

A POPULATION STUDY OF ROCK PTARMIGAN  
IN CENTRAL ALASKA

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Some results are given of the first two years of a long-term study of rock ptarmigan numbers, conducted by the Alaska Department of Fish and Game, Intensive work is being done on 15 square miles of upland tundra in central Alaska, where spring populations rose from 27 pairs in 1956 to 75 pairs in 1960 and about 115 pairs in 1961. Banding studies in 1960 and 1961 allowed an estimate of the sex and age composition of the resident population in

May, 1961: of 141 males, 17 bred on the area and 27 bred elsewhere the previous year, whereas, of the 97 yearling cocks, about 30 were hatched on the study area; of approximately 115 females, 48 were at least two years old and had bred on the area in 1960, and 20 were locally-hatched yearlings. Adult females (16 band returns) showed the highest degree of philopatry, although a few bred in places up to three miles apart in 1960 and 1961. Yearling birds (eight returns) bred an average distance of one mile from their place of capture as chicks. Only two of 25 adult cocks banded in 1960 were located the following year. Clutch size varied from 6.0 (nine nests) in 1956 to 8.2 (12 nests) in 1960 and 7.8 (21 nests) in 1961. About 90 per cent of the nests hatched each year, and chick mortality was quite low, usually not more than two chicks being lost per brood from hatching (late June) to early August.

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