

some of our forms to those eastward into Arizona and Nevada. *Opuntia mojavensis* evidently is closely related to *O. phaeacantha* and *O. engelmannii* in Arizona. It was described from the Providence Mountains area and is presently known from the eastern Mojave Desert north to the Clark Mountains. Some of the desert prickly pears in the Anza-Borrego Desert area seem closely related to *O. mojavensis* and to *O. engelmannii*, but have not been sufficiently investigated.

Opuntia mojavensis is a primarily prostrate plant in which the secondary pads are erect, but the whole plant is only about 1½ feet high. The joints are large (8 to 12 inches) and bear yellowish-brown, porrect spines up to 2½ inches long (fig. 19). The flowers are pale yellow to orange. The fruits are spineless, slender, and narrow at the base when mature.

Published localities for *O. mojavensis* include the vicinity of the Bonanza King mine in the Providence Mountains and the region adjoining Highway 95 on the California side of the Nevada state boundary.

Giant Cactus; Saguaro (*Carnegiea gigantea*)

So abundant and prevalent throughout Arizona is this magnificent succulent that it is often called the Arizona Giant Cactus. Indeed, near Tucson the Saguaro National Monument has been set up exclusively for it. Nevertheless, this plant occurs also in California, although not extensively or in large numbers (pl. 6, a). A few scattered specimens are found near the Colorado River from the Palo Verde Mountains southward toward Laguna Dam, near which a fairly large grove occurs. Another large stand is in the Whipple Mountains near the Parker Dam and reservoir. Thirty years ago, before Parker Lake was formed, it was known that many of the giant cacti would be flooded out by rising water, and permits were issued to cactus enthusiasts who wanted to transplant them. The writer, then in high school, was one of these, and it

was to my extraordinary delight that my father agreed to help me bring one home as the biggest cactus in town. It was a 22-foot giant with two limbs, and required considerable engineering to get it home to Long Beach and plant it in the back yard. There it lived and flowered for many years before it finally succumbed to rot.

The saguaro is the northernmost of the giant columnar cacti of which a number of species and genera occur in Mexico and a few in South America. This species probably should be treated under one of the Mexican genera, but it has long honored Andrew Carnegie, the benefactor of Britton and Rose, who monographed the Cactaceae early in this century and dedicated the largest American cactus to him.

The giant cactus for centuries served the Indians of the Southwest with food, fuel, and building material. The season of ripe fruits brought whole tribal populations into the cactus forest for feasting and the preparation of dried fruits for winter use. One frugal tribe of the desert even saved the seeds from their own feces to be ground up and eaten a second time.

The huge fleshy stem is supported by a woody cylinder consisting of a ring of anastomosing poles of great strength. This strong internal skeleton accounts for the size of these plants, which may reach 60 feet. Flowering is in May and June (pl. 6, b).

Velvet Cactus (*Bergerocactus emoryi*)

In 1850 the United States and Mexican Boundary Survey party discovered this plant where the first international boundary marker was installed south of Imperial Beach in San Diego County. It still may be found there, although elsewhere in southern California *Bergerocactus* has largely been exterminated by our urban sprawl along the coast. As late as 1930 it could still be found at Oceanside and San Clemente, but only a few patches now remain around San Diego.

Cacti of California
E. Yale Dawson
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