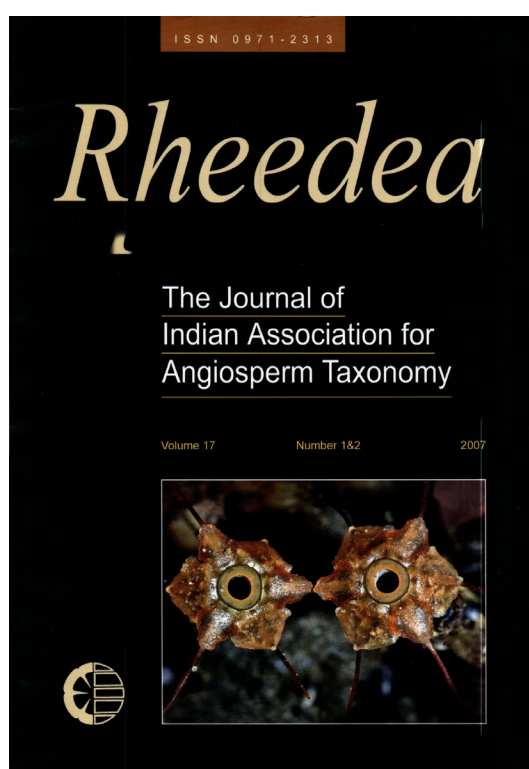




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How to cite:

**Karuppusamy S. & T. Pullaiah 2007.** Two New Varieties of *Caralluma stalagmifera* C.E.C.Fisch. (Asclepiadaceae) from Peninsular India. *Rheedia* 17(1&2): 41-45.

<https://dx.doi.org/10.22244/rheedia.2007.17.1&2.11>

Received: 23.06.2006

Revised and accepted: 22.06.2007

Published in print: 31.12.2007

Published Online: 31.12.2007

# Two New Varieties of *Caralluma stalagmifera* C.E.C. Fisch. (Asclepiadaceae) from Peninsular India

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## Abstract

Two new varieties of *Caralluma stalagmifera* C. E. C. Fisch. (Asclepiadaceae), viz.: *C. stalagmifera* var. *longipetala* and *C. stalagmifera* var. *intermedia*, are described from Peninsular India. Identification keys for the three varieties are provided.

Keywords: *Caralluma stalagmifera*, Two new varieties, Identification keys

## Introduction

*Caralluma stalagmifera* was described by Fischer in 1925 from Vandalur near Madras (Chennai). It is distributed in eastern parts of Peninsular India from north of Visakhapatnam in Andhra Pradesh to south of Ramanathapuram in Tamil Nadu. Intermediate forms of this species are already known (Gravelly & Mayuranathan, 1931). Critical study of *C. stalagmifera* helped us segregate a few stable characters in two groups which remained distinct from *C. stalagmifera* proper. In our opinion, these two groups represent two varieties of this species. They are described and illustrated here along with the variety proper.

***Caralluma stalagmifera*** C. E. C. Fisch., Bull. Misc. Inform. Kew 1925: 430. 1925.

### Fig.1

*Shrubs*; stems fleshy, branched; branches quadrangular; internodes small, 6-11 mm long, 2.5-8 mm across, distally terete, glabrous. *Leaves* decussate, sessile, 3-4 x 0.5-1 mm, triangular, pointed at tip, fleshy, glabrous. *Flowers* axillary, solitary; bracts minute, triangular; pedicels terete, erect, up to 6 mm long, c. 1 mm in diameter, glabrous; calyx five-lobed, divided up to base, lobes c. 2.5 x 1.5 mm, triangular, apex acuminate, fleshy, glabrous; corolla campanulate, c. 8 mm long; corolla tube c. 2 mm long; lobes five, c. 6 x 1.5 mm, ovate-lanceolate, deeply purplish red inside, apiculate with spindle shaped, easily detachable hairs hanging all along the distal margin and apex; corona staminal, biseriate; outer

lobes formed of two erect, linear-lanceolate slightly curved segments, c. 1.5 mm long; inner lobes arising from between the outer corona lobes at their base, incumbent over the anthers; stamens five, c. 2 mm long; pollinia five, pollen masses solitary in each anther cell, yellow, waxy, attached by light brown caudicles; gynostegium c. 1.5 mm long. *Follicles* paired, creamy white in young, light purplish streaked, c. 6-11 x 0.5-1 cm, tapering towards apex, glabrous.

*Distribution*: INDIA (Andhra Pradesh, Tamil Nadu, Karnataka), endemic.

*Flowering & Fruiting*: June-July.

*Specimens Examined*: INDIA, **Tamil Nadu**, Madurai district, Nagamalai hills, 17 September 2004, S. Karuppusamy 27910 (SKU); Dindigul district, Sirumalai hills, 2-June 2005, S. Karuppusamy 27812 (SKU); **Andhra Pradesh**, Chittoor district, Horsley hills, 8 May 2005, S. Karuppusamy 27931 (SKU); Cuddapah district, Gunjana river bed, 9 November 1962, J.L. Ellis 29797 (MH); **Karnataka**, Mysore, Hirisave, 27 October 1969, C. J. Saldanha 15346 (CAL); Mandya district, Malavalli-Kollegal road, S.B. Manohar & S.R. Ramesh 7531 (CAL).

## Key to varieties

- 1a. Angles of the stem acute; pedicel semi-erect, greenish; flowers <1 cm in diameter.....

- |   |  |
|---|--|
| .....var. <b>intermedia</b>   | corolla lobes .....var. <b>longipetala</b>   |
| 1b. Angles of the stem terete; pedicel erect, pink or purple; flowers >1 cm in diameter.....2 | 2b. Spindle hairs present only on apical portion of corolla lobes or absent.....var. <b>stalagmifera</b> |
| 2a. Spindle hairs present all along the margins of  | <b>Caralluma stalagmifera</b> var. <b>longipetala</b>  |

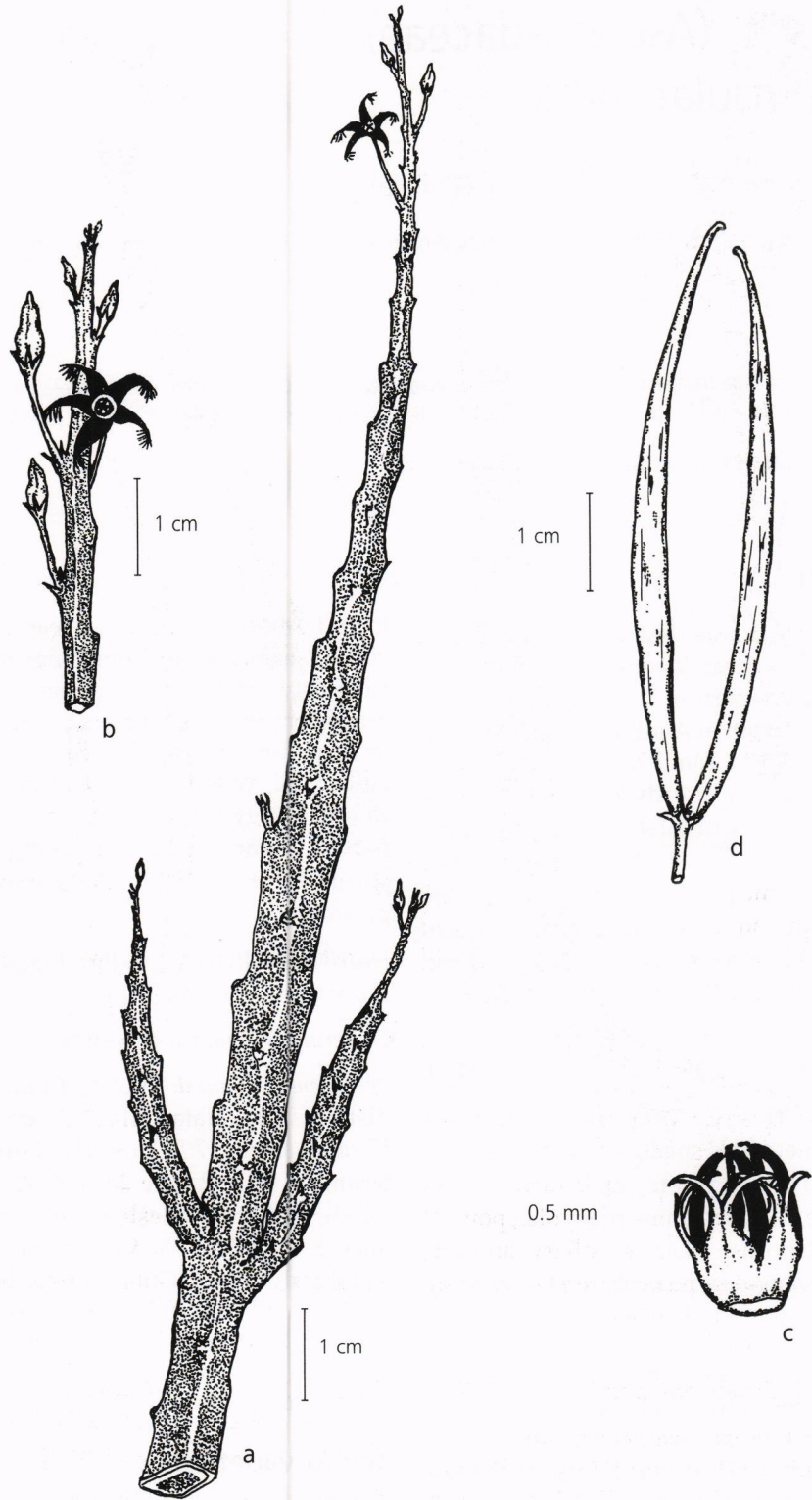


Figure 1. *Caralluma stalagmifera* C.E.C. Fisch. var. *stalagmifera* – a. Habit; b. Flowering twig; c. Corona; d. Follicles.



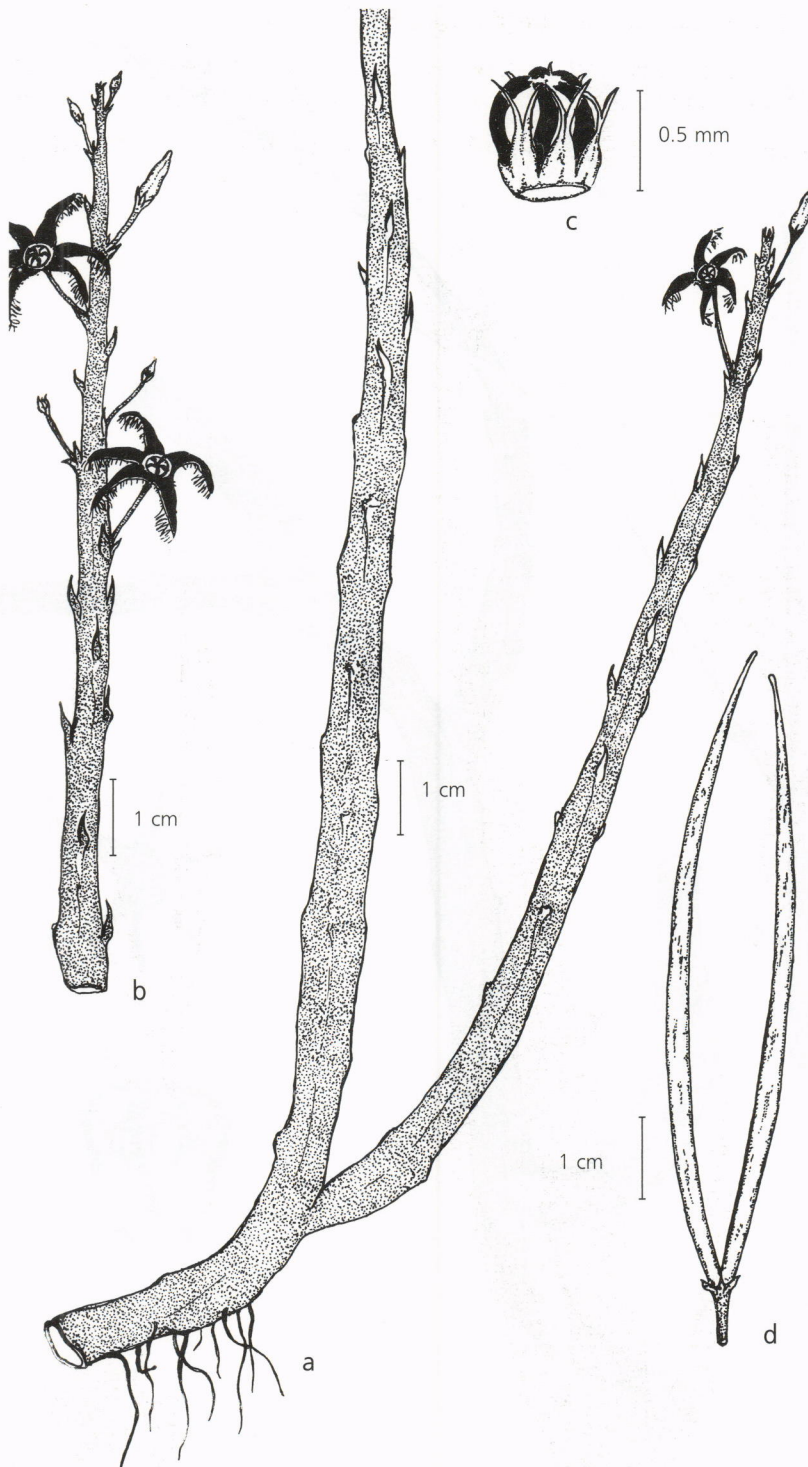


Figure 2. *Caralluma stalagmifera* var. *longipetala* Karuppusamy et Pullaiah. – a. Habit; b. Flowering twig; c. Corona; d. Follicles.

Karuppusamy et Pullaiah, *var. nov.*

*Caralluma stalagmifera* var. *stalagmifera* affinis, a qua imprimis differt, caules supra plus vel minus attenuati, plerumque sine ramulis, flores grandi, spindilli ciliati demum marginibus.

**Fig. 2**

*Type:* INDIA, Tamil Nadu, Madurai district, waste lands near airport, 28 July 2005, S. Karuppusamy 27968 (Holotype, SKU; Isotypes, MH).

*Shrubs*, stems fleshy, branched; branches slender, deeply green, quadrangular at base, terete towards

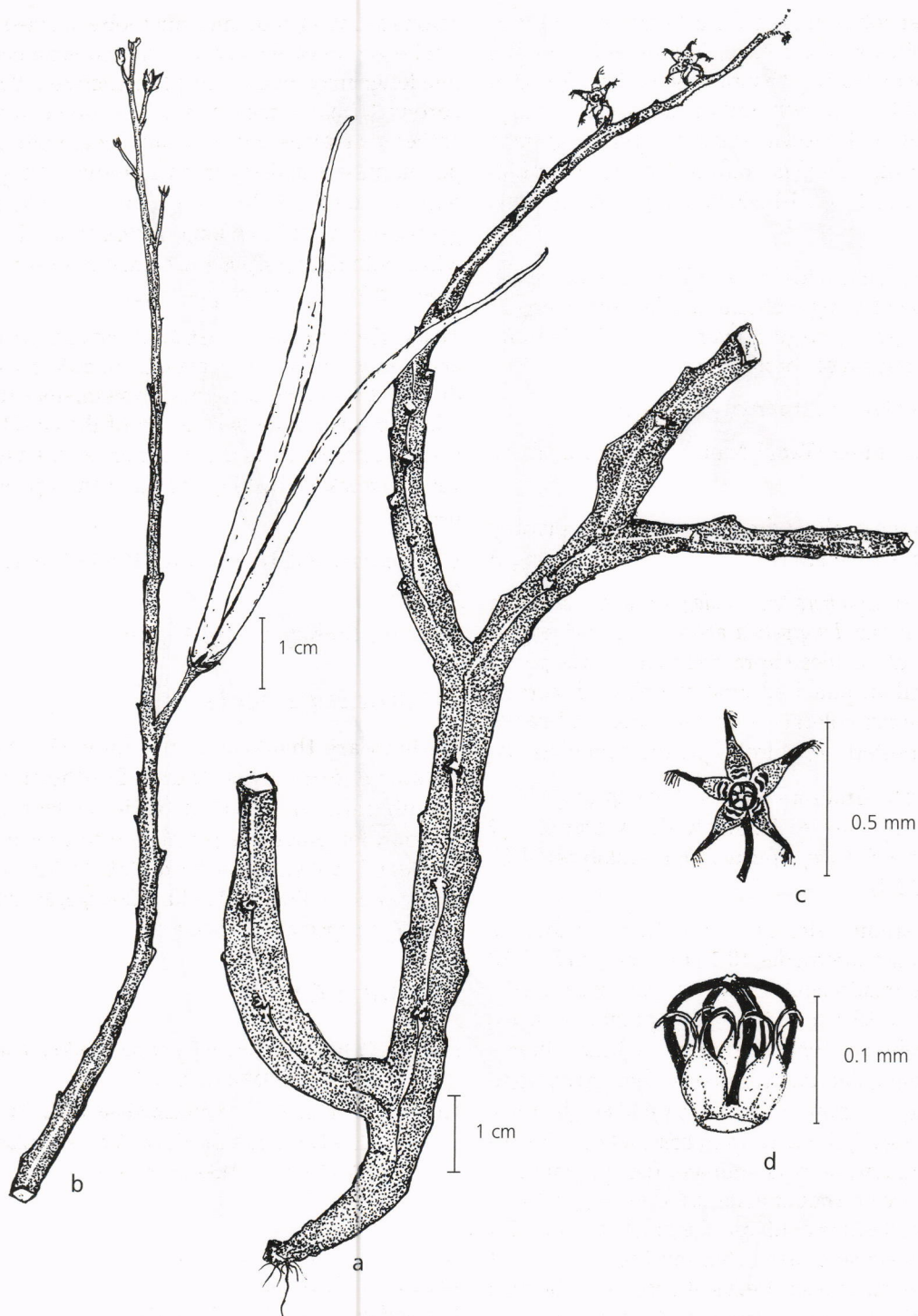


Figure 3. *Caralluma stalagmifera* var. *intermedia* Karuppusamy et Pullaiah – a. Habit; b. Flowering twig with follicles; c. Flower; d. Corona

apex; internodes 10-30 mm long, 3-15 mm across, glabrous. *Leaves* decussate, sessile, 4-6 x 0.5-1.5 mm, lanceolate, pointed at apex, fleshy, glabrous. *Flowers* axillary, solitary; bracts large, 0.2 mm long, triangular; pedicels terete, erect, c. up to 15 mm long and c. 1 mm in diameter, glabrous; calyx five-lobed, divided up to base, lobes c. 3.5 x 1.5 mm, lanceolate, apex

acuminate, fleshy, glabrous; corolla campanulate, c. 13 mm long, c. 1 mm across; corolla tube c. 2.2 mm long; lobes 5, c. 8.5 x 1.5 mm, linear-lanceolate, dark purple or dark brown inside, apiculate with spindle shaped hairs along the margin and apex; corona staminal, biseriate; outer lobes formed of two semi-erect, linear-lanceolate curved segments, c. 2 mm



long; inner lobes arising from between the outer corona lobes at their base, incumbent over the anthers; stamens 5, c. 2.5 mm long; pollinia 5, pollen masses solitary in each anther cell, yellow, waxy, attached by dark brown caudicles; gynostegium c. 2.5 mm long. *Follicles* paired, terete, purplish streaked, c. 11-15 x 0.5-1 cm, tapering towards apex, glabrous.

This variety is allied to *C. stalagmifera* var. *stalagmifera*, but differs in having the stem distally attenuating in varying degrees, large flowers and spindle hairs along the margin of corolla lobes.

*Flowering & Fruiting*: February– August.

*Distribution*: India (Tamil Nadu- Madurai district), endemic.

***Caralluma stalagmifera* var. *intermedia*** Karuppusamy et Pullaiah, *var. nov.* **Fig. 3**

*Caralluma stalagmifera* var. *stalagmifera* et *Caralluma stalagmifera* var. *longipetala* affinis, a priori anguli caulium acuti, caules supra attenuati, flores parvi, spindilli ciliati pauci ad apici vel absenti, corolla rotata, brunnes colorata, stria aliquantulo ad basim parum, a posteriori pedicellis pendulis brevioribus.

*Type*: INDIA, **Andhra Pradesh**, Anantapur district, Hillocks opposite to Gooty Railway station, 19 August 2005, S. Karuppusamy 26991 (Holotype, SKU; Isotypes, MH).

*Shrubs*; stems fleshy, branched; branches quadrangular; internodes 10-15 mm long and 2.5-10 mm across, quadrangular, glabrous. *Leaves* decussate, sessile, 3.5 x 0.5-1 mm, triangular, pointed at apex, fleshy, glabrous. *Flowers* axillary, solitary; bracts minute, triangular; pedicels terete, semi-erect, up to 5 mm long, c. 1 mm in diameter, pinkish, glabrous; calyx five-lobed, divided up to base, lobes c. 2 x 0.5 mm, triangular, apex acuminate, fleshy, glabrous; corolla rotate or campanulate, c. 6 mm long, c. 1 mm across; corolla-tube c. 1.5 mm long; lobes five, c. 5 x 1.2 mm, ovate-lanceolate, chestnut brown inside, a few yellow transverse streaks at base, tip yellowish brown, spindle hairs a very few at tip or absent;

corona staminal, biseriate; outer lobes formed of two semi-erect, linear-lanceolate curved segments, c. 1 mm long; inner lobes arising from between the outer corona lobes at their base, incumbent over the anthers; stamens five, c. 1 mm long; pollinia five, pollen masses solitary in each anther cell, yellow, waxy, attached by dark brown caudicles; gynostegium c. 2.5 mm long. *Follicles* paired, creamy white with light purplish streaks, c. 5-8 x 0.5-0.8 cm, tapering towards apex, glabrous.

This variety is allied to *C. stalagmifera* var. *stalagmifera* and *C. stalagmifera* var. *longipetala* but differs in having distally attenuating, acute angled stem, small flowers, a few or no spindle hairs at tip of the corolla lobe, chestnut brown corolla, sometimes with a very few yellow streaks at basal portion and short pendulous pedicel.

*Distribution*: INDIA (Andhra Pradesh and Tamil Nadu).

*Flowering & Fruiting*: July-August.

## Acknowledgements

Authors are thankful to the Joint Directors of Botanical Survey of India, Southern Circle, Coimbatore and Central National Herbarium, Howrah for providing permission to consult CAL and MH. Thanks are also due to Dr K. M. Rajasekaran, Department of Botany, Madura College, Madurai for helping in specimen collection.

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Received: 23.6.2006

Revised and accepted: 22.6.2007