

# Roadside Nesting by Prairie Grouse in Northwest Minnesota<sup>1</sup>

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Because of intensifying land use, many species of ground-nesting birds have few alternatives but to establish nests in roadsides. Roadsides and fencerows have been shown to provide very important nesting cover for ring-necked pheasants in Nebraska by Linder et al. (1960); in South Dakota by Trautman (1960); in Colorado by Snyder (1974); in Minnesota by Chesness et al. (1968) and in Illinois by Joselyn et al. (1968). In a Wisconsin study area Gates (1973) found 18% of gray partridge nests in roadsides. High numbers of duck nests, especially blue-winged teal, mallards and gadwalls, were found along an interstate highway in North Dakota by Oetting and Cassel (1971). Other nests found in their study were those of mourning dove, killdeer, upland sandpiper, American bittern and gray partridge. Thus, roadsides are **utilized** by a variety of birds, but little mention of roadsides as nesting habitat for prairie grouse could be located in the literature. The purpose of **this paper is** to report the use of roadsides by greater prairie chickens (*Tympanuches cupido pinnatus*) and sharp-tailed grouse (*Pediacetes phasianellus*).

During a nesting study of the greater prairie chicken in northwest Minnesota, three prairie grouse nests were located in undisturbed cover along roadsides. On approximately 30 June, 1976, two ranch hands were "fishing" for northern pike in a ditch along a county road (N edge of NW  $\frac{1}{4}$ , Sec. 27, T 149 N, R 44 W, Polk County) when they almost stepped on a nesting grouse. They reported the nest to me and I examined it on 30 July. From breast feathers incorporated into the nest bowl, it was confirmed to be a sharp-tailed grouse nest. The nest was located in a well-drained area dominated by smooth brome (*Bromus inermis*) with intermixed big bluestem (*Andropogon gerardi*) that had not been disturbed by mowing or burning for at least three **years**. The residual cover at the time of nest initiation would have been approximately 40 cm in height with 15 cm of litter. All 13 eggs were successfully hatched in early July. The nest was located 792 m from the only sharp-tailed grouse dancing ground in the area. The cover types within a 1.6 km radius around the nest were 80% bluestem-dominated prairie (most of which was heavily grazed), 10% brush and 10% cropland. No woody vegetation was within 200 m of the nest.

The other two nests observed were from a radio-tagged prairie chicken which nested on the same roadside in two different years (Wedge of SW  $\frac{1}{4}$ , Sec. 36, T

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149 N, R 45 W Polk County). Both nests were located 3 m from the lightly traveled section road and 6 m from flowing water in the adjacent county ditch. The waterway contained crayfish, cats and salamanders and was regularly traveled by raccoons and **mink** as evidenced by tracks. The road was used as a travelway by foxes as evidenced by tracks and two sightings within 50 m of the nest. A badger was also noted on the road near the incubating hen. Both of the nests hatched, one on 30 June, 1976, with 13 out of 13 **eggs** hatching and the other on 2 June, 1977, with 13 out of 15 **eggs** hatching. Both nests were located approximately 2,615 m from the booming ground at which the hen was captured both years. In addition, the hen was observed copulating on the ground one year. The cover type for both nests was predominantly big bluestem which was 20 cm in height at the time of nest initiation with an average of 14 cm of residual litter. The site had not been disturbed for at least three years. Contained within a 1.6 km radius of these nests were 65% cropland, 25% lightly to heavily **grazed** prairie and 10% undisturbed prairie.

These observations illustrate the importance of residual vegetation to nesting prairie grouse. All three of the nests were successful even though the locations would seem to increase the likelihood of detection by predators. Both striped skunks and red foxes (two of the most common nest predators in the area) are known to use fences and roads as travel lanes. Although limited, these data further strengthen the case for the need to manage roadsides for wildlife.

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