

any soil. Their thin, soft grey leaves are covered with peltate scales, though which they absorb their necessary moisture and nutriment. What roots they have are merely for anchorage purposes.

*Tillandsia fasciculata*, fourteen inches in height with a flower pike of twenty inches, is an imposing plant which is being grown successfully out of doors here in sheltered sections. Its inflorescence of brilliant red bracts supporting deep purple flowers is extremely colorful. Other *Tillandsias* which have survived mild frosts are the interesting ball-shaped *T. exserta* from northern

Mexico, the tiny pretty *T. ionantha*, which blushes when it is ready to bloom, *T. utriculata* from Florida and *T. tenuifolia*.

It is very likely that there are many other types of bromeliads which will grow successfully out of doors in Southern California—it only remains for some intrepid gardener to do a little experimenting. However, members of the Bromeliad family are being used more and more in landscape design, and it probably will not be long before they are accepted as good garden subjects for the Southland.

## TWO INTERESTING YUCCAS FROM MEXICO

WILLIAM HERTRICH

INCLUDED in the xerophyte collection of the Huntington Botanical Gardens, San Marino, California, about 120 *Yucca* plants are growing, embracing some 30 species, and as many more varieties. Most of these are indigenous to southwestern United States, some along the southeastern coastal states, and others from south of the border in Mexico.

Practically all *Yuccas* adapt themselves very readily to climatic conditions prevailing in southern California. The species range in size from the 24" *Y. tenuistyla* to the giant *Y. australis* from Mexico which attains tree-size proportions—i.e. 40 ft. or more in height, with proportionate top.

Most *Yuccas* respond to the same cultural treatment that successfully develops other plants. Some species, however, if planted in soil over-rich in plant nourishment, and provided with more than adequate water, grow too rapidly, becoming top-heavy. This condition causes them to bend over in wide arch form; in some instances they bend low enough to make contact with the ground and to take root at points of contact. This curious habit has been particularly manifest in one specimen of *Y. valida* in the Huntington Gardens which in 1925 was planted as a small plant in its present location.

Prior to 1925, the area in these gardens



*Yucca valida*, close-up of flowering stalk.

where the *Yuccas* are now growing was a large reservoir used for storing water for irrigation purposes. Subdivision of adjacent land for homesites made the reservoir obsolete; it was filled in with soil and became the foundation of what is now part of the cactus garden. The top soil used was





*Yucca valida* showing wide arching of trunk and upright terminals.

ideal as a medium for good plant growth, and as a matter of fact proved too rich for certain plants placed there, as was the case with this one *Y. valida*. It put on more than ordinary growth for such a plant in a given time, and after being established for a few years in its new location, formed several trunks, the first of which produced its first flower spikes in 1935. Blooming each successive year in increased number of blooms, it produced in July and August of this year, 1953, 39 inflorescences ranging in size from 15" to 20" in height, on stems up to 14' tall. Through the years, the stem terminals, after the blooming period, have branched and re-branched, forming multiple heads in time which have become increasingly large and heavy to the point mentioned above—of bending the trunk slowly to form an arch and ultimately bending far enough to make contact with the ground. At these points of contact roots have formed, establishing new plants severed from the parent plants.

One especially interesting factor connected with the arching of these stems is the breaking of new terminals on the upper side of the arched trunk. This feature has been noted on only one other species—*Y. australis*: it occurs in exactly the same manner except that the species *australis* did not bend far enough to make the contact with the ground. The two species, *Y. valida* and *Y. australis* are similar in some aspects of appearance as well as growth; *Y. valida*, however, has shorter leaves, does not grow as tall as *Y. australis*, and bears its inflorescences in upright position, while *Y. australis* produces leaves 18" to 24" long, forms trunks that are heavy, and excessively swollen-appearing bases, besides bearing pendant inflorescences from 3' to 6' long.

Of the 39 flower spikes produced on the large specimen of *Y. valida* this year, 18 were produced on terminals of self-layered stems, of which 5 are rooted and 3 not yet rooted. The total number of terminals of all sizes was 190. The approximate spread





of the plant, east to west, this summer of 1953, was 37 ft.; approximate spread north to south, 35 ft.

The two species of *Yucca* under consideration here are both indigenous to Mexico; however, *Y. valida* is found in Lower California and northeastern Mexico but *Y. australis* only in northeastern Mexico. Both species are commendable as ornamental plants of a bold nature, and will do well in almost any locality in southern California including the warm dry interior valleys.



Two photographs, habitat and close-up, showing the pendulous nature of the inflorescence of *Yucca australis*, contrasted with the upright inflorescence of *Yucca valida*, (cf. photograph, p. 11). In the Huntington Gardens, from a certain vantage point the pendant flowering species is a tall accent behind the sprawling, wide-arching *Y. valida*.





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