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A Census of Nesting Sites and Territories of Birds
in the Lake Solitude Area

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During the month of July a study was made to determine the nesting sites or territories of species of birds which frequented that part of North Cascade Canyon immediately around the Lake Solitude area. The time available for the study was far too limited for any comprehensive coverage. Many species appeared to have completed their nesting early in the month when many areas were still covered with snow and thus records of their nesting sites were not found. For other common species fairly complete records were obtained.

The six robin's nests which were found most likely represent a fairly accurate accounting of the numbers included in the entire area studied. Most of these nests were placed about 12 to 16 feet above the ground on the eastern or northeastern branches of white-bark pines, apparently for shelter against the prevalent southwestern wind. This was a general phenomenon among ground nesting birds also.

The few white crowned sparrow nests where found were hidden among the grasses in the lee of rocks. Again the twelve territories may be counted on as a true record of the population of these birds in this area although undoubtedly, as with the robins, there were probably more further up on the hillside.

The Audubon's warbler did not arrive and begin nesting until late in the month. The pair was probably the only one in the Solitude area since the familiar song was not heard in any other part of the area.

Although the nestlings had left home, at least a minimum number of six Clarke's nutcrackers could be established. Frequently they congregated from all over the area to one particular clump of white bark pines. While this gathering was going on no characteristic racket could be heard from the various parts of the hillside from which it usually emanated which boded well for the contention that all the nutcrackers were present and accounted for.

The one nest of the pink-sided or Oregon junco, found in a patch of pastel forbes by a little rivulet, represented the only instance of juncos seen in the area during the entire summer. The single instances of nests of the Cassin's purple finch and the mountain chickadee, however, give no indication of the total populations. Finches flew all over the area and chickadees could be seen in various parts. Probably nesting was complete for both species while the early stages of the investigation were just beginning.

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Higher up on the walls of the canyons black-rosey finches were definitely nesting in great abundance. Two pairs of pipits (American) frequented opposite sides of the lake and by the severe disturbance created by a visit to certain areas, one can quite confidently surmise that they were nesting close by. The ouzel seen frequently feeding in the chief inlet, the red-shafted flicker observed on July 26, and the red-cross-bills noted higher on the divides may or may not have been nesting. Two female ducks, a harlequin and a Barrow's goldeneye, frequented the outlet all summer but showed no signs of young. A buteo, probably Swainson's hawk, usually soared over the divides and only occasionally came down into the canyon. On July 10th an osprey chanced into the area but was never seen again--as was a black and white warbler which visited camp on the 23rd.

One particularly interesting discovery was the sighting of a small flock of red polls feeding in the evergreens on the margin of Upper Basin.

The hermit thrush and woodpeckers common further down in the canyon were conspicuously absent. Hummingbirds were frequently sighted but none were identified except a female broad-tail and no attempts were made to determine if they were nesting.

Rodent Population Studies in Jackson Hole, Wyoming
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During the summer of 1960, an attempt was made to evaluate reproduction in populations of Microtus montanus in relation to the growing season of the primary food plants. Extensive sampling of the populations was undertaken during July and August. A live-trapping unit was established in which all animals were marked and released. Females captured in this unit were X-rayed in the laboratory to obtain live embryo counts before release back into the unit. In this way we hoped to follow reproductive regimes in individuals through the season. Eventual failure of the X-ray apparatus precluded successful completion of this program. Samples of bluegrass (Poa pratensis) were collected at intervals throughout the study for chemical analysis in the laboratory during the fall and winter months. Known-age litters of young Microtus montanus were born and reared in the laboratory to obtain growth rate curves. Growth rates were determined up to 6 weeks of age. From these data approximate age determination was possible for most young animals taken during the summer.

Microtine populations were at very low density in Jackson Hole during 1960. Initial random sampling methods produced poor results. It was only after sampling failures that we discovered a successful