

NEOCALYPTROCALYX MORII (CAPPARACEAE),
A NEW SPECIES FROM CENTRAL FRENCH GUIANA

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ABSTRACT

We describe **Neocalyptrocalyx morii**, a distinctive localized endemic previously considered to be a local sporadic variant of *Capparis leprieurii*, restricted to French Guiana. The new species is characterized by alternate leaves, eight stamens and ovoid, yellowish ovaries when dried.

KEY WORDS: Capparaceae, endemic, French Guiana, *Neocalyptrocalyx morii*

RÉSUMÉ

La nouvelle espèce **Neocalyptrocalyx morii**, endémique de la Guyane française, est décrite. Cette plante était auparavant considérée comme une variante locale, sporadique de *Capparis leprieurii*. Elle se caractérise par des feuilles alternées, huit étamines, et des ovaires ovoïdes et jaunâtres à l'état sec.

Neocalyptrocalyx Hutch. (1967) is a neotropical genus of Capparaceae that comprises seven species, ranging from the Amazonian lowlands of Brazil and Ecuador to the Guianas and eastern Venezuela. The genus was recently resurrected and its taxonomical limits clarified (Cornejo & Iltis 2008). While studying the species of *Neocalyptrocalyx*, we became aware that several collections from French Guiana, provisionally identified and cited as *Capparis leprieurii* Briq. (Iltis et al. 1996: 378; Iltis & Mori in Mori et al. [eds.], 2002, Fig. 66, pl. 38:e; also used by Iltis as a New Year's card, widely distributed in 1997), consistently differ by having flowers with 8(to 9) stamens, ovoid rather than oblongoid ovaries, and alternate leaves, representing a new species herewith described.

Neocalyptrocalyx morii Cornejo & Iltis, sp. nov. (**Fig. 1**). TYPE: FRENCH GUIANA: Saül and vicinity, Sentier Botanique, just E of Eaux Claires, ca. 500 m from entrance to trail, non-flooded moist forest, 3°37'N 53°12'W, ca. 300 m, 23 Sep 1994 (fl), S. Mori, C. Gracie & C. Zinder 24021 (HOLOTYPE: NY; ISOTYPES: CAY, WIS).

Species *Neocalyptrocalyci nectareo* (Vell.) Hutch. et *Neocalyptrocalyci leprieurii* (Briq.) Iltis affinis, a quibus differt foliis alternatis, staminibus minoribus, 8(–9) et ovariis ovatis, flavidis-albidis (in sicco).

Tree to 45 m tall, trunk cylindric to base but not buttressed, sometimes angled, to 75 cm dbh, the outer bark smooth and light brown to light grayish-brown, the inner bark cream or yellow, slash yellow, emitting fetid aroma when cut; lepidote-stellate throughout. **Leaves** alternate; petioles 1–1.7(–2.3) cm; mature blades elliptic to oblong-elliptic or narrowly-obovate, 10–23 × 4–9(–11) cm, the base inconspicuously subcordate to broadly obtuse, the margin entire to repand, the apex acuminate, coriaceous (in vivo), chartaceous (in sicco), covered by lepidote-stellate hairs on both surfaces, glabrescent; and 9 to 13 main lateral veins on each side of the midrib. **Inflorescences** very short corymbose racemes on peduncles to 2 cm long, sometimes apparently subfasciculate due to the absence of a peduncle, terminal, axillary and ramiflorous; floral bracts linear, 1–2.5 mm, very soon deciduous; flower buds subspherical to widely elliptic nearly to anthesis; pedicels 10–27 mm. **Flowers** nocturnal, the outer **sepals** widely ovate to suborbicular, 7–15 × 7–9 mm, green to gray-green, entirely covering the flowerbud until anthesis, becoming widely divergent to reflexed at anthesis, the inner pair of sepals ligulate-ob lanceolate, ca. 6–10 × 2 mm; **petals** obovate, 12–20 × 10–12 mm, white, with cuneate base, wavy margin and rounded at the apex; **stamens** 8(–9), with filaments 13–25 mm, cream to creamy-white (in vivo), inserted in a single row, with hyaline uniseriate trichomes at the base, the anthers ca. 2 mm; gynophore 13–25 mm, cream to creamy-white (in vivo), the **ovary** ovoid, 2–3 × 2–3

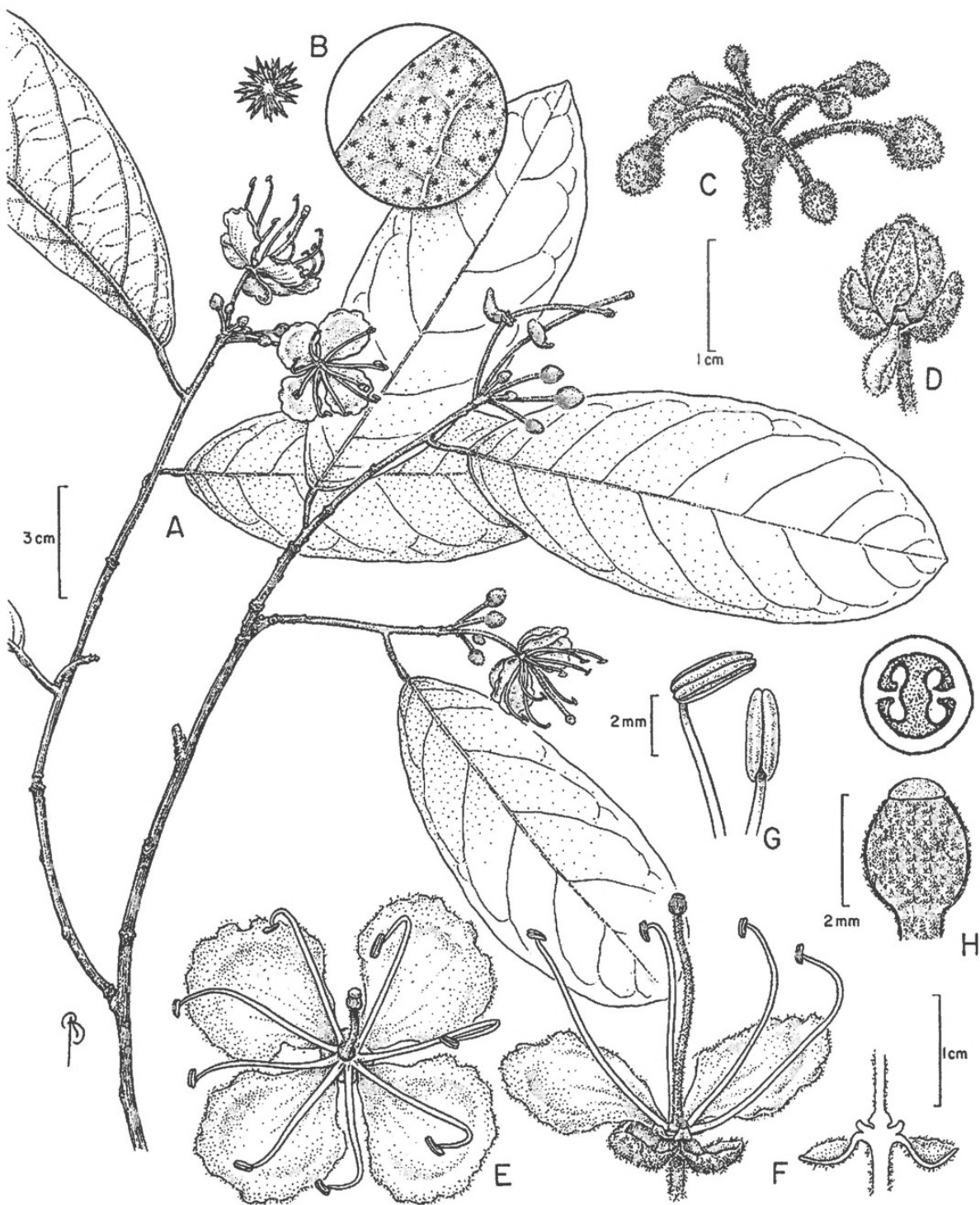


FIG. 1. *Neocalyptrocalyx morii*. A. Terminal branch with leaves and flowers. B. Detail of abaxial surface of nearly fully expanded leaf (right) and enlargement of stellate-lepidote trichome (left). C. Inflorescence in bud. D. Mature bud with inner sepal pulled down to show nectar scale. E. Apical view of flower. F. Lateral view of flower with two petals and four stamens removed (left), median section of pistil (right), and transverse section of ovary (above). G. Lateral (far left) and abaxial (near left) views of anthers. H. Lateral view of ovary and stigma (below) and transverse section of ovary (above). (From Iltis & Mori in Mori et al. [eds.] 2002: 187, fig. 66. The ovaries and number of stamens modified by the first author.

mm, yellowish, the gynophore and ovary are densely covered with whitish-stellate trichomes, the stigma capitate, sessile, green, turning red at post-anthesis. **Fruits** unknown.

Additional specimens examined: **FRENCH GUIANA. St. Elie:** Piste de St. Elie, interfluve Sinnamary/Counamama, 5°20'N 53°0'W, arbre IV-578, 5 Oct 1992 (fl), *Sabatier & Prévost* 4084 (CAY [not seen], WIS [2]); Station de la Piste de St. Elie (ECEREX), Parcelle PSEIV (km 16,3), 5°17'N 53°3'W, 6 Nov 2003 (fl), *Prévost & Sabatier* 4791 (CAY [not seen], NY). **Saül:** Monts La Fumée, Antenne Norte, 9 Oct. 1982 (fl), *Prance & Boeke* 28085 (CAY [not seen], NY); voucher for ecological study: Tree 81, 3°37'N 53°12'W, 200–400 m, 15 Sep 1982 (fl), *Boom & Mori* 1697 (MO [not seen], NY); voucher for ecological study: Tree 173, 3°37'N 53°12'W, 200–400 m, 24 Sep 1982 (st), *Boom & Mori* 1813 (NY); voucher for ecological study: Tree 227, 3°37'N 53°12'W, 200–400 m, 25 Sep 1982 (st), *Boom & Mori* 1841 (NY); voucher for ecological study: Tree 262, 3°37'N 53°12'W, 200–400 m, 7 Oct 1982 (fl), *Boom & Mori* 1897 (NY); voucher for ecological study: Tree 271, 3°37'N 53°12'W, 200–400 m, 8 Oct 1982 (fl), *Boom & Mori* 1904 (CAY [not seen], NY); voucher for ecological study: Tree 274, 3°37'N 53°12'W, 200–400 m, 8 Oct 1982 (st), *Boom & Mori* 1909 (NY); voucher for ecological study: Tree 280, 3°37'N 53°12'W, 200–400 m, 8 Oct 1982 (st), *Boom & Mori* 1914 (NY); voucher for ecological study: Tree 284, 3°37'N 53°12'W, 200–400 m, 8 Oct 1982 (st), *Boom & Mori* 1917 (NY); voucher for ecological study: Tree 416, 3°37'N 53°12'W, 200–400 m, 14 Oct 1982 (st), *Boom & Mori* 2062 (NY). Vicinity of Eaux Claires, on the Sentier Botanique, on upper part of gentle slope to the plateau, ca. 300–350 m, 12 Oct 1991 (fl), *Mori & Gracie* 22096 (CAY [not seen], NY, WIS). **Saül and vicinity:** Sentier Botanique, entrance just E of Eaux Claires, less than 800 m from entrance, tree 460–3, 3°37'N 53°12'W, 250–350 m, 12 Sep 1994 (st), *Mori et al.* 23897 (NY).

In *Neocalyptrocalyx* the number of stamens is one of the helpful characters to differentiate species. Thus, *Neocalyptrocalyx nectareus*, *N. leprieurii* and *N. grandipetala* have flowers with 16 to 18 stamens, *N. eichleri-anus* has flowers with 30 to 37 stamens, these four species have the stamens inserted in two rows. However, *Neocalyptrocalyx morii* has 8(to 9) stamens inserted in a single row. *Neocalyptrocalyx maroniensis* has flowers with 10 to 20 stamens inserted in one to two rows, but the flowers of the latter species are distinctively smaller. It is interesting to note that eight stamens is one of the characters for several well-defined species among the neotropical Capparaceae with variously stellate indumenta (e.g. *Capparicordis crotonoides* [Kunth] Iltis & Cornejo, *Quadrella lundellii* [Standl.] Iltis & Cornejo, *Q. morenoi* Cornejo & Iltis, and *Q. steyermarkii* [Standl.] Iltis & Cornejo). A second character to reinforce the recognition of this species is that among the neotropical species of Capparaceae, the shape and color of the ovaries in dried material do not show conspicuous variability. *Neocalyptrocalyx nectareus* and *N. leprieurii* have ovaries oblong-cylindrical and brown (when dried), but the ovaries of *N. morii* are ovoid and yellowish (when dried). In addition, *Neocalyptrocalyx morii* has alternate leaves, while *N. nectareus* and *N. leprieurii* usually have spiral leaves. Several of the studied collections have been previously identified as a local variant of *Neocalyptrocalyx leprieurii*, but none of the studied specimens shows intermediate floral features between *N. leprieurii* and *N. morii*. These morphological differences correlated with the uniform geographical distribution of the studied collections lead us to recognize *Neocalyptrocalyx morii* as a distinct new species.

Etymology.—We are pleased to name this new species in honor of Scott A. Mori, the distinguished specialist on neotropical Lecythidaceae, who collected the type (see details in Iltis et al. 1996: 378), and the main editor of Guide to the vascular plants of central French Guiana.

Habitat and Distribution.—Common but scattered in well-drained tropical moist forests of Saul and St. Elie, French Guiana.

Phenology.—This nocturnal and presumably bat-pollinated species has been collected with flowers from September to November.

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REFERENCES

- CORNEJO, X. AND H.H. ILTIS. 2008. Two new genera of Capparaceae: *Sarcotoximum*, *Mesocapparis* stat. nov., and the reinstatement of *Neocalyptrocalyx*. Harvard Pap. Bot. 13:103–116.

- HUTCHINSON, J. 1967. The genera of flowering plants (Angiospermae) Dicotyledones. Vol. 2. Clarendon Press, Oxford.
- ILTIS, H.H., L.J. CUMANÁ, R.E. DELGADO, AND G.C. AYMARD. 1996. Studies in the Capparidaceae XVIII. A new giant-fruited *Capparis* (*C. muco*) from Eastern Venezuela. *Novon* 6:375–384.
- ILTIS, H.H. AND S.A. MORI. 2002. Capparaceae (Caper family). In: S.A. Mori, G. Cremers, C. Gracie, J.-J. de Granville, S.V. Heald, and J.D. Mitchell, eds. Guide to the vascular plants of central French Guiana. Part 2. Dicotyledons. *Mem. New York Bot. Gard.* 76(2):186–188.



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