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HUNTERS AID GAME BIRD
RESEARCH WITH WINGS

For the fourth consecutive year game bird hunters have contributed to a province-wide research program.

In field checks and road blocks throughout Manitoba biologists and conservation officers have queried hunters and collected hundreds of sharp-tailed grouse wings.

Hon. C.H. Witney, Manitoba's mines and natural resources minister, said that the research program under the direction of R.E. McWhorter, the provincial game bird biologist, is an extensive study directed towards improving our knowledge of the reproductive and survival abilities of the sharp-tailed grouse under local conditions.

The sharp-tailed grouse make up the bulk of Manitoba's game bird populations. To the biologist falls the lot of ensuring that the flocks are not over-depleted by hunting pressure when adverse conditions or poor reproduction prevail.

Each year the biologist makes an accurate estimate of the grouse reproductive success in the different parts of the province and compares this with knowledge gained in previous years. At the end of the season he has to estimate the "bag" taken across the province, be able to evaluate the birds shot in terms of their age, and makes recommendations as to future hunting seasons and bag limits for the proper harvesting of the flocks.

Data is collected by spring and summer field surveys, by hunter interviews, and by counting and inspecting the wings collected from the birds shot.

The biologist correlates the information gained in these surveys to establish four main objectives:

1. To plot grouse hatching curves (i.e. the percentage of birds hatched each week during the nesting season) for the different ecological zones of the province.
2. To establish age ratios of the birds shot in the different ecological zones of Manitoba.
3. To ascertain the ratio of young birds to adult females, and of the males to females, and to compare these with similar data from previous years.
4. To evaluate hunter information.

Mr. Witney said that it is in the analyses of such objectives that recommendations for the proper management of the game bird populations are derived.

Wing samples collected from hunters enable the biologist to accurately determine the ages of the birds shot.

The moult pattern of a wing, and the amount of wear on the ninth and tenth primaries (flight feathers), differentiate a young bird from an adult. The length of the sixth, seventh and eighth primaries determine the young bird's age to the nearest week, and thus the time of hatch.

The timing of each year's nesting seasons -- whether earlier or later than in previous years -- also has a direct bearing on the overall reproductive success and dates of the hunting seasons.

Research, both in Manitoba and elsewhere, has indicated that large differences in reproductive success may occur between the various ecological zones in the province.

More than 1,000 grouse wings have been collected so far in the 1961 season. It will be some time yet before 1961 analyses are completed. Results for the 1960 program are reviewed below.

In 1960 the reproductive success of sharp-tailed grouse ranged from "fair" to "excellent" in different areas of Manitoba. Approximate "age ratios" were established in the different ecological zones of the province to differentiate between reproductive successes. In general, results tabulated from this research program gave juvenile/adult ratios in the following areas for 1960 as:

- Southwest Manitoba.....fair
- West of Lake Manitoba.....fair
- Southeast Manitoba.....excellent
- Interlake area.....good.

On the average a sharp-tailed grouse hen lays 12 eggs during the nesting season. Good weather following the hatch greatly helps the survival rate. An early "peak of hatching", followed by good weather until the young birds are several weeks old, are major factors for the maximum survival of the young.

Information given by hunters is evaluated in a number of ways. On the opening day of the 1960 hunting season, the hunter-hours-per-bird-bagged was found to be 2.82. A week later this ratio had increased to 3.75, the birds becoming wilder and harder to get. In the Langruth-Amaranth area the average hunter saw 3.3 birds per hour in the field, or about ten times the number of birds he managed to shoot.