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We name and describe these new species in anticipation of publishing a fully illustrated book, now in press, on the palms of New Caledonia.

Burretiokentia dumasii Pintaud and Hodel,
sp. nov. (Fig. 3, D, E, F)

Burretiokentia vieillardii (Brongn. and Gris) Pichi-Serm. affinis sed vaginis tomentososis albis, petiolis alatis, rachillis tomentososis differt. Typus: New Caledonia, Nodéla Valley, 600 m elev., 21°26'S, 165°21'E, 15 Sept. 1995 (fl.), J.-C. Pintaud and Y. Bruireu 266 (Holotypus P; isotypi BH, K, NOU).

Solitary sub-canopy palm. Trunk 8–12 m tall, 10–13 cm dbh, prominently ringed. Leaves 10–12, borne in five ranks, spreading, expanding red; sheath 60–80 cm long, cylindrical, distally costate along petiole axis, proximally rounded, abaxially pale green, covered with thick, white tomentum, adaxially bright pink with sparse to rather dense, white indument, splitting in distal 3/4 opposite petiole and terminating on petiole in two fibrous, chartaceous, prominent wings; petiole 15–35 cm long, winged at least on proximal half or up to rachis base, adaxially channelled, glabrous, abaxially angled, initially white or grey-tomentose, aging punctulate; rachis 2–2.50 m long; pinnae ~25 on each side of rachis, borne in one plane, median ones 80–100 × 5–8 cm, distal ones 30–35 × 3 cm, proximal 2–3 pairs 25–30 × 0.8–1.5 cm, all straight, forward-pointing, acute to acuminate, 1-ribbed, glossy green and glabrous on both surfaces, paler abaxially, midrib prominent adaxially, bearing sparse, brown scales, midrib very prominent abaxially, bearing brown-centered, white-margined scales, 2–8 secondary nerves scarcely prominent, scales more abundant proximally. Inflorescences 1–4, infrafoliar, stiffly spreading, protandrous, 40–60 cm long, entirely and persistently greyish-tomentose, branched to 3 orders; peduncle 5–7 cm long, 3–5.5 cm wide and 2–3 cm thick distally; prophyll 25–40 × 10–15 cm, inserted 2–3 cm above peduncular base, bicarinate, bifid, chartaceous, incompletely encircling peduncle at insertion abaxially, splitting to 1/4–2/3 its length on opposite side; first peduncular bract 40–60 × 10–15 cm, oval-elongate, rostrate to acuminate, thin, completely encircling peduncle at insertion, inserted 1–2 cm above prophyll and exceeding it by 1/3–1/2, pro-

phyll and first peduncular bract white-tomentose abaxially, second peduncular bract prominent, 8–13 × 3–5 cm, acute, bifid or truncate, densely greyish tomentose abaxially, glabrous adaxially, third peduncular bract to 5 × 3 cm, shape and indument same as second one; rachis 18–20 cm long, main branches 6–9, 5–8 cm long, 1.5–2 cm wide, second order branches 1–3 cm long, all branches angled; bracts subtending main branches triangular, 1–5 cm long, rachillae 18–35, divaricate, stout, 20–45 cm long, 1.3 cm diam.; rachis, branches, and rachillae densely greyish-tomentose. Flowers in spirally arranged triads except staminate only distally; triad clefts 8 mm wide, 4 mm high, 3 mm deep; bract subtending triad broadly rounded, densely fringed; outermost bracteole low, 4 × 2 mm, inner two bracteoles surrounding pistillate flower sepallike, subequal, 3–4 × 3–3.5 mm; staminate flowers in bud 6 × 5 mm, at anthesis 11 × 11 mm, calyx 4 × 6 mm, sepals imbricate, prominently keeled, rounded apically, fringed; petals broadly ovate, 5 × 4 mm, 1/3 longer than sepals, connate basally; stamens 6, filaments 4.5 mm long, connate basally in a short ring, inflexed apically, anthers 2.75 mm long, dorsifixed, locules with a central, sterile part; pistillode short, 2 mm high, conic; pistillate flowers 6.5 × 4.5 mm, ovoid-cylindrical; sepals 4 × 4 mm, rounded, sparsely fringed, imbricate; petals 5 × 5 mm, thin, broadly imbricate except valvate tips, fringed; staminodes three, within one petal, 1 mm long, triangular; pistil 6.5 × 3.5 mm, stigma trifid, lobes small, erect, ovule pendulous. Fruits 13 × 11 mm, obovoid-globose, pale green when immature, purplish at maturity, mesocarp grainy, tanniferous with few included fibers, endocarp thin, crustaceous, sculptured and costate, operculate, with a band of fibers adherent to costa; seeds 8 × 8 mm, obpyramidal, depressed apically, sculptured, costate, endosperm homogeneous, embryo basal. Germination adjacent-ligular, eophyll deeply bifid; seedlings becoming strongly trigonous at base with age, leaf sheath sharply angled, late bifid leaves tristichous, petiole and rachis densely covered with numerous, prominent blackish scales, lamina obtriangular, to 40 cm long, lobes to 5 cm wide, connate in proximal 2/5 to half; trunkless juveniles with keeled leaf sheaths, petioles angled abaxially, deeply channelled adaxially and prominently winged, litter trapping; leaf sheath marcescent on trunked juveniles, abscising and forming a crownshaft only in mature trees.

Additional Specimens Examined. NEW CALEDONIA. Nodéla Valley, 600 m elev., in rain forest on ultramafic rocks, 21°26'S, 165°21'E, 25 Apr. 1995 (buds), J.-C. Pintaud, S. Blancher and T. Jaffré 166 (BH, K, NOU, P), *id.* (seedlings) 167, 168, 169, 170 (P), *id.* (buds) 171 (P); *id.* 17 Sept. 1995 (fl.), J.-C. Pintaud and Y. Bruireu 267 (P); *id.* 25 Jan. 1996 (fr.), J.-C. Pintaud and S. Blancher 317 (BH).

Distribution. *Burretiokentia dumasii* is known only from collections in Nodéla Valley on the Mé Maoya massif north of Bourail in west-central New Caledonia, at 600 m elevation (Fig. 6). According to observations and photographs by J.-P. Tivollier, however, it may also grow above Emma Mine on the ridge leading to Mé Maoya summit at 1100 m elevation, and if so, it probably occurs elsewhere on the massif. A collection at Forêt de Saille, south of Thio, in southeast New Caledonia (Hodel *et al.*, 1501) may represent the same species. In that case, *B. dumasii* may be relatively widespread.

Ecology. *Burretiokentia dumasii* occurs in rain forest on ultramafic rocks. It is found mostly on rocky, well-drained sites on oxysols derived from peridotites.

Phenology. *Burretiokentia dumasii* flowers in September and fruits in January.

Conservation Status (IUCN, 1994). Low risk, conservation-dependent (LRcd). The type and only documented locality in Nodéla Valley has been recently declared a Special Reserve of Flora and Fauna. The Forestry Service of Bourail manages and controls access to the reserve. Thus, although very rare, *B. dumasii* is adequately protected. This palm is abundant where it grows and regeneration is good.

Taxonomic History. J.-M. Veillon of ORSTOM and Serge Blancher of the Forest Service found *Burretiokentia dumasii* in 1992 when the Forestry Service began to manage the forests of Nodéla. A private company had partially logged Nodéla Valley prior to 1992.

Etymology. The name honors Marc Dumas, an ardent palm enthusiast who has greatly contributed to the study of New Caledonian palms in recent years and who helped in raising a new and strong interest in palms in New Caledonia with the founding of Association Chambeyronia, of which he is currently president.

Burretiokentia dumasii shares several characteristics with *B. koghiensis*, including the new leaf expanding red and the tristichous seedling

with a triangular base and prominent blackish scales. *Burretiokentia dumasii* differs from *B. koghiensis* in the less numerous, spreading leaves with far fewer pinnae, the stiffly spreading, densely tomentose inflorescences with stout rachillae, the obovoid-globose fruits, and the peculiar, pyramidal seeds (Table 2).

Burretiokentia grandiflora Pintaud and Hodel **sp. nov.** (Fig. 3 G, H)

Species insignis pinnis latissimus, floribus et fructibus grandissimus, a ceteris speciebus bene distincta. Typus: New Caledonia, Montagne des Sources, 900 m elev., 22°08'S, 166°36'E, 9 Apr. 1996 (fl.), J.-C. Pintaud and J.-P. Tivollier 335 (holotypus P; isotypi BH, K).

Solitary, sub-canopy palm. Trunk 8–12 m tall, 9–14 cm dbh, prominently ringed. Leaves 8–12, borne in five ranks, spreading, expanding light green; sheath 40–80 cm long, fusiform, weakly costate distally to rounded, white tomentose abaxially, glabrous adaxially, splitting deeply opposite petiole nearly to base and terminating on petiole in two 20 cm long wings; petiole 18–25 cm long, channelled adaxially, weakly angled to rounded abaxially, glabrescent; rachis 2–2.80 m long; pinnae 20–25 on each side of rachis, borne \pm in one plane, median pinnae 80–90 \times 8–11 cm, distal ones 25 \times 2.5 cm, proximal ones 38 \times 3 cm (lorae absent), all acute, arranged at 5–11 cm intervals, green and glabrous on both surfaces, midrib prominent, bearing brown scales adaxially and brown-centered, white-margined scales abaxially, secondary veins slightly prominent abaxially, bearing sparse scales. Inflorescences 1–4, infrafoliar, spreading, 40–70 cm long, branched to 3 orders; peduncle 7–9 cm long, 3–6 cm wide and 1.5–2 cm thick distally, white-tomentose proximally up to insertion of first peduncular bract, indument becoming sparse above, distally green, glabrous; prophyll 27–48 cm long, inserted 2.5 cm above peduncular base, bicarinate, truncate, incompletely encircling peduncle on abaxial side, splitting in distal 2/3 on adaxial side of petiole, white-floccose abaxially, glabrous adaxially; first peduncular bract rather thick, 50–97 \times 12 cm, fusiform, prominently rostrate, indument same as prophyll, inserted 1.5–2 cm above prophyll, completely encircling peduncle at insertion, second peduncular bract 4–25 \times 3–11 cm at base, triangular to subulate, acute, sometimes inserted laterally and then en-