



RESEARCH ARTICLE

DYSOXYLUM (BLUME) - NEW GENERIC RECORD TO ODISHA, INDIA

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Howrah, West Bengal**Manuscript Info****Manuscript History:**Received: 28 June 2014
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AbstractThis paper reports new distributional record of a genus *Dysoxylum* Blume to Odisha State. A brief description, phenology, distribution along with photo plate has been provided to facilitate its easy identification and formulating conservation measures.

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Introduction

Odisha, situated on east coast of India is marginalized by the Bay of Bengal, while on the other parts by the states of West Bengal, Jharkhand, Chhattisgarh and Andhra Pradesh. This state is a land of rich floral diversity. More than 2630 species of angiosperm under 194 families (Sahoo et. al, 1999) have been recorded in the state. These include trees of commercial significance and the plants with medicinal properties. Teak, Bamboo, Sal, Haldi, Rosewood, Paisal and Sanghvan are the commonly found trees of the state.

During an exploration trip in December, 2013 under the project Flora and Ethnobotany of Balasore district, few specimens of *Dysoxylum* (Meliaceae) was collected. After a critical examination of herbarium specimens available at the CAL the identity was confirmed as ***Dysoxylum gotadhora*** (Buch.-Ham.) Mabb. Thorough perusal of all the relevant literature it was revealed that this genus has not been reported from Odisha so far. The genus *Dysoxylum* Blume consists of about 80 species distributed along Indo-malesian region extending to Australia (Mabberley, 2008). The plant has a wide range of distribution from Vietnam, Laos, Thailand, China, Bhutan, Burma, and Nepal to Bangladesh and Sri Lanka. In India it was so far recorded only from Assam and in Peninsular India to Andaman (Hooker, 1875). However the genus had no prior records in any of the earlier literatures, viz. Flora of British India (1875), Botany of Bihar and Orissa (Haines, 1921) or Bengal Plants (Prain, 1903).

The present finding is, therefore, the first record of this genus for Odisha from Kuldiha. A brief description, accompanied with photographs, is provided to authenticate the new record and facilitate its easy identification. The voucher specimen of the same is deposited at the Herbarium of the Central Botanical Laboratory, BSI, Howrah and other specimens to CAL, Howrah.

Dysoxylum gotadhora (Buch.-Ham.) Mabb., Fl. China 11: 127. 2008.

Guarea gotadhora Buch.-Ham., Mem. Wern. Soc. 4: 307. 1832. *Dysoxylum binectariferum* (Roxb.) Hook.f. ex Bedd., Trans. Linn. Soc. London 25: 212. 1866. **Fig. 1.**

Evergreen tree, to 30 m tall. Young branches pubescent. Leaves 30 – 75 cm, even-pinnate; leaflets 5-11, alternate; leaflet blades oblong or lanceolate, 8-16(-23) × 4-7(-15) cm, papery to thickly papery, both surfaces glabrous, secondary veins 9-14 on each side of midvein, base cuneate to rounded, apex acuminate, margin entire to obscurely dentate. Thyrses axillary. Pedicel 2-4 mm, pubescent. Calyx cup-shaped, leathery, pubescent, 4-lobed, lobes triangular. Petals 4, yellow, oblong, 6-8 × 2-4 mm, both surfaces pulverulent pubescent. Staminal tube cylindrical, free from petals, outside and inside pubescent, mouth 8-lobed; anthers 8, alternate with lobes, oblong, included in staminal tube with only apical tip slightly protruding. Disk cylindrical, ± as high as ovary, apex 8-10-crenate. Ovary densely grayish white pubescent; style cylindrical, basally grayish white pubescent, apically glabrous; stigma globose to oblate, glabrous. Capsule obovoid to subglobose, 4.5 – 5 × 3 – 4 cm, glabrous, yellow. Seeds 4, red when mature.

Flowering: March-Jul, **Fruiting:** May-November

Specimens examined: Orissa, Balasore dist., Kuldiha wildlife sanctuary, 12-12-13, Sujana K. A. 34587 (CAL); 07-06-14, R. Saravanan 35728 (Central Botanical Laboratory); South Kanara, 28-11-1895, W.A. Talbot 3539; Andaman & Nicobar Islands, 27-01-1978, P. Basu 6825; Assam, 23-05-1915, U. Kanjilal 5766; Sikkim, 03-06-1881, G. King (s.n); Meghalaya, 08-07-1961, D.B. Deb 26611; West Bengal, 21-02-1975, J.K. Sikdar 023; Eastern Himalaya, 14-02-1919, E.O. Shebbeare 1456; Tamil Nadu, May, 1903, C.A. Barber 5993; Kerala, 16-06-1976, Kostermans 26140; Tripura, 02-02-1962, D.B. Deb 27422.

Economic Importance: The fruits of *Dysoxylum gotadhora* are considered to be of immense medicinal importance as anti-inflammatory, diuretic and as CNS depressant (Khare, 2007). Wood yields a good timber is widely used in furniture trade (Peng & Mabberley, 1998).

Distribution & Ecology: This tree is distributed in Bhutan, India, Laos, Nepal, Thailand, Vietnam, China and Sri Lanka (Peng & Mabberley, 1998). India: Sikkim, Arunachal Pradesh, Assam, Tripura, Meghalaya, Maharashtra, Goa, Daman & Diu, Karnataka, Tamil Nadu, Kerala, Andaman & Nicobar Islands (Jain & Bennet, 1997). Five mature trees are growing in Kuldiha wildlife sanctuary, Odisha at an elevation of about 390 m altitude (21°23'38" N & 86°36'10" E) in shady places of dense semi-evergreen forests. The plant is growing along with *Actinodaphne gullavara* (Buch.-Ham. ex Nees) M.R.Almeida, *Flacourtia indica* (Burm.f.) Merr., *Glycosmis pentaphylla* (Retz.) DC., *Strobilanthes heyneanus* Nees, *Strophanthus wallichii* A.DC., *Uncaria sessilifructus* Roxb. and *Uvaria hamiltonii* Hook. f. & Thomson. A total of 4 mature and 12 saplings were recorded from single area in the mountainous forests of Kuldiha. During the period of study it was noted that Indian Giant Squirrel (*Ratufa indica*) foraging this tree for its mature seed coats. Though no threat status has been recorded but considering the exhaustive economic importance the plant needs prior attention towards conservation. The genus being a new record for Odisha, present efforts are extended to relocate the species in the Kuldiha wildlife sanctuary and to ascertain the exact population size. Further field tours are to be undertaken to collect seeds of this species and to raise seedlings in different botanic gardens.

Acknowledgements

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Fig 1. *Dysoxylum gotadhora* (Buch.-Ham.) Mabb., a - habit; b-inflorescence; c-close view of flower; d-mature fruit; e-dehiscent fruit showing seeds