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Macroptilium (Leguminosae: Faboideae), a new genus record for Kerala

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Abstract: *Macroptilium lathyroides* (L.) Urban is recorded for the first time from the Kerala State. A detailed description and colour photograph are provided.

Introduction

Majority of the species currently assigned to *Macroptilium*, were described by Bentham (1837, 1865) as a section of *Phaseolus* L. and later Urban (1928) raised Bentham's section to the genus level, which is followed by subsequent researchers (Hutchinson, 1967; Verdcourt, 1970). The genus *Macroptilium* (Benth.) Urban is an American genus included in subtribe Phaseolinae (Phaseoleae, Papilionoideae, Leguminosae), based upon the recent molecular phylogenetic analyses (Schrire, 2005). Later, Lackey (1983) divided the genus in to three sections: *Macroptilium*, *Microcochle* (Benth.) Lackey and *Monophyllum* Lackey.The sect. *Macroptilium* differs by its large, pluriovulate flowers from sect. *Microcochle,* which is having smaller flowers, and few ovules per flower. Third sect. *Monophyllum*, is distinguished by its unifoliolate leaf and lateral stigma. Since Lackey's (1983), the only one comprehensive study on this genus was done by Espert *et al*. (2007) based on morphology, biochemical and molecular evidence. The genus is distributed from the south-western United States to northern Argentina and southern Uruguay, represented by c. 21 species in the world (www.plantlist.org), of which 2 species are so far reported from India viz. *M. atropurpureum* (DC) Urban and *M. lathyroides* (Sanjappa, 1991).

Macroptilium is characterized by long wing petals, longer than the standard and keel. At anthesis, the upwardly directed left wing takes the place of the standard. The diagnostic keel of *Macroptilium* has the distal portion hooked and rotated to the right.

During the course of a botanical exploration in Kerala, the first author collected an unknown species of *Macroptilium* from the Palakkad district and later the second author collected the same from Kollam district of Kerala. On critical examination and reference to relevant literature the specimens were identified as *Macroptilium lathyroides* (L.) Urb., which is yet to be figured in the floristic account of Kerala species. Therefore, the present collection is a new distributional record for Kerala state.

Macroptilium lathyroides (L.)Urb.,Symb. Antill.9: 457. 1928. *Phaseolus lathyroides* L. Sp. Pl., ed. 2: 1018.1763. *P. hastaefolius* Mart. Ex Benth., Ann. Wien. Mus. Naturg. 2: 141. 1838. *P. maritimus* Salzm. ex Benth., Ann. Wien. Mus. Naturg. 2: 141. 1838. *P. psoralioides* Wight *et* Arn., Prod. 244. 1834; Wt. Ic. t. 249. *Macroptilium lathyroides* var. *semierectum*

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(L.)Urb.,Symb. Antill.9: 457. 1928. *P. semierectus* L., Mant. 100. 1767; Baker in Hook. f., Fl. Brit. India 2: 201. 1876; Gamble, Fl. Pres. Madras 362. 1918. (Fig. 1).

Erect, twining or creeping herb upto 2.5 m length, with numerous basal or lateral branches. Stems pubescent, cylindrical, 4–5 mm in diam.; internodes 4–6 cm long. Leaves trifoliolate, alternate; leaflets chartaceous, ovate-lanceolate or elliptical, 4–6.5 × 1.5–2.5 cm, margins entire, apex acute, mucronate or obtuse and obtuse or cuneate at base,; adaxial surface dark green, glabrous; abaxial surface pale green, pubescent, with prominent venation; petiole 0.5–5 cm long, pubescent; petiolules thickened, pubescent, 1.5–2 mm long; petioles sulcate, pubescent with thickened base; stipules lanceolate, 5.5–6 mm long, with notable parallel venation, light green coloured. Inflorescences of axillary pseudoracemes, long pedunculate, erect, 25–45 cm long, the flowers paired on the distal portion of the rachis; bracteoles 2.5–3 mm long, linear to linear-lanceolate. Calyx companulate or globular, 5–5.8 × ca. 2 mm long, puberulent, the sepals lanceolate, unequal, two are smaller than the others, light green coloured and violet tinge on the apex; corolla maroon, pink or purple-red, the standard petal orbicular to suborbicular, with two auricled long claw, claw partially adnate to staminal tube, 10–11 mm long, the wing petal larger than the standard petal, wing petal 12–15 × ca. 7 mm long, with two narrow auricles at the base, keel petal recurved, spirally twisted, 8–9 mm long. Stamen 9 (8+1), diadelphous, with eight stamens united into a staminal sheath, and one free vexillary stamen, ca. 4 mm long, anthers dithecous, basifixed. Ovary superior, style curved, thickened at base, 9–10 mm long. Legume linear, 8–10 cm × 2–3.5 mm long, pubescent, dehiscent by valves that open in a spiral. Seeds numerous, 12–20 in number, 3–4 mm long, greenish yellow in colour, dark brown at maturity.

Flowering & fruiting:— Throughout the year.

Distribution and habitat:— Native to tropical America; widely cultivated and naturalized in the tropics. In the open it remains erect but among other plants the young branches may twine round adjacent stems allowing the plant to climb. The "dried blood" red flowers are borne in racemes up to 15 cm long with a 30 cm peduncle. The narrow pods are more or less cylindrical (Wagner *et al*., 1990, USDA, NRCS 2012).

Common Names:— Phasey bean, Kacang-batang, wild bushbean etc.

Specimen examined:—INDIA. **Kerala**: Palakkad dist., Nenmara, Way to Pothundy dam, ±500 m, 17 July 2014, *K. M. Prabhukumar 7886* (CMPR!). Kollam dist., Neendakara, ±10 m, 18 December 2015, R. *Jagadeesan 9023* (KUBH!).

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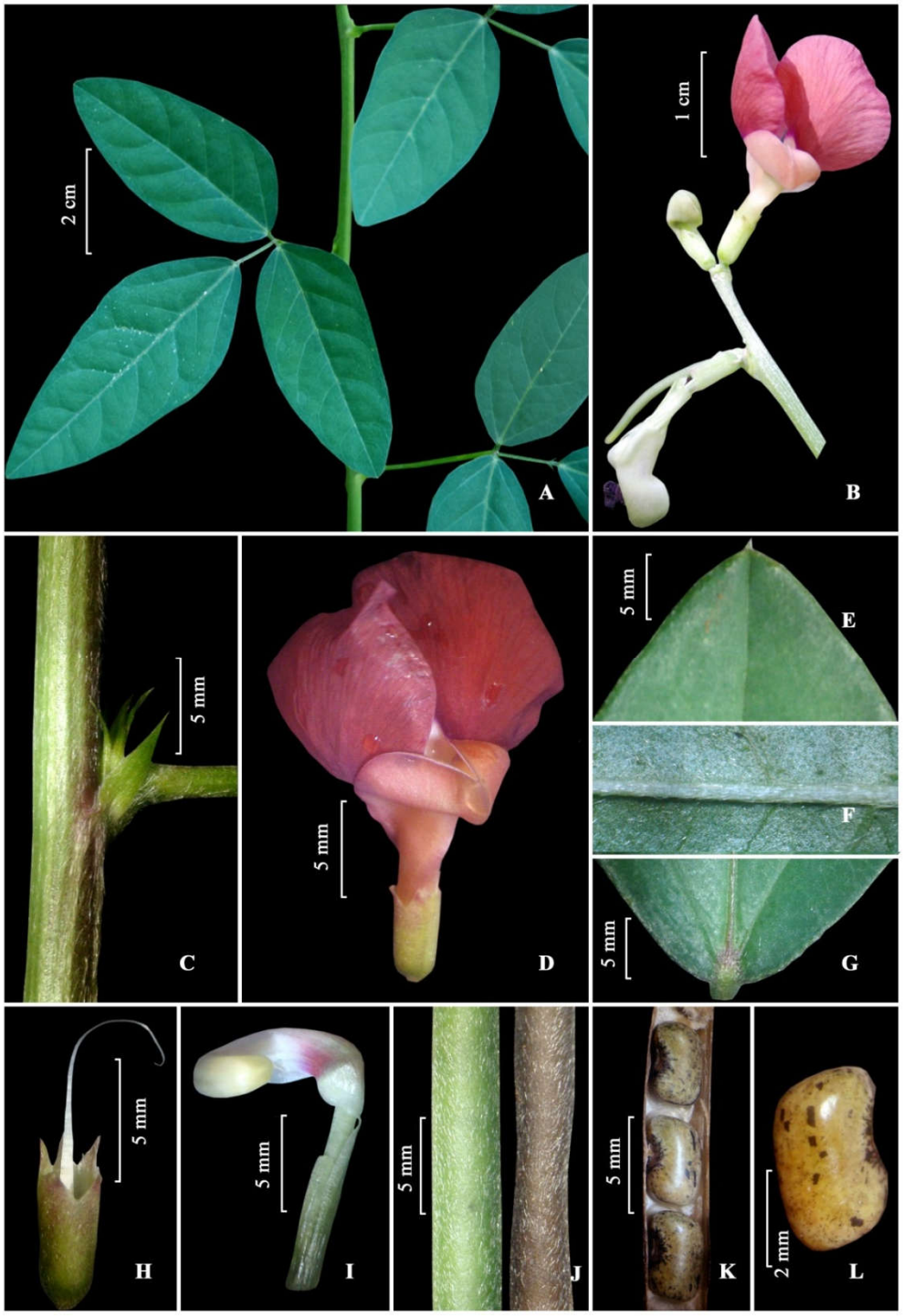

Fig. 1.*Macroptilium lathyroides* (L.)Urban. A. Leafy twig; B. Inflorescence; C. Stem showing stipules; D. Single flower; E. Leaf showing mucronate apex; F. Abaxial surface of leaf showing pubescent nature; G. Leaf base; H. Calyx with gynoecium; I. Androecium; J. Surface of fruit (matured and dried); K. Opened fruit; L. Single seed. (Photos: Prabhu,K.M.).

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