

with pink or orange and blotched with massed appressed gray scale these seldom loose and chaffy. Segments are orange where attached the orangish rachis which is blotched below. Although petioles of older seedling leaves become nearly mahogany-colored, they are still distinguishable by the blotches of gray scales. The minute lepidotes on the lower surface of the leaves are not obvious until the fourth or fifth leaf appears.

I have chosen as type for this species two collections taken from one of five trees grown from seed from Singapore Botanic Garden in the palmetto collection of the late Colonel Robert H. Montgomery whose name richly deserves to be associated with a member of the family. His own collection and his interest in the Fairchild Tropical Garden have stimulated others to grow palms and have provided the means for much effective botanical study. Other trees are now at the Fairchild Tropical Garden and seedlings have been distributed from there in the past two years. The species seems particularly well adapted to Florida conditions. Plants growing in the garden of Mr. and Mrs. F. V. Crane at Marathon on Key Vaca have demonstrated their ability to withstand sun, wind, and salt spray that have done considerable damage to such related genera as *Ptychosperma*. As an ornamental subject for suitable regions, *V. Montgomeryana* should receive far wider attention.

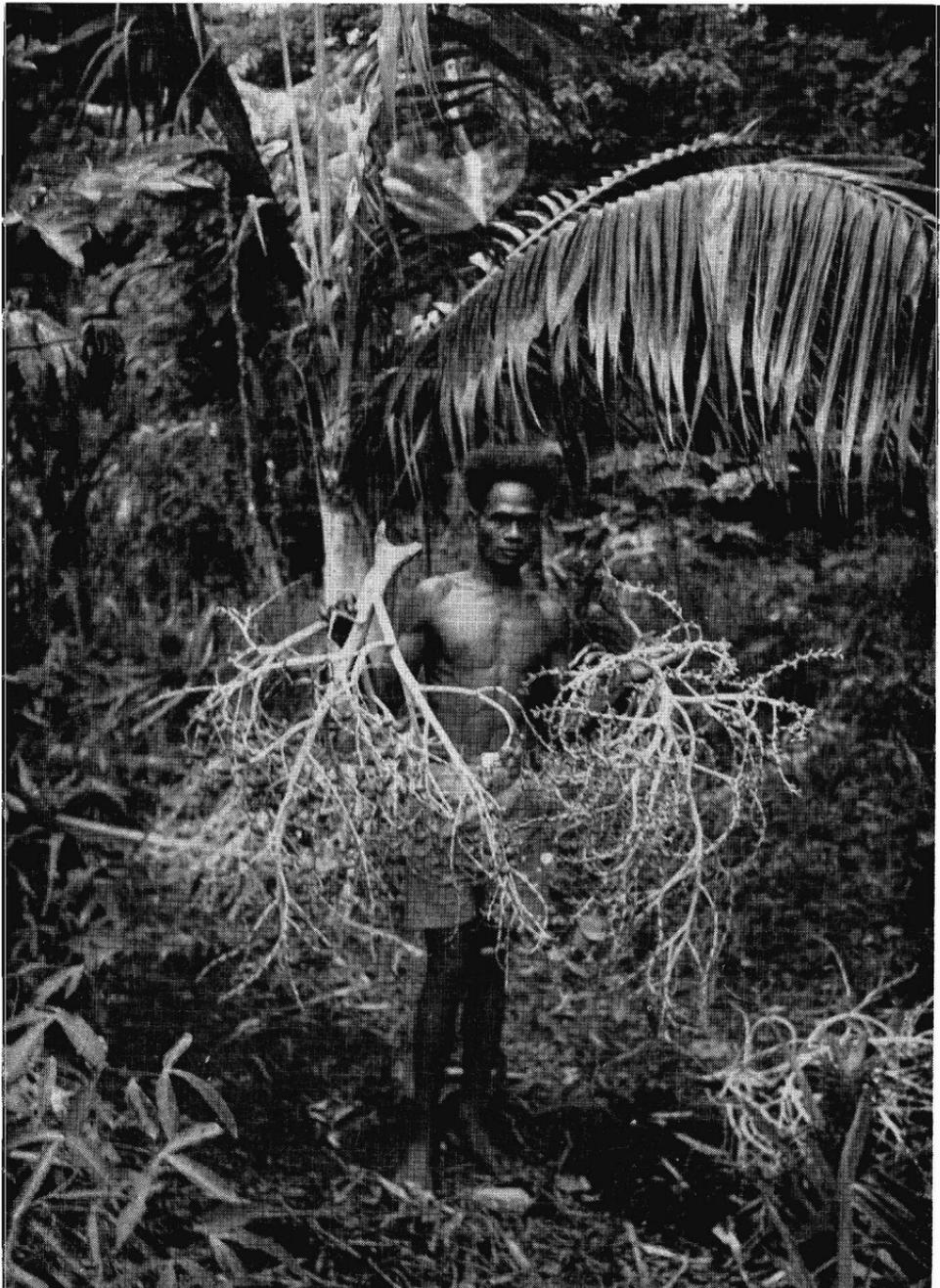
Occasional depauperate panicles appear on old or weak trees. There is some variation in fruit and seed perhaps associated with the foregoing. That illustrated in Fig. 141 is probably normal, the fruit measuring 4 cm. long, 2.4 cm. in diameter, the seed 2.8 cm. long, 1.8 cm. in diameter. Other mature fruits from a second tree in the Montgomery collection measure 3.9-4.1 cm. long, 1.8-2.0 cm. in diameter with seed 2.4 cm. long, 1.3 cm. in diameter. Fruit of the Furtado collection is immature and intermediate between the above two. A single weathered fruit from the Botanic Gardens, Rabaul, without data in the herbarium at Brisbane measures 4.5 cm. long, 2.2 cm. in diameter and may belong here as may specimens with immature fruit collected in cultivation at Alofi on Niue Island by T. G. Yuncker (10141 UC, US, 10179 BH) and cited as *V. Joannis* in The Flora of Niue Island (Bernice P. Bishop Mus. Bull. 178: 27, 1943).

† 2. *Veitchia Macdanielsii*, spec. nov. Figs. 140, 142.

Pinnae foliorum subtus pallido-lepidotæ panicula fere ad nodos omnes flores femineos gerens florum masculorum stamina ca. 100 fructus 3.3-3.5 cm. longus 1.7-1.9 cm. in diametro endospermum non ruminatum.

Trunk smooth, 25 m. high, 3 dm. base diameter, 1.5 dm. diameter at top; leaves 4 m. long; sheath ca. 1 m. long, densely pale lepidote-tomentose

(ex photo); petiole short, the fragment seen 1 dm. long, densely white-lepidote-tomentose above and below with scattered brown scales below; rachis rounded and lepidote-tomentose to glabrate but punctulate with



12. *VEITCHIA MACDANIELSII*. Native assistant holding fruiting (left) and flowering (right) panicles with crown of felled tree behind. Photograph by L. H. MacDaniels.

brown scale-bases below, slightly concave to angled and more conspicuously but minutely scaly above; pinnæ ca. 55 on each side of the rachis regularly disposed in one plane at intervals of 3.5-7 cm., the basal pinnæ not widely separated nor strongly reflexed and hanging, the lowermost 9 mm. long at insertion on the rachis, 2.5 cm. wide at middle, and directed forward at the base but in life abruptly twisted to form a nearly 90° angle with the rachis, arching toward the middle then more or less pendulous, tapered to slender acuminate tip and portion of vein, glabrous above except for minute brown scales on midnerve, lepidote-tomentose on surface and densely pale lepidote-tomentose on thick marginal veins but in age merely brown-punctulate below and with twisted castaneous basifixed or medifixed scales on midvein, the surface and secondary nerves below very densely and minutely pale lepidote, median pinnæ similar but lacking loræ, brown-scaly on primary nerves and surface below, 2-2.2 cm. wide at insertion, 5.5-7.2 cm. wide at middle, 1-1.05 m. long, tapered to an almost acuminate, shortly and obliquely toothed tip, upper pinnæ similar but smaller, 1.9 cm. at insertion, 5 cm. wide at middle, 7-8 dm. long, apex shortly bifid, terminal pinnæ 3.5 dm. long, 1.6-1.8 cm. wide acuminate and bifid, the rachis prolonged in a filament 15 cm. long panicle ca. 1.2 m. long, much ramified, whitish in flower and in fruit, to 1 m. long or more, subtended by ancipitous, pale lepidote-tomentose bracts, the outer 6.7 dm. long, 1.23 dm. wide, peduncle stout, 11. cm. to first branch, 7 cm. wide at scar of outer bract, rachis with 8-10 primary branches, these again once- to twice-branched and densely pale lepidote tomentose becoming glabrate and brown-punctate or completely glabrous in age, ultimate rachillæ of fruiting panicle 1.8-2.5 dm. long, 5 mm. thick flowers borne in triads of ♂ ♀ ♂ in a loose spiral nearly throughout the panicle, the rachillæ with paired or solitary ♂ flowers in the ultimate 8-10 nodes; staminate flowers 15 mm. long, calyx 7 mm. diameter, 5-6 mm. high, petals 13 mm. long, 5 mm. wide, stamens ca. 100, filaments 3-4 mm. long, anthers 6-8 mm. long, deeply bifid at apex and base, immature pistillate flowers 8 mm. high, 8 mm. diameter, sepals 5 mm. high, petal 7 mm. long, ovary 6 mm. high: fruit 3.3-3.5 cm. long, 1.7-1.9 cm. in diameter, bright red, ellipsoid with eccentric apical umbo 3 mm. long perianth rather closely appressed in fruit, pale brown, 12-13 mm. high, both sepals and petals dark brown and somewhat crenulate along the margin, the sepals 6 mm. high, petals 12-13 mm. high, staminodes 6 or fewer by union, prominent, exocarp smooth, mesocarp about 2 mm. thick, densely fibrous, endocarp thin, fragile, crustaceous; seed oblong-ellipsoid, 1.9 cm. long, 1.3 cm. diameter, truncate at base and rounded at apex, dark brown but obscured by numerous pale anastomosing branches of the raphe descending from or near the apex, endosperm homogeneous

New Hebrides: Espiritu Santo; in coffee plantation, left from original forest, plantation of Mr. My, December 29, 1949, *L. H. MacDaniels 9108* (BH, type).

Dr. L. H. MacDaniels, now Professor Emeritus but formerly Head of the Department of Floriculture and Ornamental Horticulture, and Chairman of the Advisory Committee of the L. H. Bailey Hortorium, at Cornell

University, collected *Veitchia Macdanielsii* and *V. Winin* during his visit to the New Hebrides in 1949.

*Veitchia Macdanielsii* appears to be close to *V. Metiti*, Becc., but differs in the smaller fruit and apparently in the panicle. Other comparisons cannot be drawn for *V. Metiti* is known only from a partial panicle and a few fruits. The latter is a palm of the cloud zone at 1000 m. altitude on Vanua Lava while *V. Macdanielsii* is a species from coastal lowlands. Doubtless other differences will appear when *V. Metiti* is better known.

The foliage, at least when newly expanded, has a copious indument of minute pale scales below, resembling *V. Montgomeryana* in this respect. It differs from material which I assign to *V. Montgomeryana* in its small fruit with markedly eccentric stylar cap, in the small seed and in fewer stamens.

† 3. *Veitchia Winin*, spec. nov. Figs. 139, 143.

Pinnæ foliorum subtus pallido-lepidotæ panicula fere ad nodos omnem flores femineos gerens florum masculinorum stamina ca. 50 fructus (14-) 18-19 mm. longus, 9-10 mm. in diametro endospermum non ruminatum.

Large palm, to 20 m. or more high, 17 cm. or more DBH; trunk enlarged at the base (in cultivation), at first densely gray-lepidote then brown: leaves 8-10, 3 m. long, 1.6 m. wide, the sheath 9.7 dm. long, green at base, densely pale lepidote-tomentose above, the scales with deciduous matted white-hairy margins from persistent brown bases, densely clothed with dull deep red-brown twisted membranaceous scales at apex; petiole 2.3-2.8 dm. long, very deep red-brown, densely pale lepidote-tomentose on both sides, slightly concave above, rounded and clothed with dense to scattered dull brown twisted scales below, becoming glabrate and densely brown-punctulate when denuded, rachis rounded and lepidote-tomentose to glabrate and brown-punctulate below, angled and at length brown-punctulate above; pinnæ 46-48 on each side of the rachis, regularly disposed at intervals of 2-5 (-9) cm., the lowermost 1.3-1.5 cm. wide and strongly reduplicate at insertion on rachis, 6.5-7 cm. wide at middle, 41-73.5 cm. long, narrowed to slender tip with blunt vestige of rein, glabrous above, with few brown scales on midvein, minutely deciduous pale lepidote on nerves and lepidote-tomentose or glabrous in age on thickened marginal nerves below, the next borne 9 cm. above, similar but the apex very obliquely toothed and ca. 3 cm. wide, the base more densely clothed with scales on the nerves and floccose but soon glabrous on the surface below; median segments 65-75 cm. long, 1.3-2.8 cm. at insertion, 7.5-11 cm. wide at middle, tapered to oblique toothed apex ca. 4.5 cm. wide, slightly floccose and scaly at base below, glabrous toward apex and above except the marginal nerves, subapical segments 44.5-57 cm. long, 4.5-8.8 cm. wide at middle, 3.5 cm. at apex, apical segments ca. 20.5 cm. long, 5.5-6 cm. along the rachis, 8.2 cm. wide at middle, 4.3 cm. wide at apex: bracts densely white-floccose-tomentose, the outer bract ca. 45 cm. long, 13.9 cm. wide, the inner ca. 43 cm. long, 9.5 cm. wide inserted ca. 3 cm. above outer and 6 cm. from base: panicles ca. 5, to 8.5 dm. long or more, 10 dm. wide, essentially glabrous or punctulate except the densely