

FROM FIELD AND STUDY

A Mass Emigration of Sharp-tailed Grouse from the Tanana Valley, Alaska, in 1934.

—In Snyder's monograph (Univ. Toronto Studies, Biol. Ser., 40, 1935) on the Sharp-tailed Grouse (*Pedioecetes phasianellus*), considerable attention is given to a mass emigration of Sharp-tailed Grouse that occurred in Canada in 1932. According to him this emigration, which was largely a southward movement, originated from peak populations centered in the watersheds of Hudson Bay and James Bay, Ontario. Some historical evidence is given that indicates a similar mass emigration of these grouse occurred in 1896 in the same region. From these data Snyder was led to suggest, for this species, the possibility of a pronounced thirty-year cycle superimposed on the more widespread ten-year game cycle.

Further, he says, "It is of interest to mention at the outset that a similar movement (mass emigration) has not been reported in the case of northern sharp-tailed grouse inhabiting the northern parts of the Prairie Provinces, Mackenzie and Alaska regions, either in 1932 or any other year" (p. 15).

In view of Snyder's statements it seems important to us to put on record facts that have come to our attention concerning a similar emigration of these grouse from the Tanana Valley, Alaska. According to two long-time residents, Ivar Skarland and Otto Wm. Geist (oral communications), Sharp-tailed Grouse were very abundant in the vicinity of Fairbanks and College, Alaska, during the early 1930's. This concentration was apparently rather widespread throughout the Tanana Valley, as Mr. Geist saw large numbers of these grouse along the Alaska Railroad between the north side of the Alaska Range and Fairbanks. The population built up to a peak in 1934. At this time Dr. Skarland says one could not walk the railroad tracks between College and Fairbanks, a distance of less than five miles, without flushing hundreds of these birds along the right of way. According to Joseph T. Flakne (oral communication to N. W. Hosley) this grouse was particularly concentrated in lowland areas like the reindeer pasture where willow brush was abundant; it also was concentrated in the fields of the agricultural experimental station, according to Skarland.

One day in October, 1934, this great number of grouse suddenly arose en masse and flew off in a great cloud to the south toward the mountains. Mr. Flakne was in the reindeer pasture at the time. He estimated the flock to be two or three miles long, half a mile wide, and in a solid formation several birds deep. (We are indebted to Dean Hosley of the University of Alaska for permitting us to use the data from his notations of a conversation with Mr. Flakne in 1951.) No grouse seemed to be left in the area, and nothing was ever learned of the fate of the emigrating birds. Except for a few local concentrations, the Sharp-tailed Grouse has not been a common bird in interior Alaska since then. The essential facts about this emigration are also contained in a written report dated 1938 by J. W. Warwick (United States Fish and Wildlife Service Files, Juneau, Alaska), which the junior author has seen.

It is interesting to add that the years from 1934 to 1936 were peak years for populations of other tetraonid species and for the Snowshoe Rabbit (*Lepus americanus*) in the same region (unpublished data in the files of the Alaska Cooperative Wildlife Research Unit). We have found no indication in the literature of a similar mass emigration of grouse in Alaska in the 1890's, but it should be kept in mind that in this decade there was not much field work in the territory and thus such a movement might easily have gone unobserved.—TOM J. CADE and JOHN L. BUCKLEY, *Alaska Cooperative Wildlife Research Unit, College, Alaska, May 25, 1953.*

The Composition of a Wintering Population of White-crowned Sparrows in South-eastern Washington.

—In the course of investigations on the migratory and reproductive cycles of White-crowned Sparrows of the race *Zonotrichia leucophrys gambelii* we have procured substantial numbers of individuals for experimental purposes. Many of these were from the population which winters in the Snake River Canyon of southeastern Washington. This is certainly one of the most northern, if not the northernmost, of wintering populations of this race. We have also obtained substantial numbers of migratory birds in spring and fall from the higher Palouse country in the vicinity of Pullman, Washington. To augment our data on sex and age groups, T. D. Burleigh of the Fish and Wildlife Service has kindly supplied us with the pertinent information on specimens which he has obtained in the Snake River Canyon and in the higher Palouse country of western Idaho. Mr. Burleigh's specimens were obtained by shooting. Ours were obtained in part by shooting and in part by

use of Japanese mist nets. We can find no basis to indicate a difference in sampling between shooting and netting. All of the data were obtained in the period from 1947 to 1953. These investigations have been supported in part by funds provided for biological and medical research by the State College of Washington Initiative Measure No. 171.

The data may be summarized as follows:

| | Males | Females | Adults | First-year birds |
|---|-------|---------|--------|------------------|
| Winter population from Snake River Canyon | 273 | 47 | 160 | 160 |
| Migrants (Whitman Co., Wash., Latah Co., Idaho) | 188 | 161 | 37* | 250* |

* Does not include spring migrants which are all in adult plumage.

If one assumes a 1:1 sex ratio for this race, a chi-square test reveals the winter population (about 85 ♂ : 15 ♀) to deviate very significantly ($P < 0.01$) from this ratio. In the same manner, however, the sex ratio of the migrants cannot be shown ($P > 0.05$) to be significantly different from the ratio of 1:1. If one were to assume the sex ratio of the migratory birds (about 54 ♂ : 46 ♀) to be approximately the true ratio for the race, the chi-square test again reveals very significantly ($P < 0.01$) an excess of males in the winter population. These analyses can lead only to the conclusion that there is a marked excess of males in this northern wintering population.

The data also suggest a greater tendency for adult rather than first-year birds to winter in this area since the migratory sample has such a large proportion of first-year birds. This interpretation must be considered with caution since there is no way available to estimate the normal age ratio in the fall. Consequently the data could be biased because of differences in migratory routes and differences in the temporal patterns of migration between adult and first-year birds.—L. R. MEWALDT and DONALD S. FARNER, *Department of Zoology, State College of Washington, Pullman, June 4, 1953.*

Status of the Lesser Common Loon.—In connection with our studies on the birds of Alaska, it has been necessary to give consideration to the races of the Common Loon, *Gavia immer*. *Gavia immer elasson*, the Lesser Common Loon, has been accorded recognition by the A.O.U. Committee on Classification and Nomenclature, and in the manuscript for the Fifth Edition of the Check-List of North American Birds the winter range is given as "from southern Alaska south to California, etc."

The type specimen used by Bishop (Auk, 38, 1921:364-370) in describing *elasson* was an adult female, from his own collection, taken at Carpenter Lake, Rolette County, North Dakota, on July 13, 1905. Subspecific characters are: "Smaller than *Gavia immer immer*." As supporting evidence, the describer gives the measurements (wing, tail, exposed culmen, depth of bill at base, tarsus, and outer toe with nail) of 59 specimens, 36 of which he assigns to *G. i. immer* and 23 to *elasson*. For both groups, the points of collection extend from the Atlantic to the Pacific.

It must be kept in mind that the only character ascribed to *elasson* is its somewhat smaller size. On this basis it is interesting to analyze the measurements given by Bishop. Thrown together in a composite table, they present a series of perfect gradations and there is scarcely a case where measurements for the largest *elasson* are not larger than the smallest *immer*. Measurements of the two Alaskan winter-taken specimens in the United States National Museum, which are the basis for including this region within the winter range of *elasson*, are well within the minimum measurements for *immer*. The National Museum also has four Alaskan specimens that are in summer plumage. They are equally confusing. A juvenal male from Lake Aleknagik is, if correctly sexed, below the minimum wing and bill measurement for *immer* and should therefore be *elasson*. A July male from St. Michael falls above the minimum for *immer* in both wing and bill measurements, but within the maximum of *elasson*. A third specimen without date or sex data and no locality other than "Alaska" could be either if judged by the bill, but is *immer* by a wing measurement which approaches maximum size. A fourth specimen, a male taken at Tolugak Lake, on June 4, 1948, is above the maximum for *elasson* in wing measurement, but it could be called either if judged by the length of bill. In connection with the wings, we should point out that our measurements are of the chord whereas Bishop followed the curve with a tape. This latter method would yield somewhat greater length but, in the case of the specimens measured by us, would not do anything to simplify the problem.

The Lesser Common Loon also is alleged to winter on the coast of California so it is interesting to note the comment of Grinnell and Miller (Pac. Coast Avif. No. 27, 1944:35): "Small individuals occur in California, but until the range in measurements displayed by various breeding populations in