



## *Dioscorea oppositifolia* (Dioscoreaceae): A new addition to the flora of Manipur

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### ABSTRACT

During the survey of floral wealth of Manipur, authors found small patches (6 individuals) of *Dioscorea* species at nearby market of Noney district, Manipur. After critical analysis on morphology and literature survey, authors identified the collected specimen as *Dioscorea oppositifolia* L. which is new records to the flora of Manipur.

**Keywords:** New record, Manipur, Dioscoreaceae, medicinal plant, distribution of *Dioscorea*.

### 1. INTRODUCTION

Manipur is smallest state in North-Eastern part of India among the eight states, popularly known as "Jewel of India". It is lying between 23° 80' to 25°68' N and 93° 03'to 94°78'E which comes under Indo-Burma Biodiversity Hotspot. The unique landscapes of the region provide a fertile platform for rich flora. Among them, many plant species are still unexplored. Approximately 90% of the total area of the place is occupied by hilly areas which give fertile landscapes for tuberous genus like *Costus*, *Dioscorea*, *Solena*,

*Curculigo*, *Amorphophallus*, *Alocasia* etc. During the survey of floral treasure of Manipur, authors observed a plenty of climbers belongs to genus *Dioscorea* at near market of Noney district. After morphological evaluation and literature survey it was identified as *D. oppositifolia* L. which is not yet be recorded to the flora of Manipur. *Dioscorea* is tuberous, herbaceous, monocotyledonous genus of climbers, climbing up to approximately 20-25 m for their support. About 600 species distributed all over the world from this genus. From North East part of India about 91 species are documented. Among them, about 30 species from Arunachal Pradesh, 19 from Assam, 16 from Meghalaya, 12 from Sikkim, 10 from Tripura and only 4 species from Manipur (Saikia *et al.* 2011; Goswami *et al.* 2013, Pradhan *et al.* 2015, Paul *et al.* 2017; Kumar *et al.* 2017). The present study is the addition of *D. oppositifolia* to the flora of Manipur and highlights its associate plant species.



**Plate 1** *Dioscorea oppositifolia* L., a: Leaves and inflorescence, b: Opposite leaves, c: Inflorescence, d: Twig

## 2. TAXONOMIC TREATMENT

*Dioscorea oppositifolia* L.Sp.PI.1033.1753; Wight, Icon.t.813.1844; Hook.f.in Hook.f. Fl. Brit. India 6:293.1893; Haines,Bot.Bihar & Orissa3:1118(1168).1924; Fischer in Gamble, Fl. Madras 3:1512(1056). 1928; Prain & Burkill, Ann Roy. Gard. (Calcutta) 14(1):392t.t.139.1938. (PLATE-1)

**Description:** Stem twining to the right, purplish when young, swollen at the nodes, unarmed, pubescent; Tubers proceeding direct from rootstock, with a very narrow neck, fusiform downwards, 10-30cm long. Leaves opposite, oblong, ovate-oblong, 4.5-13.5x 1.1-

8.9 cm, acuminate, sometime obtuse-cuspidate, 3-5 nerved, 3 unite in the tip, glabrous, base rounded; Petiole 1.3-4.8 cm. Male spikes dense, 1.0-2.3 cm long, fascicled on a pubescent rachis, 38 cm long. Flowers yellow green, scented, 1.8-2.3 mm; Bracts deflexed, upto cuspidate. Outer perianth-lobes, orbicular-oblong, 1.2-2.3 mm, concave, glabrous, inner perianth-lobes obovate or obovate-oblong upto 2.3 mm. Stamens 6 perfect, erect; Anthers oblong; Filaments as long as the anthers. Female flowers solitary or facicled. Perianth 0.8-1.2 mm. Capsule 2.0-3.5 x 3.1-3.8 cm, glabrous, depressed base and apex. Seeds orbicularwith large wing.

*Flowering:* August -September

*Fruiting:* October-December

*Specimen examined:* INDIA: Manipur, Noney district, N 24° 48' 07.5" and E 93° 40' 58.3" 616m (IBSD-BE-S/2018-0005) Sabeela Beevi Ummalyma, Rajkumari Supriya Devi, Sanjeet Kumar.

*Habitat & Ecology:* *D. oppositifolia* is found in regions where temperature is moderate and found to be grown associated with *Dioscorea bulbifera*, *Stemona tuberosa*, *Vanda coerulea*, *Ageratum conyzoides*, *Begonia picta*, *Impatiens balsamina*, *D. hispida*, *D. pentaphylla* etc.

*Conservation status:* As per the IUCN, it comes under LC (Least Concern)

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**Conflicts of Interest:** The authors declare no conflict of interest.

## REFERENCE

1. Goswami, N., Borthakur, S. K. & Hore, D. K. 2013. The genus *Dioscorea* Linnaeus [Dioscoreaceae] in Assam, India. *Pleione* 7(1): 73 - 83.
2. Kumar S, Das G, Shin HS. & Patra JK. 2017. *Dioscorea* spp. (A Wild Edible Tuber):A Study on Its Ethnopharmacological Potential and Traditional Use by the Local People of Similipal Biosphere Reserve, India. *Frontiers in Pharmacology* 8, 1-17.
3. Paul,C., Debnath,A., Chanda R, & Debnath, B. 2017.Taxonomical note, new distributional record and traditional use for *Dioscorea wallichii* Hook. f. (Dioscoreaceae) of Tripura North-East India.*AnnalsDebnath B., Paul C.& Debnath A.* 2015. *Dioscoea esculanta* (Lour) Burkillvar. *Spinosa* R. Knuth (Dioscoreaceae)- A new distributional record for Tripura India. *J.Global Sciences* 4(7): 2869-2872
4. Pradhan, A., Chettri, A. & Gurung, S. 2015. Diversity and Distribution of Genus *Dioscorea* in Sikkim Himalaya, India: an application of DIVA-GIS. *Int J. Enviro Biodiver* 6 (3): 29 – 31.
5. Saikia, B., Rawat, J.S., Huitag & Das, A. 2011. An investigation on the taxonomy and ecology of the genus *Dioscorea* in Arunachal Pradesh, India. *J. Frontl. Res.* 1: 44 – 53.