

# REVISION OF THE SAPOTACEAE OF THE MALAYSIAN AREA IN A WIDER SENSE

## IX<sup>1)</sup>. *Pouteria* Aublet

by

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## INTRODUCTION

In the present study only those species of the genus *Pouteria* have been incorporated which are found in the area covered by the Flora Malesiana, as well as those of Australia and western Polynesia.

The results of this study could not have been obtained without the kind help of the Directors of the herbaria of Berkeley, Brisbane, Bogor, Florence, Jamaica Plain, Kew, Lae, Leiden, London, Manila, Melbourne, Paris, Singapore, Stockholm, Sydney and Zürich to whom we express our most sincere thanks.

The abbreviations of the names of herbaria are those proposed by Lanjouw and Stafleu in the *Index Herbariorum*, ed. 3 (1956).

In all figures dimensions are given in mm.

## GENERAL PART

### Abbreviations of some references

- Baehni 1942 = Ch. Baehni, *Mémoire sur les Sapotaceae* 2, Le genre *Pouteria*, *Candollea* 9, 1942, 147—476.  
 Dubard 1912 = M. Dubard, *Les Sapotacées du groupe des Sideroxylées*, *Ann. Mus. col. Marseille* 20, 1912, 1—90.

<sup>1)</sup> I—III in *Blumea* VI, 3, 1952, 547—595; IV—V in *Blumea* VII, 2, 1953, 364—412; IVa in *Blumea* VII, 3, 1954, 481—483; IIa, IVb, Va, VI—IX in the present issue.

- Lam 1925 = H. J. Lam, The Sapotaceae etc. of the Dutch East Indies, Bull. Jard. bot. Bzg, sér. 3, 7, 1925, 193—218.  
 Lam 1927 = H. J. Lam, Further studies etc., Bull. Jard. bot. Bzg, sér. 3, 8, 1927, 467—476.  
 Lam 1932 = H. J. Lam, Sapotaceae, Nova Guinea 14, 1932, 544—570.

*Vidoricum* Rumphius, Herb. Amb., ed. 2, 1750, 185, t. 118 — *Pouteria* Aublet, Hist. Pl. Guiane Fr. 1, 1775, 85, excl. fr., sensu Eyma, Rec. trav. bot. néerl. 33, 1936, 159; Baehni 1942, 147—476, p.p. — *Lucuma* Molina, Saggia Chil., 1782, 186, p.p.; Bentham & Hooker, Gen. Pl. 2, 2, 1876, 654; Baillon, Hist. Pl. 11, 1891, 281; Engler & Prantl, Nat. Pfl. Fam. 4, 1, 1897, 142 and Nachtr., 1897, 273; Dubard 1912, 9; Lam 1925, 219; Lam 1927, 476; Heyne, Nutt. Pl. Ned. Ind., ed. 2, 1927, 1243; idem, ed. 3, 1950, 1243; Lam 1932, 567 — *Labatia* Sw., Prodr. Veg. Ind. Occ., 1788, 32 — *Sersalisia* R. Br., Prodr., 1810, 529, p.p. — *Beauvisagea* Pierre, Not. bot. Sapot., 1890, 15; Krause, Engl. Bot. Jahrb. 58, 1923, 482 — *Bureavella* Pierre, l. c., 16; Dubard 1912, 9; Krause, l. c., 486 — *Pichonia* Pierre, l. c., 22 — *Beccariella* Pierre, l. c., 30; Krause, l. c., 483 — *Fontbrunnea* Pierre, l. c., 31 — *Sebertia* Pierre ex Baillon, Bull. soc. linn. Paris 2, 1891, 945 — *Epiluma* Baillon, Hist. Pl. 11, 1891, 287 *Rhamnoluma* Baillon, l. c., 288.

#### Diagnosis of the genus

*Trees* or *shrubs*, with latex. Branchlets terete, juvenile ones glabrous or tomentose and often glabrescent. *Leaves* papyraceous to thick-coriaceous, estipulate, alternate, or sometimes subopposite, scattered or more or less crowded towards tips of branchlets, juvenile ones often tomentose on either side, adult ones glabrescent, or sometimes appressedly tomentose above, rarely glabrescent below, or leaves from the beginning glabrous on either side; secondary nerves mostly markedly stronger than tertiary ones; sometimes delicate; tertiary nerves mutually parallel or reticulate, either more or less transverse or parallel with secondary ones. *Flowers* fasciculate in axils of leaves or their scars, sometimes inserted on brachyblasts, mostly pedicelled, sometimes sessile; bracteoles sometimes present, 2—4. *Sepals* 5, rarely 4 or 6, outside tomentose, inside glabrous or sericeous, connate at base only, caducous or persistent in fruit. *Corolla* exserted, sometimes slightly so, tubular or campanulate, lobes 5, sometimes 4, or up to 8. *Stamens* 5, sometimes 4, or up to 8, epipetalous, inserted just above or just below the corolla throat. *Staminodes* 5, or less, rarely absent, or more, up to 8, lanceolate or subulate, sometimes squamiform or petaloid, episepalous, inserted in the corolla throat. *Ovary* 5- or sometimes 6-celled, sometimes surrounded at base by a subcupular disk, more or less densely villous, rarely glabrous, conoidal, gradually contracted into style. *Fruits* 1—5-seeded, glabrous or puberulous, sometimes with long stiff bristles, pericarp thin or thick, sometimes becoming very hard when dry, testa thin to rather thick, shining, scar narrow, oblong or broad-ovate or occupying half of the surface or nearly the whole surface of the seed, hilum apical, sometimes basal, albumen absent or membranous, cotyledons thick, very rarely subfoliaceous, radicle inferior, punctiform, sometimes exsert.

Type species: *Pouteria guianensis* Aublet.

Distr.: About 150 species in tropical and subtropical America, Africa, Asia, Australia and the southwestern Pacific islands.

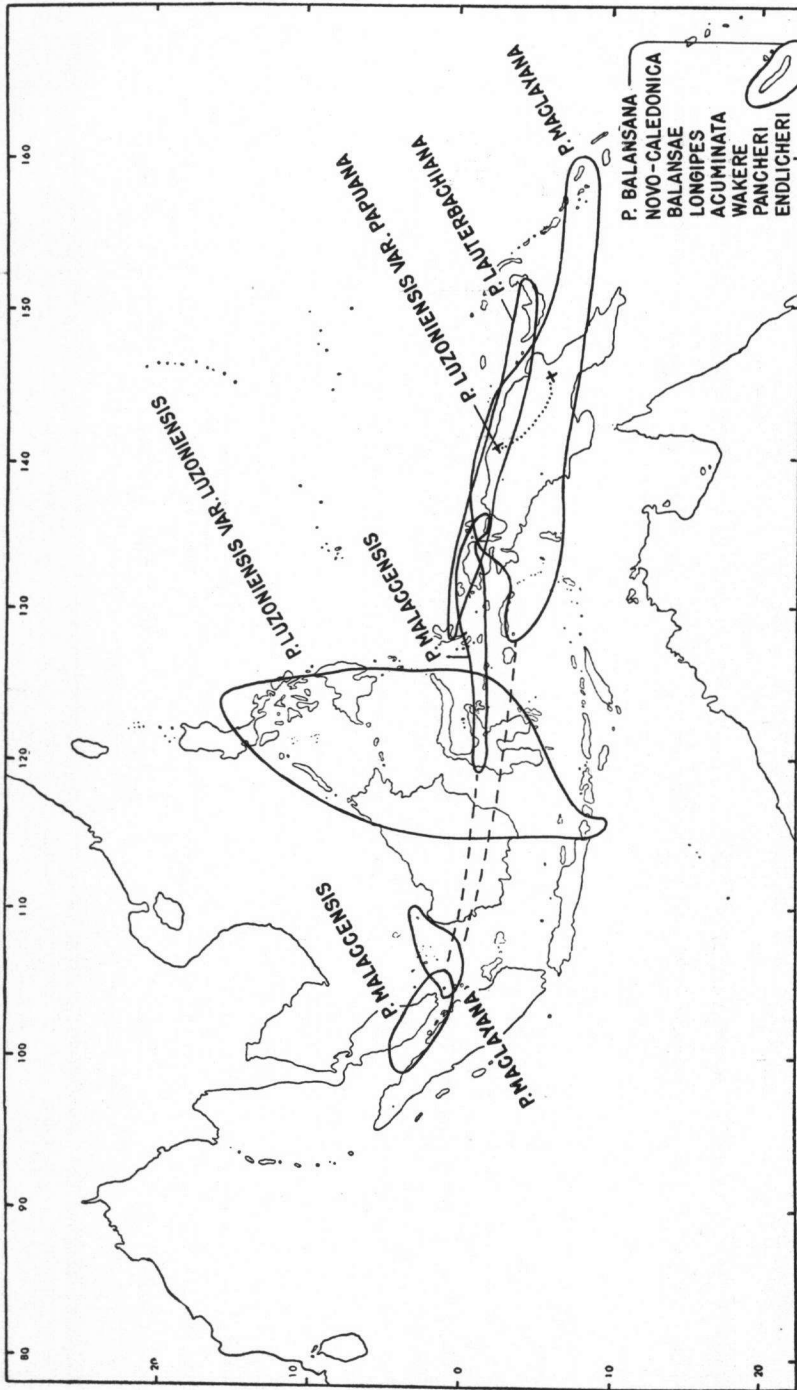


Fig. 1. Distribution of some species of *Pouteria*, I.

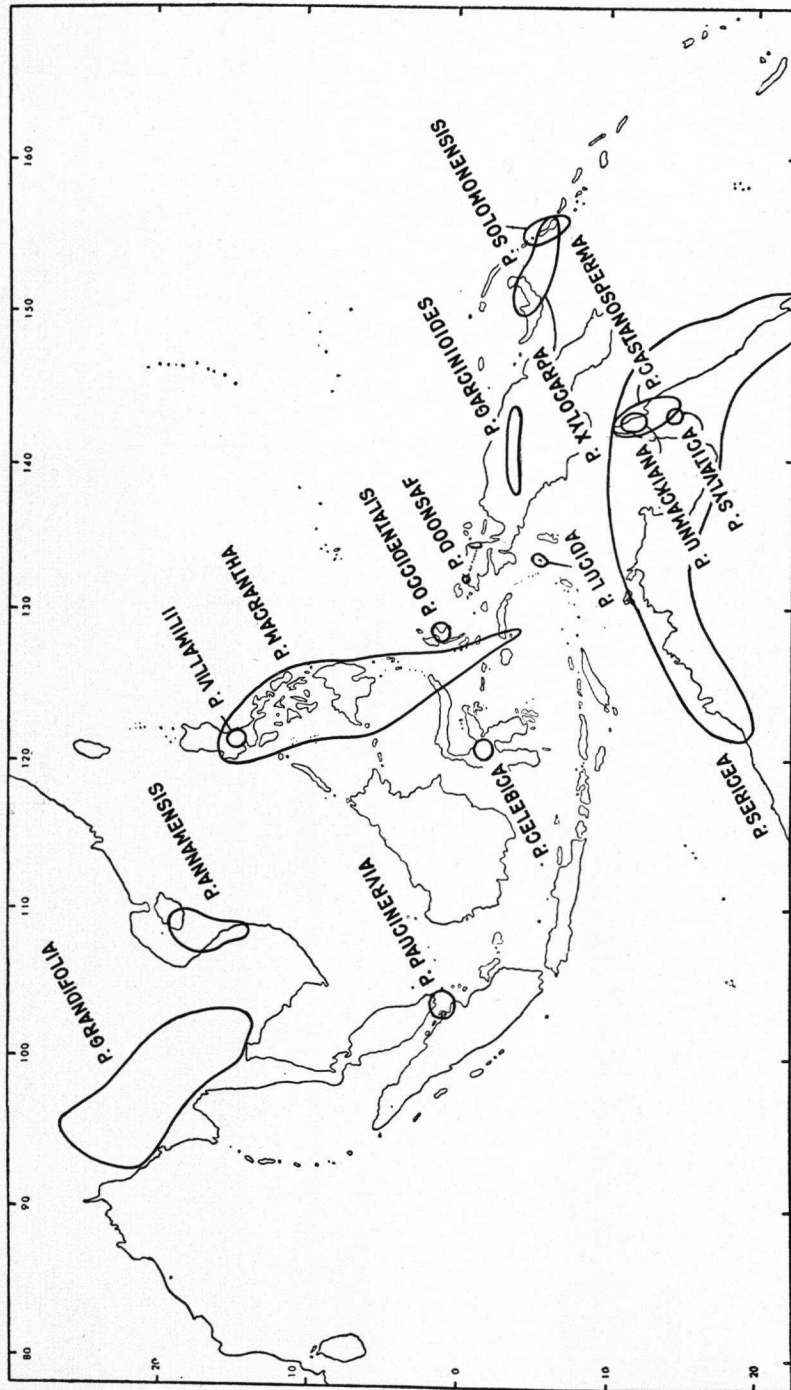


Fig. 2. Distribution of some species of *Pouteria*, II

### Distribution. (Fig. 1, 2).

The 28 species treated in this publication cover an area reaching from Assam, Burma, Tonkin, Hainan and the Malay Peninsula to the Philippines, Solomons, New Caledonia and northern Australia. Eight of these are found in New Caledonia, which all are endemic to that island. In New Guinea 7 species are found of which, however, only 2 are endemic, while the 4 Australian species are restricted to that continent only. In the Philippines 4 species are found of which one is endemic.

The largest area is covered by *P. maclayana*, ranging from the Malay Peninsula and Riouw to the Solomons, though it has not yet been recorded from Sumatra, Borneo and Celebes.

## TAXONOMIC PART

### Key to the taxa<sup>1)</sup>

- 1.a. Leaves opposite to subopposite . . . . . 2
- b. Leaves alternate . . . . . 3
- 2.a. Leaves 10—20 by 6—8 cm, thin-coriaceous, secondary nerves prominent below; flowers in 6—11-flowered clusters; fruits subobliquely oblong, 3—5.5 by 0.8—1.8 by 0.7—1.4 cm, apex pointed. *Moluccas, New Guinea, Bismarck Archipelago*  
   10. *P. lauterbachiana* (H. J. Lam) Baehni
- b. Leaves 3.5—15 by 0.8—5.3 cm, coriaceous, secondary nerves inconspicuous below; flowers in 4—6-flowered clusters, fruits globose; c. 2.5 by 2.3 by 2 cm. *Solomons*  
   24. *P. solomonensis* van Royen
- 3.a. Leaves with a stout marginal nerve . . . . . 4
- b. Leaves without such a marginal nerve . . . . . 5
- 4.a. Flowers in 4—6-flowered clusters, pedicels c. 1 mm long, reddish or greyish woolly; leaves dark olivaceous-brown above when dry, petioles 0.5—2 cm. *New Caledonia*  
   16. *P. pancheri* (Baillon) Baehni
- b. Flowers solitary, pedicels 4—9 mm long, greyish or brownish tomentose; leaves pale yellow-brown above when dry, petioles 2—5.5 cm. *New Caledonia*  
   14. *P. wakere* (Pancher & Sebert) Baehni
- 5.a. Tertiary nerves distinctly transverse to secondary nerves . . . . . 6
- b. Tertiary nerves parallel to secondary nerves . . . . . 26
- 6.a. Secondary nerves 19—22, ascending at an angle of 45°—70°, leaves obovate, 33—47 by 9.5—16.5 cm, glabrous when mature. *Halmahera*  
   7. *P. occidentalis* (H. J. Lam) Baehni
- b. Secondary nerves 3—18, if more, leaves narrower than 5 cm or the petioles glabrous . . . . . 7
- 7.a. Mature leaves completely glabrous below . . . . . 8
- b. Mature leaves tomentose below or with a few scattered hairs along midrib . . . . . 19
- 8.a. Sepals pubescent on either side . . . . . 9
- b. Sepals pubescent without only . . . . . 12
- 9.a. Leaves 10—39 by 2—15 cm and petiole 15—50 mm long, if leaves smaller than 10 cm, secondary nerves 8—17 and pedicels 3—6 mm long . . . . . 10
- b. Leaves 2—8 by 1.2—5.5 cm, petioles 3—10 mm long, secondary nerves 3—8, pedicels 0—1 mm long . . . . . 11
- 10.a. 1 or 2 flowers in each axil of leaves or scars; petioles grooved above, secondary nerves straight, angle of leafbase c. 90°, tertiary nervation perpendicular to secondary nerves; staminodes quadrangular or spatulate; fruits up to 10 cm in diam., seeds pale yellow with brownish spots. *New Guinea*  
   21. *P. doonsaf* van Royen

<sup>1)</sup> In this key *P. garcinioides* (Krause) Baehni and *P. luoida* (Burck) Baehni are not included as the material was too scanty to provide reliable details.

- b. 5—9 flowers in each axil, petioles flat above, secondary nerves curved, angle of leafbase 70°—90°, tertiary nerves mostly almost parallel to secondary nerves; staminodes linear, fruits up to 6.5 cm in diam., seeds dark brown. *Philippines, Celebes, Amboina* . . . . . 20. *P. macrantha* (Merrill) Baehni
- 11.a. Petioles 3—5 mm long, flat above, greyish tomentose, mature leaves nitidous above, branchlets yellowish tomentose. *Australia* 8. *P. unmackiana* (Bailey) Erlee  
 b. Petioles c. 10 mm long, grooved above, glabrous, mature leaves dull above, branchlets brownish tomentose. *Australia* . . . . . 22. *P. sylvatica* Baehni
- 12.a. Leaves spatulate or obovate, 4—8 by 1—3 cm, apex obtuse, secondary nerves 4—6; fruits depressedly globose, 1.5—2 by 1.5—2 by 1.2—1.5 cm, reddish brown tomentose when dry. *Malay Peninsula and Sumatra* 23. *P. paucinervia* Erlee  
 b. Leaves lanceolate, ovate, elliptic or obovate, short or long acuminate and rarely rounded, 3—53 by 1.5—14 cm, secondary nerves 3—18; fruits globose or pyriform<sup>1)</sup>, 2 cm or more in diam., glabrous or sparsely greyish tomentose, if smaller than 2 cm, the fruit blackish and glabrous and the petioles 15—45 mm long . . . . . 13
- 13.a. Leaves broadly ovate, ovate or suboblong, (3—)5—8.5(—10.5) by (2—)2.5—6 (—6.5) cm, rounded or obtuse, secondary nerves 6—11, flowers in 10—15-flowered clusters. *New Caledonia* . . . . . 5. *P. balansana* (Pierre) Baehni  
 b. Leaves elliptic or ovate, 3.5—53 by 1.5—14 cm, sometimes rounded and emarginate but mostly acuminate, secondary nerves 3—18; flowers in 1—5-flowered clusters . . . . . 14
- 14.a. Petioles of mature leaves tomentose, leaves oblong, 3.5—12 by 2—5 cm, apex rounded, sometimes emarginate or indistinctly acuminate; flowers c. 1 cm long; fruits distinctly beaked. *New Caledonia* . . . . . 6. *P. calomeris* (Baillon) Baehni  
 b. Petioles of mature leaves glabrous, leaves elliptic or obovate, 5—53 by 1.5—14 cm, obtusely or acutely acuminate; flowers always smaller than 4 mm; fruits rounded at apex . . . . . 15
- 15.a. Pedicels of flowers and fruits 20—30 mm long; fruits 8—13 cm in diam.; leaves (6—)15—35.5(—53) by 3.5—10(—14) cm. *Lingga, Talaud, Nanusa, Amboina, Key, New Guinea, Solomons* . . . . . 13. *P. maclayana* (F. v. M.) Baehni  
 b. Pedicels shorter than 10 mm, fruits smaller than 6 cm . . . . . 16
- 16.a. Leaves thin-membranous; seeds pale yellow with light brown back. *Bismarck Archipelago, Solomons* . . . . . 9. *P. xylocarpa* White  
 b. Leaves coriaceous, seeds brown . . . . . 17
- 17.a. Leaves elliptic-ovate, acuminate, tapering towards apex over a long distance. *Philippines* . . . . . 19. *P. villamilli* (Merrill) Baehni  
 b. Leaves obovate, obtusely acuminate or rounded . . . . . 18
- 18.a. Leaves when young ferruginously tomentose, tertiary nerves reticulate and some of them parallel to the secondary nerves; pedicels ferruginously tomentose, flowers in 1—3-flowered clusters, sepals ferruginously tomentose without, inner ones with entire margins, ovary with ferruginous hairs, *Tonkin, Hainan* . . . . . 15. *P. annamensis* (Pierre) Baehni  
 b. Leaves glabrous when young, tertiary nerves transverse, pedicels yellowish tomentose; flowers in 3—10-flowered clusters, sepals yellowish tomentose without, inner ones with fimbriate margins, ovary with pale yellowish hairs. *Assam, Burma, Stam* . . . . . 17. *P. grandifolia* (Wallich) Baehni
- 19.a. Sepals pubescent on either side . . . . . 20  
 b. Sepals pubescent without only . . . . . 23
- 20.a. Leaves 10—39 by 2—15 cm and petiole 15—50 mm long, if leaves shorter than 10 cm, secondary nerves 8—17 and pedicels 3—6 mm long . . . . . 21  
 b. Leaves 2—8 by 1.2—5.5 cm, petioles 3—10 mm long, secondary nerves 3—8; pedicels 0—1 mm long . . . . . 22
- 21.a. 1 or 2 flowers in each axil of leaves or scars; petioles grooved above, secondary nerves straight, angle of leafbase c. 90°, tertiary nervation perpendicular to

<sup>1)</sup> The fruit in *P. grandifolia* (Wallich) Baehni is unknown but this species can be separated from *P. paucinervia* Erlee by the bigger leaves (5—21 by 3.5—9.5 cm) and the longer petioles (15—40 mm).

- secondary nerves; staminodes quadrangular or spatulate; fruits up to 10 cm in diam., seeds pale yellow with brownish spots. *New Guinea*
21. *P. doonsaf* van Royen
- b. 5—9 flowers in each axil; petioles flat above, secondary nerves curved, angle of leafbase 70°—90°, tertiary nerves mostly parallel to secondary nerves; staminodes linear; fruits up to 6.5 cm in diam., seeds darkbrown. *Philippines, Celebes, Amboina*
20. *P. macrantha* (Merrill) Baehni
- 22.a. Petioles 3—5 mm long, flat above, greyish tomentose, mature leaves nitidous above, branchlets yellowish tomentose. *Australia*
8. *P. unmackiana* (Bailey) Erlee
- b. Petioles c. 10 mm long, grooved above, glabrous, mature leaves dull above, branchlets brownish tomentose. *Australia* . . . . . 22. *P. sylvatica* Baehni
- 23.a. Leaves densely golden sericeous below, sometimes in the young leaves only so, tertiary nerves inconspicuous or invisible above . . . . . 24
- b. Leaves greyish, brown-yellowish or reddish tomentose below, tertiary nerves faint, distinct, or very conspicuous above . . . . . 25
- 24.a. Leaves (5—)8—13(—17.5) cm long, petioles (0.5—)0.9—2 cm long; corolla glabrous on either side. *Kangean, Bali, North Borneo, Philippines, Sulabesi, New Guinea*
2. *P. luzoniensis* (Merrill) Baehni
- var. *luzoniensis*
- b. Leaves (2.5—)3—6(—7.5) cm long, petioles 0.3—1 cm long; corolla ferruginously without. *New Guinea*
2. *P. luzoniensis* (Merrill) Baehni
- var. *papua* Erlee
- 25.a. Leaves obovate or spatulate, 8—22 by 4—12 cm, at base abruptly narrowed and tapering over a short distance along petiole. *Malay Peninsula, Sumatra, Riouw, Lingga, Celebes, New Guinea* . . . . . 3. *P. malaccensis* (Clarke) Baehni
- b. Leaves spatulate, oblanceolate or obovate-lanceolate, 12—17.5 by 2.5—5.5 cm, gradually narrowing at base and tapering over a long distance along petiole *New Caledonia* . . . . . 11. *P. longipes* (Baillon) Baehni
- 26.a. Mature leaves pubescent below . . . . . 27
- b. Mature leaves glabrous below . . . . . 32
- 27.a. Proportion of length of leaf plus petiole: width of leaf = c. 4 or more . . . . . 28
- b. This proportion 1.5—3, if more, then leaves neither spatulate nor acute and tertiary nerves stout and conspicuous above . . . . . 29
- 28.a. Leafbase when seen from below tapering over a long distance along petiole. *New Caledonia* . . . . . 11. *P. longipes* (Baillon) Baehni
- b. Leafbase shortly or not tapering along petiole. *New Caledonia*
12. *P. acuminata* (Baillon) Baehni
- 29.a. Leafbase when seen from below tapering over a long distance along petiole, leaves brownish tomentose below. *New Caledonia*
14. *P. wakere* (Pancher & Sebert) Baehni
- b. Leafbase very shortly tapering along petiole, leaves golden-yellowish sericeous below . . . . . 30
- 30.a. Mature leaves densely pubescent below . . . . . 31
- b. Mature leaves with a few scattered hairs along the lower side of midrib. *Philippines, Celebes, Amboina* . . . . . 20. *P. macrantha* (Merrill) Baehni
- 31.a. Leaves (5—)8—13(—17.5) cm long, petioles (0.5—)0.9—2 cm long; corolla glabrous on either side. *Kangean, Bali, North Borneo, Philippines, Sulabesi, New Caledonia*
2. *P. luzoniensis* (Merrill) Baehni
- var. *luzoniensis*
- b. Leaves (2.5—)3—6(—7.5) cm long, petioles 0.3—1 cm long; corolla ferruginously sericeous without. *New Guinea* . . . . . 2. *P. luzoniensis* (Merrill) Baehni
- var. *papua* Erlee
- 32.a. Leafbase rounded or cordate . . . . . 33
- b. Leafbase cuneate, tapering along petiole . . . . . 34
- 33.a. Leaves 1—6 by 0.5—4 cm; pedicels 1—1.6 cm long, corolla 9 mm long. *New Caledonia* . . . . . 4. *P. novo-caledonica* (Engler) Baehni
- var. *novo-caledonica*
- b. Leaves 4—7.5 by 2—3.5 cm; pedicels c. 5 mm long, corolla c. 4 mm long. *New Caledonia* . . . . . 4. *P. novo-caledonica* (Engler) Baehni
- var. *lecomtei* (Guill.) Erlee

- 34.a. Secondary nerves of leaves 20—30, one or two tertiary nerves parallel to the secondary ones between each pair of the latter. *New Caledonia*  
 25. *P. endlicheri* (Montr.) Baehni  
 b. Secondary nerves 5—18, tertiary nerves reticulate, but if some nerves parallel to the secondary ones, the latter c. 10 . . . . . 35
- 35.a. Leaves lanceolate, 11—20.5 by 5—6 cm, acute or acutely acuminate, thick-coriaceous. *Celebes* . . . . . 18. *P. celebica* Erlee  
 b. Leaves oblong, obovate or elliptic, 2.5—15.5 by 0.5—6.5 cm, obtuse or obtusely acuminate, membranous to coriaceous . . . . . 36
- 36.a. Flowers in 10—15-flowered clusters. *New Caledonia*  
 5. *P. balansana* (Pierre) Baehni  
 b. Flowers 2 or 3 in each cluster . . . . . 37
- 37.a. Fruits beaked . . . . . 38  
 b. Fruits globose. *Tonkin, Hainan* . . . . . 15. *P. annamensis* (Pierre) Baehni
- 38.a. Leaves membranous, elliptic, apex obtusely acuminate, mature petioles and pedicels of flowers glabrous; sepals pubescent on either side. *Australia*  
 26. *P. castanosperma* (White) Baehni  
 b. Leaves coriaceous, oblong, mature petioles and pedicels of flowers pubescent; sepals pubescent without, glabrous within. *New Caledonia*  
 6. *P. calomeris* (Baillon) Baehni

### Specific descriptions

1. *P. sericea* (Ait.) Baehni, 1942, 375 — *Sideroxylon sericeum* Aiton, Hort. Kew., ed. 1, 1, 1789, 262 — *Sersalisia sericea* (Ait.) R. Br., Prodr. 1, 1810, 530; A. DC, Prodr. 8, 1844, 177; F. v. Mueller, Fragm. 7, 1870, 112; Bentham, Fl. Austr. 4, 1869, 279, p.p. — *Lucuma sericea* (Aiton) Benth. & Hooker, Gen. Pl. 2, 1876, 654; Engler & Prantl, Nat. Pfl. Fam. 4, 1, 1897, 142, f. 76 E; Bailey, Compr. Cat. Old Pl. 1909. 305 — *Planchnella sericea* (Ait.) Dubard, 1912, 47.

Trees or shrubs, up to 10 m. *Branchlets* terete, c. 5 mm in diam., greyish when dry, tips dense appressedly ferruginously or golden-brownish tomentose, glabrescent, thickly foliate, terminal buds conoid, c. 3 mm long, densely ferruginously or golden-brownish tomentose. *Leaves* ovate to orbiculate-ovate, rarely obovate, 2—9.5 by 1.5—5.5 cm, apex rounded to obtuse, angle of leafbase 90° or more, sometimes less; chartaceous, upper surface greyish to ferruginously or golden-brownish tomentose but glabrescent and then nitidous, lower surface ferruginously appressedly tomentose and rarely glabrescent; midrib impressed above, prominent below, secondary nerves 5—15, nearly inconspicuous above, faint below, straight, reticulate near margins, sometimes archingly joined by some thickened tertiary nerves, ascending at an angle of 50°—60°, tertiary nerves hardly conspicuous on either side, minutely reticulate; petioles 2—5(—7) mm long, ferruginously tomentose on either side, glabrescent, flat or broadly canaliculate above, rounded below. *Flowers* in 4—6(—15)-florous clusters near apex of branchlets; pedicels c. 2 mm long, ferruginously tomentose. *Sepals* 4 or 5, connate at base, ovate, c. 3 by 1.5 mm, subcarinate, apex acute, ferruginously sericeous without, glabrous within, inner ones with membranous and minutely ciliate, glabrous margins. *Corolla* tubuliform, 5—6.5(—8) mm long, ferruginously sericeous without, glabrous within, tube 3.5—5.5 mm long, subconstricted in upper half, lobes suborbicular, 1.5—2 by 1.5—2.5 mm, apex truncate. *Stamens* c. 0.5 mm long, adnate to the tube up to c. 4.5 mm from base, filaments subulate, anthers ovoid, c. 1 mm, subbasifix. *Staminodes*



deltoid, 1—1.5 mm long. *Pistillum* c. 6.5 mm long, ovary conoid, tapering into style, c. 1 by 1 mm, obscurely 5-furrowed at base, densely ferruginously villous, ovules apically attached; style filiform, ferruginously sericeous up to one third, with 5 stigmas. *Fruits* oblong, sessile, c. 2 by 1 by 1 cm, glabrous except for the base and persistent style, pericarp thin, purple; seeds solitary, oblong, c. 1.8 by 0.8—1 by 0.7—1 cm, testa thin, nitidous, yellowish, scar oblong, c. 1.8 by 0.2—0.4 cm, hilum apical, cotyledons thick, albumen none, radicle exserted.

Lectotype specimen: *R. Brown s.n.* in K.

Vern. name: mongo (Mt Cook natives).

Use: A useful cabinet wood.

Distr.: Australia (W, NW, N and NE Australia, Queensland).

AUSTRALIA. W. Australia, W. Kimberley, Cygnet Bay: *Fitzgerald s.n.* (NSW), fl., Nov.; Beagle Bay: *Hughan s.n.* (MEL), juv. fl. — N.W. Australia, York Sound, Roes river: *Cunningham 218* (K), fl. Sept.; Camden's Harbour: *Martin s.n.* (MEL), juv. fl.; King Sound, Hallier Bay: *Chapman s.n.* (MEL) — N. Australia, Arnhem Land, Oenpelli, in mixed open forest at base of sandstone scarp: *Specht 1202* (NSW), tree 6 m, corolla pale yellow, fr. purplish glauc, Oct.; Little Lagoon, Groote Eylandt, in monsoon forest on coastal dune: *Specht 247* (LAE), tree 8 m, corolla greenish white, April; Yirrkala, in monsoon forest on coastal dune: *Specht 928* (BRI, LAE), tree 5 m, fl. pale green, Aug.; South Bay, Bickerton Island, on landward edge of coastal dune: *Specht 573* (BRI, LAE), tree 5 m, fl. brown, fr. edible, June; Liverpool's river: *Gulliver s.n.* (MEL), a spreading stunted shrub with small whitish flowers, Oct.; Victoria river: *F. v. Mueller s.n.* (MEL); Port Darwin: *Schultz 691* (K, P), fl., Nov.; ibidem: *Bleeser 522* (NSW), fl., April; ibidem: *Holtze 1072* (MEL), tree up to 6 m, fl. & fr.; Darwin, in monsoon forest on top of seacliff: *S. T. Blake 17326* (BRI, L), tree up to 6 m, calyx rusty, corolla greenish white, fl., Oct.; Middle Creek, near junction with Douglas Road, creek bank along limestone boulders, alt. 52 m: *S. T. Blake 16241* (BRI, L), shrubby tree, 5—8 m, fl. brownish, June; without locality: *Eclipse Expedition s.n.* (NSW) — N.E. Australia, without loc.: *Curdie s.n.* (MEL), fl. — Queensland, Cape York: *Daemel s.n.* (K, MEL), fl., March; Somerset, sea beach: *Bailey 74* (BRI), tree; Thursday Island: *Bailey 88* (BRI), fl., June; Endeavour River: *Persiek 132* (BRI, MEL), fl.; Endeavour river and Bay of Islets: *Banks & Solander s.n.* (MEL), juv. fl.; Lizard Islands: *Walter s.n.* (MEL), fl., Dec.; Gilbert river: *F. v. Mueller s.n.* (L, MEL); ibidem: *Daintree s.n.* (MEL), fl.; Stannery Hills: *Bancroft s.n.* (A, BRI, NSW), fl.; Sandy Tate river: *Brass 1750* (A, BRI), bushy tree in river bed; Bloodwood Lagoon, 16 miles S of Dunbar, which is c. 60 miles SE of mouth of Mitchel river: *Whitehouse s.n.* (BRI), fl.; Georgetown: *Armit 704* (MEL), fl.; N. Kennedy district, near Townville, in stony stream, alt. c. 10 m: *S. T. Blake 18716* (BRI, L), tree 6 m, greenish flowers, Oct.; Townsville: *Betche s.n.* (NSW), fl., Aug.; ibidem, on seashore: *Michael 1697* (BRI), tree c. 4.5 m, fl.; Cleveland Bay: *Bowman s.n.* (MEL), fl.; Edgecombe Bay, on sandy foreshores: *Michael 1231* (BO, BRI), fl.; ibidem: *Dallaehy s.n.* (MEL, P), fl.; Port Denison: *Dallaehy s.n.* (MEL), fl.; ibidem: *Fitzalan s.n.* (MEL), juv. fl.; Hayman island, N. of White Sunday island, on top of hill: *Mac Gillevery s.n.* (A, BRI), fl., Dec.—Jan.; ibidem: *White 10149* (BRI), fl. June; Bowen, top of hill N of town, amongst sandstone rocks, alt. 90 m: *Hubbard & Winders 6539* (BRI, L), tree up to 4.5 m, fl., Jan. — S. Queensland, Long Island, rain forest: *White 12176* (BRI), tree 10 m; Northumberland Group: *Woods 9* (MEL), Nov.; Percy Islands, Middle Percy island: *Tryon s.n.* (A), fl., Jan.; ibidem, South Percy island: *Tryon s.n.* (BRI), fl., March, fr. edible; Keppel Bay, Shoalwater Bay: *R. Brown s.n.* (K, MEL), fl. & fr. Aug.; Curtis island: *O'Shanesy 48* (MEL), shrub 1.80 m, lf.; Yeppoon, near Rockhampton: *Francois s.n.* (A, BRI), fl. March; Rockhampton: *F. v. Mueller s.n.* (BO, L); ibidem: *Dallaehy s.n.* (MEL), fl. June; ibidem, Mac Kenzies island, Atherton's Station: *Thozet 325* (MEL, P), shrub, fl.; Gladstone: *White 1310* (A, BRI), small spreading tree, fl., Febr.; Keppel Bay: *Dietrich s.n.* (P), fl.; Brampton island: *Deenford s.n.* (BRI), tree, fl. Jan.; ibidem: *Burdickin Expedition 42* (MEL), fl.

MALAY PENINSULA. Singapore Island, Singapore Botanical Garden: *Nur s.n.* (K), fl. Sept., cultivated.

Remarks: Close to *P. luzoniensis* var. *papuana* in having short petioles and a sericeous corolla without, but differs from it by its larger tubuliform corolla, its rounded to obtuse leaf apex and its densely puberulous lower sides of the leaves.

Since there was no type specimen mentioned by Aiton, as lectotype specimen *R. Brown s.n.* in K, from Keppel Bay has been selected.

2. *P. luzoniensis* (Merrill) Baehni, 1942, 365 — *Sideroxylon luzoniense* Merrill, Phil. Journ. Sc., Bot. 1, 1906, 222 — *Lucuma luzoniensis* (Merrill) H. J. Lam, 1925, 227; idem, 1927, 477 — Fig. 3.

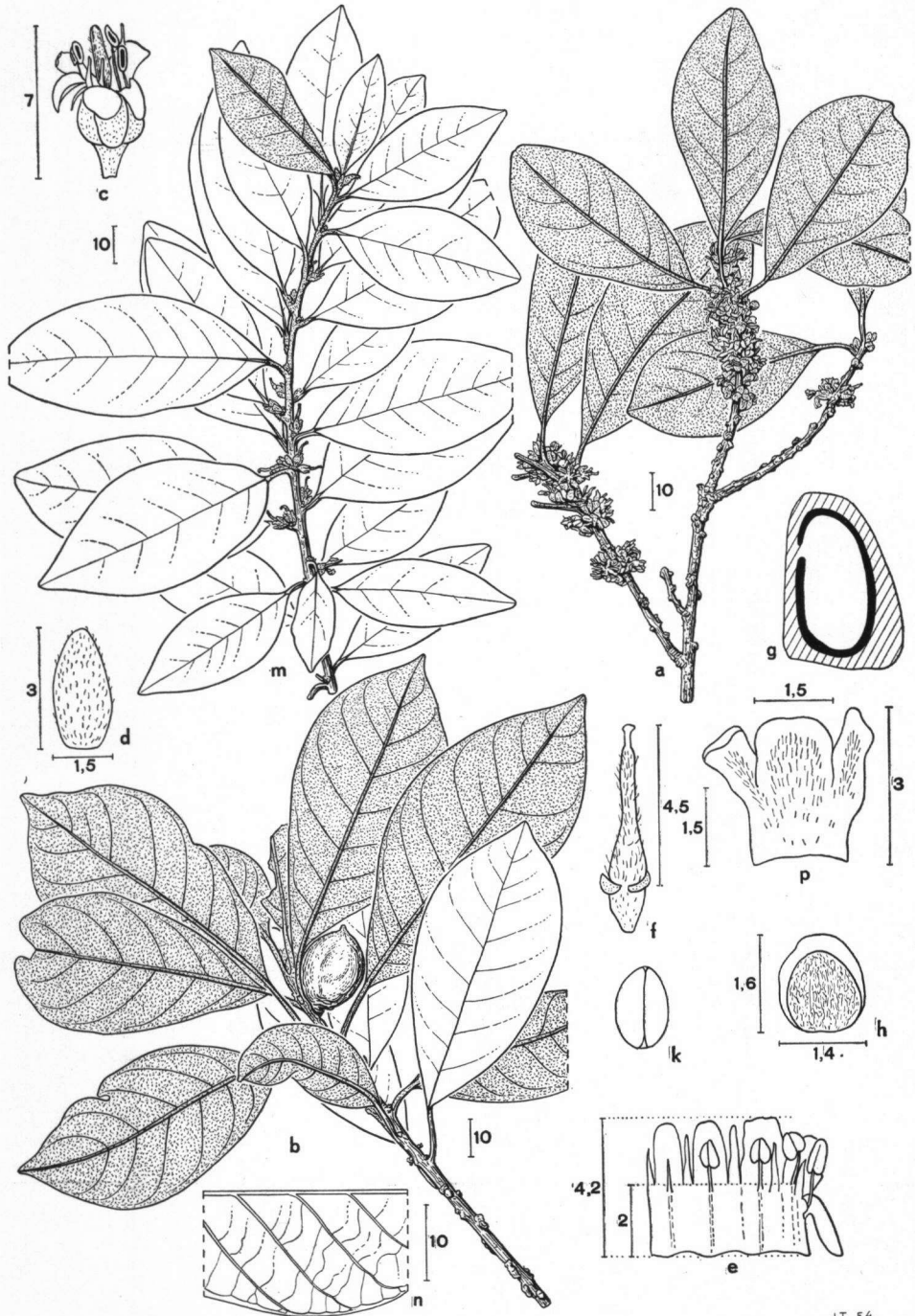
Trees, up to 30 m. *Branchlets* terete, brownish-grey when dry, tips appressedly ferruginously or sometimes golden-brownish tomentose, glabrescent; terminal buds conoid, c. 4 mm long, ferruginously or sometimes golden-brownish tomentose. *Leaves* ovate to ovate-oblong, rarely obovate-oblong, 3—17.5 by 1.8—6.5 cm, apex bluntly or acutely acuminate or acute, sometimes rounded to obtuse, base shortly decurrent, angle less than 90° or sometimes 90° or more; margins sometimes with a narrow nerve, minutely and irregularly undulate; chartaceous to thin coriaceous, glabrous, except sometimes for the midrib, greyish to brownish and nitidous above when dry, minutely appressedly ferruginously or sometimes golden-brownish tomentose, most rarely glabrescent and then dull below; midrib impressed above, prominent below, secondary nerves 6—11, ascending at an angle of 45°—60°, slightly curved, diminishing until inconspicuous or indistinctly archingly joined by some thickened tertiary nerves, impressed and sometimes inconspicuous above or almost so, prominulous below, tertiary nerves inconspicuous above, faint below, irregularly reticulate or indistinctly transverse; petioles (0.3—)0.9—2 cm long, shallowly canaliculate above, rounded below, minutely appressedly ferruginously tomentose on either side. *Flowers* in 2—6-florous clusters; almost sessile, pedicels ferruginously tomentose. *Sepals* oblong, 2.5—3 by c. 1.5 mm, apex subacute, connate at base (f. Merrill, Lam and Baehni up to  $\frac{2}{3}$ , 5-toothed), subcarinate, densely ferruginously pubescent without, glabrous within. *Corolla* campanulate, 4—5 mm long, glabrous or subglabrous without, glabrous within, lobes ovate, 1.5—3 by c. 1.5 mm, truncate, reflexed. *Stamens* c. 2.5 mm long, inserted in the corolla throat, filaments subulate, c. 2 mm long, attenuate at apex, anthers ovoid, c. 1 mm long, subbasifix. *Staminodes* linear, c. 0.5 mm wide at base, 2—2.5 mm long, acute. *Ovary* conoid, c. 1.5 by 1.5 mm, tapering into style, densely ferruginously pubescent, 4—5-celled, ovules inserted in upper third of cells; style rather stout, c. 3 mm long, densely ferruginously pubescent except for uppermost 0.5 mm, stigma punctiform. *Fruits* globose, c. 2 by 1.5 by 1.5 cm, almost sessile, when dry ferruginously puberulous at base and apex, with a punctiform remainder of style, sepals persistent, pericarp purple, thin; seeds 1—2, c. 1.6 by 1.4 by 1.1 cm, testa pale-yellow, nitidous, thin, scar ovate, c. 1.6 by 1.3 cm, cotyledons thick, albumen none, radicle not seen.

Type specimen: *Foxworthy 127* in PNH.

Distr.: Kangean, Bali, N. Borneo, Philippines, Sulabesi, New Guinea.

Var. *luzoniensis* — Fig. 3, a—b.

Leaves (5—)8—13(—17.5) cm long; petioles (0.5—)0.9—2 cm long; corolla glabrous on either side.



Type specimen: *Foxworthy 127* in PNH.

Distr.: Kangean, Bali, N. Borneo, Philippines. Sulabesi.

KANGEAN. Paliat, frequent in forest on limestone rocks, alt. 50 m: *Backer 29411* (L), buds, May.

BALL. Prapatagung, on ridges, alt. 200 m, frequent: *Becking 80* (BO, L), tree 20 m, March; NW coast, rocky, hilly country, alt. 200 m: *de Voogd 1693* (A, BO, L), tree 20 m.

BRITISH NORTH BORNEO. Tatagan, on sea shore: *Wood 2332* (= *B.N.B. For. Dep. 2332*) (SING, UC), tree 4.5 m, fl. brown, Aug.; Bod Gaya isl., Semporia, rocky country, alt. 4.5 m: *Orolfo 3798* (= *B.N.B. For. Dept. 3798*) (L), tree 7.5 m.

PHILIPPINES. Luzon, prov. Pampanga, Mt Arayat: *Clemens 16159* (UC), fl. Oct.; prov. Rizal, Antipolo, in forest on Mt Kaysipot, alt. c. 700 m: *Foxworthy 127* (K, PNH), fl. Jan.; Boso-boso: *Ramos 1059* (BO, K); ibidem: *Ramos 4663* (BO), fr. Aug.; without locality: *Ramos 1080* (FI, L, Z), fr. Aug.; Pinauisan: *Loher 12401* (UC), fl., Sept. — prov. Batangas, without loc.: *Mabesa 28034* (L, P), fl. April; Mt Lobo, south side, SW of Sili Peak, in forest on ridge, dry, rocky soil, Bo. Biga Gobo, alt. 500 m: *Sulit 15737* (BM, L, PNH), tree 7–8 m, fl. pale brown to whitish, very sweet odor, fl. May — Lubang, without loc.: *Merrill 976* (K), fl. April — Basilan, without loc.: *Miranda 17883* (P), fl. Nov.

SULABESI. Tandjungbatupan: v. *Hulstijn 227* (L).

Var. *papuana* Erlee, var. nov. — *Pag. 502* and *fig. 3 m-p*.

Leaves (2.5—)3–6(–7.5) cm long; petioles 0.3–1 cm long; corolla ferruginously sericeous without.

Type specimen: *Versteegh 67* (= *BW 48*) in L.

Distr.: New Guinea.

NEW GUINEA. Western New Guinea, distr. Hollandia, Holtekang, on steep rock country along sea, in secondary forest, alt. 2 m: *Versteegh 67* (= *BW 48*) (L), tree 12 m, fl. white, Oct. — Northeastern New Guinea, Morobe distr., Wau area, Bulwat East, on grey sandy loam, steep slopes, alt. c. 1000 m: *NGF 2521* (BRI, LAE), tree 30 m, fl.; Bulolo: *Womersley 3561* (K, L, LAE), tree in third storey, up to 15 m, fl. greenish, fr. immature, dark green, Nov.; ibidem: *Fryar NGF 4046* (K, L, LAE), tree c. 17 m, fr. immature, green.

3. *P. malaccensis* (Clarke) Baehni, 1942, 302 — *Sideroxylon malaccense* Clarke in Hooker, Fl. Brit. Ind. 3, 1882, 537; Engler & Prantl, Nat. Pfl. Fam., Nachtr. 4, 1897, 277; King & Gamble, Journ. As. Soc. Beng. 74, 1906–1909, 161; Gamble, Kew Bull. 1907, 109; Ridley, Fl. Mal. Pen. 2, 1923, 258 — *Fontbrunnea malaccensis* (Clarke) Pierre, Not. bot. Sapot., 1890, 32 — *Lucuma malaccensis* (Clarke) Dubard, 1912, 19; H. J. Lam, 1925, 231; H. J. Lam, 1927, 478; Wyatt-Smith, Manual Mal. Timber Trees 4, 1954, 16–27.

Trees, up to 40 m. *Branchlets* terete, up to 8 mm in diam., greyish to brownish when dry, densely appressed red-brownish tomentose on tips only, glabrescent; terminal buds conoid, c. 5 mm long, densely red-brownish tomentose. *Leaves* broadly obovate, or obovate to spatulate, (2–)8–22 (–28.5) by (2–)4–12 (–15) cm, apex rounded to obtuse, or sometimes very

Fig. 3. *P. luzoniensis*, var. *luzoniensis*, a. branchlet with leaves and flowers, b. branchlet with leaves and fruit, c. flower, d. outer sepal, outside, e. corolla with stamens and staminodes, f. pistillum, g. part of ovary in longitudinal section, h. seed, k. embryo. (a. from *Foxworthy 127*, b, h and k. from *Ramos 1080*, e–g. from *Mabesa 28034*). *P. luzoniensis*, var. *papuana*, m. branchlet with leaves and flowers, n. part of leaf showing secondary and tertiary nerves, p. part of corolla, outside. (from *Versteegh 67*).

shortly and bluntly acuminate, acumen 1—2 mm long; margins sometimes minutely irregularly undulate, angle of leafbase c. 90° or more, base shortly decurrent; glabrous sometimes except for the midrib, nitidous and brownish to pale greenish above, densely red-brownish tomentose below, glabrescent, sometimes except for midrib and secondary nerves and then pale below, tomentum easily rubbed off, chartaceous to thin coriaceous; midrib impressed and minutely crested above, prominent below, secondary nerves (4—)6—14(—22), ascending at an angle of 45°—70°, straight, near margins slightly curved and diminishing until inconspicuous, impressed above, prominent below, tertiary nerves transverse, distinct on either side; petioles (1.5—)2.5—4(—5.5) cm long, flattened above, rounded below, densely appressedly red-brownish tomentose on either side, glabrescent. *Flowers* in 6—11-florose clusters; pedicels 2—4 mm long, rather stout, yellowish or ferruginously to red-brownish tomentose. *Sepals* rotundate, 3 by 3 mm, apex rounded, connate at base, densely ferruginously pubescent without, glabrous within, persistent in fruit. *Corolla* c. 4.2 mm long, tubular-campulate (f. King & Gamble absent in ♀ flowers), tube c. 3 mm long, lobes ovate, c. 1.2 by 1—1.5 mm, obtuse. *Stamens* c. 1.5 mm long, inserted in the corolla throat, filaments subulate, c. 1 mm long, anthers ovoid, c. 0.5 mm long, dorsifix. *Staminodes* 1—1.5 mm long, acute, inserted just below the corolla throat, linear-lanceolate. *Ovary* subglobose, c. 1 by 1 mm, flattened at apex, with a cupuliform disk which is about 1 mm high, densely ferruginously villous, ovules inserted in lower half of cells; style cylindrical c. 2.5 mm long, minutely ribbed, truncate, glabrous, stigma very minute. *Fruits* oblong or almost globular, 2—3.5 by 1.5—2.5 by c. 1.5 cm when dry, 2—3-seeded (or more ?), rounded and tipped with the persistent style at apex, yellowish-green or brownish, densely ferruginously to red-brownish puberulous, glabrescent, in young fruits pedicels up to c. 4 mm long and 3 mm thick; seeds ovoid, 2—2.5 by 1 by 0.8—1 cm, testa rather thin, light yellow, scar oblong, pointed at either end, plane to subconvex, c. 1.8 by 0.8 cm, cotyledons thick, radicle short, exserted, albumen none.

Type specimen: *Maingay 994* in SING.

Distr.: Malay Peninsula, Sumatra, Riouw, Lingga, Celebes, New Guinea.

MALAY PENINSULA. Pulau Penang, Batu Terenggi: *Curtis s.n.* (K, P, SING), fr. July; ibidem, Government Hill, alt. c. 360 m: *Curtis 1452* (K, SING), tree c. 12 m, fl. & fr. March—June; without loc.: *Cantley s.n.* (K), fr. about size of that of *Olea curspea* and covered with a dense brown tomentum, fl. Nov.; without loc.: *Maingay 994* (L, P, SING), fl. Nov.; without loc., dense jungle, rocky local: *King's collector 6550* (SING), tree 12—18 m, fl. pale greenish, with a brown calyx, Sept.; Waterfall, Taiping (†), alt. 60 m: *Wray Jr 136* (SING), juv. fr. — Selangor, Weld Hill reserve, Kuala Lumpur: *Hamid C. F. 585* (SING), juv. fr. March; ibidem: *Hashim C. F. 514* (= *S. F. 1855*) (SING), fl. March; ibidem: *Murdock s.n.* (SING); ibidem: *Hamid C. F. 17* (SING), fl. — Johore, Singapore, NE end of Mac Ritchie reservoir: *Sinclair S. F. s.n.* (L), tree c. 21 m, fr. Jan.; ibidem, Garden jungle, near small waterhouse at NW end of Mac Ritchie reservoir: *Corner s.n.* (SING), forest tree with stilt roots; jungle in garden near Director's home: *Sulit s.n.* (SING), young tree; without loc.: *Cantley 106* (SING), fl. Aug.; Kranji: *Mat s.n.* (SING), fr.; Schlar (†): *Mat 6499* (SING), rr.; Sungai Kayu area, Mawai-Jemaluang road, in Dryobalanops forest, on hillock, low alt.: *Corner S. F. 29468* (A, L, SING), fl. & fr. May; Perak, alt. 90 m: *Wray Jr 3404* (K), large tree, fl. May; Larut Perak, in open old jungle, rocky locality, alt. 150—

300 m: *King's collector 3733* (K), tree 18—21 m, fr. greyish green, yellow when ripe, Jan.

SUMATRA. North Sumatra, Siboga and surrounding country, Baroes, alt. c. 15 m: *NIFS bb 31574* (L); *ibidem*, upland plain of Toba, alt. c. 900 m: *NIFS bb 5698* (K, L); Loebok, Sikaping: *NIFS bb 3961* (L), fr. July — South Sumatra, Palembang: *Grashoff 1023* (L).

RIOUW. Karimon, Pangke, on clayey soil, hilly country, alt. 3 m: *NIFS bb 17228* (= *Jahja 2*) (BO, L), tree 27 m; uplands of Indragiri, Muara Serangge, alt. c. 40 m: *NIFS bb 30136* (A, L); Danau Mengkoeang: *NIFS bb 27538* (L), April Pulau Kedondong, Kuantan, alt. c. 100 m: *NIFS bb 24820* (L), June.

LENGGA. Pulau Singkep, S. Pulak, on sandy clay, in old forest, c. 25 m: *NIFS bb 4032* (= *Amat 7*) (BO, L), tree 25 m.

CELEBES. Central Celebes, Malili, Kawata, alt. c. 250 m: *Reppie 238* (BO, L), fl. & fr. brown, Jan.; *ibidem*, alt. 250 m: *Waturandang 284* (BO, L), fl. & fr. yellow-green, Febr.; *ibidem*, clayey soil, alt. c. 250 m, steep country, old forest: *Waturandang 98* (BO, L), tree c. 20 m, fl. bud green, fl. white, fr., Oct.; *ibidem*, Usu: *Reppie 423* (A, BO, L), fl. bud dark red, fr., Oct.; *ibidem*, on clayey soil, steep country, in old forest: *Waturandang 72* (A, BO, L), tree c. 40 m, fr. young, green, Jan.

NEW GUINEA. Western New Guinea, Japen Island, Seroci, Marattu, alt. c. 370 m: *NIFS bb 30410* (L, SING).

Remarks: This species is easily to distinguish by its broad, ovate leaves, its densely reddish-brown tomentum on tips of branchlets, younger leaves and fruits. The tomentum on leaves and fruits is except in a few cases easily rubbed off.

It is a fairly common species of lowland forest and on ridge tops up to 360 m.

4. *P. novo-caledonica* (Engl.) Baehni, 1942, 297 — *Lucuma novo-caledonica* Engler, Bot. Jahrb. 12, 1890, 516; Engler & Prantl, Nat. Pfl. Fam. 4, 1897, 142; Dubard, 1912, 21; Guillaumin & Beauvisage, Ann. soc. bot. Lyon 38, 1913, 101 — *Sideroxylon novo-caledonicum* (Engl.) Engl., Engler & Prantl, Nat. Pfl. Fam., Nachtr. 4, 1, 1897, 277 — *Lucuma ? deplanchei* Baillon, Bull. Soc. linn. Paris 2, 1891, 894 — *Pichonia elliptica* Pierre, Not. bot. Sapot. 1890, 23 — *Rhamnoluma novo-caledonica* (Engl.) Baillon, Hist. Pl. 11, 1891, 288.

Small trees, up to 7 m (f. Baehni a shrub). *Branchlets* terete, greyish when dry, appressedly ferruginously tomentose at tips only, glabrescent. *Leaves* subopposite or scattered along the branchlets, orbiculate or ovate-oblong to oblong, 1—7.5 by 0.5—4 cm, apex rounded, angle of leafbase 90° or more; coriaceous, glabrous on either side and nitidous above, dull below, or ferruginously tomentose on midrib below; midrib impressed above, prominent below, secondary nerves (3—)6—9, ascending at an angle of 50°—65°, straight, reticulate near margins, impressed above, hardly visible below, tertiary nerves minutely reticulate, inconspicuous above, faint below; petioles 3—9 mm, flattened above, rounded below, appressedly ferruginously tomentose, glabrescent. *Flowers* solitary or in 2—3-flowered clusters, axillary; pedicels 5 mm long and rather stout or 10—16 mm long and slender, ferruginously tomentose. *Sepals* ovate, 3—5 by 2.5—3 mm, subacute, connate at base, densely ferruginously tomentose without, glabrous within, inner ones with membranous fimbriate margins, persistent in fruit. *Corolla* campanulate, 4—9(—15) mm long, tube 1—3 mm long, lobes ovate to oblong, 3—6 by 2—3.5 mm, apex obtuse, sometimes outwardly recurved. *Stamens* 3.5—9 mm long, inserted just above the corolla throat, filaments linear, 3—8 mm long, recurved at apex, widened at base, attenuate towards tips,

anthers ovoid, 1—2.5 mm long, subdorsifix, penicillate at apex. *Staminodes* lanceolate, 2—5 mm long, inserted in the corolla throat, widened at base and c. 1.5 mm broad. *Ovary* conoid, 1.5—3 by 1—2 mm, densely ferruginously villous, obscurely 5-ribbed, ovules inserted in upper half of cells (f. Baillon in the middle of the cells); style filiform, 3.5—6 mm (or longer), glabrous, apex attenuate, stigmas inconspicuous. *Fruits* gobose to oblong, c. 2 by 1.5 by 1 cm when dry, glabrous, dark purple, style persistent, pericarp thin; seeds solitary, testa thin, pale yellow, scar covering more than half of the seed, brownish, cotyledons thick, albumen none, radicle not exerted.

Type specimen: *Deplanche 442* in B.

Distr.: New Caledonia.

Var. *novo-caledonica*.

Leaves 1—6 by 0.5—4 cm; pedicels 1—1.6 cm long; corolla 0.9 cm long.

Type specimen: *Deplanche 442* in B.

Distr.: New Caledonia.

NEW CALEDONIA. Pum, Cape Tonnerre: *Deplanche 442* (A, FI, L), fl. & fr.; ibidem, in forest above Ouroué near mouth of Dothio river: *Balansa 3647* (K, P), tree 6 m, fl. pink, May; ibidem, on volcanic hills: *Balansa 3460* (P), tree 6 m, fl. pink; Imboicuvin, near Pum island: *Vieillard 2903* (P), fl.; Dothio: *Baumann 14372* (Z), fl. June; ibidem: *Baumann 14360* (Z), fl.

Remarks: Similar to *P. sericea* regarding the length of the petioles and the shape of the leaves, but very differing in floral structure by having longer pedicels and a campanulate corolla.

Var. *lecomtei* (Guill.) Erlee, nov. stat. — *Pouteria lecomtei* (Guill.) Baehni, 1942, 288 — *Lucuma lecomtei* Guill., Bull. Mus. Hist. nat. Paris, sér. 2, 6, 1934, 458, *nomen nudum*; Guill. in Lecomte, Not. Syst. 5, 1935, 15, *descr.*

Leaves 4—7.5 by 2—3.5 cm; pedicels c. 5 mm long; corolla c. 0.4 cm long.

Type specimen: *Franc 2050* in P.

Distr.: New Caledonia.

NEW CALEDONIA. Nouméa, along banks of Dombéa river: *Franc 464* (L, P), shrub, fl. July; Yaté: *Franc 2050* (A, P, UC), tree 1.5—7 m, fl. June; in dense forest on serpentine slope in valley of the lower Kalouéhola, alt. c. 50 m: *Hürtimann 1668* (Z), tree 6 m; Artillery Point, near camp of No (†): *Le Rat & Le Rat 144* (P), fl. March; without loc.: *Baumann 1394* (Z), fl.

Remarks: This variety differs from the type-variety by its larger leaves and denser ferruginously pubescent petioles, but especially by its shorter and rather stout pedicels (c. 5 mm long), and smaller dimensions of the flower elements. Close to *P. balansana* especially in leaf-characters, but different from it in having smaller flowers (in *P. balansana* the sepals and corolla are 5.5—7.5(—1) cm and 7.5—9 mm long respectively, in *P. novo-caledonica*, var. *lecomtei* they are 3 and 4 mm long respectively.

5. *P. balansana* (Pierre) Baehni, 1942, 317, syn. et descr. p.p., (sphalm. “*balanseana*”) — *Lucuma ? balansana* Pierre, Not. bot. Sapot., 1890, 22; Guillaumin, Ann. Mus. col. Mars. 19, 1911, 186, (sphalm. “*balanseana*”); Däniker, Vierteljahrsschr. Nat. Ges. Zürich 78, 1933, 351, (sphalm. “*balanseana*”) — *Pichonia balansana* (Pierre) Pierre, l. c. 23 — *Chrysophyllum*

? *pyriforme* Baillon, Bull. Soc. linn. Paris 2, 1890, 899 — *Epiluma pyriformis* (Baillon) Baillon, Hist. Pl. 11, 1892, 287; Engler & Prantl, Nat. Pfl. Fam., Nachtr. 4, 1, 1897, 275 — *Lucuma pyriformis* (Baillon) Dubard, Ann. Mus. col. Mars. 20, 1912, 20.

Tall trees. Branchlets terete, up to 8 mm in diam., glabrous, brownish to greyish when dry. *Leaves* crowded towards tips of branchlets, broadly obovate, sometimes ovate to suboblong, (3—)5—8.5(—10.5) by (2—)2.5—6(—6.5) cm, rounded to obtuse at apex, sometimes indistinctly and bluntly acuminate, angle of leafbase less than 90° or more, shortly decurrent along petiole; glabrous on either side, nitidous and brownish to greenish olivaceous above, somewhat dull below, thin coriaceous; midrib impressed above, prominent below, secondary nerves 6—11, ascending at an angle of 45°—60°, reticulate near margins, tertiary nerves minutely reticulate, faint on either side; petioles 1—2 cm long, flattened to broadly canaliculate above, rounded below, glabrous. *Flowers* in 10—15-florous clusters in axils of leaves; pedicels 8—13 mm long, with scattered ferruginous hairs and 2 or 3 bracteoles at base. *Sepals* 5, connate at base, persistent in fruit, ovate to suborbiculate, sometimes oblong, c. 4 by 2—4 mm, rounded to obtuse at apex, outside with scattered ferruginous sericeous hairs, but densely so towards apex, glabrous within. *Corolla* c. 6 mm long, tube c. 2 mm, lobes 7 or 8, ovate, c. 4 by 2—2.5 mm, apex rounded, outwardly curved, with scattered ferruginous sericeous hairs at the outside, glabrous within (f. Baehni: corolla hairy on margins and on the throat inside). *Stamens* 7 or 8, c. 7 mm long, filaments subulate, attenuate at tips, 5—6 mm long, anthers oblong, c. 2.5 mm long, penicillate at apex, subbasifix. *Staminodes* 1—3(—7) or sometimes absent, petaloid, c. 2 mm long, widened at base (f. Pierre staminodes dentiform, very short). *Ovary* conoid, c. 2 by 2.5 mm, densely ferruginously villous, (4—)5-celled, ovules inserted in upper half of cells; style cylindrical, attenuate at apex, furrowed, glabrous. *Fruits* obliquely subovoid, sometimes oblong, 4—6 by 3—4 cm, glabrous, pericarp rather thick, becoming very hard when dry; seeds solitary, subovoid, testa thick, scar covering nearly the whole surface of seed, leaving a narrow shining part, which is c. 1 mm broad at apex and c. 4 mm at base, cotyledons ovate, thick, albumen none, radicle not seen.

Type specimen: *Balansa 2371* in P.

Vern. name: messup.

Distr.: New Caledonia.

NEW CALEDONIA. Lifu, in forests: *Balansa 2321* (P), tree 10 m, fr. July; ibidem: *Sarasin 758* (P), fl.; ibidem, Thosip, in forest on terrace along river: *Däniker 2438a* (Z), high tree, fr. Nov. — Maré, Netche: *Däniker 2438* (Z), high tree, fl. greenish red, Aug.; ibidem, in forest: *Baumann 14549* (Z), fr. July; ibidem: *Baumann 14713* (Z) — without known loc.: *Balansa 2371* (P), fl.

Remarks: Baehni, 1942, unfortunately united *Sideroxylon balansanum* Pierre and *Lucuma balansana* Pierre to *Pouteria balansana* but the two species are quite distinctly to separate and the former represents a *Planchonella*, the other a *Pouteria* sensu Eyma.

6. *P. calomeris* (Baillon) Baehni, 1942, 323 *Chrysophyllum balansae* Baillon, Bull. Soc. linn. Paris 2, 1891, 901, nomen err. — *Chrysophyllum calomeris* Baillon ex Guillaumin, Ann. Mus. col. Mars. 19, 1911, 188, nomen



alt. — *Sebertia calomeris* (Baillon) Däniker, Vierteljahrsschr. Naturf. Ges. Zürich 78, 1933, 359.

Shrubs, 1—6 m, (f. Pancher & Sebert a high forest tree). Branchlets terete, 6—9 mm in diam., brownish, wrinkled when dry, glabrous except for uppermost young parts which are covered with scattered reddish-brown hairs, leaf-scars numerous, rather prominent. Leaves crowded at tips of branchlets, ovate-oblong to oblong, sometimes subobovate, 3.5—10(—12) by 2—5 cm, apex rounded, angle of leafbase 90° or more, broadly acute; coriaceous, glabrous on either side, sometimes except for base of midrib below; midrib much impressed above, very prominent below, secondary nerves 9—14(—18), ascending at an angle of 60°—70°, straight, near margins reticulate or indistinctly archingly joined, impressed but sometimes hardly visible above, prominulous below, tertiary nerves minutely reticulate in the young leaves, subaxially reticulate in the mature ones, inconspicuous above, faint below; petioles 1—2(—2.5) cm long, canaliculate above, rounded below, with scattered reddish-brown hairs. *Flowers* solitary or in 2- or 3-flowered clusters, axillary; pedicels up to 5 mm long, c. 2 mm in diam., rather stout, with scattered reddish-brown hairs, bracteoles 2—4, spirally arranged underneath the sepal spiral and continuing into it, ovate to lanceolate, 2—4 mm by c. 2 mm. *Calyx* persistent in fruit, *sepals* 5, connate at base, oblong, 5.5—7.5(—10) by 3—4 mm, apex rounded to obtuse, reddish-brown puberulous without, glabrous within. *Corolla* campanulate, 7.5—9 mm long, lobes 5—7, ovate 5.5—6 by 3—3.5 mm, truncate. *Stamens* 5—7, filaments c. 6 mm long, subulate or more or less linear, inserted near base of corolla tube and connate with it up to 3 mm from base, anthers ovoid, c. 4 mm long, subbasifixed, pointed at apex. *Staminodes* 5—7, lanceolate, sometimes petaloid, 5.5—6 by 1.5—2.5 mm, apex acute or obtuse. *Pistillum* c. 7.5 mm long, c. 2.5 mm in diam., densely covered with appressed ferruginous hairs except for the uppermost third, ovary oblong, 5- or 6-celled, ovules inserted in lower half of cells; style cylindrical, sericeous at base, c. 6 mm long, glabrous part minutely ribbed, stigma inconspicuous. *Fruits* ovoid, 2—4 by 1.2—2 by 0.8—1.6 cm when dry, one-seeded, apex tipped with the persistent style, pericarp purple, glabrous except on base and tip; seeds 1.5—3.2 by 0.7—1.4 by 1.2—1.6 cm, subcarinate at back, pointed at base, rounded at apex, testa thin, brownish, scar pale, covering half of surface, cotyledons thick, albumen none, radicle not seen.

Lectotype specimen: *Balansa 1830a* in P.

Distr.: New Caledonia.

NEW CALEDONIA. Messincoué, near Port Bouguet, on lateritic hills: *Balansa 1830* (P), shrub, fr. Sept.; near mouth of Dothio, on lateritic hills: *Balansa 3045* (P), shrub 1—2 m high, fr. pulpy, brownish black, Sept.; Canala, on lateritic soil: *Balansa 1830b* (P), shrub 2—3 m, fr. pulpy, black, June; banks of Ngoin, 8 km from its mouth: *Balansa 1830a* (P), fr. Oct.; without loc.: *Vieillard 193* (P), tree, fl.; ibidem: *Deplanche 306* (P); in valley which is coming from Mt Humboldt and the Kalouéla confluent: *Däniker 586* (Z), fr. Nov.; N. of Kouébuni, in semi-xerophyllous forest, on rocky slope exposed NE of hills, alt. c. 110 m: *Hürlimann 587* (Z), shrub 2 m, fl. reddish-white, fl. Jan.; ibidem: *Hürlimann 579* (Z), tree 5 m, fl. pink, fl. Jan.; brush-wood on alluvian sandstone in valley of the Fausse-Yaté, near bridge, alt. c. 20 m: *Hürlimann 672* (Z), shrub 2 m, leaves bicolorous, fl. Jan.; mesophyllous forest along rocky bank of a branch of the Kalouéla, coming from Mt Humboldt, c. 100 m alt.: *Hürlimann 1724* (Z), slender tree up to 6 m, buds brownish puberulous.

Remarks: According to Guillaumin, Bull. Soc. bot. Fr. 89, 1942, 223, Baillon after recognising his mistake in publishing a second *Chrysophyllum balansae* Baillon (l. c., p. 901) altered the latter specific epithet in *Chrysophyllum calomeris* based on *Balansa 3043, 1830a* and *1830b*. The type specimen of *Chrysophyllum balansae* Baillon, the first one published by Baillon bearing this specific epithet (l. c., p. 900) is *Vieillard 18*.

7. *P. occidentalis* (H. J. Lam) Baehni, 1942, 344 — *Lucuma occidentalis* H. J. Lam, 1925, 228, f. 62; idem, 1927, 477.

Large trees. Branchlets terete, c. 7—10 mm in diam., densely ferruginously tomentose, glabrescent. *Leaves* crowded towards tips of branchlets, obovate, 33—47 by 9.5—16.5 cm, apex shortly and obtusely or acutely acuminate, acumen c. 2—10 mm long, base truncate to subcordate, angle of leafbase more than 90°, leaves gradually narrowing over a distance of about 5—6 cm from base; thin coriaceous, glabrous on either side, nitidous above, dull below; midrib strongly impressed and sometimes minutely crested above, strongly prominent below, secondary nerves 19—22(—24), ascending at an angle of 45°—70°, straight, abruptly curved near margins and diminishing until inconspicuous, or reticulate and indistinctly archingly joined by some thickened tertiary nerves, impressed above, prominent below, tertiary nerves transverse, impressed above, prominulous below; petioles c. 1(—1.3) cm long, broadly impressed above, rounded below, densely ferruginously pubescent on either side (f. Lam only underside hairy). *Flowers* in 15—20-flowered clusters on axillary tuberculae below the leaves; pedicels 1—2.5(—3) cm long, densely ferruginously tomentose. *Sepals* 5, connate at base, deltoid, 4—4.5 by c. 3.5 mm, acute, outer ones ferruginously pubescent without, glabrous within, inner ones sparsely silvery pubescent without and towards apex with ferruginous hairs, glabrous within. *Corolla* in bud c. 5 mm long, tube c. 1 mm long, lobes 5—7, ovate (f. Lam sometimes sepaloid), c. 4.5 by 3 mm, obtuse. *Stamens* 5—7, inserted in base of corolla tube, c. 4 mm long, filaments slender, adnate to whole length of tube, subulate, apex attenuate and in bud outwardly curved, c. 2.5 mm long, anthers oblong, c. 1.5 mm long, apex pointed, dorsifix. *Staminodes* 5 or 6 (sometimes 7?), lanceolate, c. 3.5 mm, acuminate, widened at base, c. 1.5 mm wide. *Pistillum* c. 7 mm long (f. Lam surrounded by a thick glabrous disk), densely ferruginously villous except for the very short style, which is c. 0.5 mm long, ovary 5- or 6-celled, ovules attached in upper half of cells, stigma inconspicuous. *Fruits* globose, sometimes obovoid, 2.5—2.8 by 1.7—2.3 by c. 1.7 cm when dry, 1-seeded, pericarp purple; seeds ovoid to obovoid, c. 1.7 by 1.5 by 1.2 cm, testa thin, hardly separable from pericarp, brownish, scar nearly occupying whole surface of seed, leaving a small dorsal, dark brown shining part, which is c. 1.5 by 1 cm large, inner side of testa dark, papillose, cotyledons globose, outer side with papillae which correspond with those of the testa (f. Lam), albumen none. Calyx persistent in fruit and pedicel thick, c. 15 by 5 mm, glabrous.

Type specimen: *Beguín 2264* in BO.

Vern. name: midjioeng (Tobela), parga ma modjioi (Galela).

Distr.: Halmahera.

HALMAHERA. W. Pitu, in forest, alt. c. 100 m: *Beguín 2264* (BO, L), tree 37 m,

rather straight, immature, light green, Nov.; Soa, Tabaru, in forest, alt. c. 60 m: *Beguin 2118* (BO, L), tree 32 m, fl. light green, Aug.

8. *P. unmackiana* (Bailey) Erlee, nov. comb. — *Lucuma unmackiana* Bailey, Dept. Agric. Brisbane Bot. Bull. 4, 1891, 12; idem, Queensland Fl. 3, 1900, 954 — *Chrysophyllum* sp. ?, Baehni, 1942, 427 — Fig. 4.

Medium sized trees. Branchlets terete, striate, greyish when dry, brownish to greyish tomentose on tips only, glabrescent; terminal buds conoid, c. 3 mm long, densely ferruginously tomentose. *Leaves* scattered along the branchlets, broad-ovate to broad-obovate, sometimes oblong, 2—7.5 by 1.2—5.5 cm, short and acute acuminate, acumen up to 4 mm long, sometimes apex rounded to obtuse, angle of leaf-base less than 90° or more, base shortly decurrent; glabrous and nitidous above, brownish to greyish puberulous, sometimes glabrescent below, thin-coriaceous; midrib impressed above, prominent below, secondary nerves 4—6(—8), ascending at an angle of about 40°—50°, slightly curved, near the margins bifurcate or diminishing until inconspicuous, tertiary nerves nearly inconspicuous on either side, parallel to secondary nerves, but near margins subtransverse; petioles 3—5 mm long, flat to slightly convex above, rounded below, ferruginously or greyish tomentose on either side. *Flowers* in 3- or 4(-5)-florous clusters, axillary; pedicels c. 1 mm long or less. *Sepals* 4 or 5, connate at base, outer ones broad-ovate, c. 6 by 5.5 mm, acute, glabrous, inner ones ovate, c. 9 by 6 mm, acuminate, acumen long, margins glabrous and minutely ciliate, apex inwardly curved, ferruginously sericeous without, the inside with long ferruginous sericeous hairs in the centre only (f. Bailey glabrous within). *Corolla* urceolate, c. 9 mm long, tube c. 6.5 mm long, lobes 4 or 5, broad-ovate, c. 2.5 by 2.5 mm, rounded to obtuse, margins minutely ciliate. *Stamens* 4 or 5, c. 7 mm long, inserted in base of tube, filaments slender, adnate to tube up to 4 mm from base, c. 1.5 mm long, subulate, attenuate at tips, anthers oblong, c. 1.5 mm long, basifix. *Staminodes* linear, c. 2 mm long. *Ovary* subglobose, c. 3 by 2 mm, top flattened, densely ferruginously villous, ovules inserted in the middle of the cells; style cylindrical, slender, c. 8 mm long, attenuate at apex, glabrous, stigma very minute. *Fruits* sessile, ovoid to pyriform, 3—3.5 by 2—2.5 by c. 1.5 cm when dry, densely ferruginously hispidulous, exocarp purple, 1—4-celled, with sometimes one, more rarely with three maturing seeds, testa shining, c. 3 mm thick, scar broad, whitish, embryo not seen.

Type specimen: *Jacobson s.n.* in BRI.

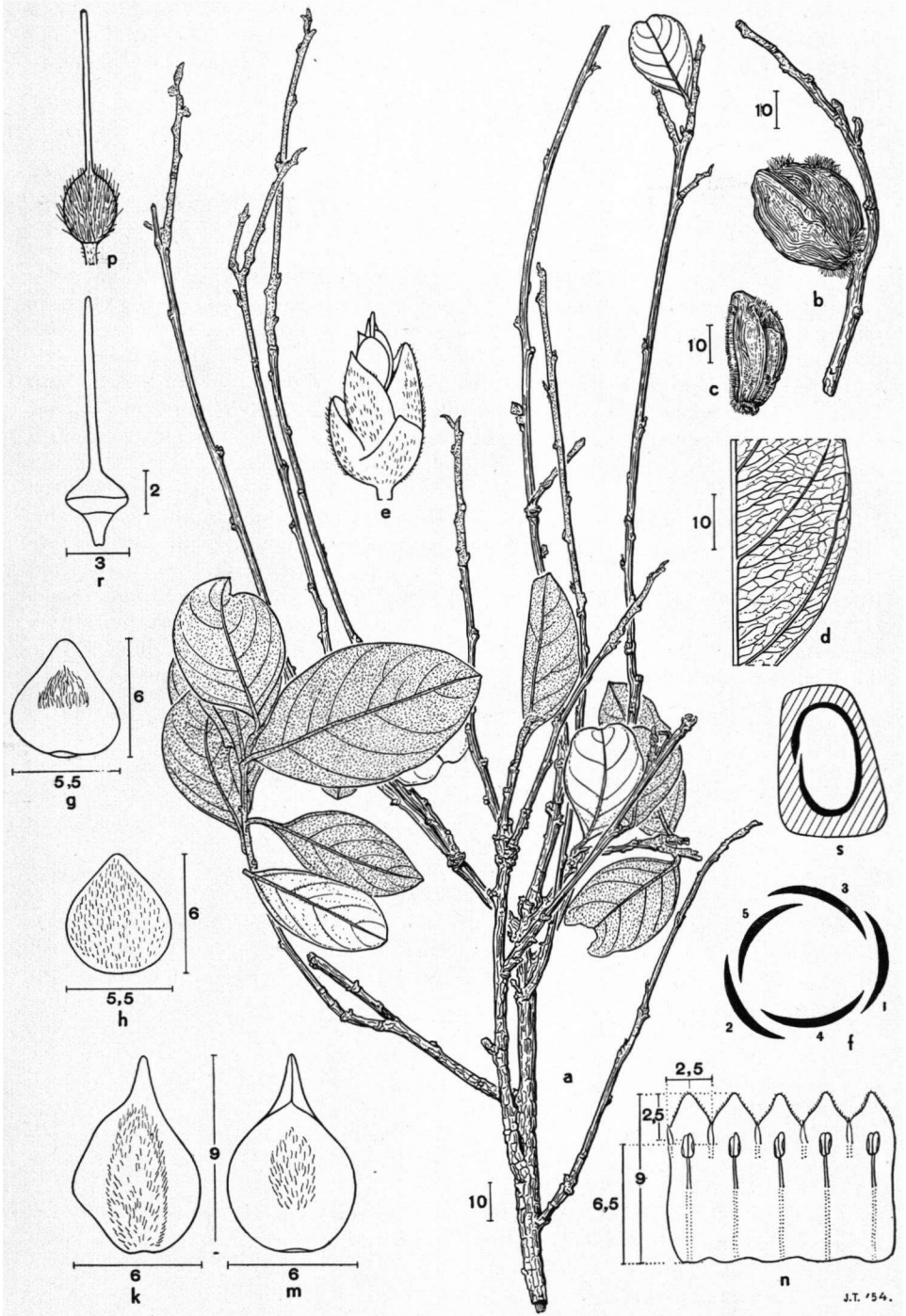
Distr.: Australia (Queensland).

AUSTRALIA. Queensland, Cape York Peninsula, Musgrave E. T. Station: *Jacobson s.n.* (A, BRI, K, MEL), fl. & fr. Aug.; Schramm Creek, branch of Batavia river: *Whitehouse s.n.* (BRI).

9. *P. xylocarpa* White, Journ. Arn. Arb. 31, 1950, 111.

Lofty trees, up to 40 m high. Branchlets terete, brownish when dry,

Fig. 4. *P. unmackiana*, a. branchlets with leaves, b. idem, with fruit, c. fruit, d. part of leaf showing secondary and tertiary nerves, e. flower, f. diagram of calyx, g. outer sepal, inside, h. outer sepal, outside, k. inner sepal, outside, m. inner sepal, inside, n. corolla with stamens and staminodes, p. and r. pistillum, s. part of ovary with ovulum. (from *Whitehouse s.n.*).



greyish to brownish puberulous at tips only, glabrescent. *Leaves* obovate or ovate to oblong, 10—25.5 by 5.5—10 cm, apex bluntly acuminate, acumen c. 10 mm long, rarely rounded to obtuse, angle of leafbase 90° or more, base shortly decurrent; olivaceous to brown-olivaceous above, somewhat dull below, juvenile leaves densely sericeous on either side, mature leaves glabrous on either side, thin chartaceous; midrib impressed above, strongly prominent below, sometimes reddish when dry, secondary nerves 7—12, ascending at an angle of 60°—70°, straight, near margins curved and diminishing until inconspicuous or sometimes indistinctly archingly joined by some thickened tertiary nerves, prominulous on either side, tertiary nerves transverse, prominulous on either side; petioles 2.5—4 cm long, flattened above, rounded below, glabrous. *Flowers* in 3—7-flowered clusters, axillary; pedicels slender, c. 5 mm long, with scattered brown hairs. *Sepals* orbiculate to ovate, c. 2 by 1.5 mm, rounded at apex, connate at base, with scattered brown hairs without, glabrous within. *Corolla* in bud c. 1.5 mm long, whitish, tube c. 1 mm, lobes orbiculate, c. 0.5 by 0.5 mm, apex rounded. *Stamens* inserted just below the throat of corolla, c. 0.6 mm long, filaments linear, anthers unknown. *Staminodes* linear-lanceolate, c. 0.6 mm long. *Ovary* subglobose, c. 0.5 by 0.5 mm, densely covered with whitish hairs, ovules inserted in lower half of cells; style glabrous, cylindrical, rather stout, c. 1 mm long, minutely ribbed, stigmas distinct. *Fruits* subglobose, shallowly but distinctly 5—10-lobed, 4.5—5 by 5—6 cm, glabrous, pericarp thick, becoming very hard when dry, pedicel c. 7 mm in diam.; seeds (2—)5, c. 2.5—3 by 1.5—1.7 by c. 1 cm, carinate, testa rather thick, yellowish, scar oblong, acute at both ends, c. 2.5 cm by 6—7 mm, cotyledons rather thick, albumen none, radicle exserted, c. 2 mm long.

Type specimen: *Mair NGF 1883* in BRI.

Vern. name: e-orie (Buin island).

Distr.: Bismarck Archipelago and Solomon Islands.

BISMARCK ARCHIPELAGO. New Britain, Namtambu, Broken Bay, in rain forest on deep volcanic soil: *Mair NGF 1883* (A, BRI, K, LAE), tree c. 40 m, fl. small, calyx green, corolla white, fl. & fr. May.

SOLOMON ISLANDS. Bougainville, Siwai: *Waterhouse 206* (K), littoral tree, fl. Jan. — Buin: Kugu-maru, in rain forest, alt. 150 m: *Kajewski 1892* (A), large tree, up to 20 m, fr. globular, seeds brown.

Remarks: *P. xylocarpa* White and *P. wakere* (Pancher & Sebert) Baehni are very much alike in fruit characters, but the former is distinguished by its very small sparsely pubescent greenish calyces and corollas and the latter by its firmly coriaceous leaves. *P. xylocarpa* is also closely allied to *P. maclayana* (F. Mueller) Baehni especially in leaf characters but differs from the latter by the shape of its fruits (*P. xylocarpa* globose, tapering at base, *P. maclayana* depressed-globose).

10. *P. lauterbachiana* (H. J. Lam) Baehni, 1942, 314 — *Planchonella lauterbachiana* H. J. Lam, 1932, 564, t. 121 — *Beccariella schlechteri* Krause, Engl. Bot. Jahrb. 58, 1923, 483.

Large trees, up to 25 m. Branchlets terete, tips brownish when dry, sparsely brownish or yellowish puberulous, glabrescent. *Leaves* subopposite, ovate to oblong, sometimes obovate, rarely lanceolate, (4.5—)10—20 by (3.3—)6—8 cm, apex acuminate, sometimes very shortly and obtusely so,

acumen 5—10 mm long, base cuneate, angle less than 90° or more, obliquely and shortly decurrent; subcoriaceous, glabrous except for a few scattered brownish to greyish hairs on midrib on the lower side, nitidous above, somewhat dull below; midrib grooved above and minutely crested, prominent below, secondary nerves (6—)8—10(—13), ascending at an angle of 45°—60°, curved, reticulate near margin, sometimes archingly joined by some thickened tertiary nerves, impressed and nearly inconspicuous above, prominulous below, tertiary nerves inconspicuous above, faint below, minutely reticulate, near margins with some stouter transverse nerves; petioles (0.8—)1—1.5 cm long, glabrous, canaliculate above, rounded below. *Flowers* in 6—11-flowered axillary clusters; pedicels 2—4 mm long, rather stout, yellowish appressedly tomentose. *Sepals* orbicular to ovate, 2.5—3 by 2—2.5 mm, connate at base, apex rounded to obtuse, outer ones subcoriaceous, inner ones with membranous margins, yellowish appressedly tomentose without, glabrous within. *Corolla* green or white, c. 5 mm long, tube c. 1 mm long, lobes ovate, c. 4 by 2 mm, obtuse. *Stamens* inserted in the corolla throat, c. 3 mm long, filaments slender, c. 1.5 mm long, subulate, apex attenuate, anthers ovoid, c. 1.8 mm long, dorsifix. *Staminodes* lanceolate, subacute, widened at base, c. 3 mm long. *Ovary* conoid, c. 1.5 by 1 mm, glabrous, obscurely 5-lobed, ovules inserted in the middle of the cells; style glabrous, cylindrical, apex attenuate, stigma distinct. *Fruits* subobliquely oblong, 3—5.5 by 0.8—1.8 by 0.7—1.4 cm when dry, one-seeded, pointed at apex, narrowed at base, pericarp purple, thin, glabrous, pedicels c. 3 mm long, sepals persistent, testa thin, nitidous, scar occupying slightly more than half of the seed, up to 4.2 by 2.5 cm, cotyledons oblong, thick, albumen none, radicle very small, punctiform.

Type specimen: *Schlechter 17933* in B.

Lectotype specimen: *Schlechter 17933* in P.

Vern. names: aa (Skou dialect, New Guinea), oelaai, kentaai (Atam dialect, New Guinea).

Distr.: Moluccas, New Guinea, Bismarek Archipelago.

HALMAHERA. Weda, Tiloppe, alt. c. 25 m: *NIFS bb 24871* (L, SING).

NEW GUINEA. Western New Guinea, district Manokwari, Ransiki, Warnapi, flat clayey ground, primary forest, alt. c. 20 m: *Kostermans 339* (= *NIFS bb 33563*) (BO, L, PNH, SING), tree c. 25 m, fl. bud brown, fl. white, Sept.; ibidem, sandy clay, primary forest, alt. c. 10 m: *Kostermans 2362* (= *NIFS bb 33681*) (BO, L), tree 20 m, fl. green, fr. green with brown-black stone, Sept.; district Hollandia, Holtekang, primary forest: *BW 1561* (L), tree 18 m, fl. Oct. — Southeastern New Guinea, alt. c. 1000 m, secondary forest: *Carr 15938* (SING), tree 15 m, fl. creamy white, March; ibidem, alt., secondary forest: *Carr 16057* (SING), tree 15 m, young fr. March.

NEW BRITAIN. Jacquinot Bay: *NGF 147* (LAE), Jan.

Remarks: Distinguishable by its subopposite leaves along the branches and its oblong slightly oblique fruits. Very close to *P. solomonensis* especially in leaf and floral characters but differing in the shape of its fruit and other fruit structuree.

The specific epithet *lauterbachiana* has been used by Lam, 1932, when, transferring *Sideroxylon schlechteri* Krause to *Planchonella*, the combination *Planchonella schlechteri* (Krause) H. J. Lam was formed, and the transfer of *Beccariella schlechteri* Krause to *Planchonella* at the same time forced him to choose the new epithet *lauterbachiana*. Baehni when transferring

the whole genus *Planchonella* to *Pouteria* subsequently maintained the newly chosen specific epithet *lauterbachiana* for his *Pouteria lauterbachiana* and the specific epithet *schlechteri* for his *Pouteria schlechteri*.

In van Royen's treatment of *Planchonella* the last named species is regarded as a *Planchonella*, viz. *Pl. schlechteri* (Krause) H. J. Lam. As, however, the combination *Pouteria schlechteri* (Krause) Baehni, had been used already, though this species appeared to represent *Planchonella schlechteri* (Krause). H. J. Lam, based on *Sideroxyylon schlechteri* Krause, it was according to the rules of nomenclature not allowed to replace the combination *Pouteria lauterbachiana* (Krause) H. J. Lam, based on *Beccariella schlechteri* Krause by *Pouteria schlechteri* (Krause) nov. comb., and therefore the existing combination *Pouteria lauterbachiana* (Krause) H. J. Lam is maintained.

As the type specimen has been burnt during the 1943 bombardment of the Berlin Herbarium a new one has been chosen out of the other specimens of the same number, viz. the one in Paris.

11. *P. ? longipes* (Baillon) Baehni, 1942, 330 *Chrysophyllum longipes* Baillon, Bull. Soc. linn. Paris 2, 1891, 900; Guillaumin, Ann. Mus. col. Marseille 19, 1911, 185 — *Planchonella linguaeformis* Pierre, Not. bot. Sapot., 1890, 36, *nomen*.

Trees, up to 10 m. Branchlets terete, up to 6 mm in diam., glabrous except for uppermost parts which are minutely appressedly red-brownish puberulous, greyish and wrinkled when dry, leaf-scars numerous and rather big. *Leaves* crowded towards tips of branchlets, spatulate, oblanceolate to ovate-lanceolate, (7—)12—17.5 by 2.5—5.5 cm, apex rounded to obtuse, angle of leaf-base less than 90°, base tapering over a long distance into petiole; thin-coriaceous, glabrous, nitidous and olivaceous above, minutely appressedly red-brownish puberulous below; midrib impressed and minutely crested above, prominent below, secondary nerves (5—)8—12, ascending at an angle of 40°—50°, curved, near margins reticulate or diminishing until inconspicuous, sometimes archingly joined, impressed above, prominulous below, tertiary nerves reticulate, faint on either side; petioles 4—5.5(—7) cm long, flat and sometimes narrowly crested above, rounded below, minutely appressedly red-brownish puberulous, glabrescent. *Flowers* in 5-flowered axillary clusters, seen very young only; pedicels slender, c. 5 mm long, red-brownish puberulous. *Sepals* suborbicular, c. 2.7 mm in diam., apex obtuse, red-brownish pubescent without, glabrous within. *Corolla* lobes ovate, c. 0.9 by 0.6 mm, apex subtruncate. *Stamens* c. 0.4 mm long, inserted below the throat of corolla, filaments terete, c. 0.1 mm long, anthers ovoid, c. 0.3 mm long, apex obtuse. *Staminodes* inserted in the throat of corolla, spatulate, c. 0.3 mm long, apex irregularly dentate or truncate, (f. Baillon staminodes absent). *Ovary* conoid, c. 1.5 mm in diam., hirsute, 5-celled, ovules inserted in lower half of cells; style conical, glabrous. *Fruits* unknown.

Type specimen: *Balansa 1824* in P.

Distr.: New Caledonia.

NEW CALEDONIA. Canala, on ferruginous country: *Balansa 1824* (L, P), young fl. Nov.

Remarks: The description given above is partly drawn up after Pierre's drawing, partly based on Baehni's description.

12. *P. ? acuminata* (Baillon) Baehni, 1942, 406 — *Sebertia acuminata* Pierre ex Baillon, Bull. Soc. linn. Paris 2, 1891, 945, *nomen nudum*; Engler & Prantl, Nat. Pfl. Fam., Nachtr. 4, 1, 1897, 280; Guillaumin, Ann. Mus. col. Mars. 19, 1911, 188 — *Sersalisia ? acuminata* Baillon, l. c. 945.

Trees, 8—10 m. Branchlets terete, up to 8 mm in diam., glabrous except for the uppermost parts which are minutely appressedly brownish puberulous, brownish or greyish when dry. Leaves crowded towards tips of branchlets, oblong or sublanceolate, 4—9 by 1.5—3.5 cm, apex obtuse or subacute, angle of leafbase 90° or less, very shortly and sometimes obliquely tapering into petiole; young leaves red-brownish puberulous on either side, adult ones glabrous, nitidous and greenish above, minutely appressedly ferruginously puberulous below, thin coriaceous; midrib impressed above, prominent below, secondary nerves 8—15, ascending at an angle of 60°—70°, straight, near margins recurved and indistinctly archingly joined, hardly visible above, faint below, tertiary nerves mainly parallel to secondary ones, laxly reticulate near margins, faint on either side; petioles 1.5—2.5 cm long, subterete, minutely appressedly red-brownish puberulous, finally glabrescent. Inflorescences and flowers unknown. Fruits obovoid, sessile, 3.5(—4) by c. 2.2 by c. 1.9 cm when dry, glabrous, pericarp purple, rather thin; seeds solitary, obovoid, 2.3(—3) by 2 by 1.7 cm, testa rather thick, 1—1.5 mm thick, yellowish, nitidous, scar covering half of surface of seed, obovate, hilum apical, raphe distinct, cotyledons thick, albumen none, radicle punctiform.

Type specimen: *Balansa* 3468 in P.

Distr.: New Caledonia.

NEW CALEDONIA. along creek above Ouroué, near mouth of Dothio river: *Balansa* 3468 (L, P), tree 8—10 m, fr. Dec.

Remarks: According to Baehni *Balansa* 3418 serves as the type specimen, but comparing the localities of *Balansa* 3418 and *Balansa* 3468, the first number must be a printing error, so *Balansa* 3468 is regarded as the type specimen of *Pouteria ? acuminata*.

13. *P. maclayana* (F. v. M.) Baehni, 1942, 307; White, J. Arn. Arb. 31, 1950, 109 — *Bassia maclayana* F. v. M., Viet. Nat. 1, Feb. 1885, 168, *nomen nudum*, sphalm. "*macleyana*"); idem, Melb. Chem. & Drugg. 7, April 1885, 93, *nomen nudum* — *Illipe maclayana* F. v. M., Descr. Not. Pap. Pl. 6, June 1885, 12, (sphalm. "*macleyana*"), descr.; Warburg, Pflanzenkl. und Nutzpfl. Neu-Guineas, in Krieger, Neu Guinea, 1899, t. 9 — *Bureavella maclayana* (F. v. M.) Pierre, Not. bot. Sapot., 1890, 16, (sphalm. "*macleyana*"); Engl. & Prantl, Nat. Pfl. Fam., Nachtr. 4, 1, 1897, 297, (sphalm. "*macleyana*"); Dubard 1,912, 40, (sphalm. "*macleyana*"); Krause, Engl. Bot. Jahrb. 58, 1923, 486, (sphalm. "*macleyana*") — *Lucuma maclayana* (F. v. M.) H. J. Lam, 1925, 221, 267; idem, 1927, 476; idem, 1932, 567 — *Lucuma pomifera* Zippel, in synon. genericorum in Pierre, l. c. 15, in genus *Beauvisagea* — *Beauvisagea pomifera* Zippel ex Baillon, Hist. Pl. 11, 1892, 288, *nomen nudum* — *Beauvisagea pomifera* (Zippel) Pierre in Krause, l. c. 482, *nomen nudum* — *Sideroxyton ? zippelianum* Pierre ex Boerl., Handl. Fl. Ned.



Ind. 2, 1, 1891, 312, *nomen nudum* — *Sideroxylon pomiferum* (Zippel) Engler, Engl. & Prantl, Nat. Pfl. Fam., Nachtr. 4, 1, 1897, 277, *nomen nudum* — *Planchonella pomifera* Dubard, 1912, 63 — *Lucuma pomifera* (Pierre) H. J. Lam, 1925, 221 — *Crataeva hansemanni* K. Schum., Fl.

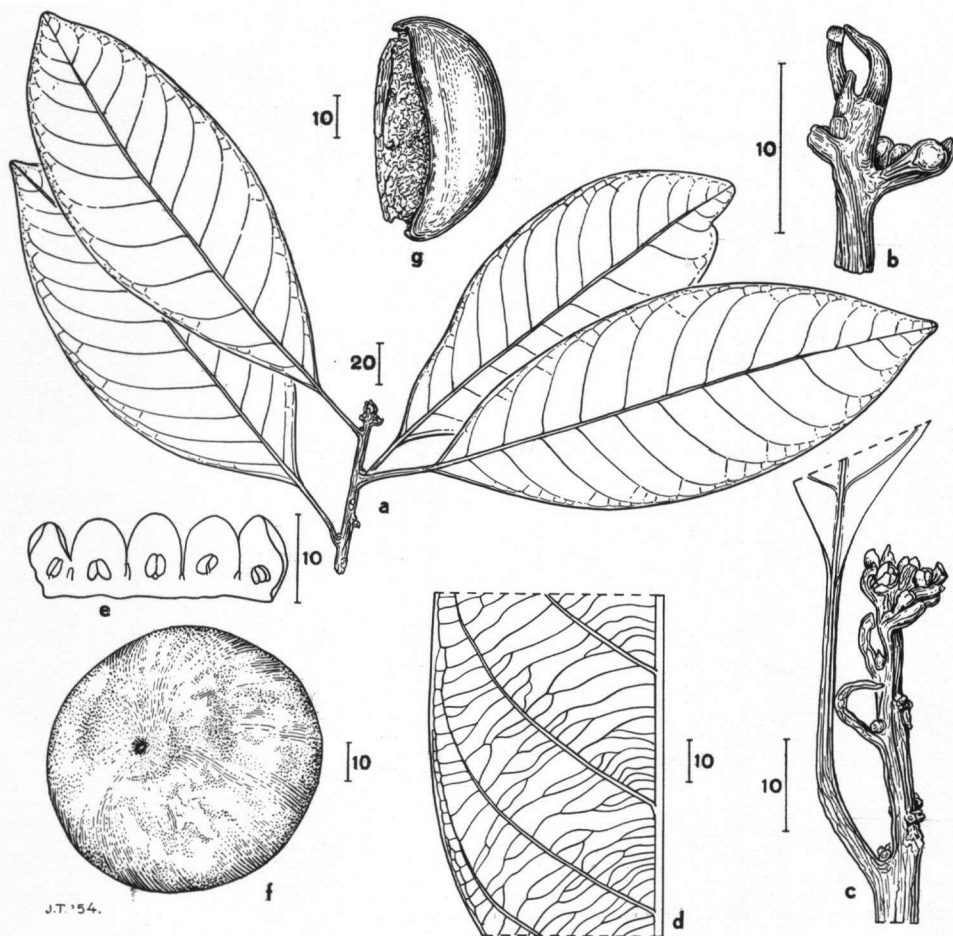


Fig. 5. *P. maolayana*, a. branchlet with leaves, b. tip of branchlet with flower-buds, c. idem, with young flowers, d. part of leaf showing secondary and tertiary nerves, e. corolla with stamens and staminodes from young flower, f. fruit, g. seed. (a-e. from Zippel s.n., f-g. from Mair NGF 1821).

Deutsch. Schutzgeb. Südsee 1901, 335, p.p. — *Lucuma navicularis* H. J. Lam, 1925, 223, t. 59 — Fig. 5.

Trees, up to 30 m. Branchlets terete, smooth, c. 3–7 mm in diam., reddish-brown or golden-yellowish puberulous on tips only, glabrescent. Leaves crowded at tips of branchlets, oblong-obovate or obovate-lanceolate,

(6—)15—35.5(—53) by 3.5—10(—14) cm, apex bluntly acuminate, sometimes very shortly so, acumen 5—10 mm long, or apex acute or rounded to obtuse, angle of leafbase less than 90°, base decurrent; juvenile leaves yellowish or golden-yellowish puberulous, glabrescent, adult ones chartaceous, glabrous and nitidous on either side, sometimes except for the midrib below; midrib impressed and minutely crested above, strongly prominent and sometimes reddish-brown tomentose below, secondary nerves (5—)9—13 (—15), ascending at an angle of 35°—70°, straight but slightly curved near margins and diminishing until inconspicuous, sometimes archingly joined by some thickened tertiary nerves, impressed above, prominent below, tertiary nerves distinct on either side, transverse, more or less mutually parallel, rarely irregularly reticulate, angle with midrib in the middle of the leaves 90°—135°; petioles (1.5—)2—5 cm long, flattened or sometimes distinctly canaliculate above, rounded below, glabrous or sometimes reddish-brown tomentose, glabrescent. *Flowers* in 6-florous (always?), axillary clusters; pedicels 2—3 mm long, sparsely yellowish puberulous, rather stout. *Sepals* suborbiculate, c. 2 mm in diam., connate at base, yellowish puberulous without, glabrous within. *Corolla* c. 1 mm long in bud, lobes four times larger than tube (f. Pierre). *Stamens* inserted just below the throat of corolla, filaments short, subulate, anthers suborbiculate, subbasifix. *Staminodes* inserted in the throat of corolla, short, subulate. *Ovary* conoid, pubescent; style short. *Fruits* depressedly globose, up to 13 cm in diam. in vivo, c. 8.5 cm in diam. when dry, at first ferruginously hirsute, glabrescent, pericarp very thick, apparently very fleshy; seeds 5, ovoid, c. 5.5 by 3 by 3 cm, laterally compressed, subcarinate on dorsal side, testa very thick, 3—5 mm thick, light or dark brown, scar ovate, c. 5 by 2 cm, very rugose, convex, cotyledons thick, c. 4 by 2 cm, albumen thin, radicle exsert, c. 6 mm long.

Type specimen: *Miklouho-Maclay s.n.* in MEL.

Vern. names: *Lingga*, serindieng; *Merampi*, arambahi; *Amboina*, widurik, anahan, ay-lonahan, tjampada utang; *New Guinea*, hutaka (*Manikion dialect*), eentawa (*Mimika dialect*), pe (*Karkar island*), dim (*Finisterre mountains*).

Distr.: Lingga, Talaud and Nanusa islands, Amboina, Key, New Guinea, Solomons.

LINGGA. Tamiang island, without loc.: *Teysmann s.n.* (BO, K, L, UC).

TALAUD and NANUSA ISLANDS. Merampi, near Damputis, alt. c. 20 m: *Lam 3416* (BO, L, UC).

AMBOINA. According to a specimen without a collector's name and number in the Kew Herbarium, but with the indication Amboina this species is also found on that island.

KEY, without known locality: *Jaheri 137* (L).

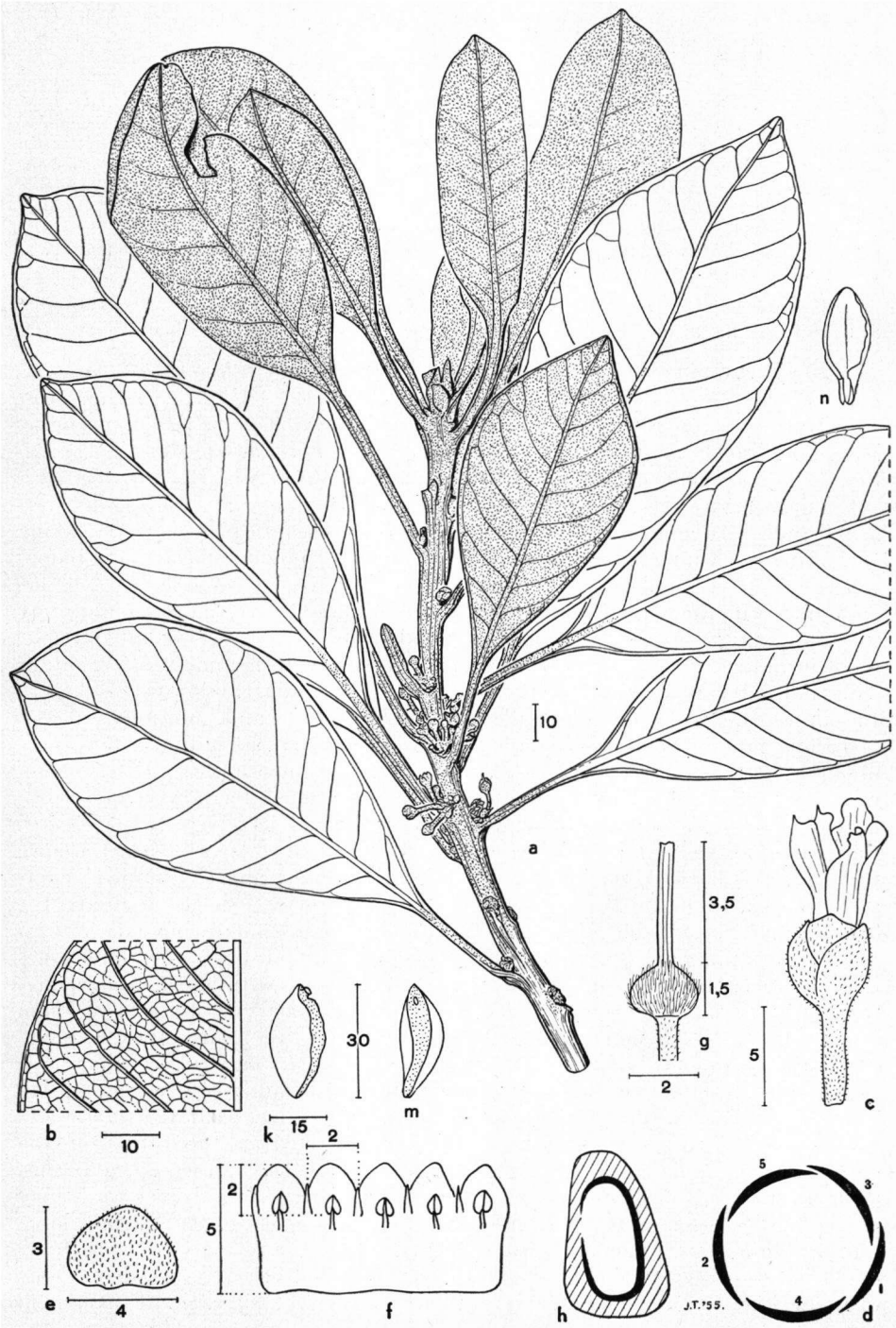
NEW GUINEA. Western New Guinea, distr. Manokwari, Andai: *Beccari 533* (FI, P), fr. Aug.; Momi, on flat clayey soil, in primary forest, alt. c. 20 m: *Kostermans 290* (= *NIFS bb 33482*) (BO, L), fairly common, tree c. 20 m, with buttresses; distr. Geelvink Bay, Japen Island, Seroei, alt. c. 250 m: *NIFS bb 30654* (A), Sept.; distr. Mimika, Njaja (Oeta), in primary forest, on sandy soil, flat country, alt. c. 3 m: *NIFS bb 32854* (= *Lundquist 135*) (L), tree 25 m; without loc.: *Zippel s.n.* (L), fl. Northeastern New Guinea, distr. Madang, Karkar island: *Mair NGF 1321* (A, K, LAE), tree c. 20 m, fr. large, seeds 5, embedded in a firm, fleshy, yellow edible pulp, Febr.; near Finisterre mountains: *Miklouho-Maclay s.n.* (MEL, P), fr. — Southeastern New Guinea, Western division, Oriomo river, Wurui, in rain-forest substage, alt. 5—10 m: *Brass 5905* (A, L), slender tree, fr. green, hard pale brown seeds in yellow pulp, fr. Febr.—March.

SOLOMONS. Fauro island: *Walker BSIP #79* (A), tree 15 m, buttresses rounded — Rendova, New Georgia, Ovusa, in foothill rain forest: *Walker & White BSIP 171* (A, BRI), tree 30 m, buttresses spreading.

14. *P. wakere* (Pancher & Sebert) Baehni, 1942, 335 — *Chrysophyllum wakere* Pancher & Sebert, Bois Nouv. Caléd., 1874, 193 — *Sideroxylon wakere* (Pancher & Sebert) Baillon, Bull. Soc. linn. Paris 2, 1800, 882; Guillaumin, Ann. Mus. col. Marseille 19, 1911, 188 — *Planchonella wakere* (Pancher & Sebert) Pierre, Not. bot. Sapot., 1890, 36 — Fig. 6.

Moderate sized trees, up to 23 m. Branchlets terete to subangular, 3—10 mm in diam., appressedly reddish-brown or blackish tomentose on tips only. *Leaves* more or less crowded towards tips of branchlets, obovate-oblong to subspatulate, sometimes ovate, 9—21(—25) by 2.5—8(—13) cm, apex shortly and bluntly acuminate, sometimes rounded to obtuse, margins with a stout marginal nerve, angle of leafbase less than 90°, base decurrent over a rather long distance; firmly coriaceous, juvenile leaves densely reddish-brown tomentose on either side, adult ones glabrescent and pale greenish or olivaceous, nitidous above, reddish-brown or greyish tomentose with some glabrous patches below; midrib impressed above, very prominent below, secondary nerves (6—)9—14, ascending at an angle of 45°—75°, slightly curved, near margins distinctly archingly joined, prominulous above, prominent below, tertiary nerves laxly reticulate, near midrib with some stout nerves parallel to the secondary nerves, near margins sometimes with a few flexuose transverse ones; petioles 2—5.5 cm long, flattened and sometimes narrowly keeled above, rounded below, greyish-yellowish to reddish-brownish or blackish tomentose, glabrescent. *Flowers* in 4—6-florous axillary clusters; pedicels 4—9 mm long, angular when dry, ferruginously puberulous. *Sepals* broadly ovate, 3—4 by 3—4 mm, connate at base, rounded to obtuse at apex, ferruginously pubescent without, glabrous within, inner sepals with more or less membranous margins, persistent in fruit. *Corolla* c. 5 mm long, tube c. 3 mm long, lobes orbiculate, c. 2 by 2 mm, obtuse. *Stamens* 1.5—2 mm long, inserted below the throat of corolla, sometimes sterile, filaments c. 1 mm long, subulate, tips attenuate, anthers ovoid, 0.5—1 mm long, basifix. *Staminodes* linear-lanceolate, c. 1 mm, sometimes dentate, inserted in the throat of corolla. *Ovary* subglobose, 1.5 by 2 mm, 4—5-celled, subabruptly tapering into style, ferruginously hirsute, ovules inserted in upper half of cells; style cylindrical, c. 3.5 mm long, glabrous, grooved, stigma distinct. *Fruits* obovoid, 4—5 by 2.5—4 by 3—4 cm when dry, shortly and obtusely acuminate, 1—3-seeded, yellowish to brownish tomentose, glabrescent, pericarp becoming very hard when dry; *seeds* ellipsoid, 2.5—4 by 1—1.5 by 1—1.2 cm, testa thick, 2—3 mm, brown, shining, scar oblong, acute at both ends, c. 2.5 by 0.5 cm, hilum prominent, apical, albumen membranous, cotyledons thick, radicle slender, acute, exserted.

Fig. 6. *P. wakere*, a. branchlet with leaves and flowers, b. part of leaf showing secondary and tertiary nerves, c. flower, d. diagram of calyx, e. outer sepal, outside, f. corolla with stamens and staminodes, g. pistillum, h. part of ovary, longitudinal section, k. seed, lateral view, m. idem. ventral view, n. embryo, lateral view. (a, b. from *Balansa 459*, c-k. from *Chittendale s.n.*, k-p. from *Passal 1*).



Lectotype specimen: *Sebert & Fournier 25* in P.

Vern. name: azou.

Distr.: New Caledonia.

NEW CALEDONIA. Prony, in North forest, on lateritic soil, alt. 300 m: *Cribs 1575* (P), tree 20—25 m, fl. white-yellowish, fr. Dec.; ibidem: *Franc A 18* (A, P), fl.; Dombéa: *d'Aleizette 33* n.o. (P), fl. Nov.; Plaine des Lacs: *Le Rat & Le Rat 2578* (P); in forests of St Louis and La Coulée: *Passal 1* (FI), high tree, fr.; South Bay: *Le Boucher 1575* (NSW) fr.; ibidem, between Bay N'go and Touaourou: *Bohrdorf 114* (Z); without loc.: *Pancher & Sebert 25* (P), fr.; ibidem: *Balansa 459* (P), fl. & fr.; ibidem: *Pancher s.n.* (K, L), young fl., fr.

AUSTRALIA. New South Wales, Sydney Botanical Garden: *Chittendale s.n.* (K, NSW), fl. Nov., cultivated.

Remarks: Since no type specimen has been mentioned by Pancher and Sebert, as a lectotype specimen *Pancher & Sebert 25* is chosen.

15. *P. annamensis* (Pierre) Baehni, 1942, 311 — *Planchonella annamensis* Pierre ex Dubard in Lec., Not. Syst. 2, 1911, 83; Dubard, Ann. Mus. col. Marseille 20, 1912, 51 — *Sideroxylon annamensis* (Pierre) Lecomte, Fl. gén. Indo-Chine 3, 1930, 892 — *Sideroxylon hainanense* Merrill, Lignan Sc. Journ. 9, 1930, 41 — *Pouteria hainanensis* (Merrill) Baehni, l. c. 312.

Large high trees. Branchlets terete, 2—4 mm in diam., glabrous, terminal buds c. 4 mm long, reddish-brown tomentose. *Leaves* scattered along the branches, young ones lanceolate, mature ones oblong-obovate or oblong-lanceolate to lanceolate, 6—15.5 by 2—5.5 cm, apex rounded to obtuse, acuminate, in the young leaves acute, acumen 2—5 mm; margins minutely undulate and with a slender intermarginal nerve, base tapering into petiole, angle less than 90°; chartaceous, densely reddish-brown tomentose on either side, but later glabrous on either side, and olivaceous and nitidous above, the underside more or less dull; midrib impressed and minutely crested above, prominent below, secondary nerves 5—9(—11), ascending at an angle of 50°—60°, straight, curved near margins and diminishing until inconspicuous, sometimes archingly joined by some thickened tertiary nerves, prominent above, prominulous below, tertiary nerves laxely reticulate with some stout nerves parallel to the secondary ones, faint above, distinct below; petioles 1.5—3.5(4.5) cm long, flat to slightly convex above, rounded below, glabrous. *Flowers* in 1—3-florous, axillary clusters; pedicels angular, 1—3 mm long, rather stout, ferruginously tomentose. *Sepals* orbiculate, 2—2.5 by 1.5—2.5 mm, apex rounded to obtuse, connate at base, the outer ones densely ferruginously puberulous without, glabrous within, the inner ones with membranous, glabrous and minutely undulate margin. *Corolla* c. 3 mm long, tube c. 2—2.5 mm long, lobes orbicular, c. 1 by 1 mm, apex rounded to obtuse. *Stamens* c. 2.5 mm long, inserted near base of corolla tube, filaments c. 1 mm long, subulate, attenuate at tip, adnate to corolla up to 1 mm from base, anthers ovoid, c. 0.5 by 0.5 mm long, basifix. *Staminodes* subulate, c. 1 mm long, narrowed at apex, inserted in the throat of the corolla. *Ovary* subglobose, c. 0.5 by 0.5 mm, flattened at the top, glabrous, with a subcupuliform, c. 0.5 mm high disk which is densely ferruginously pilose, ovules inserted in lower half of cells; style cylindrical, c. 2 mm long, truncate, glabrous, stigmas minute. *Fruits* sessile, depressedly globose, 1.8—4.5 by 1.7—4.5 cm when dry, glabrous, pericarp thick, 2—5-seeded; seeds ovoid, c. 1.8 by 1 by 0.8 cm, laterally compressed, subcarinate at dorsal

side, testa nucamentaceous, yellowish, nitidous, scar oblong, narrow, c. 1.8 by 0.2 cm, cotyledons subfoliaceous, albumen membranous, radicle exserted.

Type specimen: *Bon 2171* in P.

Distr.: Tonkin, Hainan.

TONKIN. Khang Thuong, in forest of Ma-co: *Bon 2171* (P), fl.

HAINAN. Taam Chau distr., Shui Mei Shan, on dry ground: *Tsang Wai-Tak 496* (A, K, UC), tree 9 m, fl. white, May; Potting: *How 73361* (A, BM, BO, P), juv. fr. July—Aug.; Yaichow, in forests, alt. c. 500 m: *How 70406* (A), tree 11 m, fr. green, March—July; in light woods, on mountain side: *Liang 63318* (A), tree 18 m or more, fr. green, with juice, seed reddish white, Sept.; in woods: *Wang 36053* (A), tree, fr. green, Jan.; in mixed woods: *Wang 35058* (A), tree 20 m, fr. green, juicy, Nov. in mixed woods, alt. c. 450 m: *How & Chung 70184* (A, P), tree 15 m, fr. when mature purplish red, Febr. — Tam distr., Nodoa, on dry steep slope, sandy soil, rocky: *Lei 295* (K, P), tree 6 m, fr. Dec. — Dai Land distr., Dung Ka, alt. c. 700 m, in forest: *Chung & Tso 43874* (A), tree 15 m, fr. green, glabrous, gibbous.

16. *P. pancheri* (Baillon) Baehni, 1942, 308 — *Sideroxylon pancheri* Baillon, Bull. Soc. linn. Paris 2, 1890, 885; Guillaumin, Ann. Mus. col. Marseille 19, 1911, 187 — *Sideroxylon pancheri* Baillon, var. *vestitum* Baillon, l. c. 886 — *Sideroxylon pancheri* Baillon, var. *glabrescens* Baillon, l. c. 886 — *Planchonella crassinervia* Dubard, Ann. Mus. col. Marseille 20, 1912, 44.

Shrubs, 2—7 m high. Branchlets terete, up to 9 mm in diam., glabrous, but apical parts densely brownish to greyish tomentose. *Leaves* crowded towards tips of branchlets, oblong-obovate, 6—10(—15) by 2.5—5 cm, apex rounded to obtuse, margins with a stout marginal nerve, angle of leafbase less than 90°, shortly tapering into petioles; juvenile leaves densely brownish to greyish pubescent on either side, mature ones glabrescent, nitidous and brownish olivaceous above, dull, greyish and less densely pubescent below, firmly coriaceous; midrib impressed and minutely crested above, prominent below, secondary nerves 5—9, ascending at an angle of 50°—70°, slightly curved, reticulate or distinctly archingly joined near margins, impressed above, prominent below, tertiary nerves laxely reticulate, impressed above, prominent below; petioles (0.5—)1—2 cm long, flat or shallowly canaliculate above, rounded below, densely greyish to brownish tomentose on either side, glabrescent. *Flowers* solitary, axillary, rather large; pedicels angular, c. 1 mm long, rather stout, densely dark-brownish tomentose. *Sepals* oblong, 6.5—7 by 2.5—4 cm, apex obtuse, connate at base, persistent in fruit, densely dark-brownish tomentose without, glabrous within except for uppermost part. *Corolla* c. 6.5 mm long, tube c. 5 mm long, lobes orbiculate, c. 1.5 by 1.5 mm, obtuse at apex. *Stamens* c. 2.5 mm long, inserted just below the throat of the corolla, filaments subulate, c. 1.5 mm long, attenuate at tips, anthers ovoid, c. 1 mm long, basifix. *Staminodes* lanceolate, c. 1.5 mm long, inserted in the throat of the corolla, dentate at apex. *Ovary* subglobose, c. 2.5 by 2 mm, 5-lobed, 5-celled, densely yellowish villous, ovules inserted in upper half of cells; style cylindrical, c. 4.5 mm long, glabrous, minutely grooved. *Fruits* olivaeformis, c. 3.5 cm long, attenuate at either end, pericarp purple, glabrous; seeds not seen, albumen none, f. Baehni.

Lectotype specimen: *Balansa 3148* in P.

Distr.: New Caledonia.

NEW CALEDONIA. Mt Humboldt, on lateritic soil, alt. c. 500 m: *Balansa 1829* (L, P), fr.; on volcanic hills situated between Canala and Couaoua: *Balansa 3148* (P), shrub 3—4 m high, on lateritic hills near Ouroué, near mouth of Dothio: *Balansa 3463* (P), reduced to a shrub 2—3 m; between Thio and Houailou: *Fetscherin s.n.* (P), fl.; Kanala, on lateritic hills: *Vieillard 2888* (K, P), fl.; Massif Tiebaghi, near Paagoumene: *Däniker 1480* (Z), fl. May.

Remarks: As no type specimen has been indicated by Baillon out of the material mentioned by him *Balansa 3148* has been chosen as the type specimen of this species.

17. *P. ? grandifolia* (Wallich) Baehni, 1942, 332 — *Sideroxylon grandifolium* Wallich in Roxb., Fl. Ind. ed. Carey, 2, 1824, 348; A. DC, Prodr. 8, 1844, 178; Kurz, Fl. Brit. Burma 2, 1877, 117; Engler, Engl. Bot. Jahrb. 12, 1890, 517; idem, Engler & Prantl, Nat. Pfl. Fam. 4, 1, 1897, 144 — *Planchonella grandifolia* (Wallich) Pierre, Not. bot. Sapot., 1890, 36 — *Lucuma grandifolia* (Wall.) Dubard, Ann. Mus. col. Marseille 20, 1912, 19 — *Sideroxylon regium* Wallich, Cat., 1831, nr 4156, p.p., nomen — *Planchonella kerrii* Fletcher, Kew Bull. 1937, 371 — *Pouteria ? kerrii* (Fletcher) Baehni, l. c. 313.

Lofty tree, c. 30 m. Branchlets terete, c. 4 mm in diam., greyish when dry, wrinkled, tips sparsely yellowish puberulous, glabrescent, terminal buds conoid, c. 4 mm long, glabrous. *Leaves* subconferted near ends of branchlets to scattered, oblong-obovate, 5—21 by 3.5—9.5 cm, apex obtusely acuminate, rarely rounded to obtuse, acumen 2—10 mm long, angle of leafbase less than 90°, base slightly tapering into petiole; thin-coriaceous, glabrous on either side, olivaceous to brown olivaceous and nitidous above, olivaceous and dull below; midrib impressed and minutely crested above, strongly prominent below, reddish-yellow or yellowish, secondary nerves (3—)6—12, ascending at an angle of 45°—55°, straight, but curved near margin and diminishing until inconspicuous, prominulous above, prominent below, tertiary nerves mutually parallel, subtransverse, distinct on either side; petioles 1.5—4 cm long, flat above, rounded below, glabrous. *Flowers* in 3—10-florous, axillary clusters; pedicels 2—3 mm long, slender to rather stout, yellowish tomentose. *Sepals* orbiculate to broadly ovate, 2.5—3 by 2.5—3 mm, apex rounded to broadly ovate, connate at base, outer ones yellowish tomentose without, glabrous within, inner ones membranous and with a fimbriate-lacerate margin, yellowish tomentose in the middle only, glabrous within. *Corolla* 2.5—4.5 mm long, tube 1—3 mm long, lobes trapezoid, 1 by 1.5 mm, apex truncate. *Stamens* 1—1.5 mm long, inserted just below the throat of the corolla, filaments slender, 0.5—1 mm long, attenuate at apex, anthers ovoid, c. 0.5 mm long, basifix. *Staminodes* linear, c. 1 mm long, subacute, inserted in the throat of the corolla. *Ovary* conoid, c. 1 by 1 mm, yellowish villous, with a densely yellowish villous disk, ovules inserted in lower half of cells, style rather stout, cylindrical, c. 2.8 mm long, stigma inconspicuous. *Fruit* not seen, but according to Kurz globular, the size of an apple, umbonate, smooth, yellow, later brown.

Type specimen: *Wallich 4155* in K.

Distr.: Assam, Burma, Siam.

ASSAM. Khasia mountains, alt. 900 m: *Hooker & Thompson s.n.* (K, L, P), large tree, June; Silhet: *Wallich 4155* (BM, K, L, LAE, P), fl.; Cachar: *Keenan s.n.* (K).

BURMA. Martaban, in hills between Beeling and Sittang, f. Kurz.

SIAM. Ao-Luk, Krabi, on limestone hill, alt. 100 m: *Kerr 1937?* (K), tree, fl. March.

18. *P.? celebica* Erlee, nov. sp. — *Pag. 502 and f. 7.*

Medium sized trees, 8 m high. Branchlets terete, c. 5 mm in diam., glabrous. *Leaves* scattered along branchlets, broadly lanceolate, 11—20.5 by 5—6 cm, apex acute to faintly acuminate, acumen c. 5 mm long, angle of leafbase less than 90°, base decurrent; firmly coriaceous, when young ferruginously tomentose on either side, adult ones glabrous, nitidous and brownish to olivaceous above, minutely ferruginously tomentose and glabrescent below; midrib flat above, minutely crested, prominent below, secondary nerves 12—14, ascending at an angle of 50°—60°, straight, curved near margins and distinctly archingly joined by some thickened tertiary nerves, impressed and hardly visible above, prominent below, tertiary nerves laxely reticulate, impressed and hardly visible above, prominulous below; petioles c. 2 cm long, flat above, rounded below, brownish puberulous on either side, glabrescent. *Flowers* in 2—6-florous axillary clusters; pedicels 5—9 mm long, brownish puberulous. *Sepals* rotundate, c. 5 by 5.5 mm, apex obtuse, connate at base, coriaceous, brownish puberulous without, glabrous within. *Corolla* in bud 3.5—4 mm long, tube less than 1 mm long, ferruginously puberulous without, glabrous within, lobes c. 2 mm broad, obtuse. *Stamens* 3—3.5 mm long, inserted near base of the tube of the corolla, filaments slender, in bud less than 1 mm long, apex attenuate, anthers oblong, 2.5—3 mm long, subbasifix. *Staminodes* lanceolate, 2—3 mm long, acuminate. *Ovary* conoid, c. 1 by 1 mm, 4—5-celled, with long brown hairs, ovules inserted in upper half of cells, contracted into the short style which is brownish puberulous, furrowed and with pistillum c. 7 mm long. *Fruits* unknown.

Type specimen: *Kjellberg 2325* in S.

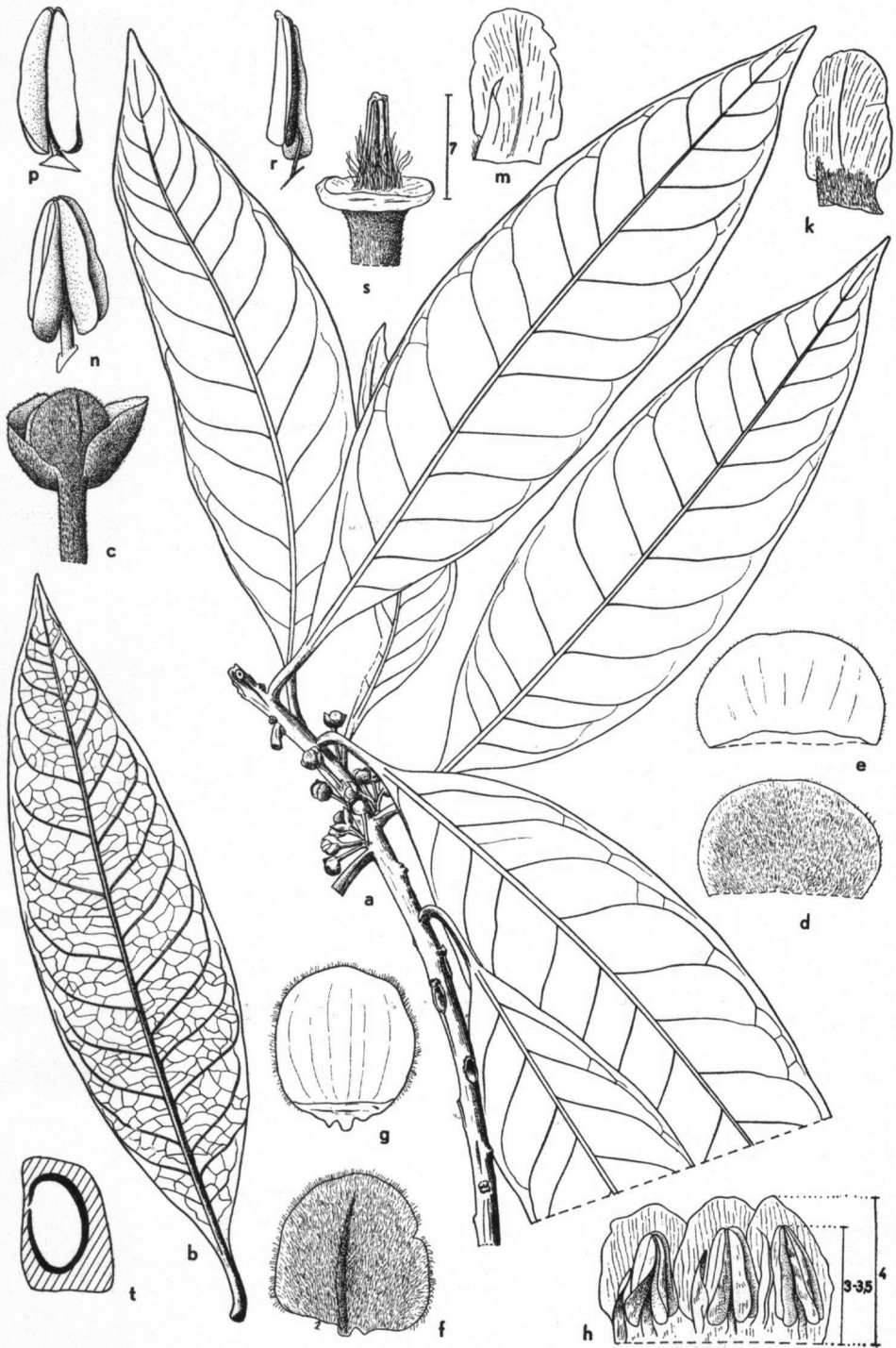
Distr.: Celebes.

CELEBES. Central Celebes, Nuna distr., B. Wawu, Meusa, in rain forest, alt. 800 m: *Kjellberg 2325* (BO, S), tree 8 m, fl. Sept.

19. *P. villamilii* (Merrill) Baehni, 1942, 318 — *Sideroxyton villamilii* Merrill, Phil. Journ. Sc. 10, 1915, 59; idem, Enum. Phil. Fl. Pl. 3, 1923, 287.

Trees, up to 30 m. Branchlets terete, 2—5 mm in diam., dark reddish-brown when dry, sparsely brownish pubescent on tips only, glabrescent. *Leaves* scattered, oblong to lanceolate, sometimes ovate, 4.5—22 by 1.5—6.5 cm, apex acuminate or obtusely to acutely acuminate, angle of leafbase less than 90°, base shortly decurrent; thin coriaceous, brown olivaceous and nitidous above, somewhat dull below; midrib flat above, minutely crested, prominent below, secondary nerves 7—10, ascending at an angle of 40°—50°, slightly curved, reticulate near margins or diminishing until inconspicuous, prominent on either side, tertiary nerves distinct on either side. laxely reticulate, near margins subtransverse; petioles 1.5—3 cm long, flat to shallowly canaliculate above, rounded below, minutely brownish pubescent on either side, glabrescent. *Flowers* in up to 7-flowered, axillary clusters; pedicels c. 4.5 mm long, sparsely brownish pubescent. *Sepals* 5 or 6, ovate to broad-ovate, c. 2 by 1.5 mm, apex rounded, connate at base, sparsely brownish to ferruginously pubescent without, glabrous within.





*Corolla* in bud c. 2 mm long, brownish puberulous within, glabrous within, tube c. 1 mm long, lobes orbiculate, c. 1 by 1 mm, truncate. *Stamens* c. 0.5 mm long, inserted just below the throat of the corolla, filaments very short, subulate, anthers ovoid, subbasifix. *Staminodes* linear, c. 0.5 mm long, inserted in the throat of the corolla. *Ovary* globose, densely covered with ferruginous stiff hairs; style cylindrical, truncate, glabrous, minutely ribbed. *Fruits* depressedly globose (f. Merrill), up to 4.5 cm in diam. when dry, glabrous, pericarp thick; seeds 5, ovoid, laterally compressed, c. 3 by 1.5 by 0.8 cm, carinate at back, testa thick, c. 2 mm, yellowish, nitidous, scar narrow, c. 2 by 0.5 cm, embryo not seen.

Type specimen: *FB 19762* in PNH.

Vern. name: duclitan (Tagan).

Distr.: Philippines.

PHILIPPINES. Luzon, prov. Bataan, Lamao river, in hill forests: *Borden 291* (UC), large tree, fr. Febr.; ibidem: *Borden 1903-4* (UC), fr.; ibidem, Mt Mariveles: *Meyer 2580* (BO, SING), fr. Febr.; prov. Laguna, Mt Maquiling: *Villamil 20604* (P); fl. Sept.; ibidem: *FB 19762* (PNH), fl. & fr.; without loc.: *Mabesa 26322* (A, K), fr. Dec.

20. *P. macrantha* (Merrill) Baehni, 1942, 328 — *Sideroxylon macranthum* Merrill, Phil. Bur. Gov. Bull. 35, 1905, 56; Enum. Phil. Fl. Pl. 3, 1923, 286 — *Lucuma macrantha* (Merrill) H. J. Lam, 1925, 225; idem, 1927, 477 — *Sideroxylon stenophyllum* Merrill, Phil. Journ. Sc. 3, 1908, 258; Elmer, Leafl. Phil. Bot. 3, 1910, 870; Merrill, Enum. Phil. Fl. Pl. 3, 1923, 287 — *Planchonella koordersii* Pierre ex Koorders, Med. 's Lands Plantentuin 19, 1898, 519, *nomen nudum* — *Lucuma dolichosperma* H. J. Lam, 1925, 223, f. 60.

Large trees, up to 40 m high. Branchlets terete, 2–6 mm in diam., brownish grey when dry, ferruginously or brownish puberulous at tips only, glabrescent, terminal buds conoid, c. 4 mm long, densely ferruginously puberulous. *Leaves* crowded at tips of branchlets, juvenile ones lanceolate, densely ferruginously puberulous on either side, adult ones obovate-oblong or obovate-lanceolate, (3.5–)10–24(–29) by 2–10 cm, apex abruptly narrowing and sometimes long acuminate, acumen 2–10 mm long or apex bluntly acuminate, sometimes very slightly so, sometimes apex also rounded to obtuse, angle of leafbase less than 90°, base narrowed; chartaceous to thin coriaceous, first sometimes ferruginously puberulous on either side, ultimately becoming glabrous, rarely ferruginously puberulous along midrib and secondary nerves, nitidous above, dull below; midrib impressed and minutely crested above, prominent below, secondary nerves 8–12(–17), ascending at an angle of 45°–65°, slightly curved, reticulate near margins or diminishing until inconspicuous, sometimes distinctly archingly joined by some thickened tertiary nerves, impressed to prominulous above, prominent below, tertiary nerves distinct on either side, irregularly reticulate or longitudinally stretched or nerves sometimes more or less transverse and,

Fig. 7. *P. ? celebica*, a. branchlets with leaves and flowers, b. leaf showing secondary and tertiary nerves, c. flower, d. outer sepal, outside, e. idem, inner side, f. inner sepal, outside, g. idem, inner side, h. part of corolla showing stamens and staminodes, k. corollalobe, outside, m. idem, inside, n, p, r. stamens, s. pistillum, t. part of ovary with ovulum. (from *Kjellberg 2325*).

mutually parallel at least near margins; petioles 1.5—4.5 cm long, flat above, rounded below, densely ferruginously tomentose, glabrescent. *Flowers* in 5—9-flowered, axillary clusters; pedicels 3—6 mm long, rather stout, yellowish hirsute. *Sepals* ovate to suborbiculate, 4.5—5 by 4.5—5 mm, apex obtuse, connate at base, yellowish puberulous without, sericeous within, the inner ones with membranous, fringed margins. *Corolla* 4—5 mm long, tube 2—3 mm long, lobes suborbiculate, c. 2 by 2 mm, rounded to obtuse, truncate. *Stamens* c. 1.5 mm long, inserted just below the throat of the corolla, filaments slender, less than 0.5 mm long, anthers ovoid, c. 1 mm long, sub-basifix. *Staminodes* linear, c. 1 mm long, subacute, inserted in the throat of the corolla. *Ovary* subglobose, c. 1 by 1.5 mm, with a cupuliform disk, the whole densely ferruginously villous, ovules inserted near the bottom of the cells; style 2—3 mm long, cylindrical, yellowish sericeous at base, glabrous towards the top, minutely ribbed, truncate. *Fruits* globose and then 3.5—4.5 cm in diam. when dry or ovoid to oblong and then 4.8—6.5 by 3.3—4.5 by 1—1.5 cm, ferruginously puberulous, 5-celled, pedicel c. 1 cm long, c. 6 mm in diam.; seeds 2—4, ovoid or oblong, more or less laterally compressed, 2—5 by 1—2 by 0.9—1.3 cm, carinate at back, testa brown, nitidous, thick, scar oblong, narrow, acute at both ends, 2—4 by 0.4—0.9 cm, cotyledons thick, radicle exserted, albumen none, (f. Lam membranous, surrounding the embryo).

Type specimen: *Borden 2741* in PNH.

Vern. names: daranau (Mindoro); sasangkalan (Celebes); soeing (Amboina).

Distr.: Philippines, Celebes, Amboina.

PHILIPPINES. Luzon, prov. Bataan, Lamao river, Mt Mariveles: *Borden 2741* (BO, K, PNH, SING), fl. March; ibidem: *Barnes 51* (BO, SING); ibidem: *Borden 1809* (BO, K, SING), fr. Sept.; ibidem: *Whitford 1246* (P), fl. May; Lamao: *Edano 4075* (PNH), fr. Nov.; without loc.: *Alvarez 12955* (NSW) — prov. Tayabas, Pagbilao: *Merrill 2608* (BM, L, NSW), fl. April/May — prov. Camarines, Norte, South Tarum, Bo Pambuhan (Daet), c. 50 m from beach, alt. c. 5 m: *Arizabal 50498* (UC), tree 10 m, fr. round, green, April; without loc.: *Ramos 2079* (BM, BO, BRI, L, P, SING), fr. Dec.; ibidem: *Alvarez 23702* (A, BM, P), fl. March — prov. N. Ecijs, Bongabon: *Vidal 439* (K), fl. — prov. Isabela: *Clemens 16617* (UC), tall forest tree, fr. green, apple-like, April — Mindoro, Mansalay, Mt Yagaw: *Conklin 17450* (L), fl. March; Paluan: *Ramos 39560* (A, BM, BO, L, P), fl. April; ibidem, Bo. Manual, South Warvan, forest near bank of Warvan river: *Sulit 17089* (L, PNH), tree 20 m, fr. green, Dec.; without loc.: *Merritt 8626* (K), fr. Jan.; ibidem: *Merrill 9833* (NSW, SING), fl. Febr.—April Sibuyan, prov. Capiz, Magallanes, Mt Giting-giting: *Elmer 12411* (A, BM, BO, FI, L, NSW), juv. fr. May — Balabac, Mt Counayan, in swampy forest: *Ramos & Edano 49860* (UC, Z), tree 19 m, fr. green, Nov.

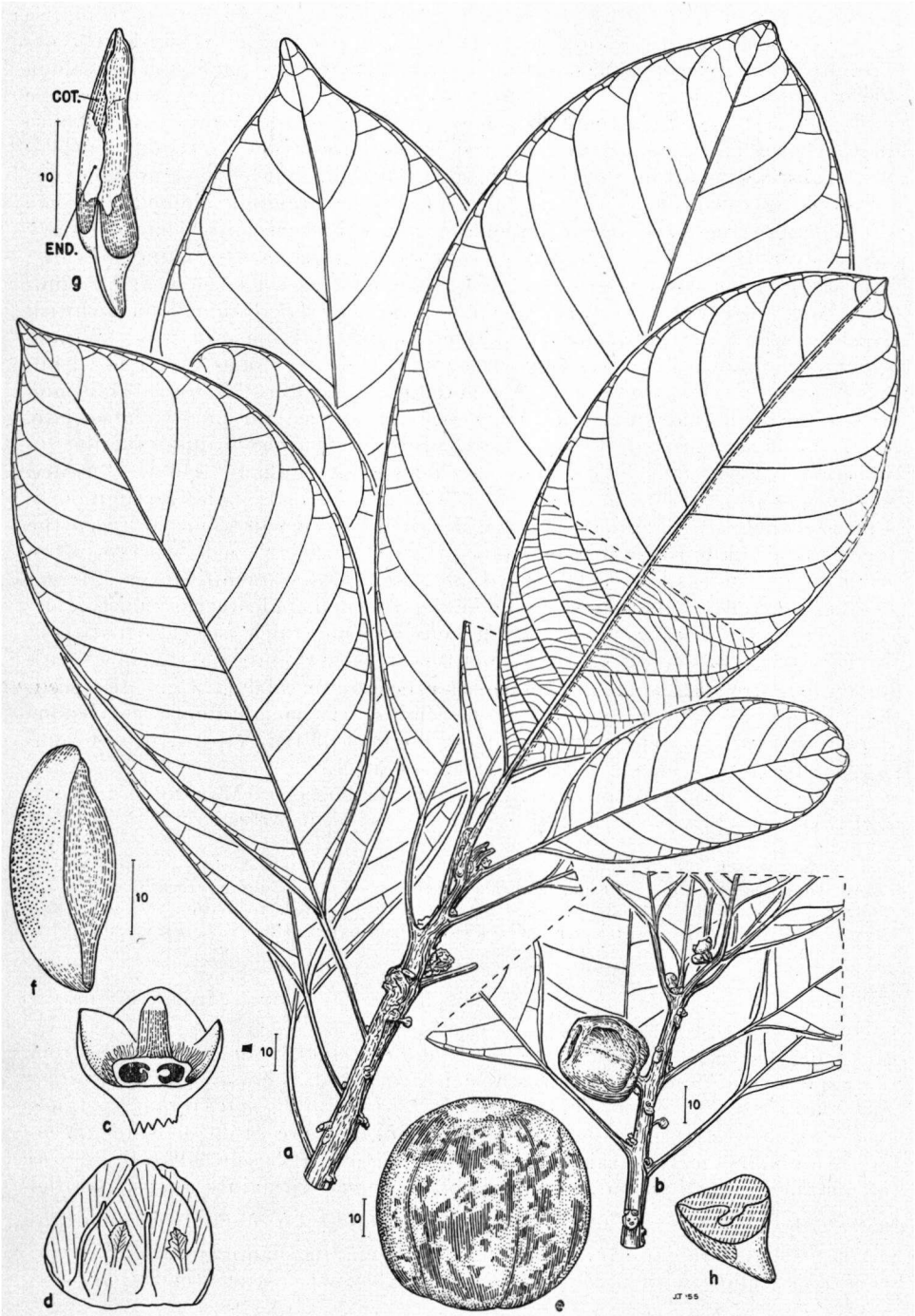
CELEBES. Minahasa, Manado, in forest near camp Pinamorongan (Kajoewatoe), alt. 500 m: *Koorders 18882*  $\beta$  (BO, L, P), tree 40 m, fr. Febr.; *Mt Pinamorongan* (Kakas), on fertile volcanic sand, alt. 500 m: *Koorders 18868*  $\beta$  (BO), tree 35 m, fr. green.

AMBOINA. Siwei, on flat sandy-clayey soil, in old forest, scattered, scanty, alt. c. 410 m: *NIFS bb 14290* (= *Malessy 16*) (BO), tree 17 m.

## 21. *P. doonsaf* van Royen, nov. sp. — *Pag. 502 and f. 8.*

Trees, up to 35 m. Branchlets stout, 3—8 mm in diam., greyish to blackish-greyish sericeous, glabrescent. *Leaves* scattered to subconferted at

Fig. 8. *Pouteria doonsaf*, a. habit, b. young fruit, c. longitudinal section of ovary, d. inner side of corolla, e. mature fruit, f. lateral view of seed, g. embryo, h. transverse section of embryo. (from van Royen 3506).



apex of branchlets, elliptic to subovate, 16—36 by 6—15 cm, apex obtuse to obtusely acuminate, acumen 2—12 mm, base cuneate, very shortly decurrent; subcoriaceous, glabrous on either side except sparsely hairy along lower surface of midrib, nitidulous above, dull below; midrib grooved above and minutely crested, prominent below, in the largest leaves crested above in the basal part only, with scattered white hairs below, secondary nerves 9—15, ascending at an angle of c. 60°, straight but curved at the tips, diminishing until inconspicuous near margin or archingly joined by some thickened tertiary nerves, canaliculate above, prominent below, tertiary nerves transverse, very often curved, prominulous above, prominent below; petioles 1.5—5 cm long, grooved above, greyish sericeous below and rounded. *Flowers* 1 or 2 per axil; pedicels angular, 2—3 mm long, whitish green sericeous. *Sepals* broadly deltoid to ovate, 1.5—2.5 by 1—1.5 mm, subobtuse, yellowish sericeous on either side, the inner ones glabrous within in the basal part. *Corolla* 2—3 mm long, lobes 1.5—2.5 by 1—1.5 mm, deltoid to ovate, subobtuse. *Stamens* seen in reduced form only, lanceolate, c. 1 mm long, inserted near base of corolla. *Staminodes* quadrangular to spatulate, c. 0.8 mm long, apiculate, margin irregularly dentate, crested within. *Ovary* disciform, c. 1 by 1.5 mm, 5-celled, pale ferruginously strigose, abruptly narrowing into style, ovules inserted about halfway the placenta, pendulous; style conoid, c. 1 mm long, grooved, with 5 white stigmas, in fruit slightly thickened at base. *Fruits* pomiform, 5—10 cm in diam., green in vivo, apex rounded, 1—3-seeded, pale ferruginously floccose, glabrescent, pericarp spongy, ligneous, c. 3 mm thick; seeds boat-shaped, 5—7 by 2.5—3.5 by 2—2.5 cm, obtuse at either end, pale yellow with numerous brownish spots, nitidous, scar occupying about  $\frac{1}{3}$  of the seed, 4.5—6.5 by 2—2.5 cm large, whitish, endosperm membranous, cotyledons thick and fleshy, radicle acute, exserted. Pedicel of fruit up to 10 by 6 mm.

Type specimen: *van Royen 3506* in L.

Vern. name: doonsaf (Biak dialect); boeboeb (Manikong dialect).

Distr.: New Guinea.

NEW GUINEA. Western New Guinea, distr. Radjah Ampat, Sorong, behind Forest Department, alt. c. 10 m, in *Eugenia* forest on slope along creek: *van Royen 3506* (L), tree 17 m, fl. buds green, fr. green with brownish tomentum, March, white latex, trunk smooth greyish; distr. Manokwari, Oransbari: *BW 1137, 1927, 2076* (L), tree 27—35 m, fl. fr. Sept./Nov.

Remarks: The specific epithet has been derived from the native name of this tree.

This species is closely related to *Pouteria macrantha* but differs from that species in numerous details which are listed below:

Number of flowers in each axil 1 or 2 (5—9 in *P. macrantha*), petioles grooved above (flat), leaves more often elliptic (more often obovate-lanceolate), secondary nerves straight (curved), angle of leaf base c. 90° (70°—90°), tertiary nervation perpendicular to secondary nerves (mainly almost parallel to secondary nerves). Flowers ♀ and ♂ (and ♂?), staminodes quadrangular to spatulate (linear), fruit up to 10 cm in diam. (up to 6.5 cm), seeds pale yellow with brownish spots (dark brown), scar broad (narrow).

22. *P. sylvatica* Baehni, 1942, 294 — *Lucuma sessiliflora* White, Proc. Roy. Soc. Qld 47, 1936, 68, non *Pouteria sessiliflora* (Sw.) Poir., Baehni, 1942, 248.

Small trees. Branchlets terete, c. 3 mm in diam., densely ferruginously tomentose at tips only, glabrescent, terminal buds conoid, c. 4 mm long, ferruginously tomentose. *Leaves* scattered, subobovate, 4—8 by 2—3.8 cm, shortly and bluntly acuminate, acumen c. 2 mm long, sometimes rounded to obtuse, angle of leafbase less than  $90^\circ$ , base slightly decurrent; chartaceous to thin coriaceous, first densely ferruginously tomentose on either side, ultimately glabrous and nitidous, brownish when dry above, densely ferruginously tomentose and glabrescent below; midrib impressed above, prominent below, secondary nerves 3—6, ascending at an angle of  $50^\circ$ — $60^\circ$ , slightly curved, near margins diminishing until inconspicuous above, prominulous below, tertiary nerves irregularly reticulate or indistinctly transverse, rather inconspicuous at either side; petioles c. 1 cm long, shallowly canaliculate above, rounded below, ferruginously tomentose on either side, glabrescent. *Flowers* solitary, axillary, sessile. *Outer sepals* ovate, c. 4.5 by 3.5 mm, subacuminate, connate at base, ferruginously sericeous on either side, the inner ones oblong, c. 6 by 3.5 mm, obtuse, with minutely and irregularly undulate membranous margins. *Corolla* c. 8.5 mm long in bud (f. White 1 cm long), tube c. 6.5 mm long, lobes c. 2 by 2.5 mm, trapezoid to truncate, slightly outwardly curved. *Stamens* inserted just below the throat of the corolla, anthers ovoid, c. 1 mm long, subsessile. *Staminodes* lanceolate, c. 1.5 by 0.5 mm, acuminate, margins submembranous. *Ovary* subglobose, c. 2 by 2 mm, densely ferruginously vil-

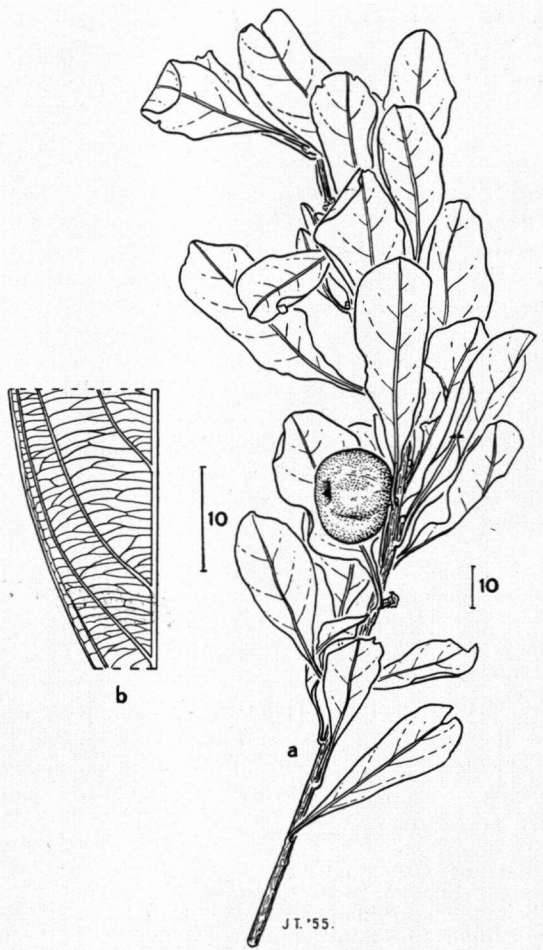


Fig. 9. *P. paucinervis*, a. branchlets with leaves and fruits, b. part of leaf showing secondary and tertiary nerves. (from *Buwalda 6503*).

lous, ovules inserted in upper half of cells; style cylindrical, c. 6.5 mm long, densely ferruginously villous up to c. 4 mm from base, stigma distinct. *Fruits* not seen.

Type specimen: *Brass 2088* in BRI.

Distr.: Australia (North Queensland).

AUSTRALIA. Queensland, Mt Demi, in high rain forest, alt. 900 m: *Brass 2088* (A, BRI, P), small tree on summit of mountain, fl. Febr.

23. *P. paucinervia* Erlee, nov. sp. *Pag. 503 and f. 9.*

Trees, up to 15 m. Branchlets terete, 2—5 mm in diam., greyish-brown, glabrous except for tips of branchlets and young leaves which are reddish-brown tomentose. *Leaves* obovate to spatulate, 4—8 by 1—3 cm, apex rounded to obtuse, angle of leafbase less than 90°, base decurrent; chartaceous, young leaves reddish-brown tomentose on either side, adult ones reddish-brown appressedly tomentose, glabrescent, sometimes underside of midrib and secondary nerves excepted; midrib impressed and minutely crested above, prominent below, secondary nerves 4—6, ascending at an angle of 30°—40°, slightly curved, near margins reticulate, sometimes archingly joined by some thickened tertiary nerves, prominulous on either side, tertiary nerves transverse, mutually parallel, prominulous on either side; petioles 3—5 mm long, flat and minutely keeled above, rounded below, reddish-brown tomentose, glabrescent. *Inflorescences* and *flowers* unknown. *Fruits* depressedly globose, 1.5—2 by 1.5—2 by 1.2—1.5 cm when dry, reddish-brown tomentose, glabrescent, sepals 5, persistent in fruit, ferruginous tomentose without, glabrous within, pedicel c. 0.5 cm long, c. 0.2 cm in diam.; seeds 4 (sometimes 5?), ovoid, c. 1.3 by 1.1 by 0.8 cm, carinate, testa thin, brownish, scar broadly ovate, c. 1 by 0.7 cm, cotyledons thick, albumen none, radicle exerted.

Type specimen: *Buwalda 6503* in L.

Distr.: Malay Peninsula and Sumatra.

MALAY PENINSULA. Johore, Siwysai Tementang, Mawai, low alt.: *Ngadiman SF 34721* (SING), tree 15 m, fr. brown, Jan.

SAMATRA. Riouw distr., uplands of Indragiri river, Muata Pedjanki, in primary forest: *Buwalda 6503* (A, BO, L, PNH, SING), fl. with white milky juice, fr. brown-green; ibidem, alt. 60 m: *NIFS bb 27490* (A, L, SING), fr. April.

Remarks: On account of the small number of secondary nerves the specific epithet *paucinervis* has been introduced.

24. *P. solomonensis* van Royen, *Blumea* VIII, 2, 1957, 427 — *Planchonella sessiliflora* White, *Journ. Arn. Arb.*, 31, 1, 1950, 108 — *Fig. 10.*

Trees, c. 27 m high. Branchlets terete, c. 3 mm in diam., glabrous (f. White near the tips minutely greyish tomentose and glabrescent), brownish when dry. *Leaves* subopposite, also along mature branchlets, oblong to lanceolate, 3.5—15 by 0.8—5.3 cm, apex bluntly acuminate, base cuneate, angle less than 90°, shortly decurrent; chartaceous to thin coriaceous, glabrous on either side, nitidous above, somewhat dull below; midrib prominulous on either side, secondary nerves 5—13, ascending at an angle of c. 50°, slightly curved, near margins diminishing until inconspicuous or sometimes archingly joined by some thickened tertiary nerves, impressed above, prominulous below, tertiary nerves minutely reticulate, nearly in-

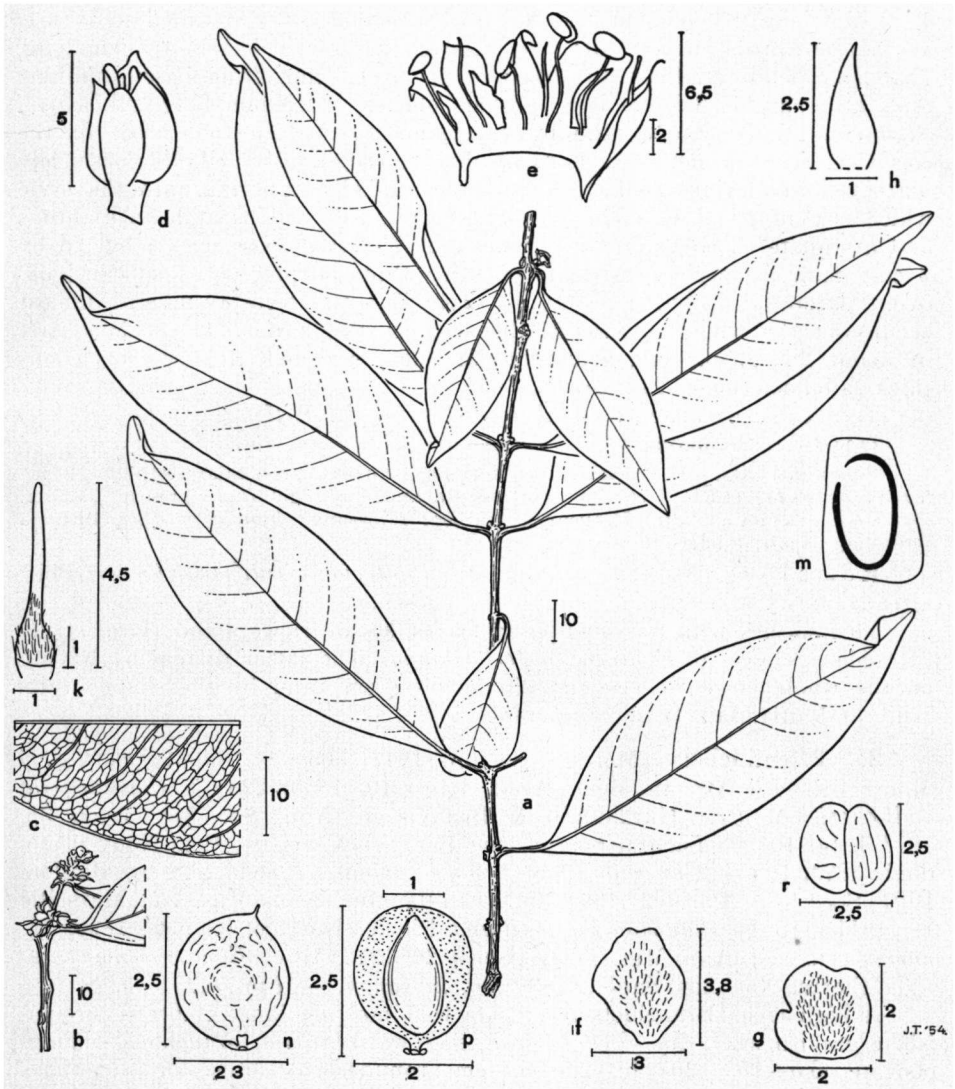


Fig. 10. *P. solomonensis*, a. branchlet with leaves, b. idem, with flowers, c. part of leaf showing secondary and tertiary nervation, d. flowerbud without sepals, e. corolla with stamens and staminodes, f. outer sepal, outside, g. inner sepal, outside, h. staminode, k. pistillum, m. part of ovary with ovulum, n. fruit, p. seed in fruit, dorsal view, r. cotyledons. (a, c, n-r. from Brass 3092, b, d-m. from Walker BSIP 327).

conspicuous above, faint below; petioles 6–10 mm long, canaliculate above, rounded below, glabrous. *Flowers* in 4–6-florous, axillary clusters, nearly sessile. *Sepals* orbiculate to ovate, 2–3.8 by 2–3 mm, apex rounded, connate at base, brownish sericeous without except for the minutely, ciliate and membranous margins, glabrous within. *Corolla* 5–6.5 cm long, tube



1—2 mm long, lobes oblong, 4—4.5 by c. 2.5 mm, apex rounded to obtuse, slightly outwards curved. *Stamens* inserted in base of tube, c. 6 mm long, filaments slender, adnate to the tube up to 1.5 mm from base, subulate, apex attenuate, c. 3.5 mm long, anthers oblong, c. 2.5 mm long, subbasifix. *Staminodes* lanceolate, 2—2.5 by c. 1 mm, inserted in the throat of the corolla. *Ovary* conoid, c. 1 by 1 mm, ferruginously villous, obscurely 5-grooved, ovules inserted in upper half of cells, tapering into the style which is cylindrical, c. 3.5 mm long, ferruginously villous at base, glabrous and attenuate at tip, stigma very minute. *Fruits* globose, c. 2.5 by 2.3 by 2 cm, glabrous, style persistent, pericarp thin, purple; seeds solitary, ob-ovoid, laterally flattened, c. 2.5 by 2 by 1.8 cm, testa thin, scar almost occupying the whole surface of the seed leaving a narrow, nitidous part of about 2.5 by 0.9 cm, acuminate at apex, rounded at base, cotyledons thick, albumen none, radicle not seen.

Type specimen: *Walker BSIP 237* in BRI.

Distr.: Solomons.

SOLOMONS. Guadalcanal: Beaufort Bay, Kimbau river, rainforest, alt. 240 m: *Walker BSIP 237* (BRI), tree 27 m, buttresses absent, but slight flutes present, fl. Febr. — San Cristoval: Star Harbour, on harbour foreshores: *Brass 3092* (BO, BRI), a spreading thickly foliaged tree, fr. green, Oct.

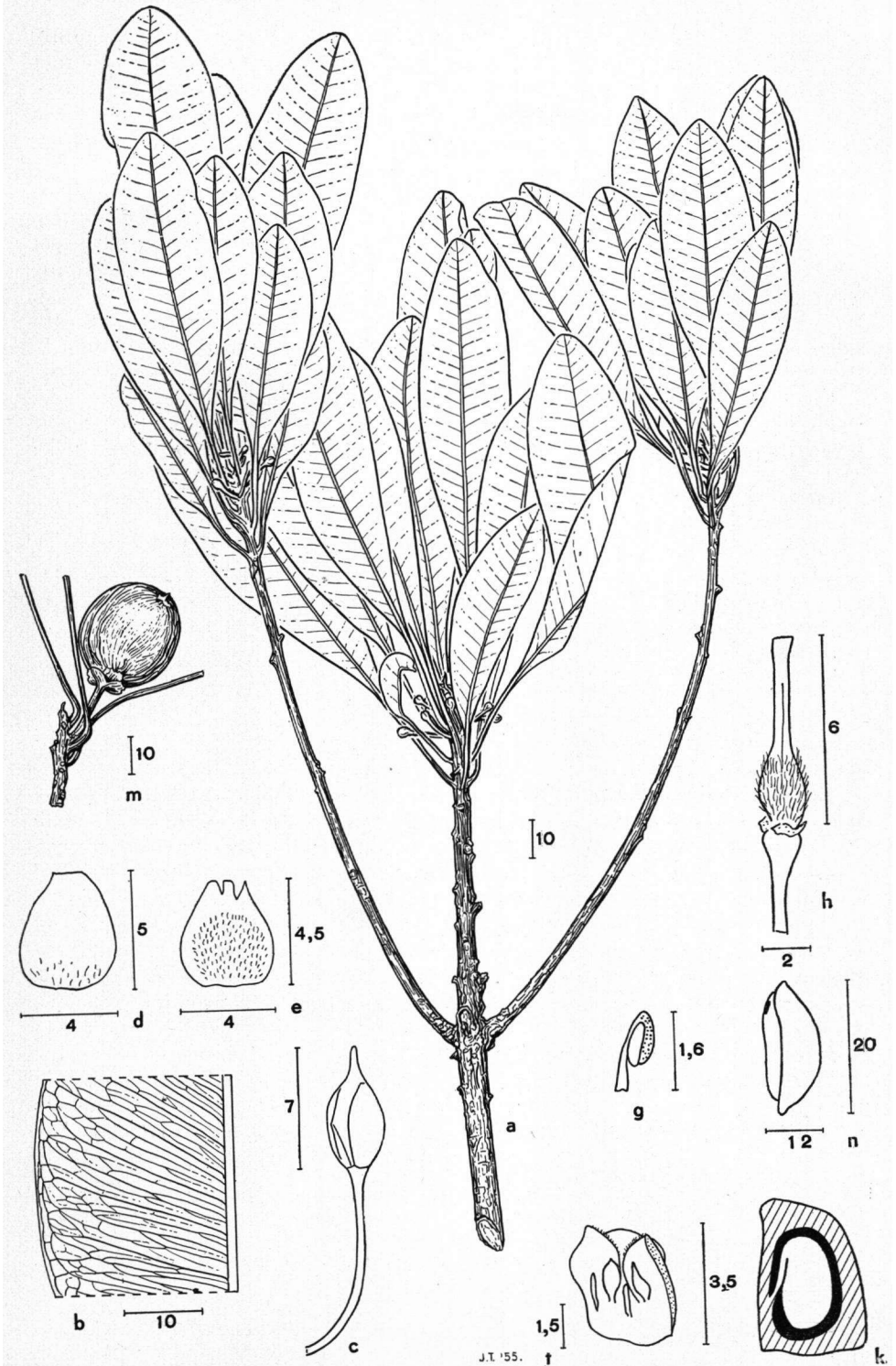
Remarks: As the combination *Pouteria sessiliflora* (Sw.) Poir. already exists a new name had to be chosen.

This species with its subopposite leaves, sessile flowers and floral structure comes closest to *Pouteria lauterbachiana*. The latter differs by having on the whole larger leaves (10—20 by 6—8 cm) and by the shape of its fruit and different fruit characters.

25. *P. endlicheri* (Montr.) Baehni, 1942, 305 — *Sapota endlicheri* Montr., Fl. Ile Art. in Mém. Acad. Lyon 10, 1860, 228 — *Planchonella endlicheri* (Montr.) Guillaumin & Beauvisage, Ann. Soc. bot. Lyon 38, 1913/1914, 101 — *Labatia macrocarpa* Pancher & Sebert, Bois Nouv. Calédonie 1874, 196 — *Chrysophyllum ? macrocarpum* (Panch. & Seb.) Baillon, Bull. Soc. linn. Paris 2, 1891, 901: Guillaumin, Ann. Mus. col. Marseille 19, 1911, 185 — *Planchonella petitiana* Pierre, Not. bot. Sapot., 1890, 36, nomen; Dubard, Ann. Mus. col. Marseille 20, 1912, 51 — *Sideroxyylon petitianum* Pierre, Not. bot. Sapot., 1890, 36, in *synon.* — Fig. 11.

A high tree. Branchlets terete, up to 7 mm in diam., glabrous, brownish to greyish when dry. *Leaves* crowded towards tips of branchlets, oblong-obovate, 6.5—15(—20) by 2.5—5.5 cm, rounded to obtuse or sometimes bluntly and indistinctly acuminate at apex, angle of leafbase less than 90°, tapering into the petiole; thin coriaceous, glabrous on either side, nitidous and olivaceous above, somewhat dull and brownish olivaceous below; midrib impressed above, prominent below, secondary nerves 20—30, ascending at an angle of 60°—85°, straight, reticulate near margins, delicate and about

Fig. 11. *P. endlicheri*, a. branchlets with leaves and flowerbuds, b. part of leaf showing secondary and tertiary nerves, c. flowerbud, d. outer sepal, outside, e. idem, inside, f. part of corolla showing stamens and staminodes, g. stamen, h. pistillum, k. part of ovary with ovulum, m. fruit, n. seed. (a. from *Cribs 1688*, b, m. from *Balansa 3466*, c-n. from *Franco 1643 A*, n. from *Vieillard 194*).



as prominent as the tertiary ones on either side, tertiary nerves mainly parallel to the secondary ones, reticulate near margins, faint on either side; petioles 2.5—3.5(—4.5) cm long, flat above, rounded below, glabrous. *Flowers* solitary or 2 per axil, in bud c. 7 mm long; pedicels 1—1.6(—3—4) cm long, glabrous, grooved. *Sepals* ovate, 4.5—5 by c. 4 mm, rounded to obtuse at apex, connate at base, outer ones glabrous on either side, inner ones minutely appressedly yellowish sericeous without, glabrous within, persistent in fruit. *Corolla* in bud c. 3.5 mm long, sometimes absent, tube c. 1.5 mm long, lobes ovate, c. 2 by 2 mm, rounded at apex. *Stamens* inserted just below the throat of the corolla, in bud c. 1.6 mm long, filaments subulate, c. 1.5 mm long, attenuate at apex, anthers oblong, c. 1 mm long, subbasifix. *Staminodes* inserted in the throat, petaloid, c. 1.3 mm long (f. *Baehni* sometimes absent). *Ovary* conoid, c. 2 by 2 mm, densely ferruginously villous, 4—5-celled, ovules inserted in lower half of cells; style cylindric, c. 4 mm long, attenuate at apex, grooved, glabrous. *Fruits* ovoid to globose, sometimes obovoid, 3—3.5 by 2.8—3 by 2—2.3 cm when dry, pointed at apex by the persistent style, glabrous, brownish to olivaceous, pericarp thick; seeds 3(—5), ellipsoid, laterally flattened, c. 2 by 1.2 by 0.8 cm, testa 1—2 mm thick, yellowish or brownish, scar oblong, c. 1.8 by 0.4 cm, cotyledons ovoid, albumen membranous.

Type specimen: *Moutrouzier 137* in P.

Vern. name: azou.

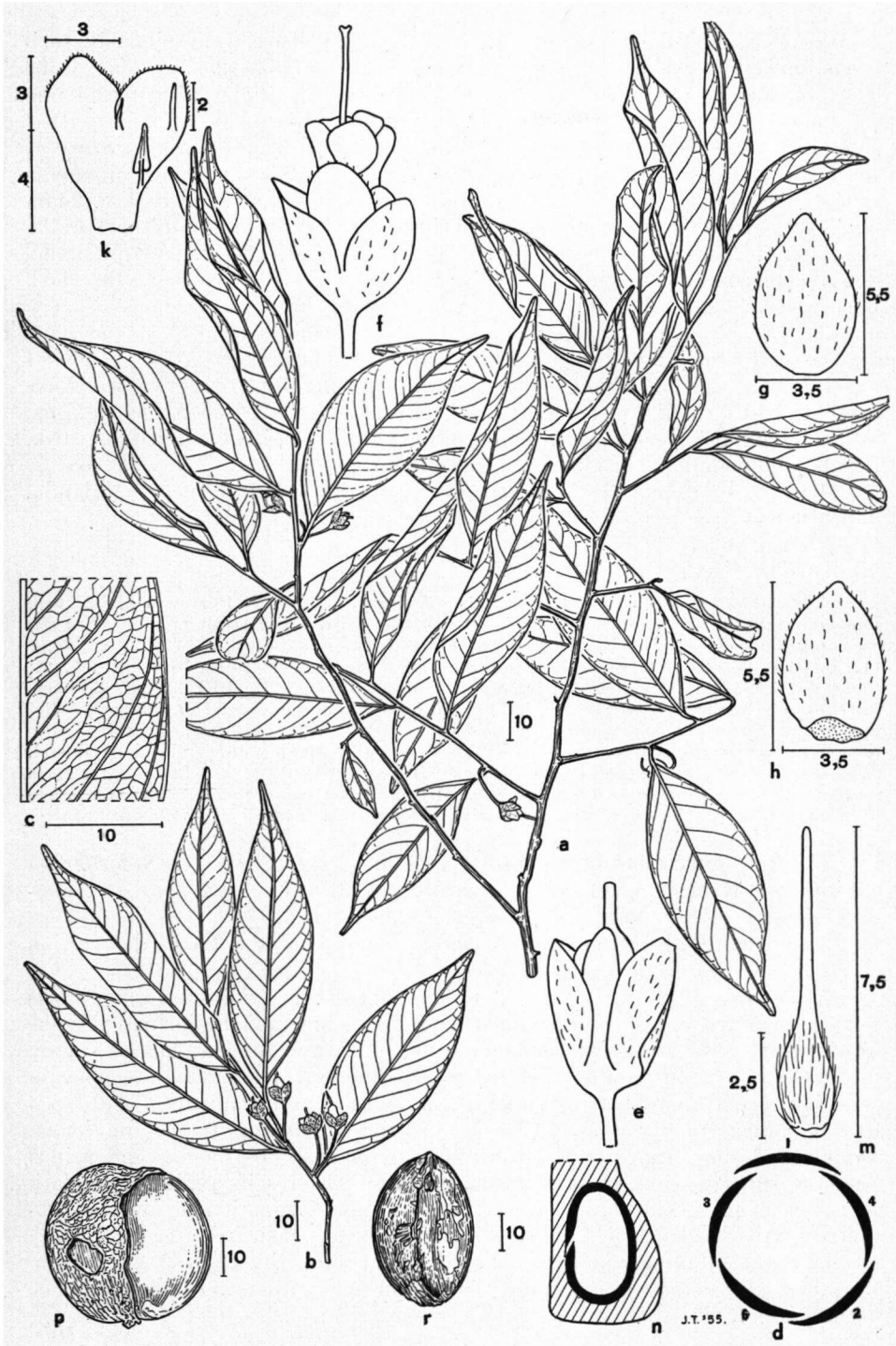
Distr.: New Caledonia.

NEW CALEDONIA. Mt Dore: *Vieillard 194* (P), tree, fr.; Prony, seashores, on lateric soil: *Cribs 1688* (P), tree, fl. white, Aug.; Yakoné: *d'Aleizette 571 NC* (P), fl. Aug.; forest situated above basin of Dothio: *Balansa 3466* (P), fr. Jan.; in moist forest, Dothio river: *Franco 1643 A* (P), tree, fr. pulpy, fl. Jan.; basis of Mont d'Or: *Hennecart 226* (L), tree 5—6 m, fr. July; without loc.: *Petit 19* (P), fr.; ibidem: *Pancher N.C. 564* (P), tree 6 m, fr. July; ibidem: *Roberts 4* (MEL, P); ibidem: *Baumann 15201* (Z), fr. Aug. — Ile Art, without loc.: *Montrouzier 137* (P), fl.

26. *P. castanosperma* (White) Baehni, 1942, 295 — *Chrysophyllum castanospermum* White, Qld Dept. Agric. Bot. Bull. 21, 1919, 12 — *Lucuma castanosperma* (White) White & Francis, Proc. Roy. Soc. Qld 35, 1923, 74 — Fig. 12.

Medium sized trees, up to 15 m high. Branchlets terete, 2—4 mm in diam., glabrous (f. *Baehni* reddish puberulous). *Leaves* lanceolate, 2.5—12 by 0.5—5 cm, apex tapering acuminate, acumen 5—10 mm long, angle of leafbase less than 90°, base narrowed into petiole; chartaceous, glabrous and nitidous on either side; midrib impressed above, prominent below, secondary nerves c. 10, ascending at an angle of 50°—60°, straight but curved and reticulate near margins, delicate, about as prominent as tertiary ones, tertiary nerves parallel to secondary nerves, reticulate near margins; petioles 3—5 mm long, glabrous. *Flowers* in 2—3-florous axillary clusters or solitary; pedicels 10—18 mm long, glabrous. *Sepals* broadly ovate,

Fig. 12. *P. castanosperma*, a, b. branchlet with leaves and flowers, c. part of leaf showing secondary and tertiary nerves, d. diagram of calyx, e. flowerbud, f. flower, g. outer sepal, outside, h. idem, inside, k. corolla with stamen and staminode, m. pistillum, n. part of ovary, longitudinal section, p. fruit, r. seed, ventro-lateral view. (a—c, f, k, p, r. from *Brass 2236*, d, e, g, h, m, r, p. from *White s.n.*).



c. 5.5—7 by 3.5—5.5 mm, obtuse, connate at the base, ferruginously sericeous on either side, persistent in fruit. *Corolla* 7—12 mm long, tube c. 4 mm long, constricted about the middle, lobes rotundate-ovate, c. 3 mm in diam., rounded to obtuse, margins minutely ciliate, glabrous on either side (f. White, corolla tube hirsute inside towards the base). *Stamens* inserted well below the throat of the corolla, c. 2.5 mm long, filaments slender, less than 1 mm long, attenuate towards tips, anthers ovoid, c. 2 mm long, subbasifix. *Staminodes* inserted just below the throat of the corolla, subulate, c. 2 mm long, acute. *Ovary* 5-lobed, conoid, 1.5—2.5 mm in diam., densely ferruginously villous, ovules laterally attached; style cylindrical, narrowed at apex, 7.5—11 mm long, persistent in fruit, stigmas 5, very minute. *Fruits* ovoid or subglobose, 3—4 by 1.5—4.5 by 1.5—3 cm when dry, pericarp purple or becoming bluish-black, glabrous; seeds 1 or 2, 2.5—4 by c. 3 by c. 2.5 cm, oblong when solitary, subangular when two seeds are present, testa thick, nucamentaceous, scar oblong, 1.5—3.5 by c. 1.2 cm, hilum irregularly verruciform, embryo oblong and angular, cotyledons thick, fleshy, albumen none, radicle not prominent.

Type specimen: *White s.n.* in BRI (found near Malanda, Jan. 1918).

Vern. name: milky plum.

Distr.: Australia (Queensland).

AUSTRALIA. Queensland, Cook distr., Mossman river, in regrowth along roadside on N. bank, alt. c. 6 m: *Smith & Webb 4014* (BRI, L), small tree, c. 6 m, fr. becoming bluish black, Sept.; Boonjee, near Malanda, in rain forest, alt. c. 720 m: *Blake 15228* (BRI), small tree, fr. immature, green, Aug.; Malanda, in rain forest, alt. 720 m: *Blake 15174* (BRI), small shrub, fr. Aug.; ibidem: *White s.n.* (BRI), type specimen, fl. fr. Jan.; Gadgarra: *White 1578* (BRI), fr. March — Atherton district: *Carry s.n.* (BRI), juv. fr.; Atherton Tableland, Boonjee: *White s.n.* (BRI), juv. fl. Jan.; Daintree river, fringes of rain forest: *Brass 2236* (A, BRI, P), small tree, fl. March; head of Russell river waters, Par. Bartle Frère, alt. 540 m: *Fraser 51* (BRI), fr.; Lake Barrine, in rain forest, alt. 500 m: *Kajewski 1350* (A, BRI, P, S, SING, Z), small sized tree up to 15 m, fr. dark purple when ripe, oval with a long spike from base, fr. Nov.

27. *P. ? garcinioides* (Krause) Baehni, 1942, 338 — *Sideroxylon garcinioides* Krause, Engl. Bot. Jahrb. 58, 1923, 477 — *Lucuma garcinioides* (Krause) H. J. Lam, 1932, 568, t. 129.

As no material of this species could be obtained the Latin description given by Krause is reproduced here:

Arbor erecta 20—25 m alta ramis subteretibus validiusculis glabris cortice brunneo vel griseo-brunneo ruguloso obtectis. Foliorum petiolus supra applanatus atque late canaliculatus 8—15 mm longus; lamina rigida subcoriacea utrinque glaberrima in vivo pallide viridis nitida late obovata vel obovato-spathulata rarius subelliptica apice acumine abrupto acuto 8—10 mm longo praedita, basin versus cuneatim angustata, 1.5—2 dm longa, usque ad 1 dm lata, nervis lateralibus primariis 14—18 adscendentibus utrinque subaequaliter prominentibus percursa. Flores in axillis fasciculati, 6—8 mm longe pedicellati; calycis laciniae 3—3.5 mm longae ovatae subacutae extus densiuscule pilosae intus glabrae, basi breviter connatae; corolla atque stamina nondum nota; ovarium subturbinatum 2 mm altum pilosum stilo glabro aequilongo coronatum. Fructus obovoideo-globosus, siccus circ. 2 cm diametens, rubro-griseus.

Type specimen: *Ledermann 10728* in B.

Distr.: New Guinea.

NEW GUINEA. Northeastern New Guinea, Sepik river, near Malu, alt. 20 m: *Ledermann 10728*, ex litt., fr. Jan.

Remarks: As the type material is destroyed during the 1942 bombardment of Berlin and no other material turned up it is at the moment impossible to decide whether it represents a species of *Pouteria* or *Planchonella*.

28. *P. ? lucida* (Burck) Baehni, 1942, 410 — *Lucuma lucida* Burck in H. J. Lam, 1925, 226, f. 61; idem, 1927, 477 — *Sideroxylon ? lucidum* Burck in msc.

Trees? Branchlets terete, 2.5—5 mm in diam., glabrous, terminal bud conoid, c. 5 mm long, greyish yellowish sericeous. *Leaves* scattered, oblong-lanceolate, 12—20 by 4.5—7.5 cm, apex obtusely acuminate, acumen up to 10 mm long, base cuneate, tapering shortly into petiole; thinly coriaceous, margin undulate, glabrous and nitidulous on either side; midrib prominulous above, prominent below, secondary nerves 8—10, ascending at an angle of c. 60°, curved, archingly joined or diminishing until inconspicuous, prominent on either side, tertiary nerves transverse; few, prominulous above, prominent below; petioles 1—2.1 cm, flattened above, rounded below, glabrous. *Inflorescences* and *flowers* unknown. *Fruits* depressedly globose, up to 4.5 by 6.5 cm, 5-seeded, glabrous, pericarp thick, fleshy; seeds naviculate, 2.7—4.1 by 1.7—2.5 by 1.1—1.5 cm, albumen subcopious, cotyledons thin, radicle cylindrical, exserted.

Type specimen: *Jaheri 139* in BO.

Distr.: Kai Islands.

KAI. Toeal: *Jaheri 139* (BO, L), fl.

Remarks: According to Lam (1925, 227), the fruits which he found in the Buitenzorg herbarium belong to this species. As, however, no complete certainty exists about this relation *Lucuma lucida* Burck is provisionally inserted in *Pouteria* though the embryo described above rather point to *Planchonella*.

#### Doubtful species

1. *P. ? amieuanum* (Guill.) van Royen, nov. comb. — *Chrysophyllum amieuanum* Guillaumin, Bull. Mus. Hist. nat., sér. 2, 22, 1950, 520.

Type specimen: *Sarlin 279* in P.

Distr.: New Caledonia.

Remarks: This species closely resembles *P. wakere* but as no fruits are known it is only provisionally placed in *Pouteria*.

2. *P. ? obpyriformis* (Bailey) Baehni, Candollea 9, 1942, 412 — *Lucuma obpyriformis* Bailey, Qld Agric. Journ. 15, 1904, 493.

Type specimen: *Meston Expedition s.n.* in BRI

Distr.: Australia.

Remarks: Since no material could be obtained and no description of the embryo has been given in the original description this species is inserted here.

3. *P. ? petaloides* (H. J. Lam) Baehni, 1942, 328 — *Lucuma petaloides* (H. J. Lam) H. J. Lam, 1927, 477 — *Planchonella petaloides* H. J. Lam, 1925, 196, f. 53 (*partim*).

Type specimen: *without collector's name 24*, from Amboina, sub signo IV. D. 91 in herb. BO.

Distr.: Amboina.

Remarks: The type material is rather fragmentary and it is not certain whether this species represents a *Planchonella* or a *Pouteria*.

4. *P. ? erringtonii* (Dubard) Baehni, 1942, 416 — *Planchonella erringtonii* Dubard, Ann. Mus. col. Mars. 20, 1912, 60.

Type specimen: *Errington de la Croix 13* in P.

Distr.: Malay Peninsula.

Remarks: According to van Royen in his publication on *Planchonella* this species belongs to *Pouteria*. The material, however, is so scanty that the insertion in *Pouteria* is doubtful.

5. *Lucuma ferruginea* Zippel, in Macklot, Bijdr. Natuurk. Wetensch. 5, 1830, 178, *nomen nudum*; H. J. Lam, 1925, 232.

Type specimen: ?

Distr.: New Guinea.

Remarks: This species has never been included in *Pouteria* but as the generic name *Lucuma* has been anticipated by *Pouteria* this species therefore is transferred to *Pouteria* as well. The actual combination, however, is not made as no material is known and the name published by Zippel is a *nomen nudum*.

6. *Lucuma lanceolata* Zippel, in Macklot, Bijdr. Natuurk. 5, 1830, 178, *nomen nudum*; H. J. Lam, 1925, 232.

Type specimen: ?

Distr.: New Guinea.

Remarks: What has been stated for *Lucuma ferruginea* applies to this species as well.

7. *Lucuma tomentosa* Zippel, in Macklot, Bijdr. Natuur. 5, 1830, 178, *nomen nudum*; H. J. Lam, 1925, 232.

Type specimen: ?

Distr.: New Guinea.

Remarks: The same can be said as has been said in *Lucuma ferruginea* and *L. lanceolata*.

8. *P. ? lecardii* (Baillon) Baehni, 1942, 309 — *Planchonella lecardii* (Baillon) Guill.

Type specimen: *Lécard s.n.* in P.

Distr.: New Caledonia.

Remarks: Owing to the fragmentary material this species is difficult to place.

#### Excluded species

1. *P. anteridifera* (White & Francis) Baehni, 1942, 381 = *Planchonella anteridifera* (White & Francis) H. J. Lam, 1927, 471.
2. *P. arnhemica* (F. v. M.) Baehni, 1942, 286 = *Planchonella arnhemica* (F. v. M.) van Royen, *Blumea* VIII, 2, 1957, 397, f. 43.

3. *P. australis* (R. Brown) Baehni, 1942, 308 = *Planchonella australis* (R. Brown) Pierre, Not. bot. Sapot., 1890, 36.
4. *P. baillonii* (Zahlbr.) Baehni, 1942, 375 — *Planchonella baillonii* (Zahlbr.) Dubard, 1912, 57.
5. *P. baueri* (Montr.) Baehni, 1942, 329 = *Planchonella baueri* (Montr.) Dubard, 1912, 53.
6. *P. brachyloba* (Domin) Baehni, 1942, 341 = *Planchonella brownlessiana* (F. v. M.) van Royen, Blumea VIII, 2, 1957, 343, f. 33.
7. *P. brousmitchei* (Baillon) Baehni, 1942, 340 = *Planchonella brousmitchei* (Baillon) Dubard, 1912, 44.
8. *P. brownlessiana* (F. v. M.) Baehni, 1942, 318 = *Planchonella brownlessiana* (F. v. M.) van Royen, l. c., 343, f. 33.
9. *P. cinerea* (Pancher) Baehni, 1942, 339 = *Planchonella cinerea* (Pancher) van Royen, l. c., 281, f. 13.
10. *P. clemensii* (Lec.) Baehni, 1942, 310 = *Planchonella clemensii* (Lec.) van Royen, l. c., 375, f. 39.
11. *P. clementis* (H. J. Lam) H. J. Lam, Blumea 5, 2, 1943, 337 = *Planchonella clementis* H. J. Lam, Boissiera 7, 1943, 97.
12. *P. ? contermina* (Pierre) Baehni, 1942, 406 = *Planchonella contermina* Pierre in Dubard, 1912, 44.
13. *P. cotinifolia* (A. DC) Baehni, 1942, 377 = *Planchonella cotinifolia* (A. DC) Dubard, 1912, 56.
14. *P. densinervia* (Krause) Baehni, 1942, 342 = *Planchonella densinervia* (Krause) H. J. Lam, 1932, 562, t. 114.
15. *P. discolor* (Baillon) Baehni, 1942, 342 = *Planchonella linggensis* (Burek) Pierre, Not. bot. Sapot., 1890, 35; van Royen, l. c., 384.
16. *P. duclitan* (Blanco) Baehni, 1942, 283 = *Planchonella nitida* (Blume) Dubard, 1912, 62.
17. *P. ? dugulla* (Bailey) Baehni, 1942, 407 = *Planchonella pohlmaniana* (F. v. M.) Pierre ex Dubard, 1912, 47.
18. *P. ? eerwah* (Bailey) Baehni, 1942, 408 = *Planchonella eerwah* (Bailey) van Royen, l. c., 302.
19. *P. eluviicola* Baehni, 1942, 310 = *Xantolis boniana* (Dubard) van Royen, var. *rostrata* (Merrill) van Royen, l. c., 213.
20. *P. euphlebia* (F. v. M.) Baehni, 1942, 335 = *Planchonella euphlebia* (F. v. M.) Francis, Austr. Rainf. Trees, ed. 2, 1951, 448.  
*P. euphlebia* (F. v. M.) Baehni, var. *cryptophlebia* White, Baehni, 1942, 335 = *Planchonella euphlebia* (F. v. M.) Francis, var. *cryptophlebia* (White) van Royen, l. c., 294.  
*P. euphlebia* (F. v. M.) Baehni, var. *typica*, Baehni, 1942, 335 = *Planchonella euphlebia* (F. v. M.) Francis, var. *euphlebia*, van Royen, l. c., 293.
21. *P. firma* (Miq.) Baehni, 1942, 284 = *Planchonella firma* (Miq.) Dubard, 1912, 59.  
*P. firma* (Miq.) Baehni, var. *microcarpa* (H. J. Lam) Baehni, 1942, 285 = *Planchonella firma* (Miq.) Dubard, var. *microcarpa* (Burek) H. J. Lam, 1925, 203.  
*P. firma* (Miq.) Baehni, var. *typica* (H. J. Lam) Baehni, 1942,



- 285 = *Planchonella firma* (Miq.) Dubard, var. *firma*, van Royen, *Blumea* VIII, 2, 1957, 317.
22. *P. ? forbesii* (H. J. Lam) Baehni, 1942, 408 = *Krausella forbesii* (Moore) H. J. Lam, *Boissiera* 7, 1943, 92.
  23. *P. francii* Baehni, 1942, 301 = *Achradotypus coriaceus* (Baillon) Lec. ex Guillaumin, *Bull. Soc. bot. France* 89, 1943, 222 = ***Pycnandra ? coriacea*** (Baill.) Vink, nov. comb.
  24. *P. garberi* (Christ.) Baehni, 1942, 296 = *Planchonella linggensis* (Burck) Pierre, var. *garberi* (Christ.) van Royen, l. c., 387.
  25. *P. hochreutineri* (H. J. Lam) H. J. Lam, *Blumea* 5, 2, 1943, 337 = *Planchonella hochreutineri* H. J. Lam, *Boissiera* 7, 1943, 92.
  26. *P. howeana* (F. v. M.) Baehni = *Planchonella myrsinoides* (Cunn.) Blake in Francis, *Austr. Rainf. Trees*, ed. 2, 1951, 358.
  27. *P. ? intermedia* (Baillon) Baehni, 1942, 409 = *Chrysophyllum intermedium* Baillon, *Bull. Soc. linn. Paris* 2, 1891, 898.
  28. *P. ? kaernbachiana* (Engler) Baehni, 1942, 338 = *Planchonella kaernbachiana* (Engler) H. J. Lam, 1925, 200.
  29. *P. kaniensis* (Krause) Baehni, 284 = *Planchonella kaniensis* (Krause) H. J. Lam, 1932, 565, t. 124.
  30. *P. ? keyensis* (H. J. Lam) Baehni, 1942, 210 = *Planchonella ? keyensis* H. J. Lam, 1925, 197.
  31. *P. koghiensis* Baehni, 1942, 295 = *Planchonella dictyoneura* (Baillon) Pierre, *Not. bot. Sapot.*, 1890, 36.
  32. *P. krausei* (H. J. Lam) Baehni, 1942, 322 = *Planchonella krausei* H. J. Lam, 1932, 561, t. 108.
  33. *P. laetevirens* (Baillon) Baehni, 1942, 377 = *Planchonella laetevirens* (Baillon) Pierre in Dubard, 1912, 47.
  34. *P. lamii* Baehni, 1942, 313 = *Planchonella chrysophylloides* H. J. Lam, 1932, 566, t. 126.
  35. *P. ? lamprophylla* (Krause) Baehni, 1942, 333 = *Planchonella lamprophylla* (Krause) H. J. Lam, 1932, 564, t. 120.
  36. *P. lasiantha* (Baillon) Baehni, 1942, 324 = *Planchonella lasiantha* (Baillon) Dubard, 1912, 58.
  37. *P. ledermannii* (Krause) Baehni, 1942, 341 = *Planchonella ledermannii* (Krause) H. J. Lam, 1932, 561, t. 111.
  38. *P. lifuana* (Baillon) Baehni, 1942, 300 = *Planchonella lifuana* (Baillon) Pierre ex Dubard, 1912, 45.
  39. *P. ? macropoda* (H. J. Lam) Baehni, 1942, 410 = *Planchonella macropoda* H. J. Lam, 1932, 563, t. 117.
  40. *P. maingayi* (Clarke) Baehni, 1942, 343 = *Planchonella maingayi* (Clarke) van Royen, l. c., 413.
  41. *P. mindanaensis* (H. J. Lam) Baehni, 1942, 326 = *Planchonella mindanaensis* H. J. Lam, 1925, 207.
  42. *P. moluccana* (Burck) Baehni, 1942, 327 = *Planchonella moluccana* (Burck) H. J. Lam, 1925, 200.
  43. *P. monticola* (Krause) H. J. Lam, *Blumea* 5, 2, 1943, 337 = *Planchonella monticola* (Krause) H. J. Lam, 1932, 561, t. 112.
  44. *P. myrsinoides* (Cunn.) Baehni, 1942, 303 = *Planchonella myrsinoides* (Cunn.) Blake in Francis, *Austr. Rainf. Trees*, ed. 2, 1951, 358.

45. *P. ? nebulicola* (H. J. Lam) Baehni, 1942, 411 = *Planchonella nebulicola* H. J. Lam, 1932, 563, t. 118.
46. *P. obovata* (R. Br.) Baehni, 1942, 324 — *Planchonella obovata* (R. Br.) Pierre, Not. bot. Sapot., 1890, 36.
47. *P. ? obovoidea* (H. J. Lam) Baehni, 1942, 412 = *Planchonella obovoidea* H. J. Lam, 1925, 207.
48. *P. oxyedra* (Miq.) Baehni, 1942, 315 = *Planchonella linggensis* (Burek) Pierre, Not. bot. Sapot., 1890, 35; van Royen, *Blumea* VIII, 2, 1957, 384.
49. *P. pedunculata* (Hemsl.) Baehni, 1942, 286 = *Planchonella pedunculata* (Hemsl.) H. J. Lam & D. A. Kerpel, *Blumea* 3, 1939, 258.
50. *P. pinifolia* (Baillon) Baehni, 1942, 376 = *Planchonella pinifolia* (Baillon) Dubard, 1912, 57.
51. *P. pohlmaniana* (F. v. M.) Baehni, 1942, 334 = *Planchonella pohlmaniana* (F. v. M.) Pierre ex Dubard, 1912, 47.
52. *P. richardii* (F. v. M.) Baehni, 1942, 287 = *Planchonella laurifolia* (Rich.) Pierre, Not. bot. Sapot., 1891, 36.
53. *P. rigidifolia* (Krause) Baehni, 1942, 319 = *Planchonella rigidifolia* (Krause) H. J. Lam, 1932, 560, t. 107.
54. *P. rubicunda* (Baillon) Baehni, 1942, 331 = *Planchonella rubicunda* (Pierre) Dubard ex Guillaumin, *Ann. Mus. col. Mars.* 1911, 287.
55. *P. saligna* (Moore) Baehni, 1942, 331 = *Planchonella saligna* Moore, *Journ. Linn. Soc.* 45, 1921, 355.
56. *P. sarcospermoides* (H. J. Lam) H. J. Lam, *Blumea* 5, 2, 1943, 337 = *Planchonella sarcospermoides* H. J. Lam, *Boissiera* 7, 1943, 94.
57. *P. schlechteri* (Krause) Baehni, 1942, 293 = *Planchonella schlechteri* (Krause) H. J. Lam, 1932, 561, t. 109.
58. *P. sebertii* (Panther) Baehni, 1942, 297 = *Planchonella sebertii* (Panther) Dubard, 1912, 58.
59. *P. serpentina* (Moore) Baehni, 1942, 413 = *Planchonella serpentina* Moore, *Journ. Linn. Soc.* 45, 1921, 413.
60. *P. ? singuliflora* (White & Francis) Baehni, 1942, 316 = *Planchonella singuliflora* (White & Francis) van Royen, l. c., 345.
61. *P. sphaerocarpa* (Baillon) Baehni, 1942, 289 = *Planchonella sphaerocarpa* (Baillon) Dubard, 1912, 63.
62. *P. suboppositifolia* (H. J. Lam) Baehni, 1942, 413 = *Planchonella suboppositifolia* H. J. Lam, 1932, 565, t. 125.
63. *P. sussu* (Engler) Baehni, 1942, 315 = *Planchonella sussu* (Engler) H. J. Lam, 1932, t. 119.
64. *P. tenuipes* (Krause) Baehni, 1942, 298 = *Planchonella tenuipes* (Krause) H. J. Lam, 1932, 564, t. 123.
65. *P. torricellensis* (Schum.) Baehni, 1942, 379 = *Planchonella torricellensis* (Schum.) H. J. Lam, 1932, 562.
66. *P. velutina* (Elmer) Baehni, 1942, 380 = *Planchonella velutina* (Elmer) H. J. Lam, 1925, 215.  
*P. velutina* (Elmer) Baehni, var. *sarcocarpa* (Merr.) H. J. Lam, 1925, 381 = *Planchonella velutina* (Elmer) Baehni, var. *sarcocarpa* (Merrill) H. J. Lam, 1925, 215.  
*P. velutina* (Elmer) Baehni, var. *typica* H. J. Lam, Baehni, 1942, 381 = *Planchonella velutina* (Elmer) H. J. Lam, var. *velutina*, van Royen, l. c., 412.

67. *P. ? vieillardii* (Baillon) Baehni, 1942, 414 = *Planchonella vieillardii* (Baillon) Dubard, 1912, 58.  
 68. *P. viscosa* Baehni, 1942, 414 = *Planchonella reticulata* (Baillon) Pierre in Dubard, 1912, 45.  
 69. *P. vrieseana* (Pierre) Baehni, 1942, 336 = *Planchonella vrieseana* (Pierre) Dubard, 1912, 59.

#### Latin diagnosis of the new taxa

1. *Pouteria luzoniensis* (Merrill) Baehni, var. *papuana* Erlee, nov. var.

*Cf. pag. 463 et f. 3 m-p.*

Differt a var. *luzoniensis* petiolis brevioribus, 0.3—1 cm, corolla c. 3 mm longa, tubo c. 1.5 mm longo, lobis c. 1.5 × 1.5 mm.

*Typus: Versteegh 67 in L.*

2. *Pouteria celebica* Erlee, nov. sp. — *Cf. pag. 483 et f. 7.*

Arbor mediocris. Ramuli teretes, c. 5 mm diam. Folia sparsa lanceolata, 11—20.5 × 5—6 cm, late lanceolata, basi decurrentia, apice acute vel obtuse acuminata, coriacea, juvenilia utrinque ferrugineo-tomentosa, adulta glabra, nitida; nervi secundarii 12—14, graciles, angulo 50°—60° de costa subtus prominenti adscendentes, prope margines distincte arcuatim conjuncti; petioli c. 2 cm longi, supra deplanati, subtus convexi. Inflorescentiae 1—6-flori; pedicelli 5—9 mm longi puberuli; sepala basi connata, rotundata, 5—5.5 mm, coriacea, extus brunneo-puberula, intus glabra; corolla in flore juvenili 3.5—4 mm longa, tubo brevi, extus ferrugineo-puberulo, lobi obtusi; stamina in alabastro brevi-filamentia 3—3.5 mm longa, antherae oblongae acutae, 2.5—3 mm longae; staminodia paulo supra stamina inserta, lanceolata, acuta, 2—3 mm longa; ovarium conoideum, longe pilosum, in stylum, sulcatum gradatim contracta, 4—? 5-loculatum, ovula in loculorum parte superiore affixa. Fructus ignotus.

*Typus: Kjellberg 2325 in L.*

3. *Pouteria doonsaf* van Royen, nov. sp. — *Cf. pag. 486 et f. 8.*

Arbores, c. 17 m. altae. Ramuli crassi, 3—8 mm diam., sericei indumento canescenti vel nigro-canescenti, glabrescentes, cicatricibus albis ad 6 mm diam. Folia sparsa vel in ramulorum apicibus subconferta, elliptica ad subobovata, 16—36 × 6—15 cm, apice obtusa vel obtuso-acuminata, acumine 2—12 mm, basi cuneata brevissime decurrentia, subcoriacea, subtus in costa sparse pilosa ceterum utrinque glabra, supra nitidula, subtus opaca, costa supra canaliculata et simul minute carinata, subtus prominens, sed in foliis maximis supra in parte basali solum carinata, subtus pilis sparsis albis, nervi secundarii 9—15, sub angulo c. 60° adscendentes, erecti sed in parte apicali curvati, diminuentes et ultimo inconspicui, vel arcuatim conjuncti interdum nervis tertiariis incrassatis connecti, supra canaliculati, subtus prominentes; nervi tertiarii transversi, plerumque curvati, supra prominuli, subtus prominentes; petioli 1.5—5 cm, supra canaliculati, subtus canescenti-sericei. Flores bini vel singuli, pedicelli angulares, 2—3 mm, sericei, indumento albido-viridi, in fructu usque ad 10 × 5 mm. Sepala late deltoideo ad ovata, 1.5—2.5 × 1—1.5 mm, subobtusa, utrinque flavescenti-sericea, interiora intus in parte basali glabra. Corolla 2—3 mm, lobis

1.5—2.5 × 1—1.5 mm, deltoideis ad ovatis, subobtusis. Stamina rudimentaria solum a mihi visa, prope corollae basin inserta. Staminodia quadrangularia ad spatulata, c. 0.8 mm, apiculata, margine irregulariter dentata, intus carinata. Ovarium disciforme, c. 1 × 1.5 mm, 5-loculare, pallide ferrugineo-strigosum, in stylum abrupte angustatum, ovula in loculi medio affixa, pendula, stylus conoideus, c. 1 mm longus, in fructu basi paulum incrassatus, sulcatus, stigmatibus 5 albis. Fructus pomiformis, 5—10 diam., in vivo viridis, apice rotundatus, 1—3-spermus, pallide ferrugineo-floccosus, glabrescens, pericarpio spongioso, lignoso, c. 3 mm crasso, semina navicularia, 5—7 × 2.5—3.5 × 2—2.5 cm, basi et apice obtusa, flavescencia et simul maculis numerosis fuscis variegata, nitida, hilo albedo seminis totam superficiam ±  $\frac{1}{8}$  attingenti, 4.5—6.5 × 2—2.5 cm, endospermium membranaecum, cotyledonibus crassis et carnosis, radícula acuta, exserta.

*Typus: van Royen 3506 in L.*

**4. *Pouteria paucinervia* Erlee, nov. sp. *Cf. pag. 490 et f. 9.***

Arbor. Ramuli teretes, griseo-brunnei, innovationibus foliisque novellis fuscis exceptis glabri. Folia chartacea, obovata ad spatulata, 4—8 × 1—3 cm, apice rotundata vel obtusa, basi decurrentia, supra glabra, subtus primum fusco-tomentosa, denique glabrescentia; nervi secundarii 4—6, angulo 30°—40° de costa subtus prominenti adscendentia, prope marginem reticulatis interdum arcuatim conjuncti; nervi tertiarii transversi inter sese paralleli; petioli 3—5 mm longi, fusco-tomentosi, glabrescentes. Inflorescentiae floresque ignoti. Fructus depresso-globoso, 1.5—2 × 1.5—2 × 1.2—1.5 cm (sicci), fusco-tomentosi, glabrescentes, sepalis 5 persistentibus, pedicelli c. 5 mm longi, 2 mm crassi; semina 4—(5 ?), ovoidea, dorso carinata, c. 13 × 11 × 8 mm, testa nucamentacea, cicatrice late ovata, c. 10 × 7 mm, cotyledonibus crassis, albumine nullo, radícula exserta.

*Typus: Buwalda 6503 in L.*

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