



***Champereia manillana* (Blume) Merr. (Opiliaceae) and *Stemodia verticillata* (Mill.) Hassl. (Plantaginaceae): New distributional records to North East India**

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ABSTRACT: *Champereia manillana* (Blume) Merr. of Opiliaceae was reported so far in India from Andaman and Nicobar Islands. *Stemodia verticillata* (Mill.) Hassl. Plantaginaceae was recorded from southern India and Maharashtra. These two species was found here as new distributional records to North Eastern parts of India from Arunachal Pradesh. This communication brings with description, distribution, phenology and photographs of the species for easy identification.

Key words: *Champereia manillana*, *Stemodia verticillata*, new records, N.E. India.

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INTRODUCTION

During a recent inventory of medicinal plants at various places in Pasighat, East Siang District of Arunachal Pradesh, North Eastern states of India was conducted to strengthen the medicinal plants repository of North Eastern Institute of Folk Medicine (Ministry of AYUSH, Govt. of India) located at Pasighat. Through literature screening (Hooker 1885, 1892; Kurz 1877; Dassanayake & Fosberg, 1981; Deb 1983; Haridasan & Rao 1987; Chauhan 1996; Kanjilal & Bor 1997; Wu *et al.* 2000; Bora & Kumar (2003) Chowdhery *et al.* 2008; Ambrish (2013), Betty & Ramanchandran (2014) and in consultation with central (CAL) and regional herbaria (ASSAM, ARUN and BSHC) these two specimens were identified as *Champereia manillana* (Blume) Merr. (Opiliaceae) and *Stemodia verticillata* (Mill.) Hassl. (Plantaginaceae) and they have not been recorded from North Eastern part of India. For reference these specimens were deposited at the herbarium of North Eastern Institute of Folk Medicine, Pasighat.

ENUMERATION

Champereia manillana (Blume) Merr. in Philipp. J. Sci. Bot. 7: 233. 1912. *Cansjera manillana* Blume, Mus. Bot. Lugd. Bat. 1:246. 1850. *Opilia manillana* Baillon in Adansonia 3: 124. 1862. *Champereia griffithiana* Planchon ex Kurz in J. As. Soc. Bengal 44 (2): 154. 1875; Hook.f., Fl. Brit. India 5: 236. 1886. Fig.1.

Small trees, 5 m tall. Leaves lanceolate or oblong, ca 7-15 X 2-6 cm, apex acuminate or acute, leathery, glabrous, venation prominent beneath, 5-8 lateral nerves on each side of the mid rib; petioles ca 4-8 mm long. Inflorescence panicles; solitary or in groups of 2-4 rachis, main rachis up to ca 21.3 cm long. Male flower: bracts ovate, 1 mm long; perianth 5, free, greenish yellow, petaloid, oblong, 1-1.5 mm, acute; pedicels 3-10 mm; stamens as long as perianth, anthers yellow, oval, 0.3 mm long; disc green, crenulate. Female flower: ebracteate; pedicels short, ca 0.5 mm; perianth 2-5, free, sepeloid, ca 0.5 mm. Ovary cylindrical to ovoid, ca 0.5 mm long; stigma cushion-shaped, sessile. Drupes orange-red, ca 7-16 X 7-9 mm.

Flowers & Fruits: February-July

Distributions: India: Andaman and Nicobar Islands. Myanmar, Thailand, Vietnam, Taiwan, Malaya Peninsula, Sumatra, Java, Borneo, Lesser Sunda Islands, Philippines, Celebes and Moluccas.

Specimens examined: INDIA, Arunachal Pradesh, Pasighat, back side of the forest nursery, Sibo Korong River, Pasighat 183 m asl, 28° 04' 15.70" N & 95° 19' 10.19" E, K. Jeyaprakash NEIFM- 00354, dated 23.04.2017.



Fig. 1. *Champereia manillana* (Blume) Merr. A twig with inflorescence.

Habitat & Ecology: This species found as rare and is growing along the side of Sibo Korong River. associated with *Ampelocissus hoabinhensis* C.L. Li, *Mikania micrantha* Kunth, *Cyathula prostrata* (L.) Blume, *Persicaria chinensis* (L.) H. Gross *Amorphophallus napalensis* (Wall.) Bogner & Mayo, *Dioscorea bulbifera* L., *Elsholtzia blanda* (Benth.) Benth., *Piper sylvaticum* Roxb., *Chloranthus officinalis* Blume, *Mussaenda frondosa* L., *Cayratia trifolia* (L.) Domin and *Solanum spirale* Roxb.

Stemodia verticillata (Mill.) Hassl., Trab. Mus. Farmacol. 21: 110 1909; Sprague, Bull. Misc. Inform. Kew 1921: 211. 1921; Alston in Trimen handb. Fl.Ceylon.6:211.1931; Ramach. *et al.*, Journ. Econ. Tax. Bot. 5: 939. 1984; Sivar. & Babu, Journ. Econ. Tax. Bot. 5: 942. 1984; Ramach. & Nair, Fl. Cannanore Dist. 320. 1988; Babu, Fl. Malappuram Dist. 540. 1990; Sutton and Hampshire in Hollowell *et al.*, Fl. Nicaragua 85: 2367. 2001; Sunil & Sivadasan, Fl. Alappuzha Dist. 511. 2009; Hegde *et al.*, New weed for Karnataka state. *Indian Forester* 140:2. 2014. *Stemodia parviflora* Ait Hort. Kew. (ed.). 52.1810; *Erinus verticillatus* Mill Gard. Dict. (ed. 8) 5. 1768 (Scrophulariaceae.). Fig.2. A-F.

Perennial herb, decumbent to prostrate, 15 cm tall, stem branched from the base, branchlets round and densely hairy, with gland tipped hairs. Leaves simple, lower opposite, upper whorled; lamina ovate, 0.5-1.5 X 0.3-1.2 cm, base

cuneate, pinnately veined, hairs sparse above, prominent below, especially along the veins; margin coarsely crenate to double crenate, apex acute; petiole 0.6-1.2 cm long, slender, slightly winged. Flowers solitary, axillary, 2-3-flowers per node, pedicel 2 mm long; calyx deeply 5-lobed, subequal, lobes linear to lanceolate, apex acute, 3-4.5 mm long with glandular hairs, persistent; corolla 0.6 cm long, tube 0.4 cm long and glandular pilose, violet with dark purplish nerves, bilabiate, lobes 5, unequal, sparsely hairy outside; upper lip slightly 2-lobed with clavate hairs at base, lobes broadly ovate; lower lip 3-lobed, lobes ovate to broadly ovate, inner corolla tube pubescent at lower side; stamens 4, didynamous, inserted on corolla tube, fertile stamens 2, filament ca. 1.5 mm long, anther ca. 0.5 mm long; staminodes 2, longer than fertile stamens, filament ca. 2 mm long, glabrous; ovary bicarpellary, ellipsoid, slightly compressed, ca. 1.2 mm long, glabrous, style short, 2 mm long, stigma slightly curved. Capsule orbicular to ovoid, glabrous, slightly compressed, 3 mm across, shorter than the calyx, brownish when mature, 4-valved, loculicidal. Seeds many, obovate, gray, with 8-longitudinal ribs.

Flowering and Fruiting: September-November

Specimens Examined: India, Arunachal Pradesh, Pasighat, Komlighat (Siang River bank); 28° 04'01.13" N & 95° 20'29.15" E; K. Jeyaprakash NEIFM-00530 dated 27-09-2017.

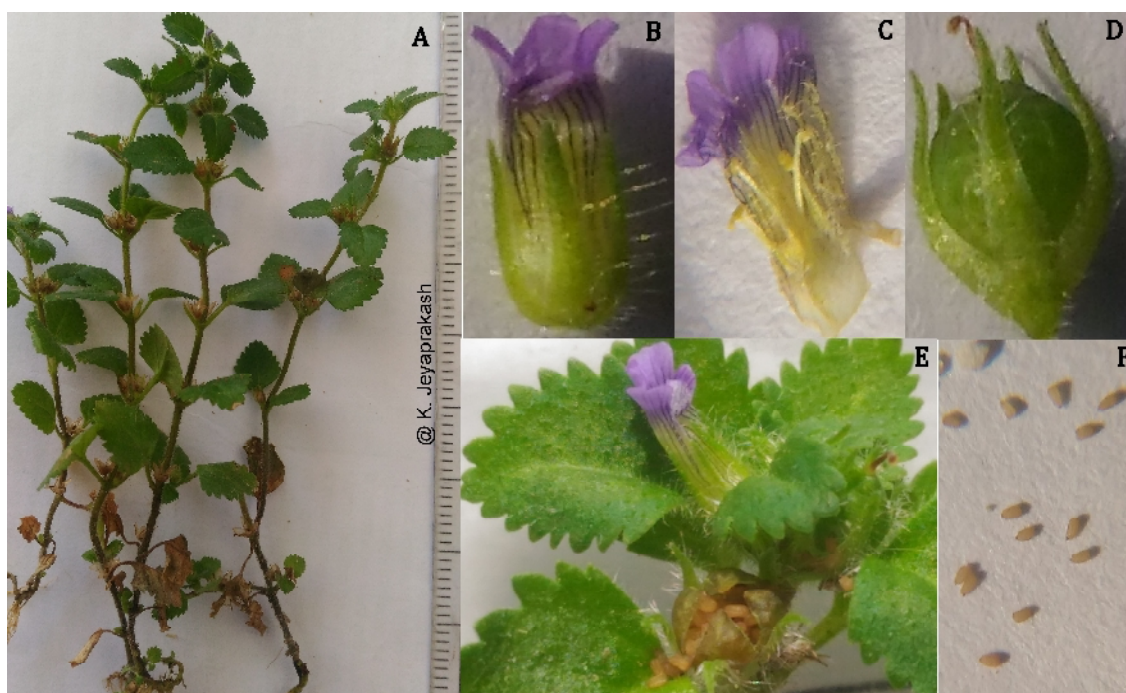


Fig. 2. A. Habit; B. Flower with calyx; C. Flower (L.S.); D. Capsule with calyx; E. Dehisced capsule and F. Seeds.

Habitat and Ecology: This species was found in Komlighat along the banks of Siang river and Boying village of Pasighat Block at 155 m elevation. It is commonly associated with *Cannabis sativa* L., *Ziziphus mauritiana* Lam., *Mikania micrantha* Kunth, *Amorphophallus napalensis* (Wall.) Bogner & Mayo, *Solanum nigrum* L., *Murraya koenigii* (L.) Spreng., *Physalis minima* L., *Oxalis debilis* H.B.K., *Ageratum conyzoides* L., *Galinsoga quadriradiata* Ruiz & Pavon, *Crassocephalum crepidioides* (Benth.) Moore and *Eupatorium odoratum* L. etc.

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Distributions: India (Kerala, Karnataka, Maharashtra, Tamil Nadu and Arunachal Pradesh); Taiwan and China.

Notes: This plant has native to tropical America, naturalized in Sri Lanka and Java of South East Asian countries (Cramer, 1981). In India, Ramachandran *et al.* (1984) was recorded for the first time from the banks of Kabini River, Cannanore district of Kerala. Later Sivarajan and

Babu (1984) reported from the Campus of Calicut University, Kerala. Subsequently, Bachulkar and Yadav (2000) noticed from Kolhapur and Satara city of Maharashtra state. Recently Betty and Ramachandran (2014) have reported from Tamil Nadu. Occurrence of this plant in North East India confirms that, this plant is now inhabiting and naturalizing well in Eastern Himalayas of India too.

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