

NOTES ON SWARTH'S REPORT ON A COLLECTION OF BIRDS
AND MAMMALS FROM THE ATLIN REGION

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THE above Report, from volume 30, University of California Publications in Zoology, is one more example of its author's painstaking methods and careful presentment of his conclusions. His descriptions of the region visited are models of their kind, embodying as they do a vivid portrayal of the character of each type of country without any waste of words.

After accompanying the author throughout most of his tour, I placed whatever notes and material I had collected at his disposal. The notes included a list of the birds seen by the writer during a ten day stay at Log Cabin in the extreme north-western corner of British Columbia some fifty miles west of Atlin. Mr. Swarth has not included the additional species I observed there in his list, so I will record these in the present paper together with some comments on the list itself.

Log Cabin is a station on the White Pass and Yukon Railroad a few miles east of the Alaskan boundary. It lies at the head of a wide valley, altitude about 3000 feet, which runs out in a southeasterly direction to the Taku arm of Lake Tagish, the route of the old Fantail trail of the days of '98. The region is essentially in the Hudsonian life-zone, fauna and flora both showing far more elements of the Boreal than are found at the same elevation farther in the interior. Swarth has already commented on the Boreal affinities of the Coastal mountains in his report on the Stikine region, and it is still more obvious farther north.

The wide flat valley south of Log Cabin is a waste of rocky ice-worn ridges interspersed with shallow lakes and stretches of muskeg, the latter mostly covered with cotton grass. A good deal of stunted balsam occurs together with some belts of larger timber, mostly lodgepole pine, western hemlock and spruce.

Birds were very scarce and the absence or scarcity of such birds as Pine Grosbeaks, Crossbills and Woodpeckers was notable. The White Pass a few miles to the westward is obviously a well-used migration route, judging by the obvious movement of birds from the direction of Lake Bennett westward through the pass.

Marila marila. Greater Scaup. Not included in Swarth's list. He says "Scaups seen at Carcross, May 22, were presumably *M. affinis*." All the Scaups we saw there were undoubtedly *marila* and were listed as such without any reservations. They were all obvious migrants only. We did not see the Lesser Scaup until we got to Atlin about a week later.

Glaucionetta clangula americana. American Golden-eye. One immature male, a sick bird, frequented the islands in front of Atlin village.

Clangula hyemalis. Old-squaw. Breeding at Log Cabin; several flying broods seen and one young bird taken with primaries still in their sheaths and unable to fly September 1. This constitutes the first British Columbian breeding record for the species and the most southerly one for the Pacific Coast.

Tringa solitaria. Solitary Sandpiper. After a long and careful study of the two forms of Solitary Sandpiper, extending over a period of some forty years acquaintance with both forms in the field, I cannot agree with Swarth that there is "no more satisfactory mode of dividing them than by regard to the points of capture". The western form, *cinnamomeus*, can always be separated in the juvenal plumage by the buffy spotting of the upper surface, size and the presence of freckling on the inner web of the first primary. The constancy of the characters are in the order named. The adults are harder to separate, as there is no buffy coloration in the spotting of the adults of the western form. The breeding ranges of the two are ill defined, chiefly owing to lack

of material. On migration, the two are found together over the whole of the west. *T. s. solitaria* occurs in British Columbia as absolutely typical juveniles in the proportion of one in three, while *cinnamomeus* is common on the prairies in the fall at least as far east as Saskatchewan.

Dendragapus obscurus flemingi. Fleming Grouse. While in absolute agreement with Swarth in his general treatment of the forms of the grouse of this genus I must differ on two minor points. First, we cannot assume that *obscurus* of Colorado has been definitely proved to belong to the *richardsoni* group. Further field observations on its courting actions and the color and character of the inflatable neck skin are needed to prove this. Geographical distributions are sometimes anything but "logical".

Second, Swarth is well aware of the presence of a very dark form of *richardsoni* with all the characters of *flemingi* throughout the whole of the humid southern interior of British Columbia. Yet he makes no mention of this fact and ignores it in his distributional map. In our conversations on the subject he mooted the possibility of the range of *flemingi* extending right down to the Selkirk ranges of southern British Columbia where the darkest races of *richardsoni* exist.

The best character for separating *flemingi* from typical *richardsoni* is not the darker coloration of the males; any large series will show dark colored *richardsoni* and, as in Swarth's Teslin Lake bird, light colored *flemingi*; but the blacker under tail coverts of the last named form with small white tips, instead of the white tip covering almost the whole exposed portion of the feather as in *richardsoni*. But birds from Revelstoke, Selkirk range, in southern British Columbia show the extreme of blackness of the lower tail coverts. It is possible that a wedge running southward to or near the British Columbian southern boundary splits the range of *richardsoni*.

But we must consider the extreme susceptibility of all grouse to conditions of humidity and environment and not judge them by the standards that are used in other orders.

Lagopus rupestris. Rock Ptarmigan. Swarth's disposition of the Willow Ptarmigan group seems so logical and conclusive that I wish I could corroborate his findings in the equally difficult Rock Ptarmigan group. Nothing carries greater conviction than a map with neat symbols conveying an idea of a definite distribution. I must disorganize Swarth's map of the distribution of the Rock Ptarmigan in one important particular, however. The four birds I loaned him which he calls *rupestris* were not collected at Bennett as he states but on the White Pass summit and on the Alaskan side of the boundary, or exactly where the "dark and extremely rufescent" specimen, no. 13462, was taken. This last, together with the male that accompanied it, he unhesitatingly ascribes to *dixonii*, while my birds are placed with *rupestris*. It is impossible to say how the mistake as to locality of my birds was made. Knowing that they should provide important testimony as to the validity of the race *dixonii*, I labeled them very carefully on the spot "White Pass Summit, Alaska-B. C. boundary". Bennett is a long way to the east of this and would be a most unlikely place for Rock Ptarmigan to occur, at any rate in summer time.

As to the Rock Ptarmigan male having only two plumages, I think Swarth refutes this himself when he states that the first summer feathers are brown and black barred, to be followed later by the finely vermiculated feathers. Two distinct types of feathers are here indicated; just as they exist in the male bird, these broadly barred and blotched feathers are conspicuous in the upper plumage of all Rock Ptarmigan, even after they have acquired the complete fall dress. A similar condition exists in the white-tailed species. It is seldom that the change to summer plumage is carried very far in either of these species before being overtaken by the intrusion of the fall plumage, but it does exist and is sometimes fairly complete. The Willow Grouse inhabiting lower altitudes where the ground is sooner clear of snow usually acquires a complete summer plumage before the arrival of the lighter and more finely marked feathers of the fall.

Astur atricapillus atricapillus. Eastern Goshawk. I entirely agree with Taverner that the heavily barred and striated adult plumage of the Goshawks is only one of age and is acquired the second year, the markings getting finer and more uniform with each successive year. This heavily marked stage may not be universal—it would be rash to say that anything was constant with such extraordinarily variable birds as the raptors. But that it does exist in a large proportion of cases is evident to anyone who has examined many Goshawks, not only in the dark colored race of the extreme northwest, but in the palest of eastern birds. Hence it cannot be regarded as a sub-

specific character. I have not seen the specimen taken September 5, so cannot say anything about its peculiarities. But the other "similar bird collected by Brooks" distinctly supports Taverner's theory, as does another light-colored adult taken at Atlin which Swarth has forgotten.

Buteo borealis calurus. Western Red-tailed Hawk. Swarth has made out a good case for recognizing the existence of a form *harlani*, but his memory is responsible for one vital flaw. The ordinary type of Red-tail (pale colored *calurus*) was seen by me in the heart of the breeding range of "*harlani*" at least seven times. In fact I suspected that a pair of typical red-tailed birds was breeding only a few miles from our quarters at Atlin.

It is as well to make a clean breast of the circumstances to explain why a large series of Harlan Hawks was not brought back. From the time we landed at Carcross, Yukon Territory, we were almost constantly in sight of pairs of large dark Buteos. These we identified as Swainson Hawks and I made no effort to collect them, as I took them to be the regular black form of this species occurring in the mountains of western British Columbia. Also we wanted to see what the juveniles were like; the first juveniles that flew we took, and to our surprise they were not Swainson Hawks at all!

Then we started to try for all the dark-colored adults and with poor success, as once the nesting was over they were wary and hard to shoot. The seeming presence of ordinary Red-tails during all this period, of course, called for no comment. The cry of the "Harlan" Hawks certainly seemed to be weaker, which may account for the error, though it certainly does not excuse it. In canvassing all possibilities that might be encountered, I never thought of the Harlan Hawk, which only shows how experienced collectors may pass by a good thing.

Swarth's memory has failed him in regard to the adult "*harlani*" that I took. This is not "uniformly dark colored", but is a very pale bird, suggesting the light-colored phase of the young American Rough-leg. I must admit also that we must have both been in error in counting the primaries of this specimen. Dr. Wetmore and Mr. Taverner, who have carefully examined it, have convinced me that the fourth primary must be missing on each wing; and this explains why it appears to have only three primaries emarginated.

The status of *Buteo borealis harlani* can only be solved by further field work—the taking of many mated pairs of breeding birds. It is to be hoped that the splendid series in the Victoria Memorial Museum at Ottawa, together with the detailed field notes of Taverner, may help to solve the problem and also clear up the Red-tailed Hawks generally. The subspecies *krideri* and *alascensis* can certainly not, to my mind, exist on the evidence at present submitted.

Bubo virginianus. Horned Owl. The question of the Horned Owls is just as confused as that of the Red-tailed Hawks and likewise cannot be settled by any study of cabinet specimens alone. While some of the Horned Owls that we took in Atlin are pale colored, they in no way approach true *subarcticus* from Manitoba and the Keewatin district. Swarth's citation of the specimens collected should have said young male and female instead of adult male and female taken July 3. These were a brood of two that I took with one parent. The parent was dark, about as in the ordinary breeding form of the Okanagan district. One of the young was similar, the other much lighter, and would have been regarded as another subspecies by most systematists. The other parent (not secured) resembled the light-colored young or was even paler.

Passerella iliaca fuliginosa. Sooty Fox Sparrow. Fox Sparrows of this type were seen at Log Cabin and one was taken. This bird, while dark and lacking the strong reddish tone of *townsendi*, is not as dark as specimens of *fuliginosa* from the Vancouver Island coast; also it is considerably smaller.

Acanthis linaria linaria. Redpoll. Dr. Bishop has already recorded the occurrence of the Redpoll in the breeding season at Bennett (North American Fauna no. 19). The species had presumably bred in some numbers at Log Cabin. Small parties and single birds were frequently seen and a young bird in first plumage was taken. It was not seen at any time during our stay in the Atlin region proper.

Okanagan Landing, B. C., November 14, 1926.