

NOTES ON CERTAIN WASHINGTON AND BRITISH COLUMBIA BIRDS.

BY SAMUEL N. RHOADS.

OWING to unavoidable delay in the publication of a complete paper on the birds I observed in Washington and British Columbia in 1892 I am induced to present the following remarks on some of the more noteworthy species. These notes are based for the most part on a collection of birds made during the past spring and summer on Puget Sound, Vancouver Island, and in parts of British Columbia south of the fifty-third parallel between the Rocky Mountains and the Pacific coast. Of the twenty species recorded as new to the fauna of British Columbia a few may be found in Lord's list,¹ but owing to the debatable nature of the territory surveyed by that naturalist and the inaccuracy of many of his statements, we are forced to ignore it in this connexion. Additions to the lists of Messrs. Chapman and Fannin are :—

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| <p><i>Simorhynchus pusillus.</i> <i>Charadrius dominicus fulvus.</i> <i>Callipepla californica vallicola.</i> <i>Bubo virginianus.</i> <i>Bubo virginianus arcticus.</i> <i>Glaucidium gnoma.</i> <i>Perisoreus canadensis capitalis.</i> <i>Chondestes grammacus strigatus.</i> <i>Zonotrichia querula.</i> <i>Spizella socialis.</i> <i>Passerella iliaca schistacea.</i></p> | <p><i>Clivicola riparia.</i> <i>Vireo huttoni obscurus.</i> <i>Helminthophila ruficapilla gutturalis.</i> <i>Dendroica maculosa.</i> <i>Icteria virens longicauda.</i> <i>Certhia familiaris montana.</i> <i>Parus hudsonicus columbianus</i> (subsp. nov.). <i>Turdus ustulatus swainsonii.</i> <i>Turdus aonalaschkæ pallasii.</i></p> |
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Additions to previous avifaunal lists of Washington are :—

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| <p><i>Colymbus holbællii.</i> <i>Urinator arcticus.</i></p> | <p><i>Simorhynchus pusillus.</i> <i>Synthliboramphus antiquus.</i></p> |
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¹'Naturalist in British Columbia,' J. K. Lord, Vol. II, Appendix.

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| Brachyramphus marinatorus. ¹ | Arenaria interpres. ¹ |
| Cephus columba. ¹ | Hæmatopus bachmani. |
| Uria troile californica. | Oreortyx pictus. ¹ |
| Larus argentatus smithsonianus? | Callipepla californica vallicola. |
| Larus californicus. ¹ | Dendragapus franklinii. ¹ |
| Larus delawarensis. ¹ | Lagopus leucurus. |
| Larus brachyrhynchus. | Cathartes aura. ¹ |
| Phalacrocorax dilophus cincinnati. | Circus hudsonicus. ¹ |
| Merganser serrator. ¹ | Falco peregrinus pealei. |
| Lophodytes cucullatus. ¹ | Falco columbarius suckleyi. |
| Anas discors. | Asio wilsonianus. |
| Spatula clypeata. ¹ | Syrnium occidentale. |
| Aix sponsa. ¹ | Megascops asio kennicottii. ¹ |
| Aythya americana. | Dryobates pubescens gairdnerii. ¹ |
| Histrionicus histrionicus. ¹ | Sphyrapicus ruber. ¹ |
| Anser albifrons gambeli. ¹ | Cypseloides niger. |
| Branta canadensis hutchinsii. ¹ | Pica pica hudsonica. ¹ |
| Branta canadensis occidentalis. ¹ | Agelaius phœniceus. ^{1 2} |
| Branta canadensis minima. | Progne subis. ¹ |
| Olor buccinator. ¹ | Vireo solitarius cassinii. ¹ |
| Grus mexicana? | Dendroica coronata. ¹ |
| Porzana carolina. | Sitta carolinensis aculeata. |
| Fulica americana. ¹ | Sitta canadensis. |
| Tringa canutus. | Parus atricapillus occidentalis. |
| Totanus flavipes. | |

Simorhynchus pusillus. LEAST AUKLET. — Mr. Jos. Edwards, of the well-known firm of Edwards Bros., taxidermists, of Tacoma, called my attention to the occurrence of a "very small Auklet," a pair of which were seen by his father on Puget Sound during the winter of 1888. One of these was wounded and finally escaped after a very close pursuit by the two men in a canoe.

The diminutive size of this Auklet as compared with *Ptychoramphus aleuticus*, or any other of its congeners known to inhabit those waters, and the great familiarity of Mr. Edwards with these, makes the authenticity of this record almost unquestionable, and extends its winter range several hundred miles south of previous records.

Syrnium occidentale. SPOTTED OWL. — Two Owls (one of which is in the collection), taken by Edwards Bros. twelve miles east of Tacoma, on the western foothills of the Cascades, prove to be almost identical with Xantus's type of *Syrnium occidentale* taken at Fort Tejon, California. In color the Washington specimens agree with the type in being darker

¹ Washington species included in Cooper and Suckley's Pacific R. R. Report of 1860, Vol. XII.

² Mistaken for *A. gubernator* by Lawrence, Auk, IX, 45.

and larger than Arizona specimens. The Spotted Owl has heretofore been considered representative of the Lower Sonoran Fauna; that it should thus suddenly appear on the Boreal horizon is somewhat startling.

Bubo virginianus. GREAT HORNED OWL.

Bubo virginianus saturatus. DUSKY HORNED OWL.

Bubo virginianus subarcticus. WESTERN HORNED OWL.

Bubo virginianus arcticus. ARCTIC HORNED OWL.—The distribution of resident and visiting forms of Horned Owls throughout British Columbia is most confusing. I have examined about thirty specimens, representing all localities visited. Of these, six from the region between the Cascade and Rocky Mountains (Ashcroft to Vernon) are almost typical *virginianus*; three from Vernon are as dark as lighter specimens of *saturatus* from the coast, and six others from the same place grade from typical *subarcticus* nearly into *arcticus*. It is probable that two winter specimens in the collection of Mr. W. C. Pound, at Vernon, are *arcticus*.

The presence of individuals so closely resembling *virginianus*, west of the Rocky Mountains, is the most striking example of the frequent reproduction of eastern forms in the northwest I have yet observed. The reappearance of the dark *saturatus* phase upon the well-watered slopes of the Selkirk Range, and their disappearance a few miles farther east on the Rockies, tallies perfectly with the local climatic conditions of those regions. If we consider the extreme susceptibility to environment displayed by certain genera of North American Owls, and their tendency to dichromatic variation, the mixed condition of the *Bubo virginianus* group becomes less puzzling. The occurrence of *saturatus* in Labrador and on the mountain peaks of Idaho and Arizona, as testified by Ridgway and Merriam, is in keeping with my own experience. From such a state of affairs to the voluntary, individual assumption of color characters according with sudden local changes of environment, is a step in development too short to be impossible.

Glaucidium gnoma. PYGMY OWL.—That the California Pygmy Owl of the Pacific slope of British Columbia is sparingly replaced by true *gnoma* in the interior, is shown by several specimens taken by Mr. Pound of Vernon, one of which is in the collection.

Colaptes cafer+auratus. 'HYBRID' FLICKER.—A paper on 'Hybridism as exemplified in the genus *Colaptes*,' in the issue of 'Science' for Dec. 9, 1892, embodies my observations on this interesting group.

Corvus americanus. AMERICAN CROW.

Corvus caurinus. NORTHWEST CROW.—Thirty specimens of Crows from British Columbia and the shores of Puget Sound, Washington, of which fifteen are in the Streater collection and fifteen in mine, give the following measurements (in inches).

| | Sex | Wing | Tail | Tarsus | Exposed Culmen |
|---|------|-------|------|--------|-------------------|
| East Cascade region of B. C. | ♂ | 12.45 | 7.15 | 2.25 | 1.72 |
| " " " " " | Juv. | 12.30 | 6.90 | 2.15 | 1.60 |
| " " " " " | ♂ | 11.75 | 6.75 | 2.25 | 1.55 |
| " " " " " | | 11.12 | 7.05 | 2.15 | 1.56 |
| " " " " " | | 11.75 | 7.00 | 2.25 | 1.75 |
| " " " " " | ♀ | 11.95 | 6.75 | 2.12 | 1.68 |
| West Cascade region of B. C. | ♀ | 11.50 | 6.65 | 1.80 | 1.76 |
| " " " " " | ♀ | 11.00 | 6.60 | 1.90 | 1.70 |
| " " " " " | ♂ | 10.60 | 5.90 | 1.90 | 1.60 |
| " " " " " | ♂ | 12.00 | 6.80 | 2.00 | 1.62 |
| " " " " " | ♀ | 11.00 | 6.25 | 2.05 | 1.62 |
| " " " " " | ♂ | 10.90 | 6.12 | 1.80 | 1.70 |
| " " " " " | ♂ | 10.40 | 6.62 | 2.01 | |
| " " " " " | ♂ | 11.00 | 6.60 | 1.85 | 1.60 |
| " " " " " | ♀ | 11.00 | 6.80 | 2.00 | 1.62 |
| " " " " " | ♀ | 11.20 | 6.50 | 1.90 | 1.62 |
| " " " " " | ♂ | 11.15 | 6.60 | 1.94 | 1.70 |
| " " " " " | ♀ | 10.50 | 5.90 | 1.89 | 1.55 |
| " " " " " | ♂ | 11.40 | 6.30 | 2.00 | 1.68 |
| " " " " " | | 11.40 | 6.50 | 1.96 | 1.68 |
| West Cascade region of Washington | | 11.50 | 6.60 | 1.80 | 1.63 |
| " " " " " | ♂ | 12.05 | 6.75 | 2.16 | 1.80 |
| " " " " " | ♂ | 11.55 | 6.80 | 2.00 | |
| " " " " " | ♀ | 10.65 | 6.30 | 2.05 | 1.50 |
| " " " " " | ♂ | 11.65 | 6.80 | 2.12 | 1.65 |
| " " " " " | ♂ | 11.25 | 6.25 | 2.23 | 1.60 |
| " " " " " | ♂ | 11.75 | 6.80 | 2.20 | 1.55 |
| " " " " " | ♂ | 11.48 | 7.00 | 2.14 | 1.70 |
| " " " " " | ♀ | 11.15 | 6.50 | 2.00 | 1.45 |
| " " " " " | ♂ | 12.12 | 7.60 | 2.21 | 1.77 |
| Average | | 11.40 | 6.90 | 2.00 | 1.65 |
| Average of <i>C. americanus</i> (Eastern) | | 12.36 | 7.43 | 2.27 | 1.92 |

Examination of these figures and of the specimens from which they are taken emphasizes the conclusions of Mr. Chapman (based on the Streator series), as given in the Bulletin of the Amer. Mus. Nat. Hist., Vol. III, p. 142. "Coloration is apparently of no diagnostic value—examples which measurements proclaim *caurinus* are as glossy as any of the larger birds, while some of these [larger specimens] are as lustreless as any bird in the series." It is also remarkable that extremes of the series, referable to *caurinus* on the one hand, and to *americanus* on the other, are connected by an unbroken chain of intermediates exhibiting every possible phase of gradation, inhabiting promiscuously certain parts of the same breeding range, and that in three localities the extremes were found paired together.

Dr. Suckley, who was the first to describe the habits of *caurinus*, notices particularly the difference in the voice of the Pacific coast forms from that of the Eastern bird, and, while recognizing that there was a great difference in size among the Crows frequenting Puget Sound, naturally attributed these vocal differences solely to the smaller and more numerous individuals designated as *caurinus*. He failed to see any difference in the breeding habits of the large and small birds. It remained for the imaginative and too superficial naturalist of the International Boundary Commission, Mr. J. K. Lord, to further separate the so-called 'Barking Crow' from its larger associate, by stating that the former, after spending the winter on the coast, retired to the interior to breed, and that it there constructed a domed nest of mud and sticks, etc. On the contrary, I am free to assert that typical specimens of *caurinus* rarely cross the Cascade Range, and more rarely breed there, that they breed as abundantly and in the same manner and situations along the Pacific coast as their larger brethren; that Northwest Crows never build a domed nest, nor, to my knowledge, ever inhabit one, that custom being the peculiar monopoly of the Magpie; and, finally, that the vocal peculiarities of Northwest as distinguished from Eastern Crows are shared equally by great and small birds.

Prof. Baird, in the original description of *C. caurinus*, characterizes it as a "small Crow from the northwest coast," separable from *americanus* by its diminutive size, but differing in no other essential particular of proportions or coloration from *americanus*, and quotes Dr. Suckley regarding its habits, as already given. Baird further shows that *C. ossifragus* is easily separable from both *americanus* and *caurinus* by the relative proportions of tarsus and toes and by the color of lower parts, and raises the question whether *caurinus* is "more than a dwarfed race of the other species," *i. e.* of *americanus*.

Mr. Ridgway, in his 'Manual,' endeavored to formulate characters for *caurinus* which would set at rest any doubts as to its title to specific rank, resting his claim on certain peculiarities of coloration and measurements which the material in my possession proves to be inconstant and valueless. In answer to a letter calling attention to this, he writes: "I had entertained hopes that good characters might be found to distinguish *C. caurinus* as a species, but doubtless you are justified in your failure to find them. Is it not possible, however, that interbreeding of *caurinus* and the western form of *americanus* has caused the state of affairs which you have discovered?"

Summing up the evidence, we have left us barely two alternatives, one the possibility that "*caurinus* and the western form of *americanus*" interbreed in this region and that the intermediates are hybrids resulting from such a union, the other, the probability that *caurinus* is a dwarfed example of the smaller western race which Mr. Ridgway described in 1887 under the name of *Corvus americanus hesperis*, and which, for reasons better known to themselves than to the public, the A. O. U. Committee failed to recognize. A subspecific distinction between the smaller and larger interbreeding Crows of the Pacific coast being a violation alike of good sense

and good rules, it remains to name the British Columbia Crows either *americanus* or *caurinus* according to size, and their intermediates hybrids, or to class all under a common name. I accept the latter as the most simple and reasonable alternative.

The northeastern and northwestern forms of *americanus* may be characterized as follows :

Corvus americanus Aud. AMERICAN CROW.—Wing averaging more than 12.35, tail averaging more than 7.40, culmen averaging more than 1.90, tarsus averaging more than 2.25 inches. Plumage black, glossed with violet reflections; lower parts jet black, glossed like upper parts on neck and breast, and fading into the plain black of belly. Larger and more glossy; length 17.00–21.00, wing 11.90–13.25 (12.36), tail 6.90–8.00 (7.43), exposed culmen 1.80–2.05 (1.92), tarsus 2.20–2.40 (2.27)¹ inches. Habitat: Eastern North America, except southern Florida.

Corvus americanus caurinus (Baird). NORTHWEST CROW.—Wing, tail, culmen and tarsus measurements always (?) less than their average measurements in *americanus*. Plumage black, with violet reflections, rarely decided as in *C. americanus*, nor as constant on lower as on upper parts. Violet of upper parts generally confined to the crown, scapulars, quills, and wing-coverts, with hind neck and interscapular region duller or lacking any gloss. Smaller and less glossy; wing 10.40–12.45 (11.40), tail 6.12–7.60 (6.90), exposed culmen 1.55–1.80 (1.65), tarsus 1.80–2.25 (2.00) inches. Habitat: Northwestern North America west of the Rocky Mountains.

Melospiza lincolni. LINCOLN'S SPARROW.

Melospiza lincolni striata. FORBUSH'S SPARROW.—A comparison of six specimens from Vancouver Island, five from the interior and four from the mainland coast of British Columbia with two from Pennsylvania, three from Mexico, two from Iowa, and one from Fort Simpson, may be thus summarized: Vancouver Island specimens (including two from Comox, the type locality) are not more "olivaceous" on superciliary stripe than those of same season from any other locality. Black markings on back not darker than in specimens from Orizaba, Fort Simpson, or the interior of the British Columbia mainland, nor darker on throat than skins from the interior. In all deference to its describer and the verdict of our committee on nomenclature, I consider *M. lincolni striata* less entitled to recognition than certain subspecies once included, but now stricken from the Check-List.

Vireo gilvus swainsonii. WESTERN WARBLING VIREO.—Warbling Vireos from west of the Rocky Mountains have caused trouble ever since Baird suggested their specific separation from *V. gilvus* under the name *Vireo swainsonii*. Coues and Ridgway recognize them as a subspecies of *gilvus*, the latter giving their habitat as west of the Rockies, but, as is well known, the race finds no place in the A. O. U. Check-List. Swainson's type came from the Columbia River, probably east of the Cascades, but

¹ These measurements of *americanus* are taken from Ridgway's 'Manual.'

the material on which Baird's proposed separation rests is five specimens from the Pacific slope, three of which were obtained at Steilacoom, Washington. The type locality being in the northwest, this race can be ignored only on a comparison of series from this region with Atlantic coast specimens. Owing to the scarcity of specimens from Washington or British Columbia this has heretofore been impossible. The subjoined table supplies the necessary information. The measurements (which are in inches) are all my own and are taken only from skins collected by Mr. Streater and myself in the respective districts named.

| <i>Wing</i> | <i>Tail</i> | <i>Bill from nostril</i> | <i>Tarsus</i> | <i>Wing</i> | <i>Tail</i> | <i>Bill from nostril</i> | <i>Tarsus</i> | |
|-------------------------------|-------------|------------------------------|---------------|---------------------|-------------|------------------------------|---------------|-----|
| Vancouver Island. | | | | West Cascade Slope. | | | | |
| 2.63 | 2.00 | .27 | .62 | 2.55 | 1.85 | .27 | .61 | |
| 2.63 | 2.08 | .27 | .60 | 2.64 | 2.00 | .28 | .74 | |
| 2.58 | 1.88 | .27 | .62 | 2.62 | 2.05 | .27 | .64 | |
| 2.62 | 2.00 | .27 | .63 | 2.62 | 1.98 | .27 | .65 | |
| 2.62 | 1.89 | .27 | .62 | 2.60 | 1.98 | .27 | .70 | |
| 2.65 | 2.00 | .28 | .62 | 2.66 | 2.00 | .28 | .63 | |
| 2.60 | 1.99 | .26 | .63 | 2.60 | 1.95 | .27 | .66 | |
| 2.63 | 1.95 | .30 | .63 | 2.65 | 2.00 | .28 | .75 | |
| Average, | 2.62 | 1.97 | .27 | .62 | 2.62 | 1.97 | .27 | .67 |
| East Cascade Region. | | | | Atlantic Coast. | | | | |
| 2.66 | 2.02 | .28 | .65 | 2.85 | 2.12 | .28 | .64 | |
| 2.60 | 1.97 | .27 | .67 | 2.67 | 2.13 | .28 | .72 | |
| 2.60 | 1.90 | .28 | .65 | 2.73 | 2.10 | .34 | .65 | |
| 2.75 | 2.08 | .29 | .63 | 2.84 | 2.20 | .31 | .69 | |
| 2.62 | 2.00 | .27 | .61 | 2.82 | 2.15 | .32 | .66 | |
| 2.55 | 1.95 | .27 | .61 | 2.70 | 2.03 | .34 | .65 | |
| Average, | 2.62 | 1.99 | .28 | .64 | 2.80 | 2.12 | .33 | .70 |
| Atlantic Coast averages, | | 2.77 | 2.11 | .31 | .69 | | | |
| Northwest averages, | | 2.62 | 1.97 | .27 | .64 | | | |
| Differences, | | .15 | .14 | .04 | .05 | | | |
| Ridgway's averages (eastern). | | 2.84 | 2.22 | .31 | .70 | | | |
| " " (western). | | 2.69 | 2.14 | .30 | .68 | | | |
| Differences, | | .15 | .08 | .01 | .02 | | | |

It will be seen that Northwest skins average about .15 inch larger in length of wing and tail, .04 in bill and .05 in tarsus measurements. These marked differences are of themselves sufficient to make *swainsonii* more distinctly subspecific than many other western forms of eastern species

included in the Check-List; add to this the difference in average coloration of upper parts between Pacific and Atlantic coast specimens and we have all that conservatism can ask. When, however, we include, in a comparison between east and west specimens of *gilvus*, skins from all localities over their respective habitats as defined by Mr. Ridgway, these differences are so diminished that the separation of the two forms becomes questionable. It will be impossible to assign hard and fast lines for the habitat of *swainsonii*. The southern Rocky Mountains furnish many specimens of an intermediate character in color, which are nearly as large as *gilvus* while those of the north are quite distinct across the entire territory west of the Rockies.

For the present it will suffice to include British Columbia, Washington, Oregon and northern California in the habitat of *Vireo gilvus swainsonii*.

Vireo huttoni obscurus. ANTHONY'S VIREO.—This may be considered a rather rare visitor on Vancouver Island. I secured one near Victoria. This specimen, also two secured on the same spot by Mr. Maynard in 1891, and which I had the privilege of examining, belong to the strongly characterized race of *Vireo huttoni* proposed by Mr. A. W. Anthony in 1890. Mr. Anthony's specimens were taken in northwestern Oregon. Those above mentioned considerably extend the habitat of *obscurus* and make it probable that it will be found much farther north.

Sylvania pusilla. WILSON'S WARBLER.

Sylvania pusilla pileolata. PILEOLATED WARBLER.—The differences in coloration between Vancouver Island, Rocky Mountain, Iowa, and Pennsylvania specimens of these forms, as given in the books, is in many cases entirely contradicted by the series in my possession. Examples may be selected from extreme east and west points which defy the most critical eye to detect a difference, save perhaps in the intensity of yellow on the forehead, while darkest eastern specimens may be perfectly matched by skins from Vancouver Island. Comparative measurements are of no value, the average differences between *pusilla* and *pileolata* given by Mr. Ridgway being only .01 inch each in lengths of tail and wing, nor is the comparative color of bill of constant value in the series before me.

If this series may be taken as a criterion of the status of *S. pusilla pileolata*, it has no better claim to recognition in our nomenclature than the late *Dendroica aestiva morcomi*.

Parus hudsonicus columbianus SUBSP. NOV. COLUMBIAN CHICKADEE.—Four specimens of *Parus* from the central Rocky Mountains near Field, British Columbia, taken in a deep forest at an elevation of 5000 feet, differ so materially from *Parus hudsonicus* that it seems proper to separate them. Measurements and coloration of these with those of a series of forty New York, Ontario, Labrador, Great Slave Lake and Alaskan skins, loaned by the Smithsonian Institution, have been taken, and the following characters noted.

SUBSP. CHAR. (Type, No. 3078, ♂, coll. S. N. Rhoads, Field, B. C., Aug. 30, 1892).—Colors much darker throughout. Black of throat jet, without sooty suffusion, its posterior border abruptly defined and lacking

invasion of white tips seen in *hudsonicus*. Bill black, lacking any tinge of brown. Brownish loreal area of *hudsonicus* replaced by sooty black and connected by a distinct frontal band of same color. Crown and hind neck slaty drab with brownish tinge obsolete or barely perceptible. Back, rump, and tail-coverts grayish brown as in *hudsonicus*. Wings and tail darker slate gray, the former without the brownish or grayish tips always (?) present in *hudsonicus* and *stoneyi* (?). Sides and flanks chocolate (nearly blackish) brown.

Comparative average measurements in inches of adults are subjoined.

| | <i>Wing</i> | <i>Tail</i> | <i>Ex. Culmen</i> | <i>Tarsus</i> |
|---------------------------------------|-------------|-------------|-------------------|---------------|
| <i>Parus hudsonicus</i> . | 2.58 | 2.55 | .27 | .61 |
| <i>Parus hudsonicus stoneyi</i> . | 2.55 | 2.60 | .31 | .64 |
| <i>Parus hudsonicus columbianus</i> . | 2.70 | 2.64 | .32 | .67 |

Should a more complete series of *columbianus* prove the constancy of the characters given above, it may be found to merit specific rank, but as the case now stands a humbler position is more tenable.

Regarding the status of *P. hudsonicus stoneyi* in this connexion, we are at much loss because of the scarcity and bad condition of specimens, which also lack data. In size *stoneyi* does not greatly exceed *hudsonicus* except in bill measurements which nearly equal those of *columbianus*. Lighter specimens of *hudsonicus* from Ungava, Labrador, differ but slightly in color from *stoneyi* while the differences between these and *columbianus* are striking.

Mr. Ridgway has suggested to me the propriety of going thoroughly over the whole ground in question. With this in view I would ask the loan of specimens of *Parus hudsonicus* from all parts of its known habitat. Such of these as may be sent to the Academy of Natural Sciences of Philadelphia will be thankfully received and cared for.

Turdus aonalaschkæ pallasii. HERMIT THRUSH.—The presence of this species breeding in the region around Lake La Hache, B. C., as attested by four skins in the collection, further complicates the relationships of this genus in the Northwest. Neither *auduboni* nor *pallasii* was found in any other part of British Columbia. I found *aonalaschkæ* breeding in the Rocky Mountains at Field. It is doubtful if *auduboni* reaches the forty-ninth parallel. If, as seems probable, it be found that *pallasii* and *aonalaschkæ* breed indifferently across common ground in the central and Rocky Mountain regions of British Columbia, without the intervention of intergrades, a more definite separation of the two is necessitated. Owing to the limited series obtained in evidence of this, a satisfactory conclusion cannot now be reached. Two points at least are established; first the breeding of *aonalaschkæ* in the Rocky Mountains; second, the breeding of *pallasii* west of the Rockies and south of the fifty-second parallel.