

HABITAT

In all localities visited, *Jt. magnifica* is a plant of steep slopes and ridge-tops except in the Virgin Jungle Reserve, Sungei Lalang Forest Reserve where it also grows at the side of a small river in a very humid valley bottom, alongside *Jt. lanceolata*; in this last locality *Jt. magnifica* occurs in great abundance in the untouched forest, from the valley bottom at 150 m to the ridge-top at 500 m. At Bukit Tangga in Berembun Forest Reserve in Negri Sembilan, *Jt. magnifica* grows in much disturbed, logged forest.

TAXONOMIC NOTES

As *Jt. magnifica* and *Jt. lanceolata* grow side by side in the Virgin Jungle Reserve (see plate 6) it is possible that hybridization between the two species could take place. As any hybridization experiments would be extremely prolonged, difficult to perform, and dependent on simultaneous flowering, it has only been possible to use indirect evidence to assess the possibility of hybridization taking place. There are no intermediates observable in mature plants; in young plants the presence of white indumentum on the lower leaf surface is always correlated with laminae about $1\frac{1}{2}$ times as long as broad. Narrower leaves are always glabrous except for scurfy brown scales along the midrib. Narrow leaved adults are always glabrous and always have the inflorescence and fruit characters of *Jt. lanceolata*. These facts suggest that hybridization does not occur.

Johannesteijsmannia lanceolata J. Dransfield sp. nov.

DIAGNOSIS

Differt a speciebus ceteris foliis angustis, inflorescentia ramis 3—6, crassis, petalis papillatis.

DESCRIPTION

Palma solitaria acaulescens, caule subterraneo procumbente ad 15 cm diametro. Folia erecta, plus minusve lanceolata ad 3.5 m alta. Lamina ad 2.4 m longa et 30 cm lata, squamis furfuraceis fuscis infra secus costam et nervos primarios tecta. Plicae numerosae ad 25 utroque costae latere, inter plicas nervulis lateralis anastomosantibus. Margo inferior folii spinis brevibus (ad 1 mm) armatus atque petiolus. Petiolus duobus striis luteis conspicuis notatus. Vagina folii fibrosa ad 25 cm longa marcescens, reticulum fuscum formans.

Inflorescentia axillaris inter petiolos infra cumulum foliorum mortuorum et fragmentorum plantarum aliorum infossa. Spathae primo cremeae dein fuscentes, caducae, 3—4 indumento fusco sparsim tectae, ad 20 cm longae et 2 cm latae, basi tubulosae, non inflatae, apicibus acutis, uno latere fissae. Pedunculus tomentosus ad 25 cm longus, 10 mm diametro, ordine uno ramosus. Rami floriferi 3—6, crassi ad 10 mm diametro et 16 cm longa, pubescentes, arcuati rective. Flores sessiles albi papillosique, alabastro obtusi, solitarii vel bini vel terni aggregati, unusquisque bracteola minuta subtentus, spiraliter dispositi. Calyx brevis, 0.3 mm altus, carnosus glaberque, paullo 3—lobatus. Petala ad 1 mm longa, late-triangularis, carnosae crassissima, basi in tube breve connata, extus papillosa, intra apices aliquantum verruculosa. Annulus staminalis minute epipetalus, in filamenta 6 aequalis superne abrupte subulata. Antherae ovaes. Grana pollinis alba. Ovarium glabrum carpellis 3, basi liberis, apice in stylo communi 0.3 mm longo connatis. Fructus ad 3.4 cm diametro, plerumque a carpello uno evolutantes, saepe a 2—3 carpellis, c. 90 verrucis humilibus suberosis fusco-rufescentibus, ad 2.5 mm altis, tectus. Endocarpium lignosum ad 1 mm crassum.

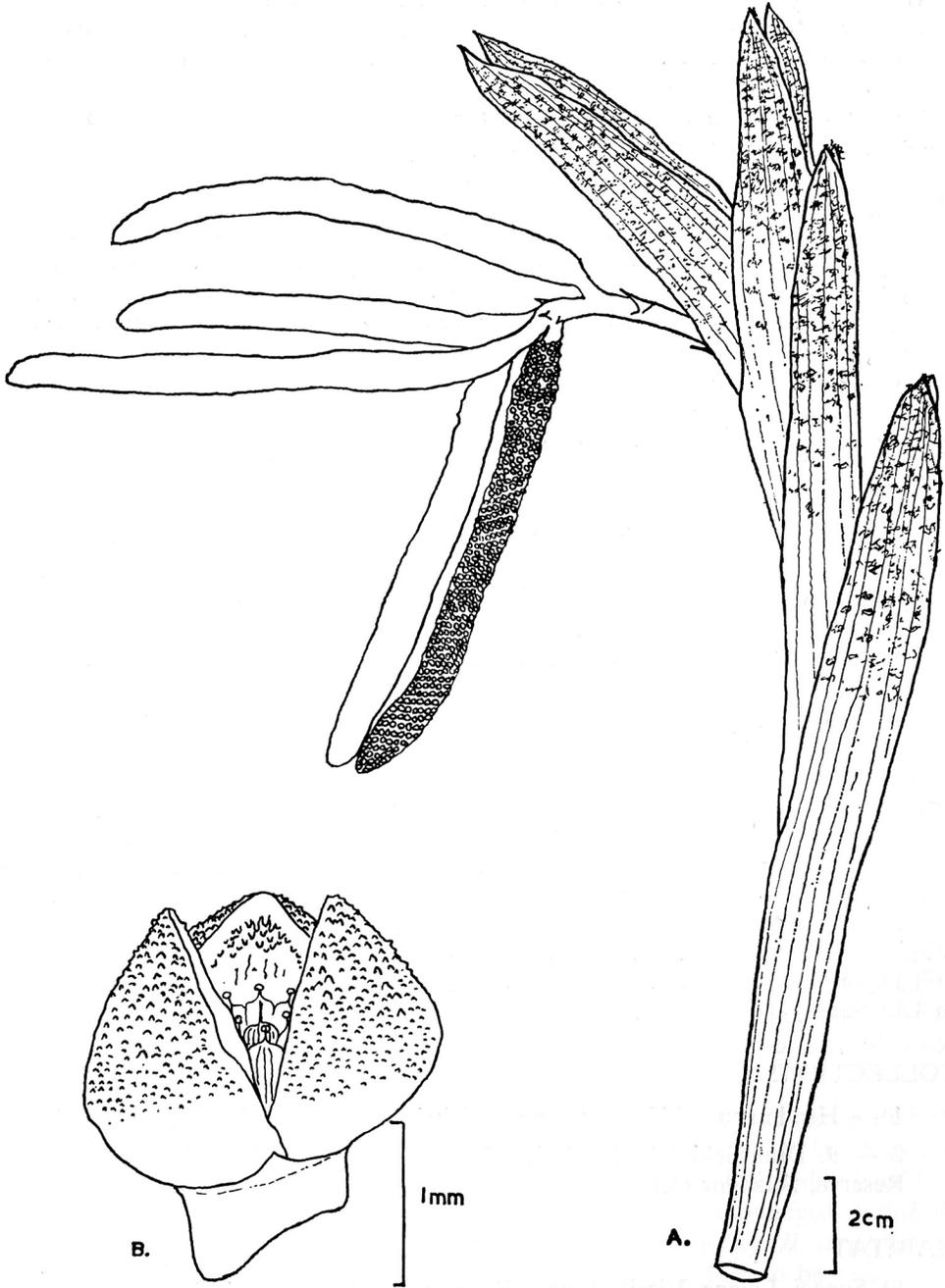


Fig. 5. JOHANNESTEIJSMANNIA LANCEOLATA
A: inflorescence, B: flower

Endospermium osseum ad 2.5 cm diametro, contextu integumentorum suberoso basi penetratus. Embryo lateralis. Malay Peninsula: *Selangor*, in valle humido prope flumen, Virgin Jungle Reserve, Sungei Lalang Forest Reserve, Semenyih, Kajang, in Hill Dipterocarp Forest. J. Dransfield 861, Holotypus, May 1968; (K) et *Pahang*, in Ulu Sungei Tekal Besar, Temerloh, Henderson March 1923 (SING).

Differs from the other species by the narrow leaves, the inflorescence with 3 — 6 thick branches and the flowers with papillate petals.

Solitary acaulescent palm, with subterranean procumbent stem to 15 cm diameter. Leaves erect, \pm lanceolate, to 3.5 m tall. Lamina to 2.4 m long and 30 cm wide covered with brown scurfy scales on the underside, along the midrib and the primary nerves. Plicae numerous to 25 along each side of the costa, with small anastomosing veins between the plicae. Lower leaf margin with short spines (to 1 mm) as on the petiole. Petiole with two conspicuous yellow stripes. Leaf sheath fibrous to 25 cm long, withering to form a brown network of fibres.

Inflorescence axillary buried between the petioles under a pile of dead leaves and other plant debris. Spathes at first cream, then turning brown, caducous, 3 — 4 in number, sparsely clothed in brown indumentum, to 20 cm long and 2 cm wide, tubular at the base, not inflated, acute at the apex, split down one side. Peduncle tomentose to 25 cm long, 10 mm in diameter, with one order of branching. Floriferous branches 3 — 6 in number, thick, to 16 cm long and 10 mm in diameter, pubescent, curved or straight. Flowers sessile, white and papillate, obtuse in bud, solitary or grouped in 2's and 3's, each subtended by a minute bracteole, arranged in a spiral on the branch. Calyx short 0.3 mm high, glabrous and fleshy, shallowly three-lobed. Petals to 1 mm long, broadly triangular, fleshy, and very thick, connate into a short tube at the base, papillose without, somewhat verrucose within towards the apex. Staminal ring minutely epipetalous, abruptly contracted into six equal filaments. Anthers oval. Pollen grains white. Ovary glabrous, carpels three, free at the base, connate at the apex to form a common style 0.3 mm long. Fruit to 3.4 cm in diameter, usually developing from one carpel, often developing from two or three, covered with c.90 low corky warts, reddish-brown in colour, to 2.5 mm high. Endocarp woody to 1 mm thick. Endosperm bony to 2.5 cm in diameter, penetrated at the base by corky integumental tissue. Embryo lateral. Malay Peninsula: *Selangor* in humid valley by the river, Virgin Jungle Reserve, Sungei Lalang Forest Reserve, Semenyih, Kajang, in Hill Dipterocarp Forest. J. Dransfield 861, Holotype, May 1968: (K) and *Pahang* in Ulu Sungei Tekal Besar, Temerloh; Henderson, March 1923 (SING).

COLLECTIONS EXAMINED

- 1 — Henderson (1923) Ulu Sungei Tekal Besar, Temerloh, Pahang (SING).
- 2 — J. Dransfield 861 (1968) Virgin Jungle Reserve, Sungei Lalang Forest Reserve, Selangor (K).

HABITAT

In Sungei Lalang Virgin Jungle Reserve, *Jt. lanceolata* is known from the steep banks of a forest river in a deep humid valley; growing with *Jt. magnifica*. Despite the proximity of the river, *Jt. lanceolata* grows on well drained soils and not in the low swampy ground at the bends in the river. The population of *Jt. lanceolata* was probably once greater — further down the valley scattered individuals occur growing in logged forest near the river.