Ecology of the Uinta Ground Squirrel in Jackson Hole

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A survey was carried out in July and August of areas inhabited by the Uinta ground squirrel (Citellus armatus) in Jackson Hole. The immediate purpose of the survey was to indicate what factors are necessary for ground squirrel habitation and to determine the nature of variation among environments inhabited by ground squirrels in Jackson Hole.

Nineteen areas were investigated. Each presented a somewhat different combination of vegetation, soil, topography, human disturbance and other factors. In each of 10 areas herbaceous vegetation and low shrubs were sampled, using the Daubenmire canopy coverage method. Soil samples were taken and analyzed for texture and the percentage of rocks present. A count of active burrows along a series of transects was made through each area to indicate the relative density of squirrels. In 9 other areas soil samples were taken and vegetation analyzed--a burrow count not being made. These included 4 areas in which ground squirrels might have been expected, but were not found. In all areas observations were made concerning topography, drainage, human developments, firmness of ground cover, height of vegetation, proximity to other vegetation types, and other local elements of the environment which appeared to be of significance.

Maps, photographs, and records of present and past land use have been consulted in an attempt to learn the history of human disturbance at specific locations surveyed above. This is not yet complete. Combined with data and observations made during the field survey, it is hoped that this will demonstrate the relationship (if any exists) between (1) presence, absence, relative abundance and density of ground squirrels and (2) human habitation and land use.

The information gathered is being analyzed to determine what differences in habitat types (natural and disturbed) are significant, and what units need, therefore, to be studied more intensively. At present it appears that 3 main sets of factors need to be accounted for in the selection of intensive study areas: (1) human disturbance vs. non-disturbance, (2) fine soil vs. coarse and rocky soil, and (3) shrub vegetation vs. grass vegetation.