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## RESEARCH ARTICLE

## *Lasianthus idukkianus* sp. nov. (Rubiaceae): A new species from the southern Western Ghats, India

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### Abstract

*Lasianthus idukkianus* E.S.S. Kumar et Roy, a new species in Rubiaceae from Idukki district in Kerala, India is described and illustrated. The new species resembles to *L. acuminatus* and *L. parvifolius* but differs from these species mainly by the large shrubs or treelets habit, elliptic leaves with shortly acute-acuminate apex, broadly ovate bracts, 5-toothed calyx lobes, 2-celled ovary, obovoid fruits with 2 pyrenes at maturity. It is named after the district of its type locality, Idukki.

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## INTRODUCTION

*Lasianthus* Jack of the family Rubiaceae is a large genus with more than 180 species, distributed mainly in the Old World tropics (Ridsdale, 1998; Zhu, 2012). The greatest number of species is found in tropical Asia (Robbrecht, 1988). In India, the genus is represented by 23 species and 2 varieties (Hooker, 1880; Deb & Gangopadhyay, 1991), of these, Kerala harbours about 15 species (Nayar et al., 2006).

As part of the survey and ex-situ conservation of the imperiled plant species of the Western Ghats, the authors conducted a field survey at Munnar-Pambadumpara forests in Idukki district in Kerala. During this trip, a curious species of *Lasianthus* was collected. On critical study with relevant literature and type specimens, it turned out to be a species new to science. It is described and illustrated here as a new species.

*Lasianthus idukkianus* E.S.S.Kumar et Roy, sp. nov. (Fig.1 & 2)

Type: INDIA, Kerala, Idukki district, Pambadumpara, ± 1520 m, 19 October 2012, E.S.Santhosh Kumar 70434 (Holotype, TBGT; Isotype, TBGT).

*Lasianthus idukkianus* is closely related to *L. acuminatus* Wight and *L. parvifolius* Wight, but differs from both these species by the large shrubs or treelets habit, elliptic leaves, 5-toothed calyx, 4-6 lobes corolla, 2-celled ovary with confluent stigmatic lobes, obovoid fruits with 2-pyrenes at maturity. The new species is further distinguished by several other characters which are tabulated below (Table-1).

Large shrubs or treelets to 3 m high; branchlets terete, green, glabrous. Leaves elliptic, 3-8 × 1.7-3 cm, coriaceous, cuneate at base, entire and slightly revolute at margin, shortly acute-acuminate and obtuse at the very apex, shining and glabrous on both sides; mid rib is distinct; lateral nerves 3-4 pairs, alternate or opposite, secondary nerves inconspicuous; petiole upto 0.8 cm long, glabrous; stipules triangular – ovate, acuminate at apex, 6-8 mm long, glabrous outside, hairy inside. Inflorescence axillary, sessile or shortly peduncled cyme; peduncle 0.1-0.2 cm long; bracts minute, broadly ovate, ciliate at the apex within. Flowers creamy white, 10-12 mm wide, fragrant, pedicelled. Pedicel 0.1-0.2 cm long, glabrous. Calyx limb 2.5-3 mm long, teeth minute, shortly toothed, glabrous. Corolla lobes 4-6, tube urceolate, upto 4 mm long, glabrous outside, villous at the throat; lobes upto 4 × 2 mm. Anthers 4-5; filaments short, anthers elliptic-oblong, 1.5-1.8 mm long, shortly beaked at apex. Ovary depressed

globose, glabrous, 2-celled, ovule 1 in each cell; style slender, minutely hairy; stigma confluent. Fruit a drupe, obovoid, to 2 × 1 cm, glabrous, black at maturity, calyx limb deciduous in fruits. Pyrenes 2, obovoid, to 1.5 x 0.7 cm, slightly wrinkled, obtuse at both ends.

**Table 1: Comparison of *Lasianthus idukkianus* with its allied species.**

Characters	<i>L. acuminatus</i>	<i>L. parvifolius</i>	<i>L. idukkianus</i>
Habit	Shrubs to 1 m high	Shrubs to 1 m high	Large shrubs or treelets, 3-4 m high
Branchlets	Pubescent	Glabrous	Glabrous
Leaf lamina	Lanceolate or elliptic-lanceolate; 7-10 x 2.5-4 cm	Obovate-lanceolate or elliptic; 3.5-6 x 1.5-2.5 cm	Elliptic; 3-8 x 1.7-3 cm
Leaf apex	Long acuminate and mucronately cuspidate at the very apex	Acute and obtuse at the very apex	Shortly acute-acuminate and obtuse at the very apex.
Leaf base	Acuminate	Attenuate	Cuneate
Leaf indumentum	Hairy	Glabrous	Glabrous
Lateral nerves	5 pairs	2-3 pairs	3-4 pairs
Stipules	Triangular-lanceolate	Triangular acute	Triangular ovate and cuspidate
Bracts	Absent	Minute or wanting	Broadly ovate, 1 mm
Calyx lobes	4-cleft, triangular, equaling the calyx tube, hairy	4-lobed, teeth minute triangular, glabrous	5-toothed, glabrous
Corolla	4-lobed	4-lobed	4-6 lobed
Style	Slender, glabrous	Slender, glabrous	Slender, minutely hairy
Stigmatic lobes	3-lobed	3-4 lobed	Confluent
Ovary	3-4 celled	3-4 celled	2-celled
Fruits	Globose, crowned with persistent calyx lobes	Globose, crowned with calyx lobes	Obovoid, calyx lobes deciduous
Pyrenes	3-4	3-4	2

**Flowering and Fruiting:**— September – December

**Distribution and Ecology:**— *Lasianthus idukkianus* grows in a shola forest at elevations 1500-1560 m a.s.l. in Idukki district. There is only a single population with about 8-10 mature individuals and several seedlings of varying age found within an area of about 2 sq km. The common associated species are *Litsea* spp., *Osbeckia aspera* (L.) Blume, *Vernonia anamallica* Bedd. ex Gamble., *Strobilanthes zenkerianus* (Nees) T. And., *Tarenna* sp, *Themeda* sp. etc.

**Eponymy:**— This species is named after Idukki district, the type locality of the taxon.

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**Figure -1:** *Lasianthus idukkianus* E.S.S. Kumar et Roy, sp. nov. a. Plant in the natural habitat, b. a portion of flowering shoot with flowers, c. close up view of flowers.

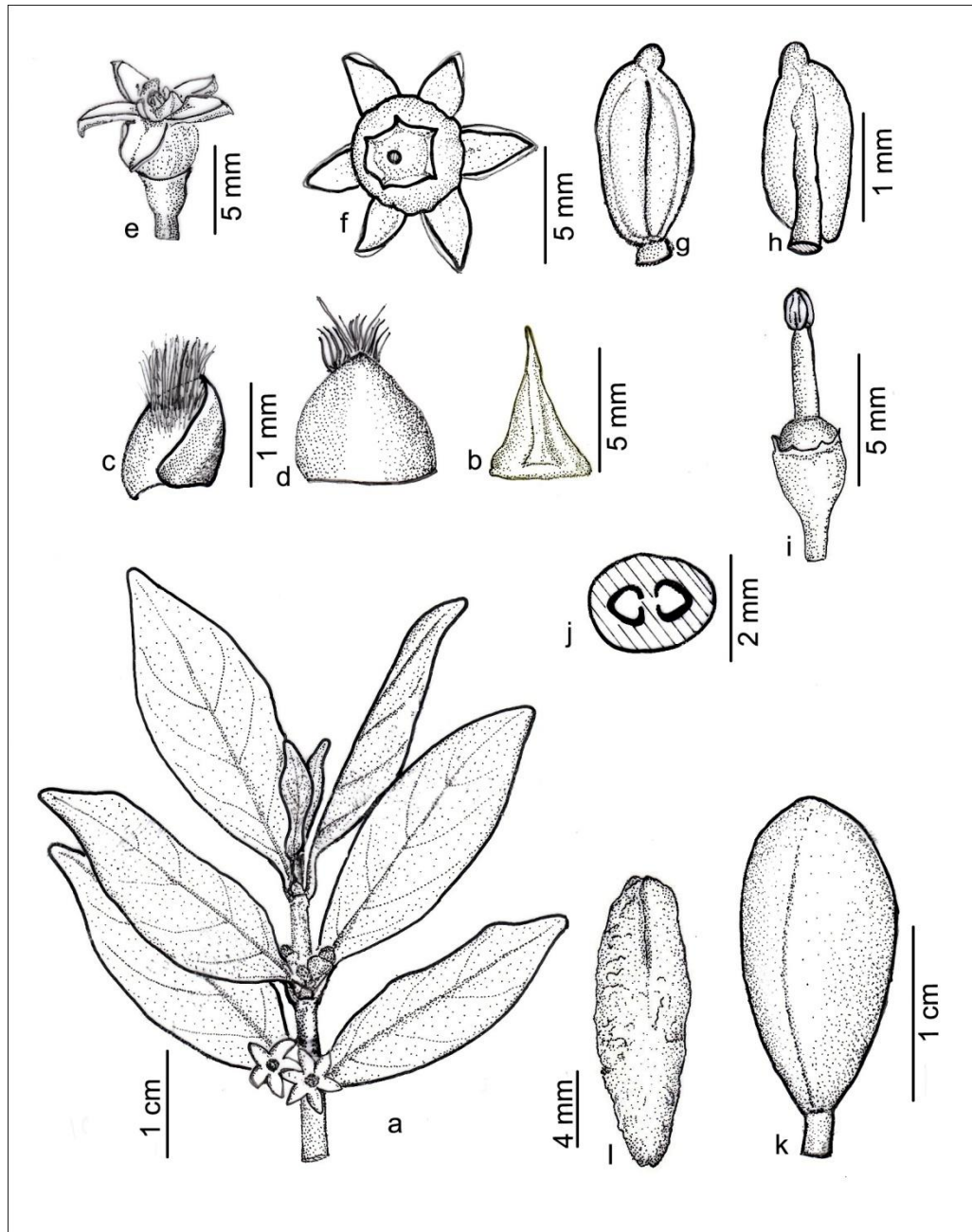


Figure 2. *Lasianthus idukkianus* E.S.S. Kumar et Roy, sp. nov. a. flowering twig, b. stipule, c. & d. bracts, e. a flower, f. a flower- view from the base showing calyx on the top, g & h. stamens, i. carpel, j. c.s. of ovary, k. a fruit, l. a seed.