NEW AND CRITICAL MALESIAN PLANTS VII *)

by

A.J.G.H. KOSTERMANS **)  

SUMMARY

1. Anacardiaceae: Mangifera caesia Jack is combined with M. kemanga Bl. and 3 varieties are recognized: caesia, kemanga and wanji.

2. Newly described are: M. pajang and M. torquenda.

3. Lepidadenia seloang Miquel represents: Phoebe declinata Bl.


5. In Meliaceae are newly described: Aphananixis reticulosa, Lansium pedicellatum and L. sepalinum.

6. Sterculia minahassae Kds. is referred to Firmiana. F. philippinensis Kosterm. is reduced to synonymy.

ANACARDIACEAE

1. MANGIFERA CAESIA Jack

Jack’s type specimen is apparently not extant any more. His description of the fruit points to the variety wanji as described below.

The inflorescence of the wild form of M. caesia is more condensed than that of the cultivated varieties; its fruit is very acid; when young it is green and partly dirty red.

The two varieties kemanga and wanji differ only by the more elongate and open inflorescences and by the fruit, which are sweet acid and agreeable in taste, when they are fully ripe (fallen from the tree and left to ripen for another one or two days; the pulp becomes then very soft and juicy).

Mangifera kemanga Blume is only grown in West Java as far as I know and perhaps in S. Sumatra and the Malay Peninsula. It has pear shaped fruit, that are pale brown in colour and dull, whereas those of the variety


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Mangifera caesia

Jack

a. var. caesia

b. var. kemanga (Bl.) Kosterm., comb. nov.; cultivar. Fructus pyriformis

subrugosis pallide bruneis (basionym: Mangifera kemanga Blume).

c. var. wanjii Kosterm., var. nov. Fructus pyriformis, nitidis, albo-viridis, rubescentiibus. Typus: Kostermans s.n. (BO).

2. Mangifera pajang Kosterm. spec. nov.—Fig. 1a et b.

Arbor magna foliis glabris, magnis, rigide coriaceis oblongo-ovatis basi sensum, attenuato apice perobscurae acuminatae, supra nitida nervo mediano
costisque prominuliis subtus pallidiora nervo mediano magna prominentibus
costis utrinque ca 20—25 patentiis prominentibus ad marginem arcuatis;

tetolios longis basi incrassatiis; inflorescentis apicaliis multifioreis, magnis,

sepalis elongato-ovatis, petalis elongato-ovatis magnis, staminibus

fertilibus 5, ovario albo, stylo longo; fructus globosus magnus.

Large tree, 33 and more m tall with a tall clear bole of 50 cm and

more in diam. Bark grey, superficially, broadly cracked, rather smooth;
sap of the living bark causing skin-eruptions when touched. Buttresses

none. Crown rather open, round. Leaves crowded at the end of the thick

branchlets, glabrous, rigidly coriaceous, oblong-ovate, 8 x 28 to 15 x 40

cm (and x 45 cm) (leaves of a sapling are narrower (10 x 40 cm) with

up to 12 cm long petioles), base gradually tapering, contracted into the

petiole, apex round with a short broad acumen; upper surface smooth,
glossy darkgreen (fresh), midrib and lateral nerves prominent; lower

surface smooth, somewhat paler, the very strong midrib prominent; lateral

nerves 20—25 pairs, patent, prominent, strongly arcuate at margin. Petioles

stout, 5—7 cm long, grooved, swollen at base.

Inflorescences apical, appearing with the new flush, dark brick red,
glabrous, paniculate, many-flowered, ca 30 cm long, consisting of a

stout main racem and patent branches; bracts and bracteoles partly present

at anthesis. Calyx lobes dark purple, oblong-ovate, 2—2.5 mm long, rather

fleshy. Petals oblong-ovate, 5—6 mm long, inside purple, outside pinkish

white. Fertile stamens consisting of one very long one (5 mm), two some-

what smaller ones (3—4 mm) and 2 short ones; filaments broad, purple;

ovary ellipsoid to ovoid, white; style white, ca 5 mm with a small capitellate

stigma.

Fruit ca 15 cm in diam. (often more), globose, roughish, brownish; rind

very thick (10 mm) (when eaten peeled off like a banana); pulp yellowish

white, sweet acid. Stone rather flattened.

TYPUS: Kostermans 12534 (BO).

The species is a well known cultivated and wild one, related to Mangi-

fera foetida.

It is easily recognized by the dark brickred inflorescences with the

purple flowers and the white ovary. The fruit are the largest of the genus

Mangifera and may reach dimensions of a small coconut. The local name

in Sabah and Indonesian East Borneo is everywhere Asem (= manggo)
pajang.

E a s t K a l i m a n t a n (Indones. Borneo), West Kutai, Tundjun Plateau


S a b a h (N. Borneo) : Sipitang, Ulu Mandalong, 6 miles S.S.E. of Malaman, alt.

500 m, Sept., fr., Wood, San 16783 (BO).

3. Mangifera torquenda Kosterm., spec. nov.—Fig. 2.

Arbor magna foliis longe petiolatis rigide coriaceis glabris, ellipticis

usque ad subobovato oblongis, inflorescentis apicalibus parce minute to-

mentellis, floribus parvis, staminibus fertilibus unicus, discus distintis.

Large tree, up to 30 m tall and 40 cm in diam. Bark smooth, light

brownred; sap not itching. Leaves rigidly coriaceous, concave (fresh),
glabrous, aggregate near the end of the branchlets, obovate-oblong to

elliptic, 5 x 12 to 9 x 21 cm, base gradually attenuate, apex obscurely

acuminate, above glossy green, smooth, midrib and lateral nerves promi-

nulous; lower surface paler, midrib strongly prominent, lateral nerves patent,

cas 20 pairs, at margin arcuate, prominent; secondary nerves rather ob-

scur. Petioles 3—6 cm long, rather slender, thickened and black-green

(fresh) at base. Inflorescences white, terminal, dense, paniculate, up to

15 cm long (the tops of the side branches often almost in the same level);

the thick main peduncle slightly, sparsely, minutely pilose towards apex,
bearing slender, short branchlets; flowers sweetly fragrant, greenish white
on a short pedicel, articulate with a slender up to 8 mm long branchlet, with a bract at its base. Flowers small; sepals elongate-ovate, 2–2.5 mm long; petals elongate ovoid, 4 mm long. Fertile stamen one, 4–5 mm long; ovary ovoid on a disk. Fruit globular, smooth, yellowish green, about 10 cm diam. with a rather thin rind; pulp pale yellowish, sweet acid. It is biconvex, about 4 cm thick.

**L.AURACEAE**

**LEPIDOAENIA SELOANG** Miq.


This species is represented in the Bogor Herbarium by two iso-type sheets (numbered 3573 H.B. and 3905 H.B.), collected by Teijsmann near Muara Dua (Moera Doewa) near Palembang; the label bears the local name: Medang selowang.

These sterile specimens represent: *Phoebe declinata* Bl.

1. Beilschmiedia glabrata Kosterm., *spec. nov.*—Fig. 3

Arbor in omnibus partibus (fioribus exceptis) glabris foliis oppositis coriaceis ellipticis vel subovato-ellipticis basi cuneatis in petiolum subdecurrentibus apice acuminatis, gemmis ovatis acuminatis, parvis paudfloris, floribus longe pedicellatis tepaliibus ovato-lanceolatis staminibus graciliceps filamentis longis parce pilosis antheris elongatis glandulis stipitatis staminodiis longis gracilis; fructus brunneis scabriuscalis magno.

Tree up to 35 m high and 80 cm in diam.; butresses none or small (up to 50 cm high), thin. Bark dark reddish, rather smooth, cracked or peeling off in papery pieces. Living bark 3–10 mm thick, light brown to orange brown. Wood moderately hard, white. Branchlets glossy dark green, drying brown. Leaves coriaceous, very glossy, glabrous, subovato-elliptic, (2 x 5.5) 3.5 x 10 to 6 x 15 cm (in saplings 10 x 30 cm), base cuneate, slightly decurrent, apex with a blunt or sharp acumen, both surfaces with a lax, prominent reticulation, upper surface glossy dark green (pale grey brown, when dried), midrib broad, flat, usually impressed or at least impressed along its centre, lateral nerves slender, 8–9 pairs, arcuate, prominent on both surfaces, lower surface drying dark chocolate brown. Leaf buds ovate, acuminate, glabrous, 5–9 mm long. Petiole glabrous, superficially sulcate on its upper surface, 2–3 (4) cm long.

Panicles axillary in the new flush, glabrous, few-flowered, hardly branched, 1–2 cm long; pedicel slender, up to 10 mm long, sparsely, minutely pilose. Flowers pale green to greenish white; tepals lanceolate, acute, 3 mm long, inside sparsely, minutely pilose. Stamens slightly shorter than the tepals with slender, slightly pilose filaments; anthers narrow, elongate; cells of the outer ones introrse, of the inner ones lateral; glands globose, shortly stipitate. Staminaos cordate, acute.

Fruit ellipsoid, up to 2.5 X 3.5 cm; chocolate brown, roughish (scaly), pointed at apex, base with a conspicuous neck of 5–10 mm long.

**TYPUS:** Kostermans 7313 (BO).

**DISTRIBUTION:** Malay Peninsula, Sumatra, Borneo.

The leaves vary considerably in size; those near the inflorescence are 3 x 6 cm, others 10 x 25 cm. The tree prefers wet places, but remains small in periodically flooded areas; on better drained soils they become much taller.

The Sumatran and Malayan material matches the Bornean perfectly, except for the specimens Kiah S.F.N. 32424 and Burkill H.oltum 8964, which have a fruit of 3 x 4.5 cm of yellowish brown colour with a very conspicuous neck at the base; the leaves have a slightly different texture. The species has leaves similar to those of *B. gigantocarpa* Kosterm.

**MALAY PENINSULA:** Pahang, Fraser Hill upon the Selanger Border, alt. 1200 m, Sept., fr., Burk., *Burkhill & Holtum 866 (K, SING);* Perak, Mt. Batu Patah, fr., Wray 1067 (K, SING); Johore, Sg. Sedili, March, young fr., Corner s.n. (SING); Kg. Kayu, March, fr., Kiah, S.F.N. 3200 (K, SING); Sumatra: Djambe, Simpang, alt. 45 m, ster., bb. 13123 (BO); Borneo: Sarawak, fl., Beccari P.B. 1156 (BM, BO, G, K, LE); Kuching, Sg. Mohon, Dec., fl., Beccari P.B. 3971 (FL); West Kalimantan (Indones. Borneo), Landak, young fr., Teijsmann H.B. 1124.0 (BO, FL); East Kalimantan, Nunukan Isl., S. part, Simengkidu, marshy, alt. 2 m, Jan., young fr., Kostermans 9194 (A, BO, K, L, SING); ibid., alt. 25 m, ster., bb. 30560 (A, BO, K, L); E. Kutei, Mt. Medadem, N.W. of Sangkulirang, alt. 100 m, Aug., buds, Kostermans 12288 (A, BO, K, L, SING); Menubur R., N.E. of Sangkulirang, June, young fr., Kostermans 5383 (A, BO, K, L, PNH, SING); ibid., sapling of 6 m on ridge, alt. 20 m, Kostermans 5795 (A, BO, K, L, PNH, SING); ibid., Mt. Tepianlobang on Menubur R., alt. 100 m, limestone, Aug., fl., Kostermans 6012 (A, BISH, BO, K, KEP, L, LAE, P, SING, SYD); ibid., Tokon on Menubur R., ster.,
Beischmiedia dietoneura Kosterm., spec. nov.—Fig. 4.

Arbor gemmis adpresso pilosis foliis coriaceis glabris lanceolatis conspicue reticulatis, costis utrinque 6–10 petiolis glabris gracilibus profunde sulcatis, paniculis gracilibus multifloris, tepalibus late ovatis pilosis, filaminis latiss brevis pilosis, antheris triangularibus cellulis introrsis, staminodis sessilibus triangularibus, ovario glabro stylo aequilongo, stigmatame inconspicuo.

Tree up to 34 m high and 57 cm in diam., buttresses none or very small. Bark darkbrown, roughish, 0.5 mm, smooth or peeling off in irregular pieces; living bark darkbrown, “timer layer dark yellow, 5–10 mm thick. Wood white. Branchlets slender, glabrous. Leafbuds conical, densely, minutely, grey adpressed pilose, small. Leaves coriaceous, glabrous, lanceolate to broadly or narrowly lanceolate, 1 x 7 to 5.5 x 20 cm, base cuneate, apex gradually acuminate, sharp; both surfaces laxly prominulously reticulate; upper surface glossy, darkgreen (fresh), midrib strong, prominent, lateral nerves very slender, slightly prominent; lower surface pale green (fresh), dull, midrib rather slender, prominent, prominent, lateral nerves 6–10 pairs, slender, arcuate, prominent, often arcuately anastomosing at some distance from the margin. Petiole glabrous, slender, 5–20 mm long, deeply and narrowly sulcate above.

Panicles axillary, narrow, 2–8 cm long, minutely pilose. Flowers greenish white, rather flat, 1.5–2 mm in diam., 1 mm high; tepals fleshy, ovate, acute, broader than long, pressed together, the tips recurved, pilose on both surfaces; anthers protruding beyond the perianth, 0.5–0.75 mm long, ovate, acute with introrse cells; filaments broad, very short, pilose; staminodes triangular or sagittate, flat, sessile, 0.25 mm; ovary globose, glabrous, 1–1.5 mm long with 1 mm long style with inconspicuous stigma. Flower tube shallow, infundibuliforme, wide.

Fruit ellipsoid, obtuse, up to 12 x 15 mm, glossy green, smooth (fresh), covered with small warts (dried), pericarp soft, green, 2 mm, acid and biting on the tongue; coteledons white, flat-convex.

3. Beischmiedia bangkae Kosterm., spec. nov.—Fig. 5

Arbor foliis coriaceis suboblongis usque ad late ellipticis, pauci gradatim attenuatis apice breviter aequilongo, costis utrinque 6–10 petiolis glabris gracilibus profunde sulcatis, paniculis gracilibus multifloris, tepalibus late ovatis pilosis, filaminis latiss brevis pilosis, antheris triangularibus cellulis introrsis, staminodis sessilibus triangularibus, ovario glabro stylo aequilongo, stigmatame inconspicuo.

Tree 8–26 m tall, 15–40 cm in diam. Bark smooth, brownish. Branchlets and young flush densely pulverulently grey pilose. Leaves coriaceous, suboblongate to broadly elliptical, 2 x 5 to 4 x 7.5 (to 5 x 10) cm, base gradually narrowed, apex shortly or distinctly, broadly acuminate; margin thickened; upper surface glossy with lax prominent reticulation, midrib prominent (impressed near the base), lateral nerves slender, prominent; lower surface with adpressed very tiny hairs, glabrescent, midrib promin-
nt, lateral nerves 6—8 pairs, slender, slightly arcuate, prominent; reticulation lax, prominulous. Petiole 5—8 mm long, flat or slightly concave above.

Panicles axillary, short, 0.5—3 cm long with few, short branches, densely puberulent pilose. Bracts and bracteoles ovate or lanceolate, acute, persistent at anthesis, up to 1 ft long. Pedicel 1 mm long. Flowers yellowish green, 2 mm in diam. Tepals elliptic, acutish, densely pilose, densely pulverulently pilose. Bracts and bracteoles ovate or lanceolate, acute, introrse, filaments as long as the anthers, rather slender, very sparsely, minutely pilose; inner anthers oblong, cells extrorse-lateral; basal glands large, sessile; staminodes ovate, acute, sessile, 0.4 mm long; ovary glabrous, globose, with a style as long as the stamens; stigma inconspicuous, truncate. Fruit (immature) ellipsoid, acute, glossy, up to 5 x 10 mm with slightly curved, slender notch at the apex.

TYPUS: Grashoff 69 (L).

The species is closely related to B. rivialaris Kosterm., from which it differs by the coriaceous leaves with lax reticulation, the shorter petioles, the glabrous ovary and the differently shaped, glossy fruit. The local name in Bangka is medang bakul.


4. Beilschmiedia montanoides Kosterm., spec. nov.—Fig. 6

Arbor mediocri gemmis minuente dense adpressa pilosis, foliis rigide coriaceis glabris lanceolatis sensim acuminatis reticulatio laxo prominulo, petiolis gracilis distinctis, paniculis paucifloris subglabris axillaris parvis, floribus subplanis, antheris triangularibus, filamentis brevis lati, staminodiis cordatis acutis sessilis, ovario basin versus pilosis stylo aequilongo, stigmate inconspicuo; fructus ellipsoides acutis.

Tree 12 m high with 8 m clear bole of 15 cm diam. Bark scaly, reddish brown, lenticellate, thin; living bark 2—4 mm thick, reddish brown; sapwood pale ochre yellow. Branchlets glabrous. Leaflets densely grey adpressed pilose. Leaves rigidly coriaceous, glabrous, lanceolate, 1.5 x 5.5 to 3 x 10.5 cm, base acute, apex gradually acuminate; upper surface glossy smooth, midrib

and primary nerves hardly prominulous, lower surface paler, midrib prominulous, lateral nerves 6—7 pairs, very slender, rather obscure, arcuate; reticulation lax, rather obscure. Petiole slender, glabrous, 5—10 mm long, flat or shallowly sulcate above.

Panicles axillary, few-flowered, narrow, almost glabrous (except for tiny scattered adpressed hairs on the base of the main peduncle), 1—3 cm long, with few, short, stiff, erect-patent ramifications. Pedicels 1—2 mm long, slender. Flowers rather flat, 1.5—2 mm diam.; tube shallow, broad; tepals ovate, acute, 1.5 mm long, rather fleshy. Anthers elongate triangular, 0.75 mm long on 0.25—0.5 mm long, slightly pilose, broad filaments; cells of the outer anthers introrse, of the inner extrorse; basal glands small. Staminodes sessile, heart shaped, acute, 0.25 mm long. Ovary glabrous, pilose at base; style as long as the stamens; stigma truncate, inconspicuous.

Fruit ellipsoid or ovoid, pointed, apiculate, smooth, up to 1.5 x 2.5 cm.

TYPUS: Singh, San 28273 (BO); para-typus: Singh, San 24203 (BO).

The alliance of this species is with B. dictyoneura Kosterm., from which it differs by its non-reticulate, narrow, stiff leaves, different flowers and smooth, acute fruit.

S a b a h (N. Borneo): Distr. Ranau, Sg. Letong, Kundasang, Kinabalu, alt. 1800 m, March, fl., Singh, San 24203 (BO); ibid., Corner's Path, E. of Kundasang, alt. 1400 m, Nov., fr., Singh, San 28273 (BO).

5. Beilschmiedia rivialaris Kosterm., spec. nov.—Fig. 7


Arbor gemmis gracilis acutis ferrugineis pulverulente pilosis, foliis chartaceis glabris ellipticis usque ad suboblanceolatis vel lanceolatis basi acutis apice obscure acuminatis reticulatio laxe prominulo, costis utrinque 6—8, petiolis gracilis longis, subsulcatis; paniculis axillaris dense pulverulente pilosis bracteis bracteolisque mox caducis, pedicellis conspicuis; antheris late ovatis acutis, cellulis antheris exterioribus magnis introrsis, interoribus minoribus extrorsis, filamentis parvis, glandulis magnis sessilibus, staminodis ovatis acutis minutis sessilis; fructus globosus rugosis apiculatis, endospermum ruminatus.

Tree, up to 30 m high, with 15 m free bole and 50 cm in diam. Bark smooth, soft, pale redbrown, slightly cracked, 0.5 mm thick; living bark 6—10 mm, reddish brown with a sweet taste and a little clear sap when cut. Wood white with a faint sweetish smell. Branchlets at apex and the slender, acute leaflets minutely rusty, pulverulently pilose. Branches slender, glabrous. Leaves glabrous, chartaceous, elliptical to subobovate-elliptical and lanceolate (3.5 x 11 cm) to suboblanceolate, 2.5 x 8 to 6 x 13.5 cm,
28 REINWARDTIA

base acute, apex rather obscurely acuminate (in seedlings long and gradually acuminate), rather laxly, prominently reticulate on both surfaces; upper surface dark glossy green (fresh), drying rather dull with flat or slightly raised midrib and lateral nerves; lower surface paler, somewhat glaucous (fresh), drying dull brown with 6—8 pairs of erect-patent, somewhat arcuate, slender, prominently lateral nerves. Petiole slender, 8—12 mm long, shallowly sulcate above.

Panicles axillary near the new flush, lax, many-flowered, up to 13 cm long, densely, pulverulently pilose; bracts minute, ovate-acute, pilose, cadu- ceous before anthesis. Pedicels slender, 2—5 mm long, pilose. Flowers greenish white; tube very shallow; tepals orbicular-ovate, acutish, 15 mm long, densely minutely pilose; anthers 0.5 mm long, broadly ovate with acute protruding connective, the outer row with very large, introrse cells and 0.25 mm long, slightly pilose filaments; the inner row with broadly oblong, obtuse anthers with smaller, extrorse cells and slightly longer, pilose, rather broad filaments; glands large, sessile; staminodes ovate, acute, sessile. Ovary glabrous, 0.75 mm; style 0.5 mm long, truncate.

Endosperm ruminate.

**TYPUS:** Kostermans 8005 (BO).

**DISTRIBUTION:** Usely along rivers and rivulets from 20—800 m alt., locally common.

The species is outstanding by its globose, rough, brown fruit with ruminate endosperm. The latter characteristic is so unusual in Lauraceae, that the species might be considered to represent a separate genus. The specimen *Endert 3665* differs by its slightly, minutely pilose, lower leaf-surface.

up to 16 x 30 cm, base rounded, contracted into the petiole; apex obscurely, shortly acuminate; both surfaces densely prominently reticulate; areoles ca 1 mm in diam.; midrib prominulous, broad on upper surface, prominent on lower one; lateral nerves slender, about 9 pairs, erect-patent to rather patent, slightly arcuate, prominulous on upper, prominent on lower surface. Petiole up to 3 cm long, stout, glabrous, widely sulcate above. Fruit ellipsoid, up to 5 x 10 cm, smooth.

**TYPUS:** White, N.G.F. 10270 (BO).

Except for *E. eusideroxylocarva* Kosterm. this is the largest-fruited *Endiandra* species known. It is related to *E. macrophylla* Teschn. by the shape and size of its leaves.

**TERRITORY OF NEW GUINEA:** Madang Distr., Josephstal, alt. 80 m, lat. 4.45 S., long. 145.00 E., Sept., fr., White, N.G.F. 10283 et 10270 (BO).

**MELIACEAE**

1. *Aphanamixis reticulosa* Kosterm., spec. nov.—Fig. 10

*Arbor ramulis glabris striatis foliis 5-foliatis, foliolis lanceolate-ellipticis membranaceae glabris utrinque nitisidem et prominule reticulatis, basi acutis apicibus conspicuis acuminatis, costis 10—12 paribus, petiolulis gracilibus, spicis glabris, fructus globosus, lignosus, sub-costatis.*

Tree 25 m high with 8 m free bole. Bark smooth, greyish green; outer bark thin; cork cambium green; inner bark pale yellow. Branchlets grey, striate, glabrous. Leaves with 5 (rarely 3) glabrous, membranaceous, alternate or sub-opposite leaflets; rachis slender, up to 20 cm long, glabrous; petiolar part ca 8 cm, thickened at base; folioles lanceolate-elliptic, 6.5 x 20 (top leaflet) to 3.5 x 10 cm (basal leaflet), base gradually tapering, acute, apex conspicuously acuminate; both surfaces glossy and prominently reticulate; upper surface darkgreen, midrib impressed, lower surface paler, duller, midrib prominent; lateral nerves 7—8 pairs, prominent, arcuate. Petioles slender, 3—4 mm long, pulvinate at base, slightly sulcate or flat on their upper surface.

Racemes in fascicles on old wood, glabrous, slender, up to 11 cm long. Flower 2 mm. Pedicel 1 mm, slender, subtended by a minute, pilose bract. Sepals ca 1 mm in diam., rounded, fringed at margin. Petals 2 mm, ovate-orbicular. Stamens in one row, the anthers protruding beyond the rim. Ovary angular, pilose; stigma truncate.

**TYPUS:** Van Steenis 3444 (BO).

The species is outstanding by its ribbed, glabrous, woody fruit and the typical leaf venation; the Jaheri specimen has a fruit without ribs.

**TYPUS:** San 24030 (BO).

The species is outstanding by its ribbed, glabrous, woody fruit and the typical leaf venation; the Jaheri specimen has a fruit without ribs.
petiolar part ca 5 cm. Folioles 9, chartaceous to chartaceous-membranaceous, lanceolate to narrowly elliptical or subobovate-lanceolate (apical leaflet), 5 x 17 (apical leaflet) to 3 x 8 cm (basal leaflet), base acute or rounded, often oblique, apex rather inconspicuously acuminate; both surfaces glossy, prominously reticulate; upper surface glabrous, midrib pilose, slightly impressed; lower surface soon glabrous, midrib prominent, lateral nerves 10—12 pairs, prominent, arcuate. Petiolule 3—5 mm, pulvinate at base. Spikes densely, minutely pale-brown pilose, up to 16 cm long, on old wood. Sepals depressed orbicular 4 mm long, densely pilose. Fruit globular, 2—2.5 cm in diam., densely, velvety tomentellous, one-seeded.

**TYPUS:** Jacobs 4456 (BO).

The species is related to *L. aqueum* Miq., from which it differs by its narrow, glabrous folioles, the much larger sepals with a more dense indumentum.

**Central Sumatra:** W. side of Mt. Tudjuh Complex, 1° 40’S, 101° 20’E, alt. 1400—1600 m, Aug., fr., Jacobs U56 (A, K, L, SING).

**Sterculiaceae**

_Firmiana minahassae* (Kds.) Kostermans., **comb. nov.**

Dr. W. Soegeng pointed out to me that *Sterculia wiinahassae* Koorders (basionym) (Suppl. Fl. N.O. Celebes 2:-33, t. 8. 1922) might belong to *Firmiana*.

It belongs indeed in that genus and is conspecific with *F. philippinensis* Kosterm.

The type specimen (*Koorders 18070*) is represented in the Bogor Herbarium by two loose leaves, a flowering branch with immature flowers and a branch with young fruit. After this specimen Koorders’ drawing was made. It may consequently be considered to represent the holo-type.

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Fig. 1a. — _Mangifera pajang_ Kosterm.
Fig. 1 b. — *Mangifera pajang* Kosterm.

Fig. 2. — *Mangifera torquenda* Kosterm.
Fig. 3. — *Beilschmiedia glabra* Kosterm.; after Kostermans 7313; flowering branch; flower (X 10); inner stamen, staminode, ovary (x 20).

Fig. 4. — *Beilschmiedia dictyoneura* Kosterm.
Fig. 5. — Beilschmiedia bangkae Kosterm.

Fig. 6. — Beilschmedia montanoides Kosterm.
40

REINWARDTIA

1965]


41

Fig. 8. — *Endiandra ochracea* Kosterm.

Fig. 7. — *Beilschniedia rivularis* Kosterm.
Fig. 9 a. — *Endiandra magnilimba* Kosterm.

Fig. 9 b. — *Endiandra magnilimba* Kosterm.
Fig. 10. — Aphanainixis reticulata Kosterm.

Fig. 11. — Lansium pedicellatum Kosterm. — Holo-typus.
NEW SPECIES OF PARINARI Aublet (Rosaceae-Chrysobalanaceae),
by
A.J.G.H. Kostermans *

The following is an account and description of new species of Asiatlic and one Pijian species of Parinari Aublet, originally intended to be included into a forthcoming monographic treatment of the Asiatic Parinari species.

Dr. Yan Franck (New York Botanical Garden) has informed me that his revision and new classification of genera of the Chrysobalanaceae will be published soon and consequently I have deferred the publication of my monograph to a later date.

The species here are treated in a conservative way and described as belonging to the genus *Parinari* sensu lato; between brackets I have added the section to which the species belongs.

1. Parinari ( § Eu-Parinari) argentus-sericen Kosterms., spec. nov.—Fig. 1

*Arbor ramulis globosis foliis characeis glabrae ellipticae petiolis 7.5 cm longis basi velanaticis, apice breviter acuminatis, nervis medianis supra impressis, subhis punctatis, contus. 11—15 maribus; petiolis brevibus; stipulis lanceolatis; caulis caduca; paniculis pedunculis albis-sericis-tomentellis; frutibus sub-ovatis, floribus grossibus, staminibus fertilibus 7—8, stipulis acuminatis.*

**Typus: SMA 16175 (BO)**

Tree 25—33 m tall and 25 cm and more in diam.; bark lenticellate, brown; outer bark hard; inner bark red, hard, 1.2 mm thick; cork cambium red; cambium yellow; branchlets dark purplish brown with numerous pale tiny lenticells, glabrous. Leaves glabrous, characeous, elliptic to oblance or subovate-elliptic, 4.5 × 9.5 to 7 × 20.5 cm, base rounded, apex shortly, often obscurely acuminate; upper surface glossy, midrib impressed (except for its basal 1—4 mm which shows protruding tissue from the petiole), lateral nerves filiformus, reflexion prominulous or inconspicuous; lower leaf surface dull, paler, lateral nerves 11—15 pairs, erect-patent (the lower ones patent), secondary nerves rather lax, prominulous; base of leaf below near the petiole insertion rarely with glandular tissue. Stipules lateral, lanceolate (base 2 mm wide), acute, adpressed strigose, especially along its midline outside, 8 mm long, early caducous. Petiole 5—9 mm, glandless.

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