

-14-

A Survey of Invertebrates of Jackson Hole  
Donald C. Lowrie  
Los Angeles State College  
Project Number 91

The summer was spent making collections of insects and spiders in the area.

Molting in Mammals  
Norman C. Negus  
Tulane  
Project Number 93

Weasels, Mustela erminea, were live-trapped and brought to the laboratory at Tulane University to study the effect of photoperiod and sexual hormones on hair growth and molting.

Water shrews, Sorex palustris, were also taken alive and taken to Tulane in order to investigate the sensory mechanisms involved in their avoidance of obstacles.

Assisted by Edwin Gould, Tulane University.

Stress as a Factor in Parasitism  
Glenn A. Noble  
California State Polytechnic College  
Project Number 103

A study was made of stress factors in ground squirrels and the effect of these factors on the parasites of the squirrels. The relationship between stress and bacterial or virus diseases has received some study, but very little attention has been given to the effect of stress factors on animal parasites. Evidence points to the general assumption that when an animal, or man, is under stress, its resistance to infection decreases. With bacterial infection this reaction seems to be due, in part, to the production of adrenocorticotrophic hormones from the pituitary gland and consequent release of adrenal glucorticoids which diminish normal inflammatory responses.

The Uinta ground squirrel, Citellus armatus, was selected as the animal for study because it was readily available in the area of the Research Station, was easily maintained in captivity, and was 100 percent infected with parasites of one kind or another. The parasite chosen for especial attention was a caecal protozoan, Trichomonas sp. The term parasite is used in its broad sense, for the pathogenicity of these flagellates in the squirrels has not been determined. The