

***Dendrocalamus copelandii* (Poaceae: Bambusoideae),  
a new giant bamboo record for Thailand**

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ABSTRACT. *Dendrocalamus copelandii* (Gamble ex Brandis) N.H. Xia & Stapleton is presented as a new record for Thailand. The species is described and an illustration is provided.

**INTRODUCTION**

The genus *Dendrocalamus* Nees (Bambuseae: Poaceae) comprises 52 species and is distributed from southern China to India, Burma, Thailand, Indo-China, and Malaysia through Papua New Guinea (Ohrnberger, 1999). Vernacular names associated with eight species have been reported to occur in Thailand (Smitinand, 2001). During a revision of this genus for the Flora of Thailand Project, sterile specimens of *D. copelandii* from Kanchanaburi, Mae Hong Son, and Tak provinces were collected by the authors. A fertile specimen, also from Kanchanaburi, was collected by Tatemi Shimizu and his colleagues in 1979. These sterile and fertile specimens were found to match the lectotype and other historical specimens at Kew. Xia & Stapleton (1997) recorded the distribution of this species as being from India and northern Myanmar. Therefore we record this species for the first time from Thailand.

**NEW RECORD**

***Dendrocalamus copelandii*** (Gamble ex Brandis) N.H. Xia & Stapleton, Kew Bull. 52(2): 484 (1997). Type: India, Dehra Dun, *Gamble* 27166 (lectotype K!, selected by N.H. Xia & Stapleton).— *Bambusa copelandii* Gamble ex Brandis, Indian Trees: 671. 1906, as “*copelandii*”.— *Sinocalamus copelandii* (Gamble ex Brandis) Raizada, Indian Forester 74(1): 10. *pl.* 1. 1948, as “*copelandii*”.— *Dendrocalamopsis copelandii* (Gamble ex Brandis) Keng f., J. Bamboo Res. 2(1): 12. 1983, as “*copelandii*”. Fig. 1.

Sympodial bamboo. *Culms* straight and erect, about 15–30 m long, 8–20 cm in diam., with relatively thin walls, about 1–2 cm thick, culm tips more or less arching; internodes 20–48 cm long, lower ones without hairs, covered with copious white wax when young; nodes not swollen, lower ones without verticils of roots. *Branches* several at

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each node, the primary one dominant, without aerial roots. *Culm-sheaths* tardily deciduous to persistent, coriaceous, 28–46.5 cm long by 42–55 cm wide, top convexly horizontal, covered with golden brown to dark brown hairs, occasionally glabrous; blades lanceolate, erect to spreading, 10–25.5 cm long, ca 5 cm wide near the base, hairy near the adaxial base; auricles continuing from the base of culm-sheath blade as fleshy, crisped lobes, 2–5 mm tall/wide, 10–40 mm long, margin wavy or pleated, glabrous; ligule 3–10 mm high, margin dentate to subentire, fringed with cilia up to 0.5 mm long. *Leaf blades* 10–27 cm long by 2.4–4 cm wide, hairy below, apex acuminate, base rounded to acute, pseudopetiole 2–10 mm long; auricles absent; ligule 1–1.2 mm high, margin dentate, fringed with cilia 0.1–0.2 mm long. *Inflorescences* iterarctant, borne on leafless branches, spikelets congested, forming stellate clusters subtended by a 1-keeled prophyll and a 1-keeled matching bract, axis hairy, internodes 1.5–2.5 cm long. *Pseudospikelets* ovate-oblong to ovate-lanceolate, laterally compressed, 20–28 mm long by 5.5–7.3 mm wide; transitional (empty) glumes 2–9, shorter than the lowest lemma, 7–35-nerved; fertile florets 5–6, terminal vestigial floret present, shorter than florets; rachilla internodes between florets short, not disarticulating below each floret; lemmas chartaceous, 12–25 mm long, minutely pubescent on the back, 23–37-nerved, apex acute to pointed; paleas membranous, 9.2–22 mm long, 2-keeled on the back, keels and edges long-fringed, the uppermost one not keeled, outside minutely pubescent, inside sparsely and minutely pubescent to glabrous, apex shortly bidentate, 2–3(–5)-nerved between keels, edges very narrow, not nerved; lodicules usually 3, occasionally none, hyaline, pubescent; stamens 6, filaments free, anthers 5–11 mm long, yellow, tips pointed, usually with minute spines; ovary umbonate, summit hairy, with long slender style, stigma 1, slightly plumose. *Caryopsis* 12–16 mm long, contracted towards the apex, almost bottled-shaped, slightly grooved on one side; pericarp rather thick and loose.

Thailand.— NORTHERN: Mae Hong Son [Pang Ma Pa, Mae Um Ong-Nam Rin Forest Station, sterile 25 April 2005, *Sungkaew & Teerawatananon* 527 (Herbarium of Faculty of Forestry, Kasetsart University, **TCD, THNHM**)]; Tak [Tha Song Yang, Ban Nam Ok Ru, sterile 4 May 2005, *Sungkaew & Teerawatananon* 570 (Herbarium of Faculty of Forestry, Kasetsart University, **TCD, THNHM**)]; SOUTHWESTERN: Kanchanaburi [Thong Pha Phum, Sunyataram Temple, sterile 22 July 2004, *Sungkaew & Teerawatananon* 20 (**BKF**), 25 (**BKF**), and 29 (Herbarium of Faculty of Forestry, Kasetsart University, **TCD, THNHM**)]; Sai Yok District, near Sai Yok Arboretum, 95 km northwest of Kanchanaburi, fertile 6 Nov. 1979, *Shimizu et al.* T-21752 (**L**).

Distribution.— India, northern Burma.

Ecology.— Confined to mixed deciduous forests on limestone ranges at altitudes from 150 to at least 500 m.

Vernacular.— Pai man moo (ไผ่มันมู).

Notes.— This species is similar to *Dendrocalamus giganteus* Munro but differs in having no verticil of roots at lower culm-nodes and membranous paleas with much narrower edges.

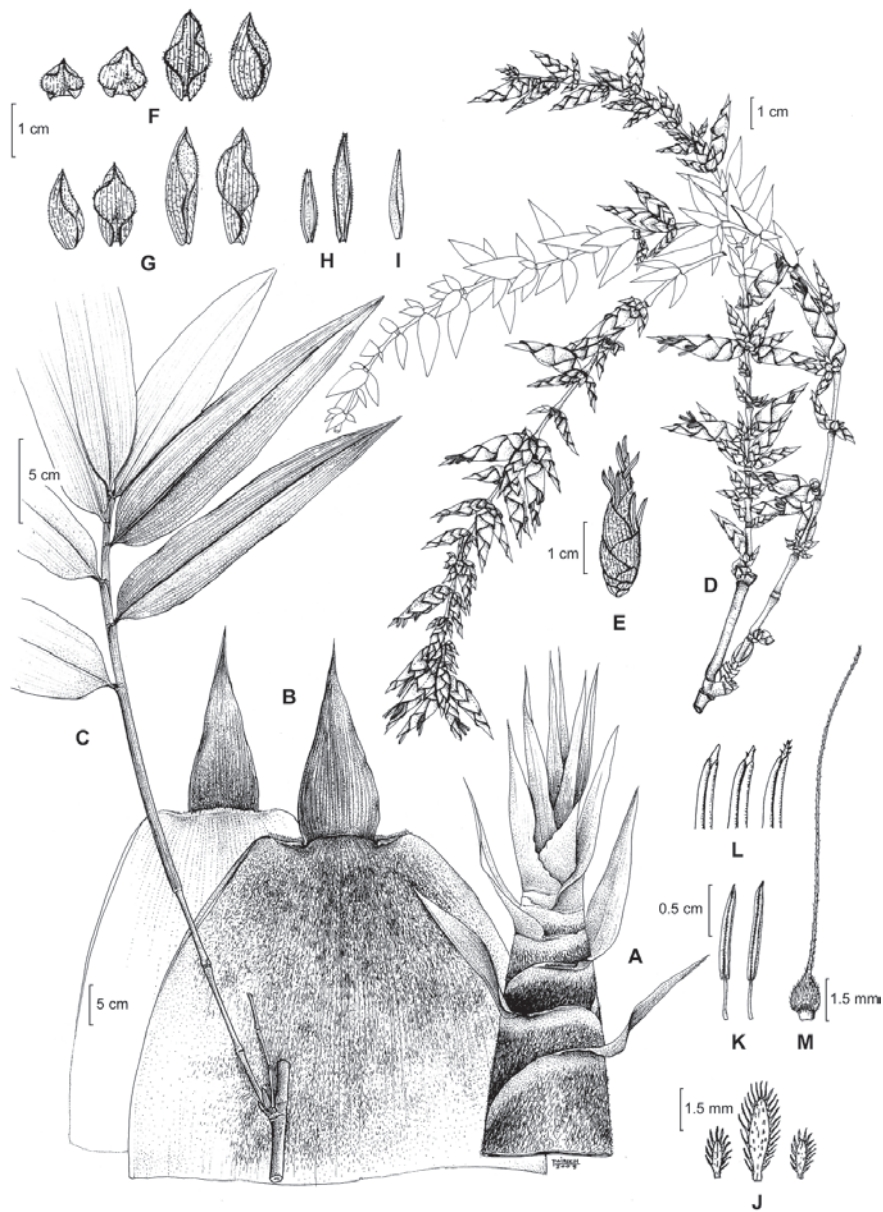


Figure 1. *Dendrocalamus copelandii* (Gamble ex Brandis) N.H. Xia & Stapleton: A. culm shoot; B. culm sheaths, showing auricles on dorsal view (right) and ligule on ventral view (left); C. leafy branch; D. flowering branch; E. spikelet; F. empty glumes; G. lemmas; H. paleas; I. empty lemma representing terminal vestigial floret; J. lodicules; K. stamens; L. variation of anther tips; M. pistil. A from Sungkaew & Teerawatananon 29; B, C from Sungkaew & Teerawatananon 20; D-M from Raizada s.n.

### NON-THAI SPECIMENS EXAMINED

Burma.— Northern Shan States [cult.?, fertile May 1896, *Copeland* s.n. (**K**)]. India. Dehra Dun [cult., Kuanli Garden, fertile March 1944, *Raizada* s.n. (**K**); cult., alt. 700 m (2200ft), sterile, Sept. 1898, *Gamble* 27166 (**K**); cult., Forest School Garden, sterile, June 1898, *Gamble* s.n. (**K**)].

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