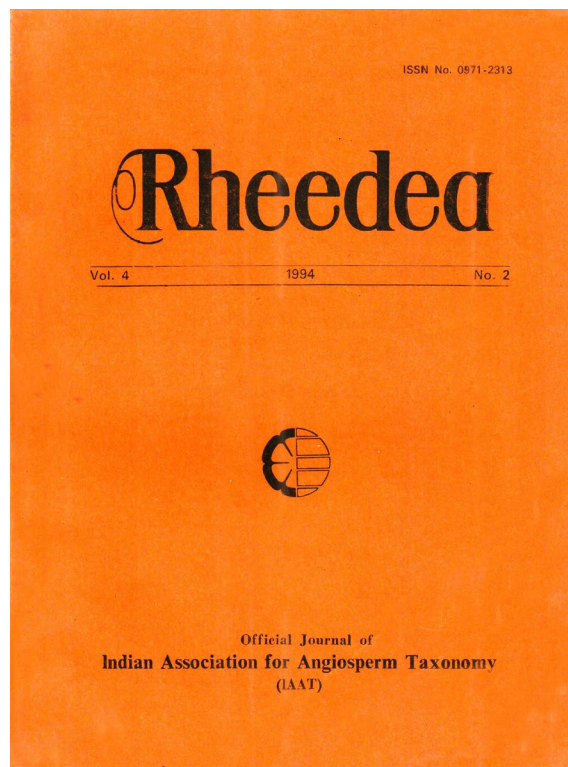




Some new species of rattans from Andaman and Nicobar Islands

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Some new species of rattans from Andaman and Nicobar Islands

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Abstract

Two new species of *Calamus* and three new species of *Daemonorops* are described from Andaman and Nicobar islands.

Geographically isolated from the mainland, Andaman and Nicobar islands are characterised by a distinctive flora and are treasure-houses of several rare and endemic taxa. This is particularly true of rattans, which has been reported to have 13 species here (Beccari 1908, 1911, 1918; Parkinson 1922; Basu 1992), belonging to three genera namely *Calamus*, *Daemonorops* and *Korthalsia*. During a recent expedition, we collected some interesting specimens from these islands, two of them belonging to *Calamus* and three to *Daemonorops*, which did not match with any of the known taxa. Closer scrutiny revealed that they are new taxa and are, hence, described and illustrated here.

Calamus basui Renuka & Vijayakumaran, *sp. nov.* (Fig. 1 a-e).

Vagina atro-viridis spinis ad 1 cm longis brevioribus mixtis armata. Folium ad 1 m longum cirro vestigiali, petiolus absens. Fructus ovoideus c. 1.5 cm longus 1 cm latus, squamis in seriebus 15 verticalibus, in medio profunde caniculatis. Endopermium ruminatum.

Typus: Little Andamans, evergreen forests, 60 m, 13.4.1992, *Vijayakumaran* 6634 (KFRI).

Local Name: *Safed beth*.

Clustering, medium diameter cane. Stem 20 m long, with sheaths 3 cm in diameter, without sheaths 1.5 cm in diameter. Sheath dark green, flagellate, armed with spines; spines to 1 cm long, interspersed with smaller ones; knee prominent; ocrea slightly developed. Leaf 1 m long with vestigial cirrus; petiole absent; rachis triangular towards the distal end, with straight spines towards the base, lower side with a row of recurved spines to 0.1 cm long; leaflets regular, ca. 56×4 cm, apical leaflet ca. 19.5×2.2 cm, linear-

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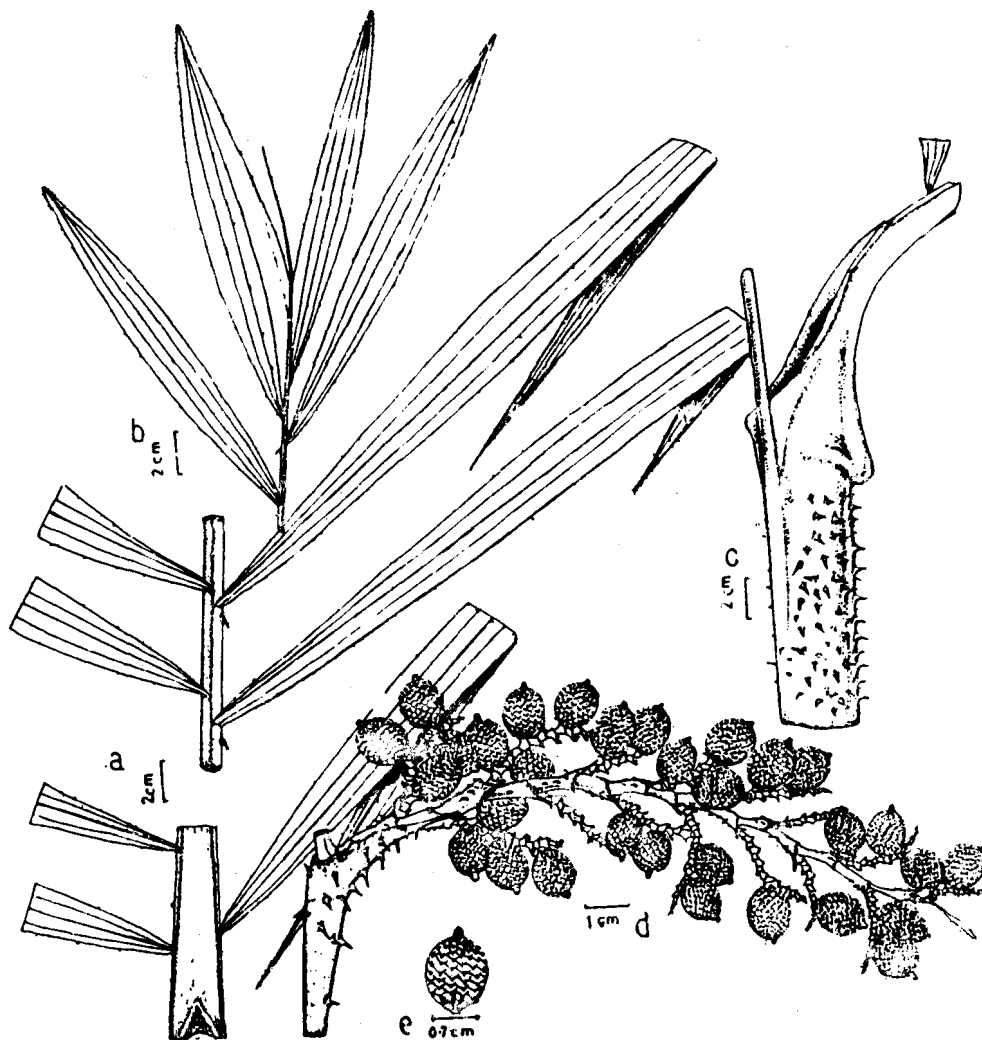


Fig. 1 a-e. *Calamus basui* Renuka & Vijayakumaran. a- basal & middle portions of leaf, b- leaf tip, c- sheath, d- Inflorescence, e- single fruit enlarged.

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lanceolate, tip margins and midrib ciliate. Inflorescence long flagellate; primary sheaths tightly sheathing, armed with downwardly directed spines to 0.5 cm long; partial inflorescence 27 cm long; secondary sheaths to 2 cm long, funnel shaped, rachillae upto 5 cm long, decreasing in length distally; involucre cup - shaped. Fruit ovoid, *ca.* 1.5×1 cm; scales in 15 vertical rows, brown with a dark brown border, deeply channelled in the middle. Endosperm ruminant.

This species comes under the Group V of Beccari (1908). This species can be distinguished from other species of the group by the dark green sheath with long and short spines interspersed, by the vestigial cirrus, the ovoid fruit with scales in 15 vertical rows and the ruminant endosperm.

The species is named after Dr. S. K. Basu, who has contributed a lot to the studies on Indian palms.

Calamus semierectus Renuka & Vijayakumaran, *sp. nov.* (Fig 2 a-e)

Caulis semi erectus, vagina lutea, infra genu spinis nigris, dense armata.

Typus: Car Nicobar, evergreen forests, 100 m, 7.4.1993, Renuka & Vijayakumaran 7037 (KFRI).

Single stemmed, large diameter cane. Stem to 15 m tall, basal part erect, then climbing, with sheaths to 5 cm in diameter, without sheaths to 3 cm in diameter, basal nodes with exposed roots. Sheath yellow, armed with spines; spines jet black, in tufts below the knee. arranged on a raised rim in semicircles, mouth of the sheath with longer spines; knee present; ocrea not seen. Leaves to 2 m long, cirrate, juvenile leaf not cirrate; petiole armed with black spines; rachis with small spines to 0.5 cm long; leaflets *ca.* 55×3.5 cm, regular, linear-lanceolate, 3 veined, veins ciliate on the ventral side, cilia to 0.8 cm long. Inflorescence flagellate; upper part of primary sheath papery; partial inflorescence to 50 cm long; secondary sheath upper part papary, splits open; involucrophorum present; involucre cup-shaped; fruiting perianth stalked. Fruit ovoid-elliptic, *ca.* 1.5×1 cm; scales in 15 vertical rows, brown with light brown margin, not channelled in the middle. Endosperm not ruminant.

This species comes under the Group XIV of Becacari (1908). This cane can be easily distinguished by its semierect form, basal part standing erect and the rest climbing, exposed roots at the basal nodes and yellow sheath with jet black spines in tufts.

3. **Daemonorops aureus** Renuka & Vijayakumaran, *sp. nov.* (Fig. 3 a-g)

Vagina viride-lutea sparse armata, spinis 8—10 in vagina infra genu. Fructus auro-luteus etiam novellus.

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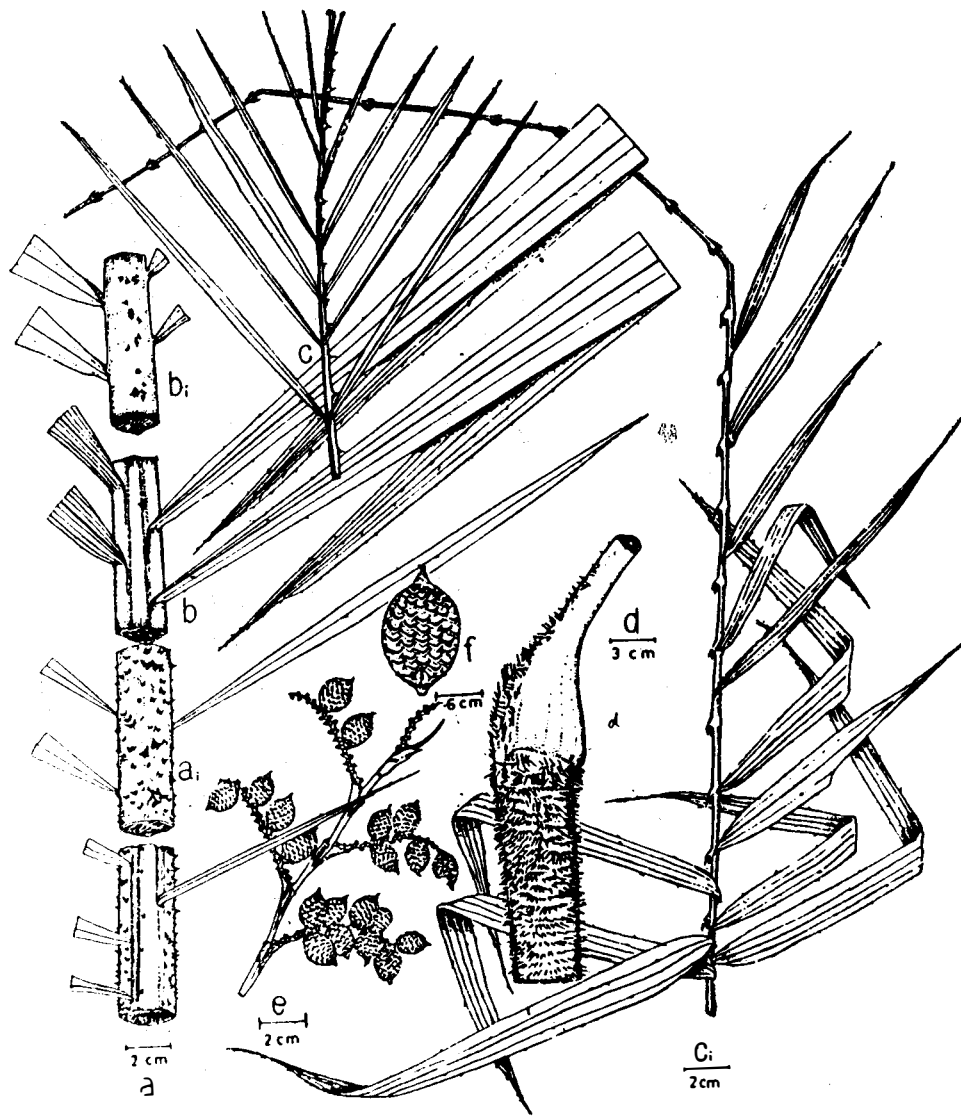


Fig. 2. *Calamus semirectus* Renuka & Vijayakumaran a. basal portions of leaf-dorsal view, ai. basal portion of leaf-ventral view, b. middle portion of leaf-dorsal view, bi. middle portion of leaf-ventral view, c. young leaf tip, ci. mature leaf tip, d- sheath, e. inflorescence f. single fruit enlarged.

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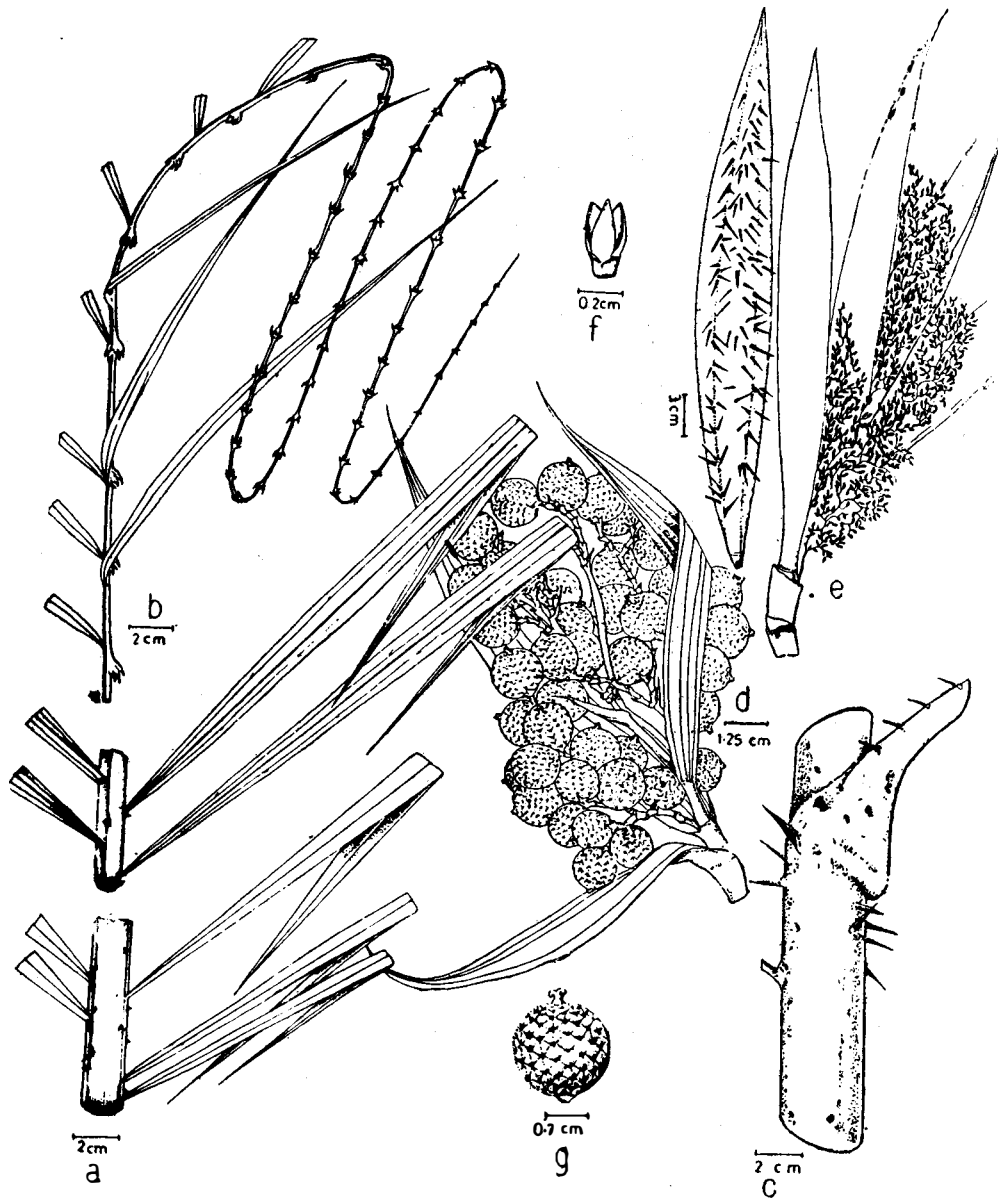


Fig. 3. *Daemonorops aureus* Renuka & Vijayakumaran. a. basal and middle portions of leaf, b. leaf tip, c. sheath, d. infructescence. e. male inflorescences, f. single male flower enlarged, g. single fruit enlarged.

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Typus: South Andamans, evergreen forests, 50 m, 2.4.1993, *Renuka & Vijayakumaran* 7035 (KFRI).

Clustering, large diameter cane, climbing high on the canopy. Stem 20 m or more long, with sheaths 3.5 cm in diameter, without sheaths 2 cm in diameter. Sheath yellowish green, sparingly armed, with 8–10 spines on sheath below the knee; knee very stout and prominent; ocrea not seen. Leaves 2 m long, cirrate; petiole to 30 cm long, armed along the margins. spines to 1 cm long; leaflets regular, the largest *ca.* 45×2.5 cm, lateral veins ciliate, cilia to 0.5 cm long. Inflorescence erect, to 30 cm long, all inner bracts enclosed in the outermost; outermost bract armed with black spines; spines to 3 cm long. Fruit globose, 1.5 cm in diameter; scales in 18 vertical rows, golden yellow, deeply channelled in the middle. Endosperm ruminant.

This species comes under the section *Cymbospatha*. This can be distinguished from other species by the sparingly armed yellowish green sheath and the golden yellow fruits.

Daemonorops rarispinosus Renuka & Vijayakumaran, *sp. nov.* (Fig. 4 a-d).

Vagina pallide lutea spinis retrorsis sprae armata. Folioli *c.* 40 cm longi 1.7 cm lati. Fructus globosus, *c.* 1.3 cm. diam.

Typus: Little Andamans, Evergreen forests, 100 m, 14.4.1992 *Vijayakumaran* 6637 (KFRI).

Clustering, medium diameter cane, climbing high on the canopy. Stem 20 m or more long, with sheaths 2.5 cm in diameter, without sheaths 2 cm in diameter. Sheath light yellow, sparingly armed with downwardly directed spines; spines to 1.5 cm long, triangular, flat; knee prominent; ocrea not seen. Leaves to 1m long, cirrate, petioled; petiole armed at the margins; spines to 1 cm long; rachis with a row of reflexed spines at the ventral side; leaflets narrow, regular, 40×1.7 cm, green, midrib prominent, margins bristly, lateral veins ciliate above. Inflorescence erect, 40 cm long, covered by a primary armed bract. Fruit globose, 1.3 cm in diameter; scales in 18 vertical rows, golden yellow, channelled. Endosperm ruminant.

This species comes under the section *Cymbospatha*. In habit this species resemble *D. angustifolia* (Griff.) Mart., but can be separated by its yellow sheath with very sparse downwardly directed spines and the yellow fruits.

Daemonorops wrightmyoensis Renuka & Vijayakumaran, *sp. nov.* (Fig. 5 a-e).

Vagina lutea ad genu deorsum viridis, infra genu spinis nigris *c.* 2.5 cm longis 0.5 cm latis, supra genu *c.* 1 cm longis 0.2 cm latis, vaginae os spinis

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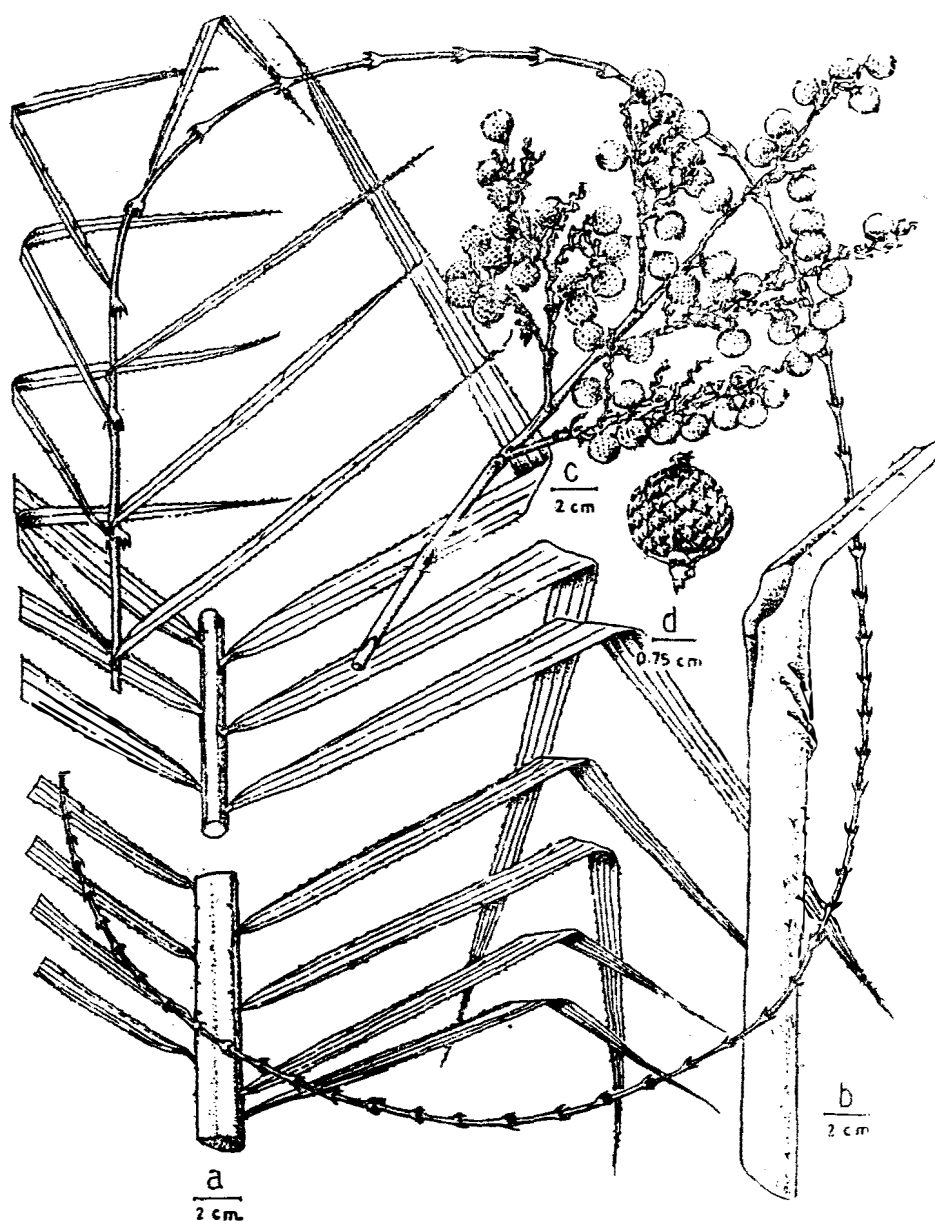


Fig. 4. *Daemonorops rarispinosus* Renuka & Vijayakumaran. a. portions of leaf, b. sheath, c. inflorescence, d. fruit enlarged.

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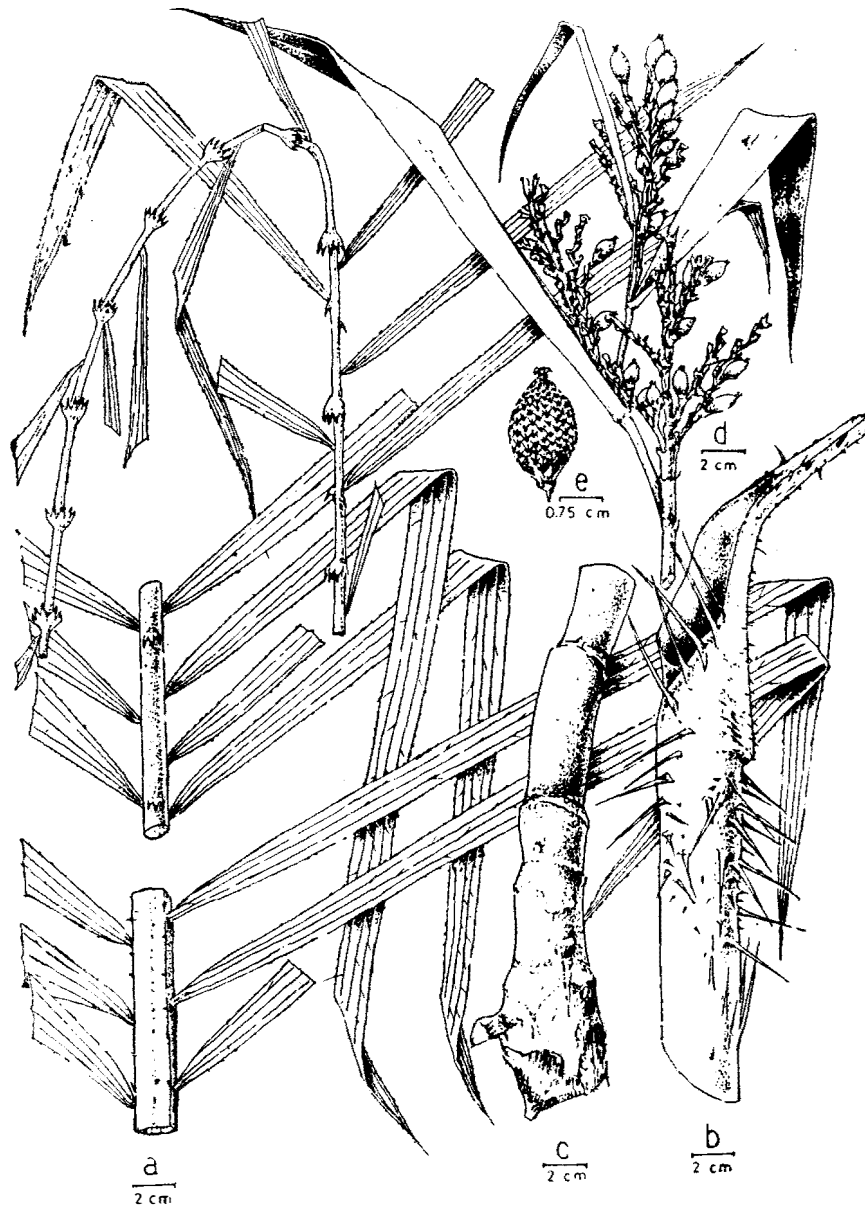


Fig. 5. *Daemonorops wrightmyoensis* Renuka & Vijayakumaran. a. portion of leaf. b. sheath, c. basal portion of stem, d. infructescence, e. single fruit enlarged.

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papyraceis ad 6 cm longis. Folioli infra albe farinosi. Frucuts oblongus c. 1 cm longus 1.5 cm latus, squamis in seriebus 18 verticalibus parum canaliculatis. Endospermium ruminatum.

Typus: South Andamans, evergreen forests, 100 m, 5.4.1988, *Renuka* 4055 (KFRI).

Local name: *Sanka beth*

Clustering, large diameter cane. Stem with sheaths 4.5 cm in diameter, without sheaths 3 cm in diameter. Sheath yellow at the knee, armed with spines; spines below the knee brown, to 4×0.5 cm, triangular, flat, base raised, spines above the knee black, to 1 cm long, mouth of the sheath with few bristles to 6 cm long; knee prominent; ocrea not prominent. Leaf 3 m or more long, cirrate; petioled; petiole armed with one row spines below and margins leaflets regular, ca. 55×2 cm, white glaucous beneath, midribs prominent, margins bristly, veins ciliate above except at the basal portion. Inflorescence erect, to 30 cm long, all inner bracts enclosed within the outermost. Fruit oblong, ca. 1.5×1 cm; scales in 18 vertical rows, brown with darker tips, slightly channelled. Endosperm ruminant.

This species comes under the section *Cymbospatha*. This can be separated from other species by the sheath yellow at the knee and the oblong fruit with brownish scales.

The species is named after its type locality wright Myo.

Acknowledgement

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