

# NOTES ON THE SYSTEMATY OF MALAYAN PHANEROGAMS

## XXX. Anacardiaceae

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### Abstract

The purpose of these notes is to formalise several taxonomic changes in the family Anacardiaceae which has just been revised for the *Tree Flora of Malaya*. The changes are as follows:-

#### Mangifera

*M. indica* L.: reduction of *M. longipes* to *M. indica* and resultant range extension of *M. indica*.

*M. magnifica* Kochummen, **sp. nov.**

*M. quadrifida* Jack var. *longipetiolata* (King) Kochummen, **stat. nov.**

*M. whitmorei* Kochummen, **sp. nov.**

#### Melanochyla

*M. caesia* (Bl.) Ding Hou: reduction of *M. kunstleri* to *M. caesia*.

*M. fasciculiflora* Kochummen, **sp. nov.**

*M. longipetiolata* Kochummen, **sp. nov.**

#### Rhus

*R. succedanea* L.: new record.

#### Semecarpus

*S. rufovelutinus* Ridl.: new record

*S. trengganuensis* Kochummen, **sp. nov.**

#### Swintonia

*S. floribunda* Griff. var. *penangensis* (King) Kochummen, **stat. nov.**

### Introduction

The Anacardiaceae for Malesia was revised by Ding Hou of Flora Malesiana Foundation. This was published in *Flora Malesiana* Vol. 8 (1978).

While I was writing up the Anacardiaceae for the 4th volume of *Tree Flora of Malaya*, based on Hou's revision, I discovered some new species as well as new records. Critical study of the family required reduction of certain taxa as well as establishment of new status for some taxa.

## MANGIFERA

### *Mangifera indica* L.

*Mangifera longipes* Griff., Notul. 4 (1854) 419; type: Griffith 1096 (K) **syn. nov.**

According to Hou, the main differentiating character between *M. indica* and

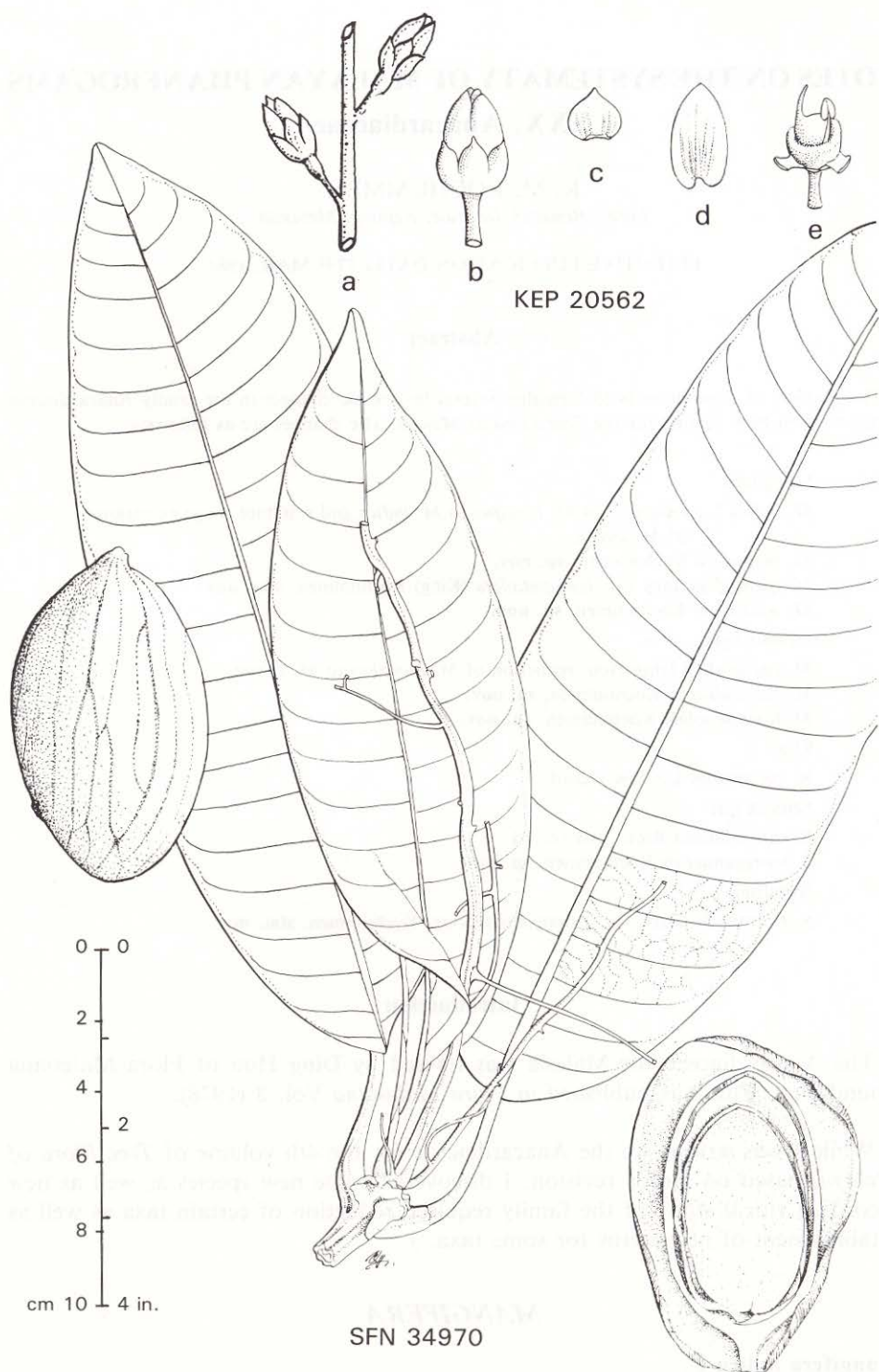


Fig. 1. *Mangifera magnifica* Kochumm. sp. nov.

Leafy twig, with longitudinal section of a fruit (right), and a seed (left). Inset - a & b: flowers; c: sepal, inside view; d: petal, inside view; e: disc, stamen and pistil. (a,  $\times 4$ ; b, c, d, e, all  $\times 5$ ).

*M. longipes* is the degree of hairiness of the calyx, i.e., densely puberulous on both surfaces especially on the outside in *M. indica*, but sparsely pubescent to glabrous in *M. longipes*. However I have come across several collections of the cultivated mango (*M. indica*) with glabrous calyx and so this character does not hold good. The degree of hairiness varies among the various cultivars. Consequently I have decided to merge *M. longipes* Griff. with *M. indica* L. I have not seen the type of *M. longipes*, but there is one sheet at Kepong, KEP 3637 on which is written in C. F. Symington's hand: "matches with the type, Griffith 1096". Many of the collections formerly distinguished as *M. longipes* are undoubtedly wild forest trees in Malesia and hence the natural range of *M. indica* must now be considered to extend into the Malesian region.

***Mangifera magnifica* Kochummen, sp. nov.**

Fig. 1.

Arbo excelsa usque at 54 m alta et 76 cm diametro; caulis sine anteridum; cortex extus cinereo-brunneus, laevis vel fissuratis et squamatis; intus luteolus; latex albus macilentus.

Ramunculi c. 7 mm crassi, glabri, subangulati. Folia spiraliter dispositi, petiolis crassis, 2 - 4.5 cm longis, basi gibbosis. Lamina crassa elliptica vel oblonga, variabilissima, 6 - 26.5 × 5 - 12 cm, apice obtuso vel rotundato, basi rotundato vel cuneato, raro asymmetrica, marginibus reflexibus; nervis secundariis 11-20-paribus, nervis intermediis paucibus, nervis tertiariis reticulationes formatibus obsoletis raro visibilibus. Inflorescentia paniculata terminalis axillaris glabra 15 cm longa breviter ramosa, axibus complanatis; floribus brevipedicellatis c. 1.5 mm longis. Sepala 4 triangularia, 1.5 mm lata, acuminata, extus papillosa. Petala 4 oblonga glabra, c. 4 × 1.5 mm, extus intusque papillosa, costata, costa e dimidio petali 3-4-diviso glanduloso. Discus extrastaminalis. Stamen fertilium unicum. Ovarium glabrum sulco distincto, stylo laterale. Drupa oblonga 11 × 7 cm (in sicco), mesocarpio 1 cm crasso, endocarpio longitudinaliter striato; semen 10 × 6 cm, testa papyraceo.

*Typus:* KEP 20562, Gunung Jerai, Kedah (Holotypus KEP, isotypus SING).

*Distribution:* common, lowlands and hill forests throughout Malaya except Perlis, Penang and Malacca.

*Other collections seen:* KEDAH: KEP 11251, 20562, 105245; PERAK: KEP 8025, 9534, 11612, 40613, 63259, 65917, 69063, FRI 13941; KELANTAN: KEP 68315; TRENGGANU: FRI 16869; PAHANG: KEP 17288, 69602; SELANGOR: KEP 84613; NEGRI SEMBILAN: KEP 18422, 64749, 93265, 93797, 104762; JOHORE: KEP 69918, 70058, 70085, 70221, 84698, 92204, 93555, 104734, 105241, 116033, SFN 34970.

This is the thickest-leaved *Mangifera* with strong recurved margins and having floral parts similar to *M. quadrifida*.

***Mangifera quadrifida* Jack var. *longipetiolata* (King) Kochummen, stat. nov.**

Basionym: *M. longipetiolata* King, J. As. Soc. Beng. 65 (1896) 470; type: King's Collector No. 7266 (K).

Ding Hou reduced *M. longipetiolata* to *M. quadrifida* Jack. After examining a photograph of the type of *M. longipetiolata* and the herbarium collections at

Kepong, I have come to the conclusion that vegetative characters like the very large leaves, often exceeding 24 cm long and 8 cm wide, the leaf stalks 4 – 10 cm long, prominently swollen at their base, and the raised tertiary nerves and lax reticulations on the upper leaf surface are sufficient to merit varietal status.

***Mangifera whitmorei* Kochummen, sp. nov.**

Fig. 2.

Arbor usque ad 30 m alta, corona subrotunda coronellis parvioribus numerosis. Cortex tenuiter fissuratus. Cortex interioris subroseus et rubrostriatus; latex albus guttulosis. Lignum succosum album.

Ramunculi rubro-brunnei glabri inconspicue striati. Petiolus tenuis 4 – 4.5 cm longis basi tumido rugoso. Lamina tenue coriacea anguste oblonda 11 – 13 × 3 – 3.8 cm, acuminata, basi cuneato, nervis secundariis 15–17-paribus, (nervis intermediis paucibus) improminentibus, supra elevatis; nervis tertiariis reticulationes formantibus, infra visibilis, supra inconspicuis; costa media supra elevata. Inflorescentia axillaris paniculata glabra usque ad 23 × 10 cm, pauciramosa. Flores bisexuales cremeri pentameri, pedicelli 6 mm longi, infra apice 1 mm articulati. Sepala 5 glabra deltoidea 2 × 1.5 mm, obscuriter 6-lineata. Petala 5 oblonda glabra 4 × 1.5 mm pentacostulata (costuli quam petali  $\frac{1}{3}$  breviori), in parte basilari tertiali confluenta. Stamina 5 fertilia, 4 mm longa, filamentis separatis, antheris globosis; staminodiis 5 valde parvioribus oppositopetalis. Ovarium subglobosum 2 mm latus glabrum, glandulosum, glandis papilliformibus dispersis. Stylus lateralis 2.5 mm longus. Cetera ignota.

*Typus: FRI 15820 (Whitmore), Upper Perak, 150 m alt. (Holotypus KEP, isotypi K, L, A, SING).*

Known only by the type, however the collector stated that it is common on the hill slopes in the area.

The only other species with 3 – 5 fertile stamens is *M. pentandra* from which it differs by the glabrous inflorescences and long-pedicelled flowers.

## **MELANOCHYLA**

***Melanochyla caesia* (Bl.) Ding Hou**

*Melanochyla kunstleri* King, J. As. Soc. Beng. 65 (1896) 504; type: *King's Collector No. 6810* (SING); **syn. nov.**

When King described *M. kunstleri* he commented that it is very close to *M. maingayi* Hook.f. and the only difference he could discover was the smaller, more shiny leaves in *M. kunstleri*. Ding Hou later reduced *M. maingayi* to *M. caesia*. After examining the type of *M. kunstleri* and all collections under *M. caesia* and *M. kunstleri* at Kepong and Singapore herbaria I could find no floral or vegetative differences between the two.

***Melanochyla fasciculiflora* Kochummen, sp. nov.**

Fig. 3.

Frutex c. 5 m altus, ramunculis pallidis, gemma terminale ferrugineo hirsuto. Folia tenuicoriaceae, laminis 10.5 – 16.5 × 2.5 – 5 cm, acuminatis (acumen ad 1 cm longis), basi cuneato, pagina supra glabro, infra uniformiter papilloso et ad costam venamque sparsiter hirtello; costa infra canaliculato; nervis secundariis 14–18-paribus curvato-adscendentibus juxta marginem transientibus; nervis intermediis

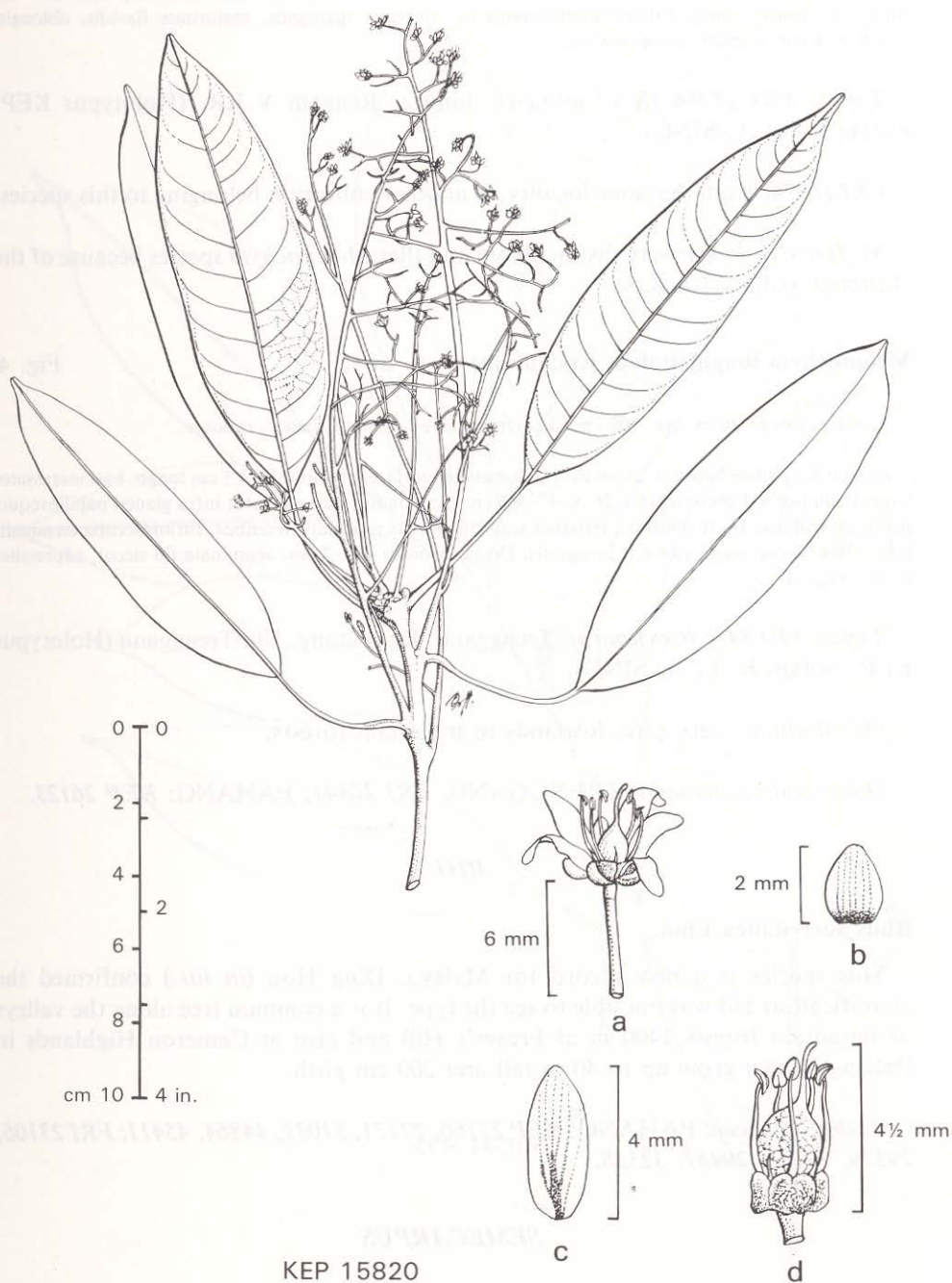


Fig. 2. *Mangifera whitmorei* Kochumm. sp. nov.

Leafy twig with inflorescence. Inset - a: flower; b: sepal, inside view; c: petal, inside view; d: disc, stamens and pistil.

brevibus; nervis tertiariis scalariformi reticulatis infra valde elevatis, supra inconspicuis; petiolo 0.7 – 2.2 cm longo. Flores ignoti. Infrutescentia axillaris, fructibus aggregatis, maturitate flavidis, oblongis, c.  $1.5 \times 1$  cm, hispidis; acuminoides.

*Typus: FRI 16366 (Kochummen), Johore, Rengam V.J.R. (Holotypus KEP, isotypi K, L, A, SING).*

*FRI 16374*, from the same locality, is another collection belonging to this species.

*M. fasciculiflora* is very distinct from all other *Melanochyla* species because of the clustered axillary fruits.

***Melanochyla longipetiolata* Kochummen, sp. nov.**

Fig. 4.

Arbor usque ad 30 m alta, 100 cm, diametro; cortex cinereus, laevis, rimosus.

Ramunculi pallide brunnei, angulati. Folia crassiter coriacea, petiolo 1 – 4.5 cm longo, basi incrassato; lamina elliptico vel obovato 16 – 26  $\times$  4 – 9.5 cm, acuminato, basi cuneato, infra glauco papillosoque; nervis secundariis 14–16-paribus, tertiariis scalariformibus reticulatis tenuibus. Inflorescentia terminalis paniculata 22 cm longa, floribus incognitis. Drupa ovoidea 4  $\times$  2 cm, acuminata (in sicco), adpressiter pilosa, rugosa.

*Typus: FRI 8478 (Cockburn), Trengganu, Kg. Petang, Ulu Trengganu (Holotypus KEP, isotypi K, L, A, SING).*

*Distribution* : very rare, lowlands to mountain forests.

*Other collections seen: TRENGGANU: FRI 20341; PAHANG: KEP 26123.*

***RHUS***

***Rhus succedanea* Linn.**

This species is a new record for Malaya. Ding Hou (*in litt.*) confirmed the identification as I was not able to see the type. It is a common tree along the valleys of mountain forests 1400 m at Fraser's Hill and also at Cameron Highlands in Pahang. It can grow up to 40 m tall and 200 cm girth.

*Collections seen: PAHANG: KEP 27166, 27171, 31031, 44864, 45411; FRI 23106, 29379, 29425, 29467, 32538.*

***SEMECARPUS***

***Semecarpus rufovelutinus* Ridl.**

This species is a new record for Malaya. It is a common small tree in the lowland forests of east Johore and Pahang. I have not seen the type, but the material match Bornean specimens SAN 39887 & 88330 which have been identified by Ding Hou.

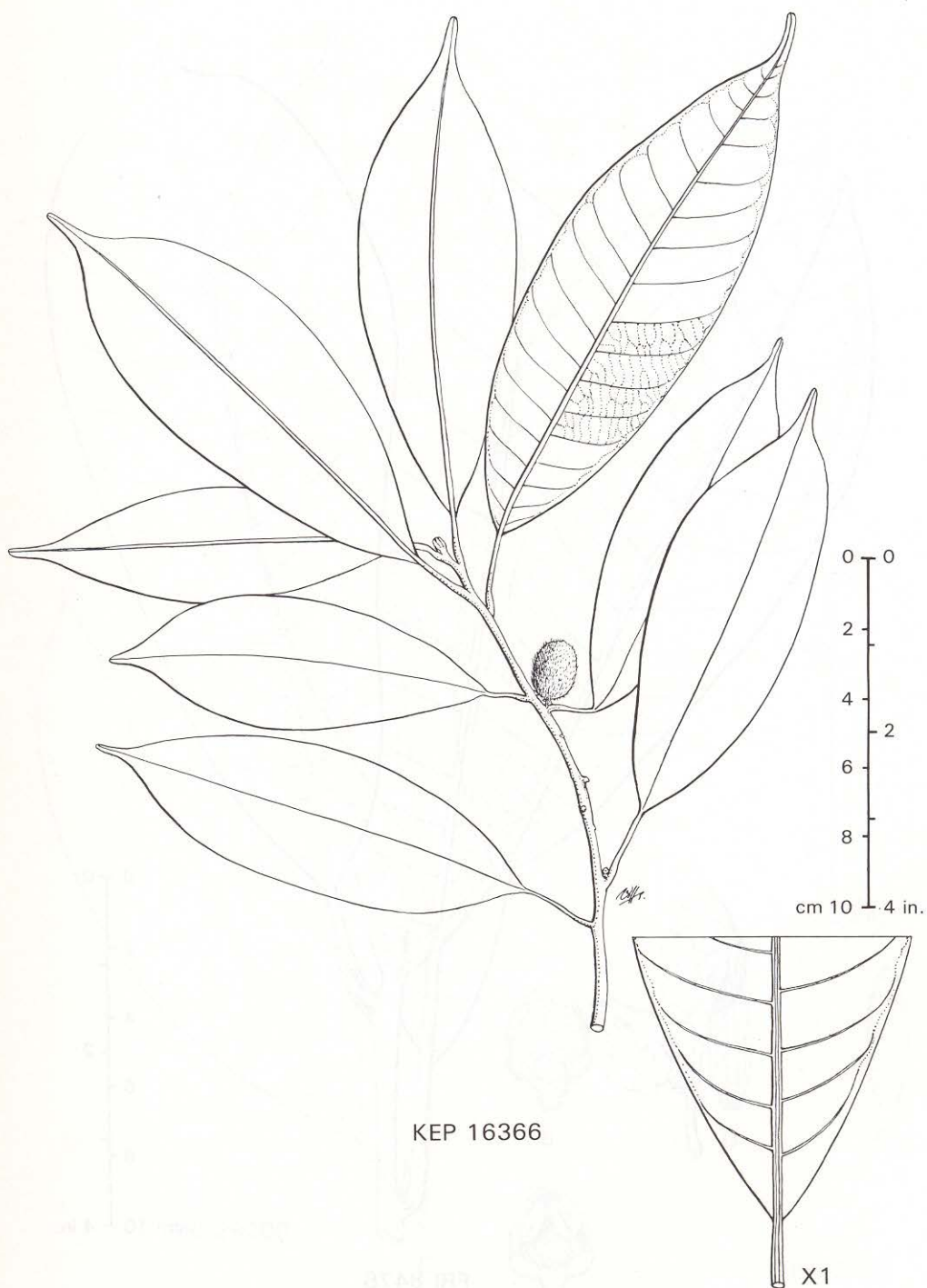
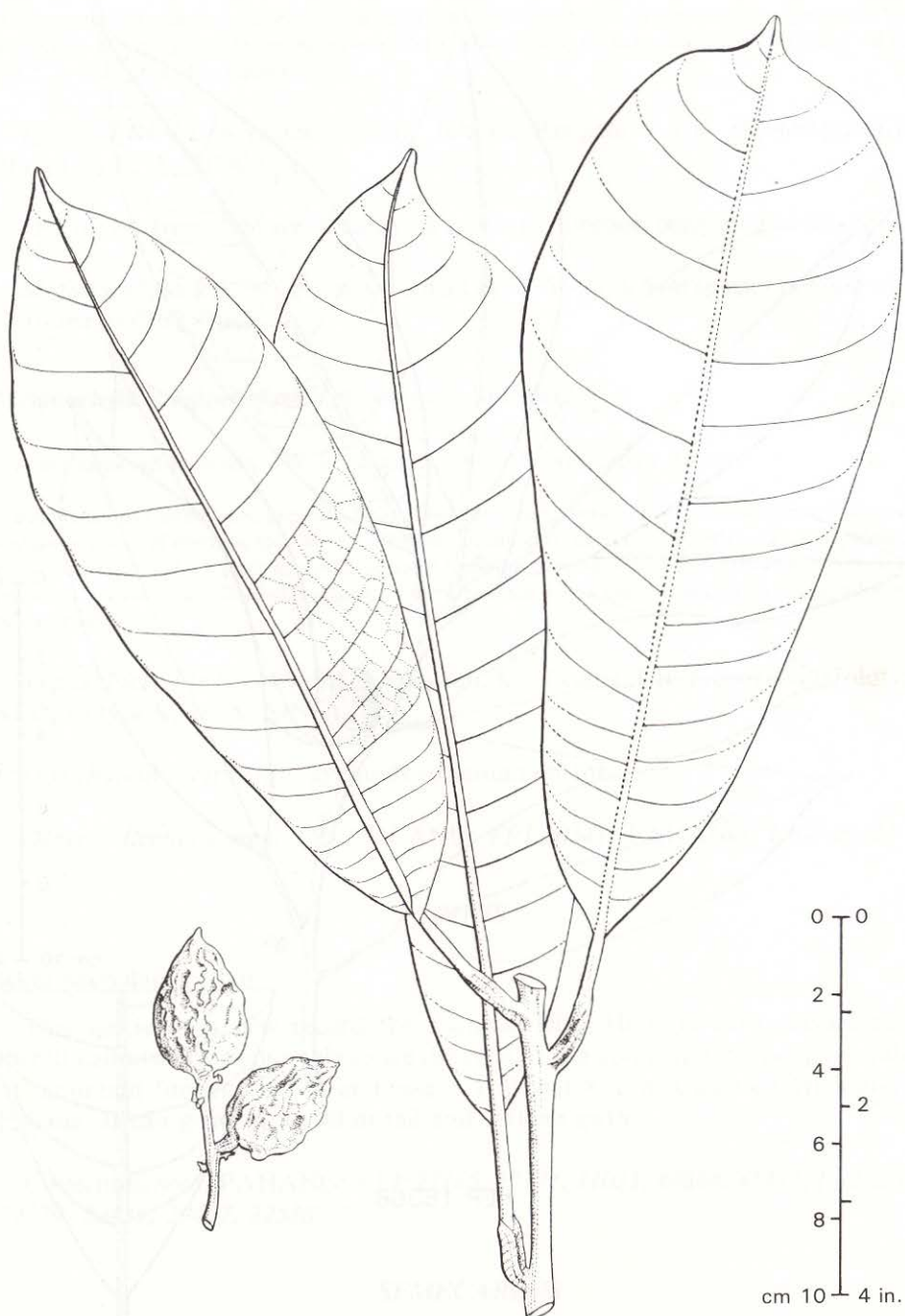


Fig. 3. *Melanochyla fasciculiflora* Kochumm. **sp. nov.**

Leafy twig with fruit. Inset – part of the underside of a leaf, enlarged to show the channelled midrib.



FRI 8478

Fig. 4 *Melanochyla longipetiolata* Kochumm. sp. nov.  
Leafy twig and fruits.

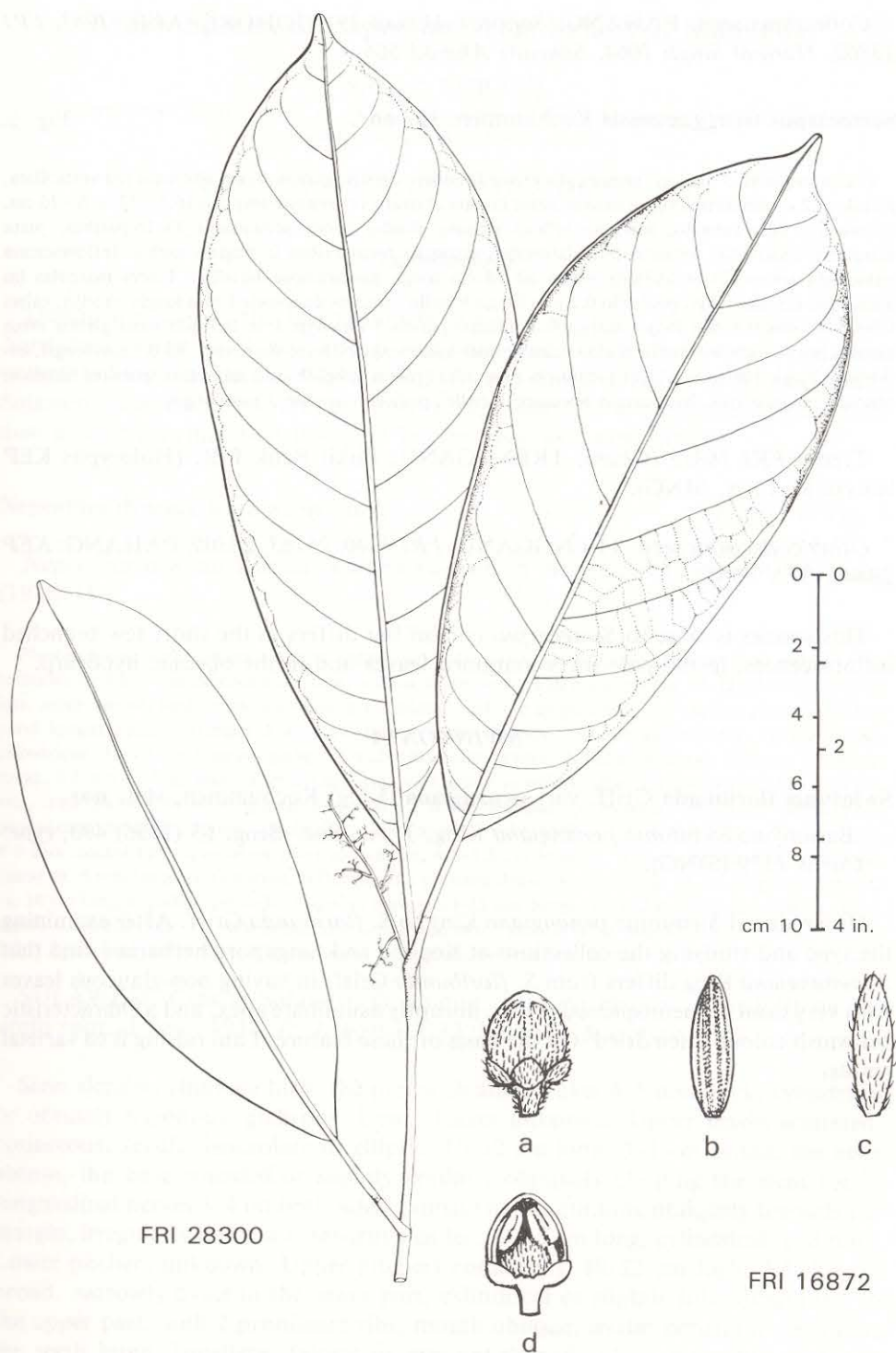


Fig. 5. *Semecarpus trengganuensis* Kochumm. sp. nov.

Leafy twig with inflorescence. Inset - : a: flower bud; b: petal, inside view; c: petal, outside view; d: longitudinal section of flower. (a & b,  $\times 12$ ; b, c, & e,  $\times 20$ ).

*Collections seen:* PAHANG: *Samsuri Ahmad* 397; JOHORE: *KEP* 97982, *FRI* 13802, *Hardial Singh* 1064, *Samsuri Ahmad* 506.

***Semecarpus trengganuensis* Kochummen, sp. nov.**

Fig. 5.

Frutex usque ad 3 m altus, ramunculis griseo-brunneis striatis, glabris. Folia alternata sed verticillata, petiolo c. 2–4 cm longo, supra canaliculato; lamina obovato vel anguste elliptico 16.5–37 × 6–15 cm, acuminato, basi cuneato, margine reflexo sinuato albido; nervis secundariis 13–16-paribus, juxta marginem recurvatis; tertiariis reticulationibus distinctis formantibus in paginis ambis. Inflorescentia paniculata terminalis et axillaris usque ad 18 cm longa pauciramosa hirtellae. Flores masculas (in alabastro) 1.5 mm longi, pedicello 0.2 mm longo hirtello, bracteis deltoideis 1 mm longis hirtellis, calyci lobis 5 obtusis 0.5 mm longis marginibus albidis; petalis 5 oblongis 1 × 0.5 mm intus glabris extus hirtellis prominente 4-venatis; disco intrastaminale apice longe hirsuto; staminis 5, ad 0.5 mm longis, antheris oblongis basifixis. Flores foemineas non vidi. Fructus subglobus 3 mm latus sparsiter hirtellus, obscure canaliculatus, hypocarpio obconico hirtello; pedicello hirtello 3 mm longo.

*Typus:* *FRI* 16872 (*Chan*), TRENGGANU, Bukit Bauk F.R. (Holotypus *KEP* isotypi K, L, A, SING).

*Other collections seen:* TRENGGANU: *FRI* 3940, 25163, 28300; PAHANG: *KEP* 28446, *SFN* 10688.

This species is close to *Semecarpus curtisii* but differs in the short few branched inflorescences, in the pale wavy-margined leaves and in the obconic hypocarp.

**SWINTONIA**

***Swintonia floribunda* Griff. var. *penangiana* (King) Kochummen, stat. nov.**

Basionym: *Swintonia penangiana* King, J. As. Soc. Beng. 65 (1896) 490; type: *Curtis* 1579 (SING).

Hou reduced *Swintonia penangiana* King to *S. floribunda* Griff. After examining the type and studying the collections at Kepong and Singapore herbaria I find that *S. penangiana* King differs from *S. floribunda* Griff. in having non-glaucous leaves with very faint to inconspicuous veins, abruptly acuminate apex, and a characteristic brownish colour when dried. On the basis of these features I am raising it to varietal status.