

(*L. chinensis*) epidermal cell walls more or less uniformly thickened (*L. chinensis*, *L. decipiens*); hypodermis 1-layered below each surface (*L. rotundifolia*, *L. Woodfordii*), not with a 2-layered adaxial hypodermis as in other species.

Wissmannia possesses no single anatomical feature by which it can be distinguished from *Livistona*, but it is recognized by a unique combination of anatomical characters. It can be distinguished from all species of *Livistona* because it possesses:—An isolateral leaf structure; non-sinuous epidermal walls which are uniformly thickened; a uniseriate, colourless hypodermis below each surface. It has neither fibre-sclereids nor does the epidermis include short, wedge-shaped, uniformly thickened cells.

The anatomical evidence therefore suggests that *Wissmannia* is a distinct genus which shows some affinity with certain species of *Livistona*. Certain observations about the evolution and geographical distribution of these two genera can be made on the basis of these conclusions. *Livistona* has a wide distribution in the Indo-Malayan region and it is therefore reasonable to suppose that *Wissmannia* represents one line of divergence from the ancestral *Livistona*-stock and has spread westwards to East Africa where it represents the most south-westerly limit of distribution of the Coryphoideae in the Old World. Apart from *Wissmannia* the only other Coryphoid palm which occurs in continental Africa is *Chamaerops* which is found in North Africa and Southern Europe. Another line of descent from the *Livistona*-stock has resulted in the development of *Licuala* in the Eastern Tropics.

Literature Cited

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NOTES FROM YASHIRODA JUNKAEN

KAN YASHIRODA

In response to a request from our Executive Secretary on how our palms at the Yashiroda Junkaen have progressed since I last wrote on them [*Principes* 1:60-64. 1957], I am writing some notes about them. One of my grieis is that I lost a fine mature tree of *Erythea edulis* which I did not mention earlier. Our climate is less congenial for it than for *Livistona chinensis* but still it is a fine palm to us. Incidentally, while I was wandering about the deserts of Arizona in 1955—for I have been interested in trying some of the woody desert subjects including cacti—I came across some *Erythea armata* heavily loaded with beautiful long clusters of flowers in some and fruits in others at a mission garden. These were so impressive that my superficial view of the palm formed while I was in charge of the Palm House at the Royal Botanic Gardens at Kew, England, when I was a student there, was resolved quickly and spontaneously and I begged permission from the man in charge to gather some seeds. Contrary to my earlier efforts, the seeds germinated very well and the slow grower in the genus is now growing nicely. The young leaves, particularly the tips, resist the severe frost, cold,

and wind better than those of *Washingtonia robusta*.

The mention of the renowned Palm House at dear old Kew reminded me of a few lines in the *Journal of the Kew Guild*, 1957, that "old Kewites will be interested to learn that one of the most troublesome pests in this part of Kew (Palm House) are 'stick insects.'" When I was there a comparatively old tree of *Bismarckia nobilis* was reputed to be a very rare one in cultivation. Now I learn that it is grown in Florida and elsewhere. However, *Chamaedorea fragrans*, which I had admired so much and wished to grow at home while I was there, seems to be not in cultivation outside some collections. It is a great pity because besides the elegant growth like that of *Sobralia macrantha*, the delicious sweet fragrance of the flowers is wonderful. It reminds one of the powerful fragrance of *Osmanthus fragrans* var. *aurantiacus*. To me it is also a great pity that my garden is too cold to acclimatize these and many others in any way and I like any plant under artificial protection least of all.

Dr. Hodge's article on "Palm Trunks as Living Planters" in *Principes* 3: 93-95, 1959, is most interesting. For years I had been growing a fine large clump of *Haworthia cymbiformis* having not less than 30 heads on the clean trunk—or as clean as a *Phoenix* trunk can be—of *Phoenix canariensis* from which the leaf bases were detached. Three or four years ago a goodly portion of the clump was robbed by someone and the little feature has disappeared—I removed the rest myself as it was painful to behold.

In the chinks of the clean trunk I have "planted" some kinds of plants such as *Echinopsis multiplex*, *E. Eyriesii*, *Aloe* spp. and the epiphytic orchids while on

trunks with the leaf bases attached are *Platyserium allicorne*, other ferns, *Ribes ambiguum*, a native shrub which grows on decaying matter of large trees, creeping and hanging cacti and some other plants. One of the most successful attempts was growing *Conandron ramondioides*, a gesneriad native to our perpendicular mountain cliffs, on the north side of the trunk under the heavy shade of the leaves. As Reginald Farrer has said, this is "a most beautiful Japanese rock-plant." The tiny tuberous-rooted herb covers the face completely with the pretty glossy crinkled fleshy oblong leaves of five to ten or more inches long hanging and purple flowers in summer. If any fellow palm lover wishes to grow it, do not hesitate to tell me so.

The big trunk of the large old *Phoenix canariensis* is so thickly covered with the protruded roots for two feet or so around that it seems as though soil were eliminated from near the base for some feet deep. A year ago, making a tiny hole cutting and removing the tangle of roots, I planted, or to be more exact placed in it, a full-size plant of *Platyserium allicorne* growing in sphagnum moss. To my surprise, within twelve months the inside of the barren fronds was fully and thickly replaced with new *Phoenix* roots and some root tips came pushing out of the outer barren frond. But it appears not to be affecting the normal growth of the *Platyserium*. Only under the palm is it hardy and it is the one species of this interesting genus able to grow in the open air in my Acclimatization Garden.

Among the thick growth of roots, a good garden variety of amaryllis (*Hippeastrum*) is growing from prewar days. The bulb remains single and has never multiplied, yet it produces good and vigorous leaves and a normal flower

scape with nice blooms annually. I wonder what shape the bulb has formed to adapt to the surrounding condition and continue normal function. It seems to me there is no space for the bulb to occupy. Also, *Iris stylosa* is planted outward from it in the thick tangle of roots from prewar days and its nature of floriferousness is not lessened.

A goodly number of palms, new or old friends, seem to be fairly hardy or worth trying but until now most of them lack in growth to be popular garden palms. But I don't wish to jump to any conclusion nor to write much on the matter now. Only time and our patient endeavor in the coming decade or two will tell us.

I cannot close these notes without expressing my deep regret at the untimely death of Dr. R. Bruce Ledin. Some palms raised from seeds which came from him will keep his memory green.

Tonosho-cho
Kagawa-ken
Japan

[*Ed. Note:* Mr. Yashiroda is interested in obtaining viable seeds of *Sabal Palmetto* and seeds or young plants of the Andean wax palms (*Ceroxylon* spp.) should any Palm Society member have these available.]

WHAT'S IN A NAME?

Brahea (bráy hee a), a small genus of unarmed medium-sized Mexican fan palms, was founded by Martius in 1838 to honor the Danish astronomer Tycho Brahe (1546-1601). It was Brahe's precise observations as recorded in his astronomical tables that later enabled his assistant Johannes Kepler to formulate his renowned three basic laws of planetary motion. The genus *Brahea* was a segregate from the earlier *Corypha* established by Linnaeus. Then as these palms in their turn came to be more closely studied, the genera *Washingtonia* and *Erythea* were created as segregates from *Brahea*. The so-called Mexican rock palm (*B. dulcis*), perhaps the best known member of the genus, has been introduced into southern California.

BRUCE H. BEELER

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WANT TO EXCHANGE

The city of Brownsville, Texas, is collaborating with members of The Palm Society with the purpose of making ours a real Palm City. We have on hand about 500 lbs. each of *Washingtonia robusta* and *Phoenix canariensis* seeds, and soon will have an equal amount of *Sabal texana*. We wish to exchange these for seeds of other genera and species suitable to our climate, that is, any but the most tender kinds. We can ship to either U.S. or foreign countries. Also

available are sprouted seedlings, about 6 to 10 inches, with two leaves, which can be sent in exchange for flats or bundles of similar-sized U.S.-grown palms. Address Larry Lightner Inc., Import-Export, Brownsville, Texas.

Limited quantity available, *Raphia Ruffia* palms, source of raffia cordage, leaves to 60 ft. In 3½-gal. containers, too large to ship. \$10.00. THAYER NURSERY, North Federal Highway, Stuart, Fla.