

***Symplocaceae* of New Caledonia**

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Summary : *Symplocos baptica* Brongn. & Gris, *S. munda* S. Moore and *S. tortuosa* Guillaumin are reduced to *S. montana* (Vieill.) Brongn. & Gris, and, together with a new taxon called var. *ultrabasica* [*S. montana* (Vieill.) Brongn. & Gris var. *ultrabasica* Nooteb. var. nov.] recognised as varieties [*S. montana* (Vieill.) Brongn. & Gris var. *baptica* (Brongn. & Gris) Nooteb. comb. et stat. nov., var. *tortuosa* (Guillaumin) Nooteb. comb. et stat. nov. and var. *munda* (S. Moore) Nooteb. comb. et stat. nov.]. *S. pseudonitida* is reduced to *S. flavescens* as variety [*S. flavescens* Brand var. *pseudonitida* (Guillaumin) Nooteb. comb. et stat. nov.]. *S. lenormandiana*, previously included in *S. caerulea*, is reinstated as *S. neocaledonica* (Vieill.) Nooteb. comb. nov., the later epithet having priority.

Résumé : *Symplocos baptica* Brongn. & Gris, *S. munda* S. Moore et *S. tortuosa* Guillaumin sont ramenés à *S. montana* (Vieill.) Brongn. & Gris, et, avec un nouveau taxon nommé var. *ultrabasica* [*S. montana* (Vieill.) Brongn. & Gris var. *ultrabasica* Nooteb. var. nov.], sont reconnus comme variétés [*S. montana* (Vieill.) Brongn. & Gris var. *baptica* (Brongn. & Gris) Nooteb. comb. et stat. nov., var. *tortuosa* (Guillaumin) Nooteb. comb. et stat. nov. et var. *munda* (S. Moore) Nooteb. comb. et stat. nov.]. *S. pseudonitida* est ramené à une variété de *S. flavescens* [*S. flavescens* Brand var. *pseudonitida* (Guillaumin) Nooteb. comb. et stat. nov.]. *S. lenormandiana*, jusqu'ici inclu dans *S. caerulea*, est assimilé à *S. neocaledonica* (Vieill.) Nooteb. comb. et stat. nov., cette dernière épithète étant prioritaire.

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Since my revision of 1980 many more collections have become available and it turned out to be difficult if not impossible to identify several of them. It also appeared that new forms were found. Therefore it was necessary to examine carefully the collections currently available, and prepare a new revision. Several of the species, recognised in the earlier revision, probably are genotypes of the same variable species, selected by some environmental agent. In any case, speciation clearly has not finished, and it is even probable that between those genotypes and the other species hybrids occur, or introgression after former hybridisation. This all makes distinguishing taxa very difficult. The classification, therefore, can only be preliminary. Hopefully future field studies will provide more data and lead to a more satisfactory classification. Because of this situation, the keys given can not be entirely satisfactory.

SYMPLOCOS Jacquin

Enum. Pl. Carib. : 5, 24 (1760); NOOTEBOOM, Leiden Bot. Ser. 1 : 33 (1975); Fl. Nouv.-Caléd. 9 : 135-158, fig. 33-37, maps 55-63 (1980); Blumea 26 : 411 (1980). Type : *S. martinicensis* JACQ.
Bobu ADANS., Fam. Pl. 2 : 88, 526 (1763). Type : *B. laurina* DC.

- “*Bobua*” MIERS, J. Linn. Soc. Bot. 17 : 302 (1879).
 — *Eugenioides* KUNTZE, Rev. Gen. Pl. 2 : 88 (1891), *nomen illeg.*
Chasseloupia VIEILL., Bull. Soc. Linn. Normandie 10 : 101 (1866). Lectotype : *Ch. lucida* VIEILL. (chosen by NOOTEBOOM, 1980).

KEY TO THE SPECIES

- 1 a. Leaves in pseudo-whorls at the nodes. Leaf base usually cordate 2
- b. Leaves spirally arranged. Leaf base cuneate, attenuate-cuneate, narrow long cuneate, rounded, or rounded to cuneate 4
- 2 a. Leaves narrowly obovate and gradually tapering towards the (nearly) sessile base, 18-80 cm long. Nerves in 10-18 pairs 6. *S. neocaledonica*
- b. Leaves different. Nerves in 5-10 pairs 3
- 3 a. Inflorescence axis glabrous. Leaves shorter than 8 cm. Pairs of lateral nerves 5 to 7 5. *S. gracilis*
- b. Inflorescence axis hairy. Leaves 8 to 19 cm. Pairs of lateral nerves 8 to 10. 3. *S. caerulescens*
- 4 a. Twigs glabrous (if twigs hairy petiole less than 15 mm long) 5
- b. Twigs hairy. Petiole (15-)22-40 mm 1. *S. arborea*
- 5 a. Calyx limb 0.4 to 1.5 mm; petiole slender 6
- b. Calyx limb 1.5 to 3 mm; petiole thick 4. *S. flavescens*
- 6 a. Inflorescence a spike or a raceme, or branched from the base with axis visible during anthesis. Fruit ellipsoid to ovoid or ampulliform, 5-10 mm long 7
- b. Inflorescence a condensed very short spike with axis often not visible during anthesis. Fruits ellipsoid to cylindrical, 10-15 mm long 2.3. *S. montana* var. *ultrabasica*
- 7 a. Inflorescence axis glabrous. Petiole up to 6 mm. Leaves 2-10 cm 8
- b. Inflorescence axis hairy (sometimes nearly glabrous). Petioles 6-25 mm. Leaves 4-18 cm ... 9
- 8 a. Inflorescence up to 1 cm 2.4. *S. montana* var. *montana*
- b. Inflorescence longer than 1 cm 2.5. *S. montana* var. *munda*
- 9 a. Inflorescence up to 1 cm 2.4. *S. montana* var. *montana*
- b. Inflorescence more than 1 cm 10
- 10 a. Inflorescence axis tomentellous, or puberulent; leaves 4-7 cm. 2.1. *S. montana* var. *baptica*
- b. Inflorescence axis pubescent, or sparsely pilose; leaves 7-18 cm. 2.2. *S. montana* var. *tortuosa*

ALTERNATIVE KEY TO THE SPECIES

- 1 a. Leaves in pseudo-whorls at the nodes, base usually cordate 2
- b. Leaves spirally arranged, base cuneate, attenuate-cuneate, or rounded 4
- 2 a. Leaves narrowly obovate and gradually tapering towards the (nearly) sessile base, nerves in 10-18 pairs; twigs with conspicuous very large leaf scars; petiole thick ... 6. *S. neocaledonica*
- b. Leaves different, nerves in 5-10 pairs; twigs without conspicuous or large leaf scars; petiole slender 3
- 3 a. Leaves 2.5 to 8 cm; pairs of lateral nerves 5 to 7; inflorescence axis glabrous. 5. *S. gracilis*
- b. Leaves 8 to 19 cm; pairs of lateral nerves 8 to 10; inflorescence axis hairy. 3. *S. caerulescens*
- 4 a. Twigs hairy 1. *S. arborea*
- b. Twigs glabrous 5
- 5 a. Twigs in innovations at least 4 mm thick, but often much thicker. Leaves (3.5-)8-21 cm. Petiole 10-40 mm. Nerves in 5-15 pairs 4. *S. flavescens*
- b. Twigs in innovations at most 3 mm thick. Leaves 4-7(-18) cm. Petiole 0-30 mm. Nerves 3-9 pairs 6
- 6 a. Petiole 0 to 5 mm 7
- b. Petiole 5 to 30 mm 9

- 7 a. Inflorescence a condensed very short spike, axis not or hardly visible when flowering. Fruits ellipsoid to cylindrical, 10-15 mm long..... 2.3. *S. montana* var. *ultrabasica*
- b. Inflorescence a spike, or a raceme, axis visible. Fruit ovoid or ovoid-ampulliform, 5-10 mm long 8
- 8 a. Inflorescence a raceme, 1 to 5 cm..... 2.5. *S. montana* var. *munda*
- b. Inflorescence a spike, 0.5 to 1 cm..... 2.4. *S. montana* var. *montana*
- 9 a. Inflorescence 0.7 to 2 cm 10
- b. Inflorescence 2 to 8 cm 12
- 10 a. Inflorescence a condensed very short spike, axis not or hardly visible. Fruits ellipsoid to cylindrical, 10-15 by 4-6 mm..... 2.3. *S. montana* var. *ultrabasica*
- b. Inflorescence a spike, or a raceme, axis clearly visible. Fruit ellipsoid to ovoid, 8-10 mm. 11
- 11 a. Inflorescence axis glabrous 2.5. *S. montana* var. *munda*
- b. Inflorescence axis hairy 2.1. *S. montana* var. *baptica*
- 12 a. Calyx limb 1.6 to 3 mm. Leaves (3.5-)8-21 cm. Petiole 10-40 mm. Nerves in 5-15 pairs 4.2. *S. flavescens* var. *pseudonitida*
- b. Calyx limb 1 to 1.4 mm. Leaves 2-18 cm. Petiole 0-25 mm. Nerves in 4-9 pairs 13
- 13 a. Inflorescence axis glabrous. Leaves 2-10 cm 2.5. *S. montana* var. *munda*
- b. Inflorescence axis hairy. Leaves 4-18 cm 14
- 14 a. Leaves 7-18 cm. Inflorescence axis sparsely pilose, fruit ampulliform..... 2.2. *S. montana* var. *tortuosa*
- b. Leaves 4-7 cm. Inflorescence axis tomentellous or puberulent, fruit ellipsoid..... 2.1. *S. montana* var. *baptica*

1. *Symplocos arborea* (Vieill.) Brongn. & Gris

Bull. Soc. Bot. France 13 : 419 (1866); NOOTEB., Fl. Nouv.-Caléd. 9 : 138, *tab. 33, fig. 1-5*, map 55 (1980); Blumea 26 : 413 (1980).

Chasseloupia arborea VIEILL., Bull. Soc. Linn. Normandie 10 : 102 (1866). Lectotype chosen by NOOTEBOOM (1980) : *Vieillard 545*, bois des montagnes, Balade, 1855-1860 (P ex CN; iso-, G, K, P).

— *Bobua arborea* (VIEILL.) MIERS, J. Linn. Soc. Bot. 17 : 305 (1879).

— *Eugenioides arborea* (VIEILL.) KUNTZE, Rev. Gen. Pl. 2 : 975 (1891).

Symplocos vieillardii BRONGN. & GRIS, Bull. Soc. Bot. France 13 : 429 (1866) “*vieillardii*”. Type : *Vieillard 542 p.p.*, Poila, 1855-60 (holo-, P).

— *Bobua vieillardii* (BRONGN. & GRIS) MIERS, J. Linn. Soc. Bot. 17 : 305 (1879).

Tree or unbranched or few branched shrub, 3-20 m high by up to 50 cm diam. Twigs in innovations often at least 4 mm thick, tomentellous (soon glabrescent). *Leaves* spirally arranged, glabrous, elliptic, 7-20 × 4-10 cm. Base cuneate. Margin recurved or revolute, undulate. Apex rounded or rarely very shortly subacuminate. Nerves in 5-9 pairs, meeting in an intramarginal vein, the latter not close to the margin. Reticulation distinct, coarse. Petiole (15-)22-40 mm long, slender. *Inflorescence* a spike (often below the leaves), loose, (2-)5-12 cm. Axis hairy, tomentellous. Bracts and bracteoles hairy, tomentellous, soon caducous; bracts 1 mm, bracteoles 0.5 mm. Pedicel 0-1 mm. Calyx tube hairy, tomentellous, 1.5 mm. Calyx lobes hairy, tomentellous, 1.6-2 mm. Corolla in vivo white, pink, or pale pink, ca. 5 mm. Stamens 50-70. Disk low cylindrical, hairy, pubescent. Style 3-6 mm, glabrous. Base not conical, glabrous. *Fruit* ampulliform, 7-10 × 4-7 mm. Embryo J-shaped.

MATERIAL STUDIED : *Aubréville & Heine 75*; *Balansa 2201*, Koghis; *3032*, Conception; *3235*, Touho; *Bernardi 9741*, Poindimié, 50-200 m; *10028*, Ouipouin, 500-550 m; *Bernier 54*, Monéo; *Guillaumin & Baumann 10421*, Mé Aoui; *10425*; *Lécard 125*; *MacKee 4937*, vallée de Thy, 50-100 m; *10112*, vallée de

Houailou; 12355, col des Roussettes, 500 m; 12572, Unio, 550 m; 12671, Farino, 500 m; 12782, Amieu, 350 m; 13458, col des Roussettes, 500 m; 17408, Nepoui, 400-600 m; 17752, Tiwaka, 200 m; 19228, Houailou, 30 m; 19240, vallée d'Amoa, 100 m; 23992, Mt. Canala, 700-800 m; 25564, Ouyit, 500-600 m; 31366, Kouaoua, 400 m; 36579, Dothio, 500 m; *McPherson 1681*, vallée de Thy, 250 m; 2863, col des Roussettes; 5079, Mt. Rembai, 500 m; 5714, *ibid.*; *Sarlin 113*; 189 b; 247; *Schmid 384*, col des Roussettes; *Suprin 1372*; *Veillon 3265*, col de Ho; 4351, Mt. Nakada; *Vieillard 542*, Poila; 545 p.p.; *Vieillard AE 1*, Wagap; *AE 2*, Wagap.

DISTRIBUTION AND ECOLOGY : Spread throughout the island, but usually not on ultrabasic soils. Alt. from sealevel to 800 m. Flowering and fruiting probably throughout the year.

NOTE : *MacKee 36569* could be a hybrid between this species and one of the glabrous taxa.

2. *Symplocos montana* (Vieill.) Brongn. & Gris

Bull. Soc. Bot. France 13 : 430 (1866); NOOTEB., Fl. Nouv.-Caléd. 9 : 152, *tab. 36, fig. 6-10*, map 60 (1980); *Blumea* 26 : 414 (1980).

Chasseloupia montana VIEILL., Bull. Soc. Linn. Normandie 10 : 104 (1866). Lectotype chosen by NOOTEBOOM (1980) : *Vieillard 551*, 1855-1860, Balade (P ex CN; iso-, G, K, P).

— *Bobua montana* (VIEILL.) MIERS, J. Linn. Soc. Bot. 17 : 305 (1879).

— *Eugenioides montana* (VIEILL.) KUNTZE, Rev. Gen. Pl. 2 : 975 (1891).

Chasseloupia tinctoria VIEILL., Bull. Soc. Linn. Normandie 10 : 104 (1866), *non S. tinctoria* L'HER. Lectotype chosen by NOOTEBOOM (1980) : *Vieillard 547*, montagne de Balade (P; iso-, A, G).

— *Symplocos baptica* BRONGN. & GRIS, Bull. Soc. Bot. France 13 : 430 (1866); NOOTEB., Fl. Nouv.-Caléd. 9 : 142, *tab. 35, fig. 6-10*, map 56 (1980); *Blumea* 26 : 413 (1980).

— *Bobua baptica* (BRONGN. & GRIS) MIERS, J. Linn. Soc. Bot. 17 : 305 (1879), *nomen illeg.*

— *Eugenioides baptica* (BRONGN. & GRIS) KUNTZE, Rev. Gen. Pl. 2 : 975 (1891).

Chasseloupia microphylla VIEILL., Bull. Soc. Linn. Normandie 10 : 104 (1866), *non Symplocos microphylla* WIGHT. Type : *Vieillard 551 bis*, Wagap (holo-, P).

Symplocos rotundifolia BRONGN. & GRIS, Bull. Soc. Bot. France 13 : 430 (1866). Type : *Vieillard 549 p.p.*, prope Diaue (holo-, P).

— *Bobua rotundifolia* (BRONGN. & GRIS) MIERS, J. Linn. Soc. Bot. 17 : 305 (1879).

— *Eugenioides rotundifolia* (BRONGN. & GRIS) KUNTZE, Rev. Gen. Pl. 2 : 975 (1891).

Symplocos nitida BRONGN. & GRIS, Bull. Soc. Bot. France 13 : 430 (1866). Type : *Vieillard 550 p.p.*, prope Diaue (holo-, P).

— *Eugenioides nitida* (BRONGN. & GRIS) KUNTZE, Rev. Gen. Pl. 2 : 975 (1891).

— *Bobua nitida* (BRONGN. & GRIS) MIERS, J. Linn. Soc. Bot. 17 : 305 (1879).

Symplocos munda S. MOORE, J. Linn. Soc. Bot. 45 : 415 (1921); NOOTEB., Fl. Nouv.-Caléd. 9 : 154, *tab. 35, fig. 1-5*, map 61 (1980); *Blumea* 26 : 414 (1980). Type : *Compton 1338* (holo-, BM; iso-, K, P a fragment only).

Symplocos pancheri GUILLAUMIN, Bull. Soc. Bot. France 71 : 942 (1924). Lectotype chosen by NOOTEBOOM (1980) : *Vieillard 2925*, Mont Mou (P; iso-, K).

Symplocos tortuosa GUILLAUMIN, Bull. Soc. Bot. France 71 : 944 (1924); NOOTEB., Fl. Nouv.-Caléd. 9 : 157, *tab. 37, fig. 1-5*, map 63 (1980); *Blumea* 26 : 415 (1980). Lectotype chosen by NOOTEBOOM (1980) : *Vieillard 2922*, Wagap (P; iso-, K).

Symplocos amosensis GUILLAUMIN, Mém. Mus. Natl. Hist. Nat., sér. B, Bot. 8 : 162 (1959). Type : *MacKee 4733*, Col d'Amos, summit, alt. 400 m (holo-, P; iso-, K, L).

Symplocos montis-fontium GUILLAUMIN, Mém. Mus. Natl. Hist. Nat., sér. B, Bot. 8 : 163 (1959). Type : *MacKee 5329*, Plateau below Montagne des Sources (holo-, P; iso-, K, L).

Symplocos baptica auct. *non* BRONGN. & GRIS : BRAND, Pflanzenr. 6 : 55 (1901).

— *Symplocos baptica* var. β BRONGN. & GRIS, Bull. Soc. Bot. France 13 : 430 (1866).

2.1. **Symplocos montana** var. **baptica** (Brongn. & Gris) Nooteb., *comb. et stat. nov.*

Symplocos baptica BRONGN. & GRIS, Bull. Soc. Bot. France 13 : 430 (1866); *Chasseloupia tinctoria* VIEILL. non *S. tinctoria* L'HÉR. Synonyms : *S. nitida* BRONGN. & GRIS; *S. rotundifolia* BRONGN. & GRIS.

Shrub or tree, 1.5-10(-15) m high. Twigs in innovation at most 3 mm thick, glabrous. Leaves spirally arranged, glabrous, elliptic to ovate, 4-7 × 2-5 cm. Base attenuate-cuneate. Margin recurved, entire. Apex rounded or acute. Nerves in 5-7 pairs, meeting in an intramarginal vein. Reticulation distinct or rather obscure, coarse. Petiole 5.1-30 mm, slender. Inflorescence a spike or often a raceme, 2-5 cm. Axis hairy, tomentellous or puberulent (glabrescent in fruit). Pedicel 0-5 mm. Calyx tube glabrous or hairy, pubescent, 1-1.4 mm. Calyx lobes glabrous or hairy, pubescent, 1-1.4 mm. Corolla 5-6 mm. Disk annular, hairy, pubescent. Style 5-6 mm, glabrous. Base conical or not, glabrous or pubescent. Fruit ellipsoid to ovoid, 9-10 × 5-6 mm.

MATERIAL STUDIED : Balansa 1346, Conception, 700 m; 2199, sud de Canala, 900 m; Bamps 5827, Koindé-Canala, 600 m; 5910, Aoupinié, 870 m; Bernardi 9973, Koindé, 900 m; 10040, 750-800 m; Deplanche 451, sommet du Mt. Pouébo; 547, Gomen; Däniker 1759, Mt. Ignambi; Franc 680, Nouméa; MacKee 4769, col de Parari, 600 m; 5658, plateau de Dogny, 900-1000 m; 12666, Farino, 500 m; 12720, plateau de Dogny, 950 m; 14577, col d'Amos, 550 m; 15110, Farino, 500 m; 15335, plateau de Dogny, 900-1000 m; 19984, Diahot, 500-600 m; 20821, Pouébo, 600 m; 23798, col d'Amos, 450 m; 23890, Mt. Canala, 800-900 m; 24026, *ibid.*, 700-800 m; 26747, Mt. Aoupinié, 900-1020 m; 31595, *ibid.*, 700 m; 32833, Mandjélia, 650 m; 34809, Ponérihouen, 500 m; 37129, Mandjélia, 750 m; 40575, Diahot, 600 m; 40579, Mandjélia, 750 m; McPherson 2601, Panié, 200 m; 2734, Mandjélia, 700 m; 3196, *ibid.*; 3401, Aoupinié, 900 m; 4051, Mandjélia, 700 m; 4083, *ibid.*; 5263, Mandjélia, 550 m; 6371, Aoupinié, 800-900 m; 6401, cascade de Ciu, 650-700 m; Morat 5082, Aoupinié, 700 m; Schmid 1191, Coulna, 850 m; 3060, Mé Ori, 900 m; Stauffer & Blanchon 5758, Montagne des Sources; Veillon 1807, col d'Amos, 400 m; 2936, Ouegoa; 3753, Montagne des Sources, 850 m; 3951, Nakada, 1000 m; Vieillard 546; 546 p.p., montagne de Balade; 547 p.p., *ibid.*; 548, Balade; 549, *ibid.*; 550 1, Diaoué?; Webster & Hildreth 14920, Canala, 700 m.

DISTRIBUTION AND ECOLOGY : Throughout the island, but generally not on ultrabasic soil. Alt. 400-1000 m. Flowering probably predominantly from April to November.

NOTE : Däniker 1759 deviates by hairy twigs (introgression from *S. arborea*?).

2.2. **Symplocos montana** var. **tortuosa** (Guillaumin) Nooteb., *comb. et stat. nov.*

Symplocos tortuosa GUILLAUMIN, Bull. Soc. Bot. France 71 : 944 (1924). Synonym : *S. montis-fontium* GUILLAUMIN.

Tree or sometimes a shrub, 2-15 m high (by up to 20 cm diam.). Twigs in innovations at most 3 mm thick, glabrous. Leaves spirally arranged (but growth in flushes, so some concentration of leaves on the nodes), glabrous, elliptic to obovate, 7-18 × 2-9 cm. Base cuneate, decurrent on the petiole. Margin recurved, entire. Apex acute, rounded, or very shortly subacuminate. Nerves in 5-9 pairs, meeting in an intramarginal vein. Reticulation distinct or rather obscure, coarse. Petiole 6-25 mm, slender. Inflorescence a spike (sometimes a

short pedicel present, and sometimes branched), 2.5-6 cm. Axis hairy, sparsely pilose (glabrescent). Bracts and bracteoles soon caducous or persistent under young fruits only; bracts 1.5-2 mm, bracteoles 0.5-1 mm. Pedicel 0-2 mm (sometimes becoming longer in fruit). Calyx tube glabrous or hairy, 1-1.5 mm. Calyx lobes glabrous or hairy (sometimes ciliate), 1-1.4 mm. Corolla in vivo white, 3-6 mm. Stamens 30-100 (or more). Disk 5-glandular (shape variable, but often ring- or cushion shaped), hairy, pubescent. Style hairy (towards base), pubescent. Base often conical, pubescent. *Fruit* ampulliform to ovoid, 8×4 mm.

MATERIAL STUDIED : *Baumann-Bodenheim* 15162; 15939; *Franc* 777, col de la Toa; *Godefroy* 436, baie de Boulari; *Le Rat* 1070, Mt. Dzumac; *MacKee* 5329, Montagne des Sources, 800 m; 5352, Mt. Ignambi, 800-1000 m; 12203, Farino, 250 m; 12273, col d'Amieu, 350 m; 13216, vallée de Tchamba, 150 m; 14737, Ton-non, 500-600 m; 15692, Tchamba, 500-550 m; 21586, Néaoua, 500-600 m; 25372, Aoupinié, 500-600 m; 26839, Ponérihouen, 600-700 m; 31098, *ibid.*, 600 m; 31926, Popomeou, 450 m; 38797, Diahot, 500 m; 38908, Ponérihouen, 600 m; *McPherson* 2584, Mt. Panié, 700 m; 2980, *ibid.*, 300 m; 6335, Touho, 430 m; 6355, Aoupinié, 700 m; 6389, cascade de Ciu, 650-700 m; *Morat* 6254, Mt. Panié, 300 m; *Pancher Mus. Néocal.* 60; *Schmid* 1190, Wayaghatt; *Suprin* 1335, Aoupinié, 600-700 m; *Veillon* 3819, Mt. Ignambi, 550 m; 4632, plateau de Tango, 650 m; *Vieillard* 552, Wagap; 2921, *ibid.*; 2922, *ibid.*; 2923, *ibid.*; *Vieillard* AE 5, Pouébo.

DISTRIBUTION AND ECOLOGY : Throughout the island, generally not on ultrabasic soil. Alt. from sealevel to 1000 m, but mostly above 400 m. Flowering probably mostly from November to May.

NOTE : This var. differs from var. *baptica* mainly in leaf size.

2.3. *Symplocos montana* var. *ultrabasica* Nooteb., var. nov.

Frutex 0.5-2 m *altus ramunculis ad 3 mm crassis foliis ellipticis 4.5 ad 10 cm longis et 1.4 ad 5.5 cm latis nervis 5 ad 7 paribus petiolo 3 ad 13 mm longo. Inflorescentia brevissima spicata condensata 0.7 ad 2 cm longa axe sparsim piloso glabrescente bracteis bracteolisque parsim pilosis mox caducis. Calyx tubo 1 mm alto lobis parsim pubescentibus 1 ad 1.2 mm longis. Corolla 4 mm longa. Stamina 40 ad 60. Fructus ellipsoideus ad cylindraceus 10 ad 15 mm longus et 4 ad 6 mm latus.*

TYPE : *MacKee* 17018, Mt. Paéoua, contrefort Nord-Est, alt. 600-900 m, 4.7.1967 (holo-, L; iso-, P).

Shrub, 0.5-2 m high. Twigs in innovations at most 3 mm thick. *Leaves* elliptic (sometimes narrowly), $4.5-10 \times 1.4-5.5$ cm. Apex rounded to shortly acuminate. Nerves in 5-7 pairs. Petiole 3-13 mm long. *Inflorescence* a condensed very short dense spike, 0.7-2 cm. Axis hairy, sparsely pilose (glabrescent). Bracts and bracteoles sparsely pilose, soon caducous. Bracts 1.5 mm. Bracteoles 1 mm. Calyx tube 1 mm. Calyx lobes pubescent (sparsely), 1-1.2 mm. Corolla 4 mm. Stamens 40-60. Disk 5-glandular, annular, or low cylindrical, glabrous or hairy. Style glabrous or hairy, pilose (towards base). Base conical or not, glabrous or pilose. *Fruit* ellipsoid to cylindrical, $10-15 \times 4-6$ mm.

MATERIAL STUDIED : *Balansa* 2197, entre Canala et Couaoua; *Debray* 2379, Boulinda; *Hoff* 3558, sommet du Mt. Do; *Jaffré* 694, massif de Koniambo, 700 m; 859, Boulinda, 670 m; 885, *ibid.*, 820 m; 1140, *ibid.*; 1150, *ibid.*; 1340, *ibid.*, 500 m; 1341, *ibid.*; *MacKee* 9884, massif de Mé Maoya, 800-900 m; 17018, Mt. Paéoua, 600-900 m; 18675, Ton-non, 800-900 m; 21211, plateau de Mé Ori, 900-1000 m; 24874, Mt. Do, 1000 m; 24876, *ibid.*, 1000 m; 30107, ouest du Mt. Do, 800 m; 34087, Tonon, 650 m; 40644, Paita, 400 m; *McPherson* 2697, Poya, 800 m; 3078, Mt. Mé Ori, 900 m; 3797, Mt. Do, 1000 m;

3810, *ibid.*, 950 m; 4494, Katrikoin, 800 m; 2648, Mt. Mou, 1000 m; Schmid 4261, Boulinda, 1100 m; Veillon 2516, sommet du Mt. Do, 1000 m; 2562, Mt. Do, versant ouest, 850 m; 3067, Tiébaghi, 400 m; 4378, Mt. Do, versant ouest, 950 m.

DISTRIBUTION AND ECOLOGY : Restricted to ultrabasic soil. Not in the NE part of the island. Alt. 400-1100 m. Flowering reported from January and June-July, but not enough data available.

2.4. *Symplocos montana* var. *montana*

Chasseloupia montana BRONGN. & GRIS, Bull. Soc. Linn. Normandie 10 : 104 (1866). Synonyms : *Chasseloupia microphylla* VIEILL.; *S. amosensis* GUILLAUMIN.

Shrub, 0.4-2 m high. Twigs in innovations at most 3 mm thick. *Leaves* elliptic, 1.5-4 (-5.5) × 0.7-2(-3.2) cm. Base cuneate or rounded. Nerves in 3-6 pairs. Petiole 3-5 mm long. *Inflorescence* a dense spike, 0.5-1 cm. Axis glabrous or hairy, sparsely pilose. Bracts and bracteoles persistent under young fruits only; bracts 0.5-1 mm, bracteoles 0.5 mm. Calyx tube glabrous, 0.5-1 mm. Calyx lobes glabrous, 0.5-0.8 mm. Corolla 3 mm. Stamens 25-30. Disk annular or 5-glandular, glabrous or hairy (sometimes hairy between the glands). Style 2 mm, glabrous. Base not conical, glabrous or pilose (rarely). *Fruit* ovoid, 5-7 × 3-5 mm.

MATERIAL STUDIED : Balansa 3236, Tchiaor; Bernardi 10250, Tiébaghi, 600 m; 10316, Tiébaghi; 12649, *ibid.*; Compton 1847; Deplanche 32; 313, Pouébo; Däniker 1692, Pouébo-Ouégoa; Jaffré 1457; Tiébaghi; MacKee 4733, col d'Amos, 400 m; 4822, Tiébaghi, 300-600 m; 6443, Tao; 7908, *ibid.*; 21940, col de Parari, 400 m; 21942, Balade, 300 m; 25679, col d'Amos; 37196, Tiébaghi, 450 m; 40780, Poum, 350 m; Pancher 70 A; Schmid 4172, Mt. Panié, 200 m; Veillon 1806, col d'Amos, 400 m; 5295, Poum; Vieillard 551, Balade; 552, Diaoué.

DISTRIBUTION AND ECOLOGY : Not on ultrabasic soil, only in the NE part of the island. Alt. 200-650 m. Flowering May through July, but not enough data available.

2.5. *Symplocos montana* var. *munda* (S. Moore) Nooteb., *comb. et stat. nov.*

Symplocos munda S. MOORE, J. Linn. Soc. Bot. 45 : 415 (1921). Synonym : *S. pancheri* GUILLAUMIN.

Shrub, 0.3-3 m high (or treelet to 8 m). Twigs in innovations at most 3 mm thick. *Leaves* elliptic or obovate, 2-10 × 1-5 cm. Margin recurved or revolute. Apex acute, rounded (rarely), or shortly acuminate (rarely). Nerves in 4-5 pairs, meeting in an intramarginal vein (sometimes not distinct). Reticulation distinct or sometimes rather obscure. Petiole 0-6 mm long. *Inflorescence* a raceme, 1.1-5 cm. Axis glabrous. Bracts and bracteoles soon caducous; bracts 1-2 mm, bracteoles 0.5-1.5 mm. Pedicel 0.3 mm. Calyx tube glabrous, 1-1.5 mm. Calyx lobes glabrous, 1-1.25 mm. Corolla in vivo white (or yellow), 3-4 mm. Stamens 25-70. Disk low cylindrical or annular, pubescent. Style hairy (lower half), pubescent. *Fruit* ovoid-ampulliform, 8-10(-13) × 4 mm.

MATERIAL STUDIED : Balansa 2200, Humboldt; 2200 a, Port Bouquet; 2799, Mt. Mou; 3548, Mt. Pénari, 500 m; Baumann-Bodenheim 5646, Mt. Mou; 15670, *ibid.*; 15716, *ibid.*; Bernardi 9469, Montagne des Sources, 750-850 m; 12481, *ibid.*, 900-1000 m; Blanchon 192, Montagne des Sources; 576, *ibid.*; 638;

688, *ibid.*; *Brousmiche* 536, Kouvélé, 600 m; 1107; *Cabalion NC* 403, Kouaoua; *Compton* 1338, Canala; *Guillaumin & Baumann* 11244, Mt. Mou; 11284, *ibid.*; 11336, Mt. Dore; 11376, Mt. Mou; 11384, *ibid.*, 750 m; *Hartley* 15072, Montagne des Sources, 800 m; *Hoff* 2648, sommet du Mt. Humboldt, 1600 m; *Hürlimann* 1653, Mt. Monéo; 1691, Mt. Humboldt; 1778, Oubatche; *Jaffré* 201, Plaine des Lacs; 1952, Mt. Humboldt, 1370 m; 2429, Montagne des Sources, 800 m; 2694, Ile des Pins, 650 m; 2709, Couvélé, 350 m; *Le Rat* 153, Mt. Dzumac, 800 m; 191, Mt. Dzumac; 2292, Dumbéa; 2821, Dumbéa; 2861, Mt. Dzumac, 1000-1100 m; *MacDaniels* 2404, Montagne des Sources; *MacKee* 3252, *ibid.*, 900 m; 4175, Riv. des Lacs, 150 m; 4411, Dzumac, 700 m; 4498, Plaine des Lacs, 150 m; 5327, Montagne des Sources, 800 m; 15855, Negropo, 500 m; 16577, Yaté, 200 m; 22868, Grand Lac, 400 m; 23290, Montagne des Sources; 26428, Touho, 1000-1050 m; 27045, Mt. Boulinda, 1100 m; 27538, Mt. Humboldt, 1150 m; 28735, Ouinné, 400 m; 31408, vallée de Kouré, 100 m; 33008, Yaté, Mt. Kouanénoa, 250 m; 34911, Dzumac, 700 m; 37970, Mt. Kaala, 600 m; 38124, Mt. Taom, 900 m; 38860, Yaté, Gouemba, 400 m; 39006, Petite Yaté, 500 m; 40354, Mt. Taom, 100 m; *McPherson* 2034, Montagne des Sources, 700 m; 2501, *ibid.*, 750 m; 2505, *ibid.*, 700 m; 2897, Rivière Bleue, N.E. de Nouméa, 350 m; 3102, Mt. Humboldt, 1300 m; 3505, Kaala, S.E. de Koumac, 950 m; 4019, Mt. Mou, 1150 m; 5640, Aréha, S.O. de Kouaoua, 800 m; *Pancher Mus. Néocal.* 60; *Pancher s.n.*; *Schmid* 1602, col d'Amos, 400 m; *Stauffer & Blanchon* 5762, Montagne des Sources, 840 m; *Suprin* 1703, Montagne des sources, 800 m; 1784, Mt. Mou, 700 m; *Veillon* 1793, Plaine des Lacs, 150 m; 2850, Mt. Humboldt, 1450 m; 3471, Kouaoua, 750 m; 3754, Montagne des Sources, 800 m; *Vieillard* 2925, Mt. Mou; *Webster & Hildreth* 14713, Mt. Kaala; *Webster & Jaffré* 19306, massif de Koniambo, 850 m.

NOTE : On ultrabasic soil sometimes hardly different from var. *montana*, except in the longer fruits.

DISTRIBUTION AND ECOLOGY : Throughout the island, but generally on ultrabasic soil. Alt. 100-1450 m, but mostly above 400 m. Flowering probably usually from February to September.

3. *Symplocos caerulescens* (Vieill.) Brongn. & Gris

Bull. Soc. Bot. France 13 : 429 (1866); *NOOTEB.*, *Fl. Nouv.-Caléd.* 9 : 144, *tab.* 34, *map* 57 (1980) *p.p.*, *incl. tab.* 34, *fig.* 5-8; *Blumea* 26 : 413 (1980) *p.p.*

Chasseloupia caerulescens VIEILL., *Bull. Soc. Linn. Normandie* 10 : 103 (1866). Type : *Vieillard* 542 *p.p.*, Wagap (holo-, P ex CN; iso-, G, GH, MEL, P).

— *Bobua caerulescens* (VIEILL.) MIERS, *J. Linn. Soc. Bot.* 17 : 305 (1879).

Symplocos defoliata BRAND, *Pflanzenr.* 6 : 41 (1901). Type : *Pancher* 56 (holo-, K; iso-, P).

Shrub or tree to 7 m. Twigs glabrous or tomentose, without conspicuous or large leaf scars. Leaves glabrous, elliptic to obovate, (4-)8-19 × (3-)4-8 cm. Base cordate. Nerves in 8-10 pairs. Petiole ca. 2 mm long, slender. Inflorescence 2-10 cm. Bracts 1 mm. Bracteoles 0.5 mm. Calyx tube 1-1.5 mm. Calyx lobes glabrous, 0.5-1 mm. Corolla 3-4 mm. Disk cushion shaped to dome shaped. Style pubescent (lower half).

MATERIAL STUDIED : *Bernardi* 9739, Poindimié, vallée d'Amoa, 50-200 m; *Godefroy* 337, Koghis; *Le Rat* 974, *ibid.*; 2622, *ibid.*; *MacKee* 4444, Koghis, vallée de la Thy, 400-500 m; 4709, Koghis; 12618, Col des Roussettes, 500 m; 34801, Ponérihouen, 50 m; *MacKee* 36418; 40494, Houailou, 450 m; *McPherson* 1703, Koghis, 700 m; 3684, vallée de la Thy, 350 m; *Pancher* 56; *Schmid* 457, vallée d'Amoa; *Thiebaut s.n.*; *Veillon* 171, Koghis, 650 m; 593; *Vieillard* 541 *p.p.*, Balade; 542, Wagap.

DISTRIBUTION AND ECOLOGY : In the centre and the SE, generally not on ultrabasic soil. Flowering March through June, fruiting July (not enough data available).

NOTE : Intermediates between this species and *S. neocaledonica* occur. That induced me previously to merge them into one species. The french botanists who are well acquainted with the flora of New Caledonia have observed that the two behave as good species in nature. Therefore I keep them now separate. Intermediates probably represent occasional hybridisation. From the few data available it appears that the two taxa have different flowering times. *S. caerulescens* does not occur in the NW part of the island, in the central part it has a similar distribution as *S. neocaledonica*, but with fewer localities, in the SE part only *S. caerulescens* occurs. *Mackee 40494* looks like a hybrid with *S. gracilis*, but the latter species does not occur nearby.

4. *Symplocos flavescens* Brand

Pflanzenr. 6 : 55 (1901); NOOTEB., Fl. Nouv.-Caléd. 9 : 148, tab. 35, fig. 1-5, map 58 (1980); Blumea 26 : 414 (1980). Type : *Deplanche 493*, Port Boisé (holo-, K; iso-, G, P).

Chasseloupia lucida VIEILL., Bull. Soc. linn. Normandie 10 : 102 (1866). Lectotype chosen by NOOTEBOOM (1980) : *Vieillard 559*, Wagap (P ex CN; iso-, P).

— *Eugenioides lucida* (VIEILL.) KUNTZE, Rev. Gen. Pl. 2 : 975 (1891).

— *Bobua lucida* (VIEILL.) MIERS, J. Linn. Soc. Bot. 17 : 305 (1879).

— *Symplocos lucida* (VIEILL.) GUILLAUMIN, Bull. Soc. Bot. France 71 : 941 (1924), non *S. ludica* ZUCC.

Symplocos calophylloides S. MOORE, J. Linn. Soc. Bot. 45 : 355 (1921). Type : *Compton 1154*, Mt. Canala (holo-, BM; iso-, K, P fragment only).

Symplocos pseudo-nitida GUILLAUMIN, Bull. Soc. Bot. France 71 : 943 (1924); NOOTEB., Fl. Nouv.-Caléd. 9 : 156, tab. 37, fig. 6-10, map 62 (1980); Blumea 26 : 414 (1980). Type : *Vieillard 550 p.p.*, Wagap (holo-, P).

Symplocos nitida auct. non BRONGN. & GRIS : BRAND, Pflanzenr. 6 : 49 (1901).

4.1. *Symplocos flavescens* var. *flavescens*

Synonyms : *Chasseloupia lucida* VIEILL.; *Symplocos calophylloides* S. MOORE.

Shrub, or tree, 1-30 m high. Twigs in innovations at least 4 mm thick, but often much thicker, glabrous, with or without conspicuous very large leaf scars. Leaves spirally arranged, glabrous, coriaceous, elliptic to obovate (mostly) 8-21 × 3.5-9 cm. Base cuneate, decurrent on the petiole. Margin recurved to revolute, entire. Apex rounded or acute. Nerves in (7-)9-15 pairs, meeting in an intramarginal vein close to the margin. Reticulation distinct or rather obscure, coarse. Petiole 15-40 mm long, thick. Inflorescence a spike (or raceme with very short pedicels), dense, 2-8 cm. Axis hairy (later glabrescent), pubescent. Bracts and bracteoles hairy, pubescent, persistent under young fruits only; bracts 2-4 mm, bracteoles 1.5-2 mm. Pedicel 0-1 mm. Calyx tube glabrous or pubescent, 1.5 mm. Calyx lobes glabrous or pubescent, 1.6-3 mm (limb 2-4). Corolla in vivo white, 6-8 mm. Stamens 60-100 (or more). Disk low cylindrical, annular, cushion shaped, or dome shaped (often 5-glandular), hairy or rarely glabrous, pilose. Styles 5 mm, glabrous, Base glabrous. Fruit ellipsoid to ovoid or rarely globose, 10-17 by 5-9 mm. Embryo straight, or J-shaped (sometimes).

MATERIAL STUDIED : *Balansa 2110*, Boulari; *2198*, Canala; *3622*, *ibid.*; *Cabalion 427*, Poya; *Compton 1154*, Canala, 600-900 m; *Cribs 1529*, Prony; *Debray 2323*, Riv. Bleue; *Deplanche 493*, Port-Boisé; *Franc*

317, Koghis, 300-500 m; 1632 a, Rouy; Godefroy 49, Nouméa; Hürlimann 3399; Le Rat 378, Prony; 727, *ibid.*; 1078, Dzumac; 2537, Koghis; 2622, Koghis; Lécarré 11; MacKee 3687, route de l'Hermitage, 200-300 m; 4659, Montagne des Sources; 4675, Plum; 8195, plateau de Dogny, 900-1000 m; 11938, vallée de Boulari, 200 m; 12644, col d'Amieu, 550 m; 20545, plateau de Dogny, 900-1000 m; 21381, Farino, 700 m; 24679, *ibid.*, 600-700 m; 27753, baie d'Ouiné, 400-600 m; 35076, Riv. des Pirogues, 300 m; 35564, Farino, 700 m; 38484, Riv. des Pirogues, 200 m; 43971; McPherson 2295, vallée de la Thy, 400 m; 2428, *ibid.*; 2917, Riv. Bleue, 300 m; 3859, Mt. Dzumac, 800 m; 3862, *ibid.*; 4004, Riv. Bleue, 300 m; 4453, Riv. des Pirogues, 300 m; 5174, vallée de Dumbéa, 550 m; 5716, Rembai, 725 m; 5768, Ouiné, 700 m; Morat & Suprin 5135, Riv. Bleue; Pancher 100, Ile des Pins; Petit 51; Schmid 5280, Yaté, 250-300 m; Suprin 1243, forêt de Bon-Secours; Thorne 28327, plateau de Dogny; Veillon 708, Riv. Bleue, 150 m; 2871, Riv. Blanche; 3020, Montagne des Sources, 400 m; 4363, Mois de Mai, 200 m; Vieillard 550 C, Wagap; 550 p.p., *ibid.*; 559 C, *ibid.*; 559 p.p., *ibid.*; 2924, Port-Boisé.

DISTRIBUTION AND ECOLOGY : In the SE and on "Isle des Pins", on ultrabasic but also on other soils, also in coastal vegetation. Alt. 0-1000 m. Flowering May-July.

4.2. *Symplocos flavescens* var. *pseudonitida* (Guillaumin) Nooteb., *comb. et stat. nov*

Symplocos pseudo-nitida GUILLAUMIN, Bull. Soc. Bot. France 71 : 943 (1924).

Twigs in innovations often less than 3-4 mm thick. Leaves 3.5-15 cm. Nerves in 5-8 pairs. Petiole 10-25 mm long.

MATERIAL STUDIED : Blanchon 177, Lavoy, 600 m; Brousmiche 533, Yahoué; Mackee 23859, Koghis, 500 m; Suprin 1289, forêt de Thy, 230 m; Veillon 214, col des Roussettes; 1991, Moindip, 650 m; Vieillard 550 p.p., Wagap; 2923 A.

NOTE : *S. flavescens* has generally obovate leaves with cuneate base, but, probably through introgression, in some collections the leaves tend to be elliptic. In var. *pseudonitida* this is even more pronounced and the leaves are generally smaller. I suspect this var. to be of hybrid origin, or existing of hybrids between *S. flavescens* and *S. arborea*. There are some collections of *S. montana* var. *munda* that could also be hybrids with *S. flavescens* var. *flavescens*.

5. *Symplocos gracilis* Brongn. & Gris

Bull. Soc. Bot. France 13 : 431 (1866); GUILLAUMIN, Ann. Mus. Colon. Marseille, sér. 2, 9 : 190 (1911); Bull. Soc. Bot. France 71 : 940 (1924); NOOTEB., Fl. Nouv.-Caléd. 9 : 150, *tab. 33, fig. 6-11*, map 59 (1980); Blumea 26 : 414 (1980). Type : Vieillard 544, arbuste, montagne de Balade, Pouébo (holo-, P).

Shrub, or tree (small treelet), 2-8 m high. Twigs glabrous, smooth. Leaves in pseudo-whorls at the nodes, glabrous, elliptic, 2.5-8 × 2-5 cm. Base cordate, not decurrent on the petiole (see note). Margin recurved, entire. Apex shortly acuminate. Nerves in 5-7 pairs meeting in an intramarginal vein, the latter not close to the margin. Reticulation distinct, coarse. Petiole ca. 1 mm long. Inflorescence a very slender raceme, 2-5 cm. Axis glabrous. Bracts and bracteoles glabrous and ciliate, persistent under young fruits only; bracts 1-2 mm, bracteoles 0.5-1 mm. Pedicel 1.5-7 mm. Calyx tube glabrous, 1.5 mm. Calyx lobes glabrous,

1 mm (limb ca. 1.5). Corolla in vivo white, 3-4 mm. Stamens 40-60. Disk cushion shaped, hairy, pubescent. Style hairy, pubescent (towards base). Base often conical, pubescent. *Fruit* ampulliform, 10 × 6 mm. Embryo U-shaped.

MATERIAL STUDIED : *Balansa* 3269, Balade; *Däniker* 1776, Mt. Ignambi; *Hürlimann* 1804, *ibid.*, 600 m; *MacKee* 23777, Pouébo; *Vieillard* 282, sommet Pouébo; 544, Balade.

DISTRIBUTION : Ignambi and Pouébo.

NOTE : *Däniker* 1776 and 1784 I consider to belong to this species although the leaf is not cordate. Formerly they were identified by me as *S. montana* var. *tortuosa* and var. *munda*, respectively.

6. *Symplocos neocaledonica* (Vieill.) Nooteb., *comb. nov.*

Chasseloupia neocaledonica VIEILL., Bull. Soc. Linn. Normandie 10 : 103 (1866), *p.p.* Lectotype chosen by NOOTEBOOM (1980) : *Vieillard* 541 *p.p.*, Balade, 1855-60 (P ex CN; iso-, P).

— *Symplocos stravadioides* BRONGN. & GRIS, Bull. Soc. Bot. France 13 : 428 (1866); GUILLAUMIN, Ann. Mus. Col. Marseille, sér. 2, 9 : 191 (1911), *nomen illeg. superfl.*

— *Bobua stravadioides* (BRONGN. & GRIS) MIERS, J. Linn. Soc. Bot. 17 : 304 (1879), *nomen illeg. superfl.*

Symplocos lenormandiana BRONGN. & GRIS, Bull. Soc. Bot. France 13 : 428 (1866). Type : *Vieillard* 541 *p.p.*, later numbered *Vieillard* 2920, Wagap (holo-, P ex CN; iso-, G, P).

— *Bobua lenormandiana* (BRONGN. & GRIS) MIERS, J. Linn. Soc. Bot. 17 : 305 (1879).

— *Chasseloupia neocaledonica* VIEILL., Bull. Soc. Linn. Normandie 10 : 103 (1866), *pp. excl.* lectotype.

Merita pallens BAILLON, Adansonia 12 : 157 (1878), Araliac. Type : *Vieillard* 37, Balade (holo-, P).

Symplocos verticillata BRAND, Pflanzenr. 6 : 38 (1901). Type : *Deplanche* 452 (BRAND cites 492, the same collection is also numbered *Vieillard* 2926), Pouébo (holo-, K; iso-, G, P).

Symplocos brandiana SCHLTR., Bot. Jahrb. Syst. 39 : 227 (1906); GUILLAUMIN, Ann. Mus. Colon. Marseille, sér. 2, 9 : 190 (1911). Type : *Schlechter* 15507, auf den Bergen bei Oubatche (holo-, B, destroyed; iso-, BR, G, K, L, P, WRCL), *non S. brandiana* KING & GAMBLE (Jan. 1906).

— *Symplocos oubatchensis* Rolfe, Bull. Misc. Inform. 1912 : 158 (1912), *in obs.*

Symplocos vieillardii auct. *non* BRONGN. & GRIS : BRAND, Pflanzenr. 6 : 38 (1901), *quoad Balansa* 2195 (P).

Symplocos caerulescens auct. *non* (VIEILL.) BRONGN. & GRIS : NOOTEBOOM, Fl. Nouv.-Caléd. 9 : 144, *tab.* 34, *map* 57 (1980) *p.p. incl. tab.* 34, *fig.* 1-4, *excl. syn.* *Symplocos caerulescens* (VIEILL.) BRONGN. & GRIS, *Chasseloupia caerulescens* VIEILL., and *Symplocos defoliata* *et tab.* 34, *fig.* 5-8; *Blumea* 26 : 413 (1980) *p.p.*

Tree (from dwarf tree or few branched shrub to small tree), up to 1-12 m high (up to 20 cm diam.). Twigs in innovations at least 4 mm thick, but often much thicker, glabrous or hairy (rarely, pubescent or tomentose), with conspicuous very large leaf scars. *Leaves* in pseudo-whorls at the nodes, glabrous or rarely pubescent underneath, narrowly obovate and gradually tapering toward the (nearly) sessile base, 18-80 × 5-22 cm. Base cordate (at very base). Margin recurved, entire, dentate, or undulate. Apex shortly acuminate, acute, or rounded. Nerves in 10-18 pairs, meeting in an intramarginal vein (sometimes faint). Reticulation coarse. Petiole 0-10 mm long, often thick. *Inflorescence* branched from the base and a spike or a raceme (often many together from the axils of the leaves or from wood and then whorls of leaves alternating with whorls of inflorescences), 6-28 cm. Axis pubescent (shortly, more or less sparse) or sparsely pilose. Bracts and bracteoles glabrous and ciliate or

hairy, pubescent to sparsely pilose (appressedly), soon caducous or persistent under the fruit; bracts 1-4 mm, bracteoles 1-2 mm. Pedicel 0-6 mm (but mostly absent or very short). Calyx tube glabrous or hairy (rarely), pubescent, 1-2 mm. Calyx lobes glabrous, 1-1.4 mm (often imbricate at base, limb in total 1.5-2 mm). Corolla ca. 5 mm. Stamens 15-60. Disk low cylindrical to cushion shaped (0.25-0.5 mm thick), glabrous or hairy, pubescent. Style glabrous or hairy (often), pubescent. Base conical (more or less), pubescent. *Fruit* ampulliform (blue or red when ripe), 9-13 × 4-8 mm. Embryo J-shaped (seed curved around placenta and longitudinally at base).

MATERIAL STUDIED : *Balansa* 2067, Mt. Arago; 2195, *ibid.*; 2196, *ibid.*; *Bamps* 6114, Col d'Amieu, 540 m; 6125, Mandjélia; *Baumann-Bodenheim* 15918, Tao; *Deplanche* 452, Pouébo; *Guillaumin & Baumann* 8884, Mé Ammen; 8893, *ibid.*; 8984, *ibid.*; *Hürlimann* 1822, Mt. Ignambi; *Lécard* 28; *MacKee* 4808, Mt. Ignambi; 6420, Mt. Panié; 6439, Tao; *MacKee* 10022, Ponérihouen, 400-500 m; 12044, Farino, 250 m; 12864, Kouaoua, 300-500 m; 13244, vallée d'Amoa, 300-500 m; 13707, vallée de la Tchamba, 400-500 m; 13826, vallée de Pouai, 20-50 m; 15693, Tchamba; 18024, *ibid.*, 600 m; 18048, Ponérihouen, 400-500 m; 18087, Canala, 500 m; 19993, Diahot, 500-600 m; 20047, vallée d'Amoa, 30 m; 25377, Ponérihouen, 500-600 m; 26420, Touho; 26700, Poindimié, 400 m; 26742, Ponérihouen, 900-1020 m; 26743, *ibid.*, 900-1200 m; 28427, Tiwaka, 450 m; 31106, Ponérihouen, 600 m; 31294, Paala, 400 m; 32773, Mandjélia, 750 m; 34468; 34810; 35180; 35592; 37783, Mandjélia, 750 m; *McPherson* 2185; 2414, Mt. Panié, 1100-1300 m; 3183, Mandjélia, 700 m; 3205, *ibid.*, 500 m; 4057, *ibid.*, 700 m; 5924, Mt. Panié; *Morat* 6246, Tchamba; 7691, Néaoua; 7752; *Nothis* 455, Paimbos; *Schlechter* 15507, Oubatche, 1200 m; 15575, *ibid.*, 600 m; 15659, Ou-Hinna; *Schmid* 904; 1571; 1572, Panié, 750 m; 3400; 4173, Panié, 1200 m; *Suprin* 1109, Ponembout; *Veillon* 207, col des Roussettes, 600 m; 1501; 1610, Mt. Arago, 800 m; 3603, Panié, 900-1300 m; 4628, plateau de Tango, 650 m; 5442, Néaoua; *Vieillard* 541 p.p., Balade; 2918, Wagap; 2920, *ibid.*; *Vieillard* AE 4, Balade.

DISTRIBUTION AND ECOLOGY : In the northwest and centre, in general not on ultrabasic soil. Flowering October through April, fruiting February through November.

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Nooteboom, H. P. 1989. "Symplocaceae of New Caledonia." *Bulletin du Muse*

um National d'Histoire Naturelle Section B, Adansonia, botanique, phytochimie 11(3), 295–306.

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