

New Plant Records for the Chandrapur District of Maharashtra, India

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ABSTRACT

The following plant records from the Chandrapur District of Maharashtra State during the field survey. The author collected some uncommon taxa from the different localities during the preparation of digital database of dicot plants of Chandrapur District, which were not recorded so far in the early floristic documentation. Four species belongs to four different families, were collected, identified and recorded as new additions to the existing floristic record of Chandrapur District. The species are *Nopalea cochenillifera* Salm. Dyck. (Cactaceae), *Glochidion ellipticum* Wight. (Euphorbiaceae), *Ficus palmata* Forsk. (Moraceae) and *Hygrophila erecta* Hochr. (Acanthaceae). A taxonomic description along with Electronic Herbarium were prepared for each taxon.

Keywords: New plant records, Electronic Herbarium, Chandrapur District.

INTRODUCTION

Chandrapur district comprising 15 talukas namely Chandrapur, Ballarpur, Bhadravati, Warora, Bramhapuri, Chimur, Nagbhid, Pombhurna, Sindewahi, Mul, Saoli, Gondpipari, Rajura, Korpana and Jivati having very rich in biodiversity and known as 'district of forest'. It lies between 18° 41' and 20° 50' north latitudes and 78° 48' and 80° 55' east longitudes and has an area of 11417 sq km. The climate follows a typical seasonal weather pattern. The peak temperature are usually reached in May-June and can be high as 50°C. The onset of Monsoon is usually from July and extends up to September Month, with monsoon peak during July to August. After monsoon the average temperature varies between 27°C and approx 6-7° through December and January. The plant wealth of the Chandrapur district is known through publications of several researchers (Tiwari 1990; Patil 1991; Moghe 1992; Malhotra and Moorthy 1992; Chavan *et al.*, 2011; Deshmukh *et al.*, 2012; Shende *et al.*, 2012; Rathor *et al.*, 2013; Dudhe and Srinivasu 2013; Wadekar *et al.*, 2013 and Dudhe *et al.*, 2016) However recent urbanization and industrialization has affected

the flora and fauna of Chandrapur and its surroundings a lot. From biodiversity and conservation point of view it is very necessary to explore existing floristic structure of Chandrapur district to update and revise the earlier data.

Herbarium is the collection or depository of dried plant specimens. Herbarium serves as vital link for various disciplines of biology not only to provide information about plants from the preserved specimens but also to give insight, the changes occurred in the existing plant biodiversity with past once from time to time. However, there are several disadvantages like insects attack, biodegradation of specimens, high maintenance cost, and availability of plant information. With the advent of computers, digital cameras this problem can be overcome easily can make herbarium i.e. electronic herbarium.

Electronic herbarium defined as high resolution virtual images of plant specimen in digital format (Srinivasu, 2005) is prepared by selecting various morphological characters (> 200) with a number of possible variable states as a model. This work is done using software, DELTA (Descriptive Language for Taxonomy) (Dallwitz et al. 2000) is a flexible and powerful method of recording taxonomic descriptions for computer processing is used for organizing a database on dicot plants. During the preparation of digital database of Dicot plants of Chandrapur district, these four plant species found to be new to this region.

METHODOLOGY

Exploration for collection of dicot plants were made during research work in different places of Chandrapur district, 4 species of 4 different families were reported new for this area, collected from their natural habitat and details of taxonomical description entered into the computer after identification and authentication of specimen with the help of floras [Flora of Maharashtra State: Dicotyledons Vol I and II (Singh et al., 2000, 2001), Flora of Maharashtra (Almeida, 1998, 2001 and 2003), Flora of British India (Hooker, 1885), Flora of Chandrapur and Gadchiroli district Ph. D. thesis, Nagpur University Nagpur (Moghe, 1992) and Ethnobotanical studies of Chandrapur and Gadchiroli district Ph. D. thesis, Nagpur University Nagpur (Tiwari, 1990)] the digital images are attached after processing to the respective plant description in the database.

RESULT AND DISCUSSION

Author collected four specimens belonging to families Cactaceae, Euphorbiaceae, Moraceae and Acanthaceae from research area were reported new addition to the Chandrapur district. The specimens are enumerated below. The flowering and fruiting seasons, ecology, localities in the district of the plants also cited in the text.

Nopalea cochenillifera (Linn.) Salm. Dyck.

Citation: Cact. Hort. Dyck. ed. 2, 64, 1850; *Cactus Cochenillifera* Linn., *Sp. Pl.* 468, 1753; *Opuntia cochenillifera* Mill, Gard. Dict. ed. 8, 6, 1768; Almeida, *Fl. Maharashtra* 2: 336, 1998; Singh et al., *Fl. Maharashtra State* (Dicot) 2: 83, 2001.

Succulent shrub. Stem erect, flattened, jointed, modified into phylloclade, areoles appears in leaf axil consist of long spines covered with tiny bristles having hooked strikers. Flowers solitary, axillary 7-7.5 cm long, rotated, perianth 4-5 whorl outer sepaloïd, thick inner thin, pink, ovate, mucronate, petaloïd, spiral; stamens many, epipetalous on equal filaments 2-3 cm long, lobes oblong, pink; carpel thick, ovary syncarpous, inferior, unilocular, with parietal placentation, style long, stigma 6 lobed. Fruit fleshy 1 celled berry with numerous seeds, scarlet red.

Place of collection: Aksapur.

Status of plant in Nature: Wild.

Flowering & Fruiting period: October-December.

Uses: Fruits are edible.

Glochidion ellipticum Wight.

Citation: *Sp. Pl.* 453, 1753; Hook. f., *Fl. Brit. Ind.* 5:239, 1887; Cooke, *Fl. Pres. Bombay* 2:576, 1907; Ugemuge, *Fl. Nagpur Dist.* 328, 1986; Almeida, *Fl. Maharashtra* 4: 323, 2003; Singh et al. *Fl. Maharashtra State* (Dicot) 2; 887, 2001.

Tree, branched; stem cylindrical, reddish brown, alternate branch. Leaves alternate, oblong, obtuse base, midrib prominent, green above, pale beneath, glabrous, 8-12cm long, 2.5-5 cm broad; petiole short; stipule triangular. Flower axillary cluster; male: 0.8 cm long-0.5 cm broad, pedicel 0.5 cm long; tepals 3+3, outer large, ovate, acute, yellowish green, inner 3, oblong, acute; anthers 3, free. Female flower 0.8 cm long, 0.4 cm

breath, style conical, 6 toothed at the apex, sepals small. Capsules 0.8 cm long, 4-lobed. Seeds orange- shiny.

Place of Collection: Somnath.

Status of Plant in Nature: Wild.

Flowering and Fruiting period: February- October.

***Ficus palmata* Forsk.**

Citation: *Knigb.*, ex Hook. f., *Fl. Brit. Ind.* 5:530, 1888 Almeida, *Fl. Maharashtra* 4: 371, 2003; Singh *et al. Fl. Maharashtra State* (Dicot) 2; 939, 2001.

Spreading deciduous, tree, without aerial roots. Leaves entire, undulate oblong-ovate, shortly acuminate, petiole long, channeled; stipules ovate/lanceolate, pubescent. Receptacle in axillary pairs, globose, whitish; bract 3, rounded, very small. Male flowers few; sepals 4; stamen; 1 Gall & female flowers, sessile; sepal 3-4; style in the female longer than the Gall flower. Achenes smooth.

Common name: "Pakari, pipri, pakar".

Place of collection: Ballarpur.

Status of plant in Nature: Wild.

Flowering & Fruiting: January-April.

***Hygrophila erecta* (Burm.f.)Hochr.**

Citation: in Candollea 5:230, 1934 Burm. f. *Fl. Ind.*135, 1771.Hook. f., *Fl. Brit. Ind.* 4:4, 1884; Clarke in Hook.f., *Fl. Brit. Ind.*4:408, 1885; Almeida, *Fl. Maharashtra* 4: 49, 2003; Singh *et al. Fl. Maharashtra State* (Dicot) 2: 590, 2001.

An erect herb. Stem obtusely quadrangular, nodes swollen. Leaves lanceolate or elliptic, narrowed at both ends, margin undulate. Flowers in axillary whorls, sessile, bi lipped, pale purple; stamens 4, didynamous; gynoecium bicarpellary, style long; capsules much exceeding the sepal, linear-oblong; Seeds numerous.

Place of collection: Rajura and Dopdala colony.

Status of plant in Nature: Weed

Flowering & Fruiting period: September-November.

CONCLUSION

Beside tremendous development towards floristic study of Maharashtra and Chandrapur district but still some alien species regularly introduced due to modernization and urbanization this study will help to identify and mention the new records and conserved.

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