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FOOD OF TOWNSEND GROUND SQUIRRELS ON THE 
ARID LAND ECOLOGY RESERVE (WASHINGTON)

Mark K. Johnson

Abstract.—Diets of townsend ground squirrels were quantified from the Arid Land Ecology (ALE) Reserve in eastern Washington.

Little has been reported on townsend ground squirrel (Spermophilus townsendii) diets. Alcorn (J. Mamm. 21:160-170, 1940) stated that the species fed mainly on green vegetation. Davis (J. Mamm. 20:182-190, 1939) reported several species of plants in their diets. Scheffer (J. Mamm. 22:270-279, 1941) related the seasonal activity of the species to the seasonal abundance of green vegetation.

Twelve ground squirrels were live-trapped on the Arid Land Ecology (ALE) Reserve during March-May 1974 in an Artemisia tridentata (big sage)/Agropyron spicatum (bluebunch wheatgrass) association (Daubenmire, Wash. State Agric. Exp. Sta. Tech. Bull. 62:131, 1970). The ALE Reserve is 15 miles northwest of Richland, Washington, on the Energy Research and Development Administration’s Hanford Works Reservation. This ground squirrel is not active above ground during the remaining months of the year at the elevation (1200 ft:366 m) of the study site.

The diet analysis technique employed was the same as that reported by Hansen and Flinders (Science Series No. 1, Range Science Dept., Colorado State Univ., 1969). Five microscope slides were made from the stomach contents of each ground squirrel, and 100 fields were quantified for each stomach sample.

There were 14 foods identified in the analysis: Poa sandbergii (49 percent), Achillea lanulosa (11 percent), Lupinus laxiflorus (10 percent), Astragalus purshii (11 percent), Descurania pinnata seed (8 percent), Erigeron filifolius (3 percent), Antennaria dimorpha (2 percent), Salsola kali (2 percent), Artemisia tridentata (2 percent), Sisymbrium altissimum (2 percent), unclassified forb (3 percent), Balsamorhiza careyana (<1 percent), Lactuca serriola (<1 percent), lichen (<1 percent) and arthropod (0.1 percent).

Staple foods of townsend ground squirrels were almost entirely green vegetation. The above-ground activity of the species seemed to be highly correlated with the seasonal abundance of the major food, Poa sandbergii.

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