THE SYSTEMATIC STATUS OF SOME NORTHWESTERN SONG SPARROWS

(WITH MAP)

By HARRY S. SWARTH

(Contribution from the Museum of Vertebrate Zoology of the University of California.)

T HE present paper is the result of an attempt to outline the ranges in British Columbia of the races of *Melospiza melodia* that inhabit the province, this for a distributional list of the birds of British Columbia now in course of preparation by Major Allan Brooks and myself.

The greater part of the material upon which the study is based is contained in the Museum of Vertebrate Zoology, but the following specimens were borrowed from other institutions: from the Victoria Memorial Museum, Ottawa, an extensive series of song sparrows representing many localities in British Columbia; from the United States National Museum, a series of birds representing *Melospiza melodia inexspectata*, including the type of that subspecies; from the United States Biological Survey, a series of birds from the Queen Charlotte Islands; from the Museum of Comparative Zoology, Cambridge, Massachusetts, the type specimen of *Melospiza fasciata merrilli* Brewster. For the use of all this material, indispensable to such a study as this, my thanks are extended to each of the institutions concerned and to the individual curators through whom the loans were made.

I am also under a debt of gratitude to Major Allan Brooks for criticism and aid of various sorts. His assistance was sufficient to justify the appearance of his name as co-author of this paper had he not wished otherwise.

Although it is the song sparrow of British Columbia that is of first concern here, the status of the bird of southeastern Alaska (the Alexander Archipelago and the adjacent mainland) is so much a part of the same problem that that region is necessarily included. For convenience the term 'rufina group' will be used to designate the birds here treated, the reddish brown song sparrows of the coast of northwest America from central Oregon north to Glacier Bay, and, in British Columbia, west from the Rocky Mountains. To the birds of that general area the subspecific names rufina, guttata, morphna, merrilli, montana, inexspectata, and phaea, have been variously applied.

My own first impression was that the song sparrows of the entire region might well all be listed under one name. I had several times studied series of specimens from southeastern Alaska and from different parts of British Columbia without being able to correlate definite subspecific characters with particular regions, and at first it did not seem to me that such correlations could be established. Inasmuch, however, as certain extremes of variation are represented by birds from localities as near together as the Queen Charlotte Islands and Vancouver Island, and as these extremes are different enough to be recognizable in the living bird, it is apparent that at least two subspecies of *Melospiza melodia* will have to be conceded. It then remains to bring the rest

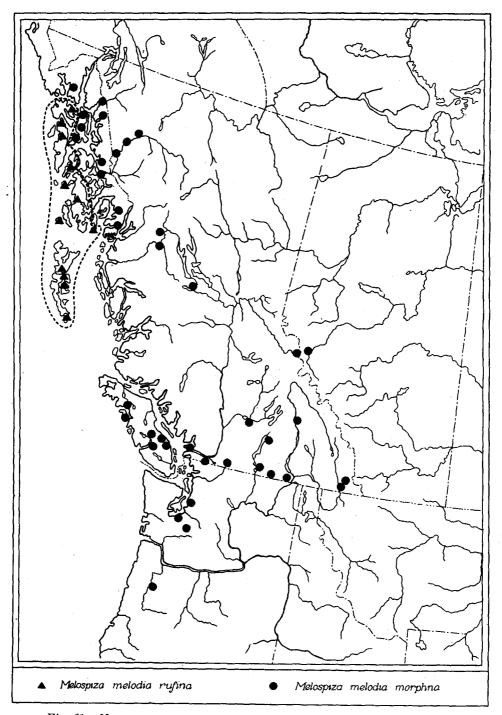


Fig. 61. MAP OF A PORTION OF NORTHWESTERN NORTH AMERICA, SHOWING BREEDING RANGE OF *Melospiza melodia rufina* and *M. m. morphna*. Symbols indicate localities FROM WHICH SPECIMENS WERE EXAMINED,

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of the series into harmony with the division indicated between the birds from these two island localities, a task of some difficulty, for it means attempting to indicate by definite names and definite geographic boundaries average differences that do not lend themselves to hard and fast diagnoses. It is hoped, however, that the division here indicated, in accord with the facts illustrated in an extensive series of specimens, will be satisfactory as a rather gross separation of races. For any minute and detailed study of geographic variation in *Melospiza melodia* in this general region, I do not believe that our system of nomenclature can be used to advantage. That is, I do not think that it is practicable to give names to any divisions smaller than are here indicated.

Comparing the extremes mentioned. from the Queen Charlotte Islands and from Vancouver Island, the outstanding characters of the birds . from the Queen Charlotte Islands are large size. long bill, and dark coloration; from Vancouver Island, smaller size, rather stubby bill, and bright reddish color. Other birds with characters the same as those of the specimens from the Queen Charlotte Islands were found from the westernmost islands of the Alexander Archipelago, Alaska, including two adults from Sitka, the type locality of Emberiza rufina Brandt. Also, specimens closely similar to Vancouver Island skins were found from the eastern islands of the Alexander Archipelago and from the adjoining mainland. So making due allowance for variation in each series, a fairly satisfactory division of races could be made, as is indicated in the accompanying map (fig. 61.)

Birds from Chichagof, Baranof, and the Queen Charlotte Islands are alike and are here taken to represent *rufina* in the extreme manifestation of that race. Specimens from Kuiu, Prince of Wales, Warren, and Forrester islands are intermediate in character, between *rufina* and *morphna*. Two specimens from Duke Island are distinctly like *rufina*. The apparent anomaly in distribution in this last-mentioned case (see map) assumes added interest in view of the fact that a white-footed mouse (*Peromyscus*) is similarly isolated on Duke Island, the species found there (*P. sitkensis*) being the same as the one that occurs on the distant Baranof and Chichagof islands,

As regards names for the two subspecies of song sparrow here recognized, the following appear to be applicable. To the song sparrow of the western islands of the Alexander Archinelago. Alaska (Chichagof, Baranof, Kuiu, Prince of Wales, Dall. Duke, and adjacent small islands). and the Queen Charlotte Islands, British Columbia, the name *Melospiza melodia* rufina (Bonaparte) will apply. This name dates from: [Passerella] rufina Bonaparte, Consp. Av., I. July 15, 1850, 477 (Sitka, Alaska; ex "Emberiza rufina Brandt, Desc. Av. Rossic, 1836, tab. ii, 5"). (Citation copied from Ridgway, U. S. Nat. Mus., Bull. 50, part 1, 1901, p. 374.)

Melospiza melodia morphna Oberholser (Auk. XVI, April, 1899. p. 183). substitute subspecific name for guttata. preoccupied. type locality near mouth of Columbia River, will apply to the song sparrow of the eastern islands of the Alexander Archipelago (Admiralty, Wrangell, Revillagigedo, etc.) and the adjacent mainland coast from Glacier Bay southward, over most of the mainland of British Columbia (except the extreme northern and northeastern sections), and Vancouver Island, and south at least to central Oregon.

This arrangement of the song sparrows of the section of the northwest coast under consideration is in a sense a recession from my attitude in previous

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papers, for I have always regarded birds from all sections studied as *Melospiza m. rufina*. (See Univ. Calif. Publ. Zool., x, 1912, p. 60; ibid., xxiv, 1922, p. 255.) I did recognize certain differences between specimens in the Alaskan series, differences which are here correlated with the names *rufina* and *morphna*, but heretofore I have not been able to associate these characters with definite regions. It is the series from the Queen Charlotte Islands that proves the decisive factor. On those islands, apparently, the characters of *rufina* reach their extreme development, and with less variation between individuals than is seen elsewhere, where the range of *morphna* is approached.

In the *rufina* group, a feature that is at once apparent on examination of the large series now available is the surprising amount of individual variation in series from almost any section that is fairly well represented; and also the unexpected sort of variation that may crop up anywhere, as exemplified by certain skins from scattered localities.

As will be seen from the list of specimens appended, the material assembled includes extensive series from many places. It is the sort of variation that is exhibited in certain of these series that made me formerly unwilling to recognize two races, *rufina* and *morphna*, from the coastal region, north and south. Following are brief comments upon certain of the larger and more important series here considered.

Breeding birds from Vancouver Island are rather more uniform in appearance than Alaskan specimens, and generally they are brighter colored, more ruddy, than are the latter. Even in the Vancouver Island series, though, there are specimens, taken at the same place and the same time, that are markedly different in appearance. Together with the usual type of bird, with ruddy coloration and rather soft, blended markings, there is a considerable mixture of others, some darker, others more grayish, and some more heavily streaked above and below. A breeding bird from Alberni (Mus. Vert. Zool., no. 16199, adult female) can be closely matched in a series of the distant *cleonensis*, from the coast of northern California. A series from Nootka Sound is notable in the matter of bill development. In these birds the bill is long and slender, closely similar in shape to the bill of *rufina*.

In a series of seven birds, immatures in first winter plumage, taken near the mouth of the Taku River, Alaska, September 7 to 16, 1909, there is as much color variation as between Alaskan and Vancouver Island specimens. Some of the Taku River skins may be matched very closely by comparable specimens from Vancouver Island. Seven immatures and adults in fresh winter plumage taken on Sergief Island, Alaska, August 18 to September 4, 1919, are about like the Taku River birds, and show the same sort of variation.

Eight breeding adults from the upper Stikine River, British Columbia, taken June 9 to July 17, 1919, show a surprising amount of variation, in relative redness or grayness of general coloration and in the amount of red or of black in the streaking on the breast and on the back. Among six breeding adults from Hazelton, British Columbia, taken in May and June, 1921, there are extremes of redness and grayness as far apart as those distinguishing the average red-colored morphna of Puget Sound from the gray-colored merrilli of the interior. Fall plumaged birds from the same place show similar, though not as great, variation.

A series of eleven breeding birds (coll. Victoria Memorial Museum)

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from Osoyoos Lake, Okanagan Valley, taken May 6, 10, 11, 15, 16 (1922), is of exceptional interest from the standpoint of the variation exhibited. Here, from the same spot, are breeding birds exhibiting dark coloration exactly like Alaskan specimens of *morphna*, others with the ruddy color of *morphna* as seen on Vancouver Island, and still others, gray of color and with sparsely streaked breast, that closely approach *merrilli*.

There is a single bird at hand (no. 9693, Mus. Vert. Zool., adult female), collected at the head of Marten Arm, Boca de Quadra, Alaska, June 10, 1909. This specimen, taken in a region where extremely dark-colored song sparrows are the rule, exhibits the extreme of gray coloration that can be seen in *morphna* from any part of its range. It matches exactly three specimens (nos. 3168, 2791, 2773, Victoria Memorial Mus.) from Midway and Trail, in extreme southeastern British Columbia. These three have been labeled *merrilli*, and, indeed, in appearance they and the Boca de Quadra skin approach very closely to that subspecies.

I have examined the type specimen of *Melospiza melodia inexspectata* Riley (Proc. Biol. Soc. Wash., xxi, 1911, p. 234), together with several other specimens from the general region of the type locality and I cannot regard that subspecies as worthy of recognition. It is indistinguishable from *morphna*. Oberholser (Auk, xxxv, 1918, p. 187), urging the validity of the race, says: "It is most nearly allied to *Melospiza melodia rufina*, but is deeidedly smaller, particularly in so far as the bill and wing are concerned; and is, in fact, a smaller, darker, somewhat heavily streaked edition of that bird."

As regards color and markings, specimens of "inexspectata" can be duplicated from the Alaskan coast. Furthermore, individual variation in the *rufina* group is so extensive, as I have shown, that it is not practicable to make the division indicated. As regards measurements, the appended table shows the similarity of "inexspectata" of the interior and morphna of the coast.

In British Columbia there remains to be considered the status of Melospiza melodia merrilli Brewster. I cannot find that this name has been published as pertaining to a British Columbia bird, but I have examined specimens in the Victoria Memorial Museum that were so labeled by different authorities. These are apparently some of the same birds listed by Macoun and Macoun (Catalogue of Canadian Birds, 1909, p. 540) as Melospiza cinerea montana, taken at various points in southeastern British Columbia. Specimens from that section, from Midway, Trail, and Fernie, for example, do certainly approach *merrilli* pretty closely, though I have seen none that are as gray as the type of that subspecies. I have no grounds for discrediting the validity of *merrilli* as occurring elsewhere, but it is not practicable on the basis of these variable specimens to give the race formal standing in a list of the birds of British Columbia, with any definitely outlined range in that province.

There are at hand seven specimens (including the type) of the type series of *Melospiza cinerea phaea* Fisher (Condor, 1V, 1902, p. 36) from the coast of southern Oregon. These birds average of small size, but all things considered, I do not regard them as representing a recognizable subspecies. Such variation from the mode of *morphna* as is seen, both in color and measurements, appears to me to be in the nature of intergradation toward *cleonensis*, the adjoining subspecies to the southward.

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The one outstanding fact brought out by an adequate series of specimens of the *rufina* group is the relative uniformity of characters presented over a tremendous area; and this despite the fact that there is a wide range of variation among birds from any one locality, for the same sort of variation crops up almost everywhere. This uniformity in the British Columbian and southeastern Alaskan song sparrow is in marked contrast to the manner in which the species breaks up into local races to the northward and to the southward. To the north are the several more grayish-colored Alaskan races, exhibiting well-defined characters of color and structure, and each occupying a definite and relatively circumscribed habitat. To the southward, *Melospiza melodia* again breaks up into rather sharply defined races, mostly of limited distribution.

To some it may seem that the proper procedure in handling the *rufina* group would be to recognize four subspecies where I have defined two. These, centering about extremes that are admittedly appreciable, would be (1) the ruddy bird (*morphna*) of Vancouver Island and the adjacent mainland; (2) the grayish-toned *merrilli* extending into southeastern British Columbia; (3) a darker-colored race (*inexspectata*) from the northern mainland and part of the Sitkan district, Alaska; (4) a larger, dark-colored race (*rufina*), with range as previously outlined in this paper.

These, however, certainly are not definable races in the same sense as caurina, kenaiensis, or sanaka, to the northward, or cleonensis, samuelis, pusillula, and others to the southward. Their characters are hard to define, and, as previously shown, individual variation in nearly all sections is so great that there would be a large proportion of specimens in any series that could not be subspecifically allocated on any ground but the geographic situation of the place of capture.

It may be said that *caurina* and the related gray-colored subspecies to the northward, the blackish California subspecies to the southward, and what might be termed the *melodia* group to the southeastward, each represents a section of the species comparable to what I have here called the *rufina* group. Within each of the three first mentioned divisions, local differentiation has proceeded to a point where several races, more or less sharply defined and of restricted range, can readily be recognized. In the *rufina* group we can see a strong tendency toward such subdivision, but, save between the very extremes, it has not advanced far enough to permit of ready definition of characters in the birds from different parts of the general range.

It seems to me that in any study of a variable bird like *Melospiza melodia*, stress should first be laid upon the major divisions of the species. In the present case this would be on the reddish-colored *rufina* group in its entirety, as compared with the group formed by the gray-colored Alaskan races occurring abruptly to the northward, the brownish-colored *melodia* group (connected through *merrilli*) to the southeastward, and the blackish-colored California subspecies (connected through *phaea*) to the southward. It seems to me that it would be well to regard observed differences within each of these larger divisions in a somewhat different light from those by which these same divisions are separated from each other.

In the mechanical handling of names, in our efforts to convey observed facts, it seems to me that we are making a mistake when, for example, we publish lists of names as the song sparrow names appear in our *Check-List*

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of North American Birds. To scatter closely connected, sometimes scarcely distinguishable forms, among others most remotely related, is to obscure the All recognizable subspecies are not equidistant from one another, and facts. they should not be treated as if they were. As more and more material accumulates, permitting careful study of variation in one species after another, facts come to light that modify our conceptions of racial differences and our standard books should reflect such advances in knowledge. The application of this in the present instance is to urge, in any new edition of the A. O. U. Check-List, or any other general work on North American birds, a modification of the present mode of listing the local races of such birds as Melospiza In place of a string of heterogeneous subspecies, listed according melodia. to a chronological system true enough, but absolutely at haphazard as regards relationship, degree of difference, or geographical position, I would urge that, where possible, stress be placed upon the main divisions of the species with some subordination of the differences within each such section.

It is perhaps permissible to speculate somewhat as to the relationship borne by rufina and morphna toward caurina, immediately to the northward. Rufing in certain characters occupies an intermediate position between morphna and caurina, but geographically morphna (as here defined) impinges more directly upon the habitat of *caurina* than *rufina* does. It may seem startling to affirm the close resemblance of the Queen Charlotte Islands song sparrow to that of Yakutat Bay (see Brooks, Auk, xL, 1923, p. 223), but there is no gainsaying the similarity in size and, to some extent, in color and in shape of bill. Study of the map will demonstrate that the close relationship implied by such a claim is not so unreasonable as it first appears to be. Directly south of Glacier Bay extend the western islands of the Alexander Archipelago, and south of them the Queen Charlotte Islands. In many respects the animal life of the western islands differs markedly from that of the inner islands and the mainland, and it is easy to conceive of the dispersal of song sparrows in such a way as to produce different lines of variation in the two regions, west and east. Thus there might be produced in dispersal southward from the mainland, on the western islands and on the Queen Charlottes, a modification of the caurina type in which size remained the same, bill remained as long and nearly as slender, and color became darker and more brown. Morphna. in similarly hypothetical dispersal northward along the mainland coast, became slightly darker colored but otherwise almost unchanged. Something of the sort is what I believe really happened, with the resulting implication that caurina and rufina may be more nearly related, than are morphna and rufina.

There are two specimens at hand that have a decided bearing upon this theory, two breeding birds from Glacier Bay. One of these (Mus. Vert. Zool., no. 514, female, July 16, 1907), is an example of *caurina*. It may be taken as indicative of the southern extremity of the breeding range of that subspecies. The other (Mus. Vert. Zool., no. 512, male, July 2, 1907), is typical, not of *rufina*, but of *morphna*. In small size, ruddy color, and stubby bill, it is like breeding birds from Vancouver Island, rather than like those from the western islands of the Alexander Archipelago. These, the only adults at hand from Glacier Bay, are too few specimens to permit of any finality in the deductions made therefrom (especially in view of the variation exhibited in series from

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other points), but the appearance of these birds fits well enough into the theory just outlined: that is, that the habitat of *morphna* extends northward on the mainland clear to the habitat of *caurina*; abrupt transition from one type to the other would be indicative of relatively remote relationship. *Rufina*, extending southward in its interrupted island range, would exhibit more or less intergradation with the closely related *caurina*, as is exhibited by many specimens. Intergradation between *rufina* and *morphna*, as certainly exists to a marked degree, might result from long ages of contact along a wide frontier.

The southernmost point from which I have seen a breeding specimen of morphna is Salem, Oregon. The type series of "phaea" from southern Oregon consists of winter birds. Rusty Song Sparrows are not uncommon in some parts of California during the winter months, and a number of specimens therefrom are included in the series studied. Birds from the coastal region are mostly of the reddish coloration seen in *morphna*; some are similar to the type series of "phaea." From the interior of California there are many that in their grayish color tend distinctly toward merrilli. They are like birds from southeastern British Columbia, before described. I have seen no winter birds from southern localities that are like the song sparrows of the Queen Charlotte Islands and the western islands of the Alexander Archipelago. In this connection the possibility suggests itself of some birds from southern points that have been recorded as *caurina* being really examples of *rufina* from Chichagof, Baranof, or the Queen Charlotte Islands. Supposed examples of *caurina* from southern localities should be carefully examined with this point in mind; as I have pointed out, some specimens of *rufina* approach *caurina* very closely in appearance.

SPECIMENS EXAMINED

Melospiza melodia rufina

Alaska: Chichagof Island, 4 ad.; Baranof Island, 3 ad., 1 im., 2 juv.; Kuiu Island, 3 ad.; Warren Island, 2 ad.; Prince of Wales Island, 1 ad.; Forrester Island, 6 ad., 2 juv.; Duke Island, 2 ad.

British Columbia: Queen Charlotte Islands, 17 ad., 4 juv. (all from collection of the U. S. Biological Survey). Total 47.

Melospiza melodia morphna

Alaska: Glacier Bay, 1 ad., 1 juv.; Taku River, 7 im., 1 juv.; Port Snettisham, 1 im.; Thomas Bay, 1 ad., 2 juv; Chickamin River, 3 ad.; Boca de Quadra, 1 ad.; Admiralty Island, 4 ad.; Sergief Island, 3 ad., 7 im., 11 juv.

British Columbia: Upper Stikine River, 8 ad., 15 juv.; Hazelton, 9 ad., 3 juv.; Kispiox Valley, 3 ad., 7 im., 6 juv.; Vanderhoof, 3 ad., 4 juv.; Moose Lake, Yellowhead Pass, 1 ad., 1 juv. ("inexspectata"); Revelstoke, 2 ad.; Kamloops, 1 ad.; Elko, 1 ad.; Fernie, 1 ad. ("merrilli"); Trail, 3 ad. (2 "merrilli"), 1 juv.; Midway, 3 ad. (1 "merrilli"); Okanagan Landing, 1 ad., 1 im.; Osoyoos Lake, 11 ad.; Skagit River, 2 ad.; Chilliwack, 1 ad.; Vancouver, 1 ad.; Vancouver Island: Parksville, 10 ad.; Little Qualicum River, 30 ad., 4 juv.; French Creek, 7 ad., 1 juv.; Kootka Sound, 11 ad., 8 juv.

Alberta: Henry House, 1 ad.; Jasper Park, 4 juv. ("inexspectata").

Washington: Seattle, 3 ad., 3 juv.; Tacoma, 3 ad. (1"merrilli"); Nisqually Flats, 1 ad.

Oregon: Gardiner, 4 ("phaea"); Goldbeach, 3 ("phaea"); Tillamook, 1; Corvallis, 1; Salem, 1.

California: Siskiyou Mts., 3 (Oct. 30, Nov. 6, Dec. 5); Helena, Trinity Co., 3 (Feb. 15, 23, 24); Tower House Shasta Co., 2 (March 1, 7); Laytonville, Mendocino Co., 1 (Oct. 9); Fyffe, Eldorado Co., 2 (Nov. 25, 27); Coulterville, Mariposa Co., 2

MEASUREMENTS IN MILLIMETERS (AVERAGE, MINIMUM, AND MAXIMUM) OF SONG SPARROWS FROM POINTS BE-TWEEN CROSS SOUND, ALASKA, AND SOUTHERN OREGON

| Melospiza m. caurina | Wing | Tail | Culmen | Depth of bill | Tarsus | Middle toe and claw |
|----------------------------------------------------------------------------------------------------------|--------------------------------------|------------------|--------------------------------------|---------------|--------------------------------------|--------------------------------------|
| S E. Alaska, 10 males ¹ | 71.4 (69.0-73.0) | 67.7 (64.0-72.5) | 12.8 (12.0-13.5) | 6.7 (6.2-7.0) | 23.8 (23.0-24.2) | 21.6 (21.0-22.0) |
| Melospiza m. rufina Queen Charlotte Ids., 10 males ² S E. Alaska, 10 males ³ | 72.8 (70.0-75.5) 69.1 (66.0-71.5) | - | 13.8 (12.5-14.8) 12.8 (12.0-13.8) | | 25.2 (24.5-26.5) 23.7 (21.2-25.0) | 22.5 (22.0-23.0) 21.5 (21.0-22.5) |
| Melospiza m. morphna | | | | | | • |
| S E. Alaska, 10 males ⁴ | 67.1 (63.0-69.5) | 64.5 (58:0-69.0) | 11.8 (11.0-12.5) | 6.4 (6.0-7.0) | 22.8 (21.2-23.5) | 21.7 (20.5-23.0) |
| Telegraph Creek, B. C., 6 males | 67.2 (64.0-71.0) | 66.0 (62.8-69.0) | 12.4 (12.0-12.8) | 6.4 (6.2-6.5) | 22.7 (22.0-23.5) | 20.6 (20.2-21.5) |
| Hazelton, B. C., 10 males Nootka Sound, Vancouver Id., | 66.5 (64.5-68.0) | 65.5 (62.5-68.0) | 12.2 (11.5-13.0) | 6.2 (6.0-6.5) | 22.4 (21.5-23.0) | 20.6 (19.5-21.0) |
| 6 males | 66.6 (64.5-68.0) | 65.4 (61.0-68.0) | 13.1 (12.5-13.8) | 6.6 (6.5-6.8) | 23.2 (22.5-24.0) | 21.2 (20.2-22.2) |
| Little Qualicum R., Vancouver | | | | | | |
| Id., 10 males | 66.4 (64.5-68.0) | 64.1 (60.5-68.0) | 12.1 (11.0-13.0) | 6.5 (6.0-7.0) | 22.9 (21.2-24.2) | 20.5 (19.5-21.2) |
| Southern British Columbia, | | | | • | | |
| 10 males ^s | 66.7 (63.0-69.0) | 64.7 (59.0-68.0) | 11.6 (11.0-12.0) | 6.3 (6.0-7.0) | 21.9 (21.2-22,2) | 19.5 (18.5-20.2) |
| Southern Oregon, 4 males | 64.2 (61.8-67.5) | 61.9 (60.0-65.0) | 11.5 (11.2-11.8) | 6.6 (6.5-6.8) | 23.5 (23.0-24.0) | 20.7 (20.2-21.0) |

1. Kuiu Id., 4; Admiralty Id., 4; Baranof Id., 1; Sergief Id., 1; all migrants.

2. Cumshewa Inlet, 6; Skidegate, 1; Louise Id., 1; Prevost Id., 2.

3. Sitka, 2; Chichagof Id., 2; Kuiu Id., 2; Warren Id., 1; Prince of Wales Id., 1: Forrester Id., 2.

4. Taku River, 5; Admiralty Id., 2; Sergief Id., 1; Chickamin River, 1; Boca de Quadra, 1.

5. Skagit River, 1; Chilliwack, 1; Okanagan Landing, 2; Midway, 2; Trail, 3; Fernie, 1.

6. "Melospiza m. phaca": Goldbeach 1; Gardiner, 3.

(Nov. 26, March 3); Snelling, Merced Co., 1 (Jan. 6); Grizzly Id., Solano Co., 1 (March 14); Nicasio, Marin Co., 2 (April 9, 14); Oakland, 2 (Dec. 4, Jan. 7); Santa Cruz Mts., 1 (Nov. 25); Riverside, 1 (Nov. 3). Total, 322.

Berkeley, California, September 15, 1923.

EDITORIAL NOTES AND NEWS

For preparing this year's annual index, which concludes the present issue, the editors of THE CONDOB are indebted to Mr. Frank N. Bassett.

The forty-first stated meeting of the American Ornithologists' Union was held at the Museum of Comparative Zoology, Cambridge, Massachusetts, October 9 to 11, 1923. The attendance was large, including 24 of the Fellows. A total of 43 papers was presented, covering a very wide range of topics. Elections included Dr. Chas. W. Townsend to the class of Fellows, and Messrs. Chas. D. Bunker, Joseph Dixon and George F. Simmons to the class of Members.

Pacific Coast Avifauna number 15, Florence Merriam Bailey on "Birds Recorded from the Santa Rita Mountains in Southern Arizona," was issued on November 8, 1923. This contribution is published under the auspices of the Cooper Ornithological Club, the cost of printing having been met by money donations from certain of the members who are actively interested in the development of southwestern ornithology. This new number in the Avifauna series will, we feel confident, prove of distinct credit to all concerned. Studies of this high standard are needed from a great many other western areas which possess marked faunal individuality.

It is with deep sorrow that we record the death of Winifred N. Wear, which took place after a brief illness, at Fresno, Cal-ifornia, September 4, 1923. Miss Wear was long a member of the Cooper Ornithological Club, always active in promoting those interests for which the Club stands. She was a successful teacher in the public schools and for the last four years of her life was Principal of the Chowchilla School. She was ever alert to introduce and foster the study of natural history in the schools of the San Joaquin Valley. The cause of bird study in that region has suffered the loss of a tireless and conscientious worker. There is no one now in view to take her place.

PUBLICATIONS REVIEWED

PREBLE AND MCATEE ON THE FAUNA OF THE PRIBLOFS.*—It is good to see another number in the North American Fauna series. We had been afraid that governmental economy had singled out this series for elimination altogether, or at least for reduction. The present number (46) is reassuring in this regard, as also because of its high standard of scientific content equal to the best of its predecessors of like nature.

Preble and McAtee give a very interesting analysis of the avifauna of the Pribilof Islands. This is a group of rather sequestered location in Bering Sea, though situated considerably nearer the Alaskan shore than the Siberian shore. A total of 137 species of birds has been definitely indentified from the Pribilofs. Only 23 of these are known to breed there, and of these 23, 19 are water birds, and only 4 species are of endemic land birds. The striking thing about the whole list is the proportion of stragglers-casual visitants or at best very irregular migrants. These strays in all cases very probably hail from the neighboring coasts of Asia and America. A great many of the records are based on just one known occurrence; and additions of this kind of record may be expected to continue far into the future, almost as long as keen observers are located on the islands. No less than 14 species are now on the North American list solely because of their casual occurrence on the Pribilof Islands,

The authors think that all these cases of straggling are to be accounted for on the basis of bewilderment of individuals driven out to sea by high winds. Such lost birds would be attracted by the sight

^{*}U. S. Dept. Agric., Bur. Biological Survey, N. Am. Fauna No. 46, 1923 ["actual date of publication, June 20", but our copy not received until August 24], pp. iv+256, 15 pls.: A Biological Survey of the Pribilof Islands, Alaska: I. Birds [pp.10-101] and Mammals, by Edward A. Preble and W. L. McAtee; II, Insects, Arachnids, and Chilopods, by various entomologists, with an introduction by W. L. McAtee.