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Research Article

Tamilnadia uliginosa (Retz) Tirveng and Sastre; (Rubiaceae) : A new distributional record with ethnomedicinal uses from Palamu division of Jharkhand, India

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Abstract

Palamau division of Jharkhand state consists of three districts i.e. Palamu,Garhwa and Latehar.Betla National Park is an important forest reserve of India. It is located in Latehar District of Jharkhand State. The present work report occurrence of an important monotypic, medicinal plant *Tamlindadia uliginosa* (Retz.), Triven and Sastry, (Family Rubiaceae) from this region. The plant profile of this important medicinal plant is elaborated in detail herewith. This profile can be useful in bioprospectation of the plant.

INTRODUCTION

Palamau division of Jharkhand state consists of three districts i.e. Palamu,Garhwa and Latehar. The Palamau region of Jharkhand is located at the latitude of 23.0° to 24.3° N and longitude 84.4° and 85.0°E, and spreads over 3.50 kms, from east to west and 3.45 kms from north to south. The river North Koel flows in east-west direction towards southern boundary of Daltonganj, the headquarters of Palamau. It's a rich area from the floristic point of view. The floristic Studies in this area are very poor however there are records dates back to 1925 but it is still virgin area (Haines, 1921-25; Santapau, 1995). The most recent floristic studies of this area are by Sarma and Sarkar (2002), and so far no additions are being made in this flora.During a recent ethnobotanical exploration occurrence of an important monotypic medicinal plant *Tamilnadia uliginosa* (Retz.), Tirveng and Sastre, (Rubiaceae) is noted. The plant was correctly identified with the help of pertinent literature (Naik, 1998; Almeida, 2001; Yadav and Sardesai, 2002). The processed specimens of the plant are deposited in the Dept. of Botany,N.P. University, Medininagar. The Photograph of flowering and fruiting twig is shown in plate 1 and 2. The plant profile showing taxonomic history, diagnostic description of the plant, Ethnomedicinal uses and phytochemical contents is represented herewith. This is a new distributional record from this region. The information will be surely useful in determining the bio-prospecting potential of this important Ayurvedic medicinal plant. The area badly needs a proper botanical revision.

Plant profile

Common Name: Divine Jasmine.

Synonyms: Gardenia uliginosa, Catunargam uliginosa, Randia uliginosa, Gardenia pomifera.

Taxonomic history :

Tamilnadia uliginosa (Retx.) Tirveng. and Sastre in Mauritius Inst. Bull. 8 (4): 85. 1979; Mudaliar and Prasad in Singh et al. Fl. Maharashtra St Dicot 2 : 167. 2001, Yadav and Sardesai 2002, Fl. Kolhapur Dist., Naik Fl Marathwada, 450, 1998; Almedia Fl Savantwadi, 1997. Karthikeyan and Anandkumar, Fl. Yeotmal Dist. 130, 1993.. *Catunaregam uliginosa* (Retx.) Sivaranjan, Fl Calicut 132, 1982, Almedia. Fl. Maharahstra, Vo. III A, 9, 2001. *Gardenia ulginosa* Retz. Obs 2.14, 1781, Willd Sp. PI 1. 1228, 1806 Roxb. Corom Pl @. t 135, 1800.

Randia uliginosa DC. Prodr. 4, 386, 1828, Graham, Cat, Bombay Pl. 89, 1839, Dalz & Gibs. Bombay Fl, 119, 1861, Wight, Icon. t 397, 1842; Hook F. in Fl. Bnt. ind. 3, 110, 1880, Talbot, Trees Bombay ed 2, 188, 1902, Woodrow in JBNHS 11, 645, 1898, Cooke, Fl. Press Bombay 1 : 599, 1903; Blatter, Journ. Bombay Nat Hist. Soc. 36 (4): 787, 1933. Voight, Hort Subrub Cal, 381, 1845.

Diagnostic description of the plant

A small deciduous tree up to 6-7 m high, bark reddish brown, branches numerous horizontal, younger are 4 angeled, terminating in 1-2 pairs of strong sharp thorns about 1.2 cm long, leaves simple opposite, decussate; stipules interpetiolar, petioles 5-10 mm, stout glabours, lamina 5-18 x 2.8 cm, obovate or oblang lanceaolate, base cuneate or attenuate, apex obtuse or round, margins entire. Flowers at end of solitary branches,bisexual, white, fragrant, 4-5 cm in diameter , calyx tube sessile 1 to 1.2 cm long fleshy, green, corolla tube short, lobes 5-7,imbricate,stamens 5-7, anthers linear, ovary, Sessile 2 celled, interior style stout, stigma thick 2 lobed, fruit a berry 5 x 3.5 cm, ovoid or ellipsoid yellow with persistent calyx, seeds numerous smooth compressed.

Phenology :

Fl & Frt (August to March.)

Plate1: Flower of Tamilnadia uliginosa

Plate 2: Fruit of Tamilnadia uliginosa

Distribution :

Ditributed in Indian subcontinent (Bangladesh Srilanka ,India) and Indochina (Thialand , Vietnam.

G.P.S. :

Latittude $23^0$48’36.0”N & Longitude $84^0$13’14.7”at Chipadohar byepass, Latehar district, Jharkhand, India.

Ethonomedicinal uses :

Roots - Diarrhoea, Aphrodisiac diuretic, biliousness

Fruits : Astringent, (Sudhakar *et al.*, 2012) used as vegetable also. The raw fruit extract is used against diarrhoea and dysentery. Fruit pulp is applied for curing boils. The fruits are rich source of carbohydrate and posses insecticidal properties. It cures abscess, ulcer, inflammation (Neerugatti Dorababu *et al.*, 2014), wounds, tumour and skin diseases (Nadkarni *et al.*, 1976).

Phytochemistry :

The unripe fruits of *Tamildadia uliginosa* (Retz.). Tirveng and Sastres contains saponiss of oleanolic acid and mannitol (Jain, 1965) The preliminary phytochemical investigation of fruits showed occurrence of Alkaloids coumarin and glycosides, Methanolic extract (Deepthy and Radhamony, 2012). Presence of 15 phenolic compounds (Deepthy *et al.*, 2016) having potential anticancer and antioxidant properties.

The anticancer property is the bioprospecting potential of the plant.

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