



Four new species of *Calamus* (Arecaceae) from Vietnam

ANDREW HENDERSON¹ & NGUYEN QUOC DUNG²

¹*Institute of Systematic Botany, The New York Botanical Garden, Bronx, NY 10458-5126, U.S.A.*

Email: ahenderson@nybg.org

²*Forest Inventory and Planning Institute, Thanh Tri, Hanoi, Vietnam*

Email: dungfipi@gmail.com

Abstract

Four new species of *Calamus* (Arecaceae) are described and illustrated and compared with similar species.

Key words: Palmae, rattan

With its 374 species, *Calamus* Linnaeus (1753: 325) is by far the largest genus of palms (Govaerts & Dransfield 2005). It is widely distributed from India eastwards to Fiji, with one disjunct species in tropical Africa. The highest concentration of species is in the Asian tropics, especially in the Malay Peninsula, Borneo, and Sumatra, with other centers of diversity in Indochina and New Guinea. The only monograph of the whole genus is that of Beccari (1908, 1913, 1914). These monumental works are unrivalled for their clarity and detail, but are now out-of-date. Although various regional treatments of *Calamus* have been recently published (e.g., Evans *et al.* 2001a for Laos), there is no comprehensive revision of the whole genus. Because of this, and its economic importance as a source of rattan cane, Henderson is currently carrying out a revision of the genus. In the course of this revision, the following new species have been collected in Vietnam.

Calamus batoensis Henderson & N. Q. Dung *sp. nov.* (Fig. 1)

It differs from related species by its rachis bracts which are swollen at the apices and recurved pistillate rachillae which have the dyads arranged in alternate rows but not opposite so one side of the rachillae is without flowers.

Type:—VIETNAM. Quang Ngai: Ba To District, road from Ba To to Ba Cung, steep slope in forest near road, 14°44'N, 108°53'E, ca. 600 m, 24 April 2013, *A. Henderson & Nguyen Quoc Dung 3881* (holotype, VFM! isotype, NY!).

Stems clustered, 1–10 m long, 0.5–0.8 cm diameter with sheaths, ca. 0.6 cm without sheaths. Sheaths greenish-white, longitudinally striate, not tomentose, with scattered, brown-tipped spines to 0.2 cm long; ocreas short, membranous, early deciduous; knees present; flagella 72 cm long; petioles 2.5–11 cm long, spiny along the margins and abaxially; rachises 12.5–30 cm long with 3–4, elliptic pinnae per side, these arranged in remote clusters, the proximal pair oriented towards the sheath, the distalmost few (usually four) in a cluster with the distalmost pair oriented away from the sheath and the adjacent pair oriented at a 45° angle to the rachis, the apical pair joined for 8.5–12.7 cm, middle pinnae 15–26 cm long, 3.7–4.7 cm wide at widest point, minutely spiny along the margins and with a few spines at the apices, not spiny on the veins. Staminate inflorescences 76 cm long, flagellate, the first partial inflorescence subtended by the prophyll; prophyll and rachis bracts tubular, swollen at the apices, just covering the bases of the partial inflorescences; partial inflorescences branched to 2 orders; rachillae 0.5–1 cm long; staminate flowers not seen; pistillate inflorescences 31–62 cm long, similar to staminate but branched to 1 order; rachillae 1.5–2 cm long; dyad bracteoles obscure, campanulate, one side of mouth acuminate, visibly ribbed, the base free from the preceding neuter flower and without an impression of its bracteole; dyads arranged in alternate rows but not