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NORTHERN GOSHAWK NESTING DENSITIES IN MONTANE COLORADO

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The Northern Goshawk (*Accipiter gentilis*) is a rarely seen bird of prey found throughout the mountain regions of Colorado. Because of its reticent manner, very little has been written on Northern Goshawk population densities in Colorado or any other part of the United States. Recently, a five year study was completed in Alaska which showed a nesting density ranging from one nest per 46 km² to one nest per 373 km² (McGowan 1975). Although this nesting density is lower than those found in similar studies in Finland which showed densities of one nest per 22-100 km² (Hogland 1964) and one nest per 16.4 km² (Hakala 1969), no other study has been reported in the United States. In Colorado, very few active nests have been reported, and as a result, state and federal agencies have described the Northern Goshawk as rare or occasional.

The area under study (Figure 1) is an 81 km² segment of a river valley in the Rocky Mountains of northern Colorado. This river valley, at an elevation of 2460 to 2550 m, contains extensive stands of Lodgepole Pine (*Pinus contorta*) interspersed with Quaking Aspen (*Populus tremuloides*). Along the river bottom are open sage (*Artemisia*) flats with willow (*Salix*) thickets bordering the river's edge. The valley shows a history of glaciation, being "U" shaped with the valley walls reaching approximately 300 m in height at an average 25% slope before abruptly flattening out. The valley is approximately 9 km wide at the study area; the top of the walls are the study boundary. The length of the study area is 11 km.

Ranches are present along the river bottom, and cattle are grazed throughout most of the study area. Near the main roads, small logging operations have opened up parts of the usually dense lodgepole pine stands.

All nests were found by traversing the study area on foot. An attempt was made to cover all terrain in the study area, whether or not the area seemed suitable for nesting goshawks. Signs looked for included plucking perches, kills, whitewash, and pellets. The goshawks' noisy defense of the nest sites was also helpful in locating the nests. The nests, once located, were then checked to see if they were active that year.

The goshawks' ability to successfully nest near man became quite apparent, as all nests were within 2 km of main roads. Several nests were within 0.5 km of ranches in the valley, yet after interviewing the ranchers, I found very few people had ever seen the hawks. Later observations showed that the goshawks were hunting in and around the ranches.

During the summers of 1974 and 1975, nine active nests were found in the study area. Using the locations of the active nests for each year, nesting densities for the two years were obtained. The area may have had more nests than were located; due to the difficulty in finding nests, the densities should be considered as minimum for the area.

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In 1974, six active nests were found in the study area, for a nesting density of one nest per 13.3 km². The closest two nests were 2.4 km apart, indicating a higher density may be possible under certain conditions. Two of these nest sites had old nests nearby, indicating goshawks had nested in the same area in previous years.

In 1975, there were also six active nests in the area, though four nests active in 1974 were abandoned. Two of these four abandoned nests had new nests built

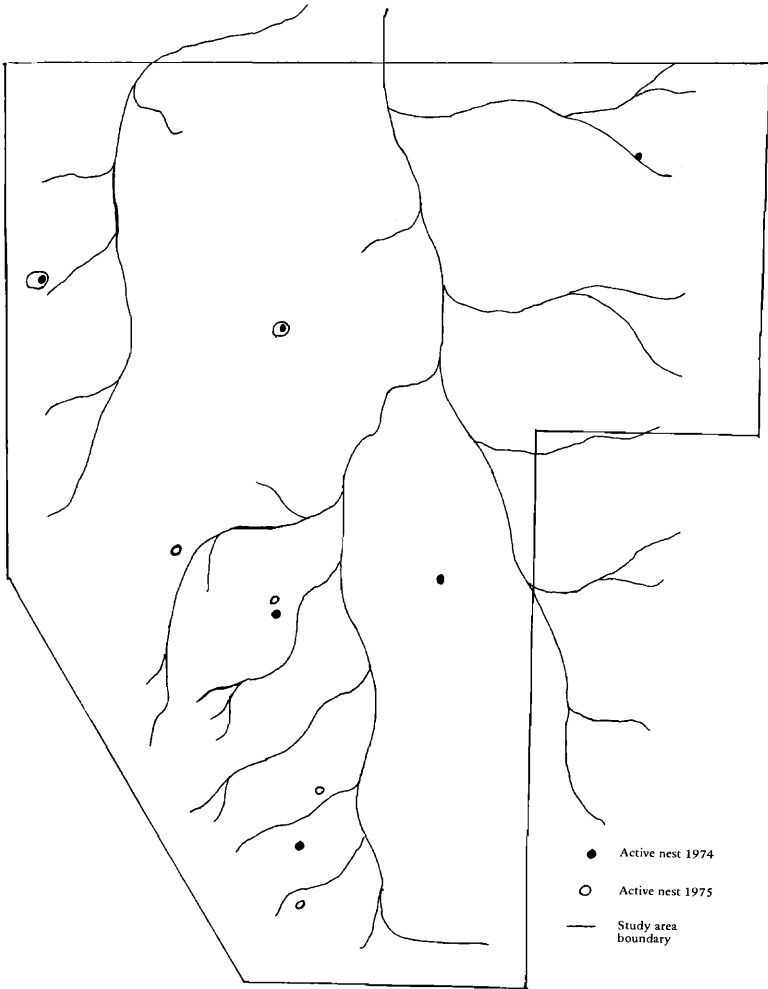


Figure 1. Northern Goshawk (*Accipiter gentilis*) nesting area in northern Colorado. Study area is approximately 9 x 11 km.

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a short distance away. The closest two nests in 1975 were 0.8 km apart, which is closer than any recorded in the literature I reviewed.

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