

CRYPTOCORYNE TAMBRAPARANIANA, A NEW SPECIES OF ARACEAE FROM TIRUNELVELI DISTRICT, TAMIL NADU, INDIA

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Abstract: A new species *Cryptocoryne tambraparaniana* is described and illustrated. The species differs from its closely allied species, *Cryptocoryne spiralis* (Retz.) Fischer ex Wydler, in having long peduncle, long runner internodes, cataphylls shape, number of appendages, nature of spathe margins, long staminate flower, syncarpium shape and number of seeds.

INTRODUCTION

The authors collected an interesting specimen belonging to the genus *Cryptocoryne* Fischer ex Wydler from Tambraparani river, Tirunelveli district, Tamil Nadu. A critical examination revealed that the specimen was distinct from the hitherto known species of the genus. The specimen did not match with any of the known species in the genus and it could not be accommodated with a known range of variation of *Cryptocoryne spiralis* (Retz.) Fischer ex Wydler. This on consultation with Madras Herbarium (MH) and relevant literature (Bhargavan, 1989; Fischer, 1931; Hooker, 1893; Rajakumar, 2002 and Sasikala, 2000) turned to be a novelty. The specimen is described here as a new species.

Cryptocoryne tambraparaniana T.J.S. Rajakumar, P. Daniel, R. Selvakumari, S. Murugesan & N. Chellaperumal sp. nov. *Cryptocoryne spiralis* (Retz.) Fischer ex Wydler affinis, sed pedunculis longioribus, internodis sarmenti longioribus, formis cataphyllorum, numeris appendicibus, naturis spatho-marginum, staminato-floribus longioribus, formis syncarpiorum et numeris seminum differt.

Typus: Southern India, Tamil Nadu, Tirunelveli distr., along Tambraparani river, near Cheranmahadevi, ca 20 km from Tirunelveli junction towards west, 71m, 13 February 2000, Rajakumar 700 (Holotype MH), 700 A (Isotype JCH); Tambraparani river, near Karungulam, ca 15 km from Tirunelveli junction towards east, 24m, 20 February 2000, Rajakumar & al.

725 & Southern India, Tirunelveli district, Tambraparani river, near Cheranmahadevi, 71m, 14th March 2000, Rajakumar 716 (Paratypi MH & JCH).

Cryptocoryne tambraparaniana is allied to *Cryptocoryne spiralis* (Retz.) Fischer ex Wydler, but distinct in having longer peduncle, longer runner internodes, cataphylls shape, number of appendages, nature of spathe margins, longer staminate flower, syncarpium shape and number of seeds.

Rhizomatous herb, to 60 cm high; rhizomes mostly erect, 3-5 x 0.6-1 cm; roots 2-3 mm thick; runners 6-15 cm long, slender, glabrous; internodes 1.5-3.5 cm long. Cataphylls oblong, 2-keeled, 1-7 x 0.4-0.7 cm; appendages 2. Leaves distichous, oblong-lanceolate, cuneate at base, wavy along margin, mucronate or acute and recurved at apex, 11-26.5 x 1.6-3.2 cm; midrib prominent beneath, purple or green; petioles 6-28.5 cm long, subterete, dorsally channelled, purplish above, white at base, 4-7 cm long, sheathing; sheath 6-9.5 x 1-1.4 cm. Peduncle flat, white to pink, 1.5-5.5 (-7.5) cm long, elongating to 7.5 cm in fruit. Spathe linear-lanceolate, 8.8-15 cm long; tube subcylindric, 1.5-2 cm long, white; limb twisted twice at base, erect above, curled at apex, 9.5-12 x 1.5-2 cm, purplish at base; dull green outside towards apex, purplish at maturity, yellowish green inside towards apex, purplish at maturity, transversely lamellate inside, strongly toothed along margins at base, gradually becoming faint above; teeth in groups of 4 or 5 with an interspace of 2-3 mm, 1-1.5 mm long

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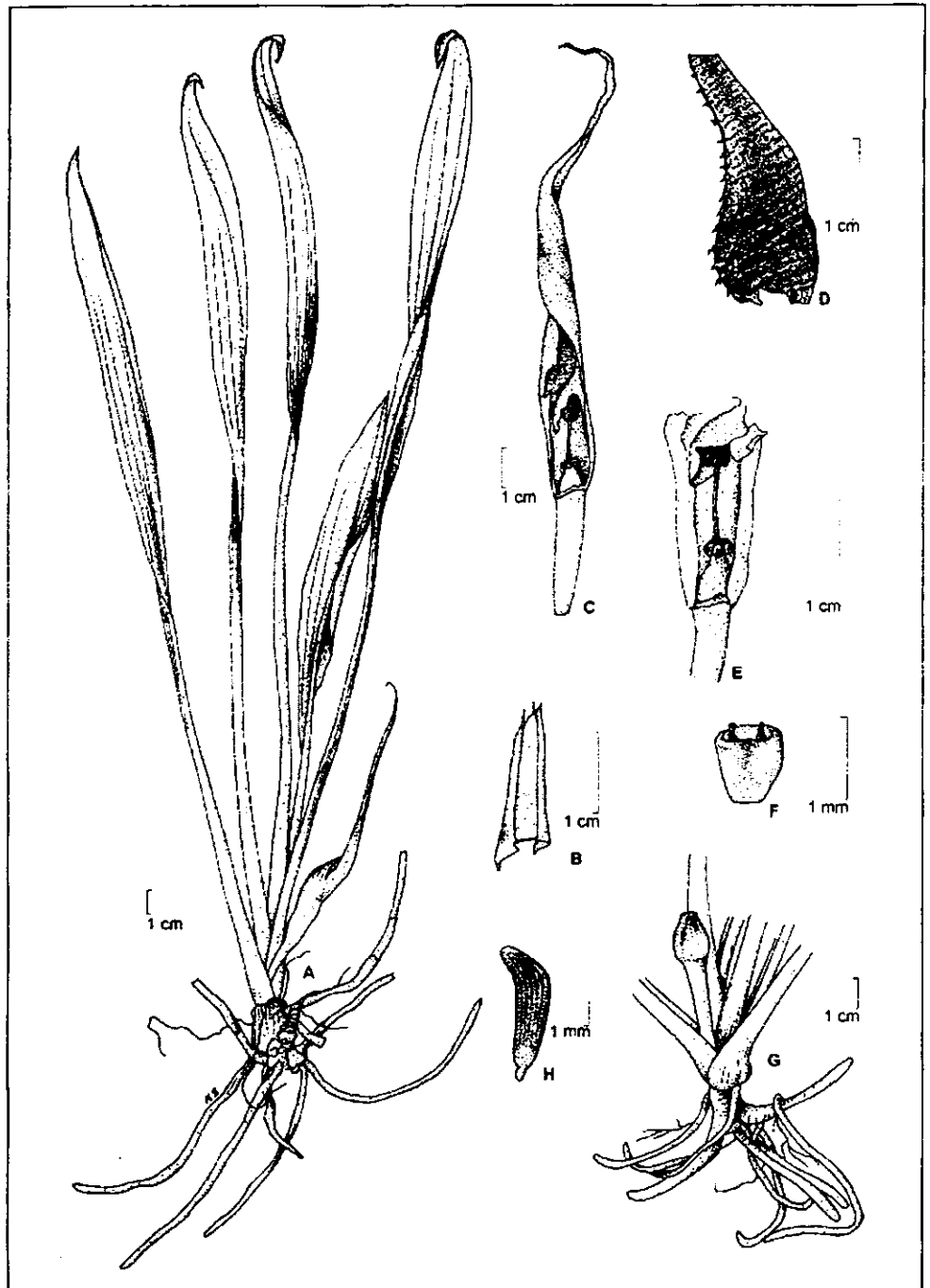


Fig. 1 (A-H). *Cryptocoryne tambraparaniana* sp. nov.
 A. Habit; B. Cataphyll; C. Inflorescence L. S.; D. A portion of spathe enlarged to show marginal teeth and lamellations inside; E. Spadix; F. Staminate flower; G. Basal portion of plant with a syncarpium; H. Seed.

at base; collar 0.6 – 0.7 cm long, enclosing whole of staminate flower – portion, white. Spadix 1.7 – 1.9 cm long, enclosed within tube, apex adherent to basal portion of spathe. Pistillate flower - portion conical to conical - globose, 0.3 – 0.5 x ca 0.4 cm; pistillate flowers 5 or 6, dull white; ovary unilocular; ovules 10 - 15 per locule, basal; style decurved; stigma broadly elliptic, ca 1 mm across, creamy; olfactory bodies 5, round, ca 1 mm broad, pale yellow to light shades of pink. Interstice 0.8 – 1.1 cm long, white. Staminate flower- portion globose - elliptic, 0.4 – 0.5 x ca 0.1 cm; staminate flowers 50 - 60, in regular rows, compact, becoming lax after anthesis; anthers obconical, yellow; lobes 2, each with a small horn; horns inverted- funnel shaped, thin, slightly projected. Appendix 0.5 – 1.5 mm long, oblong, white, adnate to basal tube of spathe. Fruit a fleshy syncarpium, ovate-oblong, 0.9 – 1.1 (1.5) x 0.6 - 1 cm, creamy to faintly purple; seeds slightly curved, 10 - 15, 5 - 7 x 1.2 – 1.5 mm, rarely 5 – 7 aborted, longitudinally and uniformly ridged, pointed at funicular end, blunt at other, dull white (Fig.1).

Fl. & Fr.: Feb. – March.

Distrib.: Tambraparani river bed, Tirunelveli district, Tamil Nadu.

Etymology: The specific epithet refers to the type locality of this species.

Habitat: In frequently inundated areas, on clayey soil, under shade of trees such as *Cocos nucifera*, *Pithecellobium dulce* and *Pongamia pinnata* associated with *Cryptocoryne spiralis* and *Struchium sparganophorum* in small (ca 1 m²) to large (25 m²) dense patches; rare.

Note: This species differs from *Cryptocoryne spiralis* (Retz.) Fischer ex Wydler as shown in Table -1.

ACKNOWLEDGEMENTS

We are grateful to the Ministry of Environment and Forests, New Delhi for financial assistance; the Chief Wildlife Warden, Chennai, the Conservator of Forest, District Forest Officer and Ranger, Tirunelveli for permission to undertake field studies; Dr. G. V. S. Murthy, Joint Director, Botanical Survey of India, Southern Regional Centre, Coimbatore for permission to consult Madras Herbarium (MH) as well as library. The authors are grateful to Dr. V. J. Nair, Emeritus Scientist, B.S.I., Southern Regional Centre, Coimbatore for the Latin translation, We also thank Mr. H. Sankar, artist for illustration.

Table -1: Comparison of *Cryptocoryne spiralis* (Retz.) Fischer ex Wydler and *Cryptocoryne tambraparaniensis* sp. nov

S.No.	<i>Cryptocoryne spiralis</i> (Retz.) Fischer ex Wydler	<i>Cryptocoryne tambraparaniensis</i> sp. nov.
1.	Plant less than 30 cm high	More than 30 cm high
2.	Flowering peduncle 0.5 – 1.2 cm long	1.5 – 5.5 cm long
3.	Fruiting peduncle 0.6 - 2.8 cm long, white	3 - 7.5 cm long, whitish to light pink
4.	Runner internodes 1 - 1.5 (- 2.5) cm long	1.5 - 3.5 cm long
5.	Cataphylls lanceolate, 1.5 – 2 (-3) cm long; appendage one	Oblong, 1 - 7 cm long; appendages two
6.	Spathe limb spirally twisted, purplish inside towards the apex, feebly toothed along the margins; interspace between the teeth 1- 2 mm long	Twisted only twice, yellowish green inside towards the apex, strongly toothed along the margins; interspace between the teeth 2 - 3 mm long
7.	Staminate flower – portion 0.3 – 0.4 cm long: anthers recurved above horn conical, thick	0.4 – 0.5 cm long; anthers recurved above; horn inverted - funnel - shaped, thin
8.	Syncarpium globose, 0.5 – 1 cm, dark purple	Ovate - oblong, 0.9 – 1.1 (- 1.5) x 0.6 – 1 cm, cream to faintly purple
9.	Seeds 4 - 5 x 1.5 – 2 mm, 5 - 9, 3 - 4 aborted, not uniformly ridged, truncate at the funicular end	5 - 7 x 1.2 – 1.5 mm, 10- 15, sometimes 5 - 7 aborted, uniformly ridged, pointed at the funicular end

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