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Factors Affecting the Ecology of the Teton National Forest

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The Station is in serious need of two improvements:

1. Construction of a room to serve as a seminar room, library and reading room. The weekly seminars have been held in the living room of the home of the director, and the space available is not adequate. This room will be constructed either as a separate building or as an addition to the laboratory.

2. Construction of a log building to serve as bachelor quarters for research workers to replace the existing bunkhouse.

We will constantly attempt to improve the existing facilities to make them more pleasant and more effective in carrying out the various research programs.

SUMMARIES OF RESEARCH PROJECTS CARRIED OUT IN 1960

The Social Role of the Aging Ungulate
Margaret Altmann
Project Number 77

Work was continued on this project during the summer and early fall. A report on this summer’s research is not available at the present time, but will be completed in December and will be on file with the reports of other research workers.

Assisted by John Ackerman, Kenyon College, Gambier, Ohio.
Supported by Grant No. M2599 from the National Institute of Mental Health.

Factors Affecting the Ecology of the Teton National Forest
Alan A. Beetle, David Clarke and James Hicks
University of Wyoming
Project Number 85

Five field seasons have been spent in the Jackson Hole region. Teton County, as a political boundary, does not exactly define the natural floristic area. Since there is little or no endemism among the plants of Teton County, other criteria must be sought for defining the boundaries of the Teton County flora as a unit. To do this, it seems most satisfactory to fall back upon geology and take the area which was so affected by the events of the Pleistocene that they are still reflected in the patterns of the vegetation.

This area of floristics which is peculiar to Teton County fades northward into the stable forest of Yellowstone National Park, includes all of the Teton Range, and the glaciated floor of Jackson Hole, as well as adjacent drainages of the Buffalo, Gros Ventre, and Hoback Rivers.
The Teton flora, thus defined, is characterized by lack of endemism, the occupancy of immature, generally shallow soils of recent origin, accentuated patterns of primary succession, and frequently changing faciations reflecting changes in geology, soil, topography, macroclimate, microclimate, and fire. The vegetation is varied, characterized by an exceedingly high number of dominants, and the percent of ground cover is, for the rainfall belt, very low.

Supported by grant from Wyoming Natural Resources Board to Wyoming Agricultural Experiment Station.

Land and Freshwater Mollusks of Jackson Hole
Dorothy E. Beetle
Laramie, Wyoming
Project Number 72

Observations of the molluscan population of five ponds were conducted during the summer of 1960. Four of the ponds, Colter Bay, Jackson Dam, Pacific Creek No. 1 and 2 lie in the lodgepole forest. The fifth, Gros Ventre, is out on the plain along the Gros Ventre River. They are closed drainage basins, filled to a depth of a few feet by the spring runoff and underground seepage.

Colter Bay pond is surrounded by a sedge-grass ring and an outer fringe of aspen. The water surface is open except for a few emergent aquatics as Conium maculatum. The pH is 7.1. The dissolved salt content must be very low for the shells of the snails are fragile and thin, crushing easily. The basin lies in a morainal deposit, the bottom consisting of coarse gravel and silt. At its greatest extent the pond measures 106 by 60 yards and has a depth of 4½ feet.

On July 2 this pond contained a rather abundant population of Lymnaea jacksonensis and Sphaerium lacustre ryckholti. Five shells of Promenetus exacuans were found. No living material of this species was seen all summer, although a few shells were found in each survey. Measurements of the rate of growth of the shells was continued with each observation.

By August 27 the pond had shrunk to a small central area not exceeding one half foot in depth except for two tiny depressions. Where the water had receded carpets of Mentha arvensis were blooming. Most of the snails and clams were dead, their shells littering the area. A tiny island near the northeast edge of the pond protects that shore from the prevailing west wind off Jackson Lake. In its shelter the greatest quantities of snails were always congregated, and on this date the only living animals were to be found here.