

STUDENT CONSERVATION PROGRAM PROJECTS

Effects of High Altitudes on the Hemolymph of Insects

Elizabeth McClain
St. Louis University

See report by Dorothy Feir and Elizabeth McClain, page 6.

Organ Weight Measurements from Four Populations of

Thomomys talpoides

Jane A. Peterson
Oberlin College

This study was undertaken while the author was at the Jackson Hole Research Station, Moran, Wyoming, with the Student Conservation Program, July 1, 1966 to August 27, 1966. This study is a correlate of a long-range study by Dr. Kenneth L. Diem concerning substrate influences on biotic material.

The objective of this study is to determine organ weights as percentages of body weight for populations of the Northern pocket gopher, *Thomomys talpoides*. Population samples were taken from three rhyolite areas of Pliocene and Pleistocene origin and a control area of glacial alluvium. Rhyolite areas exhibit high levels of natural radioactivity. Organisms sampled from these areas indicate comparably high levels of radioactivity and notable trace element peculiarities. Organ weight measurements coupled with elemental analysis of organs will be used by Dr. Diem to determine the nature and extent of substrate influence on the pocket gopher.

A Study of the Flora of Aspen Communities

in Jackson Hole, Wyoming

Ann Scott
Wellesley College

Under the Student Conservation Association Program this summer, I assisted a University of Wisconsin graduate student in a study of the structure of aspen stands in the Jackson Hole area. For my own project I undertook an analysis of the forbs and grasses of these stands in order to learn how they were distributed and to determine which ones were especially associated with aspen. Due to incomplete data, this project can be treated only as a pilot study.

Our basic method followed the random quadrat system. In each stand we paced according to a computer list of random numbers to obtain ten different sampling areas. At different radii from a stake in the center of each area we measured the trees, saplings, and shrubs. Then we tossed a meter stick, formed a meter square where it landed, and used this spot to obtain the forb and grass measurements. In each square we estimated the percentage covered by the grass *Calamagrostis* and any other exceptionally prolific plant. Then we measured every other plant individually for its height and recorded this on data sheets under their Latin names. If a plant was unknown we collected it in a portable press for later identification.