

## *Dioscorea laurifolia* Wall. ex Hook. f. - A new distributional record for Assam, India

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**This communication records the occurrence of *Dioscorea laurifolia* Wall. ex Hook. f. for the first time in Assam, India from Sarania hill, 5 km. away from Dispur, the capital of Assam. This species of *Dioscorea* is regarded to be a Malaya Peninsular plant. Earlier this plant was recorded only from Arunachal Pradesh of northeast India.**

*Dioscorea* L., commonly known as "yam", is a monocotyledonous genus belonging to the family Dioscoreaceae. There are about 600 species of *Dioscorea* distributed mainly in tropical and subtropical regions of the world with a few species extending to the temperate regions (Willis, 1973). The tubers of certain species constitute a very important source of food in some tropical areas as they are rich sources of carbohydrates and are essentially a crop of subsistence agriculture especially in tribal area of NE India (Sharma and Hore, 1995). In India the genus is represented by about 50 species (Burkill, 1935; Anonymous, 1952; Karthikeyan *et al.*, 1989). Out of these, about 19 species are known to occur in erstwhile Assam alone (Rao and Verma, 1973). From northeastern region of India 28 species and 25 varieties have been reported (Sharma & Hore, 1995). However, proper documentation of the genus within the present political boundary of Assam is yet to be accomplished. *Dioscorea laurifolia* Wall. ex Hook. f. is regarded to be a Malaya peninsular plant (Burkill, 1951). According to Prain and Burkill (1938) this species of *Dioscorea* is widely distributed throughout Malaya Peninsula, where it flourishes best on hill crests and steep slope from which the rain water is quickly drained away. It is commonly seen flowerless than with flowers, but in sites with sufficient sunlight it flowers profusely. The flowering of *D. laurifolia* occurs chiefly between January and April but flowering during the months of June, July and October is also not uncommon (Prain and Burkill, 1938).

Scrutiny of literature and herbarium, Botanical Survey of India, Eastern Circle, Shillong (ASSAM) and Herbarium of Botany Department, Gauhati University ((GUBH) revealed that the species has been reported only from Arunachal Pradesh in northeast India (Prain and Burkill, 1938; Deb and Kakati, 1963; Rao and Verma, 1973; Sharma and Hore, 1995; Chowdhury, 2005; Saikia *et al.*, 2011)

Critical study of the specimens collected by the present authors from Sarania hill, 5 km. away from Dispur, the capital of Assam and perusal of specimens in ASSAM herbarium and relevant literatures, the collected specimen is identified as *Dioscorea laurifolia* which is a new addition to the flora of Assam. The voucher specimens of the species have been deposited

in the herbarium of the Botany department, Gauhati university (GUBH).

Detail description along with photographs (Fig. 1, 2, 3 and 4) are provided to facilitate the identification of the species.



**Figure 1.** A Mature plant in Sarania Hill of Guwahati, India.



**Figure 2.** A twig with detached bulbil.

### DESCRIPTION

*Dioscorea laurifolia* Wall. (Cat. lith. 5111, 1830) ex. Hook. f. Fl. Brit Ind. 6 : 293, 1892; Prain and Burkill J. Asiat. Soc. Beng. II., 10: 39, 1914; Knuth, Pfl. R. 87 (1924) 289; Ridl. Fl. Mal. Pen. 4 : 319, 1924; Prain and Burkill Ann. Roy Bot. Gard. Calc. 14 : 222, pl. 88, 1938; *D. oppositifolia* (non L.) Curtis in J. Str. Br. R. Asiat. Soc. 25: 149, 1894.

**Stems** unarmed, wiry, glabrous with faint ridges, green or yellowish green, about 10 metres long; very small **bulbils** seen; **leaves** opposite to alternate,



**Figure 3.** A twig with inflorescence.



**Figure 4.** A twig with capsules.

coriaceous in fully grown plants, broadly lanceolate or lanceolate-ovate, obtuse at the base or truncately rounded, acuminate at the apex, size of the leaves in vegetative branches ranges from 12-15 cm. X 3.7-5.2 cm., petiole length is 1 cm., 5-nerved, the nerves of the first pair sub-marginal and almost throughout their course parallel to the margin, the intermediate nerve as near to the margin as to the midrib; upper surface dull with the larger nerves slightly prominent, lower surface shining, smooth but with larger nerves raised; petiole rather short, about 1 cm.. **Male flowering axes** usually on leafless branches or branch ends, up to 16 cm. long, but occasionally spikes are found in the axils of assimilating leaves, spike 3 to 4 cm. long, angled, with about 30 to 40 flowers, leaves in the male flowering twig mostly alternate and comparatively larger (13-15 cm. X 5-6 cm., petiole length 3 cm.) than the leaves in the female flowering twig (9-11.5 cm. X 2.8-3.5 cm., petiole length 1 cm.). Flowers about 1.5 mm. in diameter, sessile, buds slightly longer than globose; bracts deltoid acute, about 1.2 mm. long; tepals 6, in two whorls of 3 each, the outer one larger, about 2 x 2 mm., incurved, mid-vein prominent, apex rounded, margin entire; the inner ones narrower about 1.5 mm. long, incurved, apex blunt, margin entire; stamens 6 attached to the prolonged torus; anthers 2-celled, basifixed, oblong, slightly longer than the filament, introse. **Female flowers** on axillary decurved spikes, axis length 9.5 cm., bluntly angled, quite glabrous; capsules relatively large, with a stipe 8-10 mm., wings to 27 by 24 mm., apex of capsule retuse, base obtuse, brightly polished.

**Note:** Prain and Burkill (1938) commented that bulbil was not seen by them in their collection. On the other hand Burkill (1951) and Deb and Kataki (1963) have not mentioned anything about the bulbils. The present authors could collect specimens with bulbils. The bulbils are round in shape, 5-8 mm. in diameter with smooth skin (Figures 1 and 2).

**Flowering and Fruiting:** July to September

**Vernacular Name:** Not known

**Origin:** Malaysia

**Habitat:** Steep hill slopes from which rain water is quickly drained away.

**General Distribution:** Malaya Peninsula; India: Arunachal Pradesh, Assam

**Distributional status in Assam:** Rare

**Exsiccatae:** Arunachal Pradesh, Tirap Forest Division, Pung Chow, Thewarygaon, 7. 7. 1961, *D. B. Deb* 31819 and 31820 ASSAM); Arunachal Pradesh, 20. 5. 1998, *M. Bhaumik* and *M. K. Pathak*, 64696 and 64697(ASSAM); Assam, Kamrup Metro, Ulubari, Sarania Hill, 30. 9. 2012, *Nijara Goswami*, 46, 47, 48, 49, 50.

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