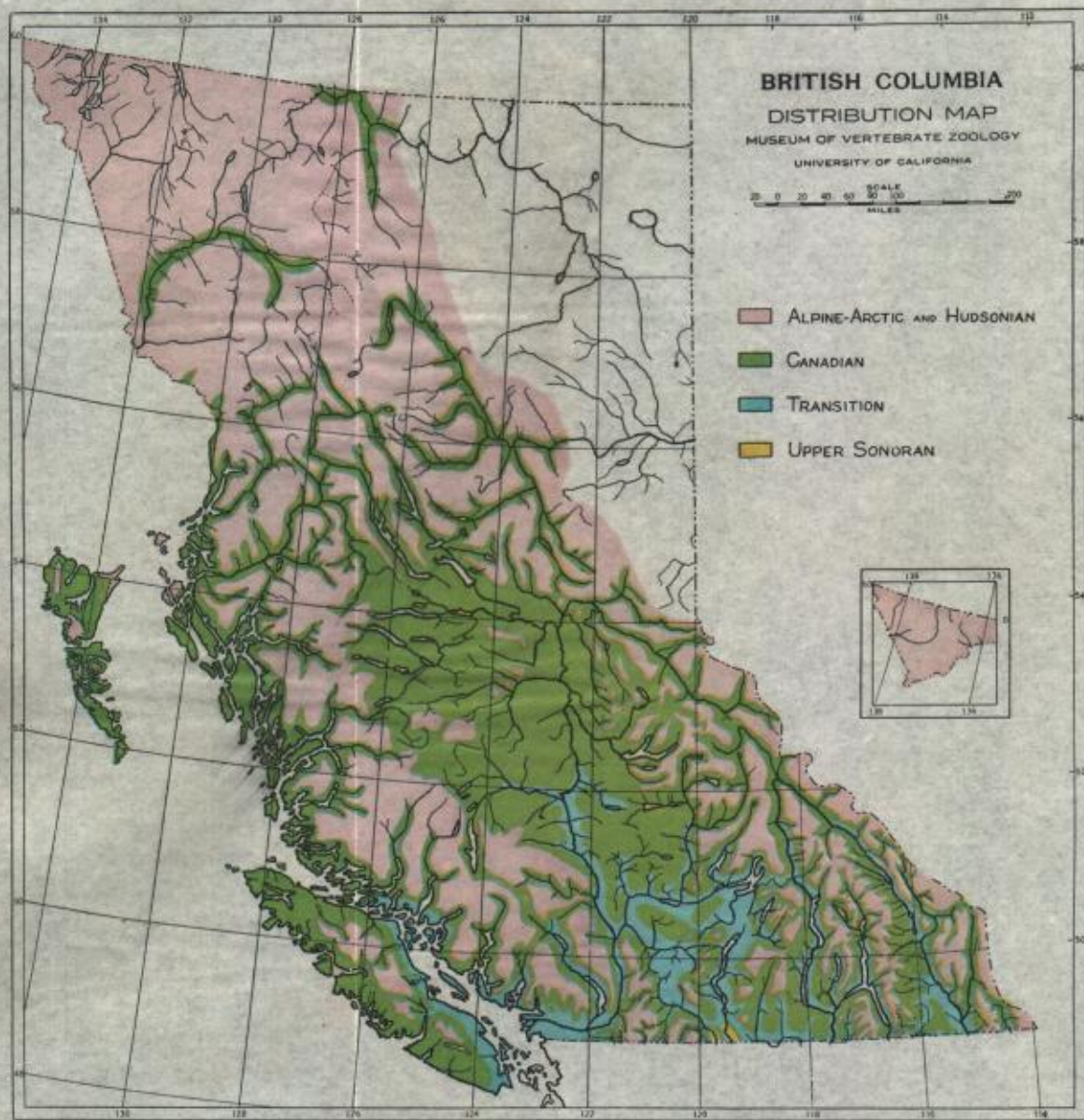
FIG. 9. STIKINE RIVER AT FLOOD GLACIER, BRITISH COLUMBIA. THE STIKINE IS ONE OF SEVERAL CHANNELS OF COMMUNICATION BETWEEN ARID INTERIOR AND HUMID COAST. THE POINT SHOWN, SOME SEVENTY MILES UPSTREAM, AND IN THE HEART OF THE COAST RANGE, IS ABOUT AS FAR INLAND AS COASTAL CONDITIONS EXTEND. THE VALLEY IS COVERED WITH A DENSE FOREST OF SITKA SPRUCE AND ASSOCIATED TREES AND UNDERBRUSH. THE RUGGED MOUNTAINS, HEAVILY FORESTED ON THEIR LOWER SLOPES, ARE, NEARER THEIR SUMMITS, COVERED WITH AN ALMOST CONTINUOUS SERIES OF GLACIERS.

LIFE ZONES AND FAUNAL AREAS

As regards the life zones and faunal areas of British Columbia, little more than a beginning has been made in the understanding of such divisions within this province. While the present contribution is not put forth as an exhaustive study of the subject, we do feel that a compilation of known facts pertaining to the occurrence of the birds, with due stress laid upon the correlations of distribution with life zones and faunal areas, is a long step forward toward a proper appreciation of existing conditions. At any rate, this will serve to draw attention to the many complications attending the distribution of animal life in British Columbia, and, also, to emphasize the manner in which these complications have been ignored or minimized in all general works treating of the distribution of birds in North America or in the northwest.

The pressing need for this list is brought home in a convincing manner if one attempts to visualize from the present available works of reference the range of almost any species of bird occurring in British Columbia. Of such publications the latest (1910) Check-List of the American Ornithologists' Union is usually taken as the final arbiter. Here the student would naturally expect to find a tabloid concentrate of the range of each species occurring in the province, compiled with special reference to all that has been published up to date, and thoroughly reliable in every way. This volume has been used in almost every instance by recent authors when compiling ranges of the species they were treating. The result is a perpetuation of a truly extraordinary mass of error. In about three instances out of five where a portion of British Columbia is specifically allotted in a bird's range as given in the Check-List, the distribution is mainly or entirely at fault. In some instances the term "southeastern" is used where the actual record really pertained to the extreme southwestern corner of the province. See, for example, in the A. O. U. Check-List (1910), the distribution given for the Bobolink (p. 231) and for the McCown Longspur (p. 253). The actual error of distance is, in itself, considerable, but what does not seem to have been realized is the great divergence in habitat involved in such errors—a difference in climate, fauna, and flora as great as that between Connecticut and Colorado.

The area of the mainland of British Columbia is more than double that of California. To make comparison with conditions in the east, the actual area of British Columbia is roughly equivalent to that of the 16 northeastern states—from Maine, west to, and including, Ohio, and south to include North Carolina. The ranges of the species inhabiting each of these states have been plotted with meticulous care, yet the extreme variation in climate and fauna of this last mentioned area is considerably less than the same variation in the single province now under consideration.



LIFE ZONES OF BRITISH COLUMBIA

Of eastern authorities who have written of the birds of British Columbia, only one, Samuel N. Rhoads, seems to have grasped the facts of this extraordinary variation. His remarks are so sound as to warrant quotation here of some of them.

"As a whole, the province of British Columbia includes a diversity of faunal characters which no single geographic area in America can match. As a result it may further boast of a longer list of summer residents than any equal area included in the A.O.U. Check-List limits. Approximately these number 330 in British Columbia. In the rest of British America, an area ten times larger, it is about 365; in the Middle States, 177, and in the United States east of the Mississippi, 300. This exceptional showing is brought about by a conjunction, intrusion and overlapping of the Arctic, Boreal and Transition life zones. It is further complicated by the westerly extension of Atlantic-boreal forms to the Pacific, the intrusion of upper Sonoran species into the central, arid region, the straggling of Pacific coast forms across the Cascades, the sojourn of Arctic species on the higher mountains and 'barren grounds' of the north and southward migration of all, including land and marine species of the polar regions, across common territory. This cosmopolitan feature of British Columbian biology makes the study of its zoogeography



FIG. 10. TIMBERLINE AT THE SUMMIT OF MARA MOUNTAIN, GOLD RANGE, MONASHEE MOUNTAINS.
Courtesy of Forestry Branch, Department of the Interior, Ottawa.

both difficult and fascinating. Mr. Chapman has pointed out some of these peculiarities in his paper on the Streater collection, and considering that he had no personal acquaintance with the country, his deductions are remarkably just. After what has been said on the subject, however, we cannot admit that in British Columbia 'faunal lines are not so complicated' as in 'northern California' for they are infinitely more so." (Rhoads, 1893d, p. 27.)

This covers the situation remarkably well and we only wonder that in view of it no realization of the requirements seems to have entered the heads of the compilers of the A. O. U. Check-List.

No other province or state is cut up into longitudinal areas by five distinct mountain ranges, each having a patent influence, and causing a succession of humid and arid areas, the variation in one hundred miles amounting to as much (in some cases) as a difference in annual precipitation of from 100 inches to less than 10.

While it is not feasible at this time to present a careful study of either the faunal areas or the life zones of British Columbia, a brief summary is possible of some of the outstanding physiographic features of the province. In this connection reference should be made to a publication from which the present authors have obtained much detailed information, *Forests of British Columbia*, by H. N. Whitford and R. D. Craig,* and from which the following quotations are taken. These authors, discussing general climatic conditions (p. 48), divide the province into the following longitudinal belts, three of them extending the entire length of the province, two, only part way: coastal belt, dry belt, interior wet belt, Rocky Mountain belt, Great Plains belt. Roughly, the salient characteristics of each of these divisions are as follows. The coastal belt "comprises all the region west of the axis of the Coast Mountains. Its main characteristics are high precipitation and comparatively mild temperature. The difference between the average mean temperature of winter and of summer is not great." The annual precipitation of the coastal belt "varies from about 40 inches to over 120 inches. This variation depends on the position of minor mountain ranges." "At the meteorological stations near sea-level, the Coastal belt shows a mean annual temperature varying from 44° to 49°, with a summer mean of 55° to 61°, and a winter mean of 30° to 38°. The lower temperatures are to the north and the higher temperatures to the south."

The dry belt extends eastward for varying distances from the eastern base of the coast mountains. "Contrasted with the Coastal belt, this region is characterized by a much lower precipitation and greater extremes in temperature. As a rule, the precipitation does not exceed 20 inches, and, in a few places, at the lowest altitudes, the annual average is less than 10 inches." "The temperature conditions of the Dry belt show greater extremes when contrasted with the Coastal belt. . . . The stations situated in the valleys of the southern portion of the Dry belt show a mean annual average of 40°, with a winter mean of 25°, and a summer mean of 65°. The extremes vary from -45° to over 100°." In extreme northern British Columbia temperature data "are available from one station in the Yukon plateau, namely, Atlin (latitude 59° 35', altitude 2240 feet), which shows a mean annual of 30.5°, with a winter mean of 6.5° and a summer mean of 51°. The highest temperature recorded at Atlin is 81° and the lowest is -50°."

The interior wet belt "includes all the region occupied by the Monashee and Cariboo mountains, the Selkirk mountains, with the exception of portions of their east slopes, and portions of the west slopes of the Rocky mountains, from the northern boundary of the Railway Belt to and including a portion of the Parsnip River drainage. Within this region the general average of precipitation is well over 30 inches and, in some cases, is so high as 60 inches." "The stations situated in the valleys of the southern portion of the Interior Wet belt have a mean annual temperature of 44°, with a mean winter average of 27°, and a summer average of 61°. The highest recorded temperature is 100° and the lowest is -17°. Contrasted with the temperature conditions of the southern portion of the Dry belt, the foregoing shows that the summers of the Interior Wet belt are cooler, the winters slightly warmer, and the extremes not very far apart."

* Commission of Conservation, Ottawa, Canada, 1918, pp. 1-409, plates and maps.

The Rocky Mountain belt "includes the west slopes of the Rocky mountains, except certain valleys included in the Interior Wet belt and the drier portion of the Rocky Mountain trench. These exceptions include the portion of the Rocky Mountain trench from the Canadian Pacific railway southward, the upper portion of the Fraser River portion of the trench, and all that portion of the trench north of the middle portion of the Parsnip river. The exceptions also include the greater portions of the east slopes of the Purcell, Omineca and Cassiar mountains." "The climatic conditions within the Rocky Mountain belt are extremely variable and depend mainly on altitudinal and latitudinal variations. . . . In general, so far as temperature is concerned, the climate in the Rocky Mountain belt is more severe than that at corresponding points in the same latitude in the belts to the west."

As regards the Great Plains belt, "no reliable climatic data exist for the portion of the Great Plains region included within the limits of British Columbia. . . . No attempts seem to have been made to even estimate the amount of precipitation of the



FIG. 11 (AT LEFT). ALPINE FIR AND ENGELMANN SPRUCE, AT TIMBERLINE NEAR MABEL LAKE, ALTITUDE 7000 FEET, IN THE GOLD RANGE, MONASHEE MOUNTAINS.

FIG. 12 (AT RIGHT). MOUNTAIN LAKE AND MEADOW BORDERED BY ALPINE FIR AND ENGELMANN SPRUCE. GOLD RANGE, MONASHEE MOUNTAINS, NEAR MABEL LAKE; ALTITUDE 7000 FEET.

Courtesy of Forestry Branch, Department of the Interior, Ottawa.

Great Plains belt in British Columbia. Judging from the character of the vegetation, the precipitation is much less than 20 inches and is probably about 15 inches or less."

On the basis of the animal life of British Columbia, the above indicated divisions (with the possible exception of the Great Plains belt) can each be subdivided into several well defined faunal areas. Some of these faunal areas might be mapped from the data at hand, but for the most part, although the essential differences of the several sections may be recognized, much more detailed information is needed to indicate exact boundaries.

The accompanying map of the life zones of British Columbia is compiled largely from the personal experiences of the authors. Some additional information was derived from other sources, especially from the book previously cited (*Forests of British*

Columbia, by H. N. Whitford and R. D. Craig) with its many maps showing the distribution of forest trees. On a map as complicated as this one is, and on so small a scale, it is unavoidable that much detail be lost. Future work resulting in the zonal mapping of restricted portions of British Columbia will unquestionably disclose the local distribution of life zones in a way to emphasize certain features that can not be brought out here. Also, we did not find it practicable to indicate the dividing line between the Alpine-Arctic and Hudsonian zones. This boundary is, perhaps, the most sharply defined of any, and, especially in the north, there are enormous stretches of Alpine-Arctic territory in British Columbia, but nevertheless we did not find it feasible to make this division. In the north the complicated nature of the scattered and irregular mountain peaks and ranges, renders necessary accurate knowledge of every section before detailed mapping of this zone can be attempted. Conditions are different from what they are in certain other parts of North America, where the zones of more or less continuous and uninterrupted mountain chains can be plotted with fair accuracy from but a relatively few record stations. Then, in southern British Columbia, the Alpine-Arctic zone is, comparatively, of such limited area, and it is so complicated in outline, that it is well nigh impossible to map it at all satisfactorily on such a small scale.

BIRDS OF BRITISH COLUMBIA

Aechmophorus occidentalis (Lawrence). Western Grebe.

Synonyms—*Aechmophorus clarkii*; *Podiceps occidentalis*.

Status—An abundant migrant across the southern half of British Columbia. Large flocks remain throughout the winter on the southern coast; a few remain on Okanagan Lake, and probably on other ice-free bodies of water. A considerable number of non-breeding birds may be seen during all the summer months, both on the sea-coast and in the interior. This has probably been the origin of the many breeding records, none of which upon investigation rests on satisfactory evidence. This is surprising as the species is a conspicuous breeder both to the south and to the east. The northernmost record is from Fort St. James, Stuart Lake, May 6, 1889, one specimen (MacFarlane, 1908, p. 290).

Colymbus holboelli (Reinhardt). Holboell Grebe.

Synonyms—*Podiceps griseigena*; *Podiceps griseogena*; *Podiceps holboelli*.

Status—Fairly common breeder throughout the province east of the coast ranges wherever suitable conditions exist. Winters commonly on the coast and more sparingly on the large unfrozen lakes of the southern interior.

Colymbus auritus Linnaeus. Horned Grebe.

Synonyms—*Podiceps cornutus*; *Podiceps auritus*.

Status—Fairly common breeder throughout the interior, mostly on small ponds in the more open country. Common in winter along the whole coast line and in the interior wherever open water occurs.

Colymbus nigricollis californicus (Heermann). Eared Grebe.

Status—Summer visitant in the southern interior, usually scarce and irregularly distributed. Breeding records: Kamloops (Macoun and Macoun, 1909, p. 6); Okanagan, Gateway, East Kootenay (Brooks, MS). Only one record west of the Cascades: Chilliwack, October, 1889, one taken, a migrant (Brooks, 1917, p. 32).

Podilymbus podiceps (Linnaeus). Pied-billed Grebe.

Status—Fairly common summer visitant on both mainland and Vancouver Island, north at least to the Cariboo District. A few may be found throughout the winter both on fresh and salt water at the coast, and an occasional individual may be seen on Okanagan Lake (and probably other lakes remaining unfrozen), even during winters of exceptional severity.

Gavia immer (Brünnich). Loon.

Synonyms — *Gavia imber*; *Urinator imber*; *Colymbus torquatus*; *Colymbus glacialis*.

Status—A common summer visitant throughout British Columbia including Vancouver Island. Only a small proportion of the birds actually breed; large numbers of non-breeding adults remain throughout the summer on the bays and inlets of the coast and on all the larger lakes. Common in winter on salt water but very rarely seen after December on the large lakes of the southern interior.

Gavia pacifica (Lawrence). Pacific Loon.

Synonyms—*Gavia arctica*; *Colymbus pacificus*; *Urinator arcticus*.

Status—Common winter visitant along the whole coast line. Scarce migrant inland, reported from Chilliwack, Okanagan, and upper Kootenay River. Reported as nesting near Atlin (Anderson, 1915a, p. 9) and on Stuart Lake (MacFarlane, 1908, p. 296), but these localities are so far south for this Arctic species as to require further verification of the records. Non-breeding birds are known to remain in British Columbia throughout the summer; their presence does not imply breeding activities.

Gavia stellata (Pontoppidan). Red-throated Loon.

Synonyms—*Colymbus septentrionalis*; *Urinator lumme*; *Gavia lumme*.

Status—Common winter visitant along the whole coast line. Fairly common breeder on Graham Island, Queen Charlotte group, where both birds and eggs were taken (C. deB. Green, MS); a few pairs breed on Porcher Island (C. deB. Green, MS). Very scarce inland; an adult taken on Harrison Lake in the summer of 1887 was examined by Brooks; Okanagan Lake, one taken November 22, 1915 (Munro, 1917, p. 16). In the northern interior was seen at points between Klappan Mountain and Thudade Lake, August 15 to September 1, 1910, on Driftwood River, August 24, 1913, and on Bear Lake, September 2, 1913 (E. A. Preble, MS).

Lunda cirrhata (Pallas). Tufted Puffin.

Synonym—*Mormon cirrhatus*.

Status—Resident and breeding at a number of points along the coast from Langara Island to Bare Island (Haro Strait).

Fratercula corniculata (Naumann). Horned Puffin.

Status—The only record seems to be that of Rev. J. H. Keene, at Masset, Queen Charlotte Islands (Fannin, 1898, p. 16). The large breeding colony of this Puffin on Forrester Island, Alaska, is only some fifty miles north of Masset.

Cerorhinca monocerata (Pallas). Rhinoceros Auklet.

Synonym—*Ceratorhinca monocerata*.

Status—Of irregular distribution along the coast line of the province and apparently a permanent resident. The height of abundance seems to be in the neighborhood of the mouth of the Skeena River. Farther south there is a large colony on Pine Island off the mouth of Seymour Inlet (Green, MS), and another near Cape Scott, the northern extremity of Vancouver Island.

Ptychoramphus aleuticus (Pallas). Cassin Auklet.

Status—Breeding at various points, including the west coast of Vancouver Island, and north to Langara Island. Rare or absent from inshore passages and inlets. No definite winter records.

Synthliboramphus antiquus (Gmelin). Ancient Murrelet.

Status—Breeds in enormous numbers on Langara Island (or North Island); no other known breeding colony in British Columbia. Frequent in fall and winter along the entire coast line, usually well out to sea. Rarely seen in the Gulf of Georgia or in any other of the inside passages.

Brachyramphus marmoratus (Gmelin). Marbled Murrelet.

Status—One of the commonest sea birds along the whole coast line of British Columbia, including all the inlets. Resident winter and summer throughout its range, although its eggs have so far eluded all efforts to discover them. There are young, unable to fly, in the Brooks collection from Gardner Canal, Sydney Williams, collector. The available evidence indicates that the Marbled Murrelet breeds in scattered pairs, not in colonies, both on islands and on the mainland, at moderate altitudes or even close to the sea, but the fearfully luxuriant vegetation of this humid coast makes the discovery of nests a difficult matter.

Cephus columba Pallas. Pigeon Guillemot.

Synonym—*Uria columba*.

Status—Common resident along the entire coast line of the province including all the islands and up to the heads of all the inlets.

Uria troille californica (H. Bryant). California Murre.

Synonym—*Uria troille*.

Status—Common along the coast but not so universally distributed as the Pigeon Guillemot, and there are very few breeding stations. The largest of these is on Triangle Island, thirty miles north of the north end of Vancouver Island. Smaller colonies exist on Solander Island, and near Ucluelet, both of these points being on the west coast of Vancouver Island. The Haidah Indians of Masset say there is a large breeding colony on the west coast of Graham Island. Immense numbers remain all winter between Vancouver Island and the mainland, following the movements of the herring, but unlike the Pigeon Guillemot, the Murres are rarely found inside the smaller inlets.

The one record of the occurrence of *Uria lomvia arra* in British Columbia, at Seymour Narrows (Bent, 1919, p. 199), was based upon a specimen in the Carnegie Museum, Pittsburgh. Information has been received from Mr. W. E. Clyde Todd, of that Museum, that this bird is really an example of *Uria troille californica*.

Megalestris chilensis (Bonaparte). Chilean Skua.

Synonyms—*Catharacta chilensis*; *Megalestris skua*.

Status—A straggler from the South Pacific. One record of two specimens taken by S. F. Warburton, June 30, 1917, off the southwest coast of Vancouver Island (Warburton, 1918, p. 178; see also Bent, 1921b, p. 7).

Stercorarius pomarinus (Temminck). Pomarine Jaeger.

Status—A scarce migrant along the coast. One specimen taken near Victoria, October 22, 1898 (Kermode, 1904, p. 7). Since then a number have been taken in the Straits of Georgia, most of them in the fall of 1912. One inland occurrence: an adult was shot with an arrow, at Tatla Lake in September, 1912, by an Indian in the company of Sydney Williams (Williams, MS).

Stercorarius parasiticus (Linnaeus). Parasitic Jaeger.

Status—Fairly common migrant coastwise; most of the records are in the fall. One specimen killed at Clover Point, November, 1897, by Wm. L. Gilchrist (Fannin,

1898, p. 17). Fairly common during September, 1903, at Comox; first seen on the 2nd (Brooks, MS). No certain inland records.

Stercorarius longicaudus Vieillot. Long-tailed Jaeger.

Status—A scarce migrant. All of the records except one are for August and September and mostly from inland points, pointing to a migration route distinct from that of the Parasitic Jaeger. An adult was taken at Sumas Lake, August 23, 1890; others seen in September, all adults (Brooks, 1917, p. 32). One juvenal taken at Okanagan Lake, August 30, 1905; one adult seen crossing the main range of the Rocky Mountains near Vermilion Pass, September 18, 1911 (Brooks, MS); one taken "at Vancouver Island," May 11 (Bent, 1921b, p. 28).

Pagophila alba (Gunnerus). Ivory Gull.

Synonym—*Gavia alba*.

Status—Casual (two records): Dease Lake, September, 1889, one specimen taken by James Porter and presented to the Provincial Museum (Fannin, 1891, p. 4). The other specimen, in the same Museum, was shot at Penticton, south end of Okanagan Lake, in October, 1897, by J. T. Studley (Brooks, 1900c, p. 104). "I saw the last mentioned bird, an adult, or nearly so, a few days after it was shot; it is the same as is recorded by Fannin (1898, p. 17) as being taken in November" (Brooks, MS).

Rissa tridactyla pollicaris Ridgway. Pacific Kittiwake.

Synonym—*Rissa septentrionalis*.

Status—A straggler from the north to the British Columbia coast. First taken by Dr. C. F. Newcombe, September, 1895, at Queen Charlotte Islands. Later a few were recorded from the neighborhood of Victoria; Discovery Island, January, 1896 (Fannin, 1898, p. 17). There is a juvenal in the Brooks collection taken at Victoria, December 27, 1907. Taken at Campbell Island, May 24 (Cooke, 1915, p. 21).

Larus hyperboreus Gunnerus. Glaucous Gull.

Synonyms—*Larus barrovianus*; *Larus hyperboreus barrovianus*; *Larus glaucus*; *Larus leucopterus*.

Status—Scarce winter visitant to the coast of British Columbia. One specimen, a bird of the second year in the white plumage, was taken at Comox, December 15, 1903 (Brooks, 1904, p. 289). "Oberholser (1918c, p. 472), under the name of *Larus hyperboreus barrovianus*, mentions this specimen, now in the collection of Dr. Dwight, but gives the date in error as November 15. Another specimen recorded in the same article as from Comox, November 9, is noted in my diary as juvenal *glaucescens*" (Brooks, MS). Two juveniles were taken at Kildonan, Barkley Sound, by William McKay in January and February, 1921 (Kermode, 1921, p. 20).

Larus glaucescens Naumann. Glaucous-winged Gull.

Status—This is the commonest and most universal species of gull along the British Columbia coast, breeding at many points both on rocky shores and islets, and also on muskegs within a mile or so of the sea. It follows the spawning salmon up all the larger rivers at least one hundred miles from salt water, but none has been taken east of the Cascade Mountains. Its occurrence in winter on Okanagan

Lake (Kermode, 1904, p. 8) was based on a sight record by Brooks, and it has not been seen there since; its occurrence in the interior has yet to be proved.

Larus occidentalis Audubon. Western Gull.

Status—Most of the many records of the Western Gull for British Columbia are based on erroneous identifications. There are but three authentic records, as follows: One moulting adult, in the Victoria Memorial Museum collection at Ottawa, was taken by Spreadborough at the south end of Vancouver Island. Two adults were taken by Brooks at Comox, January 20 and March 21, 1919, respectively, and are now in his collection. The Western Gull, however, may be of fairly regular occurrence on the southwest coast of Vancouver Island.

Larus argentatus argentatus Pontopiddan. Herring Gull.

Synonym—*Larus argentatus smithsonianus*.

Status—Fairly common and at times abundant on the coast and in the interior, being more or less in evidence during every month of the year. There are breeding records from Atlin Lake (Anderson, 1915a, p. 9) and Babine Lake (Cooke, 1915, p. 36). Occasional individuals may be seen in the breeding colonies of *Larus glaucescens* in the Straits of Georgia, but no satisfactory evidence of their breeding at the coast has been so far forthcoming.

Larus argentatus thayeri W. S. Brooks. Thayer Gull.

Synonym—*Larus thayeri*.

Status—A considerable admixture of this Arctic form of the Herring Gull may be found among the wintering Herring Gulls of the Gulf of Georgia. First taken at Comox, in March, 1903, by Brooks, an adult with slate-gray primaries now in the collection of Dr. Dwight. There are specimens collected by Spreadborough at Barkley Sound and Departure Bay (see Dwight, 1917, p. 413). An adult was taken at Comox, January 12, 1920 (Brooks, MS).

Larus californicus Lawrence. California Gull.

Status—Tolerably common in the southern interior, less so on the coast. Seen mostly in spring and fall, but a few remain all winter on the lower Fraser River and at Okanagan Lake. Reported from Chilliwack as a scarce migrant, one adult and several young taken (Brooks, MS); Comox, one moulting adult taken in August, 1903 (Brooks, MS); numerous records for Okanagan Lake for nearly every month. No reliable breeding records for this province.

Larus delawarensis Ord. Ring-billed Gull.

Status—Fairly common on migrations in the interior; much scarcer on the coast. There are no reliable breeding records. The one most often quoted is based on Macoun's (1909, p. 44) statement, "common on Shuswap Lake in June." No intimation is given there that the species was breeding, and the occurrence of gulls at any locality in the summer months is not in itself evidence of nesting. In British Columbia the Ring-billed Gull is one of the rarest gulls on salt water. Around the mouth of the Fraser it is quite common, especially in August and September; farther north along the coast the only certain record is of an adult shot at Comox,

August 20, 1903. At Sumas Lake, it is common in the fall up to, possibly later than, December; at Okanagan Lake and valley it is fairly common, and seen every month except January, February and March (Brooks, MS). One was taken May 24, 1911, near Campbell Island (Cooke, 1915, p. 43).

Larus brachyrhynchus Richardson. Short-billed Gull.

Synonym—*Larus suckleyi*.

Status—A common winter resident along the coast line, breeding in the northern half of the province. Atlin Lake, breeding (Anderson, 1915a, p. 9). The most southerly breeding record is supplied by C. deB. Green, who found this gull nesting in scattered pairs near Prince Rupert, in June, 1920. The return movement southward commences very early. Large flocks of adults and birds of the preceding year arrived at Cowichan Bay, July 2, 1904 (Brooks, MS). At Okanagan Lake it is a scarce migrant; first juvenals were taken August 17, 1921 (Brooks collection). An immature bird was taken on Nine-mile Mountain (5500 feet), near Hazelton, on July 31, 1921 (no. 41987, Mus. Vert. Zool.).

Larus heermanni Cassin. Heermann Gull.

Synonym—*Blasippus heermanni*.

Status—A fairly common migrant to the southern coast of British Columbia, arriving late in June from its breeding grounds in Mexico. The first arrivals are all adults in worn breeding plumage. The young of the year reach the south end of Vancouver Island in September, in which month the return movement of the adults has commenced. Seen north to Alert Bay, Vancouver Island (Taverner, 1918a, p. 185). Casual in winter: Esquimalt, January, 1896 (Cooke, 1915, p. 49). No inland records, as this is eminently a salt-water gull.

Larus philadelphia (Ord). Bonaparte Gull.

Synonym—*Chroicocephalus philadelphia*.

Status—Common migrant throughout the whole southern portion of the province and breeding in the north. Atlin Lake, breeding (Anderson, 1915a, p. 9); believed to breed at Fort St. James (MacFarlane, 1908, p. 300). Reported as breeding in a large colony at Moorehead Lake, Cariboo District, in 1901. This locality is in latitude 52° 30', near Quesnelle Lake. "I have confidence in its reliability as small parties of adults were frequently seen by myself fishing in lakes some twelve miles to the southwest all through the summer, and these birds always headed back in a straight line towards Moorehead Lake" (Brooks, MS). Immatures and non-breeding adults may be seen throughout the summer in southern British Columbia.

Xema sabini (J. Sabine). Sabine Gull.

Status—This Arctic-breeding gull must pass along the coast of British Columbia in large numbers, but the line of migration, probably some miles out to sea, has so far escaped observation. The following are the only definite records, evidently of stragglers: A juvenal taken at the north end of Okanagan Lake, September 9, 1897 (Brooks, 1900c, p. 104); Bellabella, May 24, 1911, several (Cooke, 1915, p. 65); one taken at Glacier Point, Sooke, October 11, 1920 (Kermode, 1921, p. 19).

Sterna caspia imperator (Coues). Coues Caspian Tern.

Synonyms—*Hydroprogne Caspia*; *Sterna caspia*.

Status—Scarce straggler. No specimen yet taken in British Columbia. An adult was seen at Okanagan Landing July 8, 1910, under conditions that could leave no doubt as to its identity (Brooks, 1912, p. 252). "Another fairly certain sight record was made at the same locality in July, 1905; and an adult was seen at Osoyoos Lake, May 7, 1922, when I was in company with P. A. Taverner and H. M. Laing" (Brooks, MS).

Sterna hirundo Linnaeus. Common Tern.

Status—Fairly common migrant in southern British Columbia; probably breeds in the northern portion of the province. Scarce on the coast, but reported from Cowichan Gap, east coast of Vancouver Island, and Comox. More common inland: Okanagan and Arrow lakes, many records. Seen at Tacla Lake, in the northern interior, August 23 and 24, 1913 (E. A. Preble, MS).

Sterna paradisaea Brünnich. Arctic Tern.

Status—Breeds in the northern portion of the province: Dease Lake, one specimen in Provincial Museum, taken by James Porter (Fannin, 1891, p. 6); Atlin, breeding (Anderson, 1915a, p. 9). Stikine River, migrant in May and July (Swarth, 1922, p. 19). Records for Okanagan and Arrow lakes are mistaken identifications of *Sterna hirundo*.

Chlidonias nigra surinamensis (Gmelin). Black Tern.

Synonyms—*Hydrochelidon nigra surinamensis*; *Hydrochelidon surinamensis*.

Status—A rather scarce summer visitant in the southern half of British Columbia. Chilcote, breeding (Sydney Williams, MS); Okanagan, several localities but not a regular breeder; Cranbrook, regular nesting colony (C. B. D. Garrett, MS). Sumas Lake, rare migrant in spring and fall (Brooks, MS). The Burrard Inlet record (Fannin, 1891, p. 6) must be reckoned as an error, as the date given (January) is an extremely unlikely one for the Black Tern to occur in this latitude.

Diomedea nigripes Audubon. Black-footed Albatross.

Synonym—*Diomedea fuliginosa*.

Status—Regular visitant to the west coast from the Straits of Juan de Fuca to Dixon Entrance, usually well out to sea. One specimen taken near Nanaimo, June 13, 1904 (Kermode, 1904, p. 10).

Diomedea albatrus Pallas. Short-tailed Albatross.

Synonym—*Diomedea brachyura*.

Status—Scarcer than the last species; no records north of Vancouver Island. Both coasts of Vancouver Island (Fannin, 1891, p. 6). Quite common near Cape Beale, April, 1894 (Kermode, 1904, p. 10). One found dead at Esquimalt by Spreadborough, June 4, 1893 (Macoun and Macoun, 1909, p. 60).

Fulmarus glacialis glupischa Stejneger. Pacific Fulmar.

Status—Regular off-shore migrant, sick and dying birds coming ashore. Chemainus, one specimen, November, 1895 (Fannin, 1898, p. 19). One picked up dead on the tundra at Rose Spit, Graham Island, in 1914 (C. deB. Green, MS.).

Puffinus opisthomelas Coues. Black-vented Shearwater.

Synonym—*Puffinus gavia*.

Status—Rare or casual post-breeding visitant as far north as Vancouver Island. Near Victoria, one specimen (Fannin, 1898, p. 20). Albert Head, four specimens, October 24, 1891 (Kermode, 1904, p. 10).

Puffinus griseus (Gmelin). Sooty Shearwater.

Status—Extremely common post-breeding migrant off shore along the entire coast line of the province, usually arriving from the southern ocean early in June. First recorded by Dr. C. F. Newcombe from the Queen Charlotte Islands in the fall of 1895 (Fannin, 1898, p. 20). During some years abundant in the Gulf of Georgia; Sidney, October 19, 1912 (Kermode, 1913, p. 8); Cordova Bay, one taken and great numbers seen by Sydney Williams, in October, 1912.

Puffinus tenuirostris (Temminck). Slender-billed Shearwater.

Status—Abundant post-breeding visitant to offshore waters along the entire coast-line. First taken off Albert Head by Geo. MacTavish, October 24, 1891 (Fannin, 1891, inserted slip between pages 6 and 7); William Head, February 23, 1904, one specimen (Kermode, 1904, p. 11); taken off the coast of the Queen Charlotte Islands by Dr. Newcombe in August, 1894 (Macoun and Macoun, 1909, p. 64). Arrives at the north end of the Queen Charlotte Islands late in May in large flocks composed entirely of adults in heavy moult. Young birds arrive from the breeding grounds in the Southern Hemisphere several months later (Brooks, MS).

Oceanodroma furcata (Gmelin). Fork-tailed Petrel.

Status—Resident and breeding at a number of points along the outer coast line. First recorded from both coasts of Vancouver Island (Fannin, 1891, p. 7). Hecate Strait, July 1-8 (Osgood, 1901b, p. 39). Breeding at Cloak Bay, Queen Charlotte Islands, July 22, 1920, in company with next species (Brooks, MS).

Oceanodroma leucorhoa beali Emerson. Beal Petrel.

Synonyms—*Oceanodroma leucorhoa*; *Oceanodroma kaedingi*.

Status—Resident and breeding at a number of points along the outer coast line. West coast of Vancouver Island (Fannin, 1891, p. 7). Breeding commonly at an islet in Cloak Bay, Queen Charlotte Islands.

Phalacrocorax auritus auritus (Lesson). Double-crested Cormorant.

Status—Cormorants observed at several points in the interior (Okanagan Lake, December, 1897; Fort Steele, Kootenay River, October 28, 1912) were probably of this subspecies (Brooks, MS). One taken on the Kootenay River near Cranbrook (C. B. D. Garrett, MS).

Phalacrocorax auritus cincinatus (Brandt). White-crested Cormorant.

Synonyms—*Graculus dilophus*; *Phalacrocorax dilophus cincinatus*; *Phalacrocorax auritus*; *Phalacrocorax cincinatus*.

Status—Fairly common resident along the entire coast line. Both coasts of Vancouver Island (Fannin, 1891, p. 7). Barkley Sound, December (Taverner, 1917, p. 356). Seen at all seasons at various points from Sidney to Graham Island, but never seen nesting (Brooks, MS).

Phalacrocorax penicillatus (Brandt). Brandt Cormorant.

Status—Scarce resident on the west coast of Vancouver Island. Two specimens taken near Victoria by D. E. Campbell, April 19, 1897 (Fannin, 1898, p. 20). Nesting in numbers on Solander Island, July 22, 1904 (Brooks, MS). Barkley Sound, December (Taverner, 1917a, p. 356).

Phalacrocorax pelagicus robustus Ridgway. Violet-green Cormorant.

Synonyms—*Graculus violaceus*; *Phalacrocorax pelagicus*.

Status—Common resident along the whole coast line: Sidney (Bare Island), breeding (Fannin, 1891, p. 7); Queen Charlotte Islands, breeding; Skedans Islands and west coast of Prevost Island (Osgood, 1901b, p. 39); Langara Island, breeding, July, 1920 (Brooks, MS).

Phalacrocorax pelagicus resplendens Audubon. Baird Cormorant.

Status—Fairly common resident in the Gulf of Georgia. Very small, slender-billed cormorants in the Brooks collection, taken at Comox in August, 1903, and January, 1920, must for the present at all events, be referred to this subspecies. Others have been examined in the collection of the Provincial Museum and elsewhere, and it is evident that two subspecies of the *pelagicus* type are found in British Columbian waters; further investigation is required to clear up the situation in regard to the status of the three subspecies of this group on the northwest coast.

Pelecanus erythrorhynchos Gmelin. White Pelican.

Status—Known to breed only at one point in the interior. A breeding colony at Sucker Lake, twenty-five miles northwest of Quesnel, was visited by Sidney Williams in 1899. Of casual occurrence throughout the southern half of the province. One taken at Shuswap Lake in October, 1890 (Fannin, 1891, p. 7). A straggler to Sumas Lake and throughout the Okanagan Valley (Brooks, MS).

Pelecanus californicus Ridgway. California Brown Pelican.

Synonym—*Pelecanus fustus*.

Status—Casual straggler to the extreme southwestern sea-coast. One taken at the mouth of Fraser River by J. C. Hughes, November, 1880; one shot at and wounded, but not taken, at Burrard Inlet the following year (Fannin, 1891, p. 7). One specimen in the Provincial Museum, killed at Race Rocks, January, 1897 (Kermode, 1904, p. 12). One seen at the east entrance to Queen Charlotte Sound, July 18, 1913 (Mrs. F. T. Bicknell, 1914, p. 92).

Mergus americanus Cassin. American Merganser.

Synonym—*Merganser americanus*.

Status—Common resident throughout the province wherever suitable condi-

tions exist: Queen Charlotte Islands, June and July, abundant (Osgood, 1901b, p. 39); Atlin Lake, breeding (E. M. Anderson, 1915a, p. 9); Alberni and Nootka, breeding (Swarth, 1912b, p. 16). Winters in the southern interior wherever there is open water.

Mergus serrator Linnaeus. Red-breasted Merganser.

Synonym—*Merganser serrator*.

Status—Abundant on the coast, scarce inland; probably breeds on the coast north of Vancouver Island. Most of the so-called breeding records for this species in the interior evidently refer to the American Merganser. Mr. C. deB. Green has seen the Red-breasted Merganser, apparently breeding, both at the extreme north end of Vancouver Island (Shusarti), and at the north end of the Queen Charlotte Islands, but has not been able to find the nest. The species remained at the latter locality all through the summer of 1920, but no broods of young were seen (Brooks, MS). Occasionally seen in summer in the interior but only single non-breeding birds. A few winter at Okanagan and a number pass through in May (Brooks, MS).

Lophodytes cucullatus (Linnaeus). Hooded Merganser.

Status—Common resident in the lower Fraser Valley and on Vancouver Island; less commonly in the interior, north to the Cariboo District, Tete Jaune Cache, where found breeding by Spreadborough in July, 1898 (Macoun and Macoun, 1909, p. 76), Yellowhead Pass, where one was taken August 31, 1911 (Riley, 1912, p. 54), and Vanderhoof (Spreadborough, MS). Scarce breeder at Masset, Queen Charlotte Islands. Winters on the coast at least as far north as Comox; in the interior, sparingly at Okanagan (Brooks, MS).

Anas platyrhynchos Linnaeus. Mallard.

Synonym—*Anas boschas*.

Status—Abundant resident throughout the province wherever suitable conditions occur. Remains through the winter along the coast, and in the interior wherever there is open water.

Chaulelasmus streperus (Linnaeus). Gadwall.

Synonym—*Anas strepera*.

Status—Scarce resident on the coast, more common in the interior. Reported from Vancouver Island by Brown (1868, p. 426), from Victoria by Kermodé (1904, p. 13). Twice seen in the summer of 1920 at Masset, Queen Charlotte Islands; common breeder at Okanagan, where it occasionally winters; breeds north to Lac la Hache (Brooks, MS). A few winter at Comox, Vancouver Island, and at Sumas Lake, on the mainland.

Mareca penelope (Linnaeus). European Widgeon.

Synonym—*Anas penelope*.

Status—Occasional visitant to coastal waters: Victoria market, one specimen, February 9, 1899, and Saanich, one specimen (Kermodé, 1904, p. 13). An adult male remained in Comox harbor throughout the winter of 1921-22 (R. M. Stewart, MS).

Mareca americana (Gmelin). American Widgeon.

Synonym—*Anas americana*.

Status—Common resident throughout the province, breeding more rarely along the southern border. Remains through the winter wherever there is open water. On the Queen Charlotte Islands it is scarce in summer; not seen breeding (Brooks, MS).

Nettion carolinense (Gmelin). Green-winged Teal.

Synonym—*Anas carolinensis*.

Status—Common resident throughout the province. Breeds rarely at the coast, commonly in the interior; winters at the coast in numbers, and rarely in the southern interior.

Querquedula discors (Linnaeus). Blue-winged Teal.

Synonym—*Anas discors*.

Status—Summer visitant in the interior, not common; now rare on the coast. Common at Chilliwack and Sumas during the summer of 1887, but becoming scarcer each year subsequently, owing to the loss of nests by summer floods. Scarce breeder in the interior: Okanagan, a few pairs breed irregularly at Westbank, Swan Lake, and near Lumby; fairly common at Lac la Hache; a few were seen during the summer as far north as the 158-mile House, but they did not breed there (Brooks, 1903, p. 278).

Querquedula cyanoptera (Vieillot). Cinnamon Teal.

Synonym—*Anas cyanoptera*.

Status—Almost exactly as in the Blue-winged Teal. Quite common at Chilliwack and Sumas from 1887 to 1891, but subsequently becoming rare, partly on account of the annual flooding by the Fraser River, partly owing to the draining of the smaller swamps in the unflooded areas. North in the interior to Lac la Hache (Rhoads, 1893d, p. 32). Scarce breeder in the neighborhood of Vernon, and south to the boundary at Osoyoos (Brooks, MS).

Spatula clypeata (Linnaeus). Shoveller.

Synonym—*Anas clypeata*.

Status—Fairly common summer visitant to the interior, scarcer on the coast. At Sumas and Chilliwack it is a fairly common migrant and used to breed. A few breed at Okanagan, and northward to Clinton (Rhoads, 1893d, p. 32), the Cariboo road above Clinton (Fannin, 1891, p. 9), and 158-mile House (Brooks, 1903, p. 278). A few are seen each winter at Comox, Vancouver Island.

Dafila acuta tzitzihua (Vieillot). American Pintail.

Synonyms—*Anas acuta*; *Dafila acuta*.

Status—Common winter visitant at the coast, where a few may breed. In the interior it breeds in fair abundance, it is very common in migration, and, very rarely, a few winter as far north as Okanagan Landing. Seen throughout the summer at Masset, Queen Charlotte Islands, but it is doubtful if they breed (Brooks, MS).

Aix sponsa (Linnaeus). Wood Duck.

Status—Summer visitant to the southern portion of the province, but only common in the lower Fraser district. Vancouver Island in summer (Kermode, 1904, p. 14). At Chilliwack and Sumas it is common (it was especially so in 1894 and 1895), and rarely a few remain all winter. Scarce in the southern interior, and breeding where suitable hollow trees are to be found along the river bottoms, as in the lower Okanagan Valley at Vaseaux Lake (Brooks, MS). Two seen at Midway by Spreadborough (Macoun and Macoun, 1909, p. 91).

Marila americana (Eyton). Redhead.

Synonyms—*Aythya americana*; *Nyroca americana*.

Status—Common resident in the southern interior; scarce visitant to the coast. Breeds north to Lac la Hache (Rhoads, 1893d, p. 32). At Okanagan it is a fairly common breeder, and it is usually abundant on the larger lakes throughout the winter. One seen at the mouth of the Campbell River, Vancouver Island, October 14, 1903 (Brooks, MS).

Marila valisineria (Wilson). Canvas-back.

Synonyms—*Aythya valisneria*; *Nyroca valisneria*.

Status—Fairly common resident in the southern interior, breeding from Grand Forks and Vernon (scarce), north at least to 158-mile House (common). One seen at Atlin, July 12 (Anderson, 1915a, p. 10). Common winter visitant to the southwestern coast: Comox, March 18, 1920; mouth of Fraser River and boundary Bay, common; irregularly common at Sumas. Remains all winter wherever open water and suitable feed occurs (Brooks, MS).

Marila marila (Linnaeus). Greater Scaup.

Synonyms—*Aythya marila nearctica*; *Fuligula marila*; *Fulix marila*; *Aythya marila*.

Status—Common winter visitant to the coast and larger bodies of water in the interior. Crippled and non-breeding birds may be seen throughout the summer, but there are no unquestioned breeding records (Brooks, 1920b, p. 354).

Marila affinis (Eyton). Lesser Scaup.

Synonyms—*Aythya affinis*; *Fuligula affinis*; *Fulix affinis*.

Status—Less numerous than the preceding in most localities, but breeds in the interior. Abundant breeder at 158-mile House, Cariboo road, in 1901. Was seen at Masset, Queen Charlotte Islands (scarce) in spring of 1920; not breeding (Brooks, MS).

Marila collaris (Donovan). Ring-necked Duck.

Synonyms—*Aythya collaris*; *Fuligula collaris*; *Fulix collaris*.

Status—Fairly common and resident in the southern half of the province. One specimen taken on Vancouver Island by J. K. Lord (Salvadori, 1895, p. 370); taken at Comox, March 19, 1920 (Brooks collection). It is irregularly common in winter in the lower Fraser Valley. There are two breeding records for that section, at Sumas and Nicomen. In the Okanagan region it is fairly common, and prob-

ably breeds, thought there is no definite record; it rarely remains all winter. At 158-mile House, Cariboo road, it is a scarce breeder; one nest was taken June 27, 1901. Seen at Windermere Lake, East Kootenay, October, 1912 (Brooks, MS).

Glaucionetta clangula americana (Bonaparte). American Golden-eye.

Synonyms—*Bucephala americana*; *Clangula clangula americana*; *Clangula clangula*; *Clangula americana*.

Status—Common winter visitant throughout the province. There are a few breeding records for the southern portion; it is probably a more common breeder in the northern interior. Observed at Sumas Lake, a female with two half grown young, August, 1895; and at Okanagan Landing, where a pair frequented a small mountain lake and seemed to have a nest. An adult pair was seen near the same place May 12, 1906. The Sumas record may have been the result of the mating of a crippled bird or pair; the Okanagan birds were obviously healthy pairs. No evidence of breeding has been seen in the latter locality since 1906 (Brooks, MS).

Glaucionetta islandica (Gmelin). Barrow Golden-eye.

Synonyms—*Clangula islandica*; *Bucephala islandica*.

Status—Breeds commonly in the interior from the International Boundary northward to Atlin Lake (Anderson, 1915a, p. 10), and from small lakes in the lower Transition zone, 1000 feet altitude, up to at least 6000 feet in the mountain ranges (Gold Range, Selkirks, and Rockies). Seen on the upper Peace River, October 1, 1910 (E. A. Preble, MS). Of rare occurrence in the interior in winter, but common at that season on the coast: Barkley Sound, December (Taverner, 1917a, p. 356); Comox (Brooks, MS).

Charitonetta albeola (Linnaeus). Buffle-head.

Synonyms—*Clangula albeola*; *Bucephala albeola*.

Status—Resident in the interior and common winter visitant to the whole coast line of the province. Breeds from the International Boundary northward, mostly at moderate altitudes. Very common breeder at 158-mile House (Brooks, MS). Two females were seen on August 20 at Della Lake in the high mountains near Alberni, Vancouver Island (Swarth, 1912b, p. 17). One breeding record for Sumas Lake (Brooks, 1917, p. 34).

Clangula hyemalis (Linnaeus). Old-squaw.

Synonyms—*Harelda hyemalis*; *Harelda glacialis*.

Status—Common winter visitant on the coast, a migrant in the interior. A few remain during some winters on Okanagan Lake; numbers pass north by this route every spring. It is common in spring at lakes near 158-mile House; one non-breeding bird remained there throughout the summer of 1901 (Brooks, 1903, p. 279).

Histrionicus histrionicus pacificus W. S. Brooks. Western Harlequin Duck.

Synonyms—*Histrionicus torquatus*; *Cosmonetta histrionica*; *Histrionicus histrionicus*.

Status—Common all the year through on the coast, but confined to the more

rugged and exposed shores. Breeds, nowhere commonly, on the larger and most rapid mountain streams, from the coast ranges to the summit of the Rockies, and in similar places on Vancouver Island: Bear River (Kermode, 1904, p. 15). Full plumaged pairs may be found about the outer islands throughout the summer, but the evidence goes to show that these are not breeding birds. Adult males abandon the females soon after the eggs are laid, and return to the coast in June; in August they are found in large flocks, flightless and in eclipse plumage, at such places as Cape Lazo, Vancouver Island (Brooks, MS). Females and young return to the coast as soon as the young are able to fly.

Oidemia americana Swainson. American Scoter.

Status—Fairly common visitant along the whole coast line but does not breed in the province. No reliable inland records, the species being restricted to salt water and normally found on the more exposed stretches and outlying points of the shore line. A few non-breeding birds remain throughout the summer, their numbers being augmented in August by the arrival of the adult males from their far northern breeding grounds.

Oidemia deglandi dixonii W. S. Brooks. Dixon White-winged Scoter.

Synonyms—*Melanetta velvetina*; *Oidemia deglandi*.

Status—Abundant on the coast and fairly common in the interior. Resident but not breeding on the coast; undoubtedly breeds in the northern interior, although absolute confirmation is lacking. Large flocks pass northward and northwestward throughout the interior in May and June. Old males, returning, pass southward and toward the coast in July, after which the species is again abundant on the coast. At 158-mile House, Cariboo road, White-winged Scoters were in pairs and apparently nesting. A female with incubating patch was picked up dead July 13; no broods of young were seen (Brooks, 1903, p. 280). Recorded from Lac la Hache, July 4 (Rhoads, 1893d, p. 33); at Telegraph Creek, "undoubtedly nesting" (Swarth, 1922, p. 199); Atlin Lake, July (Anderson, 1915a, p. 10).

Oidemia perspicillata (Linnaeus). Surf Scoter.

Synonym—*Pelionetta perspicillata*.

Status—Abundant resident on the coast and fairly common in the interior. There are no breeding records. Migrations as in the White-winged Scoter, and, as in that species, there are occasional mid-winter records for ice-free lakes in the interior.

Erismatura jamaicensis (Gmelin). Ruddy Duck.

Synonym—*Erismatura rubida*.

Status—Fairly common summer visitant to the southern portion of the province. Breeds as far north as 158-mile House, Cariboo District (Brooks, 1903, p. 280); one specimen taken at Fort St. James, Stuart Lake, in the spring of 1889 (MacFarlane, 1908, p. 317). A few remain throughout the winter on the southwestern sea coast.

Chen hyperboreus hyperboreus (Pallas). Snow Goose.

Synonyms—*Anser hyperboreus*; ?*Chen nivalis*.

Status—Uncommon migrant over most of the province. Winters in large numbers at the mouth of the Fraser River. There are two specimens from Vancouver Island entered in the British Museum Catalogue of Birds as *Chen nivalis* (Salvadori, 1895, p. 87), which will doubtless prove to be examples of *C. hyperboreus hyperboreus*.

Chen rossi (Cassin). Ross Snow Goose.

Status—A rare straggler in winter and during migrations. Specimens have been taken as follows: One bird near Fort St. James, Stuart Like, "summer 1889" (MacFarlane, 1908, p. 319); at the mouth of the Fraser River, Shuswap Lake, and Kuper Island (Fannin, 1898, p. 24); at Comox, January, 1894 (Kermode, 1904, p. 71); an adult at Rolling's Lake, near Lumby, in the spring of 1921, taken by F. Quesnelle (specimen seen by Brooks).

Anser albifrons albifrons (Scopoli). White-fronted Goose.

Synonyms—*Anser gambeli*; *Anser albifrons gambeli*.

Status—Common migrant along the coast, where a few winter. It is usually scarce in the interior, but during some years is fairly numerous. Vague statements of the breeding of this species in British Columbia (Fannin, 1891, p. 12) appear to have no basis in fact.

Branta canadensis canadensis (Linnaeus). Canada Goose.

Synonym—*Brenta canadensis*.

Status—Common resident, breeding almost throughout the province and wintering on the coast and in the southern interior. According to MacFarlane (1908, p. 321) it is "rare in northern British Columbia." Breeding records: Campbell Lakes, Vancouver Island; Osoyoos to Penticton, and Okanagan Lake (common); and lakes in the Cariboo and Chilcote districts (Brooks, MS).

Branta canadensis hutchinsi (Richardson). Hutchins Goose.

Synonym—?*Bernicla hutchinsi*.

Status—Common migrant, a number remaining throughout the winter on the southwestern coast. Occasional non-breeding birds are seen throughout some summers at Sumas Lake; the species has been taken on migration as far east as the western base of the Rocky Mountains, at Upper Columbia lake (Brooks, MS).

Branta canadensis occidentalis (Baird). White-cheeked Goose.

Status—Confined to the coastal strip, in the northern portion of which it breeds. Found at Cumshewa Inlet, Queen Charlotte Islands, in June (Osgood, 1901b, p. 40); breeding in summer of 1920 at Masset, Queen Charlotte Islands (Brooks, MS); Great Glacier, Stikine River, May 22 (Swarth, 1922, p. 200).

Branta canadensis minima Ridgway. Cackling Goose.

Synonyms—*Branta minima*; ?*Bernicla leucoparia*.

Status—Fairly common migrant along the coast, occasional in the interior. Two juveniles taken at Okanagan Landing, November, 1897; one taken at Kelowna, November 20, 1916, by Miss Pease, the latter in the collection of L. E. Taylor (Brooks, MS). One recorded from Parksville, Vancouver Island, December 1, 1912 (Kermode, 1913, p. 8).

Branta bernicla glaucogastra (Brehm). White-breasted Brant.

Synonym—*Branta bernicla*.

Status—Regular winter visitant to suitable localities on the coast: Comox, Vancouver Island, eight taken and large numbers seen during the winter of 1903-04 (Brooks, 1904, p. 289). There are two specimens in the Victoria Memorial Museum, Geological Survey, Ottawa, from Seal Island, Gulf of Georgia (Taverner, MS).

Branta nigricans (Lawrence). Black Brant.

Synonym—*Bernicla nigricans*.

Status—Common winter visitant to the coast. Confined to localities where a plentiful supply of eel grass (*Zostera*) can be obtained. In former years more generally distributed than at present.

Philacte canagica (Sevastianoff). Emperor Goose.

Status—Casual visitant: Chemainus, Vancouver Island, November 20, 1894 (Fannin, 1895a, p. 76). "Taken twice on Vancouver Island" (Cooke, 1906, p. 82) (one of these will be the Chemainus record). An immature bird was taken at the mouth of the Fraser in November, 1922, identified by Kenneth Racey.

Dendrocygna bicolor (Vieillot). Fulvous Tree-duck.

Synonym—*Dendrocygna fulva*.

Status—Casual visitant. Five taken out of a flock of eleven at Alberni, Vancouver Island, September, 1905, by Mr. J. S. Rollins. One of these is in the Provincial Museum of Victoria (Macoun and Macoun, 1909, p. 132). The record by Barnston (1861, p. 344) which J. M. Macoun (1909, p. 132) claims "must stand as a good record of the fulvous tree-duck in British Columbia," does not indicate that Mr. Barnston shot the bird inside the present borders of the province. "The banks of the Columbia above Okanagan" would seem to refer to a point on the Columbia above where the latter river empties into it, i.e., in Washington State.

Cygnus columbianus (Ord). Whistling Swan.

Synonym—*Olor americanus*.

Status—Fairly common migrant, remaining all winter on the coast.

Cygnus buccinator Richardson. Trumpeter Swan.

Synonym—*Olor buccinator*.

Status—Scarce winter visitant. There are a few breeding records, which may pertain to injured birds. The repeated assertion of the extermination of the Trumpeter Swan is an error as far as British Columbia is concerned; the species was never numerous, and, while its numbers are somewhat reduced, it still returns each winter to at least four localities. At Sumas Lake and Chilliwack it is scarce and irregular. At Campbell Lakes, Vancouver Island, it is a regular winter resident and has bred. On the Queen Charlotte Islands it winters in considerable numbers. A few may be seen there throughout the summer, but there are no reliable breeding records. On certain islands near the mouth of the Skeena River it is usually numerous, though absent in some years. It has bred on Dundas Island. In the lower Okanagan Valley it appears regularly each winter, and has bred at least once (Brooks, MS).

Plegadis guarauna (Linnaeus). White-faced Glossy Ibis.

Status—Casual straggler over the southern boundary. Two specimens are recorded by Fannin (1891, p. 14), one from Salt Spring Island, and the other from the mouth of the Fraser River. One other has since been taken, a young bird shot in the summer of 1902 at Sardis (on the Luck-a-cuck River), now in the Provincial Museum, Victoria (Brooks, 1917, p. 35).

Botaurus lentiginosus (Montagu). American Bittern.

Status—Common summer visitant to southern British Columbia, breeding north at least to 158-mile House, southern Cariboo District (Brooks, 1903, p. 280). The northernmost record is of birds seen in Kispiox Valley, twenty-three miles north of Hazelton, during August, 1921 (Mus. Vert. Zool.). A few remain all winter in the extreme southwestern corner of the province, as at the mouth of the Fraser River (Brooks, MS).

Ardea herodias herodias Linnaeus. Great Blue Heron.

Status—Probably a summer visitant in the extreme southeastern corner of the province. "Breeds from southeastern British Columbia," etc. (A.O.U. Committee, 1910, p. 95). A young bird of this subspecies is listed by Oberholser (1912, p. 534) from "Prospect Lake," September 18, 1896. The subspecific status of the great blue heron of the northern interior has not been ascertained. Birds have been seen at Telegraph Creek (Swarth, 1922, p. 201), and on the Upper Skeena River (Mus. Vert. Zool.).

Ardea herodias fannini Chapman. Northwest Coast Heron.

Synonym—*Ardea herodias*.

Status—Abundant resident on the coast, scarce in the southern interior. Breeding colonies have been described from Masset (Queen Charlotte Islands), Qualicum (Vancouver Island), Vancouver, Stave River, and other points on mainland coast and islands. Scarce visitant to Okanagan Valley, becoming more numerous of recent years; there are no definite breeding records from that region.

Nycticorax nycticorax naevius (Boddaert). Black-crowned Night Heron.

Status—One sight record only: A young bird was seen at Okanagan Landing, August 3, 1908; the actions and cry were characteristic (Brooks, 1909a, p. 60).

Grus canadensis (Linnaeus). Little Brown Crane.

Status—Regular migrant throughout the province, occurring in large flocks in late spring and early fall. Seen at Errington, Vancouver Island, in September (Swarth, 1912b, p. 18). Taken at Sumas and Okanagan (Brooks, MS).

Grus mexicana (Müller). Sandhill Crane.

Status—Summer visitant. Scarcer than the last and arriving in the spring in pairs or small flocks about six weeks previously to the Little Brown Crane. Formerly with a fairly extensive breeding range, and still breeds at the following points: Graham Island; mouth of the Fraser River; Okanagan Valley from Osoyoos to head of Okanagan Lake; and more commonly throughout the Cariboo and Chilcote districts.

Rallus virginianus Linnaeus. Virginia Rail.

Status—Fairly common summer visitant to the southern half of the province, remaining throughout the winter in the extreme southern portion. Permanent resident on Vancouver Island: Victoria, breeding (Kermode, 1909, p. 35); Errington and Alberni, breeding (Swarth, 1912b, p. 18). Reported from Chilliwack, Okanagan, and north at least to the Cariboo District (Brooks, 1903, p. 280).

Porzana carolina (Linnaeus). Sora.

Status—Fairly common summer visitant to the southern mainland and Vancouver Island. Recorded from many localities in the lower Fraser Valley and Okanagan Valley, north to the southern Cariboo District (Brooks, 1903, p. 280), and to Vanderhoof (Spreadborough, MS). "Included in Mr. Keen's manuscript list of birds seen at Massett" (Osgood, 1901b, p. 40).

Fulica americana Gmelin. American Coot.

Status—Common resident in the interior, less so on the coast. North in the interior at least to the Cariboo District (Brooks 1903, p. 280). Extraordinarily abundant throughout southern British Columbia during the winter of 1921-22. Straggler to the north end of Graham Island, of the Queen Charlotte group (C. deB. Green, MS).

Phalaropus fulicarius (Linnaeus). Red Phalarope.

Synonym—*Crymophilus fulicarius*.

Status—A migrant along the coast. Very few records, but it is probably common off shore at times. There are specific records from Burrard Inlet (Fannin, 1891, p. 15); and from Victoria (Rhoads, 1893d, p. 35; Kermode, 1904, p. 20).

Lobipes lobatus (Linnaeus). Northern Phalarope.

Synonyms—*Phalaropus lobatus*; *Phalaropus hyperboreus*.

Status—Common fall migrant throughout the province, scarcer in spring. Found miles out to sea in huge flocks, and in smaller numbers inland. Occurs from the coast up to the highest Alpine lakelets.

Steganopus tricolor Vieillot. Wilson Phalarope.

Synonym—*Phalaropus tricolor*.

Status—Rare summer visitant to the extreme southern interior. At the north end of Osoyoos Lake, two pairs were found, probably breeding, and male and female taken in May, 1922 (Brooks, MS). Reported from Chilliwack, September 9, 1888, a sight record only (Brooks, 1917, p. 36).

Recurvirostra americana Gmelin. American Avocet.

Status—Casual straggler over the southern boundary. At the north end of Okanagan Lake six were taken from a flock of fifteen, April 28, 1908 (Brooks, 1909a, p. 60). At the mouth of the Fraser River one was shot by N. H. Bain, September 20, 1915 (Munro, 1918b, p. 235).

Gallinago delicata (Ord). Wilson Snipe.

Synonym—*Gallinago wilsoni*.

Status—Resident, breeding in small numbers at the southern boundary, more commonly northward. Common on migrations and in winter on the coast. Eggs were taken at Enderby by C. de B. Green (Fannin, 1891, p. 16); at Chilliwack it is a fairly common resident; in the Cariboo District it breeds commonly. On the Queen Charlotte Islands it occurs in migration only; there are no breeding records. Found at Comox in January (Brooks, 1921, p. 151). A few birds winter in the southern interior.

Limnodromus griseus scolopaceus (Say). Long-billed Dowitcher.

Synonym—*Macrorhamphus griseus scolopaceus*.

Status—Common migrant on the coast (including Vancouver and the Queen Charlotte islands), less so in the southern interior (Okanagan). There are no records from the northern interior. Many specimens fall well within the measurements of *Limnodromus griseus griseus*; see Hypothetical List.

Micropalama himantopus (Bonaparte). Stilt Sandpiper.

Status—Scarce but probably regular fall migrant on the mainland; there are no spring records. At Sumas Lake, two specimens were taken September 19, 1899 (Brooks, 1900c, p. 104); at Okanagan, seven were taken in the fall of 1911 (Brooks, 1912, p. 252). There are several subsequent records for Okanagan (Brooks, MS).

Calidris canutus (Linnaeus). Knot.

Synonyms—*Tringa canutus*; *Canutus canutus*.

Status—A scarce migrant, closely restricted to the coastal region. There is one inland record, of a specimen taken at Sumas Lake (100 miles inland), August 15, 1890 (Brooks, 1920a, p. 29).

Arquatella maritima couesi Ridgway. Aleutian Sandpiper.

Synonyms—*Arquatella pilocnemis couesi*; *Arquatella maritima*; ?*Tringa subarquata*.

Status—Regular winter visitant to the rocky portions of the coast. At Clayoquot, western Vancouver Island, three specimens were taken by Spreadborough, May 11, 1907 (Taverner, 1912, p. 396). Taken at Comox, December 31, 1919 (Brooks, 1921, p. 151). Common in winter on the north shore of Graham Island; first taken there by C. de B. Green in April, 1914 (Brooks, 1920a, p. 29).

Pisobia acuminata (Horsfield). Sharp-tailed Sandpiper.

Synonyms—*Tringa acuminata*; *Actodromas acuminata*; *Pisobia aurita*.

Status—Casual straggler to the coast of British Columbia. Taken at Masset, Queen Charlotte Islands, December 27, 1897, by Rev. J. H. Keen; specimen in Provincial Museum (Fannin, 1898, p. 28). One juvenile was seen at very close range at the mouth of the Campbell River, Vancouver Island, October 4, 1903 (Brooks, 1904, p. 290).

Pisobia maculata (Vieillot). Pectoral Sandpiper.

Synonyms—*Tringa maculata*; *Actodromas maculata*; *Heteropygia maculata*.

Status—Common migrant in the fall; much scarcer in the spring. Many records, from Okanagan west to Vancouver Island, and from the Queen Charlotte Islands.

Pisobia bairdi (Coues). Baird Sandpiper.

Synonyms—*Tringa bairdi*; *Actodromas bairdi*; *Heteropygia bairdi*; ?*Tringa bonapartii*.

Status—Common migrant in the fall, much scarcer in the spring. Although on the fall migration Baird Sandpipers are common, and in places abundant, their numbers are composed entirely of young birds of the year; adults pass north in the spring, singly or in very small flocks. There are many records, from Moose Pass (Riley, 1912, p. 54) to Vancouver Island, and from the Queen Charlotte Islands.

Pisobia minutilla (Vieillot). Least Sandpiper.

Synonyms—*Tringa wilsoni*; *Actodromas minutilla*; *Tringa minutilla*; *Limonites minutilla*.

Status—Common spring and fall migrant throughout the province. Reported from Vancouver Island and the Queen Charlotte Islands, from the mainland coast, and from the interior.

Pelidna alpina sakhalina (Vieillot). Red-backed Sandpiper.

Synonyms—*Tringa alpina pacifica*; *Tringa alpina sakhalina*; *Pelidna americana*; *Pelidna alpina*; *Tringa alpina americana*; *Tringa alpina*.

Status—Abundant winter visitant to the southern coast. No records farther inland than Sumas Lake. Winters at least as far north as Comox, and probably on the Queen Charlotte Islands (Brooks, 1921, p. 151).

Ereunetes pusillus (Linnaeus). Semipalmated Sandpiper.

Status—Common migrant in the fall across the whole breadth of the province. In the interior the proportion to the Western Sandpiper is as one hundred to one of the latter. Many records: Ducks (Chapman, 1890b, p. 132), Quesnelle, Okanagan, Chilliwack, Sumas, Comox, Metlakatla, and Masset, Queen Charlotte Islands. There are no records for the spring.

Ereunetes mauri Cabanis. Western Sandpiper.

Synonyms—*Ereunetes occidentalis*; *Ereunetes pusillus*, part; *Ereunetes petrificatus*; *Ereunetes pusillus occidentalis*.

Status—Common migrant on the coast, scarce in the interior. Many records for the coast, from Sumas to the Queen Charlotte Islands. The only record station in the southern interior is Okanagan. There, most years, it is of casual occurrence, but was more numerous in August, 1921, when five were taken (Brooks, MS). One specimen at hand from Kispiox Valley (near Hazelton), taken August 27, 1921 (Mus. Vert. Zool).

Crocethia alba (Pallas). Sanderling.

Synonyms—*Calidris areneria*; *Calidris alba*; *Calidris leucophea*.

Status—Common migrant along the coast. A few remain all winter, at least as far north as Comox, and probably on the Queen Charlotte Islands (Brooks, 1921,

p. 151). Scarcer, but fairly regular, in the interior, on fall migration only: Quesnelle (Brooks, 1903, p. 280).

Limosa fedoa (Linnaeus). Marbled Godwit.

Synonym—*Vetola fedoa*.

Status—Scarce migrant along the coast; one record from the interior. Reported from: Vancouver Island (Brown, 1868, p. 425); Port Simpson (W. B. Anderson, in Kermodé, 1904, p. 22); Okanagan Landing, August 7, 1910 (Brooks, 1912, p. 252); Masset, Queen Charlotte Islands, May 7, 1920 (Brooks, 1921, p. 152).

Totanus melanoleucus (Gmelin). Greater Yellow-legs.

Synonyms—*Gambetta melanoleuca*; *Neoglottis melanoleuca*.

Status—Common migrant throughout the province and breeding in the northern portion. Reported as follows: Clinton, breeding (Rhoads, 1893d, p. 36); 158-mile House, Cariboo District, common breeder (Brooks, 1903, p. 281); Porcher Island, breeding (C. deB. Green, MS); seen at Bennett in June, 1903 (N. Hollister, MS). Probably also breeds on the Queen Charlotte Islands, and perhaps even at the extreme north end of Vancouver Island.

Totanus flavipes (Gmelin). Lesser Yellow-legs.

Synonyms—*Gambetta flavipes*; *Neoglottis flavipes*.

Status—Common fall migrant, scarce in the spring. Records extend from southern Okanagan to Masset, Queen Charlotte Islands. Probably breeds in the northern interior as it was seen at Telegraph Creek in June (Swarth, 1922, p. 202), and at Bennett in June (N. Hollister, MS).

Tringa solitaria solitaria Wilson. Eastern Solitary Sandpiper.

Synonyms—*Totanus solitarius*; *Helodromas solitarius solitarius*.

Status—Fairly common migrant both east and west of the Cascades. At least 30 per cent of the migrating Solitary Sandpipers belong to the typical or so-called eastern form. Many records: Chilliwack and Sumas, fairly common; a number of typical specimens taken from 1887 to 1900 (Brooks, 1917, p. 37); Brackendale, one taken August 28 (Taverner, 1917b, p. 359); Okanagan, common (Brooks, 1909a, p. 61).

Tringa solitaria cinnamomea (Brewster). Western Solitary Sandpiper.

Synonyms—*Helodromas solitarius cinnamomeus*; *Totanus solitarius cinnamomeus*.

Status—Fairly common migrant and must breed in the northern portion of the province. Distributed across the province from the Rockies, at Moose Pass (Riley, 1912, p. 54), to the Queen Charlotte Islands (Brooks, MS). There can be no question that a subspecies of the Solitary Sandpiper breeds in the northern portion of the province, but so far the nest has not been found there. Young with down still adhering were taken at 158-mile House (Brooks, 1903, p. 281), but these may have migrated some distance; they certainly were not raised in the vicinity. The record by Streater of young not able to fly, at Ducks (Chapman, 1890, p. 132), is most probably an error, as this would be an exceedingly unlikely locality for the species to breed in.

Catoptrophorus semipalmatus inornatus (Brewster). Western Willet.

Synonym—*Symphemia semipalmata inornata*.

Status—One record, of a bird shot at Clover Point, near Victoria, August 18, 1898, by Mr. J. Henley (Fannin, 1898, p. 29). No trace of this specimen (if it was preserved) is now to be found, and from the evidence of Mr. F. Kermode it may be advisable, if no further records turn up, to remove this species to the hypothetical list.

Heteroscelus incanus (Gmelin). Wandering Tattler.

Synonym—*Heteroscelus brevipes*; *Heteractitis incanus*.

Status—Fairly common migrant in suitable localities along the coast line, from Vancouver Island (both coasts) to Fort Simpson and the Queen Charlotte Islands. Except in the breeding season confined absolutely to rocky shores along salt water. One specimen, apparently a young one of the year but fully feathered, was taken August 8, 1910, near Klappan Mountain, in the northern interior (E. A. Preble, MS; specimen in Biol. Surv. collection). This is perhaps indicative of the southern limits of the breeding range of this little known species.

Bartramia longicauda (Bechstein). Upland Plover.

Synonym—*Arctiturus bartramicus*.

Status—Regular summer visitant to widely separated localities in the interior; casual on the coast. Taken at Comox, Vancouver Island, August 20, 1895, by W. B. Anderson (Fannin, 1898, p. 30); one taken at Vancouver in the fall of 1895, by E. E. White (Sydney Williams, MS). Taken on both spring and fall migrations at Quesnelle and 158-mile House, Cariboo District (Brooks, 1903, p. 281). Reported from Sidley, east of Osoyoos Lake, May 25, 1905, by Spreadborough (Macoun and Macoun, 1909, p. 194), and found breeding at the same locality in 1900 (C. deB. Green, MS). Fairly common in the fall migration in Kispiox Valley, near Hazelton (Mus. Vert. Zool.). Two were seen at the headwaters of the Finlay River, near Thudade Lake, August 23, 1910 (E. A. Preble, MS; specimen in Biol. Surv. collection). Found breeding in June, 1919, at Newgate, in the extreme southeastern corner of the province (Brooks, 1920a, p. 30).

Tryngites subruficollis (Vieillot). Buff-breasted Sandpiper.

Synonym—*Tryngites rufescens*.

Status—Scarce but regular fall migrant along the coast line. There are no records from the interior. At Chilliwack and Sumas it occurs regularly; eight were taken from August 8 to September 15 of different years (Brooks, 1917, p. 37); two that were taken at Sidney, Vancouver Island, were in the store of C. F. Lindley, Victoria (Brooks, MS); one was taken at Seal Island, near Comox, August, 1922 (Taverner, MS).

Actitis macularia (Linnaeus). Spotted Sandpiper.

Synonym—*Tringoides macularia*.

Status—Common summer visitant, breeding throughout the province, including all the islands. Occasionally seen in winter on the coast, as at Chilliwack, December 3, 1895 (Brooks, 1917, p. 37); Oyster River, Vancouver Island, December, 1921 (Munro, MS).

Numenius americanus Bechstein. Long-billed Curlew.

Synonyms—*Numenius longirostris*; *Numenius americanus occidentalis*.

Status—Now a rather scarce summer visitant to the semi-arid interior, where formerly it was common. Getting scarce in the whole of the Okanagan Valley, owing to encroachment of agriculture on its breeding grounds. The most northern breeding record is 150-mile House (Brooks, 1903, p. 281). A rare straggler to the coast: Victoria, migrant (Fannin, 1891, p. 18); Victoria and Lulu Island in May; Lac la Hache and Vernon, breeding (Rhoads, 1893d, p. 61); a straggler at Comox, Sumas and Chilliwack.

Numenius hudsonicus Latham. Hudsonian Curlew.

Synonym—*Phaeopus hudsonicus*.

Status—Locally common on the coast during migrations, from Vancouver Island (both coasts) and Boundary Bay, north to Port Simpson and the Queen Charlotte Islands. There are no records away from salt water.

Squatarola squatarola cynosurae Thayer and Bangs. American Black-bellied Plover.

Synonyms—*Charadrius squatarola*; *Squatarola helvetica*; *Squatarola squatarola*.

Status—Common migrant in suitable localities over the whole province, both inland and on the coast.

Pluvialis dominica dominica (Müller). Golden Plover.

Synonym—*Charadrius dominicus*.

Status—Fairly common migrant across the whole province. Taken at Port Simpson by W. B. Anderson, and at Dease Lake by J. Porter (Fannin, 1891, p. 18). At Sumas Lake it is common every fall, rare in the spring (Brooks, 1917, p. 37); at Okanagan it is a scarce migrant.

Pluvialis dominica fulva (Gmelin). Pacific Golden Plover.

Synonym—*Charadrius dominicus fulvus*.

Status—Occasional, probably regular, migrant on the coast. Recorded as follows: Victoria (Rhoads, 1893d, p. 37); Comox, three taken in November, 1903 (Brooks, 1904, p. 290); Masset, Queen Charlotte Islands, one adult taken August 10 (Brooks, 1921, p. 153).

Oxyechus vociferus (Linnaeus). Killdeer.

Synonym—*Aegialitis vocifera*.

Status—Common summer visitant to the southern mainland. Breeds regularly north to the southern part of the Cariboo District (Brooks, 1903, p. 281); wanders casually still farther north: Vanderhoof, August (Spreadborough, MS), Porcher Island (C. deB. Green, MS). A few remain all winter on the southern coast. Resident but not common on Vancouver Island.

Charadrius semipalmatus Bonaparte. Semipalmated Plover.

Synonym—*Aegialitis semipalmata*.

Status—Rather scarce migrant on the coast and in the interior. Reported on

migration from various parts of Vancouver Island (both coasts); a scarce migrant at Sumas (Brooks, 1917, p. 37); Okanagan, six fall records (Brooks, MS). Breeds in the extreme northern interior, as at Atlin (Anderson, 1915a, p. 10). One seen near the outlet of Thudade Lake, August 31, 1910 (E. A. Preble, MS). At Masset, Queen Charlotte Islands, it was first found breeding by C. deB. Green in 1913; found breeding commonly along the whole shore line east of Masset in 1920 (Brooks, 1920a, p. 31).

Aphriza virgata (Gmelin). Surf-bird.

Status—Fairly common migrant along the coast, and winters in some localities. Taken at Howe Sound by R. V. Griffin, and at Port Simpson by W. B. Anderson (Fannin, 1891, p. 19); at Barkley Sound, Vancouver Island, it was abundant in December and January (Taverner, 1917a, p. 357). Found at Masset, Queen Charlotte Islands, in April; it probably winters there (C. deB. Green, MS).

Arenaria interpres interpres (Linnaeus). Turnstone.

Synonym—*Arenaria interpres morinella*, part.

Status—A scarce migrant on the coast. Recorded as follows: Taken at Port Simpson by W. B. Anderson, and at James Island by Fannin (Fannin, 1891, p. 19); at Masset, Queen Charlotte Islands, seven specimens were collected in May and August (Brooks, 1921, p. 152); reported from Sidney Island (Kermode, 1904, p. 25).

Arenaria interpres morinella (Linnaeus). Ruddy Turnstone.

Synonym—*Arenaria morinella*.

Status—Probably a regular migrant but of less frequent occurrence than *Arenaria interpres interpres*. Several specimens showing all the characters of this subspecies are in the Victoria Memorial Museum at Ottawa, all collected at Ucluelet on the west coast of Vancouver Island by William Spreadborough, May 15, 1907.

Arenaria melanocephala (Vigors). Black Turnstone.

Synonym—*Strepsilas melanocephala*.

Status—Common winter visitant to the coast, where it is confined to the salt water shore-line. Actually, like several other shore birds, the Black Turnstone can be found on the coast in every month, the adults arriving from their far northern breeding grounds in early July, and non-breeding birds lingering until early June.

Haematopus bachmani Audubon. Black Oyster-catcher.

Synonyms—*Haematopus niger*; *Haematopus palliatus*.

Status—Resident in suitable localities along the coast line, where it is confined to the more rugged shores and rocky islets. Occurs from Sidney, southern Vancouver Island, northward to the northern boundary.

Dendragapus obscurus fuliginosus (Ridgway). Sooty Grouse.

Synonyms—*Dendragapus fuliginosus*; *Tetrao obscurus*; Blue Grouse, part.

Status—Resident in the coastal region of southwestern British Columbia. Abundant in the southern part of Vancouver Island. Probably occurs throughout the

Island, but rare on the west coast and at the north end (Swarth, 1912b, p. 19). On the mainland it is recorded from the lower Fraser Valley, east to Lillooet (Taverner 1917b, p. 359) and upper Similkameen Valley (Brooks collection). Seen at Malaspina Inlet in July, 1897 (E. A. Preble, MS); northern limit on the mainland coast is undetermined. This subspecies performs altitudinal migrations locally, ascending to the mountain tops in the fall, and descending to the valleys to breed, in the spring.

***Dendragapus obscurus sitkensis* Swarth. Sitka Grouse.**

Synonyms—*Dendragapus obscurus fuliginosus*; *Dendragapus obscurus munroi*; Blue Grouse, part.

Status—Resident on the Queen Charlotte Islands and on Porcher Island (Brooks, 1923a, p. 220). On the Stikine River it is recorded from the British Columbia-Alaska boundary (Swarth, 1922, p. 205), which is probably about the eastern limit of the subspecies in that region. It doubtless merges into the subspecies

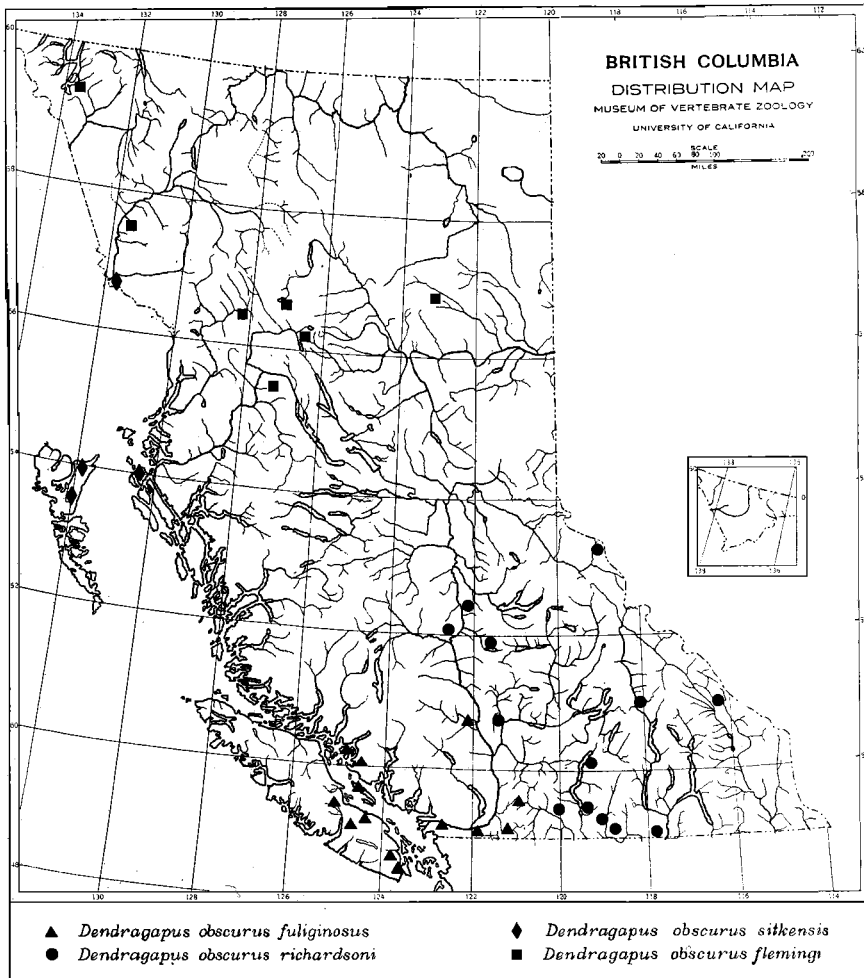


FIG. 13. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF SUBSPECIES OF THE GROUSE, *DENDRAGAPUS OBSCURUS*.

fuliginosus at some point on the British Columbian coast, south of Porcher Island, but data are lacking.

Dendragapus obscurus richardsoni (Douglas). Richardson Grouse.

Synonyms—*Tetrao obscurus*; *Dendragapus richardsoni*; Blue Grouse, part.

Status—Resident in the interior. Reported as of common occurrence at many localities, from the east slope of the Cascades eastward; north at least to the southern part of the Cariboo District (Brooks, 1903, p. 281), in the Rocky Mountains to Moose Pass (Riley, 1912, p. 55).

Dendragapus obscurus flemingi Taverner. Fleming Grouse.

Synonyms—*Dendragapus obscurus fuliginosus*; Blue Grouse, part.

Status—Resident at high altitudes (Hudsonian Zone) in northwestern British Columbia. Reported from Atlin (Anderson, 1915a, p. 11), mountains of the upper Stikine region (Swarth, 1922, p. 203), from Nine-mile Mountain, near Hazelton (Mus. Vert. Zool.), from mountains about Bear Lake and Thudade Lake and from Ground-hog Mountain (E. A. Preble, MS), and from West Halfway River (specimen in U. S. Biol. Surv. Coll.).

Objection has been raised to the recognition of the subspecies *flemingi*, on the grounds that the dark coloration which is the principal character of the race is one that appears in parts of the recognized habitat of *richardsoni* where the humid conditions of the coast are repeated in inland mountains, as in the Selkirks (see Brooks, 1912, p. 252; Rhoads, 1893d, p. 38). This is something to be determined by future investigation; definite information on the subject is lacking at this time. For the present it seems proper to accord subspecific recognition to *Dendragapus obscurus flemingi*.

Canachites canadensis atratus Grinnell. Valdez Spruce Grouse.

Synonym—Fool Hen, part.

Status—Known only from its occurrence on the Stikine River, at Flood Glacier (Swarth, 1922, p. 205). This record station doubtless indicates the eastern (inland) limits of a race that will prove to be of fairly widespread distribution along the Alaska coast (see Swarth, *loc. cit.*).

Canachites canadensis osgoodi Bishop. Alaska Spruce Grouse.

Synonym—Fool Hen, part.

Status—Resident in northwestern British Columbia. Restricted mostly to spruce woods, hence found breeding usually at moderately high altitudes (Hudsonian Zone); in the Atlin region at from 3,000 to 4,000 feet (Anderson, 1915a, p. 11). Reported from Bennett (Bishop, 1900b, p. 71), Atlin (Anderson, *loc. cit.*), and the Telegraph Creek region (Swarth, 1922, p. 205). Undoubtedly the habitat of this subspecies extends still farther east. *Canachites canadensis* in some form, must range clear across British Columbia along the northern boundary. The Alaska Spruce Grouse is reported (E. A. Preble, MS; specimens in U. S. Biol. Surv. collection) from many points south from the Stikine River to Thudade Lake, and eastward to Laurier Pass and to Rocky Mountain Portage, upper Peace River.

Canachites franklini (Douglas). Franklin Grouse.

Synonyms—*Dendragapus franklinii*; *Tetrao franklinii*; Fool Hen, part.

Status—Common resident on the mountains of the interior, in the southern two-thirds of the province. Restricted mostly to spruce woods of the Hudsonian Zone. Many record stations, from the Rocky Mountains westward nearly to the coast. Recorded northward in the Rocky Mountains to Yellowhead Pass (Riley, 1912, p. 55); to Hudson's Hope, on the Peace River (specimen in U. S. Biol. Surv. collection); in the northwest to a point forty miles north of Hazelton (Mus. Vert. Zool.), and to Ingenika River, Thudade Lake and Kluetantan Lake (E. A. Preble, MS; specimens in U. S. Biol. Surv. collection). In southern British Columbia it has been found westward to the western slope of the coast range "on Sproat Mountain between Alpha and Beta Lakes," some fifty miles north of Vancouver (Kenneth Racey, MS). As this species has been found on some of the islands off the coast of southeastern

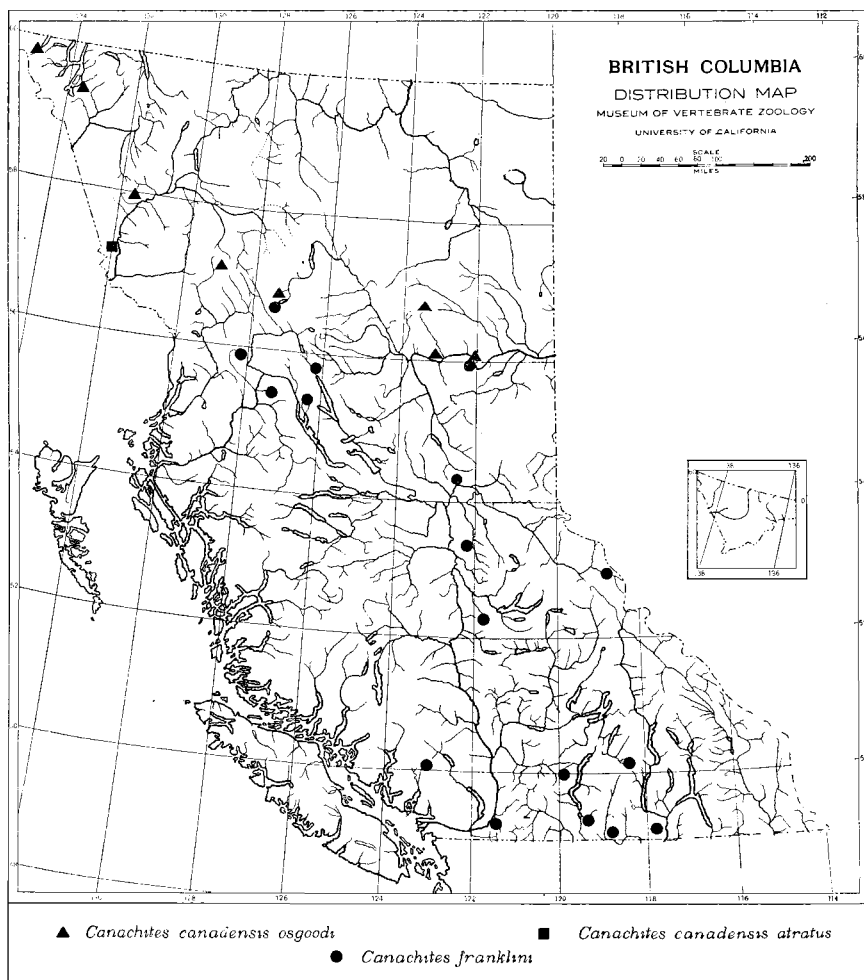


FIG. 14. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF SPRUCE GROUSE (CANACHITES).

Alaska, it may prove to occur on the nearby mainland coast of northern British Columbia also.

Franklin and Spruce grouse are reported as occurring together at the headwaters of the Parsnip and the Big Salmon rivers (F. K. Vreeland, MS); a specimen of *franklini* was collected at Giscombe Portage (in U. S. Biol. Surv. collection).

***Bonasa umbellus umbelloides* (Douglas).** Gray Ruffed Grouse.

Synonyms—*Bonasa umbellus*; ?*Bonasa sabinii*, part; *Bonasa umbellus togata*; Willow Grouse, part.

Status—Common resident in the interior; occurs everywhere east of the Cascades and coast ranges, from the southern boundary to the northern. In the interior of southern British Columbia the Ruffed Grouse ranges up to 6,000 feet (Brooks, 1917, p. 37); in the north and on the coast it is restricted to the lowlands. There is great variation in color among Ruffed Grouse, due mostly to the two color phases (gray and red) which occur throughout the range of the species. Reddish colored examples of *Bonasa umbellus umbelloides* are sometimes not unlike specimens of *B. u. togata*, from eastern Canada, and have been recorded as such.

***Bonasa umbellus sabinii* (Douglas).** Oregon Ruffed Grouse.

Synonyms—*Bonasa umbellus*; *Bonasa sabinii*; Willow Grouse, part.

Status—Common resident of the lowlands in the humid coast region of southwestern British Columbia. Abundant over the whole of Vancouver Island. On the mainland it is reported only from the lower Fraser Valley, west of the Cascades. The northernmost mainland record is from Malaspina Inlet (E. A. Preble, MS; specimen in Biol. Surv. collection). Several Ruffed Grouse were seen near Port Simpson in August, 1897 (E. A. Preble, MS), but there is a possibility that occasional individuals of *umbelloides* range down the Skeena Valley to the coast. The Ruffed Grouse does not occur on the Queen Charlotte Islands (see Osgood, 1901b, p. 42).

***Lagopus lagopus lagopus* (Linnaeus).** Willow Ptarmigan.

Synonym—*Lagopus lagopus albus*.

Status—Willow Ptarmigan (including two subspecies, *lagopus* in eastern British Columbia, *alexandrae* in the west) are resident above timber line (Alpine-Arctic Zone), in the northern and central portions of the province. Birds from Moose Pass are referred by Riley (1912, p. 58) to *Lagopus lagopus albus* (= *L. l. lagopus*, as here used), and it seems likely that Willow Ptarmigan from the Cariboo District (Brooks, in Dawson, 1909, p. 967), belong to the same subspecies. *Lagopus l. albus* Gmelin may well be the proper name to use for this form, as pointed out by Riley (1911, p. 233).

***Lagopus lagopus alexandrae* Grinnell.** Alexander Willow Ptarmigan.

Synonyms—*Lagopus lagopus*; *Lagopus rupestris*, part.

Status—Resident above timber-line on the mountains of northwestern British Columbia. There are record stations as follows: Atlin (Anderson, 1915a, p. 11); Dease Lake (Fannin, 1891, p. 21); Nine-mile Mountain, near Hazelton (Mus. Vert. Zool.); Porcher Island, breeding (Brooks, 1923a, p. 221); Icha Mountains, northern Chilcoten (Brooks, in Dawson, 1909, p. 967). Specimens upon which the above

records are based have all been examined (except from Dease Lake), and prove to belong to the subspecies *L. l. alexandrae*. The Porcher Island birds are typical of *alexandrae*; mainland specimens show intergradation toward *lagopus*. Willow Ptarmigan are recorded (E. A. Preble, MS) at many points from the upper Stikine River southward to Bear Lake. A ptarmigan (probably *alexandrae*) is reported from Campania Island, about 100 miles south of Prince Rupert (Swarth, MS).

Some species of ptarmigan is said to occur on the mountains of the Queen Charlotte Islands (Osgood, 1901b, p. 42), but no specimen has been taken, and it is doubtful if the species is established there. The remains of a bird in winter plumage are in the Brooks collection, shot by a hunter on Rose Spit, the extreme northeastern extremity of these islands, but this undoubtedly was a straggler of this subspecies that had been blown over from Prince of Wales Island to the north.

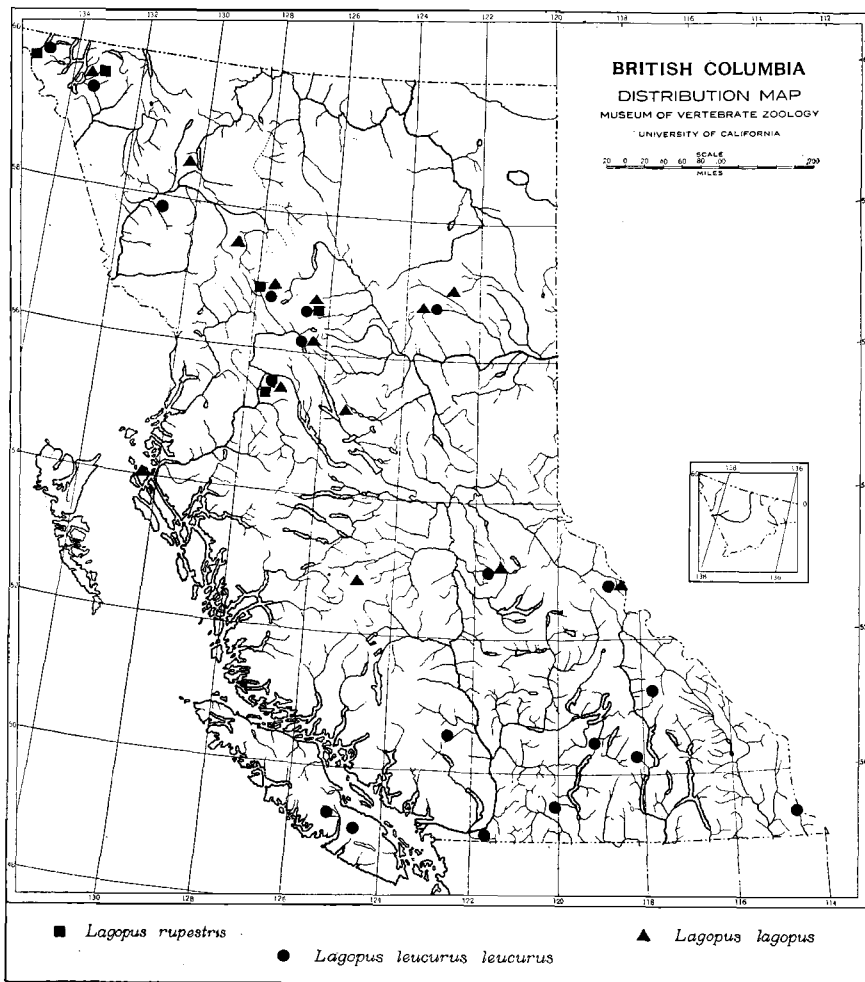


FIG. 15. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF ROCK PTARMIGAN (*LAGOPUS RUPESTRIS*), WILLOW PTARMIGAN (*L. LAGOPUS*) AND WHITE-TAILED PTARMIGAN (*L. LEUCURUS*).

Lagopus rupestris rupestris (Gmelin). Rock Ptarmigan.

Status—Resident above timber-line (Alpine-Arctic zone) in northern British Columbia. There are but few record stations for the province: White Pass Summit, June (Bishop, 1900b, p. 72), mountains near Atlin, summer (Anderson, 1915a, p. 11), Nine-mile Mountain, near Hazelton, July and August (Mus. Vert. Zool.); mountains near head of Tsakadzoa River, and mountains near junction of Ingenika River and McConnell Creek (E. A. Preble, MS). The Nine-mile Mountain station, the southernmost for British Columbia, is likewise, apparently, the southernmost known breeding station for this species in North America.

Lagopus leucurus leucurus (Swainson). White-tailed Ptarmigan.

Synonym—*Lagopus rupestris*, part; Rock Ptarmigan, part.

Status—Resident above timber-line (Alpine-Arctic zone) nearly throughout the province. Specimens are lacking to prove its presence in the coast ranges nearest the coast, but it occurs in the Cascades, and has been found on mountain tops eastward to the Rockies at practically every suitable place explored. On Vancouver Island the White-tailed Ptarmigan has been found on Mount Arrowsmith (Macoun and Macoun, 1909, p. 229), and on mountains south of Alberni, and mountains north of Great Central Lake (Swarth, 1912b, p. 23). It probably occurs on the higher peaks throughout the island. Not present on the Queen Charlotte Islands. In northern British Columbia this species probably descends into the lowlands occasionally in winter.

Pediocetes phasianellus phasianellus (Linnaeus). Sharp-tailed Grouse.

Status—Probably resident locally in extreme northwestern British Columbia (see A. O. U. *Check-List*, 1910, p. 144). The basis of the statement in the *Check-List*, according to information received from Dr. E. W. Nelson, Chief of the United States Biological Survey, as derived from the records of that Bureau, "is a specimen taken on August 28, 1900, at Tagish Lake, British Columbia, and identified in the Biological Survey by Dr. A. K. Fisher." Reported also from Hudson's Hope, upper Peace River, October 9, 1910 (E. A. Preble, MS; specimen in U. S. Biol. Surv. collection).

Pediocetes phasianellus columbianus (Ord). Columbian Sharp-tailed Grouse.

Synonyms—*Pedioecetes phasianellus*, part; *Pediocaetes phasianellus*; *Pediocaetes columbianus*; *Pediocaetes phasianellus columbianus*.

Status—Resident, common locally, in the lowlands of the interior. Reported from many points along the southern boundary between the Cascades and the Rocky Mountains, and northward through the Okanagan region, Kamloops, etc., to 158-mile House and Quesnelle, Cariboo District (Brooks, 1903, p. 281).

Centrocercus urophasianus (Bonaparte). Sage Hen.

Status—Known only from the statement by Fannin (1891, p. 21): "Three specimens taken by G. B. Martin, M. P. P., at Osoyoos Lake in October, 1864." From information supplied by Mr. Val Haynes, two others were killed by an Indian named Si-an at the same locality about 1883.

Columba fasciata fasciata Say. Band-tailed Pigeon.

Synonym—*Chloroenas fasciata fasciata*.

Status—Locally common in summer in southwestern British Columbia. Occurs throughout Vancouver Island, including the west coast (Swarth, 1912b, p. 26) and the north end (Taverner, 1918a, p. 185), and on some, at least, of the small islands in the Strait of Georgia. On the mainland it is reported from the coast at Brackendale, and from points in the lower Fraser Valley (Chilliwack, Westminster, and Douglas), all lying west of the Cascade Mountains. There is a record by C. A. Patch (1922, p. 133) of a bird seen at Tow Hill, on Graham Island, of the Queen Charlotte group; in the same publication he mentions an occurrence at Bella Coola, on the mainland coast. The only other statement regarding the northern limit of the Band-tailed Pigeon on the coast is that by Brown (1868, p. 423), to the effect that it "probably does not go north of Millbank Sound."

Ectopistes migratorius (Linnaeus). Passenger Pigeon.

Status—Inclusion of the Passenger Pigeon among the birds of British Columbia is based altogether upon the probability that specimens were collected within the province by J. K. Lord. The species is included by Lord (1866, vol. 2, p. 298) in the list of birds he collected or observed in the province, but his statement concerning it is vague. In the Catalogue of Birds in the British Museum (Salvadori, 1893, p. 371), three specimens are listed as received from J. K. Lord, collected on the "W. side of Rocky Mts." Much of Lord's collecting was done south of the boundary, in what is now the state of Washington, and doubt naturally exists as to the exact place where these birds were taken. In the "Catalogue of North American Birds and Eggs . . . in the Museum of the Royal Artillery Institution, Woolwich" (Whitely, 1865, p. 14) is the following entry: Catalogue No. 750. *Ectopistes migratoria*. British Columbia. orig. no. 94, J. K. Lord, Esq.

The presence of the Passenger Pigeon at that time does not in itself seem unlikely, considering the many other migratory eastern birds that extend into British Columbia, and altogether it seems proper to retain the species in our list. Bearing in mind the many careless and inaccurate statements that were made by Lord, however, it may be admitted that the evidence on which the Passenger Pigeon is ascribed to British Columbia is not conclusive.

Zenaidura macroura marginella (Woodhouse). Western Mourning Dove.

Synonyms—*Zenaidura macroura*; *Zenaidura carolinensis*; *Zenaidura macroura carolinensis*; *Zenaidura macroura caurina*.

Status—Summer visitant to southern British Columbia, fairly common in some of the interior valleys, less numerous toward the coast. Occurs, rather uncommonly, in the southern part of Vancouver Island, north to Alberni (Swarth, 1912b, p. 26). Graham Island, Queen Charlotte group (Osgood, 1901b, p. 42). On the mainland it is reported in greater or less abundance from many points, north to the southern part of the Cariboo District (Brooks, 1903, p. 281). Some form of *Zenaidura macroura* occurs still farther north, for Mourning Doves have been seen at Telegraph Creek (Swarth, 1922, p. 209), and it is possible that these northern birds are of the eastern subspecies, *Z. m. carolinensis*. The addition of this subspecies to the British Columbia list, however, must await the taking of specimens.

Melopelia asiatica trudeau (Audubon). White-winged Dove.

Synonym—*Melopelia asiatica*.

Status—A rare straggler from the south. Two birds were seen and one collected by Mr. J. G. French, at Sherringham Point, Renfrew District, Vancouver Island, in July, 1918, and the specimen collected was presented to the Provincial Museum, Victoria (Kermode, 1922, p. 11). This is the only record for the province.

Cathartes aura septentrionalis Wied. Turkey Vulture.

Synonyms—*Cathartes aura*; *Ænoys aura*.

Status—Summer visitant to southern British Columbia. On the mainland it has been reported as of common occurrence in summer at various points, as at Chilliwack (Brooks, 1917, p. 37), and the Okanagan region (Anderson, 1914, p. 9), and in lesser numbers northward as far as Lac La Hache (Rhoads, 1893d, p. 39). On Vancouver Island it is fairly common as far north as Nanaimo (Macoun and Macoun, 1909, p. 241) and Alberni (Swarth, 1912b, p. 27). Fannin (1898, p. 34; see also Macoun and Macoun, *loc. cit.*) describes two young birds of this species said to have been brought from Fort Rupert (=Alert Bay, Vancouver Island). If no mistake was made they provide a far northern locality record for the breeding of the Turkey Vulture, at least on the coast. There is one winter record: Comox, Vancouver Island, February 24, 1920 (Brooks, MS).

Circus hudsonius (Linnaeus). Marsh Hawk.

Status—Breeds in the valleys of the mainland, commonly in the south, in lesser numbers northward, but occurring throughout the length of the province. In the extreme south it breeds commonly west to the coast; in the north it is restricted during summer to the country east of the coast ranges. Not known to breed on Vancouver Island. An abundant migrant, on the islands, on the mainland coast, and throughout the interior. A few individuals remain through the winter in southern British Columbia: Okanagan (Munro, 1919a, p. 67); lower Fraser Valley (Fannin, 1891, p. 22).

Accipiter velox (Wilson). Sharp-shinned Hawk.

Synonym—*Accipiter fuscus*.

Status—Occurs in all parts of British Columbia. Rare in summer, but reported from many widely scattered localities, and apparently is to be found nesting (though in small numbers) at any point, either inland or on the coast. Seen in various parts of Vancouver Island in summer; a scarce breeder at Masset, Queen Charlotte Islands (Brooks, MS). In the Chilliwack region it was found nesting in the lowlands and in the mountains (Brooks, 1917, p. 37); in the dry interior it does not breed below 4,000 feet (Brooks, MS). An abundant migrant throughout the province. A few individuals remain during winter in the extreme south: Okanagan Landing (Brooks, MS); Chilliwack (Brooks, 1917, p. 37); Vancouver Island (Fannin, 1891, p. 22).

Accipiter cooperi (Bonaparte). Cooper Hawk.

Synonym—*Accipiter mexicanus*.

Status—Summer visitant to southern British Columbia, common in the interior

but of rarer occurrence on the coast. Reported from many points east of the Cascades and coast ranges, north to Lac La Hache (Rhoads, 1893d, p. 39), Fort St. James, Stuart Lake (MacFarlane, 1908, p. 352), and Yellowhead Lake (Riley, 1912, p. 61). Fairly common on migration at Comox, Vancouver Island (Brooks, MS). Kermode (1922, p. 12) records a specimen from Victoria, July 8, 1921.

Astur atricapillus atricapillus (Wilson). Eastern Goshawk.

Synonyms—*Accipiter atricapillus*; ?*Astur atricapillus striatulus*, part.

Status—Breeds throughout the interior, not abundantly anywhere. A nest is described from Penticton, near the southern boundary (Spreadborough, in Macoun and Macoun, 1909, p. 250), and the species has been seen in summer at various points, north to the northern boundary. Sometimes abundant in migrations. This subspecies occurs as a transient on the coast as well as inland; adults and young were taken at Chilliwack (Brooks, MS). Remains through the winter at least as far north as the Cariboo District (Brooks, in Macoun and Macoun, 1909, p. 248).

Astur atricapillus striatulus Ridgway. Western Goshawk.

Synonyms—*Astur atricapillus*, part; *Accipiter atricapillus striatulus*.

Status—Presumably it is this subspecies that nests in the coastal region, but definite breeding records are lacking. There is no published account of the finding of a Goshawk's nest anywhere in the humid coast region. The existence of two distinguishable subspecies of *Astur atricapillus* has been questioned (see Taverner, 1917b, p. 360), but at any rate, birds exhibiting the characters ascribed to the race *striatulus* are common in migration along the mainland coast, on Vancouver Island, and on the Queen Charlotte Islands. Remains throughout the winter along the whole length of the coast line.

Buteo borealis calurus Cassin. Western Red-tailed Hawk.

Synonyms—*Buteo montanus*; *Buteo borealis alascensis*.

Status—Breeds throughout British Columbia, in the interior from the southern boundary to the northern, on the mainland coast, on Vancouver Island, and on the Queen Charlotte Islands. The limit of distribution toward extreme northeastern British Columbia is undetermined. More abundant inland than in the coastal region. Remains through the winter in extreme southwestern British Columbia, as at Chilliwack (Brooks, 1917, p. 38), and on Vancouver Island. Red-tails of the *krideri* type have been taken at various points, at Teslin Lake (Victoria Memorial Museum) and on the Stikine River (Swarth, 1922, p. 212) in the north, and, in migration, in the Okanagan region (Brooks, MS). Whether these light-colored birds are really of a separate subspecies is a question as yet unsettled.

Buteo swainsoni Bonaparte. Swainson Hawk.

Status—A summer visitant, restricted mostly to the more arid interior. Breeds in fair abundance, but is irregular in distribution, a requirement of first importance being the presence of open, park-like country. In southwestern British Columbia it breeds only at high elevations, in the southern interior as low as 2,000 feet; ranges north at least to Telegraph Creek (Swarth, 1922, p. 213), where it was

found in the lowlands. Of rare occurrence on the coast. Reported by Kermode (1904, p. 29) as having been taken (presumably in migration) at Victoria and Union.

Archibuteo lagopus sancti-johannis (Gmelin). American Rough-legged Hawk.

Synonyms—*Archibuteo lagopus*; *Archibuteo sancti-johannis*.

Status—An irregular, occasionally common, migrant in the interior; rare on the coast but reported (Kermode, 1904, p. 30) even from Vancouver Island. A few individuals remain through the winter along the southern boundary (Brooks, 1917, p. 38). The A. O. U. *Check-list* (1910, p. 161) records this species as breeding "south to central British Columbia." The basis of this statement is the sight identification by Mr. Sydney Williams of young birds in a nest near Cottonwood, Cariboo District; it is a record that can not be accepted without further verification (Brooks, MS). Riley (1912, p. 61) observed one of the birds on Moose River, Yellowhead Pass region, July 16, 1911; this may indicate an extreme southern breeding locality.

Archibuteo ferrugineus (Lichtenstein). Ferruginous Rough-legged Hawk.

Status—Probably a summer resident in the arid southern interior. At Osoyoos, April 28, 1922, an adult, undoubtedly of this species, was watched for some time at one hundred yards with an eight power glass. Others were twice seen a few days later, one a melanistic individual. All of the conspicuous characters of this hawk were recognized in the first instance (Brooks, MS). An old record by J. K. Lord (1866, vol. 2, p. 292) cites the species as "seen only at Sumas."

Aquila chrysaetos (Linnaeus). Golden Eagle.

Status—Breeds only at high altitudes in the coast ranges, as low as 1,000 feet in the southern interior. In August, 1913, a nest, used that year, was found in the valley of the south fork of Bear Creek (between Hazelton and Fort Babine) at about 3000 feet elevation (E. A. Preble, MS). After the nesting season and through the winter it is found in the inland valleys, and occasionally even along the coast. According to Fannin (1891, p. 23) it occurs "rarely west to Vancouver Island." Probably leaves the extreme northern part of the province during winter.

Haliaeetus leucocephalus alascanus C. H. Townsend.

Northern Bald Eagle.

Synonyms—*Haliaeetus leucocephalus*; *Haliaeetus albicilla*.

Status—Abundant resident in the coastal region, on the mainland and on all the islands. Less numerous inland, but still fairly common, and occurring in all parts of the province. Probably locally migratory to some extent, as in the northern interior. Breeds from the northern boundary, as at Atlin (Anderson 1915a, p. 12), southward.

Falco islandus Brünnich. White Gyrfalcon.

Synonym—*Falco rusticolus candicans*.

Status—But two definite records for British Columbia. An adult female was taken at Comox, Vancouver Island, December 4, 1903 (Brooks, 1904, p. 290);

this skin is now in the Brooks collection. Another, also an adult, taken at the mouth of the Fraser River in the winter of 1909, is now in the Provincial Museum, Victoria. There is also in that Museum a juvenile taken at Saanich, Vancouver Island (Kermode, 1909, p. 44). This last is colored as in juveniles of *Falco rusticolus* but is much paler, with a light colored head; it probably represents the dark phase of the White Gyrfalcon as diagnosed by H. Kirke Swann (1922, p. 209).

Falco rusticolus Linnaeus. Gyrfalcon.

Synonym—*Falco rusticolus gyrfalco*.

Status—One subspecies of *Falco rusticolus* is a regular, but rather rare, winter visitant, probably of wide distribution in British Columbia, though reported from but a few localities. It has been taken at Sumas Prairie (Brooks, 1917, p. 38), at Comox, Vancouver Island (Kermode, 1904, p. 30), and at Kelowna, Lake Okanagan (Munro, 1922b, p. 12). This form of Gyrfalcon (the regular winter visitant) is a dark-colored bird (*Falco rusticolus gyrfalco* of Ridgway's *Manual of North American Birds*, 1887, and Coues' *Key to North American Birds*, 1903); probably it is the breeding form of Alaska and the northwestern Arctic coast.

As regards the correlation of the proper subspecific name with the racial characters and habitats of the two subspecies, *Falco rusticolus rusticolus* and *F. r. gyrfalco*, such confusion exists, as between the statements of Ridgway (*loc. cit.*) and Coues (*loc. cit.*) on the one hand, and the A. O. U. *Check-List*, 1910, on the other, that it is impossible for us to come to a definite conclusion as to the proper use of the different names.

Falco mexicanus Schlegel. Prairie Falcon.

Status—Scarce resident; breeds in the interior of southern British Columbia. Found nesting at Osoyoos Lake (Brooks, 1909a, p. 61), and reported from Deer Park, Columbia River (the northernmost record station) in June (Macoun and Macoun, 1909, p. 276). Of regular occurrence in fall and winter at Chilliwack (Brooks, 1917, p. 39). Frequently seen in winter at Okanagan Landing (Brooks, MS).

Falco peregrinus anatum Bonaparte. Duck Hawk.

Synonyms—*Falco communis*; *Falco nigriceps*; *Falco peregrinus pealei*, part.

Status—Breeds locally throughout the province, its occurrence being dependent upon the presence of cliffs for nesting sites, and water fowl to prey upon. There are specific breeding records from Osoyoos and Okanagan lakes (Brooks, 1909a, p. 61). Fairly common on migrations in the central interior, in the Cariboo District (Brooks, MS). Stated by Macoun and Macoun (1909, p. 277) to be "resident on Vancouver Island," and by Brooks (1904, p. 290) as taken at Comox, Vancouver Island, in winter.

Falco peregrinus pealei Ridgway. Peale Falcon.

Status—Known to breed in fair abundance on the Queen Charlotte Islands, where it is resident throughout the year (C. deB. Green, MS). Occurs elsewhere along the coast in migrations. Reported from Metlakatla, and from Cadboro Bay, Vancouver Island (Kermode, 1904, p. 30). "One specimen taken at Chilliwack, B. C., October 5th, 1901" (Spreadborough, in Macoun and Macoun, 1909, p. 279).

Falco columbarius columbarius Linnaeus. Pigeon Hawk.

Synonym—*Tinnunculus columbarius columbarius*.

Status—There are but few explicit records of the breeding of this bird in British Columbia, but apparently *columbarius* occurs in summer (nowhere commonly) throughout the interior, east of the Cascades and coast ranges. Found breeding at Cascade, on the southern boundary (Macoun and Macoun, 1909, p. 280), and seen in June at Atlin, near the northern boundary (Anderson, 1915a, p. 12). During migrations it occurs commonly inland, and in lesser numbers in the coastal region also: Errington, Vancouver Island, September (Swarth, 1912b, p. 28). Scarce but of regular occurrence throughout the winter in Okanagan Valley.

Falco columbarius suckleyi Ridgway. Black Pigeon Hawk.

Status—The breeding range of this subspecies must lie mostly, if not entirely, in British Columbia, though there is not a single definite nesting record from any point. Presumably the summer habitat comprises the coastal region west of the Cascades and coast ranges on the mainland, the adjacent small islands, and Vancouver Island. It is noteworthy that *suckleyi* has not been taken upon the Queen Charlotte Islands; there are "sight records" (open to question) from there, but no specimens. In the southern coastal region *suckleyi* is common during migrations, less so throughout the winter. Extreme points of record are: Kispiox Valley, 23 miles north of Hazelton, August 29, 1921, one specimen (Mus. Vert. Zool.); Okanagan Landing, August, 1907, one specimen (Brooks, 1909a, p. 61); Okanagan Landing, February, 1913, one specimen (Munro, 1915, p. 107). An extraordinary occurrence consists in the capture of an adult male (no. 17881, Victoria Memorial Museum, Ottawa), taken by P. A. Taverner at Oliver, in the southern Okanagan Valley, June 10, 1922. It was not a breeding bird.

Cerchneis sparveria sparveria (Linnaeus). American Sparrow Hawk.

Synonyms—*Tinnunculus sparverius*; *Falco sparverius deserticola*; *Falco sparverius phalaena*; *Falco sparverius*.

Status—Common in summer nearly throughout the province. It occurs abundantly in southern and eastern Vancouver Island, but has not been reported from the north end, or from the Queen Charlotte Islands. On the southern mainland it is found both on the coast and in the interior. Inland it occurs abundantly as far north as the Skeena River, in lesser numbers to the upper Stikine Valley (Swarth, 1922, p. 214) and Atlin (Anderson, 1915a, p. 12). Occasionally remains through the winter in the extreme south, as at Chilliwack (Brooks, 1917, p. 39) and Lake Okanagan (Brooks, in Macoun and Macoun, 1909, p. 285).

Pandion haliaetus carolinensis (Gmelin). American Osprey.

Synonyms—*Pandion haliaetus*; *Pandion carolinensis*.

Status—Abundant in summer throughout the province, occurring wherever there are suitable lakes or streams providing a supply of fish. Occurs throughout Vancouver Island, on the Queen Charlotte Islands, along the mainland coast and in the interior. Has been found breeding from the southern boundary to the northern, at Atlin (Anderson, 1915a, p. 12). There are no winter records.

Tyto alba pratincola (Bonaparte). American Barn Owl.

Synonym—*Aluco pratincola*.

Status—There is but one record for British Columbia. An adult female, apparently breeding, was taken at "Ladner's landing, not far from the mouth of the Fraser River," about April 7, 1909 (Brooks, 1909b, p. 313).

Asio wilsonianus (Lesson). Long-eared Owl.

Synonyms—*Asio americanus*; *Otus wilsonianus*.

Status—Resident, rather uncommon, in southern British Columbia. Reported as occurring, though rarely, on Vancouver Island (Fannin, 1891, p. 25); has been taken at many mainland localities: Chilliwack, Okanagan (breeding), Vaseaux Lake (breeding), Sicamous, etc. The northernmost point of record in British Columbia is the Cariboo District, where Brooks (in Macoun and Macoun, 1909, p. 289) found it remaining through the winter, but as the species has been taken on the lower Taku River, Alaska, a few miles west of the British Columbia boundary, it may be expected to occur as far north within this province.

Asio flammeus (Pontoppidan). Short-eared Owl.

Synonyms—*Asio accipitrinus*; *Asio cassini*; *Brachyotus cassini*.

Status—Recorded definitely as breeding at Chilliwack (Brooks, 1917, p. 39), and at Swan Lake, near Vernon (Munro, 1917, p. 13). The Short-eared Owl is known to nest both north and south of British Columbia, and it may be expected to do so in any suitable locality in the southern part of the province, and anywhere east of the coast ranges in the north. It remains through the winter in the southwest corner of the mainland, as at Chilliwack (Brooks, *loc. cit.*), and at the southern end of Vancouver Island (Kermode, 1904, p. 31). Of general distribution during migrations, on all the islands, on the mainland coast, and inland.

Strix occidentalis caurina (Merriam). Northern Spotted Owl.

Synonyms—*Syrnium occidentale*; *Syrnium occidentale caurinum*.

Status—Rare resident of the extreme southwestern corner of the mainland. Recorded as follows: Lower Fraser Valley, "a rare and local resident" (Brooks, 1900c, p. 105); Mount Lehman, breeding; Chilliwack, January 28, 1909, one specimen (Brooks, 1917, p. 39); Hope Mountains (Munro, 1918b, p. 235). The casual statement by Clark (1910, p. 59) that "this owl was not uncommon in the woods about Union Bay, Vancouver Island" cannot be given serious consideration.

Scotiaptex nebulosa nebulosa (J. R. Forster). Great Gray Owl.

Synonyms—*Syrnium cinereum*; *Scotiaptex cinerea*.

Status—Has not been found nesting anywhere in British Columbia, but nevertheless this species probably does breed in small numbers at high altitudes (Hudsonian Zone) throughout the interior of the province. There are but very few published records, all of winter taken specimens: Sumas (Brooks, 1917, p. 39); "rare at Chilliwack; most probably breeds; rare in winter at Lake Okanagan" (Brooks, in Macoun and Macoun, 1909, p. 296); Stuart Lake (Fannin, 1891, p. 25).

Cryptoglaux funerea richardsoni (Bonaparte). Richardson Owl.

Synonyms—*Nyctala richardsoni*; *Nyctala tengmalmi richardsoni*; *Cryptoglaux tengmalmi richardsoni*.

Status—Scarce resident of the mainland. One or two occurrences indicate the probable breeding of this species in northern British Columbia: At Adolph Lake (Ridgway, 1914, p. 625); near Thudade Lake, August 27, 1910 (E. A. Preble, MS); at Laurier Pass, August 20, 1912 (specimen in U. S. Biol. Surv. collection); at Flood Glacier, Stikine River, where a young bird was collected July 28, 1919 (Swarth, 1922, p. 215). Reported in winter from a few localities farther south: At Sumas, January 13, 1903, one specimen (Brooks, 1917, p. 40); "rare in the Okanagan district in winter; resident throughout the winter in the Cariboo district" (Brooks, in Macoun and Macoun, 1909, p. 298). At Hope, two were picked up dead, February 4, 1914, and November 13, 1914 (Mrs. T. L. Thacker, MS).

Cryptoglaux acadica (Gmelin). Saw-whet Owl.

Synonyms—*Nyctale acadica*; *Nyctala acadica*; *Nyctala acadica scotaea*; *Cryptoglaux acadica scotaea*.

Status—Resident in southern British Columbia; apparently scarce, for it has been found at but a few points. In the interior it is reported north to the Cariboo District, where it is resident (Brooks, in Macoun and Macoun, 1909, p. 299). In the coastal region it has been found at various points on Vancouver Island; on the mainland at Chilliwack and Vancouver, and north to Fort Simpson (Fannin, 1891, p. 25) and southeastern Alaska. The capture of typical *acadica* on the Queen Charlotte Islands in winter indicates a migratory movement in the coastal region.

Cryptoglaux brooksi Fleming. Queen Charlotte Saw-whet Owl.

Synonym—*Cryptoglaux acadica brooksi*.

Status—Restricted to the Queen Charlotte Islands, where it is resident. First taken in the fall of 1915 by C. deB. Green at Masset, the type and three topotypes. This bird is sufficiently different from *Cryptoglaux acadica* to be regarded as a distinct insular species. There is a possibility that *brooksi* represents a phase of color and markings pertaining to *academicus* that is found only on the Queen Charlotte Islands, but this possibility appears to us to be too remote to be considered, without conclusive evidence. It should be noted that *Nyctala acadica scotaea* Osgood (1901b, p. 43), from the Queen Charlotte Islands, was based upon a winter specimen of *acadica*, presumably a transient. Typical *acadica* has not been taken on these islands in the breeding season. The type specimens of *scotaea* and of *brooksi*, and several additional examples of *brooksi*, were examined by the authors of this list before the opinions expressed above were reached. (See Fleming, 1916, p. 422, and colored frontispiece of the present paper.)

Otus asio macfarlanei (Brewster). MacFarlane Screech Owl.

Synonyms—*Scops asio*, part; *Scops kennicotti*, part; *Megascops asio macfarlanei*; *Otus asio kennicottii*, part.

Status—Resident, nowhere common, in southern British Columbia east of the Cascades and coast ranges. Recorded from but a few points: Okanagan and Osoyoos districts (Brooks, 1909a, p. 61); Okanagan and Penticton (Ridgway, 1914, p. 697), and, the northernmost record, Sicamous (Macoun and Macoun, 1909, p. 302).

There is a statement published by Bishop (1900b, p. 76) regarding a small owl believed to be a screech owl seen at Caribou Crossing, at the northern boundary of British Columbia, but the specific identity of the bird was not ascertained. The notes of a screech owl were heard in the valley of the Ingenika River, northern British Columbia, the night of September 10, 1910 (E. A. Preble, MS).

Otus asio kennicotti (Elliot). Kennicott Screech Owl.

Synonyms—*Otus asio*; *Scops asio*; *Scops kennicotti*, part; *Megascops asio saturatus*; *Megascops asio kennicottii*.

Status—Resident in the humid coast region. Apparently not abundant; at any rate, reported from but a few localities. At Chilliwack it is a common resident (Brooks, 1917, p. 40), and it has been taken at various places on Vancouver Island, and also on Porcher Island (Brooks, 1923a, p. 221). On the Queen Charlotte Islands it is reported by Osgood (1901b, p. 43) as "seen at Massett (Keen)". It has not been seen there by subsequent observers. As this subspecies is known to occur in southeastern Alaska it must be distributed along the entire British Columbia coast, though the Chilliwack record above cited gives the only mainland locality known to us. Probably resident throughout its range.

Otus flammeolus (Kaup). Flammulated Screech Owl.

Synonym—*Otus flammeola idahoensis*.

Status—"In November, 1902, I picked up a dilapidated specimen of this little owl on the beach at Penticton at the south end of Okanagan Lake. This is the only Canadian record" (Brooks, 1909a, p. 61). There is nothing to be added since the above statement was made; it still remains the northernmost record of this species.

Bubo virginianus saturatus Ridgway. Dusky Horned Owl.

Synonyms—*Bubo virginianus*, part; *Asio magellanicus saturatus*.

Status—Resident of the humid coast region. Reported from various parts of Vancouver Island, and from mainland points lying west of the Cascades and coast ranges. *Saturatus* has been reported from inland points by Rhoads (1893a, p. 18) and by others, but the evidence is not conclusive. Certainly this subspecies does not normally or regularly migrate eastward. Individuals may wander inland occasionally, but it will require further study of this difficult group of birds to demonstrate such details of distribution.

Bubo virginianus lagophonus (Oberholser). Northwestern Horned Owl.

Synonyms—*Bubo virginianus*, part; *Asio magellanicus lagophonus*; ? *Bubo virginianus subarcticus*; ? *Bubo virginianus arcticus*; *Bubo virginianus pallescens*, part.

Status—Resident, abundant but of irregular distribution, throughout the interior. Ranges from the southern boundary to the northern: Atlin, breeding (Anderson, 1915a, p. 12).

Bubo virginianus subarcticus Hoy. Arctic Horned Owl.

Synonyms—*Bubo virginianus arcticus*; ? *Bubo virginianus pallescens*, part.

Status—Occasional winter straggler. Two records: Victoria, November, 1896, collected by A. H. Maynard (Fannin, 1898, p. 37) (specimen examined by Brooks); and Chilliwack, December, 1888 (Brooks collection).

Nyctea nyctea (Linnaeus). Snowy Owl.

Synonym—*Nyctea nivea*.

Status—May be expected to occur anywhere in British Columbia during migrations and in winter. Brooks (1917, p. 40) reports it from Chilliwack as a "scarce though fairly regular visitant" in November and December; also recorded from Lake Okanagan, from Vancouver Island, from the Queen Charlotte Islands, and from Metlakatla. There are vague statements in print regarding the probable breeding of this species in northern British Columbia (see Fannin, 1891, p. 26; Ridgway, 1914, p. 768), but with no basis of established facts.

Surnia ulula caparoch (Müller). American Hawk Owl.

Synonyms—*Surnia ulula*; *Surnia funerea*.

Status—Occurs mainly east of the Cascades and coast ranges. Probably of wide distribution through the province, though reported from but a few points. Found breeding at Atlin (Anderson, 1915a, p. 12), in the extreme north, and believed by Brooks (1917, p. 40) to breed in the mountains near Chilliwack, on the southern boundary. Reported from Lake Okanagan in winter (Brooks, in Macoun and Macoun, 1909, p. 314). Said to occur occasionally on Vancouver Island (Fannin, 1891, p. 26; Rhoads, 1893d, p. 41), but the statements are vague, lacking particulars of localities and dates of observation.

Speotyto cunicularia hypogaea (Bonaparte). Burrowing Owl.

Synonyms—*Speotyto cunicularia*; *Athene cunicularia*.

Status—Occurs in summer in the interior valleys of the arid portions of southern British Columbia. A straggler on migrations to the lower Fraser Valley, west of the Cascades; Sumas prairie, two fall records and one in spring (Brooks, 1917, p. 40). [The statement in Macoun and Macoun (1909, p. 318) of occurrence in the Cariboo District is a mistake; the note (transmitted by Brooks) pertains to another species.]

Glaucidium gnoma grinnelli Ridgway. Coast Pigmy Owl.

Synonyms—*Glaucidium gnoma*, part; *Glaucidium gnoma californicum*, part.

Status—Common resident of the southern mainland. There are many records from the coastal region (Chilliwack, Sumas, Mt Lehman, etc.) and from Okanagan Valley. Northward, it is reported from Willow River, Cariboo District (Brooks, 1903, p. 281), from the "second cabin north of Hazelton" (specimen in U. S. Biol. Surv. Coll.), and from the upper Stikine River (Swarth, 1922, p. 216). As this owl has been taken at Wrangell, Alaska, it may be assumed to range along the entire British Columbia coast to the southward. Remains through the winter in Okanagan Valley (Munro, 1919a, p. 70); northern limit in winter not ascertained. Specimens from the Okanagan region show some approach to the characters of the Rocky Mountain Pigmy Owl (*Glaucidium g. pinicola*). No subspecies of Pigmy Owl has yet been reported from the Queen Charlotte Islands.

Glaucidium gnoma swarthi Grinnell. Vancouver Island Pigmy Owl.

Synonyms—*Glaucidium gnoma*, part; *Glaucidium gnoma californicum*, part.

Status—Fairly common on Vancouver Island, where it is probably resident the year through. Not known to occur elsewhere.

Coccyzus americanus occidentalis Ridgway. California Cuckoo.

Synonym—*Coccyzus americanus*.

Status—Summer visitant to southern British Columbia. Reported by Fannin (1891, p. 27) as breeding at Kamloops (the northernmost point of record), and as seen near Victoria and at Burrard Inlet. Other records are: Chilliwack, abundant (Brooks, 1900c, p. 106); Mt. Lehman (Chapman, 1890b, p. 136; Macoun and Macoun, 1909, p. 320). There are no interior records except the statement of Fannin's quoted above.

Ceryle alcyon caurina Grinnell. Western Belted Kingfisher.

Synonyms—*Ceryle alcyon*; *Streptoceryle alcyon caurina*.

Status—Common resident, of general distribution; abundant or scarce locally according to the nature of the country. Occurs throughout Vancouver Island, on the Queen Charlotte Islands, and on the mainland, in the coastal region and in the interior and from the southern boundary to the northern. Winters regularly in the southern coastal region, and occasionally in the southern interior.

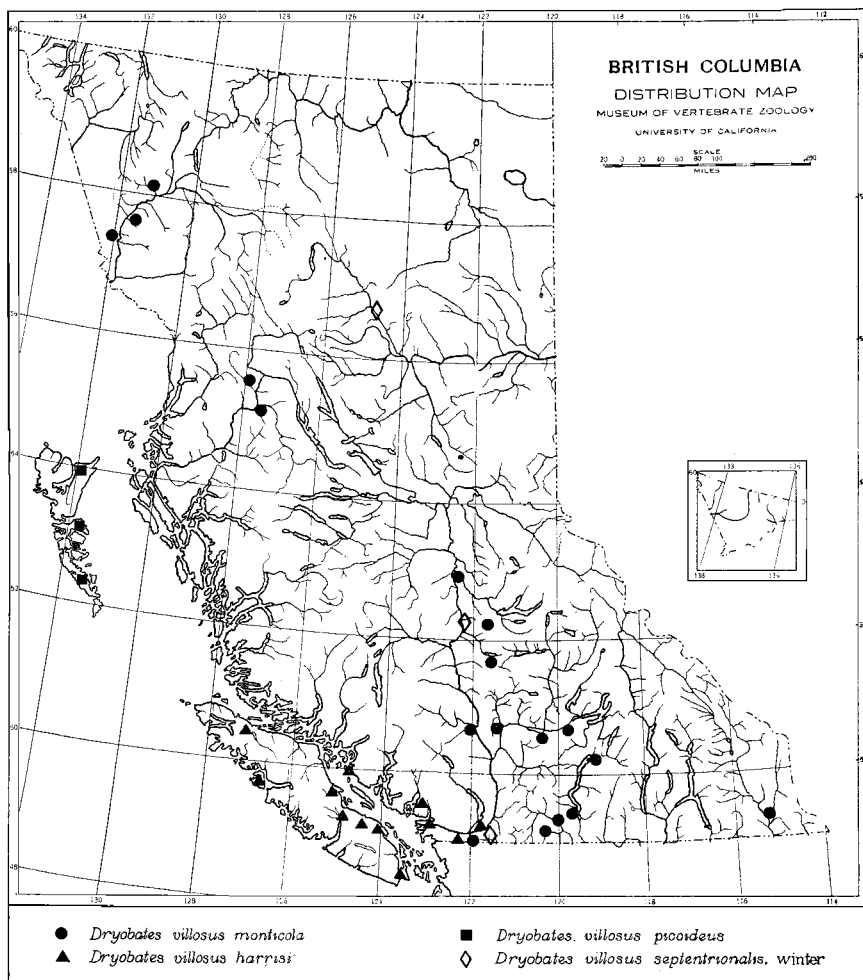


FIG. 16. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF SUBSPECIES OF THE HAIRY WOODPECKER (*DRYOBATES VILLOSUS*).

Dryobates villosus septentrionalis (Nuttall). Northern Hairy Woodpecker.

Synonym—*Dryobates villosus leucomelas*.

Status—Probably the resident form of Hairy Woodpecker in extreme northern British Columbia; a rare straggler to the southern portions of the province. Taken at Sumas in the winter of 1895 (Brooks, 1917, p. 40). Also reported from Soda Creek (Cariboo District), and Fort Grahame, north central British Columbia (Oberholser, 1911, p. 604).

Dryobates villosus monticola Anthony. Rocky Mountain Hairy Woodpecker.

Synonyms—*Dendrocopus villosus*; *Dryobates villosus*, part; *Dryobates villosus hyloscopus*.

Status—Found practically throughout the interior of British Columbia, east from the Cascades and coast ranges. Occurs at least as far north as Telegraph Creek, on the upper Stikine River, where it is common (Swarth, 1922, p. 217). Western points of record are Flood Glacier, Stikine River (Swarth, *loc. cit.*), in the north, and the mountains above Chilliwack (Brooks, 1917, p. 41), in the south. Probably resident throughout its range.

Dryobates villosus harrisi (Audubon). Harris Woodpecker.

Synonyms—*Picus harrisi*; *Dendrocopus harrisi*; *Dryobates villosus*, part.

Status—Fairly common resident in the southern part of the humid coastal belt. Found throughout Vancouver Island. On the southern mainland it is reported from many points in the lower Fraser Valley, east to Chilliwack and Agassiz (Macoun and Macoun, 1909, p. 327), and north on the mainland coast to Lund (Oberholser, 1911, p. 615).

Dryobates villosus picoideus Osgood. Queen Charlotte Woodpecker.

Synonym—*Dryobates picoideus*.

Status—Restricted to the Queen Charlotte Islands, where it is permanently resident.

Dryobates pubescens leucurus (Hartlaub). Batchelder Woodpecker.

Synonyms—*Dryobates pubescens*; *Dryobates pubescens homorus*; *Dryobates pubescens oreæcus*; *Dryobates pubescens glacialis*; ? *Dryobates pubescens medianus*.

Status—Distributed over most of British Columbia east of the Cascades and inner coast ranges. Resident in the southern part of the province and for an undetermined distance northward. Reported as a summer visitant only, in the Cariboo District (Brooks, 1903, p. 282). There is no actual occurrence reported within British Columbia north of the upper Skeena Valley (Mus. Vert. Zool.), but the species has been taken on the lower Taku River, Alaska, but a few miles from the British Columbia boundary (Swarth, 1911, p. 68), so that it undoubtedly occurs in northwestern British Columbia also.

This woodpecker is not known to perform regular migrations of any extent, but there is probably some wandering of individuals after the breeding season. It seems likely that a bird such as the one recorded by Ridgway (1914, p. 233, footnote) from Saturna Island, and doubtfully referred to *Dryobates pubescens medianus*, is a variant of *D. p. leucurus* that had strayed beyond the normal boundaries of the

race. There is a specimen in the Brooks collection that was taken at Masset, Queen Charlotte Islands, on August 24, 1920; another, formerly in the Brooks collection, was collected at the same place in mid-winter.

Dryobates pubescens gairdneri (Audubon). Gairdner Woodpecker.

Synonyms—*Picus gairdneri*; *Dendrocopus gairdneri*; *Dryobates pubescens*; *Dryobates pubescens fumidus*.

Status—Resident in the humid Transition zone of the extreme southwestern corner of British Columbia. Nearly all records (and all occurrences in summer) are from the lower Fraser Valley (from Agassiz westward), and from Vancouver Island, at the southern end and on the east coast as far north as Comox (Brooks collection). A specimen listed by Ridgway (1914, p. 241) from Vernon was far out of the normal range of this subspecies.

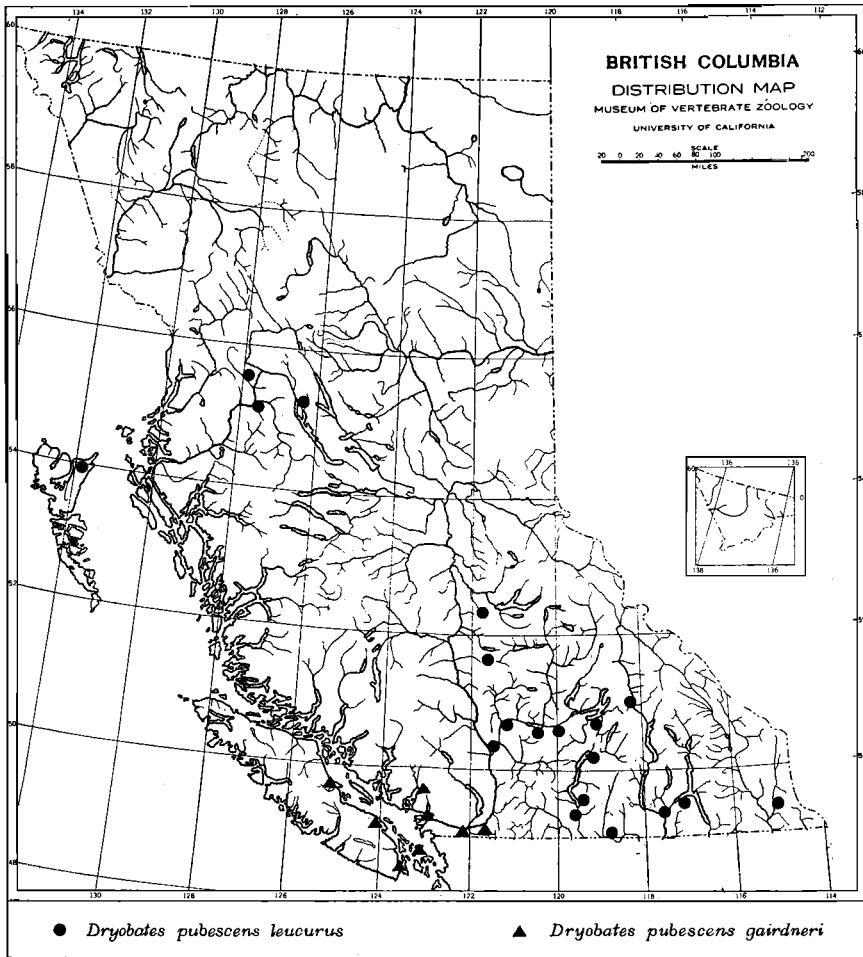


FIG. 17. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF SUBSPECIES OF THE DOWNY WOODPECKER (*DRYOBATES PUBESCENS*).

Xenopicus albolarvatus albolarvatus (Cassin). Northern White-headed Woodpecker.

Status—Of extremely rare occurrence over the southern boundary of British Columbia. "For twenty years or more a bird in the Provincial Museum at Victoria has constituted the only record for this species for British Columbia. This is said to have been taken many years ago in Similkameen Valley by Mr. R. V. Griffin, but has never had any label to my knowledge. I am glad to be able now to record the capture of a fine adult female by Mr. James Munro near Okanagan Landing on December 20, last" (Brooks, 1912, p. 253). Another specimen has since been taken at Okanagan Center and is now in the Brooks collection.

Three specimens are listed in the British Museum Catalogue of Birds (Hargitt, 1890, p. 284), as follows: "British Columbia, J. K. Lord". However, Lord, in his narrative (1866, vol. 2, pp. 166, 293) records the species only from Colville, which is in the state of Washington.

Picoides arcticus (Swainson). Arctic Three-toed Woodpecker.

Status—Resident locally, where conditions are suitable, nearly throughout the province, east of the Cascades and Coast ranges. A bird of lower altitudes, as a rule, than *Picoides americanus*. *P. arcticus* has been found nesting at Vaseaux Lake as low as 900 feet altitude, almost in the Upper Sonoran zone (Brooks, MS). In British Columbia it has not been reported farther north than Hazelton and the nearby Kispiox Valley (Mus. Vert. Zool.), and at Fort Grahame, Finlay River (E. A. Preble, MS), but it undoubtedly does occur to the northern boundary, as it is found in Alaska, still farther north. The westernmost records are from the vicinity of Hope (the west slope of the Cascades), one specimen taken on Little Mountain, October 4, 1909, another, collected by S. G. Jewett, at Lightning Lake, August 31, 1920 (Mrs. T. L. Thacker, MS).

Picoides americanus fasciatus Baird. Alaska Three-toed Woodpecker.

Synonyms—*Picoides hirsutus*; *Picoides americanus americanus*; *Picoides americanus dorsalis*; *Picoides americanus alascensis*; *Picoides americanus fumipectus*.

Status—Resident, locally, nearly throughout the province. In summer restricted to a great extent (not entirely) to the Hudsonian zone, hence in southern British Columbia found breeding only well up in the mountains. Has been found at many scattered localities, from the Cascades at the southern boundary (Brooks, 1900c, p. 106), north to Atlin (Anderson, 1915a, p. 12), and from the coast east to near the eastern boundary, at Fernie (Macoun and Macoun, 1909, p. 337). It is apparently rare in the coastal region. There appears to be but one definite record from Vancouver Island: "Duncan's, Vancouver Island—Dr. Hasell" (Fannin, 1898, p. 39). Two specimens are reported from Saturna Island (Bangs, 1900, p. 132). The species has not been found on the Queen Charlotte Islands.

We are following the usage of the A. O. U. *Check-List* in applying the name *fasciatus* to this race of three-toed woodpecker, for the sake of present uniformity, but with the conviction that the arrangement proposed by Outram Bangs (1900, p. 126) is more nearly correct.

***Sphyrapicus varius varius* (Linnaeus).** Yellow-bellied Sapsucker.

Status—Found nesting near Telegraph Creek, on the upper Stikine River, in June, 1919 (Swarth, 1922, p. 218). This is the only record for British Columbia, but as this sapsucker has been reported from several points in the Mackenzie River drainage, short distances to the northward and eastward, the inference is that it will be found to occupy the intervening region in northeastern British Columbia.

***Sphyrapicus varius nuchalis* Baird.** Red-naped Sapsucker.

Synonyms—*Sphyrapicus varius*; *Sphyrapicus nuchalis*.

Status—Common summer visitant to southern British Columbia, in the region between the inner coast ranges and the Rocky Mountains. Reported from many localities, north to the southern part of the Cariboo District, where it is a "common summer resident" (Brooks, 1903, p. 282), and east to Revelstoke and Elko (Ma-

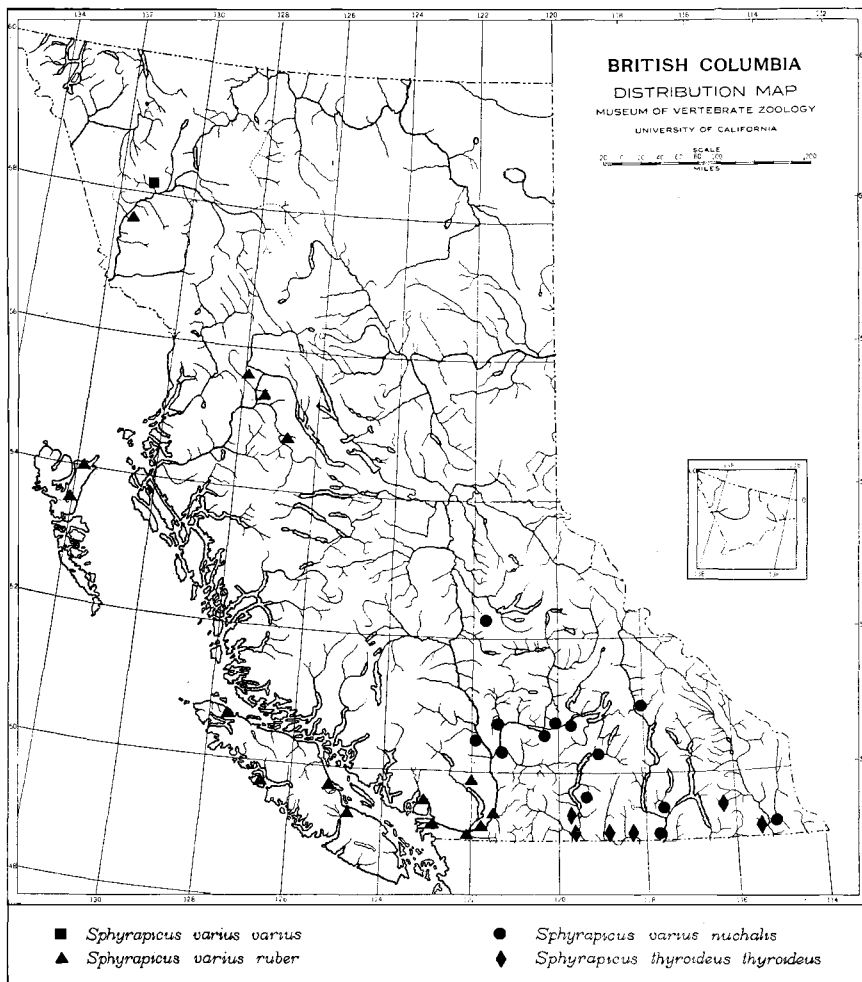


FIG. 18. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF THE SAPSUCKERS (*SPHYRAPICUS*).

coun and Macoun, 1909, p. 340). It occurs farther east, of course, but it is probably absent from a strip along the eastern boundary of British Columbia which includes the higher parts of the Rockies. There are no authentic records from the coastal region, merely the (probably mistaken) statement by J. K. Lord (1866, vol. 2, p. 293) of the occurrence of "*Sphyrapicus varius*" on Vancouver Island.

Sphyrapicus varius ruber (Gmelin). Northern Red-breasted Sapsucker

Synonyms—*Sphyrapicus ruber*; *Sphyropicus ruber*; *Sphyrapicus ruber notkensis*; *Sphyrapicus ruber flaviventris*.

Status—Primarily of the coastal district. Found throughout Vancouver Island and on the Queen Charlotte Islands, as well as on the mainland coast, but as a rule a rather uncommon bird at any point. In southern British Columbia it is found inland as far as Agassiz, Hope, and Douglas (Macoun and Macoun, 1909, p. 340); in the north, to Hazelton, in abundance (Mus. Vert. Zool.), Telkwa (Spreadborough, MS), and Fort St. James, Stuart Lake (MacFarlane, 1908, p. 378). Probably a summer visitant in the northern part of its range. It has been taken at Barkley Sound, Vancouver Island, in December (Taverner, 1917a, p. 357); and it winters regularly at Comox (Brooks, MS); the northern limit of the species in winter is not known.

Sphyrapicus thyroideus thyroideus (Cassin). Williamson Sapsucker

Status—Summer visitant to a limited region in extreme southern British Columbia. Has been reported from several points in the southern part of the Okanagan region: Fairview and Similkameen (Brooks, 1909a, p. 61); Schoonover Mountain (Anderson, 1914, p. 10). "Common in all the heavy timber from Midway to Osoyoos Lake, B. C., at an altitude of about 4,000 feet" (Spreadborough, in Macoun and Macoun, 1909, p. 341). The Williamson Sapsucker occurs in southeast Kootenay from Cranbrook east to Elko, at the base of the Rocky Mountains (Brooks, MS). This last should be in the region of the Rocky Mountains subspecies, *Sphyrapicus thyroideus nataliae*.

Phloeotomus pileatus picinus Bangs. Western Pileated Woodpecker.

Synonyms—*Dryotomus pileatus*; *Hylatomus pileatus*; *Ceophloeus pileatus*; *Phloeotomus pileatus*; *Ceophloeus pileatus abieticola*; *Phloeotomus pileatus abieticola*.

Status—Fairly common resident in southern British Columbia. Probably occurs throughout Vancouver Island, as it is recorded from various points, including Alert Bay, near the northern extremity of the Island (Taverner, 1918a, p. 186). Reported from many localities from the coast eastward to the Rockies. How far north it extends along the coast is not known, but inland it ranges north to Hazelton (Taverner, 1919, p. 83); occasionally still farther, as at Thudade Lake, September 1, 1910, and Buckley Lake (25 miles east of Telegraph Creek), July 25 and 27, 1910 (E. A. Preble, MS). Northern limit in winter not definitely known, but it is reported by Brooks (1903, p. 282) as "resident" in the Cariboo District. Not found on the Queen Charlotte Islands.

***Asyndesmus lewisi* Riley. Lewis Woodpecker.**

Synonyms—*Melanerpes torquatus*; *Asyndesmus torquatus*.

Status—Has been found breeding, or seen in the nesting season, at many scattered points in southern British Columbia; at Cadboro Bay and Comox, Vancouver Island (Fannin, 1898, p. 39); at Chilliwack (Brooks, 1917, p. 41); at various localities in the Okanagan region (Anderson, 1914, p. 10); at Ashcroft and Clinton (Rhoads, 1893d, pp. 43, 62); and at other intervening points. Erratic in its appearance, so that it may nest in a locality one year and be absent the next. Undoubtedly rare on Vancouver Island. Occasionally remains through the winter: Kelowna, winter of 1920-21 (Munro, 1922b, p. 13).

***Colaptes auratus borealis* Ridgway. Boreal Flicker.**

Synonyms—*Colaptes auratus*; *Colaptes auratus luteus*.

Status—Common summer visitant east of the coast ranges in the northern



FIG. 19. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF THE FLICKERS (COLAPTES).

half of British Columbia. Breeds commonly at Atlin (Anderson, 1915a, p. 12), in the upper Stikine Valley (Swarth, 1922, p. 220), in the valley of the upper Skeena (Taverner, 1919, p. 83), at the mouth of that river (Brooks, 1923a, p. 222), and south to the southern part of the Cariboo District, where it occurs together with *Colaptes cafer*. "Hybrids" between the yellow-shafted and red-shafted species, that is, individuals exhibiting a mixture of characters of the two, have been taken at many scattered points in British Columbia. Occurs on migration in southern British Columbia, including Vancouver Island, but not commonly (see Brooks, 1917, p. 41). The regular line of migration of the Boreal Flicker apparently lies mostly east of the Rockies.

***Colaptes cafer cafer* (Gmelin).** Northwestern Flicker.

Synonyms—*Colaptes cafer saturator*; *Colaptes mexicanus*.

Status—Common resident of the coast and islands, east at least to Okanagan Valley. A series of specimens from Okanagan proves that the dark coastal form extends well into the interior; whether the birds from the northern portion of the range of the Red-shafted Flicker in this province belong to this or the paler southern subspecies (*collaris*) requires further material which is not at present available. (For the use of the name *Colaptes cafer cafer* see Palmer, 1916, p. 322).

***Colaptes cafer collaris* Vigors.** Red-shafted Flicker.

Synonyms—*Colaptes cafer*, part; *Colaptes mexicanus*.

Status—Common summer resident in the southeastern portion of the province, where a few probably winter. Sufficient specimens are not available to indicate the boundary between this subspecies and *Colaptes cafer cafer* (= *C. c. saturator*) either on the east or to the north. The most northern record for the Red-shafted Flicker in British Columbia is the Yellowhead Pass region (Riley, 1912, p. 62).

***Phalaenoptilus nuttalli nuttalli* (Audubon).** Poor-will

Status—Fairly common summer visitant to the semi-arid valleys of the southern interior. Reported from several points in the Okanagan region and north to Kamloops (Spreadborough, in Macoun and Macoun, 1909, p. 354).

***Chordeiles virginianus virginianus* (Gmelin).** Eastern Nighthawk.

Synonyms—*Chordeiles popetue*; *Chordeiles virginianus henryi*; *Chordeiles virginianus hesperis*, part.

Status—Common summer visitant over most of British Columbia. Breeds commonly on Vancouver Island, on the southern mainland both on the coast and inland, and, east of the northern coast ranges, north to the northern boundary, as at Telegraph Creek (Swarth, 1922, p. 221) and Atlin (Anderson, 1915a, p. 13). In the southeastern corner of the mainland it does not breed (replaced by *C. v. hesperis*) but occurs in migration. Does not occur on the Queen Charlotte Islands or on the mainland coastal strip north of Vancouver Island. According to Oberholser (1914, p. 39), specimens from Ashcroft, Lac La Hache, Hope, and Chilliwack, show intergradation with *Chordeiles virginianus hesperis*, though properly referable to *C. v. virginianus*. See Oberholser (*loc. cit.*) for map showing distribution and details of occurrence, etc.

***Chordeiles virginianus hesperis* Grinnell. Pacific Nighthawk**

Status—Summer visitant to the southeastern corner of the mainland. According to Oberholser (1914, p. 48): "Breeding birds from Trail, southeastern British Columbia, close to the boundary of the State of Washington, verge toward *Chordeiles virginianus virginianus*, but are decidedly nearer *Chordeiles v. hesperis*."

***Cypseloides niger borealis* (Kennerly). Black Swift.**

Synonyms—*Cypseloides niger*; *Cypseloides borealis*; *Nephoetes niger*; *Nephoetes niger borealis*.

Status—Abundant summer visitant over a large part of British Columbia. Most numerous toward the coast, and thence eastward in diminishing numbers. Occurs north to the upper Skeena Valley at Hazelton, where it is abundant, and, in small numbers, to the upper Stikine at Telegraph Creek (Swarth, 1922, p. 222). Common throughout Vancouver Island, but not yet reported from the Queen Charlotte Islands. Though so common a species and covering so large a territory, little is known of the nesting habits. No nest of the Black Swift has yet been found in British Columbia.

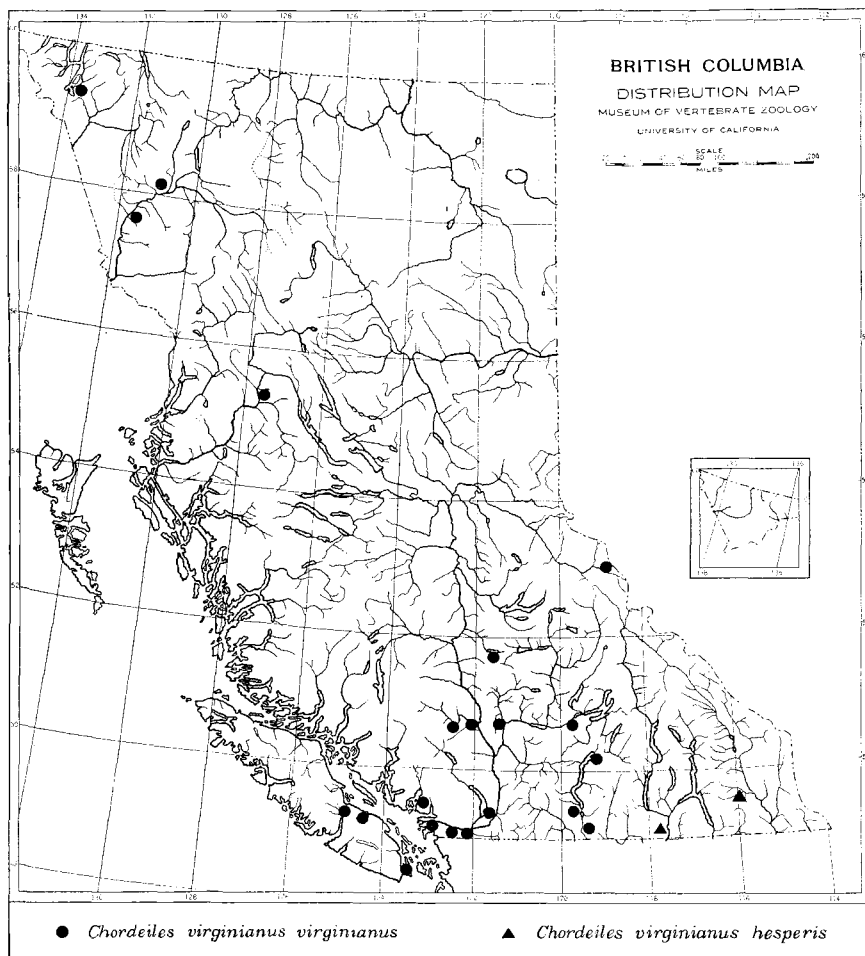


FIG. 20. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF SUBSPECIES OF THE NIGHTHAWK (*CHORDEILES VIRGINIANUS*).

Chaetura vauxi (J. K. Townsend). Vaux Swift.

Status—Fairly common summer visitant over a large part of British Columbia. In the south it is reported from the coast eastward to the western base of the Rockies at Newgate, East Kootenay (Brooks, MS); it ranges northward in the interior valleys to the upper Skeena River at Hazelton (Taverner, 1919, p. 83), and in small numbers to the upper Stikine River at Telegraph Creek (Swarth, 1922, p. 223). Has been recorded from various parts of Vancouver Island, but not from the Queen Charlotte Islands.

Aeronautes melanoleucus (Baird). White-throated Swift.

Status—This species apparently finds its extreme northern limit in the southern Okanagan region, where, near Vaseaux Lake, it has been found nesting by Mr. C. deB. Green (Brooks, 1909a, p. 62; Munro, 1918b, p. 235).

Archilochus alexandri (Bourcier and Mulsant). Black-chinned Hummingbird.

Synonym—*Trochilus alexandri*.

Status—An uncommon summer visitant to the valleys of the extreme southern mainland. Reported from but a few localities: Chilliwack, "rare though regular summer resident" (Brooks, 1917, p. 41); Agassiz, "in some abundance", "a few" at Spence Bridge, and "several" at the Similkameen River (Macoun and Macoun, 1909, p. 363). Scarce throughout the whole length of Okanagan Valley from Vernon to Osoyoos (Brooks, MS). One record from Edgewood, Lower Arrow Lake (specimen in the collection of W. B. Johnstone).

Selasphorus rufus (Gmelin). Rufous Hummingbird.

Synonyms—*Trochilus rufus*; *Selasphorus alleni*; *Trochilus alleni*.

Status—A common summer visitant, most abundant in the coastal region but found practically throughout British Columbia except, perhaps, in the section beyond the Rocky Mountains in the extreme northeastern corner of the province. It has been reported from many points, from Vancouver Island and the Queen Charlotte Islands, from the southern boundary of the mainland to the northern, at Bennett (Bishop, 1900b, p. 79), and, in the north, inland to Telegraph Creek (Swarth, 1922, p. 223).

Stellula calliope (Gould). Calliope Hummingbird.

Synonyms—*Trochilus calliope*; *Stellata calliope*.

Status—Summer visitant to the southern mainland east of the Cascades and coast ranges. Breeds in fair abundance in the Okanagan region (Munro, 1919a, p. 70), about Lower Arrow Lake (Spreadborough, in Macoun and Macoun, 1909, p. 365), and north into the Lillooet District, where it was found "breeding in the mountains west of Clinton" (Brooks, 1903, p. 282). Chilliwack Lake is the westernmost point of record (Macoun and Macoun, *loc. cit.*).

Tyrannus tyrannus (Linnaeus). Eastern Kingbird.

Synonyms—*Tyrannus carolinensis*; *Tyrannus pipiri*; *Tyrannus verticalis*.

Status—Fairly common in summer on the mainland of southern British Columbia. At the extreme south it reaches the coast, as at Westminster (Chapman, 1890b, p. 140) and Brackendale (Taverner, 1917b, p. 362). Common in summer at Chilliwack (Brooks, 1917, p. 41). Farther north it is restricted to the regions east of the

coast ranges. Reported north to Revelstoke (Macoun and Macoun, 1909, p. 367), and to Kispiox Valley, 25 miles north of Hazelton (Mus. Vert. Zool.). Two records for Vancouver Island: a specimen taken at Alberni by Mr. W. R. Carter (Brooks, MS), one seen at Comox, June 2, 1895 (C. P. Streater, MS).

Tyrannus dominicensis (Gmelin). Gray Kingbird.

Status—Reported by Fannin (1891, p. 30), as follows: "One specimen taken at Cape Beale, 29th Sept., 1889, by Miss Cox, and presented to the Museum." Cape Beale is on the west coast of Vancouver Island. The specimen is still extant in the Provincial Museum, Victoria.

Tyrannus verticalis Say. Western Kingbird.

Status—Summer visitant to the southern mainland. Fairly common in certain interior valleys, as in the Okanagan region; recorded north to a point "a few miles south of Clinton" (Rhoads, 1893d, p. 44), and to Lillooet (Taverner, 1917b, p. 362). Rare toward the coast: A scarce summer visitant at Chilliwack (Brooks, 1917, p. 42); one specimen from Brackendale, June 27 (Taverner, 1917b, p. 362). There are vague statements on record of the occasional occurrence of this species on Vancouver Island, but nothing definite as regards localities and dates.

Sayornis sayus yukonensis Bishop. Northern Say Phoebe.

Synonyms—*Sayornis sayus*; *Sayornis pallida*.

Status—Summer visitant east of the Cascades and coast ranges, the entire length of the province. Nowhere abundant, but found nesting in small numbers from the Okanagan region (Anderson, 1914, p. 11) north to Atlin (Anderson, 1915a, p. 13) and Bennett (Bishop, 1900b, p. 79). A rare straggler to the coast during migration: Chilliwack, two records, March 26, 1896, and October 1, 1887; Stubbs Island, Barclay Sound, west coast of Vancouver Island, two specimens, August 25, 1893 (Macoun and Macoun, 1909, p. 375).

Nuttallornis borealis (Swainson). Olive-sided Flycatcher.

Synonym—*Contopus borealis*.

Status—Fairly common summer visitant in southern British Columbia; in small numbers in the north. Occurs on Vancouver Island, on the southern mainland from the coast to the eastern boundary, and in the interior to the northern limits of the province. Not reported from the Queen Charlotte Islands or from the northern coast region.

Myiochanes richardsoni richardsoni (Swainson). Western Wood Pewee.

Synonyms—*Contopus richardsoni*; *Contopus richardsonii saturatus*.

Status—Common summer visitant, mostly at low altitudes. Found on Vancouver Island, on the southern mainland from the coast to the eastern boundary, and north in the interior to the northern limits of the province. Has not been reported from the Queen Charlotte Islands, and is probably absent from the densely wooded northern coastal strip.

Empidonax flaviventris (W. M. and S. F. Baird). Yellow-bellied Flycatcher.

Status—But two occurrences: "An adult male was obtained at Pike River, Atlin, on August 3rd [1914]" (Anderson, 1915a, p. 13). This specimen has been identified by H. C. Oberholser. An adult male was collected by E. A. Preble at Hazelton, July 24, 1913 (in U. S. Biol. Surv. collection).

Empidonax difficilis difficilis Baird. Western Flycatcher.

Status—A summer visitant, restricted to the coastal region. Breeds in fair abundance on Vancouver Island, on the Queen Charlotte Islands, and along the mainland coast. On Vancouver Island it nests mostly at high altitudes (Swarth, 1912b, p. 43).

Empidonax trailli trailli (Audubon). Traill Flycatcher.

Synonyms—*Empidonax pusillus*, part; *Empidonax pusillus trailli*.

Status—Common in summer in the lowlands of southern British Columbia. Reported from many localities, north to Lac La Hache. Specimens from Vernon,

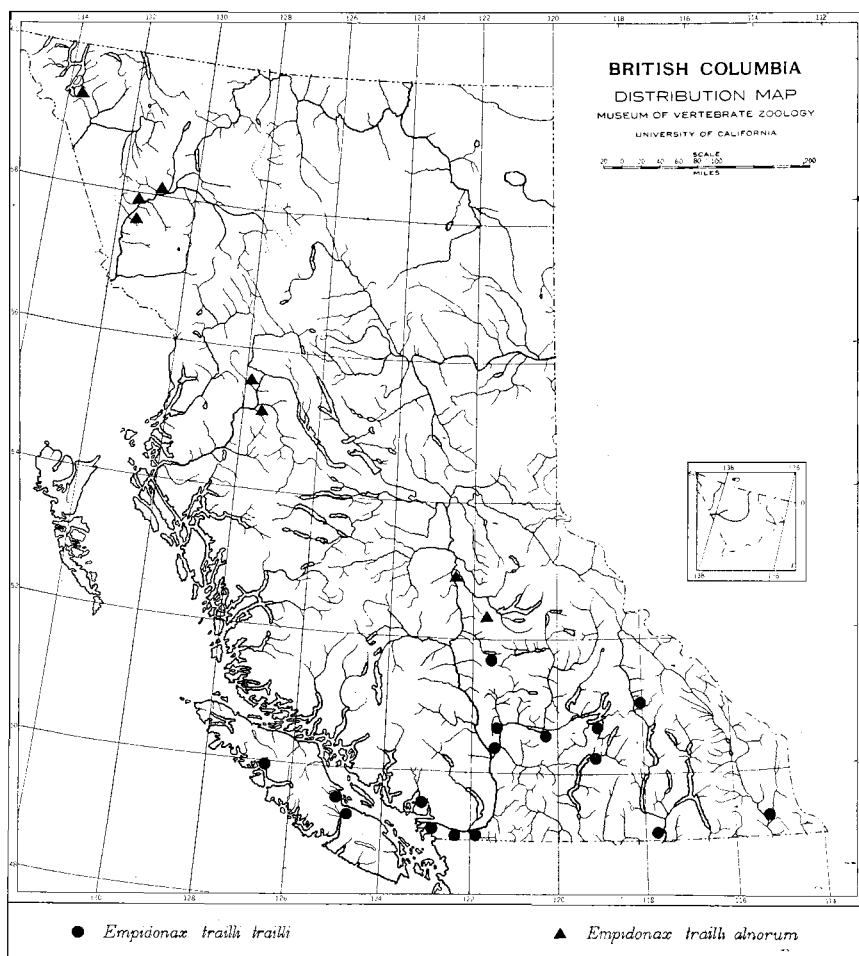


FIG. 21. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF THE TRAILL FLYCATCHER (*EMPIDONAX T. TRAILLI*) AND ALDER FLYCATCHER (*E. T. ALNORUM*).

Ashcroft, and Lac La Hache, reported by Rhoads (1893d, p. 45) as of the eastern subspecies, *Empidonax pusillus* (= *Empidonax trailli alnorum*), and now in the collection of the Academy of Natural Sciences, Philadelphia, are, according to information received from Dr. Witmer Stone, all representative of *E. t. trailli*. Occurs on Vancouver Island, north at least to Alberni and Comox, and, on the west coast, to Nootka Sound (Swarth, 1912b, p. 44).

Empidonax trailli alnorum Brewster. Alder Flycatcher.

Synonym—*Empidonax pusillus*.

Status—Common in summer in the lowlands of northern British Columbia. Reported from Atlin (Anderson, 1915a, p. 13), from the upper Stikine River (Swarth, 1922, p. 226), from the upper Skeena Valley (Mus. Vert Zool.), and from Quesnelle (Brooks, 1903, p. 282). Not recorded from any coastal locality, but it may reach the coast at some points, as it has been taken there in extreme south-eastern Alaska (Swarth, 1911, p. 76; 1922, p. 226). It is, however, primarily of the avifauna of the country east of the coast ranges. The line of migration must lie sharply to the southeast, across the Rockies, as this subspecies has never been taken traveling through southern British Columbia.

Empidonax hammondi (Xantus). Hammond Flycatcher.

Status—Abundant in summer over most of the province. In the south it reaches the coast. How far north it extends in the coastal region is not known, but in the northern half of the province, as in the Skeena and Stikine valleys, it is restricted to the country east of the coast ranges. Reported from the extreme northern boundary, at Atlin (Anderson, 1915a, p. 13). Breeds commonly over the whole of Vancouver Island, but has not been found on the Queen Charlotte Islands. On Vancouver Island it occurs mostly at low altitudes (Swarth, 1912b, p. 44); on the mainland, in the Okanagan region, it breeds mostly above 4000 feet, but on cool northern slopes occasionally as low as 1500 feet (Brooks, MS). In northern British Columbia it is a bird of the lowlands.

Empidonax wrighti Baird. Wright Flycatcher.

Synonym—*Empidonax obscurus*.

Status—Summer visitant to the mainland, east of the Cascades and coast ranges; occasional in migration on the southern coast. Reported, either actually nesting or at a season when nesting must have been in progress, at many points. Found as far north, in the Rocky Mountains, as the Yellowhead Pass region (Riley, 1912, p. 63); farther west, to the upper Stikine River (Swarth, 1922, p. 227) and Atlin (Anderson, 1915a, p. 13). Reported, in the south, near the coast, at Chilliwack, in April, 1888 (Brooks, 1917, p. 42), and on the coast at Hastings, Burrard Inlet, in April, 1889 (Macoun and Macoun, 1909, p. 390).

Otocoris alpestris arctica Oberholser. Pallid Horned Lark.

Synonyms—*Otocoris alpestris*; *Otocorys leucolaema*; *Otocoris alpestris leucolaema*.

Status—Breeds commonly above timber line, on the summits of the higher mountains (Alpine-Arctic zone) of the mainland east of the coast ranges. Reported in summer from mountains near Atlin (Anderson, 1915a, p. 14), on the upper Stikine

(Swarth, 1922, p. 228), and from various points south to mountains near Lillooet (Taverner, 1917b, p. 362), and mountains west of Okanagan Valley (Brooks, 1909a, p. 62); east to mountains above Barkerville (Brooks, 1903, p. 282). Descends to the valleys in migrations and in winter. Remains through the winter in the arid southern interior. At Masset, Queen Charlotte Islands, three were taken on migration, May 15, 1920 (Brooks, MS). From Vancouver Island, the vague statement by J. K. Lord (1866, vol. 2, p. 296), recording the presence of "*Eremophila cornuta*," is the only authority for the occurrence of any subspecies of the horned lark.

***Otocoris alpestris merrilli* Dwight. Dusky Horned Lark.**

Synonyms—*Otocoris merrilli*; *Otocorys chrysolaeama*, part; ?*Eremophila cornuta*.

Status—Breeds in the valleys of the southern mainland, from Osoyoos east to Newgate, and northwestward at least to Kamloops and Ashcroft. Horned Larks

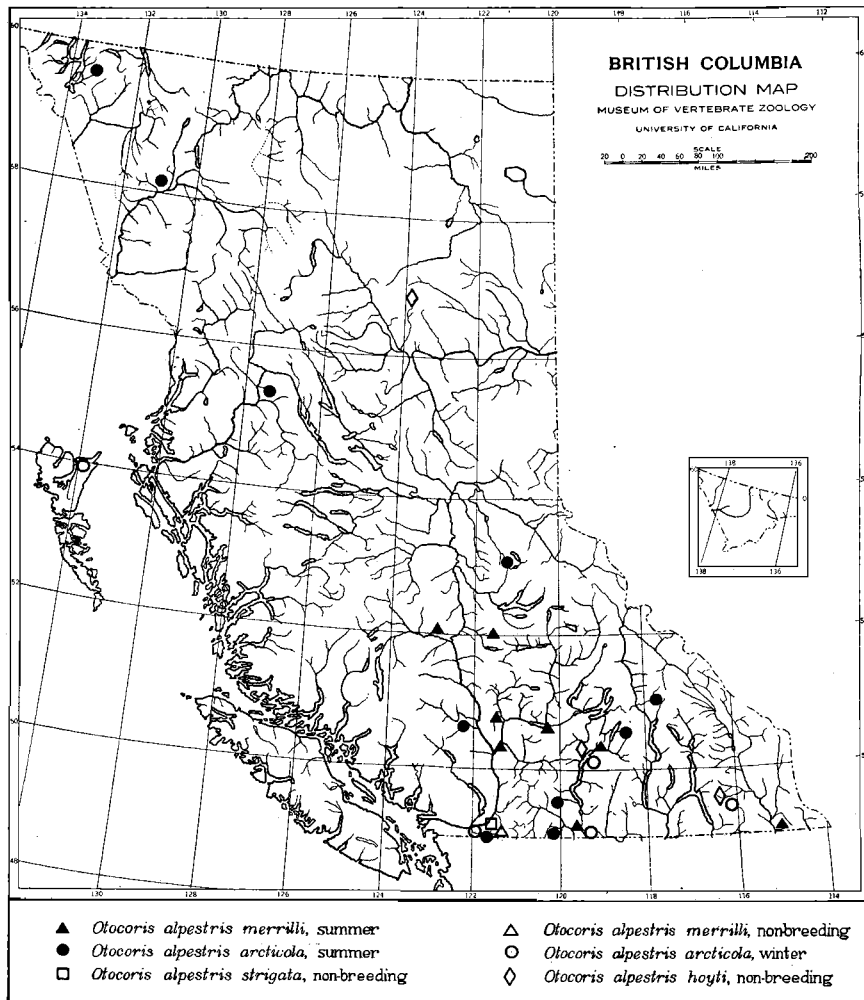


FIG. 22. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF SUBSPECIES OF THE HORNED LARK (*OTOCORIS ALPESTRIS*).

occur in abundance on the Chilcoten Plateau, still farther to the northwest, and birds from that region have been recorded as *merrilli* (Brooks, 1903, p. 282), but this identification is questionable (see under *Otocoris alpestris strigata*, beyond).

Otocoris alpestris hoyti Bishop. Hoyt Horned Lark.

Status—Scarce migrant (and winter visitant?) to the southern interior. Three specimens in the Brooks collection, one from Cranbrook, East Kootenay (collected by C. B. D. Garrett) and two from Okanagan Landing. All were taken in early spring or late fall, and all were identified by Mr. H. C. Oberholser. Specimens in the U. S. Biological Survey collection were taken near Laurier Pass, August 21, 1912.

Otocoris alpestris strigata Henshaw. Streaked Horned Lark.

Status—The only British Columbia records are from Chilliwack, in the southwestern corner of the province. Three specimens (in the Brooks collection) that were taken at Chilliwack and identified by Brewster as of this subspecies (Brooks, 1917, p. 42), may represent an undescribed race breeding in the semi-arid plateau to the northward (see under *O. a. merrilli*, above). They are not *merrilli*.

Pica pica hudsonia (Sabine). Black-billed Magpie.

Synonyms—*Pica pica*; *Pica hudsonica*.

Status—Abundant resident in the southern interior, from the eastern slope of the Cascades and coast ranges eastward, and northward, commonly, at least to Ashcroft (Chapman, 1890b, pp. 141, 157). Occurs in winter in the Cariboo District (Brooks, in Macoun and Macoun, 1909, p. 403). There are few records from northern British Columbia. Said to have been seen at Hazelton (Swarth, MS). Two seen at Telegraph Creek, July 22, 1910 (E. A. Preble, MS). Seen in fair abundance in September on the lower Taku River, Alaska, a few miles below the British Columbia boundary, and migrating downstream (Swarth, 1911, p. 77). The birds seen must have come from within British Columbia. Reported as common at Bennett in fall and winter (N. Hollister, MS). In the south the Magpie wanders coastward in winter, as in the lower Fraser Valley (Brooks, in Macoun and Macoun, 1909, p. 403). A rare straggler to Vancouver Island (Fannin, 1891, p. 32).

Cyanocitta stelleri stelleri (Gmelin). Steller Jay.

Synonyms—*Cyanura stelleri*; *Cyanurus stelleri*; *Cyanocitta stelleri litoralis*.

Status—Common resident of Vancouver Island and of an extremely narrow strip along the mainland coast. Mainland birds from various points show a decided leaning toward *Cyanocitta stelleri annectens*; in fact the latter subspecies in nearly typical form has been taken at some coastal localities. On the Stikine River, the Steller Jay was found inland as far as Flood Glacier (Swarth, 1922, p. 229), the northernmost point at which the species has been taken in British Columbia. The species is migratory to some extent, and there are probably some east and west movements of both *stelleri* and *annectens*, but such details of distribution remain to be worked out.

Cyanocitta stelleri annectens (Baird). Black-headed Jay.

Synonym—*Cyanocitta stelleri*.

Status—Of fairly general distribution (except at high altitudes) in the interior, from the eastern boundary westward nearly to the coast, in places even reaching salt water. There are coastal records from points near the mouth of the Skeena River: Fort Simpson (Fisher, 1902, p. 42); Porcher Island (Brooks, 1923a, p. 222). Specimens (in the collection of K. E. Racey) have been taken at Green Lake, in the coast range north of Vancouver; it is also recorded from Sumas (Brooks, 1917, p. 42). Inland, *annectens* is reported from many localities: in the Rockies north to Moose River, in the Yellowhead Pass region (Riley, 1912, p. 63); farther west, to a point forty miles north of Hazelton (Mus. Vert. Zool.), and to Poison Mountain, about sixty miles north of Hazelton (E. A. Preble, MS). It is not known whether or not there is any migration southward from the northern part of its range.

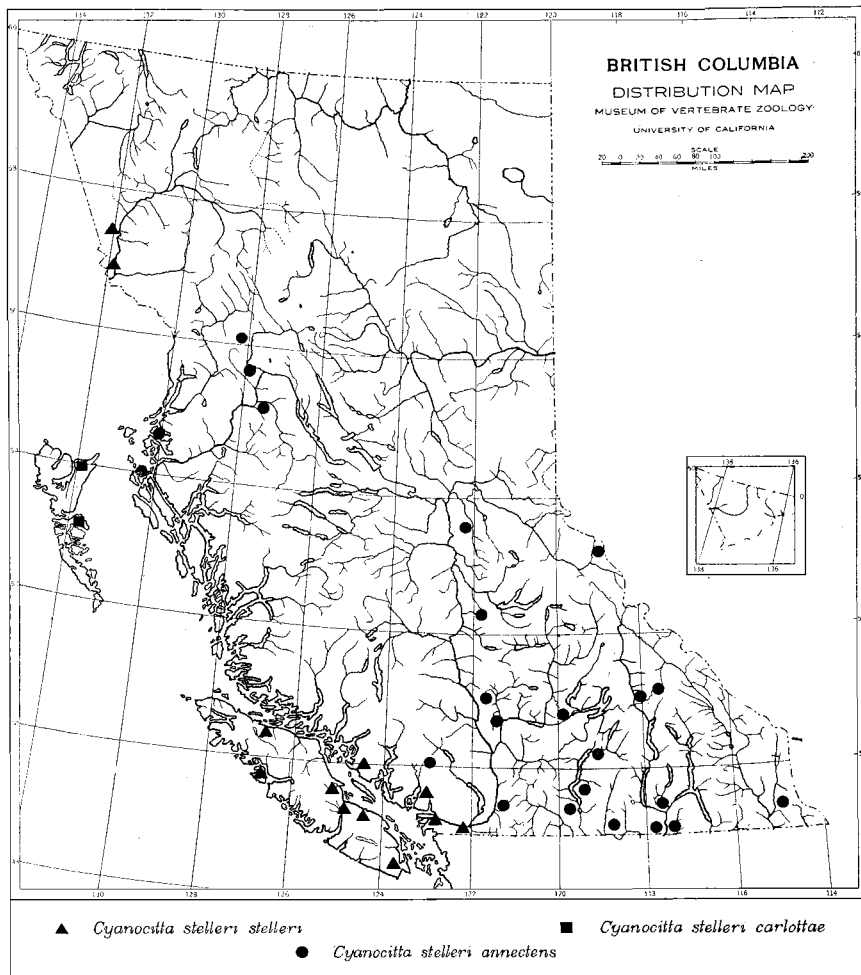


FIG. 23. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF SUBSPECIES OF THE STELLER JAY (*CYANOCITTA STELLERI*).

Cyanocitta stelleri carlottae Osgood. Queen Charlotte Jay.

Status—Fairly abundant, and permanently resident, upon the Queen Charlotte Islands.

Perisoreus canadensis canadensis (Linnaeus). Canada Jay.

Synonyms—*Perisoreus canadensis fumifrons*; ?*Perisoreus canadensis capitalis*, part.

Status—Resident in the interior of northern British Columbia. Reported from Bennett (Bishop, 1900b, p. 80), Atlin (Anderson, 1915a, p. 14), the upper Stikine, west to Flood Glacier (Swarth, 1922, p. 229), and south to the vicinity of Hazelton (specimens in Mus. Vert. Zool.), to the Yellowhead Pass region (Riley, 1912, p. 63), and probably to the southern Cariboo District (where recorded as *P. c. capitalis* by Brooks, in Macoun and Macoun, 1909, p. 410).

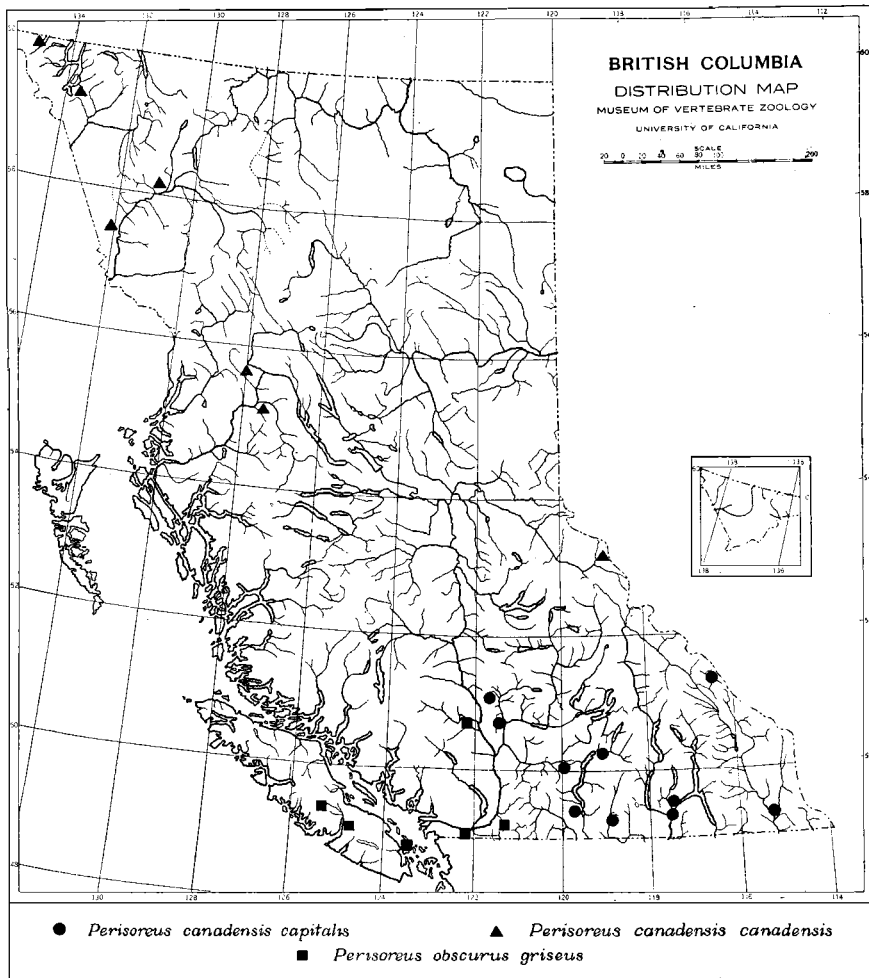


FIG. 24. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF SUBSPECIES OF THE CANADA JAY (*PERISOREUS CANADENSIS*), AND THE GRAY JAY (*P. OBSCURUS GRISEUS*).

Perisoreus canadensis capitalis Ridgway. Rocky Mountain Jay.

Synonym—*Perisoreus canadensis*, part.

Status—Resident in the interior of southern British Columbia. Reported from various localities as far west as the mountains west of Okanagan Lake, north to Field (Rhoads, 1893d, pp. 45, 63).

Perisoreus obscurus griseus Ridgway. Gray Jay.

Synonyms—*Perisoreus canadensis*, part; *Perisoreus obscurus*.

Status—Resident in central and northern Vancouver Island, in the Cascades (of the extreme southwestern mainland), and north at least to the vicinity of Lillooet (specimens in the Victoria Memorial Museum) and Malaspina Inlet (E. A. Preble, MS). On Vancouver Island this jay occurs mostly at high altitudes; definitely reported from Mount Arrowsmith, Mount Douglas (south of Alberni), and near Great Central Lake (Swarth, 1912b, p. 48). At Chilliwack it is "common up to timber-line and down to 700 feet, never seen in the valley" (Brooks, 1917, p. 42).

The systematic status of the British Columbia form of the species *Perisoreus obscurus* is still unsettled. Vancouver Island birds and Lillooet (mainland) specimens are alike, and they differ in color and measurements from specimens from the coast of northern California, assumed to be *P. obscurus obscurus*.

Whatever name be applied to the British Columbia subspecies, it seems safe to say that but one race of *P. obscurus* occurs in the province. Until more material is available it seems best to use the name *P. o. griseus* for this bird, excluding the subspecies *P. o. obscurus* from our boundaries altogether.

Corvus corax principalis Ridgway. Northern Raven.

Synonyms—*Corvus corax*; *Corvus carnivorus*; *Corvus corax sinuatus*; *Corvus caurinus*, part.

Status—Occurs in greater or lesser numbers in all parts of British Columbia. Most numerous along the coast, especially northward; least often seen in the valleys of the southern mainland. Fairly numerous in the southern mountains. Probably occurs throughout the year wherever found.

According to Ridgway (1904, p. 259) specimens from British Columbia (presumably from southern localities) are not typical of *Corvus corax principalis*, but incline toward the smaller southern subspecies, *C. c. sinuatus*.

Corvus brachyrhynchos hesperis Ridgway. Western Crow.

Synonyms—*Corone americana*, part; *Corvus brachyrhynchos*; *Corvus americanus*; *Corvus americanus hesperis*; *Corvus americanus caurinus*, part.

Status—Confined to the valleys of the mainland. Abundant in the south, and extending northward in lesser numbers to Fort St. James (Ridgway, 1904, p. 270), Hazelton (Taverner, 1919, p. 84; Mus. Vert. Zool.), Babine Lake and Fort Connolly, at the north end of Bear Lake (E. A. Preble, MS). Resident the year through in the extreme south, as at Chilliwack (Brooks, 1917, p. 42). Northern limit in winter not determined, but the Babine Lake colony is said to remain there all year (E. A. Preble, MS). No definite record for Vancouver Island.

Corvus caurinus Baird. Northwest Crow.

Synonyms—*Corone caurina*; *Corvus americanus caurinus*, part; *Corvus brachyrhynchus caurinus*.

Status—Abundant resident of the coastal region. Closely confined to the beach, but following the beaches the length of the mainland coast, around Vancouver Island and on the Queen Charlotte Islands. Even on Vancouver Island it is rarely seen many miles inland (see Swarth, 1912b, p. 50); on the mainland the easternmost breeding records are for Sumas Prairie and Chilliwack (Brooks, 1917, p. 42).

"Personal observation of this bird for many years has convinced me that it is specifically distinct from *Corvus brachyrhynchus*" (Brooks, MS).

Nucifraga columbiana (Wilson). Clark Nutcracker.

Synonym—*Picicorvus columbianus*.

Status—Breeds in fair abundance, though irregularly, in the southern interior, from the Cascades and coast ranges eastward. Probably most abundant where yellow pine is found. Recorded from Chilliwack, a rare straggler (Brooks, 1917, p. 43), and Lillooet (Taverner, 1917b, p. 363), east and north to the Yellowhead Pass region (Riley, 1912, p. 64), Lac La Hache (Rhoads, 1893d, p. 46), and even to Fort St. James, Stuart Lake, where a flock was seen May 13, 1889 (MacFarlane, 1908, p. 393). Probably resident throughout its range on the mainland. A rare straggler on Vancouver Island, one bird being taken at Comox, February 18, 1904 (Brooks, 1904, p. 290). A considerable number wintered on Graham Island, Queen Charlotte group, 1919-1920 (Brooks, MS). For an account of nesting habits in the Okanagan region see Munro, 1919a, p. 72.

Dolichonyx oryzivorus (Linnaeus). Bobolink.

Synonym—*Dolichonyx oryzivorus albinucha*.

Status—Summer visitant to southern British Columbia. So far found nesting only in the Okanagan region, at Penticton and north to Lumby (Brooks, 1909a, p. 62; Anderson, 1914, p. 12). Taken at Chilliwack in July and August, but not found breeding there or elsewhere west of the Cascades (Brooks, 1917, p. 43).

Molothrus ater artemisiae Grinnell. Nevada Cowbird.

Synonyms—*Molothrus ater*; *Molothrus pecoris*.

Status—Summer visitant to southern British Columbia. "Tolerably common east of, and a straggler west of, the Cascade Mountains" (Brooks, 1900c, p. 106). Reported north to Revelstoke (Macoun and Macoun, 1909, p. 426), and, on hearsay, to Lac La Hache (Rhoads, 1893d, p. 46). "A rare straggler on Vancouver Island; it has been taken near Victoria. . . . Rev. J. H. Keen reports it rare at Metlakatla" (Kermode, 1904, p. 42).

Xanthocephalus xanthocephalus (Bonaparte). Yellow-headed Blackbird.

Synonym—*Xanthocephalus icterocephalus*.

Status—Summer visitant to southern British Columbia east of the Cascades. There are breeding colonies in parts of Okanagan Valley (Munro, 1915, p. 107; 1917, pp. 13, 18), and many records from points in the interior north to Clinton (Fannin, 1891, p. 33) and 158-mile House, Cariboo District (Brooks, 1903, p. 282). It is a straggler to the coast district, there being one record each from Chilliwack and Sumas (Brooks, 1900c, p. 106). The asserted occurrence of the species on Vancouver Island is apparently based entirely on its inclusion by Sclater (1859, p. 235) in a list of birds from that region. No particulars are given, and in the absence of later confirmation, the record may be disregarded.

Agelaius phoeniceus arctolegus Oberholser. Northern Red-winged Blackbird.

Status—The range of this subspecies is given by Oberholser (1922b, p. 85) as including "southeastern British Columbia"; a locality designated (p. 87) is Mirror Lake. There is a specimen at hand (Mus. Vert. Zool. no. 42233) ultra-typical of this subspecies, taken in Kispiox Valley, 23 miles north of Hazelton, September 7, 1921.

Agelaius phoeniceus nevadensis Grinnell. Nevada Red-winged Blackbird.

Synonyms—*Agelaius phoeniceus*, part; *Agelaius phoeniceus neutralis*.

Status—Resident, common locally, in the interior valleys of southern British Columbia, from the east base of the Cascades eastward to the Selkirks, and north at least to the southern Cariboo District (Brooks, MS). Remains through the winter in the southern part of its range, as in Okanagan Valley.

Agelaius phoeniceus caurinus Ridgway. Northwestern Red-winged Blackbird.

Synonyms—*Agelaius phoeniceus*, part; *Agelaius phoeniceus sonoriensis*.

Status—The type locality of this subspecies is Cedar Hill, near Victoria. It is resident, common locally, in the coastal district of southwestern British Columbia. Reported from various points on the east coast of Vancouver Island, north at least to Comox (Macoun, 1909, p. 431), possibly to Alert Bay (Taverner, 1918a, p. 186); also from Salt Spring Island, Gulf of Georgia (Macoun, *loc. cit.*), and Lulu Island (Rhoads, 1893d, p. 47). According to Kermode (1904, p. 43) it is found throughout the year about Victoria. On the mainland coast it is resident at Chilliwack (Brooks, 1917, p. 43); its northern limit on the coast has not been ascertained.

Sturnella neglecta Audubon. Western Meadowlark.

Synonyms—*Sturnella magna neglecta*; *Sturnella neglecta confluenta*.

Status—Common in summer in the valleys of the southern mainland and of southern Vancouver Island. Occurs north on the mainland to Lac La Hache (Rhoads, 1893d, p. 47); and Quesnelle (Sydney Williams, MS); on Vancouver Island to Alberni (Swarth, 1912b, p. 51) and Comox (Rathbun, 1917, p. 68). Remains all winter on Vancouver Island (Fannin, 1891, p. 33); and throughout the southern interior (Brooks, MS).

Icterus bullocki (Swainson). Bullock Oriole.

Status—Common summer visitant to the lowlands of the southern interior. Reported from many points, from Chilliwack (where it is a scarce breeder) eastward, and north to Ashcroft. "Disappears midway between Ashcroft and Clinton" (Rhoads, 1893d, p. 47). Not seen at any point nearer the coast than Chilliwack and Sumas.

Euphagus carolinus (Müller). Rusty Blackbird.

Synonym—*Euphagus cyanocephalus*.

Status—Breeds commonly east of the coast ranges in northern British Columbia. Has been found in summer at Atlin (Anderson, 1915a, p. 14); on the Stikine River

from Telegraph Creek down to Grand Rapids (Swarth, 1922, p. 231); at Hazelton (Taverner, 1919, p. 84; recorded as *Euphagus cyanocephalus*); and in Kispiox Valley, north of Hazelton (Mus. Vert. Zool.). The species is so abundant in the north that it might be expected to be of common occurrence in southern British Columbia on migration and in winter, but there are few records from the south. Evidently the normal line of migration is sharply to the eastward. One was taken at Edgewood, November 10, 1917, by W. B. Johnstone. Three were seen, two collected, at Okanagan Landing, December 5, 1918, by Munro (1922b, p. 13). In November, 1919, there was an influx of this species into Okanagan Valley, when specimens were taken by Munro (*loc. cit.*), and others (Brooks, MS). On the coast, an occurrence is reported from Metlakatla, November 26, 1901 (Kermode, 1904, p. 43).

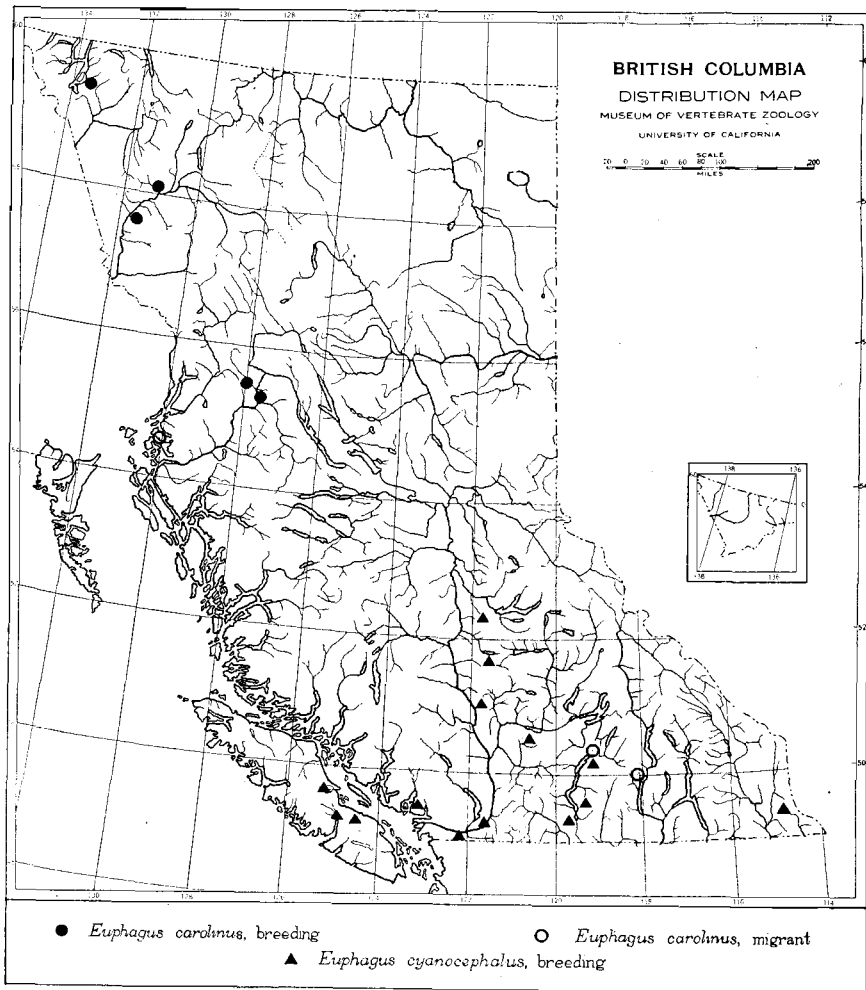


FIG. 25. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF THE RUSTY BLACKBIRD (*EUPHAGUS CAROLINUS*), AND THE BREWER BLACKBIRD (*E. CYANOCEPHALUS*).

Euphagus cyanocephalus (Wagler). Brewer Blackbird.

Synonym—*Scolecophagus cyanocephalus*.

Status—Common in summer in the valleys of the southern mainland (in the interior and on the coast), and at the south end of Vancouver Island. Found breeding at many points, from Chilliwack, the Okanagan region, and Fernie, north to Clinton (Fannin, 1891, p. 34; Rhoads, 1893d, p. 63) and Lac La Hache (Rhoads, 1893d, p. 47; apparently no specimens collected). On Vancouver Island it breeds on the east coast from Victoria north to Errington and Alberni (Swarth, 1912b, p. 52). There are winter records from Chilliwack (Brooks, 1917, p. 43), and from Kelowna and Vernon, in the Okanagan Valley (Munro, 1922b, p. 13).

Hesperiphona vespertina brooksi Grinnell. British Columbia Evening Grosbeak.

Synonyms—*Coccothraustes vespertinus*; *Hesperiphona vespertina*; *Coccothraustes vespertina montana*; *Hesperiphona vespertina montana*.

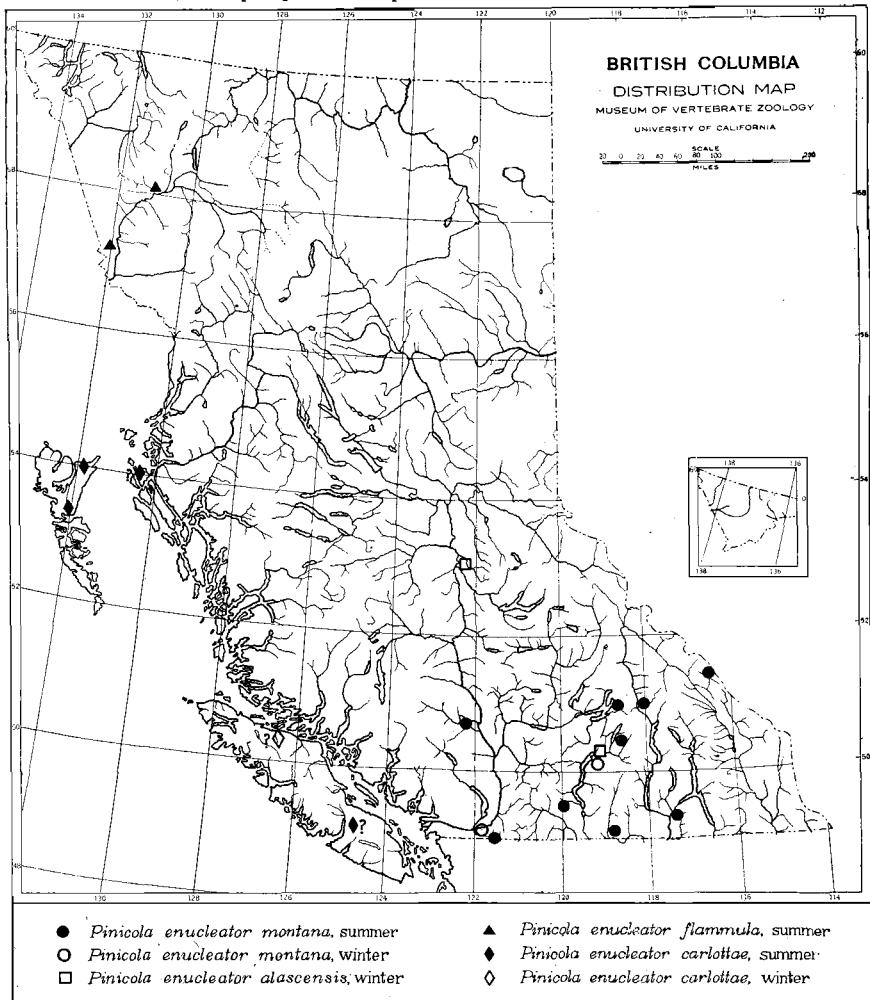


FIG. 26. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF SUBSPECIES OF THE PINE GROSBEEK (*PINICOLA ENUCLEATOR*).

Status—Irregularly common resident in parts of the southern half of British Columbia. Reported from Schoonover Mountain, Okanagan district, in June (Anderson, 1914, p. 12); from Arrow Lakes and from Pass Creek, near Robson, in June (Macoun and Macoun, 1909, p. 447); near Hope and near Skagit, in July (Macoun and Macoun, *loc. cit.*, p. 448); from Ducks, in August (Chapman, 1890b, p. 143); and, the northernmost record, from Hazelton, upper Skeena Valley, in June (Mus. Vert. Zool.). Found on Vancouver Island in winter, but not known to breed there.

Pinicola enucleator alascensis Ridgway. Alaska Pine Grosbeak.

Synonym—*Pinicola enucleator canadensis*, part.

Status—Occurs as an erratic winter visitant east of the coast ranges, south to the southern boundary of the province. Has been taken some winters at Okanagan Landing (Brooks, MS). There is a possibility that this subspecies breeds in extreme northern British Columbia, as at Atlin (see Anderson, 1915a, p. 14).

It is not possible at this time to state with accuracy the distribution and exact manner of occurrence in British Columbia of the several subspecies of *Pinicola* occurring within the province. The statements here given are tentative, and subject to revision as new facts come to light.

Pinicola enucleator montana Ridgway. Rocky Mountain Pine Grosbeak.

Synonyms—*Pinicola enucleator*; *Pinicola enucleator canadensis*, part; *Pinicola enucleator alascensis*, part.

Status—Presumably it is the subspecies *montana* that breeds in the Rocky Mountains and in other high mountains in southeastern British Columbia, west to the coastal slope of the Cascades (Brooks, 1922a, p. 87). Reported in late spring and summer from Revelstoke, the Gold Range and near Robson (Macoun and Macoun, 1909, p. 450). Probably of irregular occurrence in winter in the valleys of southern British Columbia east of the Cascades.

Pinicola enucleator flammula Homeyer. Kadiak Pine Grosbeak.

Synonyms—*Pinicola enucleator canadensis*, part; *Pinicola enucleator alascensis*, part; *Pinicola enucleator*.

Status—Breeding birds from the upper Stikine River have been tentatively referred to this subspecies (Swarth, 1922, p. 231). It may occur southward along the coast in the winter months.

Pinicola enucleator carlottae Brooks. Queen Charlotte Pine Grosbeak.

Synonyms—*Pinicola enucleator flammula*; *Pinicola enucleator alascensis*, part; *Pinicola enucleator*, part; *Pinicola canadensis*.

Status—Resident, not common, on the Queen Charlotte Islands. Some form of *Pinicola* breeds on the high mountains of Vancouver Island (Swarth, 1912b, p. 52); the subspecific status of the Vancouver Island bird has not been ascertained, and it may prove to be the same as that on the Queen Charlotte Islands. The same statement applies to the Pine Grosbeak of Porcher Island (Brooks, 1923a, p. 222).

***Carpodacus purpureus purpureus* (Gmelin). Eastern Purple Finch.**

Status—Summer visitant to northern and eastern British Columbia. Reported from Telegraph Creek (Swarth, 1922, p. 232), upper Skeena Valley at Hazelton and Kispiox (Mus. Vert. Zool.), and Crow's Nest Pass (Macoun and Macoun, 1909, p. 453). There are no winter records.

***Carpodacus purpureus californicus* Baird. California Purple Finch.**

Synonym—*Carpodacus purpureus*.

Status—Resident in the Transition zone of extreme southwestern British Columbia. On Vancouver Island it occurs on the east coast from Victoria north to Comox (Macoun and Macoun, 1909, p. 455), and it is said to remain there during the winter (Kermode, 1904, p. 44). On the mainland it is reported from many localities in the lower Fraser Valley: Chilliwack, resident (Brooks, 1917, p. 43); Hastings, Agassiz, etc., and, the farthest inland, Lillooet (Taverner, 1917b, p. 364).

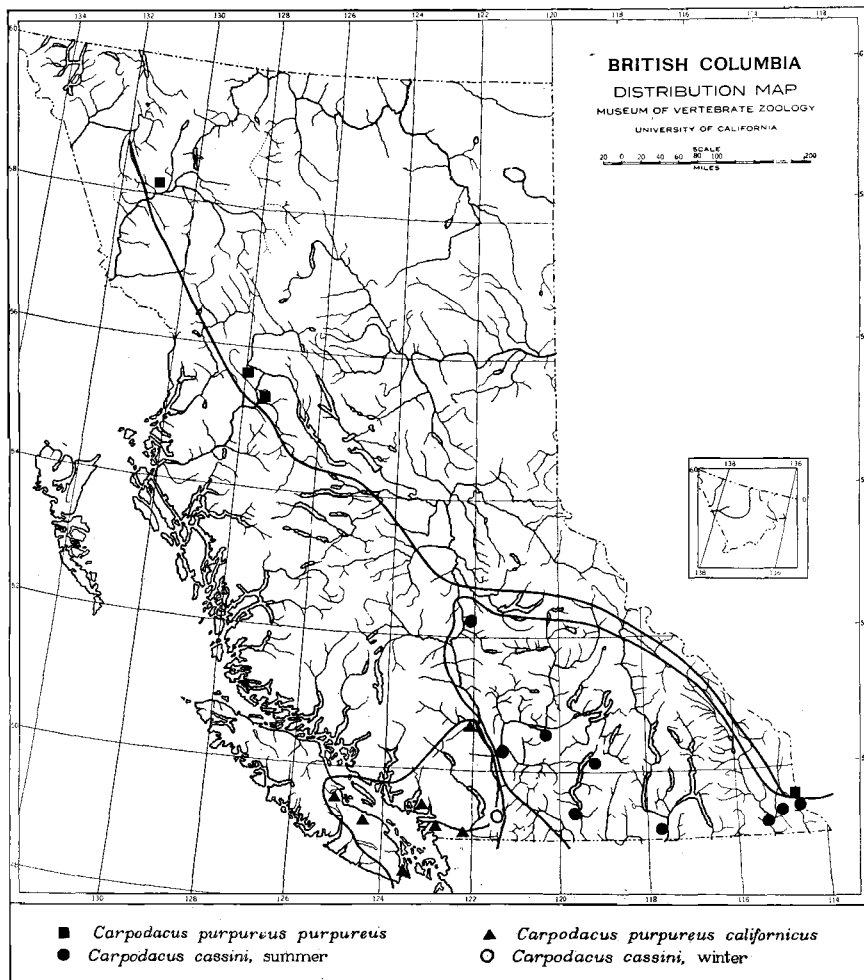


FIG. 27. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF THE PURPLE FINCHES (*CARPODACUS PURPUREUS PURPUREUS*, *C. P. CALIFORNICUS*, AND *C. CASSINI*). THE ASSUMED SUMMER HABITAT OF EACH IS OUTLINED.

Carpodacus cassini Baird. Cassin Purple Finch.

Status—Resident in southern British Columbia east from the Cascades and coast ranges to the Rockies. Found commonly in the Okanagan region, and reported from there north to Soda Creek, Cariboo District (Brooks, 1903, p. 282). One record for the western slope of the Cascades: Hope, two taken April 14, 1922, by T. L. Thacker (Brooks, MS). Wintering in Okanagan Valley in occasional years (Munro, 1922b, p. 13); northern limit in winter undetermined.

Loxia curvirostra minor (Brehm). American Crossbill.

Synonyms—*Loxia curvirostra*; *Curvirostra americana*; *Loxia americana*.

Status—It is impossible now to define the ranges in British Columbia of the two subspecies of *Loxia curvirostra* that occur within the province. The erratic migrations of the birds may bring about the occupation of territory one year by one race, that during another year is occupied by the other. The breeding season of the Red Crossbill, too, is irregular, so that wandering flocks may appear at any time. The smaller subspecies (*minor*), however, occupies the coastal region, including Vancouver Island (in great abundance) and the Queen Charlotte Islands (in lesser numbers), to the exclusion of *bendirei*. It is in the interior of the mainland that the confusion between the two races exists. Neither form is abundant in the interior of northern British Columbia.

Loxia curvirostra bendirei Ridgway. Bendire Crossbill.

Synonym—? *Loxia curvirostra minor*, part.

Status—Has been taken in northern British Columbia at Telegraph Creek (Swarth, 1922, p. 232), and in the south, in the Okanagan region (commonly) and west to Chilliwack (Brooks, MS). The general range of *bendirei* in North America is to the southward and inland, in the Rocky Mountains and Sierra Nevada. Here, at its northern extreme in British Columbia, the range of *bendirei* meets, and apparently overlaps, with that of *minor*, so that no definite line of demarcation can be drawn between the two. (See under *Loxia curvirostra minor*.) *Bendirei*, however, has not been taken upon the coast or at any island locality. Red crossbills occur in British Columbia throughout the year, but are erratic, both as to locality visited and season of appearance.

Loxia leucoptera Gmelin. White-winged Crossbill.

Status—Resident, in the sense that the species occurs somewhere in British Columbia at all seasons of the year. Abundant in the northern half of the province, especially east of the coast ranges. Occurs in lesser numbers southward to the southern boundary and on the coast. Has been found on Vancouver Island in winter, rather rarely; is not known to breed there. Occurs on the Queen Charlotte Islands (Brooks, MS). Of erratic occurrence, both as regards localities visited, and the season of the year when it appears.

Leucosticte tephrocotis tephrocotis (Swainson).

Gray-crowned Rosy Finch.

Status—Breeds above timber-line (Alpine-Arctic zone) in the Rocky Mountains, north at least to Moose Pass (Riley, 1912, p. 65), and west to the Galton Range in extreme southern British Columbia (Brooks, MS), and to the Cariboo Range near Barkerville (Brooks, 1903, p. 282). In the winter, migrates west (as

well as east and south) from the breeding grounds, and may occur anywhere in the lowlands of southern British Columbia: Sumas (Brooks, 1917, p. 44); near Lake Okanagan (Brooks, MS).

***Leucosticte tephrocotis littoralis* Baird. Hepburn Rosy Finch.**

Synonym—*Leucosticte tephrocotis*, part; *Leucosticte griseinucha*.

Status—Breeds above timber-line (Alpine-Arctic zone) in the coast ranges and Cascades the entire length of the province. In central British Columbia it breeds east at least to the vicinity of Hazelton (Mus. Vert. Zool.); in the south, at least to the vicinity of Lillooet (Taverner, 1917b, p. 364), Hope, and the Skagit River (Macoun and Macoun, 1909, p. 465). The breeding range undoubtedly extends still farther inland, possibly to include the Selkirks (Brooks, MS). "Found tolerably common on the summit of Mount Arrowsmith, Vancouver Island, July 19, 1887" (Macoun, 1909, p. 466). There is an older record of a summer occurrence on Vancouver

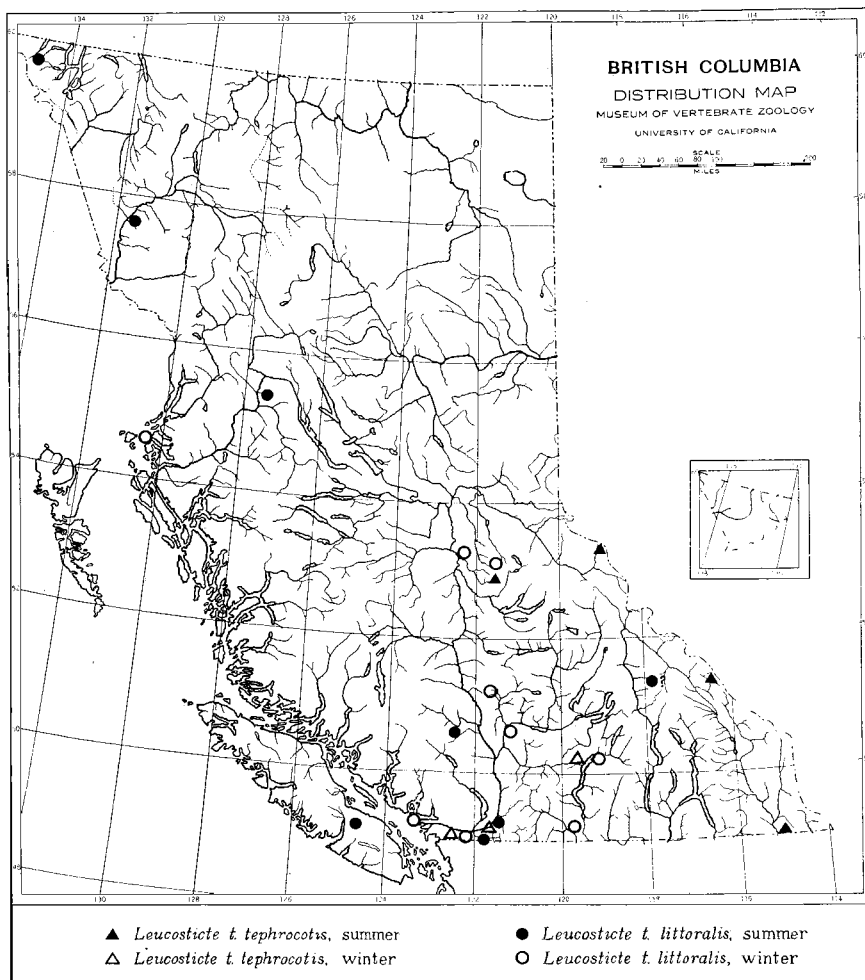


FIG. 28. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF SUBSPECIES OF THE ROSY FINCH (*LEUCOSTICTE TEPHROCOTIS*).

Island (Brown, 1868, p. 422); the species may prove to occupy the higher mountains throughout the Island. Of widespread occurrence in the lowlands in winter. At that season *littoralis* has been found together with *tephrocotis* in the Okanagan region (Brooks, MS) and at Sumas (Brooks, 1917, p. 44); it occurs in winter at least as far north as Quesnelle (Brooks, 1903, p. 282), possibly much farther.

Acanthis hornemanni exilipes (Coues). Hoary Redpoll.

Synonym—*Acanthis linaria exilipes*.

Status—Of rare and irregular occurrence in winter. Reported from Quesnelle (Brooks, 1903, p. 282), and Chilliwack (Brooks, 1917, p. 44).

Acanthis linaria linaria (Linnaeus). Redpoll.

Synonym—*Aegiothus linaria*.

Status—Breeds in extreme northern British Columbia. Found at Bennett in June (Bishop, 1900b, p. 82). Abundant in winter in the southern part of the province, for an undetermined distance northward. Reported from Chilliwack, Okanagan Valley, Revelstoke, and the Cariboo District. Occurrence on Vancouver Island appears to be based entirely upon one old record by Brown (1868, p. 421).

Astragalinus tristis pallidus (Mearns). Pale Goldfinch.

Synonyms—*Spinus tristis*; *Chrysomitris tristis*; *Spinus tristis salicamans*; *Astragalinus tristis salicamans*; *Astragalinus tristis*.

Status—Summer visitant to the extreme southern mainland. Reported from various points in Okanagan Valley, and north to Lillooet (Taverner, 1917b, p. 364).

Astragalinus tristis salicamans (Grinnell). Willow Goldfinch.

Status—Occurs regularly of recent years in extreme southwestern British Columbia. Specimens collected at Victoria are in the Provincial Museum; from Brackendale, on the mainland coast, in the Victoria Memorial Museum, Ottawa.

Spinus pinus pinus (Wilson). Pine Siskin.

Synonym—*Chrysomitris pinus*.

Status—Abundant and of general distribution. Occurs at all altitudes, in the interior and on the coast; on Vancouver Island and on the Queen Charlotte Islands. Breeds throughout the province; remains through the winter in southern British Columbia, to an undetermined distance northward.

Plectrophenax nivalis nivalis (Linnaeus). Snow Bunting.

Synonyms—*Passerina nivalis*; *Plectrophanes nivalis*.

Status—Probably of general distribution during the migrations, though explicitly recorded from but a few points in British Columbia. Abundant in winter in the southern part of the province. Reported in migration (October) from near Fort St. John, upper Peace River (E. A. Preble, MS); in winter from Okanagan Lake and the Cariboo District (Brooks, *in* Macoun and Macoun, 1909, p. 483) and from Sumas Prairie (Brooks, 1917, p. 44). "Not common on Vancouver Island" (Kermode, 1904, p. 46). "Seen at Massett by Mr. Keen" (Osgood, 1901b, p. 47). A non-breeding female was taken at Massett, Queen Charlotte Islands, June 17, 1920 (Brooks, MS).

Calcarius lapponicus alascensis Ridgway. Alaska Longspur.

Synonym—*Calcarius lapponicus*.

Status—Common migrant, probably throughout the province; occasionally remains through the winter in southern British Columbia, as at Chilliwack (Brooks, 1917, p. 44), and at Okanagan (Brooks, MS). Reported in migration from Metlakatla, Port Simpson, Okanagan, and Burrard Inlet, and from both coasts of Vancouver Island. "Seen at Massett by Mr. Keen" (Osgood, 1901b, p. 47).

Calcarius pictus (Swainson). Smith Longspur.

Synonym—*Plectrophanes pictus*.

Status—A single bird taken at the summit of "Boundary Pass" (the extreme southeastern corner of British Columbia), May 15, 1858 (Blakiston, 1862, p. 6; 1863, p. 72). One specimen, an immature male (no. 42271, Mus. Vert. Zool.), was collected in Kispiox Valley, twenty-three miles north of Hazelton, August 25, 1921. These are the only occurrences known to us, but the species may prove to be a summer visitant to extreme northeastern British Columbia, east of the Rocky Mountains.

Calcarius ornatus (J. K. Townsend). Chestnut-collared Longspur.

Status—An adult female (no. 42272, Mus. Vert. Zool.), apparently not a breeding bird, was collected in Kispiox Valley, twenty-three miles north of Hazelton, July 8, 1921. This is the only recorded occurrence in British Columbia.

Rhynchophanes mccowni (Lawrence). McCown Longspur.

Status—Known only from the capture of three specimens at Chilliwack, an adult male taken June 1, 1887, and two adult females on June 2, 1890 (see Brewster, 1893, p. 237; Brooks, 1900c, p. 107; 1917, p. 44).

Poocetes gramineus confinis Baird. Western Vesper Sparrow.

Synonyms—*Poocetes gramineus*; *Pooaetes gramineus*; *Poocetes confinis*; *Pooaetes gramineus confinis*.

Status—Summer visitant to southern British Columbia, east of the Cascades. Recorded from Barkerville, Cariboo District, where breeding at timber-line (Brooks, 1903, p. 283), and southward (Lac La Hache, Lillooet, Kamloops, Okanagan Valley, etc.).

Poocetes gramineus affinis G. S. Miller. Oregon Vesper Sparrow.

Synonyms—*Pooaetes gramineus affinis*; *Pooaetes gramineus confinis*, part.

Status—There are but few explicit and authenticated records of this subspecies from British Columbia. It appears to be a rare summer visitant to the extreme southwestern corner of the province; while it may breed in that section it has not been found actually nesting. A rare migrant at Chilliwack (Brooks, 1917, p. 44). One seen at the mouth of Tami Hy Creek, September 9, 1901 (Spreadborough, in Macoun and Macoun, 1909, p. 496). "*Pooaetes gramineus confinis*" is recorded from Vancouver Island by Fannin (1891, p. 35; 1898, p. 46) but with no particulars of occurrence. Rhoads (1893d, p. 48) "wounded a singing male near Victoria, but it was lost."

Passerculus sandwichensis sandwichensis (Gmelin). Aleutian Savannah Sparrow.

Synonym—? *Ammodramus sandwichensis*, part.

Status—Rather uncommon migrant along the coast. Has been taken on the Queen Charlotte Islands, on Vancouver Island, and on the mainland at Chilliwack.

Passerculus sandwichensis anthinus Bonaparte. Kadiak Savannah Sparrow.

Synonyms—*Passerculus sandwichensis*, part; *Passerculus savanna*; *Passerculus sandwichensis savanna*; *Passerculus sandwichensis alaudinus*, part.

Status—Common migrant along the coast, including Vancouver Island and the Queen Charlotte Islands. Is not known to breed anywhere south of Dixon Entrance (see Brooks, 1923a, p. 223).

This is the breeding form of the Sitkan district, Alaska, listed in various papers by Grinnell and by Swarth as *Passerculus sandwichensis savanna*. It is pointed out by Brooks that this race can be differentiated from the Eastern Savannah Sparrow (*P. s. savanna*) by an average browner coloration and smaller bill on the part of the western bird. The name *Passerculus anthinus* Bonaparte (Compte Rendu, xxxvii, December, 1853, p. 919), type locality Kadiak Island, appears to be applicable to this subspecies.

Passerculus sandwichensis alaudinus Bonaparte. Western Savannah Sparrow.

Synonyms—*Passerculus sandwichensis*, part; *Ammodramus sandwichensis*, part; *Ammodramus sandwichensis alaudinus*.

Status—Summer visitant to the interior. Breeds east from the coast ranges to the Rockies, and from the northern boundary southward over the entire province. Abundant in migration throughout the valleys of the mainland. Breeding birds from southern British Columbia show a decided leaning toward the characters of *Passerculus sandwichensis nevadensis*. It may even be that *nevadensis* in typical form extends northward to some points within the province.

Passerculus sandwichensis brooksi Bishop. Dwarf Savannah Sparrow.

Synonyms—*Passerculus sandwichensis*, part; *Ammodramus sandwichensis*, part; *Passerculus sandwichensis alaudinus*, part.

Status—Breeds in certain restricted coastal localities in extreme southwestern British Columbia. Has been taken at Chilliwack and other points in the lower Fraser Valley; and Savannah sparrows, presumably of this subspecies, were seen in June at Brackendale (Taverner, 1917b, p. 364). On Vancouver Island, *brooksi* is known only from the mouth of the Cowichan River, where it is resident except in mid-winter (Brooks, MS). Of occasional, but rare, occurrence at Chilliwack in winter (Brooks, MS).

Ammodramus savannarum bimaculatus Swainson. Western Grasshopper Sparrow.

Synonyms—*Coturniculus savannarum bimaculatus*; *Ammodramus savannarum perpallidus*.

Status—A summer visitant, found breeding as yet only in Okanagan Valley, near Vernon and Okanagan Landing (Brooks, 1900c, p. 107; 1912, p. 253).

Chondestes grammacus strigatus Swainson. Western Lark Sparrow.

Synonym—*Chondestes grammaca*.

Status—Fairly common summer visitant to the extreme southern mainland; a "scarce summer visitant both east and west of the Cascades" (Brooks, 1900c, p. 107). Explicitly reported as breeding at Osoyoos (common) and at Vernon (scarce) (Brooks, 1909a, p. 62); at Chilliwack in summer (Brooks, 1917, p. 45); Vaseaux Lake, May (Anderson, 1914, p. 13); Similkameen River (Macoun and Macoun, 1909, p. 509).

Zonotrichia querula (Nuttall). Harris Sparrow.

Synonym—*Zonotrichia harrisi*.

Status—A rare visitant to southern British Columbia. About eight or ten specimens recorded so far, all taken in migration or during winter. The same specimens have been reported by different people, and sometimes twice by the same observer, but the known instances of occurrence may be summarized as follows: "near Victoria," April, 1891, one specimen (Rhoads, 1893d, p. 49); Comox, Vancouver Island, November 20, 1894, one specimen; December 1, 1894, two specimens (Fannin, 1895a, p. 76; 1895b, p. 305); Sumas, January 8, 1895, two specimens (Brewster, 1895, p. 182; Brooks, 1900c, p. 107; 1917, p. 45); "Cadboro Bay, A. H. Maynard, October, 1894" (Fannin, 1898, p. 46); Okanagan Landing, April 30, 1911, one specimen; December 1, 1911, one specimen (Brooks, 1912, p. 253). Besides these records of specimens collected there is mention in some of the papers cited of additional birds seen but not shot.

Zonotrichia leucophrys (J. R. Forster). White-crowned Sparrow.

Status—Recorded by Riley (1912, p. 66) as breeding on the West Fork of the Moose River, in the Yellowhead Pass region. Has also been found breeding in Crow's Nest Pass (Brooks, MS). The summer habitat in British Columbia, as thus indicated, is a narrow strip in the Rocky Mountain region along the boundary line between British Columbia and Alberta, in the southeastern corner of the province. There is but one migration record known to us, of a specimen (now in the Brooks collection) taken at Okanagan Landing, May 3, 1921.

Zonotrichia gambeli (Nuttall). Intermediate Sparrow.

Synonyms—*Zonotrichia intermedia*; *Zonotrichia leucophrys intermedia*; *Zonotrichia leucophrys gambeli*; *Zonotrichia leucophrys*, part; Gambel Sparrow.

Status—Breeds abundantly east of the coast ranges and Cascades. In northern British Columbia it is confined to the lowlands (Canadian zone); in the southern part of the province it breeds from Transition to Hudsonian (timber line). There are explicit summer records, in the north, from Bennett, Atlin, Telegraph Creek, Hazelton and Terrace (C. deB. Green, MS); in the south, from mountains south of Hope, Kamloops, Okanagan Valley, and Trail. Riley (1912, p. 66) found *Zonotrichia leucophrys* and *Z. gambeli* nesting in the same place, in the Yellowhead Pass region. The Intermediate Sparrow is an abundant migrant throughout the province, on the mainland coast as well as in the interior, and on the east coast, at least, of Vancouver Island. Not reported from the Queen Charlotte Islands. Occasionally winters in small numbers as far north as Okanagan Landing.

Zonotrichia nuttalli Ridgway. Nuttall Sparrow.

Synonyms—*Zonotrichia gambeli*; *Zonotrichia leucophrys*; *Zonotrichia leucophrys gambeli*; *Zonotrichia leucophrys nuttalli*.

Status—Common in summer over a limited area in southwestern British Columbia. Has been reported from the southeastern coast of Vancouver Island, from Victoria and Esquimalt north commonly to Parksville, rarely to Comox; from Saturna Island (Sharpe, 1888, p. 606); from the mouth of the Fraser River.

In the A. O. U. Check-List (1910, p. 262) *nuttalli* is stated to breed south "from Port Simpson, British Columbia," which is near the mouth of the Skeena River and far north of any definitely known breeding station. This statement was apparently taken from Ridgway (1901b, p. 342), where the locality is given as "Fort Simpson, British Columbia." In support of this locality record, Ridgway cites "Sharpe, Cat. Birds Brit. Mus., XII, 1888, 606." At the place cited, a specimen

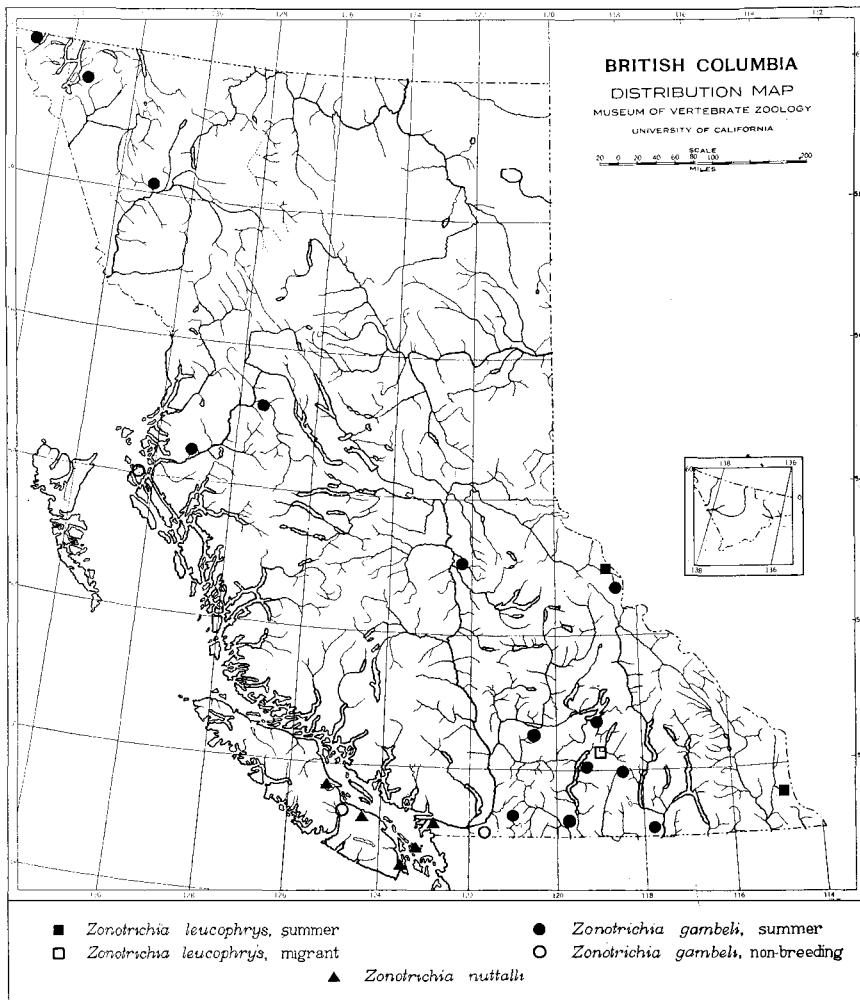


FIG. 29. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF THE WHITE-CROWNED SPARROWS (*ZONOTRICHIA*).

is listed from "Fort Simpson," collected by B. R. Ross. However, Ross collected at *Fort* Simpson on the Mackenzie River, not at *Port* Simpson on the coast, and it seems reasonable to suppose that the specimen listed in the Catalogue of Birds is an example of *gambeli*, placed under the wrong name. From the context it is evident that Sharpe had not a clear idea of the characters distinguishing *gambeli* and *nutalli*. The confusion of names that has existed between the two forms adds to the likelihood of error. All in all, we do not give credence to "Port Simpson, British Columbia" as a breeding station for *Zonotrichia nutalli*.

***Zonotrichia coronata* (Pallas).** Golden-crowned Sparrow.

Status—Common summer visitant at high altitudes (Hudsonian zone) east of the coast ranges in northern British Columbia. Has been found in summer in the vicinity of Atlin (Anderson, 1915a, p. 14), in the mountains bordering the upper Stikine River (Swarth, 1922, p. 241), on mountains east of Bear Lake (E. A. Preble, MS), on Nine-mile Mountain, near Hazelton (Mus. Vert. Zool.), near Barkerville (Brooks MS), and, the southernmost record, in the mountains near Lillooet and MacGillivray Creek (Taverner, 1917b, p. 365). A breeding record by Riley (1912, p. 67) from the Alberta side of Moose Pass is the southernmost in the Rocky Mountain region. The Golden-crowned Sparrow is a common migrant in the valleys throughout the province, in the interior, on the mainland coast and on Vancouver Island. Occurs on migration at Masset, Queen Charlotte Islands; specimens taken (Brooks, MS). One mid-winter record at Boundary Bay; specimen in collection of J. A. Munro.

***Zonotrichia albicollis* (Gmelin).** White-throated Sparrow.

Status—An adult male, of a pair of breeding birds, was collected in Kispiox Valley, twenty-three miles north of Hazelton, June 21, 1921 (Mus. Vert. Zool.). One specimen was collected at Saanich, Vancouver Island, October 6, 1913 (Munro, 1915, p. 107), and one at Vanderhoof, August 15, 1919 (Spreadborough, MS). These are the only records for British Columbia.

***Spizella monticola ochracea* Brewster.** Western Tree Sparrow.

Synonyms—*Spizella monticola*; *Spizella ochracea*.

Status—Summer visitant at high elevations (timber line) in the interior of northern British Columbia. Definitely reported as breeding at Atlin (Anderson, 1915a, p. 14); in mountains near Telegraph Creek (Swarth, 1922, p. 242), and in mountains near Barkerville, Cariboo District (Brooks, 1903, p. 283). The Barkerville record, the southernmost breeding station in the province, was based upon one pair of birds, seen and identified beyond a doubt (Brooks, MS). Observed above timberline on mountains near the head of the south fork of Bear Creek (between Hazelton and Fort Babine), August 6 and 8, 1913 (E. A. Preble, MS). During migrations the Western Tree Sparrow is of general distribution in the valleys of the mainland, except perhaps on the more northern coast, and it has been reported from Vancouver Island (Fannin, 1898, p. 47). Remains in some sections of southern British Columbia during the winter, as at Chilliwack (Brooks, 1917, p. 45), and Okanagan, where it is fairly common.

Spizella passerina passerina (Bechstein). Eastern Chipping Sparrow.

Synonyms—*Spizella socialis arizonae*; ? *Spizella socialis*.

Status—Common summer visitant to the lowlands east of the coast ranges in northern British Columbia. Specimens from the upper Stikine River and the upper Skeena River have been definitely identified as of the subspecies *Spizella p. passerina* (Swarth, 1922, p. 243), and the Chipping Sparrow at Atlin (Anderson, 1915a, p. 15) is assuredly the same. The Chipping Sparrow (one subspecies or the other) occurs throughout the interior of British Columbia, recorded from a score of places: Yellowhead Pass region (Riley, 1912, p. 67); Ashcroft (Rhoads, 1893d, p. 50); Revelstoke, Kamloops, etc. (Macoun and Macoun, 1909, p. 525); and elsewhere. How far south *passerina* extends, however, cannot now be stated.

Spizella passerina arizonae Coues. Western Chipping Sparrow.

Synonyms—*Spizella passerina*; *Spizella socialis arizonae*; *Spizella socialis*.

Status—The Chipping Sparrow found on Vancouver Island and in the southern portion of the mainland (Okanagan Valley, etc.) is of the subspecies *Spizella p. arizonae*, as shown by specimens in the Museum of Vertebrate Zoology and in the collection of Allan Brooks. It is a summer visitant to those regions. On Vancouver Island it occurs in the valleys at the extreme south and on the east coast as far north as Parksville (Swarth, 1912b, p. 58). In the southern Rocky Mountains it occurs up to 5000 feet. How far north *arizonae* extends, just where it meets the subspecies *passerina*, is not known, but the probabilities are that all records north at least to Ashcroft and Revelstoke pertain to *arizonae*.

Spizella pallida (Swainson). Clay-colored Sparrow.

Synonyms—*Spizella pusio*; *Spizella breweri*.

Status—Only one authentic record; two adult males collected at 158-mile House, Cariboo District, July 3, 1901 (Brooks, 1903, p. 283; 1905a, p. 83). There is a specimen listed in the British Museum Catalogue of Birds (Sharpe, 1888, p. 666), entered as collected by J. K. Lord in "British Columbia".

Spizella breweri Cassin. Brewer Sparrow.*

Status—Summer visitant to certain arid valleys of the interior in extreme southern British Columbia. Fairly common "in sage brush areas at Osoyoos" (Brooks, 1909a, p. 62); in migration at Vernon (Brooks, *loc. cit.*); one specimen taken at Ashcroft (Rhoads, 1893d, p. 50).

Junco hyemalis hyemalis (Linnaeus). Slate-colored Junco.

Status—A migrant, probably occurring over most of the province. Found in fair abundance at Hazelton and in the nearby Kispiox Valley in September, 1921 (Mus. Vert. Zool.); reported from Chilliwack, in extreme southern British Columbia, as a migrant and occasional winter visitant (Brooks, 1917, p. 45). There are no records from the mainland coast or from Vancouver Island, but it is probably of occasional occurrence there.

*Since the manuscript of this "Distributional List" was finished an additional species of bird, a near relative of *Spizella breweri* and *S. pallida*, has been discovered in northern British Columbia. This is the Timberline Sparrow, *Spizella tawerneri*; type locality, Spruce Mountain, 10 miles east of Atlin, British Columbia (Swarth and Brooks, Condor, XXVII, March 15, 1925, p. 67). This species is not included in the 409 kinds of birds mentioned in the introduction as comprising the avifauna of the province.

***Junco hyemalis connectens* Coues. Cassiar Junco.**

Synonym—*Junco hyemalis hyemalis*.

Status—Common summer visitant east of the coast ranges in northern British Columbia, extending southward in small numbers in the Rocky Mountains. Breeds commonly at Atlin (Anderson, 1915a, p. 15) and on the upper Stikine River (Swarth, 1922, p. 243); rarely as far south as Kispiox Valley, near Hazelton (Mus. Vert. Zool.), where *Junco oregonus shufeldti* is the common Junco. Has also been found breeding, in company with *shufeldti*, in the Yellowhead Pass region (Riley, 1912, pp. 67-68), and at the west base of the Rocky Mountains in the extreme southeastern corner of the province (Brooks, MS). Migrant, of general distribution east of the Cascades and coast ranges, and occasional in winter in southern British Columbia.

***Junco oregonus oregonus* (J. K. Townsend). Oregon Junco.**

Synonyms—*Junco oregonus*; *Junco hyemalis oregonus*; *Junco oregonus shufeldti*, part; *Junco hyemalis connectens*, part; *Junco oregonus couesi*, part.

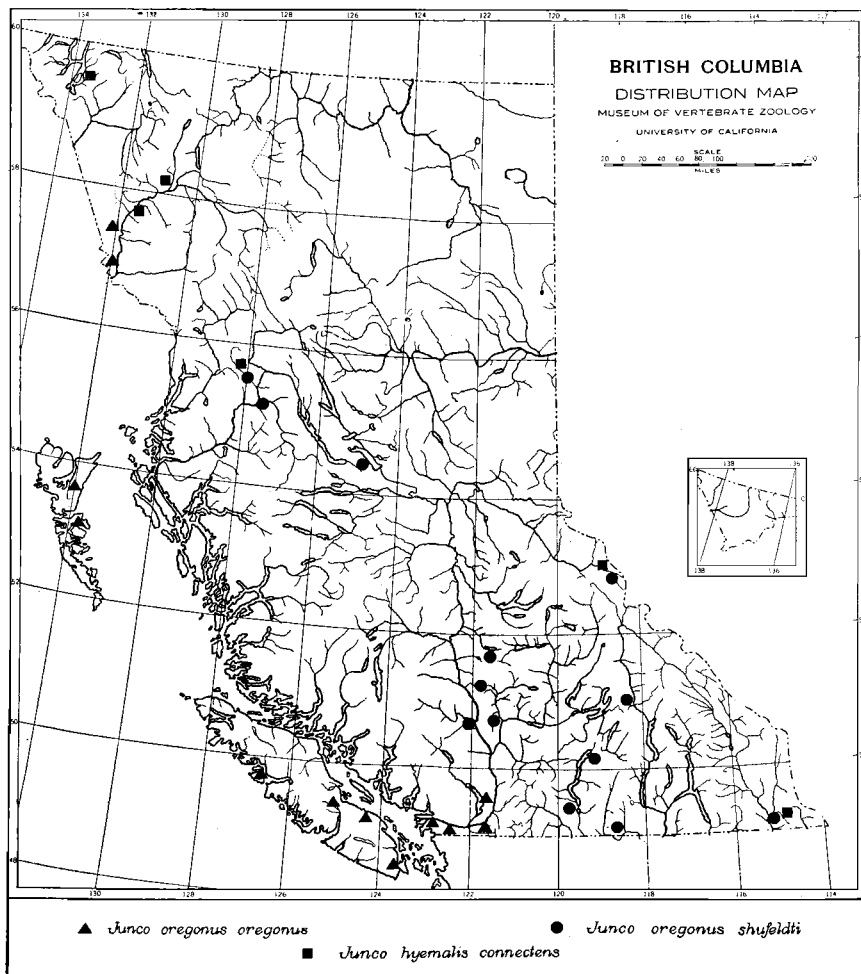


FIG. 30. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF THE SPECIES AND SUBSPECIES OF JUNCOS BREEDING WITHIN THE PROVINCE.

Status—Common summer visitant to the coastal region of the mainland, west of the Cascades and coast ranges, and to the adjoining islands, including Vancouver Island, where it is abundant, and the Queen Charlotte Islands, where it is rather scarce. Northernmost point of record in British Columbia is on the Stikine River, at Great Glacier and Flood Glacier (Swarth, 1922, p. 253). Remains through the winter on Vancouver Island.

The Junco of Vancouver Island and the southern mainland coast has been regarded by some authors as the same as the Junco of the interior (*Junco oreganus shufeldti* of this list), under various names: *Junco oreganus shufeldti* (Ridgway, 1901b, p. 285); *Junco hyemalis connectens* (A. O. U. Check-List, 1910, p. 266); *Junco oregonus couesi* (Dwight, 1918, p. 291). The Vancouver Island Junco is admittedly not typical of *oreganus*, the birds being paler colored, less ruddy than the mode of series from the Queen Charlotte Islands and from the Sitkan district, Alaska. On the whole, however, taking series from various parts of Vancouver Island, the average is nearer to *oreganus* than to the paler colored *shufeldti* of the interior, sufficiently so that it seems best to use the name *oreganus* for the Junco of the whole coastal region.

Junco oreganus shufeldti Coale. Shufeldt Junco.

Synonyms—*Junco hyemalis shufeldti*; *Junco oreganus connectens*; *Junco hyemalis connectens*, part; *Junco oregonus*, part; *Junco hyemalis oregonus*, part; ? *Junco hyemalis montanus*; *Junco oregonus couesi*, part.

Status—Common summer visitant east of the Cascades and coast ranges. Reported from many stations in southern British Columbia, east to the eastern boundary of the province, and as far north as Hazelton and Kispiox Valley (Mus. Vert. Zool.). Remains through the winter in southern British Columbia.

Melospiza melodia caurina Ridgway. Yakutat Song Sparrow.

Status—Migrant and winter visitant to the coastal region. So far reported only from Porcher Island and the adjacent mainland near Prince Rupert (Brooks, 1923a, p. 223). This subspecies is known to winter in fair abundance on the islands of southeastern Alaska, just north of the British Columbia coast, and a few specimens have been taken in winter at coastal points south of this province, so it may be inferred that *caurina* occurs in winter along the entire British Columbia coast line. Probably it is fairly common in the north, and in diminishing numbers southward.

Melospiza melodia rufina (Bonaparte). Sooty Song Sparrow.

Synonyms—*Melospiza fasciata guttata*, part; *Melospiza fasciata rufina*, part; *Melospiza cinerea rufina*, part; *Melospiza cinerea morphna*, part.

Status—Resident on the Queen Charlotte Islands. The subspecies *rufina* may migrate southward to some extent from the northern part of its habitat, in southeastern Alaska, and thus occur in winter on Vancouver Island or on the mainland coast, but we have seen no winter specimens taken south of the summer home, within the range of *morphna*. (See Swarth, 1923, p. 214.)

Melospiza melodia morphna Oberholser. Rusty Song Sparrow.

Synonyms—*Melospiza melodia*, part; *Melospiza fallax*; *Melospiza fasciata guttata*, part; *Melospiza rufina*; *Melospiza melodia rufina*, part; *Melospiza cinerea*

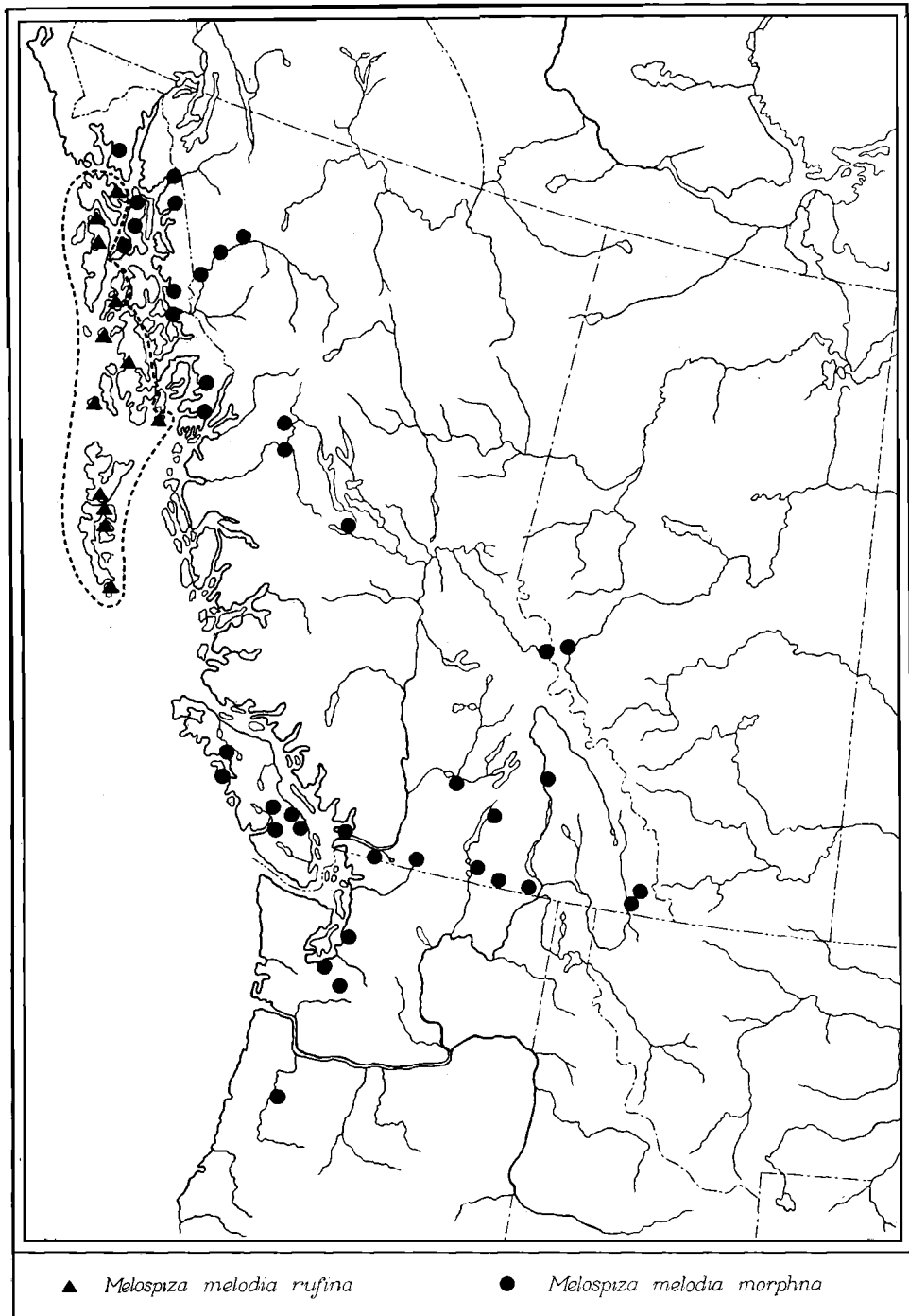


FIG. 31. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA AND ADJACENT TERRITORY OF SUBSPECIES OF THE SONG SPARROW (*MELOSPIZA MELODIA*). THE ASSUMED HABITAT OF *MELOSPIZA M. RUFINA* IS OUTLINED.

rufina, part; *Melospiza cinerea morphna*, part; *Melospiza melodia inexpectata*; *Melospiza cinerea montana*.

Status—Breeds nearly throughout British Columbia, except on the Queen Charlotte Islands (where replaced by *rufina*) and in the extreme northern and northeastern portions of the mainland (where no song sparrow is known to occur). Occurs commonly throughout Vancouver Island, on the mainland from the coast east to the eastern boundary; north abundantly to the Upper Skeena Valley, in lesser numbers to the upper Stikine Valley, at Telegraph Creek (Swarth, 1922, p. 255). The northern limits in winter have not been determined. Song sparrows certainly leave the northern interior in winter; they probably remain through the winter all along the coast, in small numbers at the north, abundantly southward. They also remain all winter in the valleys of the southern interior.

Some song sparrows from extreme southeastern British Columbia closely approach *Melospiza melodia merrilli* in appearance, but we do not feel justified on the strength of these intergrading specimens in extending the range of *merrilli* to within the boundaries of this province. (See Swarth, 1923, p. 214.)

Melospiza lincolni lincolni (Audubon). Lincoln Sparrow.

Synonyms—*Melospiza lincolni striata*; *Melospiza lincolni gracilis*, part.

Status—Common summer visitant, from the southern boundary to the northern, and from the Cascades and coast ranges eastward. In southern British Columbia it breeds at high altitudes: Chilliwack, Hudsonian zone (Brooks, 1917, p. 45); farther north it is found in the lowlands.

Melospiza lincolni gracilis (Kittlitz). Forbush Sparrow.

Synonyms—*Melospiza lincolni striata*; *Melospiza lincolni*.

Status—Summer visitant to the coastal region, west from the Cascades and coast ranges. Rather rare on Vancouver Island; breeds locally, in the mountains at the southern end of the island, probably at sea level at the northern end. Fairly common on the Queen Charlotte Islands, where it breeds at sea level.

Melospiza georgiana (Latham). Swamp Sparrow.

Status—One specimen in the collection of the Victoria Memorial Museum, Ottawa, collected by Wm. Spreadborough at Vanderhoof, August 4, 1919.

Passerella iliaca iliaca (Merrem). Eastern Fox Sparrow.

Status—A male bird collected by John Fannin at Sicamous, September 25, 1893 (Swarth, 1920, p. 118). Two specimens collected in Kispiox Valley, September 14, and one near Hazelton, September 22, 1921 (Mus. Vert. Zool.).

Passerella iliaca altivagans Riley. Alberta Fox Sparrow.

Synonyms—*Passerella iliaca schistacea*; *Passerella iliaca unalascensis*; *Passerella iliaca*.

Status—Summer visitant at high altitudes (Hudsonian zone) throughout most of the interior. Occurs as far north at least as Thudade Lake (Riley, 1911, p. 234), east into Alberta (Riley, *loc. cit.*), south nearly, if not quite, to the southern boundary of the province, and west to the eastern slopes of the coast ranges and Cascades. Has

been found migrating in the lowlands of the upper Skeena Valley (Mus. Vert. Zool.), and is probably of general occurrence in the valleys as a migrant. (For details of distribution, etc., see Swarth, 1920, pp. 119, 185). It is possible that the nearly related *Passerella iliaca schistacea*, instead of *P. i. altivagans*, is the subspecies that breeds on the Cascades just north of the Canada-United States boundary (see Brooks, 1917, p. 46).

***Passerella iliaca schistacea* Baird. Slate-colored Fox Sparrow.**

Status—Breeds in the Rocky Mountains in extreme southeastern British Columbia. There is a specimen, a breeding bird, in the Brooks collection, taken in Crow's Nest Pass (altitude 5500 feet), June 13, 1919.

***Passerella iliaca unalaschcensis* (Gmelin). Shumagin Fox Sparrow.**

Status—Rare migrant and perhaps winter visitant in the southern coastal region. Three specimens examined from Departure Bay, Vancouver Island, two collected on January 5, 1910, the other on March 26, 1910 (Swarth, 1920, p. 187). Reported also from Chilliwack, as a migrant (Brooks, 1917, p. 45). There is one specimen (a migrant) in the Brooks collection, taken at Masset, Queen Charlotte Islands, April 18, 1920.

***Passerella iliaca insularis* Ridgway. Kadiak Fox Sparrow.**

Synonym—*Passerella iliaca unalaschcensis*, part.

Status—An uncommon migrant in the southern coastal region. Specimens examined from Parksville, Vancouver Island, and from New Westminster and Westminster Junction, on the mainland (Swarth, 1920, pp. 132, 188). Also reported from Chilliwack (Brooks, 1917, p. 45).

***Passerella iliaca sinuosa* Grinnell. Valdez Fox Sparrow.**

Synonym—*Passerella iliaca unalaschcensis*, part.

Status—A migrant, and perhaps winter visitant, in the southern coastal district. Specimens have been examined from Victoria, Saanich, and Departure Bay, Vancouver Island; and from Chilliwack and Mount Lehman on the mainland. Winter birds from Departure Bay, though referred to *sinuosa*, are not typical examples of that subspecies. (See Swarth, 1920, p. 135.)

***Passerella iliaca annectens* Ridgway. Yakutat Fox Sparrow.**

Status—Rare migrant in the southern coastal region; specimens examined from Victoria and Clayoquot, Vancouver Island (Swarth, 1920, pp. 140, 194). The capture of one specimen at Victoria on January 28, 1896, indicates the possibility of its occasional occurrence through the winter at that point.

***Passerella iliaca townsendi* (Audubon). Townsend Fox Sparrow.**

Status—From the main summer home in southeastern Alaska, the breeding range of the Townsend Fox Sparrow extends southward to include the Queen Charlotte Islands. This is the only part of British Columbia where this subspecies is known to breed. Occurs on the mainland coast and on Vancouver Island as a fairly common migrant. Has been known to remain through the winter at Chilliwack (Brooks, 1917, p. 45).

***Passerella iliaca fuliginosa* Ridgway. Sooty Fox Sparrow.**

Synonyms—*Passerella iliaca unalaschcensis*; *Passerella townsendi*; *Passerella iliaca*.

Status—Breeds on the islands in the Strait of Georgia and Puget Sound (Brooks, MS); at high elevations (Canadian zone) in southern Vancouver Island, and probably at sea level in northern Vancouver Island (Swarth, 1912b, p. 62). Found in summer on the northern mainland on the lower Stikine River (Swarth, 1922, p. 261), and, though there are no published records, this subspecies may be supposed to breed at suitable points between the Stikine River and Puget Sound, along the coastal mainland or on the adjacent small islands. Remains in winter on Vancouver Island and perhaps at other points in the southern part of its breeding range (Swarth, 1920, p. 149).

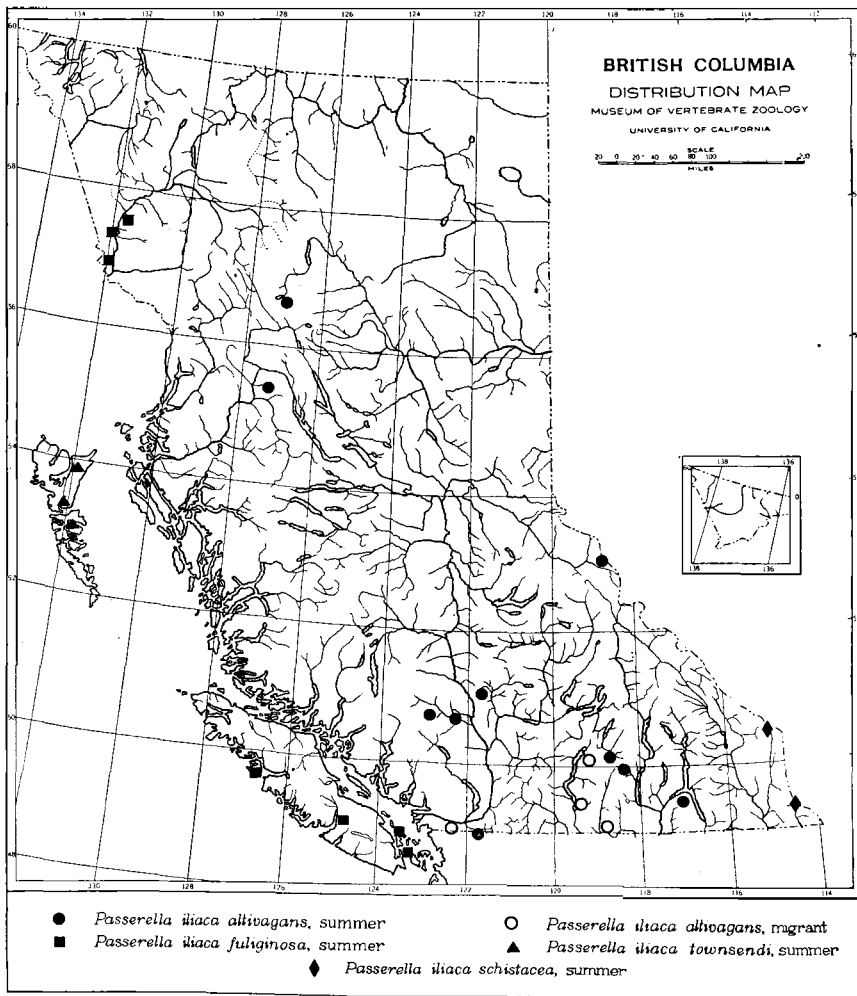


FIG. 32. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF SUBSPECIES OF THE FOX SPARROW (*PASSERELLA ILIACA*) BREEDING WITHIN THE PROVINCE.

Pipilo maculatus curtatus Grinnell. Nevada Towhee.

Synonyms—*Pipilo maculatus*; *Pipilo maculatus montanus*; *Pipilo maculatus megalonyx*.

Status—Common summer visitant in the Transition zone of southern British Columbia, east of the Cascades. Of occasional occurrence in winter (Munro, 1919a, p. 73). Reported from various parts of the Okanagan region (Anderson, 1914, p. 13; Macoun and Macoun, 1909, p. 555), from Elko, Enderby and Sicamous (Macoun and Macoun, *loc. cit.*), as far north as Ashcroft and Lac La Hache (Rhoads, 1893d, p. 52).

Pipilo maculatus oregonus Bell. Oregon Towhee.

Synonyms—*Pipilo maculatus*; *Pipilo oregonus*.

Status—Breeds commonly in the Transition zone of extreme southwestern British Columbia, west of the Cascades; remains through the winter in the warmer and more



FIG. 33. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF SUBSPECIES OF THE SPOTTED TOWHEE (*PIPILO MACULATUS*). THE ASSUMED SUMMER HABITAT OF EACH FORM IS OUTLINED.

sheltered portions of its range. Extends east to Chilliwack (Brooks, 1917, p. 46) and Agassiz (Macoun and Macoun, 1909, p. 555). Occurs on "the islands in the Gulf of Georgia" (Macoun and Macoun, *loc. cit.*). On Vancouver Island it is restricted to the southeastern section, ranging north to Comox (Brooks, MS) and Alberni (Swarth, 1912b, p. 63). The northernmost mainland locality recorded is Malaspina Inlet, July (E. A. Preble, MS).

Hedymeles melanocephalus capitalis (Baird).

Pacific Black-headed Grosbeak.

Synonyms—*Habia melanocephala*; *Guiraca melanocephala*; *Zamelodia melanocephala*.

Status—Summer visitant, of irregular distribution, in southern British Columbia. Records from extreme eastern part of the province, as at Revelstoke and Robson (Macoun and Macoun, 1909, p. 560) may pertain to the Rocky Mountain subspecies, *Zamelodia m. melanocephala*. Almost unknown at Okanagan Landing (one specimen, August 24, 1916 [Munro, 1917, p. 18]) but fairly common both east and south of that point. Reported from the lower Fraser Valley (Macoun and Macoun, 1909, p. 560), from Chilliwack (Brooks, 1917, p. 46), and from Brackendale (Taverner, 1917b, p. 366). Occurs in the southern and eastern section of Vancouver Island, north to Comox (C. P. Streater, MS) and Alberni (Swarth, 1912b, p. 64).

Passerina amoena (Say). Lazuli Bunting.

Synonym—*Cyanospiza amoena*.

Status—Summer visitant to the lowlands of southern British Columbia. On the mainland it is fairly common and reported from many points, the northernmost being Bonaparte (Rhoads, 1893d, p. 52). "Rare on Vancouver Island" (Fannin, 1891, p. 38). The first definite published records from Vancouver Island, are of a single bird collected at Comox, June 23, 1893, and one seen near Victoria, May 15, 1887 (Macoun and Macoun, 1909, p. 562).

Spiza americana (Gmelin). Dickcissel.

Status—But one occurrence: An adult male (no. 17883, Victoria Memorial Museum) was collected by P. A. Taverner at Vaseaux Lake, June 12, 1922. It was apparently a breeding bird, as a female was seen by the collector at close quarters when picking up the male. The organs of the latter also indicated that it was a mated bird (Taverner, MS).

Calamospiza melanocorys Stejneger. Lark Bunting.

Status—Records of two occurrences. An adult male was taken by Spreadborough "at Thurston ranch, Chilliwack River, B. C., August 2nd, 1906" (Macoun and Macoun, 1909, p. 563); this specimen is in the Victoria Memorial Museum at Ottawa. A male bird was collected at Okanagan Landing, June 8, 1914 (Munro, 1915, p. 107).

Piranga ludoviciana (Wilson). Western Tanager.

Synonym—*Pyrranga ludoviciana*.

Status—Summer visitant, fairly common and widely distributed. Abundant "in the Columbia Valley both east and west of the Selkirks" (Macoun and Macoun,

1909, p. 564); also reported from the Okanagan region (Anderson, 1914, p. 13); from Ashcroft, Bonaparte, Clinton, Lac La Hache, etc. (Rhoads, 1893d, p. 52); from Chilliwack (Brooks, 1917, p. 46); from Westminster and Mount Lehman (Chapman, 1890b, p. 148); and northward to Hazelton (Taverner, 1919, p. 84), and the upper Stikine River (Swarth, 1922, p. 264). On Vancouver Island it has been noted as far north as Alberni (Swarth, 1912b, p. 64) and Comox (C. P. Streator, MS). Absent from the Queen Charlotte Islands and the northern coast region.

Progne subis hesperia Brewster. Western Martin.

Synonym—*Progne subis*.

Status—Summer visitant to extreme southwestern British Columbia. Reported only from the cities, where it nests about the buildings: from Victoria and New Westminster (Fannin, 1891, p. 38); from Vancouver (Macoun and Macoun, 1909, p. 567); and from Nanaimo, Vancouver Island (Swarth, 1912b, p. 65).

Petrochelidon lunifrons lunifrons (Say). Cliff Swallow.

Synonyms—*Hirundo lunifrons*; *Petrochelidon pyrrhonota*; *Petrochelidon albifrons albifrons*.

Status—Fairly common summer visitant in the valleys, mostly east of the coast ranges, but irregularly distributed. Reported from Chilliwack (Brooks, 1917, p. 46); from many points in the Okanagan region (Anderson, 1914, p. 13); from Ashcroft (Chapman, 1890b, p. 149); from the upper Stikine River (Swarth, 1922, p. 264); and from Atlin (Anderson, 1915a, p. 15). Has not been found on Vancouver Island or northward along the coast.

Hirundo erythrogaster Boddaert. Barn Swallow.

Synonyms—*Chelidon erythrogaster*; *Hirundo horreorum*; *Hirundo erythrogastra palmeri*; *Hirundo erythrogastra unalaschkensis*.

Status—Common in summer in the lowlands throughout British Columbia. Reported from many localities from the southern boundary to the northern, and both in the interior and on the coast. Common on Vancouver Island and on the Queen Charlotte Islands.

Iridoprocne bicolor (Vieillot). Tree Swallow.

Synonyms—*Tachycineta bicolor*; *Hirundo bicolor*.

Status—A summer visitant, of general, though irregular, distribution. Locally abundant, and, conversely, absent from many regions where it might be expected to occur. Has been found nesting from Chilliwack (Brooks, 1917, p. 46) north to the upper Stikine River (Swarth, 1922, p. 265); and to as high an elevation as 4000 feet, at Crow's Nest (Brooks, MS); Cowichan, Vancouver Island, abundant (Brooks, MS); Queen Charlotte Islands (Osgood, 1901b, p. 49).

Tachycineta thalassina lepida Mearns. Northern Violet-green Swallow.

Synonyms—*Tachycineta thalassina*; *Hirundo thalassina*; *Iridoprocne thalassina lepida*.

Status—Summer visitant, abundant and widely distributed. Common on Vancouver Island. It is of general distribution (except at high altitudes) to the northern boundary of the province: Atlin, breeding (Anderson, 1915a, p. 15). Has not been found on the Queen Charlotte Islands.

Riparia riparia (Linnaeus). Bank Swallow.

Synonyms—*Clivicola riparia*; *Cotyle riparia*.

Status—Summer visitant, mostly east of the Cascades and coast ranges. Reported from Chilliwack (Brooks, 1917, p. 46); from the Okanagan district (Anderson, 1914, p. 14); from Kamloops, near Revelstoke, and near Trail (Macoun and Macoun, 1909, p. 582); from Ashcroft (Rhoads, 1893d, p. 53); and from the upper Stikine River (Swarth, 1922, p. 266). May be of general distribution during migrations, though not as yet reported from any island locality nor from the northern coast region.

Stelgidopteryx serripennis (Audubon). Rough-winged Swallow.

Synonym—*Cotyle serripennis*.

Status—Summer visitant to southern British Columbia, east of the coast ranges except at the extreme south, where it reaches the coast. Reported from many points: Westminster, Ducks (Chapman, 1890b, pp. 149, 157); Ashcroft, Sicamous (Rhoads, 1893d, p. 53); Chilliwack (Brooks, 1917, p. 46); Brackendale, Lillooet (Taverner, 1917b, p. 366); Revelstoke, Penticton, etc. (Macoun and Macoun, 1909, p. 584); and north to Hazelton (Taverner, 1919, p. 84). Occurs in the southern and eastern parts of Vancouver Island: Nanaimo, Parksville, Alberni (Swarth, 1912b, p. 66); Comox (C. P. Streator, MS). Also reported from Fort Rupert, by Brown (1866, p. 421).

Bombycilla garrula pallidiceps Reichenow. Bohemian Waxwing.

Synonyms—*Ampelis garrulus*; *Bombycilla garrula*.

Status—Breeds in the interior, mostly in the northern half of British Columbia. Has been found nesting at the following points: Atlin (Anderson, 1915a, p. 15); Telegraph Creek (Swarth, 1922, p. 266); 158-mile House, Cariboo District (Brooks, 1903, p. 283). Found on Moose River, Yellowhead Pass region, evidently breeding though nests were not found (Riley, 1912, p. 69), and south to the Monashee Range (Brooks, MS). Has been found in winter at Chilliwack (Brooks, 1917, p. 46), at Lake Okanagan, Golden, and Nicola River (Macoun and Macoun, 1909, p. 587), and on Vancouver Island (Fannin, 1891, p. 39). Northern limit in winter unknown. Not reported from Queen Charlotte Islands nor from the more northern mainland coast.

Bombycilla cedrorum Vieillot. Cedar Waxwing.

Synonym—*Ampelis cedrorum*.

Status—Common in summer over the southern half of British Columbia, including Vancouver Island. Reported from many points: Vernon, Nelson, Sicamous, Bonaparte, Lac La Hache (Rhoads, 1893d, p. 53); Mount Lehman, Ashcroft, Ducks (Chapman, 1890b, p. 149); Chilliwack (Brooks, 1917, p. 46); Brackendale (Taverner, 1917b, p. 366). The northernmost point of record is Kispiox Valley, north of Hazelton (Mus. Vert. Zool.). Has been found in all parts of Vancouver Island (Victoria, Comox, Alberni, Nootka Sound and Alert Bay), but not on the Queen Charlotte Islands. Occurred at Okanagan Landing during the winter of 1920-21 (Munro, 1922b, p. 13).

Lanius borealis Vieillot. Northern Shrike.

Synonym—*Collyrio borealis*.

Status—Common migrant throughout most of the province. Remains through the winter in the extreme south, as at Chilliwack (Brooks, 1917, p. 46) and Lake Okanagan (Brooks, in Macoun and Macoun, 1909, p. 594), and Comox, Vancouver Island (Brooks, MS). Probably not as abundant anywhere in the coastal region as in the interior. Not yet reported from the Queen Charlotte Islands. There are no definite breeding records for British Columbia; a specimen was collected at Bennett, June 9, 1903, by W. H. Osgood (in U. S. Biol. Surv. collection).

Lanius ludovicianus gambeli Ridgway. California Shrike.

Synonym—*Lanius ludovicianus excubitorides*.

Status—A rare straggler into extreme southern British Columbia. There are published records of three occurrences: "Vancouver Island—A. H. Maynard" (Fannin, 1891, p. 39); Chilliwack, April 9, 1888, one specimen collected by W. E. Brooks (Brewster, 1893, p. 237); Osoyoos, March, 1908, one specimen collected by C. deB Green (Brooks, 1909a, p. 62). There is record of a small shrike (under the name of *Lanius ludovicianus excubitorides*) seen at Midway, April 6, 1905 (Spreadborough in Macoun and Macoun, 1909, p. 598). There is one specimen, adult female, collected at Edgewood, west shore of Arrow Lake, May 16, 1917, in the collection of Dr. J. E. H. Kelso (Brooks, MS).

Vireosylva olivacea (Linnaeus). Red-eyed Vireo.

Synonym—*Vireo olivaceus*.

Status—Abundant summer visitant in southern British Columbia. Reported from many mainland localities: Mount Lehman and Chilliwack (Brooks, MS); Brackendale and Lillooet (Taverner, 1917b, p. 366); Vaseaux Lake, Penticton, Okanagan Falls, etc. (Anderson, 1914, p. 14); Vernon, Nelson, Bonaparte, Ashcroft, and Lac La Hache (Rhoads, 1893d, p. 53); McLennan River, Robson, Agassiz, Kamloops, etc. (Macoun and Macoun, 1909, p. 598); Newgate (Brooks, MS); northward in diminishing numbers as far as Hazelton (Taverner, 1919, p. 84). Occurs in small numbers on southern Vancouver Island as far north as Alberni (Swarth, 1912b, p. 67).

Vireosylva gilva swainsoni (Baird). Western Warbling Vireo.

Synonyms—*Vireo gilvus swainsonii*; *Vireo gilvus*; *Vireosylva gilva*.

Status—Summer visitant, abundant and widely distributed. Absent from the Queen Charlotte Islands, from the west coast of Vancouver Island, and from the mainland coast except at the extreme south. East of the coast ranges it is of general occurrence, reported from many stations: Chilliwack (Brooks, 1917, p. 47); Revelstoke, Kamloops, etc. (Macoun and Macoun, 1909, p. 604); Yellowhead Pass (Riley, 1912, p. 70); Vernon, Ashcroft, Lac La Hache, etc. (Rhoads, 1893d, p. 53); Hazelton (Taverner, 1919, p. 85); and, the northernmost recorded point, the upper Stikine River (Swarth, 1922, p. 285). Abundant in the southern and eastern parts of Vancouver Island, north at least to Comox.

Lanivireo solitarius cassini (Xantus). Cassin Vireo.

Synonyms—*Vireo solitarius cassinii*; *Vireo solitarius*; *Lanivireo solitarius*; *Vireo solitarius plumbeus*.

Status—Common summer visitant to southern British Columbia. On Vancouver Island it occurs at the southern extremity, and on the east coast north to Errington and French Creek (Swarth, 1912b, p. 67), and even to Comox (C. P. Streater, MS). On the mainland, reported from various points: Westminster Junction, Agassiz, Chilliwack, Okanagan Falls, etc., north to Lillooet (Taverner, 1917b, p. 366) and Lac La Hache (Rhoads, 1893d, p. 53); east to the Rockies: Newgate (Brooks, MS). The record by Fannin (1891, p. 40) of the occurrence of *Vireo solitarius plumbeus* at "Chilliwack" was based upon a specimen of *cassini* in worn plumage. This skin is in the Brooks collection.

Vireo huttoni huttoni Cassin. Hutton Vireo.

Synonyms—*Vireo huttoni obscurus*; *Vireo huttoni insularis*.

Status—Resident in small numbers along the southeastern coast of Vancouver Island. Reported from Victoria (Rhoads, 1893d, p. 23) and from Comox, where it is fairly common throughout the year (Brooks, 1904, p. 290). There is but one mainland record: Chilliwack, May, 1905, one specimen collected (Brooks, 1917, p. 47). Recent studies by Grinnell (1922, p. 32) and by Oberholser (1922a, pp. 77, 78) argue against the existence of a distinguishable northern subspecies of *Vireo huttoni*; we accordingly here regard *V. h. obscurus* Anthony and *V. h. insularis* Rhoads as synonyms of *V. h. huttoni*.

Vermivora ruficapilla gutturalis (Ridgway). Calaveras Warbler.

Synonyms—*Helminthophila ruficapilla*; *Helminthophila ruficapilla gutturalis*; *Helminthophila rubricapilla gutturalis*; *Vermivora rubricapilla*; *Vermivora rubricapilla gutturalis*.

Status—Fairly common summer visitant to the lowlands of southern British Columbia east of the Cascades. Common at Okanagan (Brooks, 1900c, p. 107); also reported from other points as far north as Lillooet (Taverner, 1917b, p. 366) and Revelstoke (Macoun and Macoun, 1909, p. 614). The westernmost record is of a singing male seen at Chilliwack in April, 1889 (Brooks, 1917, p. 50).

Vermivora celata celata (Say). Orange-crowned Warbler.

Synonym—*Helminthophila celata*.

Status—Probably a migrant of fairly common occurrence in the interior, less commonly along the coast. There are many records of occurrence, but dating mostly from a time when no distinction was made between *celata* and *orestera*. Hence it is not possible at this time to determine the relative abundance of these subspecies. *Vermivora c. celata* may prove to be the breeding form of extreme northeastern British Columbia. Specimens taken on migration at Chilliwack and Okanagan have been identified by Oberholser as typical examples of the subspecies *Vermivora celata celata*.

Vermivora celata orestera Oberholser. Rocky Mountain Orange-crowned Warbler.

Synonyms—? *Helminthophila celata lutescens*; *Vermivora celata lutescens*, ? *Vermivora celata celata*; ? *Helminthophila lutescens*, part; *Helminthophila celata*.

Status—Recorded as breeding at Penticton, in extreme southern British Columbia

(Oberholser, 1905, p. 244), and as a migrant on the upper Stikine River, in the north (Swarth, 1922, p. 286). It is likely that *orestera* is the form of *Vermivora celata* to be found breeding throughout most of the interior of British Columbia, but specimens and data are not available to prove this. Records that apparently pertain to this subspecies are: Eagle Pass, west of Revelstoke, breeding (Macoun and Macoun, 1909, p. 617); Lillooet (Taverner, 1917b, p. 366); Moose Lake, Yellowhead Pass region, August (Riley, 1912, p. 70); Cariboo District, scarce summer resident (Brooks, 1903, p. 283); Lac La Hache (Rhoads, 1893d, p. 54).

Vermivora celata lutescens (Ridgway). Lutescent Warbler.

Synonyms—*Helminthophila celata lutescens*; *Helminthophila celata*, part; *Helminthophaga celata*.

Status—Common summer visitant to the lowlands of the coastal region. Reported from many points on Vancouver Island, from the Queen Charlotte Islands, and from the mainland coast west of the coast ranges and Cascades. Easternmost records are: Great Glacier, Stikine River, August, migrating (Swarth, 1922, p. 286); vicinity of Hazelton, July and August (Mus. Vert. Zool.); Chilliwack, possibly breeding (Brooks, 1917, p. 47). May occur farther inland during migrations.

Vermivora peregrina (Wilson). Tennessee Warbler.

Synonym—*Helminthophila peregrina*.

Status—Reported in summer from several points in northern British Columbia: From Cariboo Crossing (Bishop, 1900b, p. 89), from Telegraph Creek (Swarth, 1922, p. 286), and from Hazelton (Mus. Vert. Zool.). Found breeding commonly at 158-mile House, southern Cariboo District (Brooks, 1903, p. 283). The line of migration is probably east of the Rocky Mountains, for the most part; the species has not yet been detected passing through southern British Columbia.

Dendroica aestiva aestiva (Gmelin). Eastern Yellow Warbler.

Synonyms—*Dendroica aestiva morcomi*; *Dendroica aestiva rubiginosa*; *Dendroica aestiva brewsteri*.

Status—Abundant summer visitant in the lowlands east of the coast ranges, the length of the province. Reported from Atlin (Anderson, 1915a, p. 16) and from the upper Stikine River (Swarth, 1922, p. 287; subspecific status carefully determined) in the north; and, farther south, from Revelstoke, Elko, Robson, and Kamloops (Macoun and Macoun, 1909, p. 626); from Vaseaux Lake and Penticton (Anderson, 1914, p. 14); from Vernon and Crow's Nest Pass (Brooks collection; identified by H. C. Oberholser); and from other intervening points.

Dendroica aestiva rubiginosa (Pallas). Alaska Yellow Warbler.

Synonym—*Dendroica aestiva*.

Status—Abundant summer visitant in the lowlands west of the coast ranges; at some points it extends east of those mountains. Reported from many parts of Vancouver Island, from the Queen Charlotte Islands (questionably), and from the mainland coast. The exact line of division between *rubiginosa* of the coast, and *aestiva* of the interior has not been worked out. In northern British Columbia, *rubiginosa* has been found breeding in the Skeena Valley as far eastward as Hazelton (Mus. Vert. Zool.).

Dendroica coronata hooveri McGregor. Alaska Myrtle Warbler.

Synonyms—*Dendroica coronata*; *Dendroica auduboni auduboni*.

Status—Breeds commonly in the interior in extreme northern British Columbia. Found in summer at Bennett (Bishop, 1900b, p. 90); and in fair abundance at Telegraph Creek (Swarth, 1922, p. 289). Capture of one specimen, July 23, in the Yellowhead Pass region (Riley, 1912, p. 70) indicates the possibility of the southern extension of the breeding range to that point. A migrant in the lowlands throughout the province both in the interior and on the coast. Common in migration on Vancouver Island, but not reported from the Queen Charlotte Islands.

Dendroica auduboni auduboni (J. K. Townsend). Audubon Warbler.

Synonym—*Dendroica auduboni*.

Status—Abundant summer visitant over the southern half of British Columbia. Reported as breeding at many localities, over the breadth of the province; the northernmost point of record being 23 miles north of Hazelton, in Kispiox Valley, where it was common in summer (Mus. Vert. Zool.). Breeds commonly in the southern and eastern portions of Vancouver Island, north to Alberni (Swarth, 1912b, p. 69), and Comox (C. P. Streater, MS). Apparently absent from the northern and western parts of the island; and absent from the Queen Charlotte Islands. Probably a few remain through the winter in the lower Fraser Valley (Brooks, 1905, p. 215).

Dendroica magnolia (Wilson). Magnolia Warbler.

Synonym—*Dendroica maculosa*.

Status—A fairly common summer visitant in the vicinity of Hazelton (Taverner, 1919, p. 85) and in the nearby Kispiox Valley (Mus. Vert. Zool.). Seen near Tacla Lake in August (E. A. Preble, MS). A rather uncommon migrant at Quesnelle (Brooks, 1903, p. 284); one specimen taken at Field (Rhoads, 1893d, p. 54). There are published records from Okanagan (Fannin, 1898, p. 51, and Rhoads, 1893d, p. 54), without the basis of specimens taken, which are probably erroneous.

Dendroica striata (J. R. Forster). Black-poll Warbler.

Status—Seen during the summer, and presumably breeding, at Lake Atlin (Anderson, 1915a, p. 16). At Hazelton, on the upper Skeena River, one specimen was taken on August 25, 1917 (Taverner, 1919, p. 85); in the Kispiox Valley, near Hazelton, two were collected on August 18 and September 1, 1921, respectively (Mus. Vert. Zool.). Seen at Tacla Lake and Bear Lake in late August, 1913 (E. A. Preble, MS). Brooks (1903, p. 284) saw one "in the first plumage," at Quesnelle, in the summer of 1901. To sum up, this species appears to be a summer visitant to extreme northern British Columbia. It is probably a not uncommon migrant in the interior of the northern half of the province; the trend of migration is apparently to and from the southeast, missing southern British Columbia entirely.

Dendroica nigrescens (J. K. Townsend). Black-throated Gray Warbler.

Status—A summer visitant, reported from but a few localities in southwestern British Columbia. Brooks (1917, p. 47) found it "a common summer resident" at Chilliwack. Reported from Agassiz, Hastings, Huntingdon, and Douglas, apparently in migration (Macoun and Macoun, 1909, p. 649); from Westminster and Mount

Lehman, "not common" (Chapman, 1890b, pp. 151, 158); and from Brackendale and Lillooet (Taverner, 1917b, p. 367). On Vancouver Island, Rhoads (1893d, p. 54) heard the song but got no birds. Clark (1910, p. 70) reports the species from Union Bay as "common," but gives no particulars. Seen at Nanaimo, April 28, 1904, and at Cowichan in June, 1904 (Brooks, MS); one seen at Wellington in May, 1895 (C. P. Streater, MS).

Dendroica townsendi (J. K. Townsend). Townsend Warbler.

Synonym—*Dendroeca townsendi*.

Status—A common summer visitant to Vancouver Island, the Queen Charlotte Islands, and the mainland coast. West of the coast ranges it breeds at sea level and for an undetermined distance upward in the mountains; east of the coast ranges it breeds in small numbers and at high altitudes. Reported from the upper Stikine River (Swarth, 1922, p. 291); mountains near Hazelton (Mus. Vert. Zool.); Tacla Lake and Bear Lake, in late August (E. A. Preble, MS); Revelstoke, in May (Macoun and Macoun, 1909, p. 651); Okanagan, breeding in mountains (Brooks, MS). Probably of fairly general distribution in the lowlands during the migrations.

Seiurus noveboracensis notabilis Ridgway. Grinnell Water-thrush.

Synonym—*Seiurus noveboracensis*.

Status—Summer visitant, from the northern boundary of the province south, at least in the high mountains of the eastern section, to the southern boundary. Specific localities of record are: upper Stikine River (Swarth, 1922, p. 292); Hazelton (Taverner, 1919, p. 85); Quesnelle and 158-mile House (Brooks, 1903, p. 284); Lac La Hache and Bonaparte (Rhoads, 1893d, p. 55); Ducks, August (Chapman, 1890b, p. 151); Moose Lake, Yellowhead Pass region (Riley, 1912, p. 71); Elko (Macoun and Macoun, 1909, p. 662). Not reported from any island locality nor from the mainland coast. There are specimens in the collections of Dr. J. E. Kelso and W. B. Johnstone, taken on migration at Edgewood, Lower Arrow Lake, from July 30 to August 4.

Oporornis tolmiei (J. K. Townsend). Macgillivray Warbler.

Synonyms—*Geothlypis tolmiei*; *Geothlypis macgillivrayi*.

Status—Common summer visitant to the lowlands over most of the province; ascending well up the mountains also in the south. Reported from many points: Chilliwack (Brooks, 1917, p. 47); Vernon, Kamloops, Bonaparte, and Lac La Hache (Rhoads, 1893d, p. 55); Yellowhead Lake (Riley, 1912, p. 71); north as far as the upper Stikine River (Swarth, 1922, p. 292). Has been found at various points on Vancouver Island, both on the east and west coasts (Swarth, 1912b, p. 70), but not on the Queen Charlotte Islands.

Geothlypis trichas occidentalis Brewster. Western Yellowthroat.

Synonyms—*Geothlypis trichas*; *Geothlypis trichas arizela*.

Status—Common summer visitant to the valleys over at least the southern half of the province. Reported from Chilliwack (Brooks, 1917, p. 47); Vaseaux Lake and Penticton (Anderson, 1914, p. 15); Lulu Island, Kamloops, Clinton, and Lac La Hache (Rhoads, 1893d, p. 55); Robson, Revelstoke, Agassiz (Macoun and Macoun,

1909, p. 670); and as far north as Kispiox Valley, near Hazelton (Mus. Vert. Zool.). On Vancouver Island, occurs in the southern and eastern parts, north to Alberni (Swarth, 1912b, p. 71) and Comox (Oberholser, 1899, p. 256).

For use of the name *occidentalis* for the yellowthroat of British Columbia, instead of *arizela*, as in the A. O. U. *Check-list*, see Swarth, 1912b, p. 71.

Icteria virens longicauda Lawrence. Long-tailed Chat.

Status—Summer visitant to the valleys of the southern mainland. It has been found at various points about Lake Okanagan: Near the mouth of the Similkameen River in June (Macoun and Macoun, 1909, p. 672); commonly at Osoyoos, and rarely at Vernon (Brooks, 1909a, p. 63). Also at Kamloops (Fannin, 1898, p. 51); and at Ashcroft (Rhoads, 1893d, p. 55). One specimen collected at Sumas, May 26, 1897 (Brooks, 1900c, p. 107).

Wilsonia pusilla pileolata (Pallas). Pileolated Warbler.

Synonyms—*Sylvania pusilla*; ? *Wilsonia pusilla pusilla*; *Myiodiactes pusillus*; *Myiodiactes pileolatus*; *Sylvania pusilla pileolata*; *Wilsonia pusilla chryseola*.

Status—Common in summer throughout southern British Columbia, from the eastern boundary to the coast, and including Vancouver Island and the Queen Charlotte Islands. Breeds at sea level on the coast, at high altitudes inland. In the interior of northern British Columbia it is less abundant and breeds at high elevations: Atlin, nesting at 3000 feet (Anderson, 1915a, p. 16). Common in migration throughout the province.

Birds from southern British Columbia have been referred to the subspecies *chryseola*, but a series of specimens from Vancouver Island (Mus. Vert. Zool.), while displaying a tendency toward that form, are best referred to *pileolata*. *Wilsonia p. pusilla* has been reported from the Yellowhead Pass region (Riley, 1912, p. 71), but the specimens upon which the record is based (examined by us) we do not consider as clearly representative of that subspecies.

Setophaga ruticilla (Linnaeus). American Redstart.

Status—Common summer visitant to the valleys of the mainland, mostly east of the Cascades and coast ranges. Has been found breeding commonly in the Okanagan region (Anderson, 1914, p. 14), the southern Cariboo District (Brooks, 1903, p. 284), at Hazelton (Taverner, 1919, p. 85) and, the northernmost record, on the upper Stikine River (Swarth, 1922, p. 293). In southern British Columbia, according to Brooks (1900c, p. 107) it occurs "regularly east of, and accidentally west of Cascades." One specimen collected on the southern coast, at Brackendale (Taverner, 1917b, p. 367).

Anthus rubescens (Tunstall). Pipit.

Synonyms—*Anthus pensilvanicus*; *Anthus ludovicianus*.

Status—Summer visitant to Alpine-Arctic mountain tops, probably everywhere east of the first line of the coast ranges. Has been reported as breeding on mountains near Atlin (Anderson, 1915a, p. 16), on the upper Stikine (Swarth, 1922, p. 294), the upper Skeena (Mus. Vert. Zool.), Moose Pass (Riley, 1912, p. 71), "on nearly all the mountains of the coast and Gold ranges, B. C.; near the 49th parallel"

(Macoun and Macoun, 1909, p. 683), and on mountains near Chilliwack (Brooks, 1917, p. 47). Not known to breed on Vancouver Island. A scarce migrant on the Queen Charlotte Islands (Brooks, MS); "a bird thought to be this species was seen on a snow field in the mountains of Moresby Island June 23" (Osgood, 1901b, p. 49). Abundant and of general distribution during migrations, occurring in the lowlands throughout the province. Said to remain during some winters on Vancouver Island (Fannin, 1891, p. 42), presumably at the southern end.

Cinclus mexicanus unicolor Bonaparte. Dipper.

Synonyms—*Cinclus mexicanus*; *Hydrobata mexicana*; Water Ouzel.

Status—Common resident locally in all sections of the province. Has been reported from the southern boundary, at Chilliwack (Brooks, 1917, p. 47), to the northern, at Atlin (Anderson, 1915a, p. 16), and east to Moose Pass (Riley, 1912, p. 72). Abundant on Vancouver Island (Swarth, 1912b, p. 21), and occurs also on the Queen Charlotte Islands (Osgood, 1901b, p. 49). Thus found in all parts of British Columbia where conditions are suitable, but there are vast areas where the necessary surroundings supplied by rushing streams do not exist, and where the Dipper is not found.

Oreoscoptes montanus (J. K. Townsend). Sage Thrasher.

Status—Barely extends north of the southern boundary of British Columbia. First known through the record by Brooks (1909a, p. 63) of its discovery in the Osoyoos District by C. deB. Green. "He reports it as a scarce local breeder in the sage brush country of Osoyoos District, and has sent me a handsome set of four eggs with the male bird collected 21st June of this year." Has since been found breeding (in the summer of 1919) at White Lake, Osoyoos, and at Keremeos, in the Similkameen Valley (Brooks, MS).

Dumetella carolinensis (Linnaeus). Catbird.

Synonym—*Galeoscoptes carolinensis*.

Status—Summer visitant to the valleys of the southern mainland. Reported from many points in the valley of the Columbia, the Thompson, and the lower Fraser rivers. Brooks (1903, p. 284) found it in the southern Cariboo District as far north as Soda Creek. The northernmost point of record is Hazelton, on the upper Skeena River, a single adult male, apparently breeding, taken June 10, 1921 (Mus. Vert. Zool.). Reported toward the coast at Chilliwack (Brooks, 1917b, p. 367). Assertions of occurrence on Vancouver Island apparently are repetitions of Fannin's (1891, p. 42) statement that it is "rare on Vancouver Island"; there appear to be no specimens extant to support this belief.

Salpinctes obsoletus obsoletus (Say). Rock Wren.

Status—Fairly common summer resident, locally, in arid regions from the Cascades eastward in southern British Columbia. Found as far north as Kamloops and Ashcroft, and "northward to Cache Creek" (Rhoads, 1893d, p. 56). Toward the coast a straggler has been taken at Chilliwack, in November, 1889 (Brooks, 1900c, p. 107). The oft-cited record by Fannin (1891, p. 42) of an occurrence at Burrard Inlet, in June, 1884, is of questionable authenticity (Brooks, MS). Similarly,

repeated statements of the Rock Wren's occurrence on Vancouver Island apparently have no foundation in fact.

Catherpes mexicanus conspersus Ridgway. Cañon Wren.

Status—Found by C. deB. Green, one pair, apparently breeding, in March, 1909, at McIntyre Creek, "a mountain stream which flows into Okanagan River from the east, some twenty miles north of the International Boundary"; and another pair near the north end of Osoyoos Lake (Brooks, 1909b, p. 314). Since found by Taverner and Brooks to be a fairly common, though local, resident in the southern portion of Okanagan Valley, north to Dog Lake.

Thryomanes bewicki calophonus Oberholser. Northwest Coast Bewick Wren.

Synonyms—*Thryothorus bewicki*; *Thriothonus bewickii*; *Thryomanes bewicki*; *Thryothorus bewickii spilurus*; *Thryomanes bewickii ariborius*.

Status—Common resident of the extreme southwestern corner of the mainland, and of the southeastern coast of Vancouver Island. On Vancouver Island it has been reported as breeding at Victoria (Fannin, 1898, p. 52), and as far north as Comox, where it is resident (Brooks, MS). On the mainland, recorded as resident at Chilliwack (Brooks, 1917, p. 48), the easternmost limit; there are summer records from New Westminster, Westminster Junction, Mount Lehman, Agassiz, Brackendale and Gibson's Landing, Howe Sound.

Troglodytes aedon parkmani Audubon. Western House Wren.

Synonyms—*Troglodytes aëdon*; *Troglodites parkmani*; *Troglodytes parkmanni*.

Status—Abundant summer visitant to southern British Columbia, both on the coast and in the interior. Has been found on Vancouver Island as far north as Alberni (Swarth, 1912b, p. 75) and Comox (C. P. Streater, MS), on the mainland at Kispiox Valley, 23 miles north of Hazelton, one specimen (Mus. Vert. Zool.). As the species is common on Peace River, Alberta, at about the same latitude as Hazelton (Macoun and Macoun, 1909, p. 699), it may also prove to occur in numbers in northeastern British Columbia, between those points.

Nannus hiemalis pacificus (Baird). Western Winter Wren.

Synonyms—*Anorthura hiemalis pacifica*; *Troglodytes hiemalis pacificus*; *Olbiorchilus hiemalis pacificus*; *Nannus hiemalis*; *Troglodites hyemalis*; *Troglodytes hyemalis*.

Status—Occurs over most of British Columbia; possibly absent from the extreme northern and northeastern sections. Most abundant in the coastal region, where it is found from sea level well up the mountains. Recorded from many points on Vancouver Island and from the Queen Charlotte Islands. East of the Cascades and coast ranges it breeds only at high elevations: Upper Stikine River, at 3,000 feet altitude (Swarth, 1922, p. 295); upper Skeena River, at 4,000 feet (Mus. Vert. Zool.); Moose Pass (Riley, 1912, p. 72), etc. Chilliwack, breeding both in the valley and on the mountains.

Winter Wrens remain through the winter at sea level along the entire coast, as well as at some points in the southern interior. Reported from Barkley Sound, Vancouver Island, December (Taverner, 1917a, p. 357), in the valley at Chilliwack

in winter (Brooks, 1917, p. 48), and from Lake Okanagan in winter (Brooks, *in* Macoun and Macoun, 1909, p. 703).

Telmatodytes palustris paludicola (Baird). Tule Wren.

Synonym—*Cistothorus palustris*.

Status—Occurs in a limited area on the coast of the extreme southwestern corner of the mainland of British Columbia. Found nesting near New Westminster (Macoun and Macoun, 1909, p. 707). Reported by Brooks (1917, p. 48) from Chilliwack: "Breeding in suitable localities and a few probably remain all winter." Not recorded from Vancouver Island.

Telmatodytes palustris plesius (Oberholser). Western Marsh Wren.

Synonyms—*Cistothorus palustris plesius*; *Cistothorus palustris paludicola*; *Telmatodytes palustris paludicola*.

Status—Summer visitant to the southern mainland, east of the Cascades. Reported from the "Cariboo Road" (Fannin, 1891, p. 43), Lac La Hache (Rhoads, 1893d, p. 57), Ashcroft and Ducks (Chapman, 1890b, p. 152), Swan Lake (Munro, 1917, p. 13), Penticton and Midway (Macoun and Macoun, 1909, p. 707). "A few stay all winter at Lake Okanagan, B. C." (Brooks, *in* Macoun and Macoun, *loc. cit.*).

Certhia familiaris montana Ridgway. Rocky Mountain Creeper.

Synonyms—*Certhia familiaris zelotes*; *Certhia familiaris*.

Status—Occurs east of the Cascades and north to central British Columbia. There are summer records from various points in that section, as far north as Shuswap Falls (Munro, 1917, p. 14) and Revelstoke (Macoun and Macoun, 1909, p. 710). Okanagan in winter (Munro, 1922b, p. 13) and Cariboo District (Macoun and Macoun, *loc. cit.*).

In northern British Columbia the creeper apparently is rare or wanting. It is not included by Anderson (1915a) in his list of birds of the Atlin region, nor by Swarth (1922) as from the upper Stikine River. In fact there are no explicit breeding records of any subspecies of creeper from northern British Columbia. *Certhia f. montana* is known to occur still farther northward.

Certhia familiaris occidentalis Ridgway. Tawny Creeper.

Synonyms—*Certhia familiaris*, part; *Certhia americana*.

Status—Found in the coastal district, both on the mainland and on Vancouver Island and the Queen Charlotte Islands. Remains through the winter on Vancouver Island; its northern limit in winter on the mainland, is not known. Resident at Chilliwack (Brooks, 1917, p. 48).

Sitta carolinensis aculeata Cassin. Slender-billed Nuthatch.

Synonyms—*Sitta carolinensis*; *Sitta aculeata*; *Sitta carolinensis nelsoni*.

Status—Resident in the interior of southern British Columbia, where closely "confined to the region of *Pinus ponderosa*" (Brooks, 1900c, p. 107). Reported from several points in the Rocky Mountain region: Newgate (Brooks, MS); Crow's Nest Pass, Revelstoke, Robson, etc. (Macoun and Macoun, 1909, p. 712); from Ashcroft (Rhoads, 1893d, p. 57); Lillooet (Taverner, 1917b, p. 368); and southward. Of

extremely rare occurrence on the coast; Sumas Prairie, October 10, 1894, one specimen (Brooks, 1917, p. 48). Included among the birds of Vancouver Island by Brown (1868, p. 42). This old record may be erroneous, but there is a recent occurrence that is reliable: one specimen, female, taken by H. M. Laing at Comox, Vancouver Island, September 9, 1922 (no. 18278, Victoria Memorial Museum).

***Sitta canadensis* Linnaeus.** Red-breasted Nuthatch.

Status—Reported at one season or another from many points on the mainland, on Vancouver Island and on the Queen Charlotte Islands. Recorded in the summer from Bennett, in extreme northern British Columbia (Bishop, 1900b, p. 92), to Chilliwack, at the southern boundary (Brooks, 1917, p. 48); in winter, from Vancouver Island (Fannin, 1891, p. 43), and Chilliwack (Brooks, *loc. cit.*). Winters in the southern interior, how far north is not known; migratory to some extent, and also wanders locally into regions where it seldom or never breeds.

***Sitta pygmaea pygmaea* Vigors.** Pigmy Nuthatch.

Status—Resident in a restricted area on the southern mainland, south of latitude 52°. "Confined to the region of *Pinus ponderosa*" (Brooks, 1900c, p. 107); Penticton, Midway, Sidley (Macoun and Macoun, 1909, p. 716); Okanagan Valley (Anderson, 1914, p. 15); Ducks (Chapman, 1890b, p. 153). East to Newgate, East Kootenay (Brooks, MS). The range of the Pigmy Nuthatch will probably prove to be co-extensive with that of the yellow pine in British Columbia, as stated by Brooks. The statement by Lord (1866, vol. 2, pp. 133, 296) of its occurrence on Vancouver Island, repeated by Brown (1868, p. 421) and by Ridgway (1904, p. 456), is an obvious error.

***Penthestes atricapillus septentrionalis* (Harris).** Long-tailed Chickadee.

Synonyms—*Parus atricapillus septentrionalis*; *Parus atricapillus*, part; *Penthestes atricapillus atricapillus*; *Penthestes atricapillus turneri*.

Status—Abundant east of the Cascades and coast ranges; probably resident wherever found. In southern British Columbia it ranges up to 5,000 feet altitude (Brooks, MS); in the north probably does not ascend above 2,500 feet. An inhabitant mainly of deciduous woods; the Mountain, Columbian, and Chestnut-backed chickadees are found mostly in coniferous forests. No coastal records.

The distribution of the subspecies of *Penthestes atricapillus* in southern British Columbia presents a problem that cannot yet be worked out in detail. According to Ridgway (1904, p. 397) the birds from this section form an isolated "colony" of *P. atricapillus atricapillus*, and they are formally accorded this name. Their superficial resemblance to this eastern race, however, is the result of intergradation between the pale-colored, long-tailed *P. a. septentrionalis* (in typical form) to the northward and eastward, and the dark-colored, short-tailed *P. a. occidentalis*, to the southward. For the present it seems best to use the name *septentrionalis* for these birds, especially so as it is not possible at this time to give details of distribution, or the manner in which the variable characters concerned behave geographically. (See Ridgway, *loc. cit.*, p. 398, footnote.)

***Penthestes atricapillus occidentalis* (Baird). Oregon Chickadee.**

Synonyms—*Parus occidentalis*; *Parus atricapillus occidentalis*; *Parus atricapillus*, part.

Status—Resident in a limited area in the extreme southwestern corner of the mainland of British Columbia. All records are from the valley of the lower Fraser River; Hastings, Agassiz, Chilliwack and Douglas (Macoun and Macoun, 1909, p. 719); Lulu Island (Rhoads, 1893d, p. 57); Westminster and Mount Lehman (Chapman, 1890b, p. 153). The statement by Lord (1866, vol. 2, pp. 134, 296) that it is "common on Vancouver Island" has not since been verified by so much as a single observation.

***Penthestes gambeli abbreviatus* Grinnell. Short-tailed Mountain Chickadee.**

Synonyms—*Parus montanus*; *Penthestes gambeli*; *Parus gambeli*.

Status—Common resident in the interior. Its range is almost co-extensive with

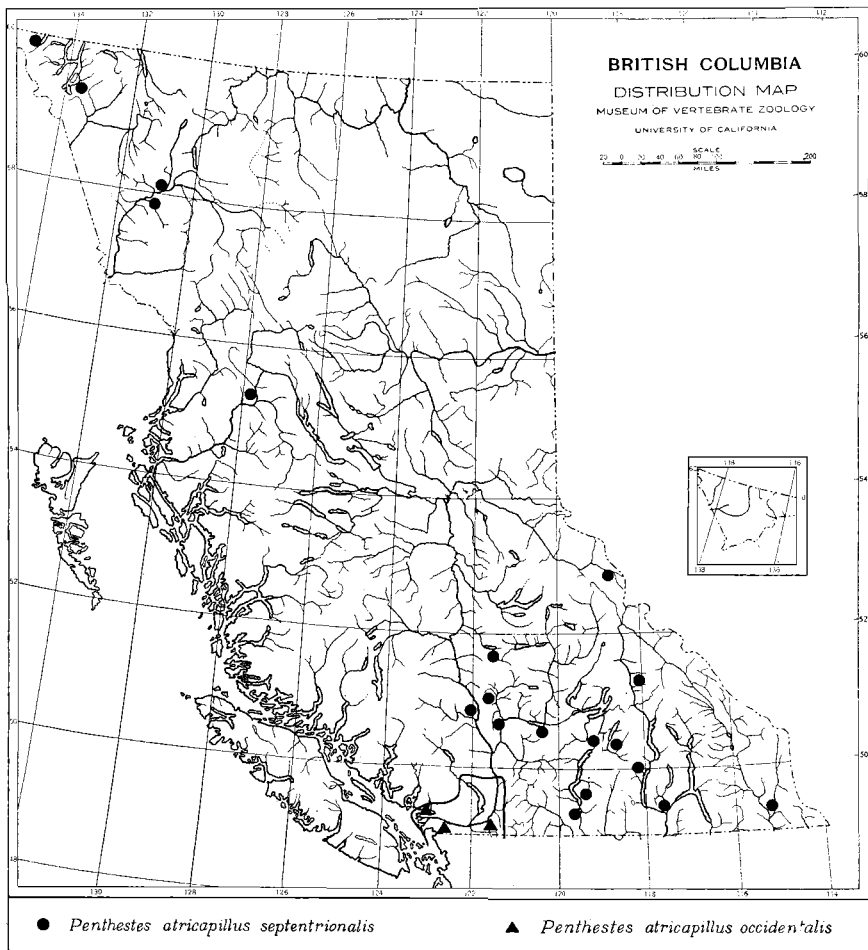


FIG. 34. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF SUBSPECIES OF THE BLACK-CAPPED CHICKADEE (*PENTHESTES ATRICAPILLUS*). ASSUMED HABITAT OF *PENTHESTES A. OCCIDENTALIS* IS OUTLINED.

that of *P. hudsonicus columbianus*; there may be local differences in habitat, and *abbreviatus* breeds down to a lower level than *columbianus* ever does. Also, *abbreviatus* does not extend so far to the northward. Doch-da-on Creek, on the upper Stikine River, is the northernmost point of record (Swarth, 1922, p. 297). Common in winter in the valleys of southern British Columbia. One record west of the Cascades, at Hope (Mrs. T. L. Thacker, MS).

***Penthestes hudsonicus columbianus* (Rhoads).** Columbian Chickadee.

Synonyms—*Parus hudsonicus columbianus*; *Penthestes hudsonicus hudsonicus*.

Status—Resident at high elevations (Hudsonian zone) in the interior. Reported from Atlin (Anderson, 1915a, p. 16), from Nahun, near Okanagan Lake, breeding (Munro, in Kermode, 1916, p. 9), and from various points in the southern Rocky Mountains, and the Gold and Selkirk ranges. Resident throughout its range, but sometimes descending to lower levels in winter. No record from any coastal point.

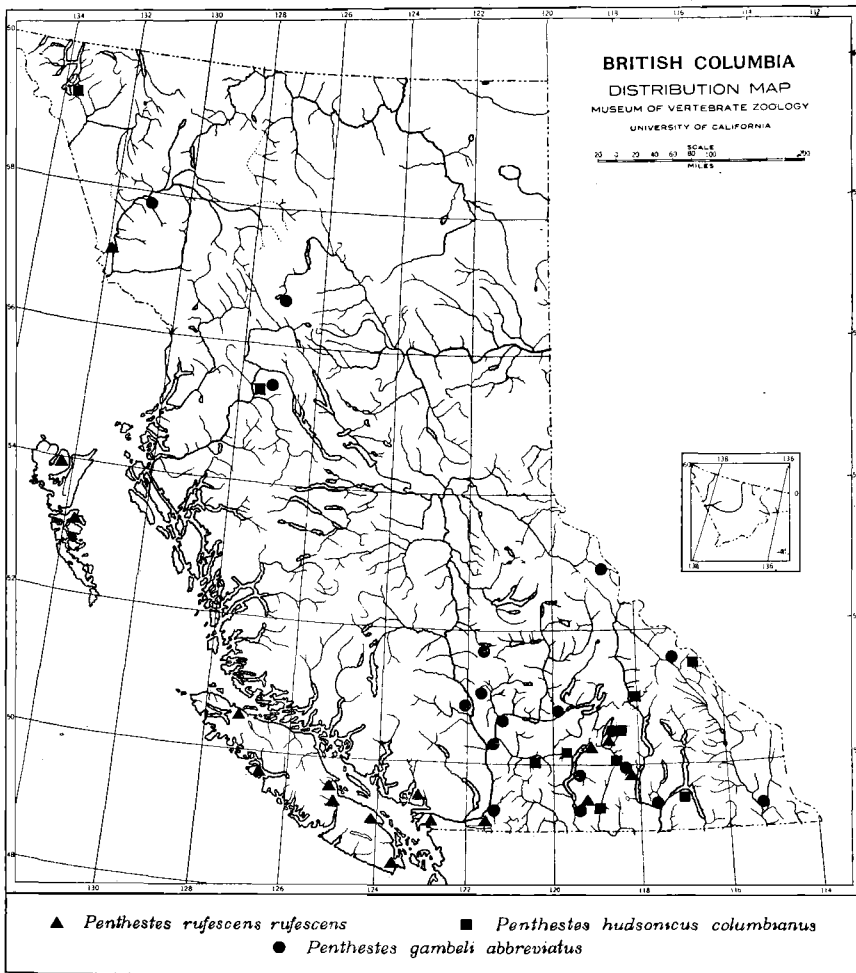


FIG. 35. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF THE CHEST-NUT-BACKED, COLUMBIAN, AND SHORT-TAILED MOUNTAIN CHICKADEES.

Penthestes rufescens rufescens (J. K. Townsend). Chestnut-backed Chickadee.

Synonym—*Parus rufescens*.

Status—Common resident on the coast, including the Cascade Range; also on all the larger islands. Ranges over the whole of Vancouver Island and the Queen Charlotte Islands. Occurs in the interior, both winter and summer, but less commonly and of local distribution, as far east as Arrow Lakes, West Kootenay (Brooks, MS). Easternmost points of record in northern British Columbia are Flood Glacier, Stikine River, in August (Swarth, 1922, p. 298), and Hazelton, August and September (Mus. Vert. Zool.).

Psaltriparus minimus minimus (J. K. Townsend). Coast Bush-tit.

Synonym—*Psaltriparus minimus saturatus*.

Status—"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 The Bush-tit occurs as a resident some fifty miles nearer the coast at Boundary Bay" (Brooks, 1917, p. 48). Not observed at any other points in British Columbia.

Regulus satrapa olivaceus Baird. Western Golden-crowned Kinglet.

Synonym—*Regulus satrapa*, part.

Status—Breeds commonly in the Hudsonian and in the higher parts of the Canadian zones throughout the province, at sea level in the coastal district, at higher altitudes inland. There are explicit summer records from the upper Stikine River (Swarth, 1922, p. 298), the Yellowhead Pass region (Riley, 1912, p. 73), mountains above Chilliwack (Brooks, 1917, p. 49), Queen Charlotte Islands (Osgood, 1901b, p. 50), Vancouver Island (Swarth, 1912b, p. 78). Has been found in winter at Chilliwack (Brooks, *loc. cit.*), at Okanagan, and as far north as the Cariboo District (Brooks, *in* Macoun and Macoun, 1909, p. 729). Remains through the winter throughout southern British Columbia.

Regulus calendula calendula (Linnaeus). Ruby-crowned Kinglet.

Status—Summer visitant east of the Cascades and coast ranges. During the breeding season most plentiful in the Transition zone and up to the Hudsonian of the mountains over most of the province. Explicit summer records are from Bennett (Bishop, 1900b, p. 93), upper Stikine River (Swarth, 1922, p. 299), vicinity of Hazelton (Mus. Vert. Zool.), 158-mile House, Cariboo District (Brooks, 1903, p. 284), Moose River (Riley, 1912, p. 73), Schoonover Mountain, Okanagan region (Anderson, 1914, p. 15). During migrations, of general distribution in the lowlands of the interior. Occasional in winter in the southern Okanagan Valley.

Regulus calendula grinnelli W. Palmer. Sitka Kinglet.

Synonym—*Regulus calendula*, part.

Status—There are very few explicit records of the occurrence of this bird in British Columbia. It has been found nesting at Cumshewa, southern Graham Island, of the Queen Charlotte group, and on Porcher Island, near the mouth of

the Skeena River (C. deB. Green, MS). There is no explicit breeding record from Vancouver Island. It is stated to be a "summer visitant" at Fort Rupert (Brown, 1868, p. 420), and "apparently a summer resident on Vancouver Island" (Macoun and Macoun, 1909, p. 730). During migrations it should occur throughout the coastal region. Reported (Munro, 1915, p. 107) from Okanagan Landing, December 29, 1913, one specimen, an unusual occurrence of a straggler east of the Cascades.

Myadestes townsendi (Audubon). Townsend Solitaire.

Status—Has been found breeding at many points, mostly east of the coast ranges and Cascades, from Bennett (Bishop, 1900b, p. 93) and Atlin (Anderson, 1915, p. 16) at the north, to the southern boundary. Also at Chilliwack (Brooks, 1917, p. 49), and at Cowichan, Vancouver Island (Brooks, MS). A bird mostly of the Canadian zone. Found nesting on Mount Benson, near Nanaimo, Vancouver Island (Macoun and Macoun, 1909, p. 733); one bird seen in June near Alberni, Vancouver Island (Swarth, 1912b, p. 79). Not reported from the densely forested portion of the coastal belt (Vancouver Island record stations are in rather open country), and is probably absent from that section. No records from the Queen Charlotte Islands. Reported as occurring in winter at Chilliwack (Brooks, 1917, p. 49), in January on the lower Fraser River (Fannin, 1891, p. 44), as resident at Okanagan (Munro, 1919a, p. 73) and on the western slopes of the Rocky Mountains in East Kootenay (Brooks, MS).

Hylocichla fuscescens salicicola Ridgway. Willow Thrush.

Synonym—*Turdus fuscescens salicicolus*.

Status—Summer visitant to the southern mainland, east of the Cascades, north as far as Lac La Hache (Rhoads, 1893d, p. 58). Reported from many points: Clinton, Kamloops, Shuswap Falls, Revelstoke, Vernon, Ashcroft and others.

Hylocichla aliciae aliciae (Baird). Gray-cheeked Thrush.

Status—A northern species whose breeding range extends southward barely within the northern limits of British Columbia. One bird collected at Wilson Creek, Atlin, on June 13, 1914, and one (supposed to be of this species) seen at Pike River, Atlin, on August 3 (Anderson, 1915a, p. 17). One taken near Buckley Lake (25 miles east of Telegraph Creek), July 25, 1910, by E. A. Preble (in U. S. Biol. Surv. collection). The migration route is evidently to the southeastward. No migrants have been taken within the province.

Hylocichla ustulata ustulata (Nuttall). Russet-backed Thrush.

Synonym—*Turdus ustulatus*.

Status—Abundant summer visitant in the lowlands of the coastal region, west of the Cascades and coast ranges. One of the commonest summer birds of Vancouver Island and the Queen Charlotte Islands.

Hylocichla ustulata swainsoni (Tschudi). Olive-backed Thrush.

Synonyms—*Turdus ustulatus*; *Turdus ustulatus swainsonii*; *Turdus swainsoni*; *Hylocichla ustulata almae*.

Status—Summer visitant in the interior, east of the Cascades and coast ranges. Many record stations, from the northern boundary, at Lake Bennett (Bishop, 1900b, p. 94) to the southern, at Elko (Macoun and Macoun, 1909, p. 742). An extreme western occurrence was at Great Glacier, on the lower Stikine River (Swarth, 1922, p. 301).

Hylocichla guttata guttata (Pallas). Alaska Hermit Thrush.

Synonyms—*Hylocichla aonalaschkae*, part; *Hylocichla guttata sequoiensis*, part.

Status—Summer visitant to northern British Columbia east of the coast ranges. Reported from Atlin (Anderson, 1915a, p. 17), Telegraph Creek (Swarth, 1922, p. 303), and the upper Skeena River (Mus. Vert. Zool.). A bird of the Hudsonian zone, hence found mostly in the mountains during the breeding season; occurs in the valleys of the mainland over the length of the province during migration.

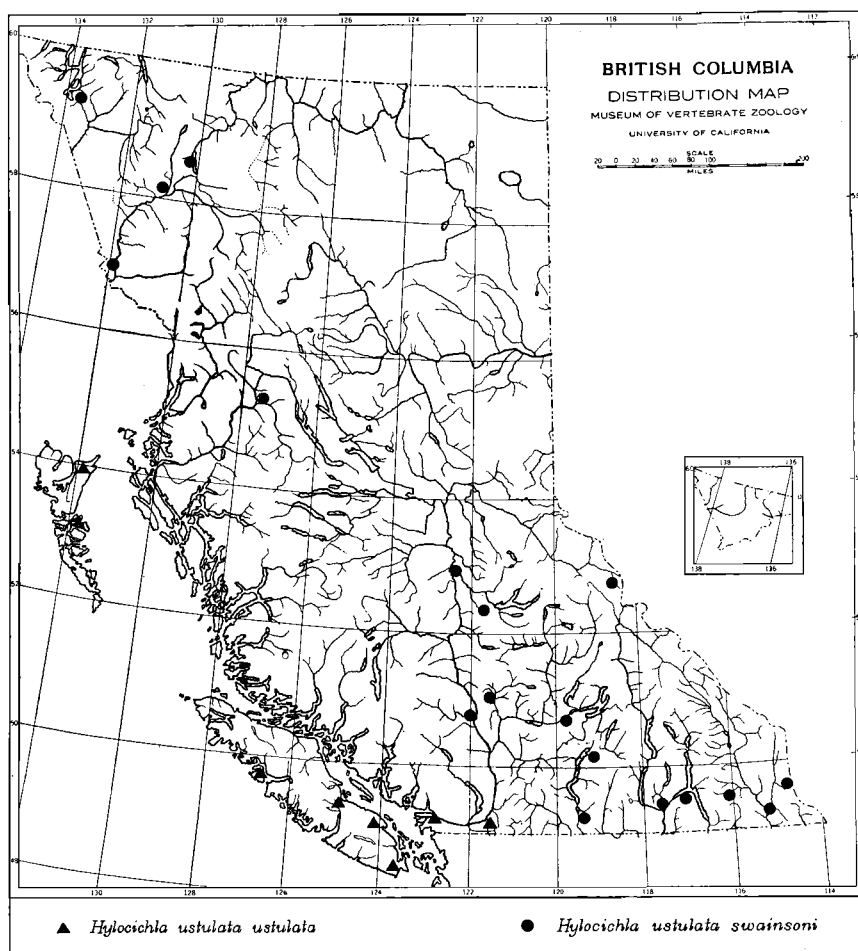


FIG. 36. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF THE RUSSET-BACKED THRUSH (*HYLOCICHLA U. USTULATA*), AND OLIVE-BACKED THRUSH (*HYLOCICHLA U. SWAINSONI*).

Hylocichla guttata sequoiensis (Belding). Sierra Hermit Thrush.

Synonyms—*Hylocichla guttata*, part; *Turdus aonalaschkae*, part; *Hylocichla guttata auduboni*; *Turdus aonalaschkae auduboni*.

Status—Summer visitant to the mountains of southern British Columbia. Found from the Cascades near Chilliwack (Brooks, 1917, p. 49) east to the Rockies; ranges north at least to Lillooet (specimens in Victoria Memorial Museum) and Moose River, Yellowhead Pass region (Riley, 1912, p. 74). Just where in central British Columbia *guttata* and *sequoiensis* come together remains to be demonstrated. Hermit Thrushes from southern British Columbia, though properly referred to *sequoiensis*, are not quite typical of that subspecies. In slightly smaller size, as compared with birds from the Sierra Nevada, California, they show an approach toward the characters of *guttata*.

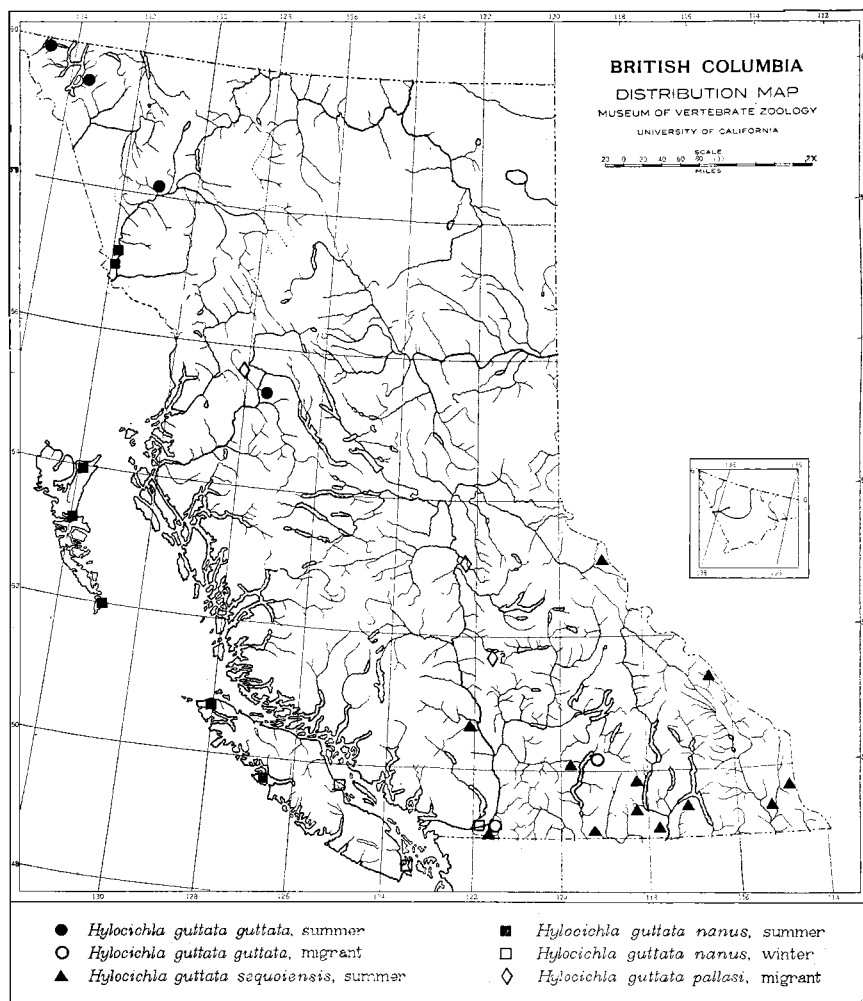


FIG. 37. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF SUBSPECIES OF THE HERMIT THRUSH (*HYLOCICHLA GUTTATA*).

***Hylocichla guttata pallasii* (Cabanis).** Eastern Hermit Thrush.

Synonym—*Turdus aonalaschkae pallasii*.

Status—There are two explicit published records for this subspecies within the province: At Lac La Hache, breeding (Rhoads, 1893a, p. 24), and at Quesnelle (Brooks, 1903, p. 284). One of Rhoads' specimens is in the collection of the Philadelphia Academy of Natural Sciences, and according to Dr. Witmer Stone (in letter) it is "strikingly like" the eastern bird. Brooks' Quesnelle record is for migrating birds, unquestionably of this subspecies (identified by Brewster and Oberholser). There are two specimens at hand, migrating birds, collected at Hazelton, September 10, 1921 (Mus. Vert. Zool., nos. 42606, 42607).

***Hylocichla guttata nanus* (Audubon).** Dwarf Hermit Thrush.

Synonyms—*Turdus aonalaschkae*; *Hylocichla guttata*; ? *Turdus pallasii*; *Hylocichla aonalaschkae verecunda*.



FIG. 38. MAP SHOWING STATIONS OF OCCURRENCE IN BRITISH COLUMBIA OF SUBSPECIES OF THE ROBIN (*PLANESTICUS MIGRATORIUS*).

Status—Summer visitant to the extreme coastal district of the mainland, west of the coast ranges, and on all the islands. During the breeding season confined mostly to the Hudsonian zone. During migration it is of more general distribution. There is one record of occurrence at Victoria in January (Macoun and Macoun, 1909, p. 748). Common at Comox during the winter of 1903-04 (Brooks, MS).

Planesticus migratorius migratorius (Linnaeus). Eastern Robin.

Synonyms—*Merula migratoria*; *Turdus migratorius*; ? *Merula migratoria propinqua*, part; *Planesticus migratorius caurinus*.

Status—Summer visitant east of the coast ranges in northern British Columbia. Reported from Bennett (Bishop, 1900b, p. 95) and from the upper Stikine River (Swarth, 1922, p. 305). Robins from Hazelton on the upper Skeena River, though referable to the subspecies *migratorius*, are intermediate toward *caurinus* (Mus. Vert. Zool.). There is no information nor any specimens available showing where *migratorius* and *propinquus* meet, whether there is any southward migration of *migratorius* in British Columbia, or whether *migratorius* remains in winter anywhere within the province.

Planesticus migratorius caurinus Grinnell. Northwestern Robin.

Synonyms—*Merula migratoria propinqua*, part; *Planesticus migratorius propinquus*, part; *Merula migratoria*, part; *Turdus migratorius*.

Status—Occurs throughout Vancouver Island and the Queen Charlotte Islands, and in the mainland coastal district, west of the Cascades and coast ranges, the length of the province. Probably permanent resident over much of its habitat; certainly so in the southern part of Vancouver Island (Fannin, 1891, p. 45), and on the southern mainland coast.

Planesticus migratorius propinquus (Ridgway). Western Robin.

Synonyms—*Merula migratoria propinqua*; *Planesticus migratorius*, part.

Status—Breeds on the southern mainland, east of the Cascades. Robins have been reported in summer from many points in the Okanagan Valley and in the valleys of the Fraser and Thompson rivers, and it is probably the subspecies *propinquus* that occupies those regions.

Ixoreus naevius (Gmelin). Varied Thrush.

Synonyms—*Turdus naevius*; *Hesperocichla naevia*; *Geocichla naevia*; *Ixoreus naevius meruloides*.

Status—Occurs in summer practically throughout British Columbia, with local restrictions as to breeding habitat. Breeds commonly over most of Vancouver Island and on the Queen Charlotte Islands. On the mainland it occurs commonly at sea level in the coastal district; inland it ascends the mountains, and, going eastward, it is more and more restricted to high altitudes during the summer months. Ranges eastward to the Rocky Mountains along the eastern boundary of the province, as at Yellowhead Pass (Riley, 1912, p. 75). Occurs abundantly in the mainland valleys during migration. There is a December record from Barkley Sound, west coast of Vancouver Island (Taverner, 1917a, p. 357). It is fairly common in winter on eastern Vancouver Island (Brooks, MS), and in the southern mainland

coastal region, as at Chilliwack (Brooks, 1917, p. 49). In the interior, there is one winter record from Okanagan (Brooks, 1905b, p. 214), and Varied Thrushes have been found wintering fairly regularly at Edgewood, Lower Arrow Lake (W. B. Johnstone, MS).

[Note: There seems to be fairly good reason for the recognition of two subspecies of *Ixoreus naevius* in British Columbia, with *I. n. naevius* restricted mainly to the coastal region, *I. n. meruloides* to high altitudes inland. The differences between the two, however, are admittedly slight and not always appreciable, and apparently anomalous identifications of certain specimens as of one subspecies or the other renders it impossible at this time satisfactorily to indicate the ranges of the two supposed forms.]

Sialia mexicana occidentalis J. K. Townsend. Western Bluebird.

Synonyms—*Sialia mexicana*; *Sialia occidentalis*.

Status—Resident in the lowlands of extreme southwestern British Columbia. On the mainland it has been found in summer at various points, both east and west of the Cascades, all south of latitude 51°; on Vancouver Island, as far north as Alberni (Swarth, 1912b, p. 83). There are winter records from Okanagan (Munro, 1922b, p. 13), from a point "fifty miles westward from Chilliwack" (Brooks, 1917, p. 49), and from Vancouver Island (Kermode, 1904, p. 59). The easternmost records are Newgate, East Kootenay, June, 1919, breeding (Brooks, MS); and Cranbrook (C. D. B. Garrett, MS).

Sialia currucoides (Bechstein). Mountain Bluebird.

Synonym—*Sialia arctica*.

Status—Summer visitant over most of the province. East of the Cascades and coast ranges it has been found breeding at many points, from the southern boundary to the northern. Absent in summer from the coastal region. A common migrant at Chilliwack (Brooks, 1917, p. 49). Occasional on Vancouver Island (Fannin, 1898, p. 55). One winter record: Comox, Vancouver Island, January 23, 1919; two females taken by R. M. Stewart (Brooks collection).

INTRODUCED SPECIES

Colinus virginianus texanus (Lawrence). Texas Bob-white.

Status—Introduced in several localities: On Vancouver Island, in the lower Fraser Valley, and in the southern interior. Although the Bob-white has bred and increased to some extent both on the coast and in the interior (as in Okanagan Valley), the species does not seem to have attained a permanent hold in any locality.

Oreortyx picta picta (Douglas). Mountain Quail.

Status—Found in some parts of extreme southern Vancouver Island, where it is said to have been "introduced from California" (Fannin, 1891, p. 19). "Very plentiful on the Sooke hills, about 25 miles from Victoria, Vancouver Island, in 1906" (Spreadborough, in Macoun and Macoun, 1909, p. 215). If the Mountain Quail is not native, the introduction seems to have taken place at a very early date, for as early as 1859 the species is included by Sclater in a list of birds from Vancouver Island. The exact history of the first importation is apparently nowhere upon record. In a letter written by Mr. M. A. Wylde, Strathcona Lodge, Shawnigan Lake, Vancouver Island, addressed to Mr. F. Kermodé, Director of the Provincial Museum, Victoria, the following statement occurs: "My father brought the California Quail to Victoria in the year 1860 or '61. And I have remembrance of seeing a box of Mountain Quail that he was instrumental in having brought to Victoria. I could not say if they were the first lot introduced on the Island, but I think the California ones were." In a letter from Mr. J. R. Anderson, an old resident of Victoria, to Allan Brooks, Mr. Anderson speaks of the introduction of "both kinds" of quail near Esquimalt "about 1862."

Lophortyx californica californica (Shaw). California Quail.

Synonyms—*Callipepla californica*; *Callipepla californica vallicola*.

Status—Introduced at the southern extremity of Vancouver Island, and at some points on the southern mainland. Is now abundant in the vicinity of Victoria and in the southern Okanagan region. According to Rhoads (1893d, pp. 37, 61) both *californica* and *vallicola* were introduced into British Columbia and liberated in the same place. See under *Oreortyx picta picta* for early dates of importation.

Perdix perdix (Linnaeus). European Partridge.

Synonym—Hungarian Partridge.

Status—Introduced in 1905 into the extreme southwestern corner of the mainland, in the lower Fraser Valley, and on Vancouver Island, from stock acquired from game farms in the United States. Has attained a good foothold, especially on Lulu Island.

In the interior the partridge made its appearance in the lower Okanagan Valley about 1915, having spread northward from the state of Washington, where it had been introduced some years previously. First seen at Midway in 1919, evidently from the same source. It is now common as far north as Vernon, or farther.

Phasianus colchicus colchicus Linnaeus. English Pheasant.

Phasianus colchicus mongolicus Brandt. Mongolian Pheasant.

Phasianus colchicus torquatus Gmelin. Ring-necked Pheasant.

Status—Details of the history of the introduction of pheasants into British Columbia are unknown to us. So also are the dates of the first importations, save that *mongolicus* was introduced in 1909 (Brooks, MS). The pheasant is now firmly established in many sections, but introduction at various times of all three of the above listed forms has resulted in interbreeding to such an extent that pure-bred birds of any kind are uncommon. The general run seem to tend (or revert?) to *torquatus* (the southern Chinese bird), but fairly typical examples of both the other subspecies are occasionally brought in.

Pheasants are abundant at the southern extremity of Vancouver Island, extending north to Seymour Narrows. On the mainland they are common in the lower Fraser Valley and in the southern part of the Okanagan region.

Alauda arvensis Linnaeus. Skylark.

Status—Introduced about 1902 and additional importations again in 1908 (Brooks, MS). The Skylark apparently has secured a permanent foothold at the mouth of the Fraser River and near Victoria.

Æthiopsar cristatellus (Linnaeus). Japanese Starling.

Synonyms—*Acridotheres cristatellus*; *Mina*.

Status—Introduced, and apparently well established, in the city of Vancouver. The date and manner of introduction are not known to us, but the birds were in Vancouver in 1897 (see Kermode, 1921, p. 20; Munro, 1922d, p. 32).

Passer domesticus (Linnaeus). House Sparrow.

Status—Resident in most of the towns, usually absent from the country. Arrived in Vancouver about 1890. No increase of late years. Seen at Telkwa in August, 1919 (Spreadborough, MS).

HYPOTHETICAL LIST

Gavia adamsi (Gray). Yellow-billed Loon.

Status—A single record by Macoun (1909, p. 11) as follows: "One specimen taken at Comox, Vancouver Island, by Mr. W. B. Anderson; seen also at Victoria by Mr. Fred Foster (Kermode)". The foregoing specimen is not in the Provincial Museum, nor can it now be located, and, in view of the uncertainty of identifying winter specimens by the descriptions available at the time the above quotation was written, it is deemed advisable to place this species in the Hypothetical List until undoubted specimens are secured. The species should occur in our waters in winter.

Gavia arctica (Linnaeus). Black-throated Loon.

Synonym—*Urinator arcticus*.

Status—There is a specimen of this species in the Provincial Museum, Victoria. Some confusion exists in certain published references to this specimen, the place of capture being given sometimes as Dease Lake and sometimes as Burrard Inlet, but according to information received from Mr. F. Kermode, Director of the Museum, it was collected at Victoria in March, 1906. It has been identified by Mr. A. C. Bent (in letter to Mr. Kermode) as *Gavia arctica suschkini*; according to F. Seymour Hersey (1917, p. 289, footnote) it is "most like Siberian specimens and may be a straggler from that country."

Aethia cristatella (Pallas). Crested Auklet.

Status—"In May, 1912, when passing around the north end of Vancouver Island from the inside passage, a number of very small auklets with recurved crests were seen by Messrs. C. deB. Green, W. S. Burton, and the late Warburton Pike. The birds were close at hand, viewed from the deck of a small launch, and the crests ('like the crest of a California Quail') were distinctly seen. In addition to this evidence by the above mentioned close observers, I have been told by several different sealers, both white and Indian (men who were familiar with the Crested Auklet in Bering Sea waters), of the occurrence of 'sea-quail' with crests in British Columbia waters" (Brooks, MS).

Larus nelsoni Henshaw. Nelson Gull.

Status—The inclusion of this gull rests on the entry in the British Museum Catalogue of Birds (Saunders, 1896, p. 287) of a young bird (the specific identity is questioned) taken on "Vancouver I., Dec. 20th". Doubt as to the identification of this specimen is expressed by Ridgway (1919, p. 595).

Fulmarus rogersi Cassin. Rodgers Fulmar.

Status—One sight record only: "70 miles west of the Queen Charlotte Islands" (Clark, 1910, p. 40). The Rodgers Fulmar is a disputed species and may be only a color variant of the Pacific Fulmar.

Puffinus creatopus Coues. Pink-footed Shearwater.

Status—Occurs regularly just north of British Columbia waters, as at Forrester Island (Willett, Condor, vol. 20, 1918, p. 85) and more commonly to the southward of them. Large, white-breasted shearwaters that were seen off Cape Cook, west coast of Vancouver Island, July 23, 1904, as well as others described by fishermen from the north coast of the Queen Charlottes, were most probably of this species (Brooks, MS).

Olor bewicki Yarrell. Bewick Swan.

Status—An adult swan that was taken in the lower Fraser Valley prior to 1890, seen, mounted, in the shop of Mr. Wm. Hall, Vancouver, and three individuals seen but not secured at Sumas Lake, November 5, 1894, were in all probability of this species (Brooks, 1917, p. 35).

Egretta candidissima candidissima (Gmelin). Snowy Egret.

Synonyms—*Ardea candidissima*; *Mesophoyx intermedia*.

Status—This species has been in the lists of British Columbia birds since 1891, based on the record by Fannin (1891, p. 14) of: "Two specimens taken at Burrard Inlet, May, 1879". A mounted Egret has been in the Provincial Museum collection since 1890. This, however, is an adult, in full nuptial plumage, of *Mesophoyx intermedia* of eastern Asia; it was first detected as such by Mr. J. H. Fleming. While herons are capable of considerable wanderings, it is impossible for such a bird to cross the North Pacific, and it is rare to find any but juvenile birds of this order far out of their normal range. The Provincial Museum specimen is, as stated above, an adult with full nuptial train. It is probable that some species of white heron was taken by Fannin at the time he mentions, and that, the specimen or specimens being later lost, the Japanese Egret was substituted to represent the species in the collection. In support of this theory, the fact may be cited that there were quantities of skins of *Mesophoyx intermedia* in nuptial dress for sale by Davidge and Co., Oriental traders, Victoria, in the spring of 1891, and probably for several years previously. Many of these were bought by taxidermists and displayed in mounted form (Brooks, 1923b, p. 180).

Limnodromus griseus griseus (Gmelin). Dowitcher.

Status—Numerous specimens of Dowitchers taken at various localities in British Columbia fall well within the dimensions given for the eastern form; color characters are unreliable. The situation in regard to the species at present is this, that absolutely typical examples of either subspecies may be taken from eastern Manitoba to the Pacific coast. Were it not for the fact that long-billed and short-billed birds seem to keep in separate flocks (for instance, nine birds taken from one flock at Osoyoos, May 11, are all short-billed birds) it might be advisable to suppress the subspecies *scolopaceus* altogether. Until someone with access to ample eastern and western material undertakes a revision of the species, it is best to retain both subspecies; but we are not now in a position to demonstrate absolutely (what seems to be the case) that both occur in British Columbia.

Falco columbarius richardsoni Ridgway. Richardson Pigeon Hawk.

Synonym—*Falco richardsonii*.

Status—Probably an occasional straggler to the province. A number of pale colored merlins, all juveniles, much lighter than normal *columbarius* have been taken from Okanagan west to Chilliwack and Victoria on the coast. While most of these are pale enough for *richardsoni*, only two had the requisite number of tail bands; one of these was taken at Okanagan and the other at Chilliwack. Both were identified as *richardsoni* by the late William Brewster, but they can not now be traced.

Dryobates villosus sitkensis Swarth. Sitka Hairy Woodpecker.

Status—A hairy woodpecker of some kind is known to occur on Porcher Island, near the mouth of the Skeena River (Brooks, 1923a, p. 222). This is likely to be the subspecies *sitkensis*, of the nearby Alaska coast; it may even occur still farther south along the British Columbia coast.

Melanerpes erythrocephalus (Linnaeus). Red-headed Woodpecker.

Status—"A pair seen at Pass Creek, near Robson, Columbia River, B. C., June 25th, 1890" (Macoun, 1900-1904 [1903], p. 316). This is the only British Columbia record known to us, and Mr. Macoun, on enquiry, had no confirmation nor recollection of the occurrence.

LIST OF BIRDS ASCRIBED TO BRITISH COLUMBIA
ON UNSATISFACTORY GROUNDS

We consider the recorded occurrences of these species as mistakes in every case. Furthermore, they are for the most part birds that are not at all likely to be found in the province in the future. For these reasons they are entered apart from the Hypothetical List. They need hardly have been listed at all were it not to forestall the acceptance of the records by others who are not in a position to judge as to the probabilities.

Phaleris psittacula (Pallas). Paroquet Auklet.

Status—The range as given in the A. O. U. *Check-List* (1910, p. 27) may be construed to include the coast of British Columbia. As yet there is no actual record, and it is quite possible for a species to breed on the Aleutian Islands and winter on the Californian coast and yet miss the whole of the coast of British Columbia.

Aethia pusilla (Pallas). Least Auklet.

Status—Winter range given in the A. O. U. *Check-List* (1910, p. 28), as including the British Columbia coast. This statement presumably is based upon the very ambiguous record by Rhoads (1893a, p. 17) of its occurrence on Puget Sound.

Gymnogyps californianus (Shaw). California Condor.

Synonyms—*Pseudogryphus californianus*; *Cathatis californianus*.

Status—"Mouth of Fraser River. Seldom visits the interior" (Lord, 1866, vol. 2, p. 291). "In September, 1880, I saw two of these birds at Burrard Inlet. It is more than probable they are accidental visitants here" (Fannin, 1891, p. 22). "Seen on Lulu Island as late as 'three or four years ago' by Mr. W. London. 'None seen since, used to be common'" (Rhoads, 1893d, p. 39). This species may once have ranged north to the British Columbia boundary, but the above statements, the only ones known to us bearing upon the case, are not conclusive evidence.

Buteo lineatus elegans Cassin. Red-bellied Hawk.

Status—Reported to have occurred at Burrard Inlet and Fort Simpson (Fannin, 1891, p. 23), Chilliwack (Brooks, 1917, p. 38), and "in the British Columbia interior" (Rhoads, 1893d, p. 39). There are no specimens extant from this province, and it seems likely that all the above records are mistakes.

Chaetura pelagica (Linnaeus). Chimney Swift.

Status—A specimen is listed in the British Museum Catalogue of Birds (Hartert, 1892, p. 480) as from "Vancouver's Island". No particulars are given, but obviously some mistake must have been made.

Empidonax virescens (Vieillot). Acadian Flycatcher.

Synonym—*Empidonax acadicus*.

Status—Included by J. K. Lord (1866, vol. 2, p. 294) as one of the birds of British Columbia. There is no evidence whatever that the species has ever been taken within the province.

Cyanocephalus cyanocephalus (Wied). Piñon Jay.

Status—In the range as given by Ridgway (1904, p. 284) the Piñon Jay is said to extend "north to southern British Columbia". Coues (1903, p. 492) says: "N. only to British Columbia". The basis of these statements is unknown to us, nor do we know of any definitely established occurrence within this province.

Vermivora chrysoptera (Linnaeus). Golden-winged Warbler.

Synonym—*Helminthophaga chrysoptera*.

Status—Included in "A List of the Birds collected by Captain A. H. Markham on the west coast of America": "Two specimens without labels, probably from Esquimalt" (Salvin, 1883, p. 420). Previous stops had been made at points in South America, and the Golden-winged Warblers may have been collected there. At any rate, there is no good reason now to believe that they were taken in British Columbia.

Dendroica occidentalis (J. K. Townsend). Hermit Warbler.

Status—Reported by Fannin (1891, p. 41) as "A summer resident, chiefly west of Cascades". Cooke (1904, p. 91) says that "a hermit warbler was noted at Burrard Inlet, British Columbia, April 25, 1884", and it seems likely that Fannin's assertion was based upon this same occurrence. The species has not been encountered by other observers.

Dendroica vigorsi (Audubon). Pine Warbler.

Status—"One taken at Revelstoke, B. C., in May, 1890, by Mr. W. Spreadborough" (Macoun, 1900-1904 [1904], p. 623). Omitted from the revised edition (1909, p. 653).

Seiurus aurocapillus (Linnaeus). Oven-bird.

Synonym—*Siurus auricapillus*.

Status—A specimen entered by Salvin (1883, p. 420) in a list of birds collected by Captain A. H. Markham on the west coast of America, as from "Esquimalt, 1880". The collection includes specimens from points in South and Central America, and it seems likely that this Oven-bird was collected at some southern locality.

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