SPECIAL REPORT

THE JOSHUA TREE AREA SOUTH OF KINGMAN, ARIZONA

W. B. McDougall
Regional Wildlife Technician

On the afternoon of May 9, 1939, I drove part way through the Joshua Tree Area South of Kingman, Arizona, with Regional Geologist Gould, Supervisor Christiansen of the Recreational Area Planning Division, Associate Landscape Architect Miller, and Inspector Haile. The next day Dr. Gould and I went back and spent the day studying the area and in driving around Hualapai Mountain by way of Yucca, Signal, Wikieup, and Round Valley.

The Joshua tree (Yucca, or Clistoyucca, brevifolia) extends all the way from Yucca to Signal, a distance of 42 miles. They are abundant for, perhaps, 35 miles of this distance. Both at Yucca and at Signal they are scattering. There are also a few in the vicinity of Wikieup.

The Joshua tree seems to have a rather wide range of tolerance so far as soil types and textures are concerned. It may grow on coarse sandy ridges where the soil is so shallow that the roots must spread out only 6 or 8 inches below the surface, or they may grow in deep porous loam where the roots extend downward many feet. The size of the plants, however, varies in proportion to the soil and water supply. Under favorable conditions the trees become 25 to 35 feet high.

The distribution of the Joshua tree in Arizona extends roughly from Aguila on U. S. Highway 60 and 70 and the Harcuvar Mountains to the extreme northwest corner of the State. It is most abundant in the area that this report is concerned with and in an area south of the Colorado River and west of Grand Wash Cliffs.

The vegetation of which the Joshua tree is a part may be considered as a subtype of the creosote bush-salt bush type of desert. In the area west of Grand Wash Cliffs, through which the road to Pierce's Ferry passes, there occurs a Joshua tree-creosote bush subtype quite comparable to that in the Joshua Tree National Monument in California. Southeast of the town of Yucca and extending nearly to 17-mile Ranch we find this same subtype, not so striking, however, as that found in the Joshua Tree National Monument because the Joshua trees are neither so large nor so numerous.

Beyond 17-mile Ranch, however, for a distance of some 20 miles southwest toward Signal, and extending from the foothills of the Hualapai Mountains nearly to the foothills of the Mohave Mountains, there is a type of vegetation which is wholly unique and extremely interesting. It represents a tension zone between the Lower Sonoran and Upper Sonoran zones of vegetation and the three most important of the component species are the Joshua tree, the Utah juniper (Juniperus utahensis), and Canotia holacantha. Only slightly less important is the saguaro (Carnegia

gigantea). To the best of my knowledge, there is no other place in the world where Joshua trees and juniper trees live together in the same community. Canotia holacantha is a unique, leafless shrub which belongs to the staff-tree family (Celastraceae) and is apparently limited in its distribution to the central part of Arizona from the White Mountains on the east to the valley of the Bill Williams and in the vicinity of Kingman on the west, though it was once reported as collected on Providence Mountain in Southern California. The saguaro is important here only because it is strictly a Lower Sonoran species but is associated here not only with the Joshua tree but with the juniper which is strictly an Upper Sonoran species.

Some of the other species found in this unique Yucca-Juniper-Canotia community are the banana yucca (Yucca macrocarpa), several species of chollas and prickly pears (Opuntia), saltbushes (Atriplex), mescal bean (Sophora), buckwheats (Eriogonum), bur sage (Franceria dumosa), Ocotillo (Fouquieria splendens), creosote bush, several composites, a larkspur (Delphinium), and mesquite (Prosopis).

The entire Joshua tree area is about 42 miles long and 10 to 12 miles wide and includes, therefore, about 500 square miles. The Yucca-Juniper-Canotia community occupies about half of this area, or about 250 square miles.

Very little is known of the animal life of this area. Birds

are numerous but no attempt was made to list them. We saw one gila monster, several jackrabbits, and many lizards. Undoubtedly there are deer in the area, especially in the winter, but we have no data on any of the larger members of the fauna.

I recommend that this area be given serious consideration for national monument status and that further study be authorized in order that definite bounderies may be recommended. Serious consideration would need to be given to the name for such a monument. Obviously it should not be called a Joshua Tree National Monument; first, because we already have such a monument in California and, second, because this area does not have national monument status merely because of the Joshua trees but because of the unique combination of Joshua trees, juniper trees, and Canotia trees along with the other desert plants and animals. In other words, it is a unique biotic community. Probably it would be best to give it a name that has no relation to any of the plants. For example, it might be named after the ghost town of Signal, formerly a mining town of about 4,000 population and now reduced to a population of two men, who, as Dr. Gould remarked, probably "wouldn't be there if they could get away". Or it might be named for Nestona, the name of another town site within the area, or perhaps some other local feature would furnish a more suitable name. The name, whatever it may be, is of secondary importance as compared to the desirability of setting up a monument for this biotic community which is different from any found anywhere else in the world.