

Leucas biflora (Vahl) R. Br. (Lamiaceae): A new distributional record and its less known ethno-medicinal usage from Tripura

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The present communication is providing the additional distributional record of *Leucas biflora* (Vahl) R. Br. (Lamiaceae), a less known ethno-medicinal plant has been collected from West Tripura in course of ethnobotanical studies during 2007-2008. The species is not so far reported from Tripura. It has several ethno-medicinal values and is well known as *Khomosa* to most of the local traditional healers (*Ochai*). *Tripuri* community used the leaf decoction of this procumbent herb as eye drop for relief and cure from conjunctivitis, to stop nosebleed and white discharge.

Keywords: *Leucas biflora* (Vahl) R. Br., Ethno- medicinal usage, New record, Tripura

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Tripura is a small hilly state of North-Eastern India, surrounded by Bangladesh on three sides with richest plant diversity^{1,2}. Forest covers an area of about 6292.681 sq km, with the annual rainfall of about 247.9 cm due to South west monsoon and the temperature varies between 10-35° C. Physiographical about 60 % of the state is hilly terrain, with 5 distinct hill ranges run parallel to each other from North to South. Which support luxurious growth of various types of plants resources scattered all over the state from hilly tract to plain. There are 19 tribal communities are found, viz. *Tripuri*, *Reang*, *Noatia*, *Jamatia*, *Halam*, *Kuki*, *Chaimal* and *Uchai* are known to have migrated to this state from outside in the historical period as such they are regarded as the original settlers of Tripura. Most of the tribal economies have been engaged in subsistence agriculture, *jhum*, piggyery, fishery and hunting. With the passage of time, they have developed a great deal of knowledge on the use of plants and plant products in curing various ailments / diseases. They have a deep belief in their native folklore medicine for remedies³.

It had mentioned the occurrence of 3 species of *Leucas* R. Br., viz. *L. aspera*, *L. lanata* and *L. lavandulaefolia* from Tripura². But presently the

occurrence of *Leucas biflora* var. *procumbens* is known from Bhrigudaspara, Jirania region of West Tripura district. Of course there are 43 species of *Leucas* in India and *L. biflora* and its variety *procumbens* has extent distribution from Uttar Pradesh, Bihar, West Bengal, Orissa, Madhya Pradesh, Karnataka, Tamil Nadu, Kerala, Andaman and Nicobar Islands and also found in Bangladesh and Sri Lanka^{4,5}.

The present communication is providing the additional distributional record of this plant. The ethno-medicinal usages is also known first time of its kind that are not been previously known to us. However, it has the report to use in eye conjunctivitis, nosebleed and white discharge by the *Tripuri* tribe, with valid photograph to facilitate its future R & D programme.

Methodology

An ethnobotanical survey was conducted in the South and West Tripura districts for collection of ethno-medicinal plants used by *Tripuri* tribes^{3,6,7}. During the survey 2007-2008, the plant was collected and identified based on critical taxonomic studies^{4,5} and comparison with authenticated specimens at Central National Herbarium (CAL), Botanical Survey of India, Howrah. The taxa was found that *Leucas biflora* (Vahl) R. Br. var. *procumbens* (Desf.)

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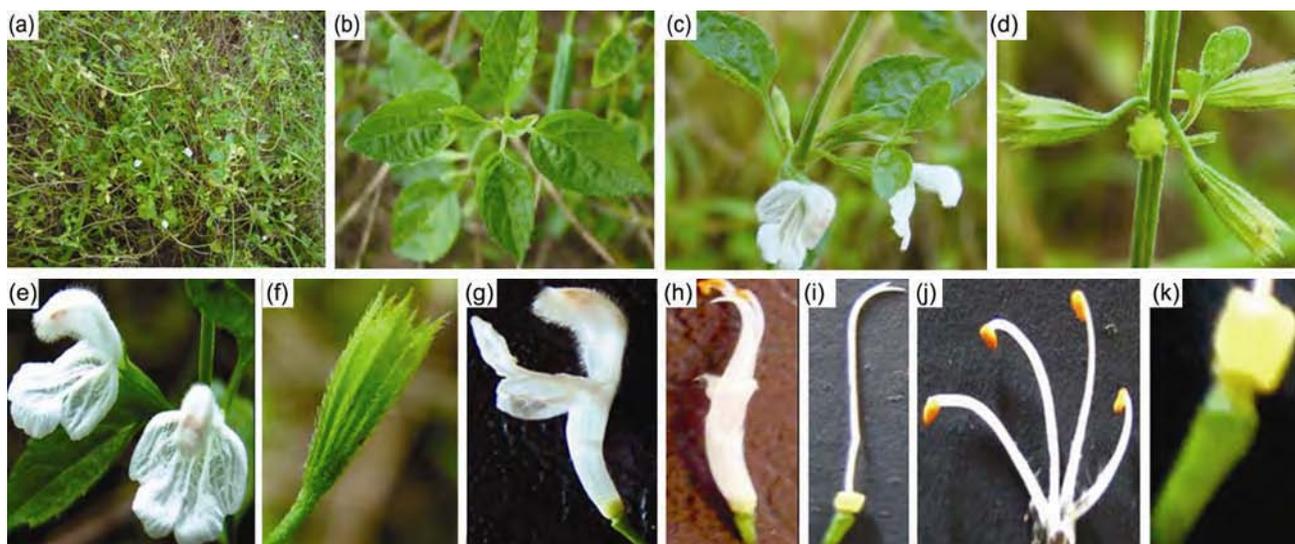


Fig. 1—*Leucas biflora* (Vahl) R. Br.: a-Habit, b-Leaves, c- Stem with whorls, d- Calyx and stem with hairs, e-Open flowers, f- Pedicel and calyx tube, g- Lips, h-Corolla tube with stamen, i- Gynoecium and style, j- Anther and k-Nutlet

Gamble. is an additional adventive species for the state. It is also found that the plant bearing ethno-medicinal importance for that it was felt necessary to provide a brief description about its usage and mode of administration. Voucher specimens are kept in Central National Herbarium (CAL) and the Herbarium of Tripura University, Department of Botany and Forest Research Division / Medicinal Plants Board of Tripura. After collection the plant from it's wild habitat are now being preserved and propagated in the sample plot of Forest Research Division, Gandhigram, Agartala to being abundant for it's future work pertaining to the clinical analysis and validating it's ethno-medicinal usage.

Description of the plant

Leucas biflora (Vahl) R. Br. var. *procumbens* (Desf.) Gamble. Fl. Madras 2: 1151. 1924: Mukerjee in Rec. Bot. Surv. India 14(1): 180.1940. *Leucas biflora* (Vahl) R. Br. Prodr. 504. 1810; Wall. ex Benth in Wall. Pl. As. Rar. 1:62.1830; Benth. Lab. Gen. Sp. 610. 1834; in DC. Prodr. 12 : 527. 1848; Hook. f. Fl. Brit. India 4 : 683. 1885; Mukerjee in Rec. Bot. Surv. India 14(1): 180. 1940. *Nepeta indica* Burm. f. Fl. Ind. 126. 1768, non L. 1753. *Phlomis biflora* Vahl, Symb. Bot. 3 :77 . 1794. *Leucas biflora* (Vahl) Sm. in Rees, Cyclop. 20(2):no7. 1812. *L. procumbens* Desf. in Mem. Mus. Hist. Nat. 11: 7. t. 3. f. 2. 1824: Wall. ex Benth in Wall. Pl. As. Rar.1: 62.1830; Benth, Lab. Gen. Sp. 610. 1834. *Blandina biflora* (Vahl) Rafin. Fl. Tellur. 3: 88. 1837.

A perennial procumbent herb with nodal roots, branches many from the woody root-stock; stem square, much pubescent with deflexed hairs at the ribs, reported occasionally as a wild in Bhrigudaspara & Jirania, in Tripura. Leaves 0.7-3×0.5-15cm, ovate or ovate-oblong, obtuse or narrowed at apex to sub-acuminate, rounded, rounded-cuneate or narrowed at base, crenate-serrate, pubescent on both the surfaces especially on the veins, petioles 0.5-2 cm long, pubescent. Flowers whorl, 1 to 6 flowered, axillary; pedicels up to 2 mm long; bracts about 2 mm long, corolla white, bilabiate, lower lip 4 lobed, spreading, pubescent, upper lip concave, villous out side. Calyx tube 5-12 mm long, tubular, campanulate, straight, 10-ribbed, hispid outside especially on the ribs, thinly pubescent within above the middle with white deciduous hairs; mouth truncate; villi absent; teeth 10, 1-2 mm long, sub-equal, erect, triangular-subulate, ciliate. Corolla-tube as long as calyx (including teeth), annulate within; both lips almost equal; upper one bearded with white hairs. Stamen 4, didynamous, filament hairy; anthers orange in colour; Nutlets 1.5-2 mm long, truncate at top, irregular granulate, brown (Fig.1).

Specimen examined: K. Majumdar, TU -121, MPBT-121 and Central National Herbarium (CAL-121).

Local name: *Lotdron* (Bengali); *Khomosa* (Kokbarok)

Availability status: Wild, occasional.

Locality: Bhrigudaspara, Jirania

GPS Location: 23° 50'52.88" N Latitude and 91° 28'19.61" E Longitude

Altitude: 53.7 m

Humidity: 95%

Soil p^H : 5.7

Ecology: Growing in the patches on moist shady forest floor

Phenology: Throughout the year

Propagation: Branches grows on the soil surface and get rooted at the nodes, produce lateral branches which in turn again get rooted like the primary branches and processes continues for the further generation.

Ethno-medicinal usage: The mature leaf decoction is use as eye drop twice a day in case of conjunctivitis. The mature leaves ground with the leaves of *Centella asiatica* (L.) Urban. (*Thankuni*) in a ratio of 2:1 and the juice extracted from this mixture is applied directly to stop instance of bleeding from nose (Nose bleed). Four to five leaves are also prescribed to chew with a leaf of *Piper betel* L. (*Pan Pata*) for the women who suffering from white discharge.

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