

## *Washingtonia robusta* Naturalized in Southeastern California

The natural range of the Mexican fan palm, *Washingtonia robusta*, is limited to northwestern Mexico (McCurrach 1960) and the Baja Peninsula (Shreve and Wiggins 1964). However, in California its use as an ornamental is widespread and the species is the most frequently planted palm in the state (Sunset Editors 1979). It occasionally can be found in disturbed situations immediately adjacent landscaped areas and David Brown (pers. comm.) reports that it is frequently encountered along the Colorado River in Arizona and California. To date, it has not been recorded in undisturbed situations at seeps and springs.

In February 1982 and April 1984, the authors visited a seep in Whipple Wash, San Bernardino County, California, where a lone palm was found. The specimen was unburned, approximately 6.5 m in height and had a slender trunk 40 cm in diameter as measured 1.5 m from the ground. The trunk also flared outward at its base. The petioles were less than 1.2 m in length, formed a cross-hatched pattern around the trunk and hung at an angle. These are all characteristics unique to *W. robusta* as described by McCurrach (1960), Shreve and Wiggins (1964), and Wiggins (1980) and we have concluded that the individual does in fact belong to this species. The palm could have arrived as a seed from the community of Havasu Palms located 9 km down Whipple Wash at the Colorado River. *W. robusta* is an abundant ornamental in this small community and the distance is well within the dispersal potential of birds or the coyote, *Canis latrans* (Cornett 1984). *Cer-*



Fig. 1. Location of naturalized specimens of *Washingtonia robusta* at undisturbed sites. The upper x designates the lone tree in Whipple Wash; the lower x designates the three individuals at Palm Spring in Anza-Borrego Desert State Park.

*cidium floridum*, *Salazaria mexicana*, and *Hyptis emoryi* were growing within 4 m of the palm indicating the site was undisturbed.

This palm was identified in 1975 as *W. filifera* by Brown et al. (1976). However, it probably would not have been of sufficient height at that time to observe the distinguishing characteristics.

On 3 May 1984 the senior author visited Palm Spring in Anza-Borrego Desert State Park. Within historic times, this spring had supported several of the desert fan palms, *W. filifera* (Edwards 1961). However, these were destroyed by early settlers and were gone by 1858. In the late 1950's park rangers attempted to restore the original plant associates of the spring by planting three palms. It had been widely assumed that these were palms of the species *W. filifera* (R. Bloomquist, pers. comm.). However, it has been concluded that these palms also belong to the species *W. robusta* as each of them possesses the characteristics previously described.

In the past three years we have visited over 95% of the palm oases in California, Arizona, and Baja California Norte and these are the only locations where we have found *W. robusta* occurring under relatively undisturbed conditions above latitude 32 degrees north.

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