For elk which migrate from above treeline in the summer to lower winter ranges of entirely different aspect it must be clear that their natural range covers many different patterns. On the other hand the life history of antelope could conceivably be included within one pattern.

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Some Aspects of Plant and Animal Distribution as Affected by Geologic Formations

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Research conducted in the summer of 1965 was a continuation of a study initiated in 1961. The study areas have been described in the 1962 Biological Research Station report.

Slow melting of snow on the study areas delayed phenological developments as much as three weeks. Plant and animal specimens were difficult to collect during most of the summer. A total of 63 northern pocket gophers (Thomomys talpoides) were collected and frozen for analytical work. Weights of the testes, the liver, heart, and the kidneys were recorded. Samples of each of the foregoing were preserved for micro element analysis. Placental scars were tabulated from the reproductive tract of each mature female. Leaves, stems and roots of Agoseris and Lupinus were collected and frozen for chemical analysis. The comparative results of the pocket gopher mound censuses for 1962, 1963, and 1965 are given in the following table.

Northern Pocket Gopher, Thomomys talpoides, Population Densities in Soils of Four Geological Formations, 1962, 1963, and 1965.

Area and Formation	Gophers per Acre		
	1962 27 Aug.-2 Sept.	1963 22 Aug.-30 Aug.	1965 21 Aug.-26 Aug.
Huckleberry Ridge	149	85	86
Huckleberry Exclosure (Cloverly-Morrison)	150	67	97
Big Game Ridge	102	101	86
Big Game Exclosure (Harebell)	56	90	57
Two Ocean Plateau (Wiggins)	104	96	25
Pitchstone Plateau (Rhyolite)	20	22	17

The difficulty encountered in trapping gophers in 1965 appears also to have been related to low population densities on several areas.

Research will be continued at the University of Wyoming concerning radiation and isotope accumulation and distribution, fat analysis, trace element analysis, gross energy measurements, and chromatography analysis of plant and animal tissues.

Assisted by Robert Casebeer, Teton National Forest; Dr. Archibald Cowan, University of Michigan; and Douglas Flack, Student Conservation Program participant. Cooperators were Grand Teton National Park, Teton National Forest, Yellowstone National Park and the U.S. Geological Survey.
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