

but also provides four pages of figures illustrating the essential parts of a palm that should be included in or noted for a palm specimen.

The Manual will be a valuable reference work, not only for those scientists embarking on the establishment of a herbarium, but also for an established herbarium. The portion of the volume dealing with field techniques for special groups will be invaluable for collectors. The extensive bibliographic sections provide a ready source of indispensable reference material.

Preparation of this manual was promoted by the National Council of the Flora of Mexico to advance the orderly increase of Mexican collections.—ANNETTA CARTER, Herbarium, Department of Botany, University of California, Berkeley 94720.

LETTERS

Dear Editor:

I read the note (Madrono V. 33, No. 1, pp. 76–78, 27 March 1986) about presence and absence of spines in petioles in *Washingtonia filifera* by James W. Cornett and would like to suggest an alternate hypothesis. Instead of the notion that the palm ceases petiole spine production in taller individuals because of the absence of (very) tall herbivores, I would like to suggest the possibility that some simple physiological mechanism (for example, increased water stress with increased height and exposure) might be responsible. We should remember, after all, the simple sun and shade variations in the foliage of many plants.

Stephen D. Veirs, Jr.
Redwood National Park
1125 16th Street
Arcata, CA 95521

Dear Editor:

Here is my written response to Stephen D. Veirs, Jr., who wrote concerning my explanation for the absence of petiole spines in tall individuals of *Washingtonia filifera*.

If one accepts the notion that petiole spines evolved as a result of the protection afforded the apical meristem, then, in the absence of any documentation to the contrary, one must also assume that the selective pressure favoring the development of petiole spines decreases with height. That is what the data in Table 1 indicates at this time. Further, is it merely a coincidence that the percentage of each petiole covered with spines begins to markedly decrease at the uppermost reach of the largest known Pliocene-Pleistocene herbivore? Any other explanation must answer this question and deal with the demise of the spines instead of some other trait of the species. I'll stick with my hypothesis for the time being.

James W. Cornett
Natural Science Department
Palm Springs Desert Museum
101 Museum Drive
Palm Springs, CA 92263



Veirs, Stephen D and Cornett, James W. 1986. "LETTERS." *Madroño; a West American journal of botany* 33, 233-233.

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