



Blue grouse production, movements and population, in the Bridger Mountains, Montana
by Thomas W Mussehl

A THESIS Submitted to the Graduate Faculty in partial fulfillment of the requirements for the degree
of Master of Science in Fish and Wildlife Management

Montana State University

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Abstract:

A study of blue grouse (*Dendragapus obscurus*) was conducted in the Bridger mountains of southwest Montana. Field work, on a full or part time basis, was carried on from April 14, 1957 to October 6, 1958. A total of 256 grouse, captured on the summer range, provided a nucleus of data on seasonal movements, development of young, population characteristics, and other life history information. Grouse observations were made throughout the course of the study and hunting season information was obtained by contacting hunters.

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ABSTRACT

A study of blue grouse (Dendragapus obscurus) was conducted in the Bridger mountains of southwest Montana. Field work, on a full or part time basis, was carried on from April 14, 1957 to October 6, 1958. A total of 256 grouse, captured on the summer range, provided a nucleus of data on seasonal movements, development of young, population characteristics, and other life history information. Grouse observations were made throughout the course of the study and hunting season information was obtained by contacting hunters.

INTRODUCTION

Various aspects of the life history and ecology of blue grouse, Dendragapus obscurus (AOU-1957) have been reported. These include, in Washington, food habit studies by Beer (1943), breeding age analysis by Buss and Schotelius (1954), brood habits and growth by Wing, Beer, and Tidyman (1944); and life history studies by Bendell (1954) in British Columbia, Caswell (1954) in Idaho, and others. The seasonal, altitudinal migration has been described by a number of workers, including Marshall (1946) in Idaho, Wing (1947) in Washington, and Bendell (1955) in British Columbia. During winter, blue grouse are reported to be present at the higher elevations of their mountain habitat. In spring, a movement to lower elevations takes place. Broods are raised in the foothill areas and move to higher elevations in late summer. The present study was on marked blue grouse from the Bridger mountains in Gallatin county, Montana. Information was secured on the chronology and extent of seasonal, altitudinal migrations; brood movements; development of young; population characteristics and general life history. During the summer months of 1957 and 1958, 256 blue grouse were captured, and of these 236 marked. Periodic observations of marked and unmarked grouse were made during other months of the year from April 14, 1957 to Oct. 5, 1958.

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DESCRIPTION OF THE AREA

The study area (Fig. 1), consisting of approximately 10 square miles on the western slope of the Bridger Mountains, in southwestern Montana, is located 20 miles north of Bozeman. The main part of the Bridger range extends in a somewhat north-south direction, with numerous ridges and canyons extending in an east-west direction. The slopes are generally steep (Fig. 2). Elevations on the study area range from 5,200 to 8,840 feet.

Three of four vegetative types described by Wilkins (1957) were included on the study area.

The montane forest (Figs. 1, 2, 3), consisting mainly of Douglas fir (Psuedotsuga menziesii) extends from approximately 6,000 to 8,600 feet. Limber pine (Pinus flexilis) and white bark pine (Pinus albicaulis) are prevalent on the tops of the higher ridges with some alpine fir (Abies lasiocarpa) on the north slopes. Most of this vegetative type is included in the Gallatin National Forest.

The bunchgrass prairie (Figs. 1, 2) extends outward from the base of the mountain. Bluebunch wheatgrass (Agropyron spicatum) and Idaho fescue

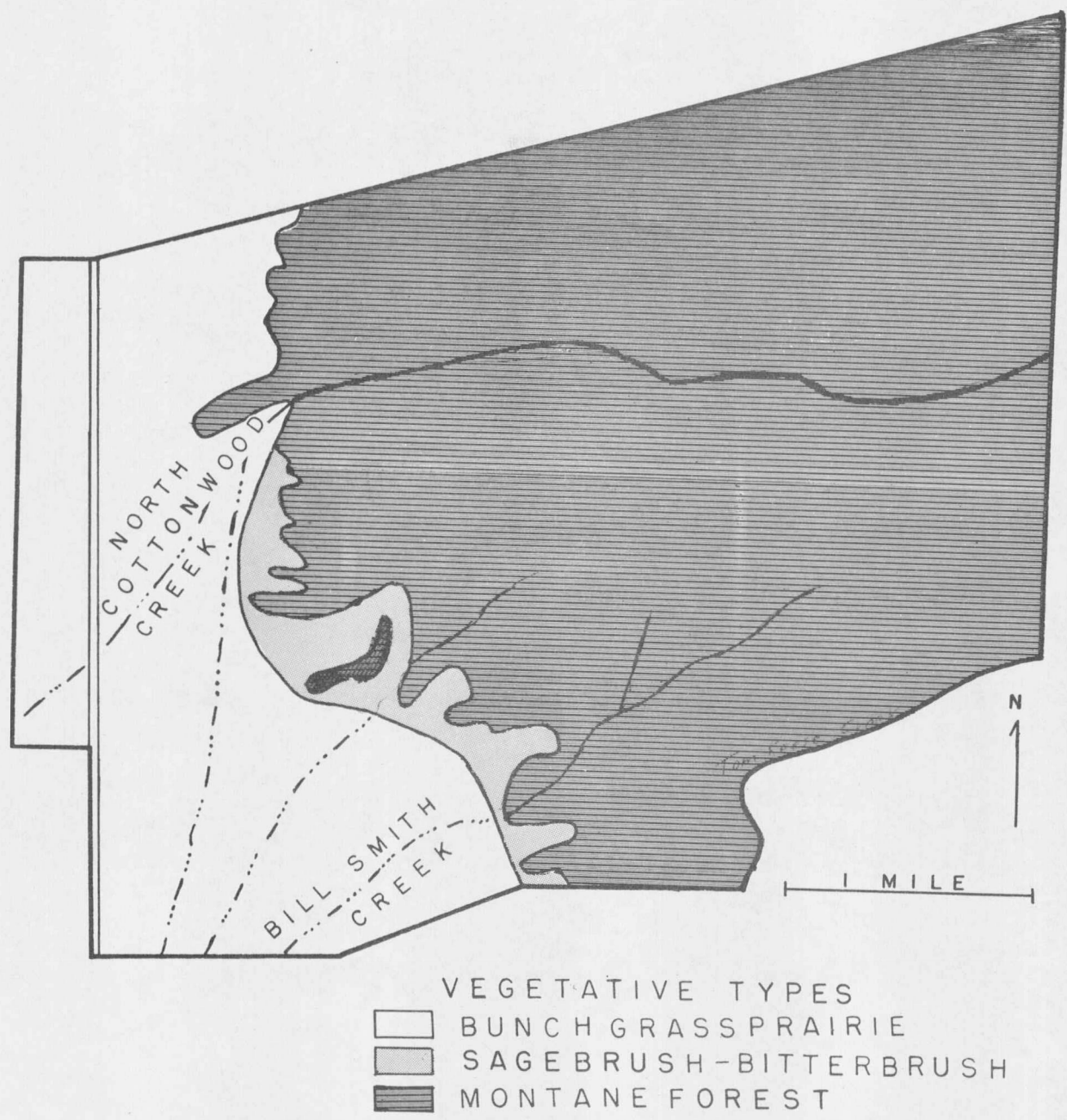


Fig. 1. Map of the study area.

