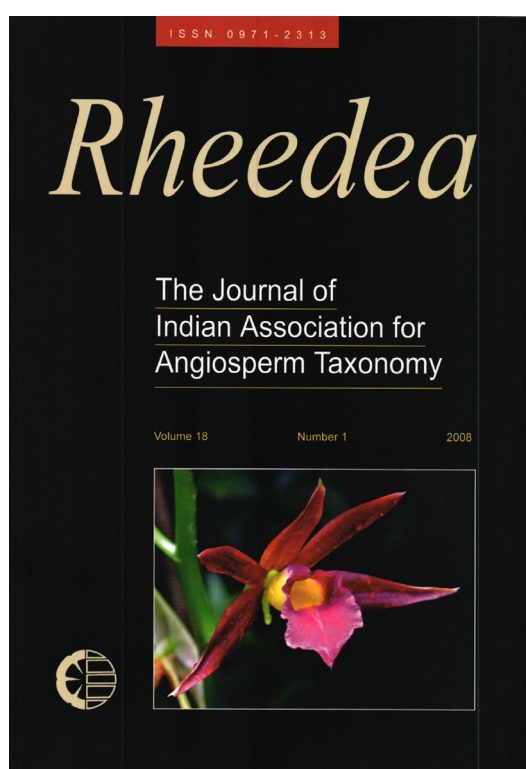




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A New Species of *Calamus* L. (Arecaceae) from Silent Valley, the Western Ghats, India

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Abstract

Calamus renukae Joemon Jacob, Mohanan et Kariyappa, a new species, is described from Silent Valley National Park, the Western Ghats. The species is allied to *C. wightii* Griff. but differs from it in having seriate spines, highly branched short inflorescence and fruit scales arranged in 24 rows. The new species comes under the group VIII of Beccari (1908).

Keywords: *Calamus renukae*, New species, Silent Valley National Park

Introduction

Tropical evergreen forests of the Western Ghats form one of the preferred habitats of *Calamus* (rattans). About 20 species of the genus are reported from this region (Fischer, 1931; Renuka, 1992, 2000; Renuka *et al.*, 1997) and about 45 taxa from India (Renuka and Sreekumar, 2006). A specimen collected recently from Silent Valley National Park in Palakkad district, Kerala clearly differed from hitherto described species. After critical examination and consultation with Dr C. Renuka this was confirmed as a new species which is described here.

Calamus renukae Joemon Jacob, Mohanan *et* Kariyappa, *sp. nov.* **Fig. 1**

Calamus wightii Griff. valde affinis sed spinis seriate-dispositis, inflorescentia brevi ramosissima et squamis fructuum in series 24 dispositis differt.

Type: INDIA, Kerala, Palakkad district, Silent Valley National Park, ± 1300 m, 17 May 2007, Joemon Jacob 57491 (Holotype, TBGT; Isotypes, KFRI, MH).

Clustering cane, climbing to the canopy; stem reaching up to 25 m in height, with sheath 5-5.5 cm and without sheath 4-4.5 cm in diameter towards upper nodes, without sheath 1.8-2 cm at basal nodes; internodes to 20 cm long. *Leaf sheath* pale green or greenish brown, densely brown tomentose towards the apex, densely spiny; spines brown, up to 1.5 cm

long, flat, bulbous at base, arranged in groups intermingled with smaller solitary ones, grouped ones arranged in semi-circular series; knee large and conspicuous, densely spiny; ocrea absent; flagellum up to 6 m long; primary sheath of flagellum about 40 cm long, slightly flat, biconvex, densely armed with seriate and solitary spines, brown tomentose; spines on the secondary sheath and flagella black, backwardly pointed, arranged in groups of three. *Leaves* up to 1.8 m long, ecirrate; petiole to 35 cm long; rachis biconvex; rachis and petiole spiny and brown tomentose on both sides; spines grouped and solitarily intermingled, a few adaxial spines longer, up to 1.3 cm long and bulbous based; leaflets regular, to 56 x 3.5 cm, narrowly lanceolate, acuminate, spinulose on margins, tips armed with short bristles, ciliate on three veins on the dorsal side and mid vein on ventral side; cilia up to 1 cm long, black at base; apical leaflets free. *Female inflorescence* stout, to 2-3 m long, flagellate, with up to 4 partial inflorescence; primary sheath brown, stout, up to 30 cm long, slightly compressed, 1.5-2.2 cm in diameter at base, 3-3.8 cm in diameter at top, closely sheathing, tubular and funnel shaped, densely armed with spines and brown tomentum; spines up to 1 cm long, seriatly grouped ones and solitarily mingled; partial inflorescence 15 to 30 cm long, apparently panicked, producing secondary branches and a few basal

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secondary branches again branching to produce tertiary branches; secondary branches 10-13 cm long; tertiary branches 2-8 cm long, recurved; secondary sheath unarmed, closely sheathing. Female flowers numerous; involucre stalked; involucre disc shaped. Fruits numerous, globose, 1.8-2 cm in diameter; scale reddish brown, channeled in the middle, in 24 rows; perianth persistent; endosperm ruminant; male inflorescence not seen.

Habitat: Evergreen forests, straggling on large trees.

Distribution: Hitherto known only from the type locality, Silent Valley National Park, ± 1300 m.

Note: *Calamus renukae* Joemon Jacob, Mohanan et Kariyappa is allied to *C. wightii* Griff. [= *C. huegelianus* Mart. (Govaerts & Dransfield, 2005)] in gross vegetative characters such as clustering nature of cane, size and shape of leaves, arrangement and

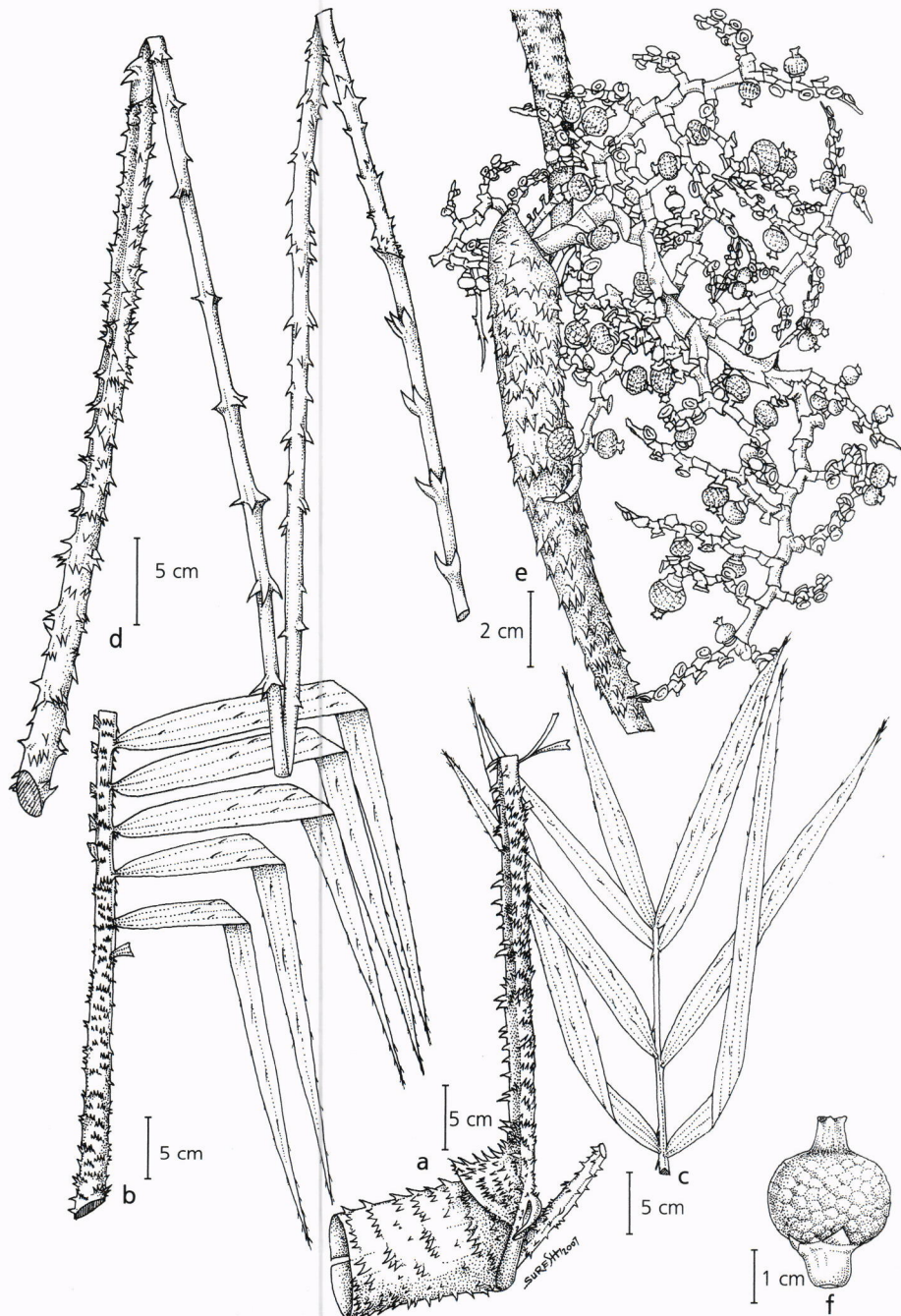


Figure 1. *Calamus renukae* Joemon et al. – a. Leaf sheath; b. Basal portion of the leaf; c. Tip of the leaf; d. Flagellum; e. A partial infructescence; f. Fruit.

Table 1. Morphological differences of *Calamus wightii* Griff. and *Calamus renukae*

Sl. No.	<i>Calamus wightii</i>	<i>Calamus renukae</i>
1	Spines solitary or sub-seriate, not arranged in a semi circle; spines not tomentose	Spines seriate, arranged in a semi circle; spines tomentose
2	Petiole with solitary, backwardly pointed spines	Petiole with both seriate and solitary, vertical spines
3	Rachis sparsely spined	Rachis densely spined
4	Leaflets 50 x 2.5 cm, ciliate on mid rib on both sides	Leaflets 56 x 3.5 cm, ciliate on all three veins on upper side and mid rib on lower side
5	Ocrea present	Ocrea absent
6	Primary sheath of inflorescence cylindrical and long with sparse solitary spines.	Primary sheath widening towards top, stout, with numerous seriate and solitary spines and tomentum
7	Partial inflorescence with limited branches	Partial inflorescence profusely branched
8	Rachilla limited in number	Rachilla numerous in number
9	Involucrophore sub sessile	Involucrophore stalked
10	Female flowers less than 100 in number	Female flowers more than 500 in number
11	Fruit a few, black; scales in 21 rows	Fruit numerous, reddish-brown; scales in 24 rows

venation of leaflets, presence of prominent knee, brown tomentum on younger parts etc., but differs in having seriate spines, highly branched short inflorescence and fruit scales arranged in 24 rows (Table 1). The new species comes under the group VIII of Beccari (1908) in having flagelliferous leaf sheath, tubular primary spathe, pedunculate involucre and deeply ruminant seeds.

Etymology: The specific epithet is in honor of Dr C. Renuka, Scientist, Kerala Forest Research Institute, in appreciation for her contribution to the taxonomy of rattans.

Additional specimens examined: INDIA, Kerala, Palakkad district, Silent Valley National Park, ± 1000 m, 19 September 2007, Joemon Jacob 57498 (TBGT).

Note: Our specimen was matched with authenticated herbarium specimen (Palakkad district; Sispara, 11 March 1997, Anto 7092 (KFRI) of *Calamus wightii* Griff. (*C. huegelianus* Mart.) housed at KFRI, Peechi, Kerala,

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Literature Cited

- Beccari, O. 1908. Asiatic Palms: Lepidocaryeae. Part I. The species of *Calamus*. *Ann. Roy. Bot. Gard. Calcutta*, 11: 1-518, Pl. 1-11, 1 - 238.
- Fischer, C. E. C. 1931. Palmaceae. In: Gamble, J. S. *Flora of the Presidency of Madras* 3. Adlard & Sons Ltd., London. pp. 1553 -1568.
- Govaerts, R. & J. Dransfield 2006. *World checklist of Palms*. Royal Botanic Gardens, Kew, Richmond, Surrey, TW 9 3 AB, U.K.
- Renuka, C. 1992. *Rattans of the Western Ghats – A Taxonomic Manual*. Kerala Forest Research Institute, Peechi. India.
- Renuka, C. 2000. *Field Identification Key for Rattans of Kerala*. Kerala Forest Research Institute, Peechi. India.
- Renuka, C. & V. B. Sree Kumar 2006. *Calamus rivalis* Thw. ex Trim. (Arecaceae): a new record for India. *J. Econ. Taxon. Bot.* 30:277 – 279.
- Renuka, C., Sasidharan, N. & P. V. Anto 1997. A new species of *Calamus* (Arecaceae) from Silent Valley, Kerala, India. *Rheedea* 7: 69-71.

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