



***Brugmansia suaveolens* (Humb. & Bonpl. ex Willd.) Sweet.: An alien species, New Record for Odisha State, India**

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ABSTRACT: During the floristic studies in the district of Kandhamal in Odisha state, an interesting plant was encountered from Tikabali town of Kandhamal district. After perusal of available literatures and herbariums housed at CAL (Central National Herbarium, Botanical Survey of India, Howrah-711103, West Bengal) the species turned out as a new addition to the Flora of Odisha and named as *Brugmansia suaveolens* (Humb. & Bonpl. ex Willd.) Sweet. This paper deals with a brief description of the species along with ecology, phenology of flowering and distribution etc. Concurrently coloured photographs of plants are also provided for better identification.

Keywords: Alien species, new record, ecology, ethnobotany, Odisha.

INTRODUCTION

Solanaceae Juss. is represented in the world by 98 genera and nearly 2700 species (Yadav *et al.*, 2015). It is distributed in tropical and temperate regions of the world but native to central and south America. In India, this family is represented by 15 genera and 90 species (Hickey & King 1988). *Brugmansia* has 7 species distributed across the globe (Hay *et al.*, 2012; Stinca, 2020). *Brugmansia suaveolens* is native to coastal rain forest regions of south east Brazil but widely introduced in to sub tropical and temperate areas of the world and has naturalised in many areas. During floristic survey in Odisha, it is found to occur in the road sides of Tikabali town of Kandhamal district (Map 1). After scrutiny of literatures and modern floras especially regional floras such as Saxena & Brahmam (1995), it is confirmed to be *Brugmansia suaveolens* (Humb. & Bonpl. ex Willd.) Sweet and turned to be new record for the state of Odisha. Authentication of the identity of the specimen was done by matching the preserved herbarium specimens available at Central National Herbarium (CAL), Botanical Survey of India, Howrah (Fig. 1).

This plant is known as Brazil white angel trumpet and was first described by Willdenow in 1809 as *Datura suaveolens* Humb. & Bonpl. ex Willd. and was discovered by Alexander Von Humbolt 1799-1804, on voyage to North America. Lockwood (1973); Mace *et al.* (1999), presented morphological, biochemical and genetical evidences for its separation in to two genera.

Recent phylogenetic analysis based on 4-plastid DNA sequences confirmed its separation in to two genera namely *Datura* and *Brugmansia* (Bye & Sosa 2013). Originally, this plant migrated from coastal rain forest regions of south east Brazil and grow below 3500 ft. of the sea level, along river banks and forest edges. Now it is found in cultivation in Brazil, south America, Mexico and tropical Africa for traditional medicine and ornaments. Choudhury & Meena (2021) reported it from Mount Abu districts of Rajasthan and Bhattacharya *et al.* (2020) reported from Tripura state of India from along the road sides.

Nomenclature:

Brugmansia suaveolens (Humb. & Bonpl. ex Willd.) Sweet., Hort, Suburb. Lond.41.1818. *Datura suaveolens* Humb. & Bonpl. ex Willd. Enum. Pl.227.1809. *Datura gardneri* Hook. Bot. Mag.72:t.4252.1846. *Datura suaveolens* Humb. & Bonpl. ex Willd. var. *macrocalyx* Sendt. in Mart. Fl. Bras 10:161.1846.

Phytography:

Erect, much branched shrubs, upto 4mt. tall, stem soft wooded. Stems solid, terete, young stems densely covered with multicellular appressed trichomes. Leaves green, deciduous, alternate, petiolate, simple; lamina lanceolate 17-22 × 7-10.5 cm, entire, acute, base attenuate, veins reticulate with prominent mid-vein, sticky-hairy; petioles 3-4 cm long, terete, hairy. Flowers solitary and axillary, pendulous, hypogynous; pedicel 2-2.5 cm. long; calyx gamosepalous, 8-10 cm. long, 5-

lobed, acuminate lobed, united up to middle; lobes subulate, acute, green, deciduous; corolla trumpet shaped or infundibuliform, 25-30 cm. long, 5 lobed, contortate folded, slightly recurved, acute-apiculate tips, white or pale pink colour. Stamens included in corolla, adnate, anthers basifixed and adherent. Ovary bilocular, style long (18-23 cm.), stigma elongate. Fruits terete, oblong capsule, seeds numerous.

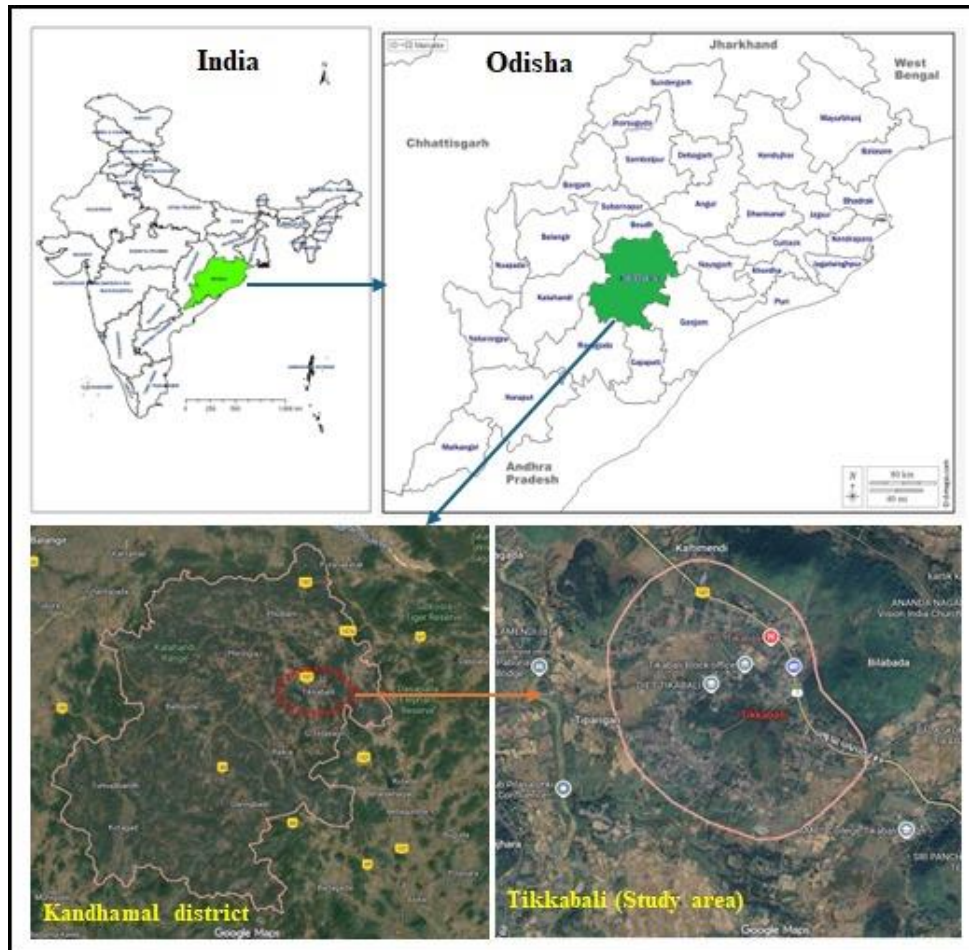
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Ecology: Found along the road side and rare distribution in Odisha.

Distribution: Australia, Brazil, California, Central America, Florida, Greece, India, Kenya, Mexico, Portugal, Srilanka.

India: Andhra Pradesh, Assam, Karnataka, Maharashtra, Nagaland, Tamil Nadu, Tripura, Uttarakhand, West Bengal.

Specimen examined: India: Odisha, Kandhamal District, Tikabali town (20°14'37.98" N latitude & 84°24'14.28" E longitude), Anuradha Pradhan, BOTU-1025 (Utkal University). Manipur, Deb, 7377, s. loc., (317893CAL!).



Map 1. Distribution of *Brugmansia suaveolens* (Humb. & Bonpl. ex Willd.) Sweet. in Odisha.



Fig. 1. Herbarium specimen studied at CAL.



Fig. 2. Flowering twig with flowers.



Fig. 3. An opened flower.



Fig. 4. Plant with flowers.

Ethnobotanical notes: The leaves are used for treating abscesses, dermatitis and fungal infection in skin by tribals of Northern Peru (Reis *et al.*, 2019; Parker *et al.*, 2007). Leaf paste is used externally to relieve pain while leaf decoction is used for cramp, anti-inflammatory (Armijos *et al.*, 2014). Leaves are used as asthma cigarretes. Stem bath is given for treatment of cough and bronchitis. Leaves decoction is used in white secretion of females and dysmenorrhea (Sakuntala *et al.*, 2013).

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Conflict of Interest. None.

REFERENCES

- Armijos, C, Kota, I. & Gonazalez, S. (2014). Traditional medicine applied by the Saraguro yachakkuna. A preliminary approach to the use of sacred and psychoactive plant species in the Southern region of Ecuador. *J. Ethnobiol. Ethnomed*, 10(1), 1-13.
- Bye, R. & Sosa, V. (2013). Molecular phylogeny of jimson weed genus *Datura* (Solanaceae). *Systematic Botany*, 38: 818-829.
- Bhattacharya, P., Aparajita, D., Kar, S. & Datta, B. K. (2020). Naturalisation of *Brugmansia suaveolens* (Homb. & Bonpl. ex Willd.) Bercht. & J. Presl and *Gaillardia pulchella* Fougeroux in Tripura, India. *Pleione*, 14(1), 167-171.
- Choudhury, D. & Meena, K. L. (2021). *Brugmansia suaveolens* (Homb. & Bonpl. ex Willd.) Bercht. & J. Presl: A new record to the flora of Rajasthan, India. *Asian Resonance*, 10(1), 166-168.
- Hickey, M. & King, C. (1988). Hundred families of flowering plants. Cambridge University Press, Cambridge.
- Hay, A., Gottschalk, M. & Holguin, A. (2012). *Brugmansia*, Royal Botanical Garden, Kew.
- Lockwood, T. E. (1973). Generic recognition of *Brugmansia*. *Botanical Museum Leaflets Harvard University*, 23, 273-284.
- Mace, E. S., Gebhardt, C. G. & Lester, R. N. (1999). AFLP analysis of generic relationship in the tribe Daturae (Solanaceae). *Theoretical and Applied Genetics*, 99, 634-641.
- Parker, A.G., Peraza, G.G., Sena, J. & Silva, F. S. (2007). Anticoniseptic effects of the aqueous extract of *Brugmansia suaveolens* flowers in mice. *Biol. Res. Nurs*, 8(3), 234-239.
- Reis, R. R., Bragagnola, F. S., Gianeti, T. M., Rodrigues, S. A., Funari, C. S., Gonclaves G. G. & Ming, L. C. (2019). *Brugmansia suaveolens* leaf productivity and alkaloid contents with different doses of organic fertilisers. *J. Agril. Sci*, 11(3), 341.
- Sakuntala, P., Charles, A., Kesavan, D. & Ramani, V. A. (2013). Phytochemical screening and adsorption studies of *Brugmansia suaveolens*. *Che. Sci. Rev. Lett*, 29(5), 319-322.
- Stinca, A. (2020). *Brugmansia suaveolens* (Humb. & Bonpl. ex Willd.) Sweet. Solanaceae. An alien species new to continental Europe. *Bio-invasions Records*, 9(4), 660-669.
- Saxena, H. O. & Brahmam, M. (1995). Flora of Orissa. Vol. II, Regional Research Laboratory (CSIR), Bhubaneswar and Forest Development Corporation Ltd., Bhubaneswar, Orissa.
- Yadav, R., Rathi, M., Pednekar, A. & Rewachandani, Y. (2015). A detailed review of Solanaceae family. *Ejp. Mr*, 3(1), 369-378.

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