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AN UNUSUAL POPULATION OF SPIDERS IN UTAH

Dorald M. Allred¹

An unusual population of spiders belonging to the species *Neoscona oaxacensis* (Keyserling) was observed on West Mountain in Utah County, Utah, by Miss Mary Fenley and her mother, Mrs. Ed. J. Fenley, of Provo, Utah, while on a Labor Day outing in 1971. They kindly directed my attention to the phenomenon.

West Mountain is situated in a north-south axis along the south-eastern side of Utah Lake. Its three major peaks have elevations of 6083, 6813, and 6904 feet, respectively. The level of the lake is at approximately 4487 ft. The predominant vegetation consists of various grasses along the foothill areas, and sagebrush and rabbit brush merging with a scattering of juniper trees at the higher elevations.

The spiders were densely distributed over several acres in the sagebrush and rabbit brush about midway up the mountain on the northern slopes. Only adults were present, and the females were predominant in number. The webs were not ornate as is typical of some of the other species of orb weavers. The radii of the webs were almost exclusively situated in some part of the individual shrub rather than in the spaces between shrubs. However, bridge lines frequently extended between separate plants. The bridge lines were of unusual strength, causing the limbs of plants to which they were attached to bend toward one another. As I walked between the plants and consequently broke the bridge lines, the tension of each line against my legs was almost like that of a lightweight twine.

Several random counts were made of the unusually high population of spiders. These varied from 10 to as many as 60 individuals per square meter. In more than 20 years of extensive field investigations in temperate desert areas I have never observed such a high, localized population of spiders of any species. Some of my colleagues stated that they had noted that populations of spiders of other species in Utah were much higher this year than they had ever seen previously; but they had not observed such a density as reported here. Dr. Willis J. Gertsch, who kindly identified the spiders and provided some information on their biology, indicated that many years ago the same species occurred in great numbers on the old Saltair Pavilion on the shore of Great Salt Lake west of Salt Lake City. Incidentally, Ralph V. Chamberlin at that time named the species *Neoscona saleria*, now a synonym.

According to Dr. Gertsch, *Neoscona oaxacensis* is a common orb weaver of the southwestern United States, ranging southward through Mexico to Panama. The species has had several names, probably the most familiar of which is *N. vertebrata* McCook, based on specimens from California. *Neoscona oaxacensis* is probably the

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largest of the species of the "smaller" round-shouldered araneas with elongate oval abdomens.

It is a species that often lives in clusters, with males, females, and the young stages living close together in webs. However, they are not necessarily tied by social habits, and their webs are single and not communal ones.

Continued annual observations of this species on West Mountain in order to determine cyclical population fluctuations related to environmental influences would be desirable.