

## 11. *Cryptocarya subcorymbosa* Mez

*Arbeiten Königl. Bot. Gart. Breslau* 1: 106 (1892). – Lectotype (designated by Moraes, 2005a): Brazil. “in Brasilia, loco ignoto” (Rio de Janeiro, “Alto Macahé de Nova Friburgo” – fide Glaziou, 1910), s.d. (18 Aug. 1890 – in sched.) (young fl.), *A.F.M. Glaziou 18436* [C!, photo in UEC! (Holotype: B<sup>†</sup>, photo F Neg. No. 3848!); isolectotypes: BR-880631! (photo in UEC!), F-647869! (Photo F Neg. No. 3848! and fragments! from B<sup>†</sup>, photo in UEC!), G (negatives in UEC!), K! (cibachrome in UEC!), LE (photo in UEC!), OUPR-8935! (photo in UEC!), P-00221221 (photo in UEC!), P-00221222 (photo in UEC!), P-00221223 (photo in UEC!), U (photo in UEC!]. Plate XIV B (cf. Appendix 13.5).

= *Cryptocarya minutiflora* Mez, *Bot. Jahrb. Syst.* 30(67): 11 (1902). – Lectotype (designated by Moraes, 2005a): Brazil. “loco non indicato”, “Rio de Janeiro, Alto Macahé de Nova Friburgo – fide Glaziou, 1910”, s.d. (1890/91 – in sched. B; Jun.-Jul. fide Glaziou, 1910) (fl.), *A.F.M. Glaziou 18437* [K!, cibachrome in UEC! (Holotype: B<sup>†</sup>, Photo F Neg. No. 3846!); isolectotypes: BR-837724! (photo in UEC!), G (negatives in UEC!), LE (photo in UEC!), P-00221224 (photo in UEC!), P-00221225 (photo in UEC!), P-00221226 (photo in UEC!). Plate XIV A (cf. Appendix 13.5).

**Vernacular names** - Canela.

**Description** - *Trees* large (fide Glaziou, 1910), 10-20 m tall, trunk cylindrical, sometimes multistemmed, bark brownish to brownish yellow, rugose, with lenticels, without flakes (Fig. 61). *Branches* terete, dark-brown, with longitudinal lenticels. *Branchlets* 5 cm below terminal bud c. 1.1-3.2 mm in diam., dark-brown, initially subangular to cylindrical from the beginning, smooth, glabrous; terminal buds minute, dense yellowish-tomentellous. *Petioles* thin, 4.6-14.0 mm long, 0.8-1.8 mm thick, deeply canaliculate, roundish below, rugose, glabrous. *Leaves* (Fig. 62) alternate, lanceolate to elliptic-lanceolate or obovate, 3.3-11.3 cm long, 1.0-4.6 cm broad, chartaceous to stiffly chartaceous (seldom coriaceous), tip either short acuminate or sub-rounded, base fairly frequently acute sub-acuminate, margin flat, slightly incurved at base, sclerified; above somewhat shining, glabrous, poorly to prominently reticulate; beneath opaque, glaucescent, with papillae conspicuous, glabrous to almost glabrous, with very sparsely short, appressed hairs mostly along midrib; midrib prominent above, impressed to level towards the base, prominent below, secondary veins (4-10 per side) slightly raised on both surfaces; tertiary venation lax, poorly reticulate above, slightly raised below; venation pattern brochidodromous. *Inflorescences* axillary, paniculate, subcorymbose, pyramidal, many-flowered, 0.7-1.4 mm in diam. at base, 4.2-7.5 cm long, densely ochre-yellow tomentellous, with ± long, ± appressed hairs; peduncles rather short and thin; bracteoles minute, densely tomentose, deciduous. *Flowers* (Fig. 63) whitish (Glaziou, 1910), densely yellowish-tomentellous towards the base, with ± long, ± appressed hairs, c. 3.2-3.9(-5.0) mm long, c. 1.72 mm in diam. at apex, tube cylindrical-urceolate, 1.2-1.4 mm long, c. 1.2 mm in diam.; pedicels short, 0.48-0.64 mm long; tepals equal, 1.35-2.5 mm long, 0.84-1.36 mm broad, concave, ovate, rounded, tip obtuse, involute, pilose within; stamens included; stamens of whorls I and II introrse, 1.0-1.3 mm long ( $\bar{X} = 1.16 \pm 0.11$  mm;  $N = 6$ ), anthers glabrous, ovate, 0.54-0.84 mm long ( $\bar{X} = 0.66 \pm 0.08$  mm;  $N = 15$ ), 0.35-0.67 mm broad ( $\bar{X} = 0.45 \pm 0.08$  mm;  $N = 11$ ), connectives prolonged beyond the large sporangia, tip obtuse, truncate, filaments slender, shorter than anthers, densely pilose, adnate to tepals; stamens of whorl III lateral, 1.0-1.54 mm long ( $\bar{X} = 1.32 \pm 0.19$  mm;

$N = 5$ ), anthers narrow-triangular, pilose, 0.73-0.98 mm long ( $\bar{X} = 0.83 \pm 0.08$  mm;  $N = 8$ ), c. 0.35 mm broad, connectives obtuse to truncate, prolonged beyond the large sporangia, filaments rather stout, shorter than anthers, pilose; glands subglobose, 0.34-0.52 mm long ( $\bar{X} = 0.46 \pm 0.06$  mm;  $N = 9$ ), 0.3-0.47 mm broad ( $\bar{X} = 0.38 \pm 0.06$  mm;  $N = 8$ ), pedicel long, densely pilose, disposed between the base of filaments; staminodes small, cordate-sagittate, 0.45-0.89 mm long ( $\bar{X} = 0.71 \pm 0.17$  mm;  $N = 5$ ), 0.35-0.59 mm broad ( $\bar{X} = 0.44 \pm 0.10$  mm;  $N = 4$ ), tip and abaxial side pilose, stalk short, pilose; gynoecium immersed in the tube, glabrous, 2.32-2.68 mm long, ovary ellipsoid, 0.81-1.02 mm long, 0.3-0.61 mm in diam., gradually merging into the about 1.41-1.61 mm long style with small, discoid stigma. *Fruits* light green, green-yellowish, yellow, globose to top-shaped, smooth or with vestigial ribs, 1.42-1.9 cm long ( $\bar{X} = 1.58 \pm 0.14$  cm;  $N = 12$ ), 1.32-1.94 cm broad ( $\bar{X} = 1.54 \pm 0.20$  cm;  $N = 12$ ), often with remnant of tepals (Fig. 64); flesh portion originated from the accrescent flower tube usually thin.

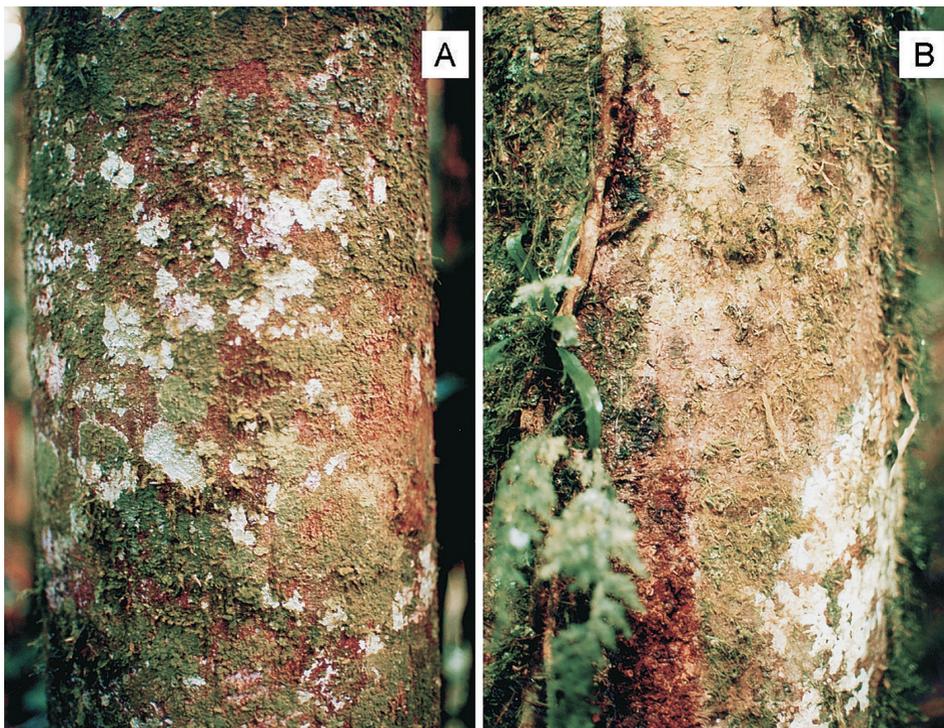
**Phenology** - Flowers in June to August (fide Glaziou, 1910). Immature fruits in November. Mature fruits in February and March (Curucutu).

**Distribution and habitat (Fig. 65)** - So far only known from ten herbarium collections of Rio de Janeiro and São Paulo, in the Upper Montane Ombrophilous Dense Forest, from 950-1300 m altitude (but also from P.E. Serra do Mar, Núcleo Curucutu, SP, alt. 750-850 m, and Serra da Estrela, RJ, alt. c. 150 m; pers. obs.).

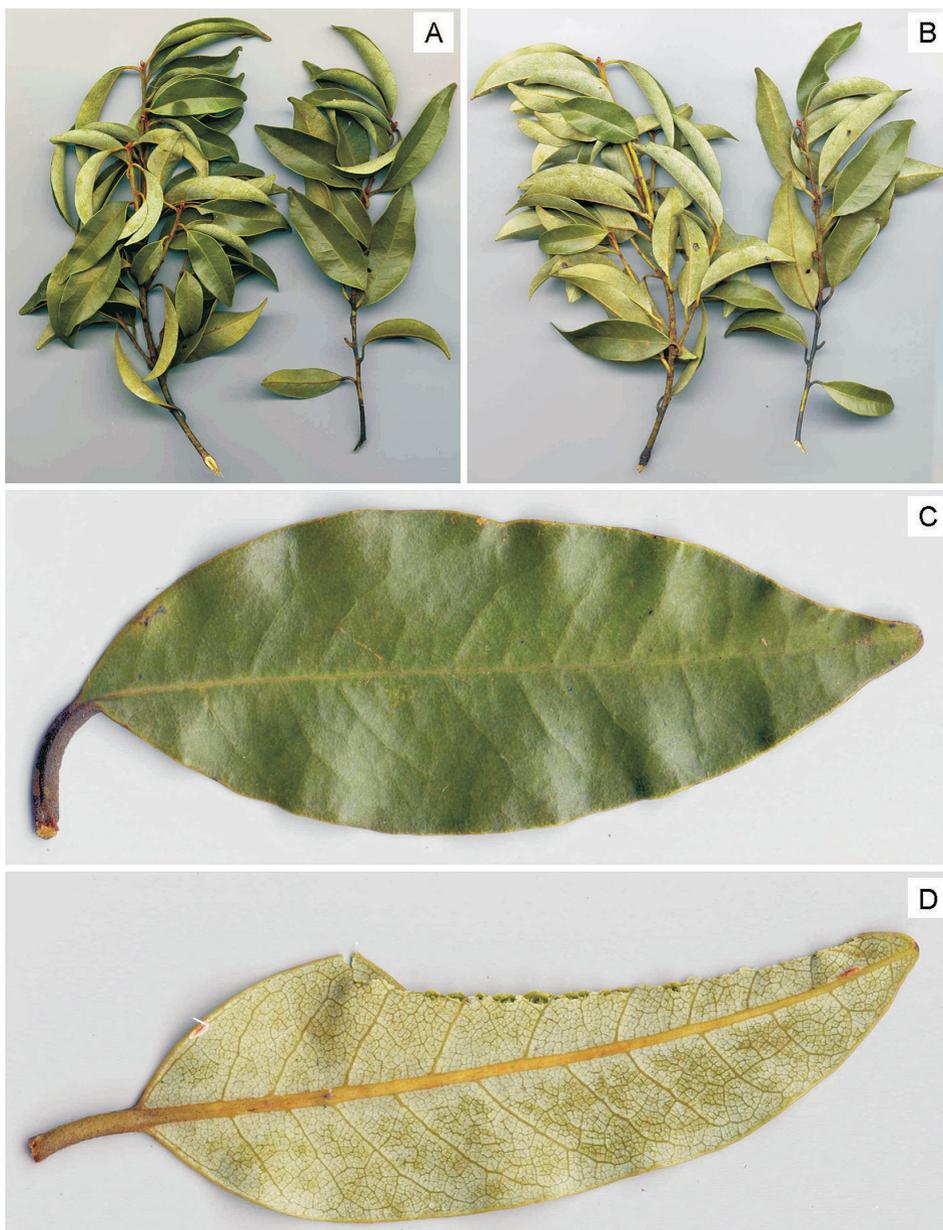
**Comments** - It is here decided to reinstall *Cryptocarya subcorymbosa* as a valid species because it not only looks distinct from *C. moschata* and *C. aschersoniana* in herbarium material, but also because it is clearly different in the field (also different foliar features reported by Petzold, 1907). Its bark lacking flakes, rugose, brownish yellow in combination with petioles deeply canaliculate, leaves usually small, opaque, glaucescent and with papillae conspicuous on lower surface, midrib prominulous above, impressed to level towards the base, prominulous below, secondary veins slightly raised on both surfaces, tertiary venation lax, poorly reticulate above, slightly raised below, venation pattern brochidodromous, inflorescences and flowers densely tomentellous, and mature fruits usually small, globose to top-shaped, smooth with remnant of tepals, make this taxon distinct. Nevertheless, it should be emphasized that the present circumscription encompasses the type specimens of *C. minutiflora* and *C. subcorymbosa*, which are the only known flowering collections, and fruiting specimens of which the vegetative features perfectly matched the pattern found from Glaziou's collections.

**Uses** - Unknown at present.

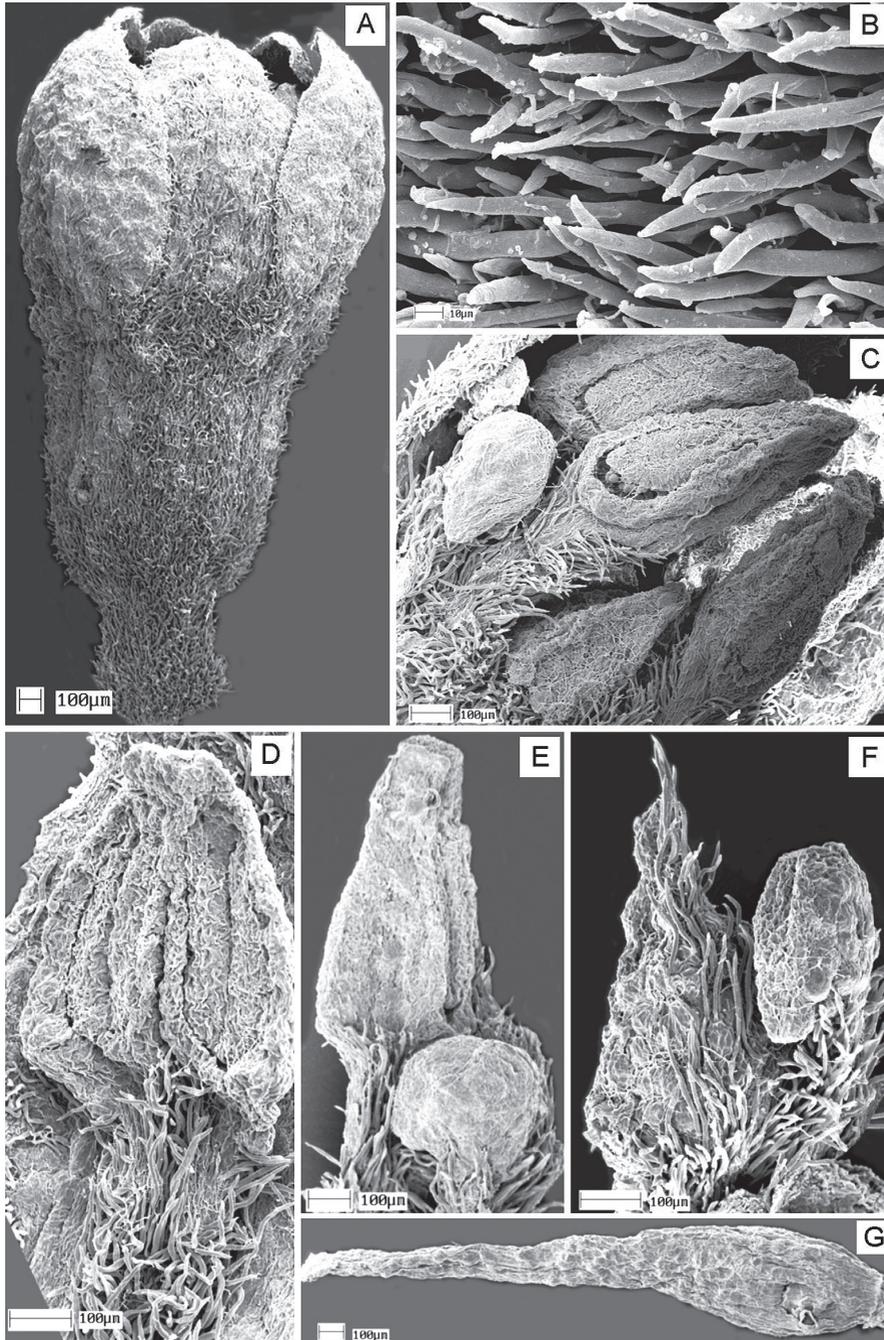
**Specimens examined** - 10 (listed in appendix 13.3).



**Fig. 61.** Appearance of barks of *Cryptocarya subcorymbosa* Mez.  
A. Serra da Estrela, Petrópolis, RJ; B. Parque Estadual da Serra do Mar,  
Núcleo Cunha-Indaiá. (Photographs by author).



**Fig. 62.** *Cryptocarya subcorymbosa* Mez. A-B. Branches collected at Serra da Estrela, Petrópolis, RJ; C-D. Detail of leaves. (Photographs by author).



**Fig. 63.** SEM micrographs of flowers of *Cryptocarya subcorymbosa* Mez.

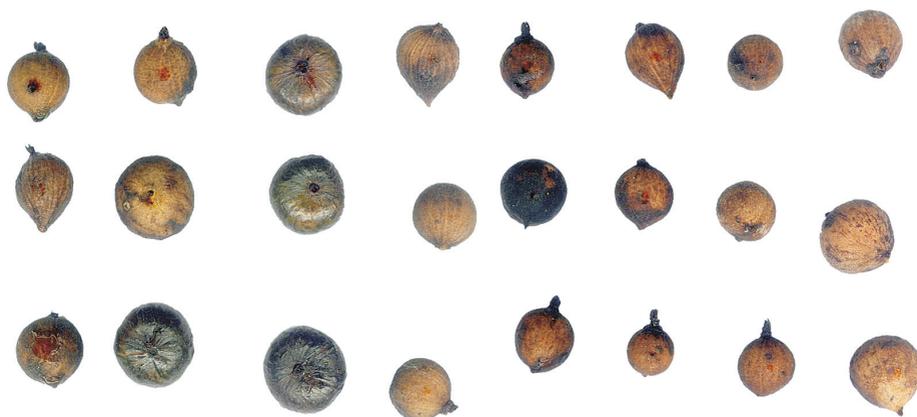
A. Flower bud; B. External indumenta; C. Longitudinal section of flower;

D. Adaxial side of stamen of the androecial whorl II, introrse;

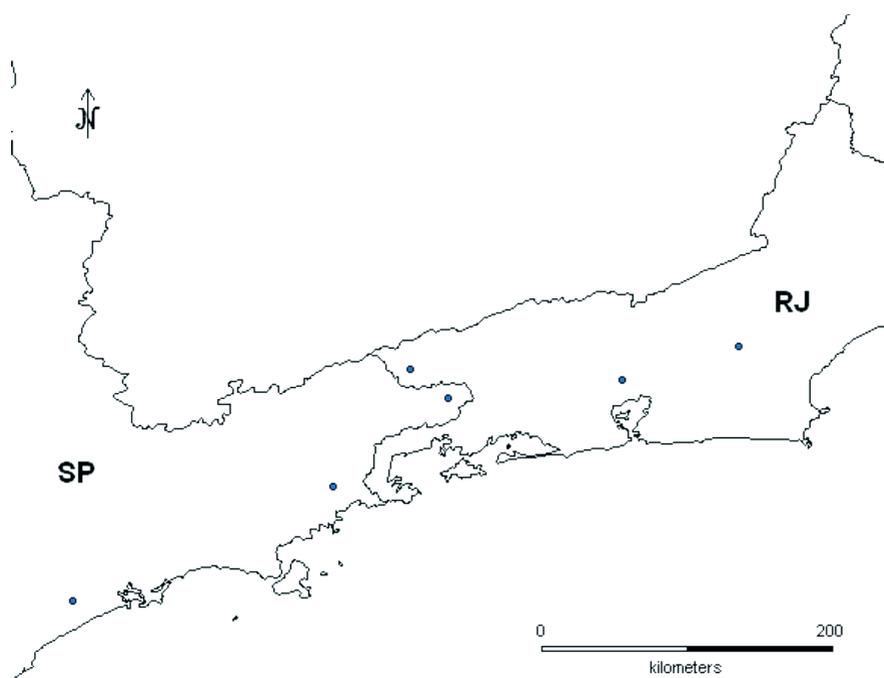
E. Adaxial side of stamen of the androecial whorl III, lateral-extrorse, and gland;

F. Adaxial side of staminode and gland; G. Gynoecium (from *Glaziou 18436*, OUPR).

(Photomicrographs by author).



**Fig. 64.** Fruits and diaspores of *Cryptocarya subcorymbosa* Mez collected at P.E. Serra do Mar, Núcleo Cunha-Indaiá, SP, in February 2002. (Photograph by author).



**Fig. 65.** Distribution of *Cryptocarya subcorymbosa* Mez.

## 12. *Cryptocarya velloziana* P.L.R. de Moraes sp. nov.

Holotype: Brazil. Espírito Santo, Santa Teresa, Valsugana Velha, Estação Biológica de Santa Lúcia, c. 19°58'S, 40°32'W, alt. 600-900 m, 24 Sep. 1991 (fr.), E. Bausen & M.F. dos Santos 28 (MBML!; isotypes: MO n.v., RB!, SPSF!). Fig. 66; Plate XV A (cf. Appendix 13.5).

Ab omnibus speciebus *Cryptocaryae* ex regione Neotropica foliis apicibus late acutis ad rotundatos, base obtusa, laminis rigido-coriaceis, crassis, glabris supra et infra, petiolis ad 4 mm crassos, quasi-complanatis supra differt.

Differs from other species of Neotropical *Cryptocarya* in the tip of the leaf broadly acute to rounded, base obtuse, leaf laminae rigid-coriaceous, thick, glabrous on both surfaces, petioles up to 4 mm thick, flattish above.

**Etymology** - This species is named in honour of José Mariano da Conceição Vellozo, author of *Florae Fluminensis*, the work that marks the onset of the study of the Brazilian flora, more specifically that of Rio de Janeiro.

**Description** - Trees up to 16 m tall, trunk cylindrical, DBH 6-35 cm, bark light chestnut-brown, slightly rugose, with lenticels (Fig. 67). *Branches* terete, shining, relatively smooth, striate, glabrous. *Branchlets* 5 cm below terminal bud c. 2.0-3.9 mm in diam., light yellowish to dark-brown, initially angular from the beginning, smooth to slightly striate to rugose, with longitudinal lenticels, glabrous. *Petioles* 10.0-19.6 mm long, 2.2-4.0 mm thick, acanaliculate and flattish above, roundish below, rugose, glabrous, dark (dried). *Leaves* alternate, broad-ovate, 7.2-24.0 cm long, 4.0-11.7 cm broad, rigid-coriaceous, thickness up to 1.3 mm (measured at the base), glabrous on both surfaces, tip broadly acute to rounded, base obtuse, margin flat to recurved, sclerified; above somewhat shining, prominulous reticulate; beneath paler, with papillae conspicuous; midrib prominulous to impressed to level towards the apex above, prominulous to prominent below, secondary veins patent (6-10 per side), prominulous on both surfaces; tertiary venation lax, prominulous reticulate on both surfaces; venation pattern camptodromous-brochidodromous. *Inflorescences* unknown, however, remnant peduncles are axillary, subterminal, 1.4-2.6 mm in diam. at the base, pubescent, with ± short, ± appressed hairs. *Flowers* unknown. *Immature fruits* green, slightly ribbed. *Mature fruits*, pear-shaped to ellipsoid, c. 3.16-3.46 cm long, 2.34-2.54 cm in diam., smooth.

**Phenology** - Flowering time so far unknown. Immature fruits in May and September; mature fruits in September.

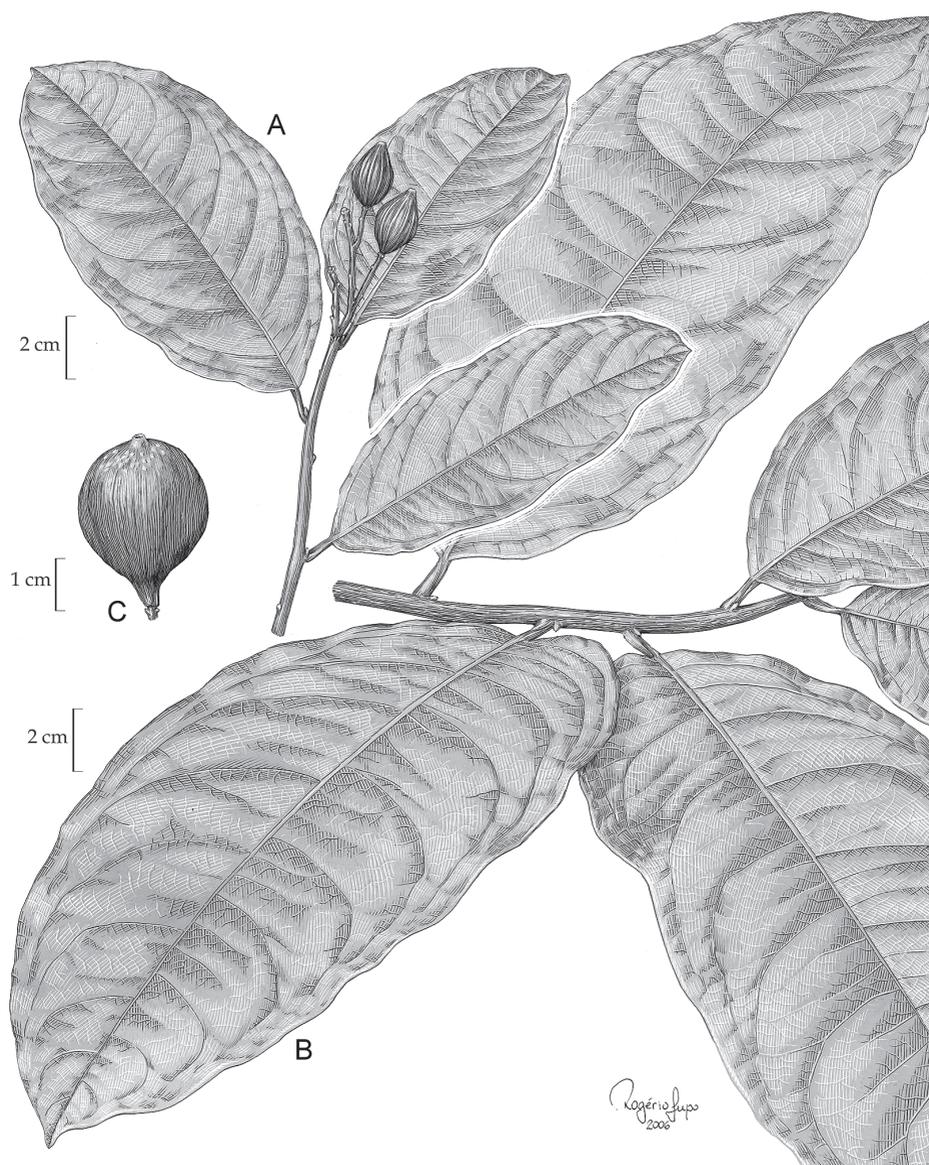
**Distribution and habitat (Fig. 68)** - Species only known from few collections of Estação Biológica de Santa Lúcia, occurs in the Ombrophilous Dense Forest, from 600-900 m altitude.

**Uses** - Unknown at present.

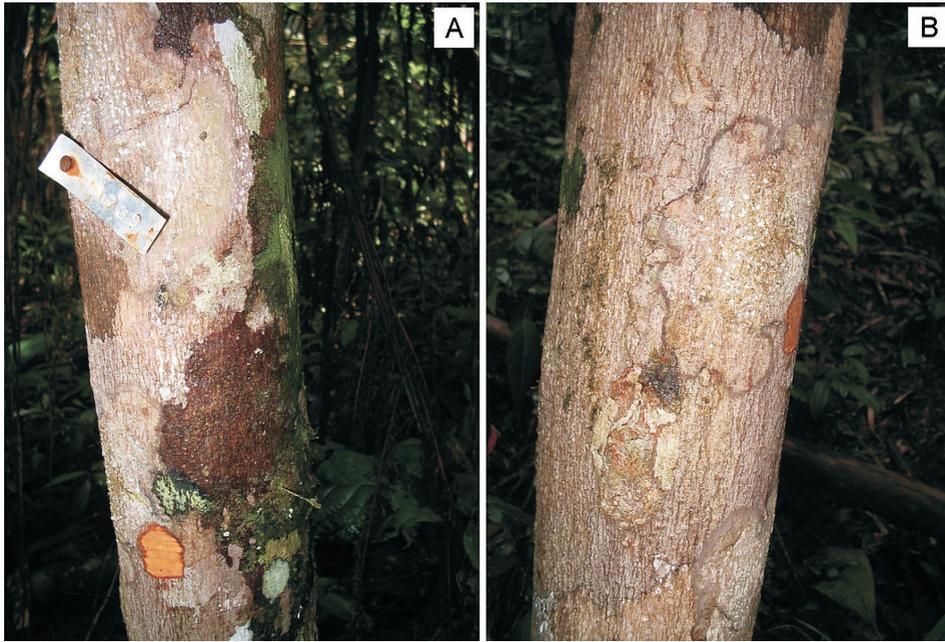
**Comments** - *Cryptocarya velloziana* is the most distinctive new species in this treatment. It is easily recognised by its rigid-coriaceous and thick leaves, tip broadly acute to rounded, base obtuse; the overall appearance of leaves suggests a relationship with some Brazilian species of *Beilschmiedia*, such as

those of *B. rigida* and *B. linharensis*, but its fruits do not fit the concept of this genus, being typical for *Cryptocarya*. Because of its characteristic leaves, sterile material of *C. velloziana* is not likely to be confused with any other Brazilian *Cryptocarya* species.

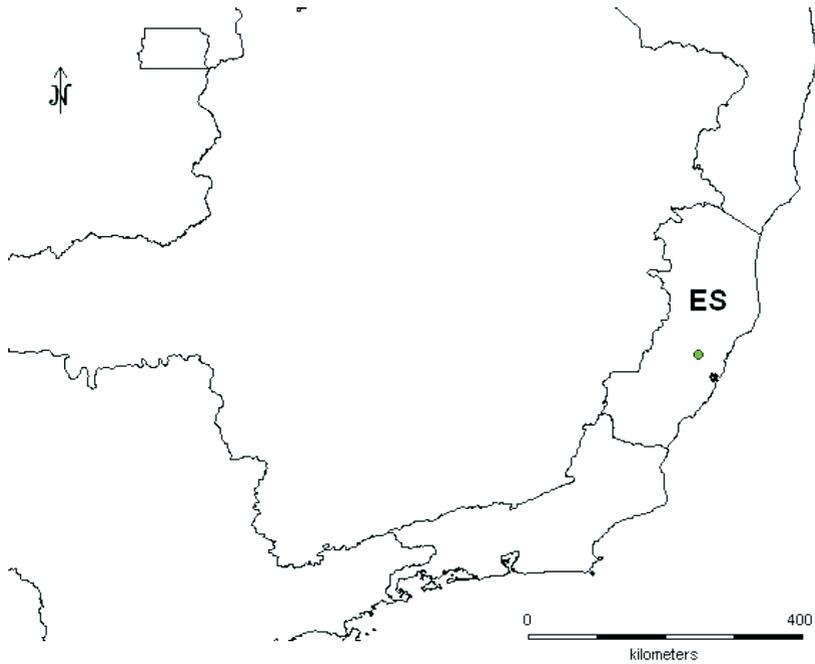
**Specimens examined** - 6 (listed in appendix 13.3).



**Fig. 66.** *Cryptocarya velloziana* P.L.R. de Moraes. A. Habitus (from Lopes et al. 676, UEC); B. Habitus (from Thomaz 1254, VIES); C. Fruit (from Demuner et al. 55, UEC).



**Fig. 67.** Barks of *Cryptocarya velloziana* P.L.R. de Moraes. A-B. Estação Biológica de Santa Lúcia, Santa Teresa, ES. (Photographs by author).



**Fig. 68.** Distribution of *Cryptocarya velloziana* P.L.R. de Moraes.

### 13. *Cryptocarya wiedensis* P.L.R. de Moraes sp. nov.

Holotype: Brazil. Espírito Santo, Santa Maria de Jetibá, Rio Nove, terreno de L. Kollmann, alt. 850 m, 13 Apr. 1999 (fl.), L.J.C. Kollmann *et al.* 2464 (MBML!; isotypes: RB n.v., SPSF!, UEC!). Fig. 69; Plate XVI A (cf. Appendix 13.5).

Ab omnibus speciebus *Cryptocaryae* ex regione Neotropica foliis coriaceis, sparse pubescentibus supra et infra, base obtusa, facie adaxiali opaca et obscure reticulata, ramulis, pedunculis et floribus dense pubescentibus differt.

Differs from other species of Neotropical *Cryptocarya* by leaves coriaceous, sparse pubescent on both surfaces, base obtuse, adaxial face opaque and poorly reticulate, branchlets, peduncles and flowers densely pubescent.

**Etymology** - This species is named in honour of Maximilian Alexander Philipp, Prinz zu Wied-Neuwied, famous German naturalist and explorer of Brazil (1815-1817).

**Description** - *Trees* or mostly small trees, 6-25 m tall. *Branchlets* 5 cm below terminal bud c. 1.7-3.0 mm in diam., brownish, initially flattened or angular from the beginning, minutely pubescent, with short, yellowish, appressed hairs completely covering the surface; terminal buds ovoid, minutely yellowish pubescent. *Petioles* 8.25-10.27 mm long, 1.2-1.9 mm thick, slightly canaliculate to acanaliculate above, flattened, roundish below, pubescent. *Leaves* alternate, elliptical to ovate, 3.7-11.0 cm long, 1.3-4.24 cm broad, coriaceous, sparsely pubescent on both surfaces, with short, yellowish, appressed hairs, tip acute to short acuminate, base obtuse, margin flat to slightly recurved; above opaque, inconspicuous to poorly reticulate; beneath paler, dull, minutely reticulate, with papillae conspicuous; midrib impressed to level above, prominent below, secondary veins erect (4-7 per side), inconspicuous to slightly salient below; tertiary venation densely impressed reticulate below; venation pattern brochidodromous. *Inflorescences* light green to green-yellowish, panicles in the axils of distal leaves, subterminal, few-flowered, 1.0-1.4 mm in diam. at the base, 1.87-3.74 cm long, minutely pubescent; peduncles densely sericeous-tomentellous, short (Fig. 69 A). *Flowers* (Fig. 69 B-J) yellowish, minutely pubescent, with short, ± appressed hairs, 3.8-4.2 mm long, 1.6-2.0 mm in diam. at apex; tube urceolate, 1.4-1.6 mm long, 1.2 mm in diam.; pedicels pubescent, 0-1.3 mm long; tepals subequal, 1.7-2.2 mm long, 1.0-1.4 mm broad, slightly concave, erect and slightly incurved at apex, widely ovate to ovate-elliptical, acutish or obtuse, sparsely pilose within; stamens included; stamens of whorl I and II introrse, anthers glabrous, subtriangular, tip rounded to obtuse, connectives prolonged beyond the sporangia, filaments rather slender, pilose, as long as or slightly shorter than anthers, adnate to the tepals; stamens of whorl III extrorse-lateral, anthers narrowly ovate, glabrous, c. 1.0 mm long, connectives thick, obtuse, strongly prolonged beyond the sporangia, filaments rather slender, as long as, pilose; glands subglobose, compressed, long pedicelled, pedicel stout, pilose; staminodes large, sagittate, acute, c. 1.0 mm long, tip and abaxial side pilose, adaxial side flattened, glabrous, with two conspicuous small elliptical protuberances at the base in lateral/abaxial side, stalks conspicuous, stout, pilose; gynoecium immersed in the tube, c. 2.6 mm long, glabrous, ovary ellipsoid, gradually merging into the cylindrical-conical, glabrous, up to 2.0 mm

long style with small, discoid stigma. *Immature fruits* green, ellipsoid-ovate, ribbed (Fig. 69 K).

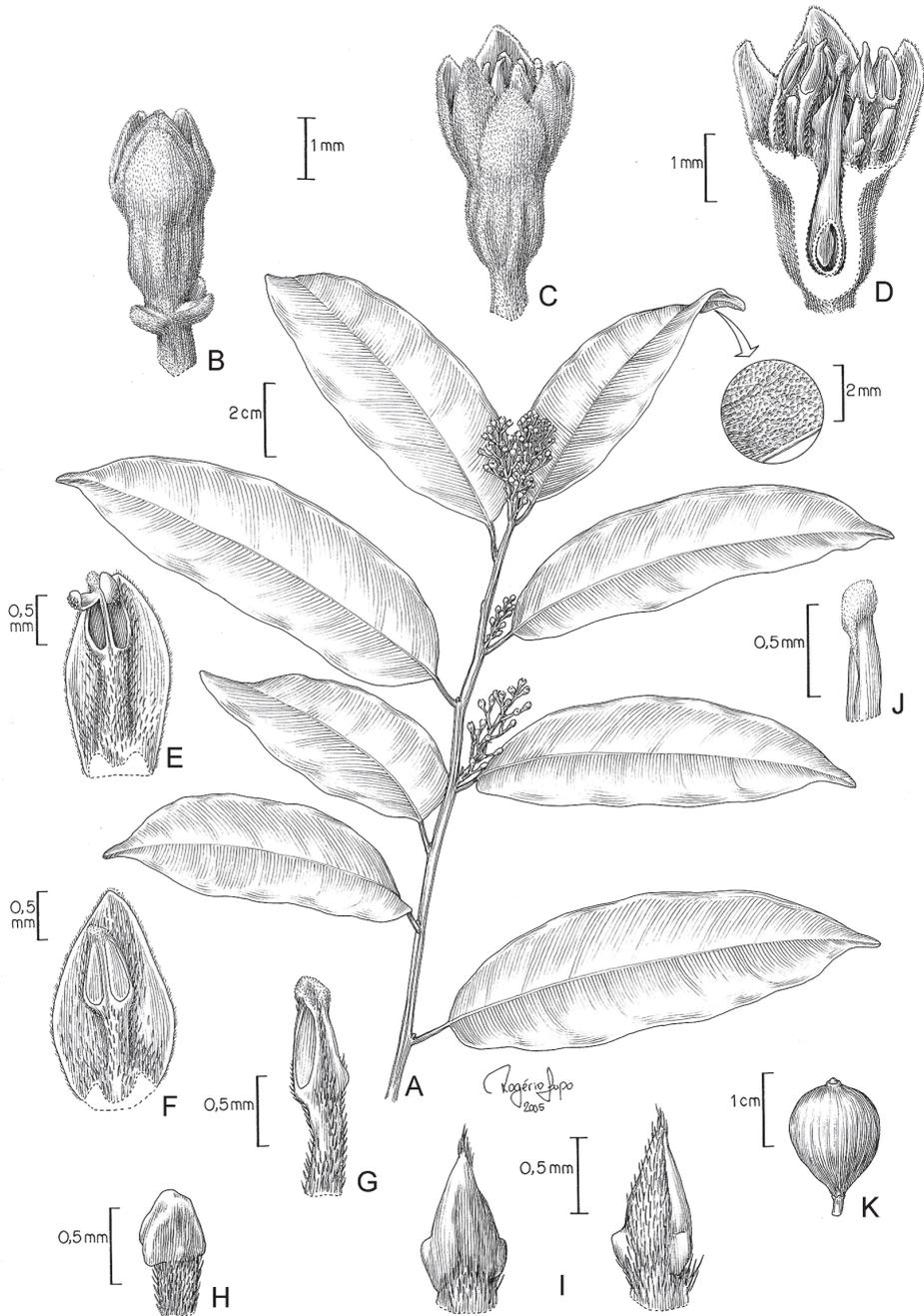
**Phenology** - Flowering material (only known from the type collection) in April and a paratype bearing flower buds in February. Immature fruits only known from the two paratypes collected in July.

**Distribution and habitat (Fig. 70)** - So far only known from the collections at Santa Maria de Jetibá and Santa Teresa, Espírito Santo. In the Montane Ombrophilous Dense Forest, from 750 to 850 m altitude.

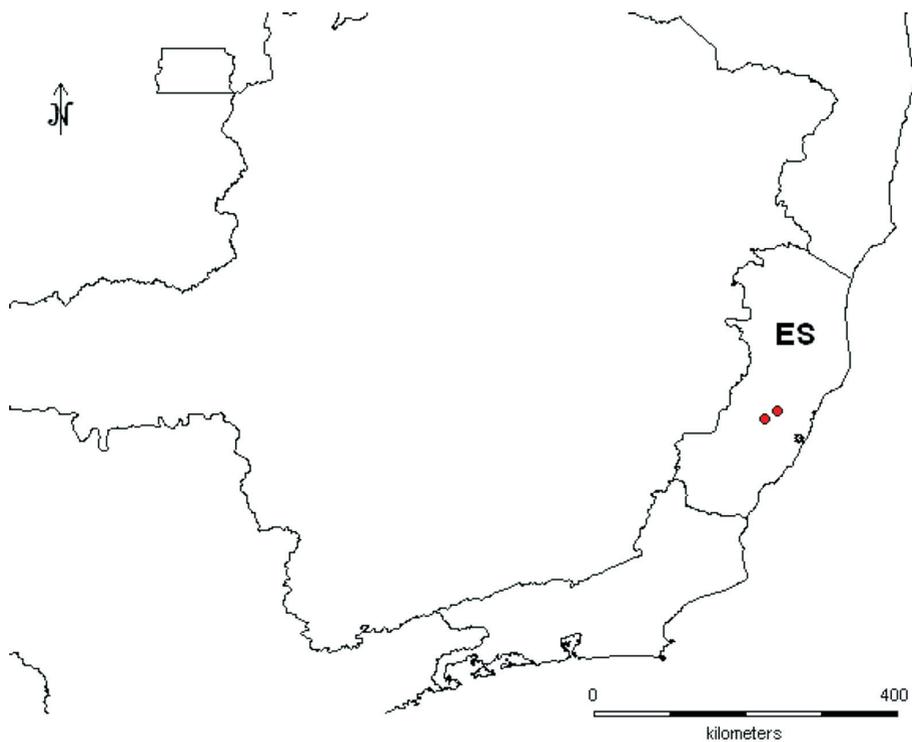
**Uses** - Unknown at present.

**Comments** - *Cryptocarya wiedensis* deserves specific status due to its conspicuous indument of short, appressed hairs covering nearly always the entire surface of branchlets, inflorescences, and flowers, and by its leaves coriaceous, sparse pubescent on both surfaces, base obtuse, adaxial face opaque and poorly reticulate. Although no other species shows this combination of characters, further collections and more study are needed to clarify its relationship with the other species, since this entity apparently shares characters of both *C. mandioccana* and *C. moschata* group.

**Specimens examined** - 4 (listed in appendix 13.3).



**Fig. 69.** *Cryptocarya wiedensis* P.L.R. de Moraes (habitus and floral parts from Kollmann *et al.* 2464). A. Habitus; B. Flower bud; C-D. Flowers; E. Stamen of whorl I; F. Stamen of whorl II; G. Stamen of whorl III; H. Gland; I. Staminodes; J. Detail of style and stigma; K. Fruit (from Kollmann *et al.* 269).



**Fig. 70.** Distribution of *Cryptocarya wiedensis* P.L.R. de Moraes.

#### 9.4. Doubtful taxa

***Cryptocarya jacarepaguensis* Vattimo-Gil**, *Rodriguésia* 25 (37): 230 & 237, f. 78 (1966b). – Holotype: Brazil. Rio de Janeiro, Represa do Camorim, May 1952 (fr.), J.G. Kuhlmann s.n. (RB, fruit collection no. 2727, not located).

As pointed out by Moraes (2005a), Vattimo-Gil (1966b) described *C. jacarepaguensis* based on a fruit collection that has not been located at RB. Moreover, her description of fallen fruits and the drawing thereof (more or less round and with ribs like nearly all Brazilian species of *Cryptocarya*), are not distinctive enough to warrant recognisable specific status.

#### 9.5. Excluded taxa

***Cryptocarya aü-üva* Martius ex Nees**, *Syst. Laur.* 246 (1836), invalid name = *Aydendron permolle* Nees, loc. cit. = *Aniba permollis* (Nees) Mez, *Jahrb. Königl. Bot. Gart. Berlin* 5: 55 (1889). – Lectotype (designated by Kubitzki, 1982): Brazil. Amazonas, “in sylvis ad Ega, Rio Negro”, Dec. (fl.), C.F.P. von Martius s.n. (Martius obs. 2908) (M! – 3 sheets; isolectotypes: B<sup>+</sup> – Photo F Neg. No. 3806!, NY-00354890 – photo in UEC!, NY-00354891 – photo in UEC!).

***Cryptocarya canelilla* Kunth**, in *Nov. Gen. Sp. (quarto ed.)* 7: 192, t. 645 (1825). – Holotype: Venezuela, Esmeralda, “in monte de la Canelilla”, s.d. (immat. fr.), F.W.H.A. von Humboldt & A.J.A. Bonpland 1018 (P-Bonpl.-00307242 – photo in UEC!, F Neg. No. 35005!; isotypes: B-W-7784!, P-00506929 – photo in UEC!) = *Aniba canelilla* (Kunth) Mez, *Jahrb. Königl. Bot. Gart. Berlin* 5: 53 (1889).

***Cryptocarya dubia* Sprengel ex Nees**, *Syst. Laur.* 400 (1836), invalid name = *Oreodaphne phillyreoides* Nees, loc. cit. = *Mespilodaphne phillyraeoides* (Nees) Meissner, in *Prodr. (DC.)* 15(1): 100 (1864) = *Ocotea phillyraeoides* (Nees) Mez, *Jahrb. Königl. Bot. Gart. Berlin* 5: 315 (1889).

***Cryptocarya emarginata* Meissner**, in *Prodr. (DC.)* 15(1): 76 (1864) = *Hufelandia emarginata* (Meissner) Mez, *Jahrb. Königl. Bot. Gart. Berlin* 5: 18 (1889) = *Beilschmiedia emarginata* (Meissner) Kostermans, *Recueil Trav. Bot. Néerl.* 35: 855 (1938c). – Holotype: Brazil. São Paulo, “in sylvis subhumidis prope Lorena”, Oct. 1823 (fl.), L. Riedel 1585 (LE n.v.; isotypes: G-00007871 – photo in UEC!, K n.v., NY-00355041!).

***Cryptocarya hirsuta* Schott ex Sprengel**, in *Syst. Veg.* 4(2): 405 (1827) = *Endlicheria hirsuta* (Schott) Nees, *Linnaea* 8: 38 (1833), typ. cons. = *Goepertia hirsuta* (Schott) Nees, *Syst. Laur.* 366 (1836). – Lectotype (designated by Kostermans, 1937): Brazil. Rio de Janeiro, “ad S. Cristovão prope Sebastianopolis Bras.”, s.d. (fl. ♂), J.B.E. Pohl 5611 (W<sup>+</sup>; isolectotypes: M! – 2 sheets, Photo F Neg. No. 19260!, U n.v., and probably BR-880679!) = *Endlicheria paniculata* (Sprengel) J.F. Macbride, *Field Mus. Nat. Hist., Bot. Ser.*, 13(2/3): 850 (1938).

***Cryptocarya laevis* Nees ex Martius**, *Flora* 21(2): Beibl. 64 (144). (1838) = *Aiouea laevis* (Martius) Kostermans, *Recueil Trav. Bot. Néerl.* 35: 84 (1938a). – Type: Brazil. Rio de Janeiro, “crescit in sylvis Caa-poera dictis ad Sebastianop.”,

12 Jun. (fl.), *C.F.P. von Martius, Herbar. Florae Brasil. N° 237* (B<sup>†</sup> – Photo F Neg. No. 3782!, BR-868583!, BR-868616!, BM-000894059 – photo in UEC!, E-00259412 – photo in UEC!, G – 4 sheets – photos in UEC!, GH-41126 – photo in UEC!, HAL-101918 – photo in UEC!, K n.v., KR – photo in UEC!, L-0035524 – photo in UEC!, L-0035525 – photo in UEC!, LE n.v., LZ<sup>†</sup>, M! – 4 sheets, MO-145001 – photo in UEC!, NY-00354800!, P-00128383 n.v., P-00128384 n.v., W<sup>†</sup>, WRSL – photo in UEC!).

***Cryptocarya monticola* Martius ex Nees**, *Syst. Laur.* 400 (1836), invalid name = *Oreodaphne phillyreoides* Nees, loc. cit. = *Mespilodaphne phillyraeoides* (Nees) Meissner, in *Prodr.* (DC.) 15(1): 100 (1864) = *Ocotea phillyraeoides* (Nees) Mez, *Jahrb. Königl. Bot. Gart. Berlin* 5: 315 (1889).

***Cryptocarya mucronata* (Poiret) Sprengel**, *Syst. veg.* 2: 271 (1825) ≡ *Laurus mucronata* Poiret, in *Lam. Encycl., Suppl.* 3: 323 (1813) ≡ *Ocotea mucronata* (Poiret) Kostermans, *Reinwardtia* 5: 395 (1961). – Holotype: French Guiana. Île de Cayenne, s.d. (fr.), *Herbier Desfontaines* [FI-W-160347 – photo in UEC!; isotypes: FI-W-160346 – photo in UEC!, G-00007863 (fragment, photo in UEC!), P-00307243 (fragment, photo in UEC!)]. Plates XVII A-B (cf. Appendix 13.5).

***Cryptocarya pachycarpa* Gleason**, *Bull. Torrey Bot. Club* 54(8): 607 (1927). – Holotype: Guyana. Kamakusa, upper Mazaruni River, 59°50'W, 11-22 Jul. 1923 (immat. fr.), *J.S. de la Cruz 4215* (NY-00355047!; isotypes: GH-41156 – photo in UEC!, F-544793 – F Neg. No. 62890!, MO-928688 – photo in UEC!, MO-928689 – photo in UEC!, US-00051075 – photo in UEC!) = *Aniba citrifolia* (Nees) Mez, *Jahrb. Königl. Bot. Gart. Berlin* 5: 74 (1889).

***Cryptocarya pretiosa* Martius ex Nees**, *Syst. Laur.* 237 (1836), invalid name = *Mespilodaphne pretiosa* Nees & Martius var. *angustifolia* Nees, loc. cit. = *Aniba canelilla* (Kunth) Mez, *Jahrb. Königl. Bot. Gart. Berlin* 5: 53 (1889).

***Cryptocarya pyriformis* Nees**, *Syst. Laur.* 220 (1836) ≡ *Mespilodaphne pyriformis* (Nees) Meissner, in *Prodr.* (DC.) 15(1): 108 (1864) ≡ *Endlicheria pyriformis* (Nees) Mez, *Jahrb. Königl. Bot. Gart. Berlin* 5: 116 (1889). – Holotype: French Guiana. Without locality, 1819-1821 (immat. fr.), *P.A. Poiteau s.n.* (B<sup>†</sup>, F Neg. No. 3820!; isotypes: G-00007872 – photo in UEC!, LE! – 2 sheets, NY-00099497!, P n.v.).

***Cryptocarya riedelii* Meissner**, in *Prodr.* (DC.) 15(1): 75 (1864). – Holotype: Brazil. State not indicated, “in sylvis pr. Esperança”, May 1821 (fl., imat. fr.), *L. Riedel 770* (LE, photo in UEC!; isotype: NY-00355048! – photo in UEC!) = *Rhodostemonodaphne macrocalyx* (Meissner) Rohwer ex Madriñán, *Fl. Neotrop. Monogr.* 92: 46 (2004).

***Cryptocarya robusta* A.C. Sm.**, *Bull. Torrey Bot. Club* 58(2): 97 (1931). – Holotype: Peru. Dept. Junín, San Nicolas, Pichis Trail, about 1100 m, 4-5 Jul. 1929 (immat. fr.), *E.P. Killip & A.C. Smith 26077* (NY-00099496 – photo in UEC!; isotypes: F n.v., US-00642132 – photo in UEC!) ≡ *Endlicheria robusta* (A.C. Sm.) Kostermans, *Recueil Trav. Bot. Néerl.* 34: 556 (1937).

## 10. Literature cited

- ADANSON, M. 1763. *Familles des plantes*. II Partie. Paris: Chez Vincent, 640 pp.
- AGRIPINO, D.G., LIMA, M.E.L., SILVA, M.R., MEDA, C.I., BOLZANI, V.S., CORDEIRO, I., YOUNG, M.C.M. & MORENO, P.R.H. 2004. Screening of Brazilian plants for antimicrobial and DNA-damaging activities. I. Atlantic Rain Forest. Ecological Station Juréia-Itatins. *Biota Neotropica* 4(2): 1-15.
- ALLEN, C.K. 1942. Studies in the Lauraceae, V. Some eastern asiatic species of *Beilschmiedia* and related genera. *Journal of the Arnold Arboretum* 23: 444-463.
- APG II. 2003. An update of the Angiosperm Phylogeny Group classification for the orders and families of flowering plants: APG II. *Botanical Journal of the Linnean Society* 141: 399-436.
- ARMESTO, J.J. & MARTINEZ, J.A. 1978. Relations between vegetation structure and slope aspect in the Mediterranean region of Chile. *The Journal of Ecology* 66(3): 881-889.
- ASSIS, L.C.S., FORZZA, R.C. & VAN DER WERFF, H. 2005. A família Lauraceae na Reserva Biológica da Represa do Gramma, Descoberto, Minas, Gerais, Brasil. *Boletim de Botânica da Universidade de São Paulo* 23(1): 113-139.
- ASSUMPCÃO, C.T. DE 1983. *An ecological study of the primates of Southeastern Brazil, with a reappraisal of Cebus apella races*. Unpublished Ph.D. thesis. Edinburgh: University of Edinburgh, 337 pp.
- BAAS, P. & GREGORY, M. 1985. A survey of oil cells in the dicotyledons with comments on their replacement by and joint occurrence with mucilage cells. *Israel Journal of Botany* 34: 167-186.
- BAITELLO, J.B. & COE-TEIXEIRA, B. 1987. Flora Fanerogâmica da Reserva do Parque Estadual das Fontes do Ipiranga (São Paulo, Brasil). 7 – Lauraceae. *Hoehnea* 14: 63-74.
- BAITELLO, J.B. & MORAES, P.L.R. DE 2005. Flora Fanerogâmica da Ilha do Cardoso (São Paulo, Brasil) – Lauraceae. In M.M.R.F. DE MELO, F. DE BARROS, S.A.C. CHIEA, M. KIRIZAWA, S.L. JUNG-MENDAÇOLLI & M.G.L. WANDERLEY (eds.). *Flora Fanerogâmica da Ilha do Cardoso*. São Paulo: Instituto de Botânica, 2004, 11: 31-70.
- BAKKER, M.E., GERRITSEN, A.F. & VAN DER SCHAAF, P.J. 1992. Leaf anatomy of *Cinnamomum Schaeffer* (Lauraceae) with special reference to oil and mucilage cells. *Blumea* 37(1): 1-30.
- BARROSO, G.M., MORIM, M.P., PEIXOTO, A.L. & ICHASO, C.L.F. 1999. *Frutos e sementes: Morfologia aplicada à Sistemática de Dicotiledôneas*. Viçosa: Editora UFV, 443 pp.

- BECCARI, O. 1880. *Massoia*. In L.M. D'Albertis. *New Guinea: What I did and what I saw*. London: Sampson Low, Marston, Searle and Rivington, 2: 398.
- BEHLING, H., ARZ, H.W., PÄTZOLD, J. & WEFER, G. 2000. Late Quaternary vegetational and climate dynamics in northeastern Brazil, inferences from marine core GeoB 3104-1. *Quaternary Science Reviews* 19: 981-994.
- BENOIST, R. 1924. Descriptions d'espèces nouvelles de phanérogames de la Guyane Française. *Bulletin du Muséum National d'Histoire Naturelle* 30: 510.
- BENOIST, R. 1931. Les bois de la Guyane Française. *Archives de Botanique, Mémoires*. Caen, 5(1): 1-292.
- BENTHAM, G. 1870. *Flora australiensis: a description of the plants of the Australian territory*. London: Lovell Reeve & Co., 5: 599 pp.
- BENTHAM, G. 1880. Laurineae. In G. BENTHAM & J.D. HOOKER. *Genera Plantarum*. Londini: L. Reeve & Co., 3(1): 146-165.
- BERNARDI, L. 1962. *Lauráceas*. Mérida: Universidad de Los Andes, Facultad de Ciencias Forestales, Talleres Graficos Universitarios, 355 pp.
- BLANCO, F.M. 1845. *Flora de Filipinas, según el sistema sexual de Linneo*, segunda impresion, corregida y aumentada por el mismo autor. Manila: D. Miguel Sanchez, 619 pp.
- BLETTER, N., JANOVEC, J., BROSI, B. & DALY, D.C. 2004. A digital base map for studying the Neotropical flora. *Taxon* 53(2): 469-477.
- BLUME, C.L. VON. 1826. *Bijdragen tot de flora van Nederlandsch Indië*. Batavia: Lands Drukkerij, 11: 529-577.
- BOGGAN, J., FUNK, V., KELLOF, C., HOFF, M., CREMERS, G. & FEUILLET, C. 1997. *Checklist of the plants of the Guianas* (Guyana, Surinam, French Guiana). 2<sup>nd</sup> ed.. Publication No. 30 in the Smithsonian's Biological Diversity of the Guianas Program. Washington, D.C.: Department of Botany, National Museum of Natural History, Smithsonian Institution, 238 pp.
- BRIANI, D.C., VIEIRA, E.M. & VIEIRA, M.V. 2001. Nests and nesting sites of Brazilian forest rodents (*Nectomys squamipes* and *Oryzomys intermedius*) as revealed by a spool-and-line device. *Acta Theriologica* 46(3): 331-334.
- BROUWER, Y.M. & CLIFFORD, H.T. 1990. An annotated list of domatia-bearing species. *Notes from the Jodrell Laboratory XII*, Royal Botanic Gardens Kew: 1-33.
- BROWN, R. 1810. *Prodromus Floræ Novæ Hollandiæ et Insulæ Van-Diemen, exhibens characteres plantarum quas annis 1802-1805, per oras utriusque insulæ collegit et descripsit*. Londini: Typis Richardi Taylor et Socii. Veneunt apud J. Johnson et Socios, in Cœmeterio Sancti Pauli, 1: [i]-viii, 145-590.

- BRUMMITT, R.K. 1994. Report of the Committee for Spermatophyta: 41. *Taxon* 43(2): 271-277.
- BRUMMITT, R.K. 2001. *World Geographical Scheme for Recording Plant Distributions*. Plant Taxonomic Database Standards No. 2. Ed. 2. Pittsburgh: Hunt Institute for Botanical Documentation. (*TDWG Standard*), xv, 137 pp.; 17 maps
- BRUMMITT, R.K. & POWELL, C.E. 1992. *Authors of plant names*. Kew: Royal Botanic Gardens, 732 pp.
- BURGER, W.C. 1988. A new genus of Lauraceae from Costa Rica, with comments on problems of generic and specific delimitation within the family. *Brittonia* 40(3): 275-282.
- BURGER, W.C. & VAN DER WERFF, H. 1990. Flora Costaricensis – Family 80: Lauraceae. *Fieldiana, Botany, new series*, 23: 1-129.
- CAMARGOS, J.A.A., CZARNESKI, C.M., MEGUERDITCHIAN, I. & OLIVEIRA, D. 1996. *Catálogo de árvores do Brasil*. Brasília: Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis. Laboratório de Produtos Florestais, 887 pp.
- CAMINHOÁ, J.M. 1877. *Elementos de Botanica General e Medica*. 6 vol.. Rio de Janeiro: Typographia Nacional, 3167 pp.
- CARTELLE, C. & HARTWIG, W.C. 1996. Macacos sul-americanos: ossos que são um verdadeiro tesouro. *Ciência Hoje* 21(125): 30-36.
- CAVALHEIRO, A.J. 1995. *Estirilpironas poliidroxiladas de Cryptocarya moschata (Nees & Martius) Mez (Lauraceae)*. Unpublished D.Sc. thesis. São Paulo: Instituto de Química, USP, 75 pp., XXXIV.
- CAVALHEIRO, A.J. & YOSHIDA, M. 2000. 6- $[\omega$ -arylalkenyl]-5,6-dihydro- $\alpha$ -pyrones from *Cryptocarya moschata* (Lauraceae). *Phytochemistry* 53: 811-819.
- CELIS-DIEZ, J.L. & BUSTAMANTE, R.O. 2005. Frequency-dependent seed size selection on *Cryptocarya alba* (Mol.) Looser (Lauraceae): testing the effect of background. *Biological Journal of the Linnean Society* 84: 137-142.
- CHANDERBALI, A.S. 2004. *Endlicheria* (Lauraceae). *Flora Neotropica Monograph* 91: 1-141.
- CHANDERBALI, A.S., VAN DER WERFF, H. & RENNER, S.S. 2001. Phylogeny and historical biogeography of Lauraceae: evidence from the chloroplast and nuclear genomes. *Annals of the Missouri Botanical Garden* 88(1): 104-134.
- CHRISTOPHEL, D.C. & ROWETT, A.I. 1996. *Leaf and cuticle Atlas of Australian leafy Lauraceae*. *Flora of Australia Supplementary Series Number 6*. Canberra: Australian Biological Resources Study, 217 pp.

- CHRISTOPHEL, D.C., KERRIGAN, R. & ROWETT, A.I. 1996. The use of cuticular features in the taxonomy of the Lauraceae. *Annals of the Missouri Botanical Garden* 83(3): 419-432.
- COE-TEIXEIRA, B. 1965. Lauráceas do Estado de São Paulo – II: *Cryptocarya*. *Arquivos de Botânica do Estado de São Paulo* 4(1): 3-8.
- CONTIM, L.A.S., CARVALHO, C.R. DE, MARTINS, F. & FREITAS, D.V. DE. 2005. Nuclear DNA content and karyotype of Rosewood (*Aniba rosaeodora*). *Genetics and Molecular Biology* 28(4): 754-757.
- CORNER, E.J.H. 1976. *The seeds of dicotyledons*. Cambridge: Cambridge University Press, 1: 311 pp.
- CRONQUIST, A. 1981. *An integrated system of classification of flowering plants*. New York: Columbia University Press, 1262 pp.
- CRONQUIST, A. 1988. *The evolution and classification of flowering plants*. 2<sup>nd</sup>. ed. New York: The New York Botanical Garden, 555 pp.
- DE ANDRADE-LIMA, D. 1966. Contribuição ao estudo do paralelismo da flora amazônico-nordestina. *Boletim Técnico Instituto de Pesquisas Agronômicas de Pernambuco*, Nova Série, 19: 3-30.
- DE OLIVEIRA, P.E. 2005. Paleovegetação e paleoclimas do nordeste, Capítulo 3, Paleovegetação e paleoclima do Quaternário do Brasil. In C.R.G. SOUZA, K. SUGUIO, A.M.S. OLIVEIRA & P.E. DE OLIVEIRA (eds.), *Quaternário do Brasil*. Ribeirão Preto: Holos, Editora, 68 pp.
- DE OLIVEIRA, P.E., BARRETO, A.M.F. & SUGUIO, K. 1999. Late Pleistocene/Holocene climatic and vegetational history of the Brazilian caatinga: the fossil dunes of the middle São Francisco River. *Palaeogeography, Palaeoclimatology, Palaeoecology* 152(3/4): 319-337.
- DRAGENDORFF, J.G.N. 1898. *Die Heilpflanzen der Verschiedenen Völker und Zeiten*. Stuttgart: Verlag von Ferdinand Enke, [i]-vii, [1]-885 pp.
- DRINNAN, A.N., CRANE, P.R., FRIIS, E.M. & PEDERSEN, K.R. 1990. Lauraceous flowers from the Potomac Group (Mid-Cretaceous) of eastern north America. *Botanical Gazette* 151(3): 370-384.
- DUCKE, A. & BLACK, G.A. 1954. Notas sobre a fitogeografia da Amazônia brasileira. *Boletim Técnico do Instituto Agronômico do Norte* 29: 3-62.
- EKLUND, H. & KVAČEK, J. 1998. Lauraceous inflorescences and flowers from the Cenomanian of Bohemia (Czech Republic, Central Europe). *International Journal of Plant Sciences* 159(4): 668-686.

- ENDRESS, P.K. 1972. Zur vergleichenden Entwicklungsmorphologie, Embryologie und Systematik bei Laurales. *Botanische Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie* 92(2/3): 331-428.
- ENDRESS, P.K. 1990. Evolution of reproductive structures and functions in primitive angiosperms (Magnoliidae). *Memoirs of the New York Botanical Garden* 55: 5-34.
- ENDRESS, P.K. & HUFFORD, L.D. 1989. The diversity of stamen structures and dehiscence patterns among Magnoliidae. *Botanical Journal of the Linnean Society* 100: 45-85.
- ENDRESS, P.K. & IGRSHEIM, A. 1997. Gynoecium diversity and systematics of the Laurales. *Botanical Journal of the Linnean Society* 125: 93-168.
- FAGGETTER, C.D. 1987. Leaf cuticles (phytoglyphs) of selected Lauraceae. In C.R. Metcalfe (ed.). *Anatomy of the Dicotyledons*. Magnoliales, Illiciales, and Laurales. 2<sup>nd</sup> ed. New York: Oxford University Press, 3: 157-159.
- FEUILLÉE, L.E. 1725. Histoire des plantes medecinales qui sont le plus en usage aux Royaumes du Perou & du Chily dans l'Amerique Meridionale. Composée sur les lieux par ordre du Roy, dans les années 1709. 1710. & 1711. Paris: Jean Mariette. In *Journal des observations physiques, mathematiques et botaniques*, 3: 71 pp.
- FORMARIZ, T.P., KOHN, L.K., ANTÔNIO, M.A., CAVALHEIRO, A.J., FOGLIO, M.A. & CARVALHO, J.E. 2002. Atividade antiproliferativa dos extratos obtidos de *Cryptocarya aschersoniana* Mez. In XXXIV Congresso Brasileiro de Farmacologia e Terapêutica Experimental, Águas de Lindóia, 2002. *Abstracts*. 07.017.
- FRODIN, D.G. 1976. Studies in *Cryptocarya* (Lauraceae) I. *Telopea* 1(3): 217-224.
- GAERTNER, J. 1790. *De fructibus et seminibus plantarum. Volumen alterum. Continens seminum centurias quinque posteriores...* Tubingæ: Typis Guilielmi Henrici Schrammii, 2(1): 1-184.
- GALETTI, M., PEDRONI, F. & MORELLATO, L.P.C. 1994. Diet of the brown howler monkey *Alouatta fusca* in a forest fragment in southeastern Brazil. *Mammalia* 58(1): 111-118.
- GALETTI, M., MARTUSCELLI, P., OLMOS, F. & ALEIXO, A. 1997. Ecology and conservation of the jacutinga *Pipile jacutinga* in the Atlantic forest of Brazil. *Biological Conservation* 82: 31-39.
- GAY, C. 1851-1852. *Historia física y política de Chile según documentos adquiridos em esta república durante doce años de residencia em ella y publicada bajo los auspicios del supremo gobierno...* Botánica [Flora Chilena]. Paris: E. Thunot y Ca.; Santiago: Museo historia natural, 5(3): 257-384