

# A new species of *Bactris* (Palmae) from French Guiana

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**Abstract.** A new species, *Bactris nancibaensis*, from French Guiana, is described and illustrated.

**Key words:** Arecaceae, Palmae, *Bactris*, French Guiana.

Through the Flora of the Guianas and the Biological Diversity of the Guianas Programs, and through research on biodiversity regularly carried out by the biologists of Institut de Recherche pour le Développement (IRD, formerly ORSTOM), species new to science are discovered every year in French Guiana. Names are needed for floristic treatments. The new species described herein is the twenty-first species of *Bactris* Jacq. known from French Guiana (Granville, 1999).

***Bactris nancibaensis* Granv., sp. nov.** Type:

French Guiana. Comté River basin, Crique Nancibo, 4° 37' N, 52° 27' 42" W, 26 Dec 1981, *de Granville 5000* (holotype: P; isotypes: BR, CAY). (Fig. 1)

Palma caespitosa. Caudex gracilis 2–5 m altus, 1–1.5 cm crassus; internodia spinarum annulis munita. Folia 7–12, circa metralia; lamina simplex, bifurcata, obovata. Inflorescentiae pedunculus 8–13 cm; pedunculi spatha 18–26 cm, extus pallide fusco-tomentosa; spadix patens, ramulis 3–6 gracilibus, 7–10 cm longis, rachis 1–2 cm. Fructus globosi vel late obovoidei, 1.5–2.5 cm diam., atropurpurei.

Cespitose understory palm; stems 5–15 (or more), 2–5 m tall, 1–1.5 cm in diam.; internodes 2–8 cm long, usually armed under each leaf scar with rings of 1–2.5 cm long black, flattened spines. Leaves 7–12, 0.8–1.1 m long; sheath pale brownish green, lepidote, 13–20 cm long, sheath and petiole armed with brown to black, slightly flattened spines, 0.5–5 cm long; petiole cylindrical, canaliculate adaxially, light green, whitish floccose (including the spines) when young, basally erect,

arching, 7–35 cm long, 4–5 mm in diam.; blade horizontally spreading, entire, obovoid, deeply bifid at apex, cuneate, sometimes slightly asymmetric at base, green, membranous, bullate; the apical lobes 20–30 cm long, acute; rachis 35–50 cm long, with a few pale brown spines adaxially; 17–19 pairs of primary lateral veins, these prominent abaxially. Inflorescences 1–3 per stem, infrafoliar, erect and arching at anthesis, pendulous when fruiting; prophyll membranous, glabrous, light brown, 7–10 cm long, 10–14 mm in width; peduncular bract 18–26 cm, with a fusiform part light brown, arachnoid-tomentose, densely covered with brown, erect hairs 1–5 mm long; peduncle 8–13 cm long, slightly curved apically, laterally flattened, brown velvety to hairy on upper half; rachis green, 1–2 cm long, bearing 3–6 green, glabrous, slender, rachillae, 7–10 cm long, with pistillate flowers scattered among male flowers, the distal part with staminate flowers only; staminate flowers 2–3 mm long; sepals whitish, glabrous, acute triangular, united at base, 0.2 × 0.8 mm; petals cream, glabrous, fleshy, obovate, valvate, united at base, 1–1.5 × 2–3 mm; stamens 6, the filaments ca. 2 mm long, inflexed at apex, the anthers dorsifixed, 0.8–1 mm long; pistillate flowers pale green at anthesis, 4 mm long; calyx cupular, glabrous, 3-denticulate, ca. 2 mm long, 1.2 mm in diam.; corolla as long as calyx, conspicuously puberulous; ovary green, cylindrical, exceeding calyx, 4 mm long. Fruit globose to widely obovoid, glabrous, smooth, shiny, slightly apiculate at apex, green becoming red wine to dark purple at maturity,

1.5–2.5 cm in diam.; mesocarp fleshy, white, 2–2.5 mm thick; fruiting perianth with corolla green, puberulous, irregularly split at margin, 8–10 mm in diam., without a staminodial ring, and calyx pale yellowish green, glabrous, 5–6 mm in diam.; endocarp turbinate, 0.3 mm thick, 8–10 mm long and 12–15 mm wide, brownish black; endocarp fibers numerous, terete, black, with attached juice sacs; endocarp pores displaced; endosperm white, solid, homogeneous.

**Distribution, habitat, and ecology.** Known from two localities from northeastern French Guiana; scarce (about ten plants in each locality), lowland forest, in flooded places.

**Additional specimens examined.** FRENCH GUIANA. South of Cayenne area, Crique Anguille, along trail to the "Bagne des Annamites," 4° 49' N, 52° 31' W, 16 May 1993, de Granville 11853 (CAY, NY, P, U). Cayenne, ORSTOM Botanic Garden, 17 Dec 1990, de Granville 5000-A (B, CAY, K, NY, P, U, US; collected from the type plant, transplanted and cultivated at the garden).

Burret (1933–1934) published a classification of *Bactris* in which he recognized four sections (*Bactris*, *Aiphanoides*, *Amylocarpus*, and *Piranga*) distributed in two subgenera (*Bactris* and *Amylocarpus*). According to Burret's classification, *Bactris nancibaensis* is a member of subgenus *Bactris*, which has flowers irregularly arranged along the rachillae (in contrast to subgenus *Amylocarpus*, with rachillae that bear triads of two staminate flowers and one pistillate flower basally and only staminate flowers distally). In subgenus *Bactris*, *B. nancibaensis* belongs to section *Bactris*, which is characterized by acuminate leaf segments (in contrast to section *Aiphanoides*, which has leaf segments that are praemorse at the apex). In Sanders' cladistic analysis of *Bactris* (1991), in which species relationships differ greatly from Burret's, *Bactris nancibaensis* is placed in the "atropurpureous" clade, which is further subdivided into five clades ("bidentate", "long-prophyll", "tubiflorous", "pilosa", and "pyrenoglyphis").

*Bactris nancibaensis* is related to the *monticola* complex of the "tubiflorous" clade, with which it shares the dark purplish brown epicarp and a mesocarp consisting of juice sacs attached to endocarp fibers. Within the *monticola* complex, *B. nancibaensis* is similar to *B. maraja* Mart. var. *chaetospata* (Mart.) A.J. Hend. (Henderson, 1995; Henderson et al., 1995; Henderson, 2000) based on size, habit, and the entire leaves. Nevertheless, *B. nancibaensis* is distinguished from the latter species by its densely setose corolla, noticeably larger fruits, glabrous epicarp, and round or slightly flattened spines on the leaf sheath. The new species also has some similarity to *B. macroacantha* Mart. of the "pilosa" clade. Both species have densely setose corollas in the pistillate flowers, but *B. macroacantha* has pinnate leaves and much larger prominently rostrate fruits.

#### Acknowledgments

The author is much indebted to Dr. Andrew Henderson and Dr. Greg de Nevers for improving the English text and to Dr. Jacques Florence and Dr. R. Barneby for correcting the Latin diagnosis.

#### Literature Cited

- Burret, M. 1933–1934. *Bactris* und verwandte Palmengattungen. Repertorium Specierum Novarum Regni Vegetabilis. Centralblatt für Sammlung und Veroffentlichung von Einzeldiagnosen neuer Pflanzen. 34: 167–253.
- Granville, J.-J. de 1999. Palms of French Guiana: diversity, distribution, ecology and uses. Acta Botánica Venezolana 22 (1): 109–125.
- Henderson, A. 1995. The palms of the Amazon. Oxford University Press, New York.
- . 2000. *Bactris* (Palmae). Flora Neotropica Monographs 79: 1–181.
- , G. Galeano & R. Bernal 1995. Field guide to the palms of the Americas. Princeton University Press, Princeton, NJ.
- Sanders, R. 1991. Cladistics of *Bactris* (Palmae): survey of characters and refutation of Burret's classification. Selbyana 12: 105–133.

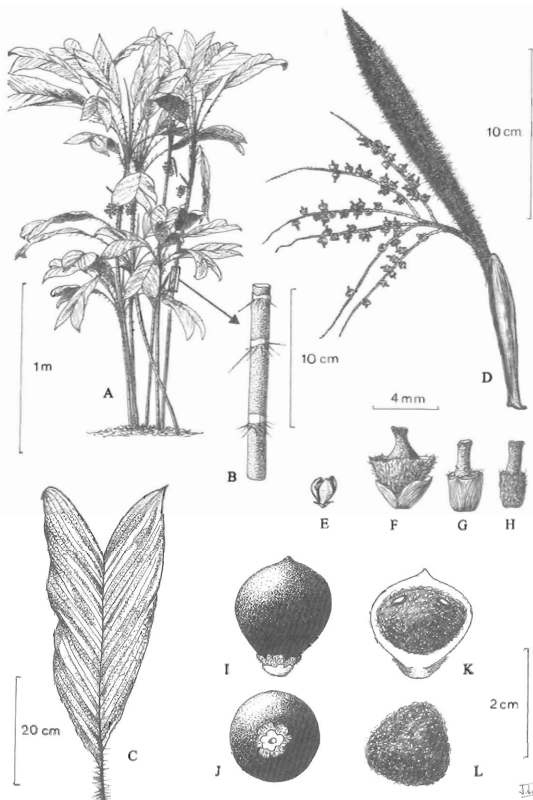


FIG. 1. A. Habit. B. Detail of the stem. C. Leaf. D. Inflorescence (post anthesis). E. Staminate flower. F. Pistillate flowers, post anthesis. G. Pistillate flowers at anthesis. H. Pistillate flowers with calyx removed. I. Mature fruit, view in profile. J. Mature fruit, basal view. K. Fruit in vertical section showing the seed. L. Seed, basal view. (Drawn from *de Granville 5000-A, CAY.*)