

# **Leucas mathewiana Sunojk. (Lamiaceae) : a new species from India**

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# Leucas mathewiana Sunojk. (Lamiaceae), a new species from India

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## Abstract

SUNOJKUMAR, P. (2009). *Leucas mathewiana* Sunojk. (Lamiaceae), a new species from India. *Candollea* 64: 45-48. In English, English and French abstracts.

*Leucas mathewiana* Sunojk., new species from India, is described and illustrated. Its relationships with *Leucas aspera* (Willd.) Link, *Leucas lavandulifolia* Sm., and *Leucas zeylanica* (L.) R. Br. are discussed.

## Key-words

LAMIACEAE – *Leucas* – Andhra Pradesh – India – Taxonomy

## Résumé

SUNOJKUMAR, P. (2009). *Leucas mathewiana* Sunojk. (Lamiaceae), une nouvelle espèce d'Inde. *Candollea* 64: 45-48. En anglais, résumés anglais et français.

*Leucas mathewiana* Sunojk., une nouvelle espèce d'Inde, est décrite et illustrée. Ses affinités avec *Leucas aspera* (Willd.) Link, *Leucas lavandulifolia* Sm. et *Leucas zeylanica* (L.) R. Br. sont discutées.

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The genus *Leucas* R. Br. (*Lamiaceae*) comprises about 100 species and is found in Southern to tropical Africa, Arabia and Asia (SEBALD, 1980). In India, the genus is represented by about 40 species, of which 21 are Indian endemics (SINGH, 2001). Majority of these are distributed in the Southern Peninsula. Three additional endemic species from this area were described recently by SUNOJKUMAR & MATHEW (2002) and SUNOJKUMAR (2005, 2008). During collection of all the hitherto described Indian *Leucas* for a taxonomic study, the author discovered a small population of *Leucas* at an open wasteland, near a deciduous forest in the Kalasamudram forest area of Andhra Pradesh state, South India. Fresh specimens were collected and studied. This, when compared with specimens and types of related taxa, has confirmed it to be another distinct species, which is described and illustrated below.

*Leucas mathewiana* Sunojk., spec. nova (Fig. 1)

**Typus:** INDIA. Andhra Pradesh: Ananthapur Dist., Kalasamudram open waste place, ca. 250 m, 24.X.2001 (fl.), Sunojkumar, P. CU49664 (holo-: K; iso-: CALI).

*Leucadi asperae similis, foliis angustis (3-5.5 cm longis x 4-6 mm latis), inflorescentia terminali non-globulari, floribus minus laxe dispositis circulariter patentibus, calyce semi-obliquo dentibus aequalibus, corolla magna (16-18 mm longa) differt.*

Erect annual herb, 20-40 cm high, stem obtusely quadrangular and grooved, not much branched, pubescent; internodes 10-17 cm long. Leaves opposite decussate; petiole 3-5 mm long; lamina 3-5.5 cm long, 4-6 mm broad, approximately 8-9 times longer than broad, membraneous, narrowly linear-lanceolate, base long cuneate to angustate, tip obtuse, margin almost entire or remotely 2-3 serrate, lateral veins not prominent, sparsely pubescent on both side with extrorse hairs. Inflorescence a terminal solitary verticillaster, subtended by a pair of leaves, fewer numbers of flowers, arranged loosely, spreading horizontally. Bracteoles 4-7 mm, 0.05 mm broad at base, narrowly linear, spinulose tip, slightly bend toward flowers, hispid outside and margins. Flowers 10-25, pedicel 1-2 mm long. Calyx tubular, side  $\pm$  10 mm long, up to 14mm long at

seeding stage, slightly bent at middle, 10 nerved, prominent towards upper half, each nerve excurrent in a teeth, inside glabrous, outside fully hispid, hairs 1-2 mm long, scattered, mouth semi-oblique, rim annulate with thick veins; teeth 10, equal sized, 1-1.5 mm long, tip subulate, spinulose. Corolla white, 16-17 mm long; tube 6-8 mm long, included in calyx tube, outside hairy above, inside middle annulate with a ring of fleshy hairs; lower lip  $\pm$  10 mm long, middle lobe  $\pm$  7 mm wide, fan shaped, side lobes 2.5 mm broad at free end, base narrowed, margin slightly revolute; upper lip 6 mm long, concave, bent, white spreading hairs outside, margins ciliate, tip of upper cilia slightly dark brown coloured. Stamens included in the upper lip, light reddish brown, upper pair shorter than the lower; filaments hairy; anther lobe 0.9 mm long, 0.5 mm broad, confluent theca. Disc semi-cup shaped, four lobes equal. Carpel locules 1 mm high, top rounded. Style 11 mm long, bent towards upper side; stigma unequally bilobbed, lower lobe 0.8 mm long, upper 0.06 mm long. Nutlets 3.5-4 mm long, 1.5 mm broad, almost cylindrical, dark brownish, glabrous shining, basal attachment flat, oblong outside, apex rounded.

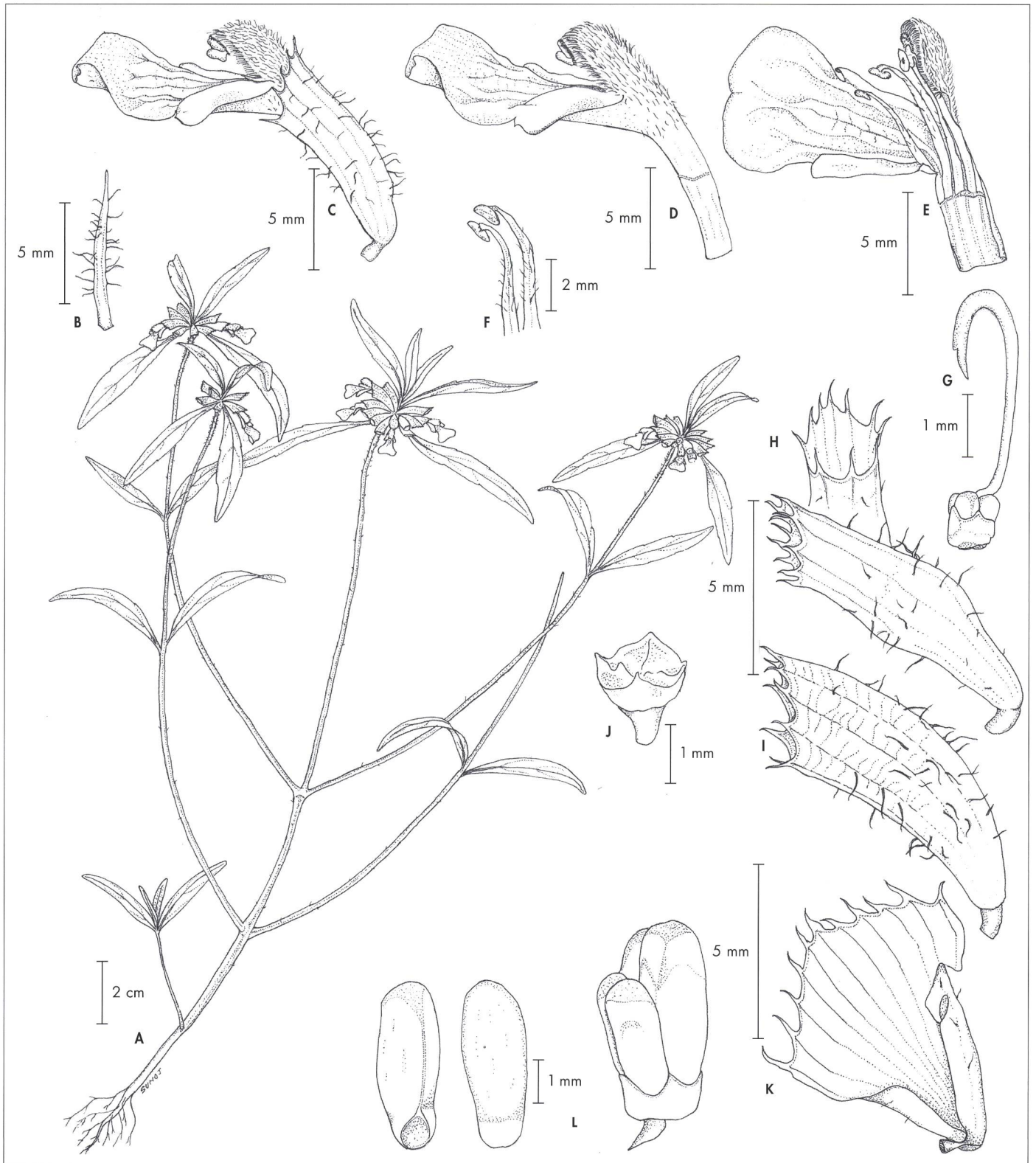
*Distribution.* – The new species is endemic to Andhra Pradesh state (South India), from a small population of less than 250-300 plants are known from a single locality near the Kalasamudram forest area in the Ananthapur District.

*Ecology.* – Rare; the new species is found in the open, rocky waste place, near a deciduous forest area at an altitude between 200 and 250 m. The plant is found growing among grasses.

*Etymology.* – The species is named after Dr Philip Mathew, Professor of Botany, University of Calicut, Kerala, India in appreciation of his contribution to plant taxonomy.

*Flowering and fruiting.* – Observed as flowering in September to October; fruiting from November to December.

*Notes.* – *Leucas mathewiana* is included in *Leucas* sect. *Plagiostoma* Benth., together with its close relatives *L. aspera* (Willd.) Link, *L. lavandulifolia* Sm., and *L. zeylanica* (L.) R. Br. Taxa included in this section are very similar in their appearance and can be distinguished by their floral (particularly calyx) characters. The new species is distinct from its relatives by the characters shown in Table 1.



**Fig. 1.** – *Leucas mathewiana* Sunojk. **A.** Habit; **B.** Bracteole; **C.** Flower; **D.** Corolla; **E.** Corolla split open; **F.** Stamens; **G.** Pistil; **H.** Flowering calyx; **I.** Seeding calyx; **J.** Basal disc; **K.** Calyx split open; **L.** Nutlets.

[Sunojkumar CU49664, K] [Drawn by the author]



**Table 1.** – Comparison between *Leucas mathewiana* Sunojk. and its relatives (*L. aspera* (Willd.) Link, *L. lavandulifolia* Sm., *L. zeylanica* (L.) R. Br.).

	<i>Leucas aspera</i>	<i>Leucas lavandulifolia</i>	<i>Leucas zeylanica</i>	<i>Leucas mathewiana</i>
<b>Inflorescence</b>	2-3 towards tip	2-3 towards tip	2-3 towards tip	solitary
<b>Inflorescence outline</b>	globular, compact	semi-globular compact	semi-globular compact	flowers loosely spreading
<b>Flowers number</b>	many, up to 75	many, up to 50	many, up to 50	less, 15-25
<b>Pediceal [mm]</b>	± 0.5	± 0.5	± 0.5	1-2
<b>Bracteoles</b>	equal to calyx	equal to calyx	equal to calyx	half of calyx
<b>Calyx length [mm]</b>	9-10	7-8	5-6	± 10
<b>Calyx nature and distribution of hairs outside</b>	dense hispid on upper half	dense pubescent on upper half	dense hispid on upper half	sparsely hispid along entire length
<b>Calyx mouth</b>	very oblique	very oblique	semi oblique	semi oblique
<b>Calyx teeth</b>	10, anterior slightly longer	7-10, anterior much longer	8, anterior slightly longer	10, equal sized
<b>Corolla size [mm]</b>	13-15	13-15	13-15	16-17
<b>Nutlets [mm]</b>	± 2.5 x ± 1	± 2.5 x ± 1.3	± 2.8 x ± 3	± 4 x ± 1.5

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