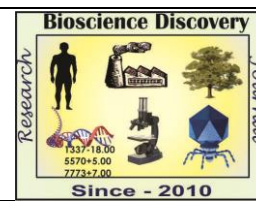


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Research Article



Some newly introduced flowering Taxa in the Marathwada region of Maharashtra State, India

Bhosale S. S.^{1*}, V. A. Paithane², B. M. Rathor¹, A. S. Dhabe³ and A. S. Bhuktar⁴

Department of Botany,

¹Jaysingpur College, Jaysingpur, Kolhapur-416101- (M.S.) India.

²Anandibai Raorane Arts, Commerce and Science College, Vaibhavwadi, Sindhudurga-416810- (M.S.) India.

³Dr. Babasaheb Ambedkar Marathwada University, Aurangabad-416004-(M.S.) India. (M.S.) India.

⁴Vivekanand Arts, Sardar Dalipsingh Commerce & Science College, Aurangabad-431 001 (M.S.) India.

*santoshsk1106@gmail.com

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Abstract

The present paper deals with addition of eleven (11) species and a variety of flowering plants to the Flora of Marathwada, Maharashtra. Author citations, name of the family, localities, field number, GPS location details, flowering & fruiting season and brief description are given for each taxon.

INTRODUCTION

Marathwada is one of the largest regions of Maharashtra state consisting eight districts viz. Aurangabad, Jalna, Parbhani, Nanded, Latur, Beed, Osmanabad and Hingoli. The field surveys in the region were carried out during 2011-2015. During thorough plant exploration of the region we found some newly introduced flowering plant taxa in the region those were not reported in earlier floristic and taxonomic work. After the publication of Flora of Marathwada Naik (1998), many taxa of flowering plants were collected and reported as an addition to the flora of Marathwada by various authors such as Rathor & Chavan (2002), Rathor (2006, 2008), Sonje *et al.* (2007), Rathor *et al.* (2007), Kare *et al.* (2008, 2008), Wadood Khan & Solanke (2008), Survase *et al.* (2009), Survase & Sardesai (2009), Gore and Gaikwad (2011), Kamble *et al.* (2013), Raut *et al.* (2016) and Tambde (2016). Plant taxa reported in present work are totally new addition to the flora of Marathwada region of Maharashtra.

MATERIALS AND METHODS

During our field survey, many taxa were collected from the region. Specimens were brought to laboratory and processed for herbarium specimens with standard procedures. Majority of the specimens were satisfactorily identified by using pertinent literature viz. Sharma *et al.* (1996), Singh & Karthekeyan (2000) and Almeida (2003). After critical investigations authors found that some plants from our collection are not reported from the region earlier. Correct and updated citation, a short description and note on its phenology is depicted for each taxon followed by a note on distribution and taxonomic identity has been provided.

Collected plant specimens were processed for herbarium by following the techniques given by Survase and Dhabe (2013). The voucher specimens are deposited in the Herbarium of Department of Botany, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (BAMU).

Table-1. Plant specimen collected from different location of Marathwada

Botanical Name	Family	Locality	Field No.	Longitude	Latitude	Altitude
<i>Clematis gouriana</i> Rox. ex DC.	Ranunculaceae	SCPCA	0165	E 75°21'634"	N 19°52'299"	1996 ft.
<i>Eriolaena stocksii</i> Hook f. & Thoms ex Mast.	Sterculiaceae	KFN	0127	E 78°3'506"	N 19°38'476"	991 ft.
<i>Grewia rhamnifolia</i> Roth.	Tiliaceae	KFN	0131	E 78°3'889"	N 19°49'870"	946 ft.
<i>Indigofera trita</i> subsp. <i>trita</i> var. <i>purandharensis sanjappa</i>	Fabaceae	SRTMU	0173	E 77°17'521"	N 19°06'294"	1224 ft.
<i>Epiphyllum macropterum</i> (Lem.) Britton & Rose.	Cactaceae	BPA	0181	E 75°19'056"	N 19°54'038"	1931 ft.
<i>Cuphea micropetala</i> Kunth.	Lythraceae	BAMU	0177	E 75°18'729"	N 19°54'303"	1936 ft.
<i>Lagerstroemia speciosa</i> (L.) Pers.	Lythraceae	MAUP	0166	E 76°47'706"	N 19°15'057"	1376 ft.
<i>Rotala fimbriata</i> Wight.	Lythraceae	KFN	0153	E 77°56'123"	N 19°06'246"	1208 ft.
<i>Allamanda violácea</i> Gard.	Apocynaceae	BAMU	0190	E 75°13'663"	N 19°54'173"	1921 ft.
<i>Solanum denticulatum</i> Blume.	Solanaceae	HBA	0162	E 75°20'262"	N 19°53'908"	1934 ft.
<i>Origanum majorana</i> L.	Lamiaceae	SCPCA	0189	E 75°21'634"	N 19°52'299"	1996 ft.
<i>Eriocaulon dinae</i> Fyson.	Eriocaulaceae	PHA	0181	E 75°24'463"	N 20°04'535"	2154 ft.

Abbreviation: SCPCA-Shiv Chhatrapati College, Aurangabd, KFN-Kinwat Forest, Nanded, SRTMUN-Swami Ramanand Tirth Marathwada University, Nanded, BAMU-Dr. Babasaheb Ambedkar Marathwada University Aurangabad, MAUP-Marathwada Agricultural University Parbhani, BPA-Begampura Aurangabad, HBA-Himayatbag Aurangabad and PHA-Phulambri, Aurangabad.

ENUMERATIONS

Family- Ranunculaceae

Clematis gouriana Roxb. Ex DC. Syst. Nat. 1: 138. 1818; Hook. f. & Thoms in Hook. f. Fl. Brit. India 1: 4. 1872; Cooke, Fl. Pres. Bombay 1; 2. 1958 (Repr.); M.A. Rau in Sharma et al. Fl. India 1: 64. 1993. Sharma *et al.* Fl. Maharashtra St. Dicot. 1: 151. 2000.

Climbers; stems grooved. Leaves uni-bi or tirpinnate; leaflets 2-12 x 1-4 cm, ovate, toothed, rounded or cordate at base; petioles slender, pubescent; sepals 4, obovate or oblong; filaments linear. Achenes ovoid, hairy, tails feathery.

Fls. & Frts.: October- November *Locality:* Aurangabad town *Exsiccata:* VAP & ASB 0165

Distribution: It is rare and occasionally occurs near houses.

Family- Sterculiaceae

Eriolaena stocksii Hook. f. & Thoms. Ex Mast. In Hook. f. Fl. Brit. India 1: 370. 1874; Cooke, Fl. Pres. Bombay 1: 139. 1958 (Repr.); Malick in Sharma et al. Fl. India 3: 419. 1993.

Trees. Bark purplish. Leaves 7.5-12.5 x 6.2-10.0 cm, orbicular, dotted above with stellate hairs, finely pubescent beneath, apex shortly and bluntly acuminate, base deeply cordate, irregularly crenate, 5-7-nerved. Flowers 3.7-5.0 cm across, in lax axillary racemose cymes near top of a long peduncle.

Fls. & Frts.: July-October

Locality: Kinwat forest; Nanded *Exsiccata:* VAP & ASB 0127

Distribution: It is newly introduced in ghats of Aurangabad.

Family- Tiliaceae

Grewia rhamnifolia Heyne ex Roth, Nov. Sp.. Pl. 244. 1821; Daniel & Chandrab. In Sharma et al. Fl. India 3: 507. 1993; Almeida, Fl. Mah. 1: 159. 1996. P.p.; G. Orientalis auct. Non L. 1753; Mast in Hook. F. Fl. Brit. India 1: 384. 1874 p.p.; Bole & Almeida in J. Bombay Nat. Hist. Soc. 77. 462. 1981; Singh *et al.* Fl. Maharashtra St. Dicot. 1: 391. 2000.

Shrubs up to 3 m tall. Leaves 2.5-10.5 X 1.5-5.5 cm, rhomboid-ovate or lanceolate, rounded or subcordate at base, acute to acuminate at apex, margins crenate-serrate. Flowers in axillary and terminal umbellate cymes, buds ovoid, ribbed, tomentose. Drupes 1.2-1.3 cm across, faintly 2-4-lobed, subglobose, tomentose.

Fls. & Frts.: June- August

Locality: Aurangabad town *Exsiccata:* VAP & ASB 0131

Distribution: Plants are occurs on roadside.

Family- Fabaceae

Indigofera trita L. f. subsp. *trita* var. *purandharensis* Sanjappa -- Bull. Bot. Surv. India 26(1-2): 117. 1985 & Legumes of India 197. & 1991 & in Hajra et al. Fasc. Fl. India 21: 150, f. 56. 1995; Sharma et al. Fl. Maharashtra St. Dicot. 1: 716. 2000.

Undershubs, 1.5-2.0 m high. Leaflets 3, 1.8-4.5 x 1.0-1.5 cm, elliptic-oblong, densely pubescent beneath, apex rounded acuminate, base obtuse. Flowers axillary longer racemes and flower as well as shorter, compact and deflexed pods.

Fls. & Frts.: August-November

Locality: Kinwat forest; Nanded

Exsiccata: VAP & ASB; 0173

Note: This taxon is endemic to Pune district but newly introduced in Marathwada region.

Family- Lythraceae

Cuphea micropetala. B. & K. Nov. Gen. et Sp. 6: 209, t. 551. 1824; Almeida, Fl. Mah. 2: 283. 1998; Singh et al. Fl. Maharashtra State Dicot. 2: 988. 2001.

Shrubs, 30-60 cm high, erect more or less setose hairy or almost glabrous. Leaves 5-12 cm long, lanceolate to oblong-lanceolate, acute at apex, shortly petioled. Flowers yellowish with scarlet at base, extra axillary, in long, terminal, leafy racemes; calyx tube broad and hairy.

Fls. & Frts.: February-June

Locality: Aurangabad town

Exsiccata: SSB & SAS; 0177

Distribution: Ornamental plant, cultivated in garden.

Lagerstromia speciosa Pers. Syn. Pl. 2(1): 72. 1807; Bole & Almeida J. BNHS. 79, 312, 1982; Shah Fl. Gujrat 1: 308. 1978; Almeida Fl. Savantwadi 179. 1990; Ugemuge Fl. Nagpur Dist. 170. 1986. A large tree 10-20 m high, branches widely spreading. Leaves opposite or subopposite, simple, entire, elliptic, obovate, oblong, pinnate. Flowers pink, lavender, very showy, Fruit rounded with dry or hard epicarp.

Fls. & Frts.: April-June.

Locality: Aurangabad & Parbhani

Exsiccata: SSB & SAS; 0166

Distribution: Plants are grown on roadside and cultivated in garden.

Rotala fimbriata Wight, Ic. T. 217. 1839 Koehne in Engl. Bot. Jahrb. 1: 166. 1880; et Pflanzenr. 17: 37. 1903; C.D.K. Cook in Boissiera 29: 108., f. 16. 1979; S.M. Almeida, Fl. Savantwadi 1:180. 1990. *Ammannia pentandra* Var. *Fimbriata* C.B.Cl. in Hook. F. Fl. Brit. India 2: 569. 1879; Singh et al. Fl. Maharashtra St. Dicot. 2: 35. 2001.

Erect herbs, 8-10 cm tall. Leaves opposite, sessile, oblong-ovate, apex acute, base amplexicaul. Flowers pale pink to white axillary, solitary; sepals-5, triangular, appendages alternating with sepals. Capsules oblong. Seeds yellowish, smooth.

Fls. & Frts.: September-October.

Locality: Sitakhandi; Nanded

Exsiccata: VAP & ASB; 0153

Distribution: Very rare in the Maharashtra region but occur in few localities in Marathwada.

Family- Cactaceae

Epiphyllum macropterum Britton & Rose, Cactaceae IV. 193. 1923.

Unarmed, flat-stemmed, branching cactus with large and showy flowers. Plants upright up to 1.5 tall with flat, 2-edged, leaf like branches which are crenate or serrate on margins, spineless. Flowers usually large, mostly nocturnal, arise on edge of leaf, the tube longer than limb; corolla White, 10 cm in diam.; stemans elongated, numerous. Fruit not seen.

Fls. & Frts.: July-January.

Locality: Aurangabad

Exsiccata: SSB & SAS; 0182

Distribution: Plants are commonly cultivated in garden and also kitchen garden.

Family- Apocynaceae

Allamanda violácea Gaertn. & Fild Sert Plant t. 41, 1844; Sen, Curr. Sci. 25 (4): 125-6. 1956; Almeida Fl. Mah. Vol. IIIA & IIIB, 198. 2001.

Weak slender climber branches hairy. Leaves in whorls ovate 8-12 cm long downy above hairy beneath. Flowers in axillary cymes. Corolla funnel shaped redish purple. Fruit not seen.

Fls. & Frts.: Throughout the year

Locality: Aurangabad town

Exsiccata: SSB & SAS; 0190

Distribution: Newly introduce in the Marathwada region and common in gardens.

Family- Solanaceae

Solanum denticulatum Bl. Bijdr. 697. 1825; C.B.Cl. in Hook. F. Fl. Brit. India 4: 231. 1883; Cooke, Fl. Pres. Bombay 2: 334. 1958 (Repr.); Singh *et al.* Fl. Maharashtra St. Dicot. 2: 503. 2001. Shrubs, 1.0-1.5 m high. Lower leaves solitary, upper in unequal pairs, 5-12 x 2.5-5.5 cm, elliptic-lanceolate, sparsely hairy above, glabrous beneath. Flowers in lateral fascicles. Berries globose, c 1 cm across, red when ripe.

Fls. & Frts.: October-November

Locality: Himayatbag, Aurangabad

Exsiccata: SSB & ASD; 0162

Distribution: Newly introduced on grassland in Garden region.

Family- Lamiaceae

Origanum majorana L. Sp. Pl. 2: 590. 1753.

Aromatic herbs. Leaves entire or toothed. Flowers dimorphic, larger bisexual. Calyx 10-13 nerved, throat villous. Corolla obscurely 2-lipped, upper lip notched or 2-fid. Stamens 4, distinct, ascending; anther cells distinct, spreading. Style lobes acute.

Fls. & Frts.: July-August

Locality: Aurangabad town

Exsiccata: SSB & SAS; 0189

Note: Plants are highly medicinal, cultivated in gardens.

Family- Eriocaulaceae

Eriocaulon dinae Fyson in J. Indian Bot. 2: 259, t 11. 1921; Kulkarni & Desai in J. Bombay Nat. Hist. Soc. 69: 232. Sharma *et al.* Fl. Maharashtra St. Monocot. : 251. 1996.

Herbs, annual, erect, tufted. Leaves 3-7 x 0.4-0.6 cm, lanceolate. Scapes many. Heads 5-9 cm across, flat, hemispherical, globose or ovoid, longer than broad; involucre bracts longer than the head. Male flowers few; female flowers numerous, third sepal plane. Seeds minute, oblong-ellipsoid.

Fls. & Frts.: August-February

Locality: Phulambri; Aurangabad, Nanded

Exsiccata: VAP & SSB; 0181

Distribution: Plants are occurs on grassland forest in Surrounding of Aurangabad and Nanded district.

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