

Irven O. Buss

Professor Emeritus, Wildlife Biology  
Washington State University  
Pullman, Washington 99164

## Comments on an Apparent Sharp-Tailed Grouse Movement in Eastern Montana

### Abstract

Observations on Sharp-tailed Grouse (*Pedioecetes phasianellus*) in eastern Montana during mid-November 1978 suggested a seasonal, southward movement.

Studies of prairie grouse are meager compared to that of most other gallinaceous species, and information regarding that of Sharp-tailed Grouse (*Pedioecetes phasianellus*) is particularly limited. On 18 and 19 November 1978 my wife and I observed a concentration of Sharp-tailed Grouse associated with high mortality along U.S. highway 12 in eastern Montana. Although we had driven this stretch of highway annually at this time of year for the past decade, this was the first time that we had observed Sharp-tails anywhere along the route.

We first observed road-killed birds, which were assumed to be pheasants, while driving west-bound along the highway near Hettinger, North Dakota. When we saw eight Sharp-tails standing along the roadside about 2.7 km from the Montana border, we recognized that the birds seen earlier might have been Sharp-tails. We then recorded all observations of live and dead birds from that point to Shawmut, Montana, a distance of 463 km.

We saw a total of 138 Sharp-tails, usually in groups of 2-6 birds. One group of 81 birds was first encountered flying in a southward direction 1.6 km west of Baker. We found a total of 18 road-kills, which represents 12 percent of the birds encountered. Additional mortalities were undoubtedly removed by predators. We saw Black-billed Magpies (*Pica pica*), coyotes (*Canis latrans*), Common Ravens (*Corvus corax*), and one Golden Eagle (*Aquila chrysaetos*) along this stretch of highway.

Tracks of Sharp-tails were easily counted in the snow along the roadway. I counted at least 400 sets of tracks, including one concentration made by about 75 birds in Fallon County. A majority of the tracks indicated that the birds were moving to the south. Although these birds may have concentrated along the highway to collect grit or grain spilled from trucks, most of those we saw continued their movement southward after crossing the highway.

There are a number of records of apparent one-way Sharp-tailed Grouse movements (Ammann 1957, Criddle 1935, Edminster 1954, Hamerstrom and Hamerstrom 1951). Snyder (1935) has given a remarkably detailed account of the great 1932 Sharp-tail exodus from the vicinity of James Bay. His map shows that the birds moved southward, some as far as 190 km. He reports that large areas of grouse habitat containing white birch (*Betula papyrifera*) were defoliated by the birch skeletonizer (*Bucculatrix*

*canadensisella*) prior to this movement. Grange (pers. comm.) suggests wildfires that devastate large areas containing winter forage plants may also induce such migrations.

While there is no way of determining whether these Montana sightings comprise seasonal shifts (Roberts 1936), north-south movements of the usual sort (Johnson 1934), or, mass dispersal like that Snyder (1935) described, the unusual nature of these sightings, their directionality, and the high rate of mortality associated with the movement, suggest that this may have been a one-way migration.

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