

Some new plant reports to the Flora of Nagpur District, Maharashtra - III

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ABSTRACT

During frequent botanical explorations to various localities of the Nagpur District, authors have collected 10 plants of 8 different families of both dicotyledons and monocotyledons viz. *Byttneria herbacea* Roxb. (Byttneriaceae), *Alysicarpus ovalifolius* (Schum.), *Millettia peguensis* Ali, *Vigna trilobata* (L.) Verdc. var. *trilobata* (Fabaceae), *Ceiba pentandra* (L.) Gaertn. (Bombacaceae), *Exacum petiolare* Griseb. (Gentianaceae), *Leucas longifolia* Bth. (Lamiaceae), *Justicia betonica* L. (Acanthaceae), *Persicaria barbata* (L.) Hara. var. *gracilis* (Danser) (Polygonaceae) and *Cyanotis axillaris* (L.) D. Don (Commelinaceae) for the first time from this region. Plant specimens were collected, identified with the help of some pertinent literatures, various floras and authenticated it.

Keywords: New plant reports, Flora, Nagpur District**INTRODUCTION**

Regular botanical explorations and diversity assessments are required for evaluating the current scenario of plant diversity status of that particular region and will be helpful in the conservation of biodiversity. Continuing from last two communications related to addition of novel plant records for this region (Kamble *et al.*, 2013-a. and Kamble *et al.*, 2013-b.), the authors have enumerated 10 additional new plant reports of 8 different families of both dicotyledons and monocotyledons for the first time from Nagpur District.

Earlier documentation on floristic exploration of this area in the form of Flora of Nagpur District was done by Ugemuge (1986). Afterwards many workers in this as the additions to the Flora of Nagpur District, viz. Bhuskute (1989, 1990), Thakre and Srinivasu (2012a, 2012b) and Kamble *et al.*, (2013-a, 2013-b). This paper deals with the addition of some new plant reports to the documentation of floral wealth.

MATERIALS AND METHODS

Nagpur is the winter capital of state of Maharashtra. It lies between latitudes 20° 35' and 21° 44' north and longitudes 78° 15' and 79° 40' east and has an area of 9930 sq. km. The district has an average elevation between 275.5m to 305m

above sea level. The Nagpur district is quite rich and diversified in its plant composition. It is divided into 14 talukas amongst which Katol, Saoner, Parseoni, Ramtek, Kuhi and Nagpur Rural having dense forest area. Several visits were made in the various localities of the district for the floristic inventories. The identification and authentication has been done with the pertinent literatures, research papers; reports and various floras viz., Flora of Nagpur District (Ugemuge, 1986), Flora of Maharashtra State Vol. I (Singh & Karthikeyan, 2000), Flora of Maharashtra State Vol. II (Singh *et al.*, 2001), Flora of Maharashtra State: Monocotyledons Vol. III (Sharma *et al.*, 1996), The Flora of Maharashtra (Almeida, 1996), Flora of Marathwada (Naik, 1998) which confirmed that these plants have yet not been collected and reported previously from the Nagpur District. The voucher specimens of the collected plant specimens have been deposited at the Herbarium, Department of Botany, RTM Nagpur University, Nagpur.

OBSERVATIONS AND RESULTS

Authors collected some specimens belonging to families Byttneriaceae, Fabaceae, Bombacaceae, Gentianaceae, Lamiaceae, Acanthaceae, Polygonaceae and Commelinaceae.

After minuscule inspections and authentication were done with the help of floras, it was found that these are the new reports to the Flora of Nagpur district. Amongst which *Leucas longifolia* Bth. of family Lamiaceae is the first record for the Vidarbha. While *Byttneria herbacea* Roxb. of family Byttneriaceae found after a decade from Vidarbha, earlier it was reported from Gadchiroli region by Moghe (1993) and Almeida (1996). This is first time observed in Nagpur district. The specimens are enumerated below. The flowering & fruiting seasons, ecology, localities in the district of the plants and voucher specimen number also cited in the text.

1. Byttneriaceae

***Byttneria herbacea* Roxb.** Pl. Cor. 1:t.29. 1795; Mast. In Hook.f. Fl. Brit. India 1:376. 1874; Malick in Sharma *et al.* Fl. India 3:412, f. 115. 1993. (Fig. a)

Herbs, procumbent spreading; root-stocks woody. Leaves 2-4 x 1-2cm, oblong, ovate-lanceolate, base obtuse or subcordate, apex acute or acuminate, irregularly dentate, sparsely hairy, more so along margins, glabrous below. Flowers purple in axillary or terminal umbellate cymes. Capsules c 0.8cm across, lobose, shortly prickeled, apically horned, septically 5-valved. Seeds 5, 0.5cm long, ovoid, angular, muricate.

Flowering and Fruiting: August- October

Location: Satnavari Forest and Pench Forest of Nagpur.

Ecology: Moist and Rocky patches

Exsiccata: Bot/9841

Distribution Note: Not reported so far from Maharashtra State since more than a decade. Moghe (1993) reported for the first time in Vidarbha region of Chandrapur district now this is observed from various localities of Nagpur district extending its habitat.

2. Fabaceae

i) *Alysicarpus ovalifolius* (Schum.) J. Leon. in Bull. Jard. Bot. Stat. Brux. 24:88 1954; Sanj. & Bhatt. in J. Bombay Nat. Hist. Soc. 75. 250. 1978; Sanj. Legumes of India 79. 1991; Naik, Fl. Marathwada 1:246. 1998. *Hedysarum ovalifolium* Schum. Beskr. Guin Pl. 359. 1827. (Fig. i)

Prostrate or procumbent herbs, branches terete, striate, minutely pubescent, 20-50cm long. Leaves unifoliate; petioles 2-5cm long; stipules ovate-lanceolate, 01-6.5cm to 01-2.5cm, rounded or subcordate at the base, obtuse or acute, glabrous

above and pubescent on nerves underside; petiolule minute, stipels obscure. Inflorescence lax, 6-10 flowered, simple or branched racemes, 6-12cm long; bracts ovate-acuminate teeth. Petals deep violet. Standard orange colour in bud. Stamens diadelphous (9)+1, puberulous. Ovary cylindrical 4mm long, tuft of hairs at the top of ovary. Style 2mm long; stigma capitate, apiculate. Pods linear, 1.5-2cm long, compressed, 4-8 jointed with a raised line between the joints, longitudinally striate, straw coloured.

Flowering and Fruiting: August –December.

Location: Gorewada Forest near Nagpur City, Besides Nagpur University Campus area.

Ecology: Open patches

Exsiccata: Bot/9837

ii) *Millettia peguensis* Ali. In Kew Bull. 21:489. 1968; Shah & Yogi in J. Bombay Nat. Hist. Soc. 69:445. 1972; Sanj. Legumes of India 214. 1991. *M. ovalifolia* Kurz in J. Asiat. Soc. Bengal 42:68. 1873; Baker in Hook.f. Fl. Brit. India 2:107. 1876 non *Pongamia ovalifolia* Weight & Arn. 1834. (Fig. g)

Trees, medium sized. Leaflets 7, 1.2-2.5cm long, ovate-elliptic, shortly acuminate. Flowers pinkish purple in slender, axillary racemes. Pods linear, 2-3 seeded at middle, sub-lignose, incurved, narrowed to base, sparsely verrucose.

Flowering and Fruiting: March-October.

Location: Besides Nagpur University Campus area.

Ecology: Open conditions.

Exsiccata: Bot/9838

iii) *Vigna trilobata* (L.) Verdc. var. *trilobata*. In Taxon 17:172. 1968 & in Kew Bull. 24:560. 1970; Sanj. Legumes of India 276. 1991. *Dolichos trilobatus* L. Mant. Pl. 101. 1767. *Phaseolus trilobus* Ait. Hort. Kew. Ed. 1,3:30. 1811 non *Dolichos trilobatus* L. 1753; Baker in Hook.f. Fl. Brit. India 2:201. 1876; Cooke, Fl. Pres. Bombay 1:401. 1958 (Repr.). (Fig. c)

Herbs, suberect or trailing. Leaflets 1.5-4.5 x 0.8-5.3 cm, middle lobe largest, spatulate, laterals spatulate with subacute or obtuse apex, hairy on both sides. Flowers yellow in subcapitate racemes. Pods 1-2cm long, slightly curved. Seeds 2-5, brownish-black.

Flowering and Fruiting: August- September

Location: Gorewada Forest, Mansar area, Besides Nagpur University Campus area.

Ecology: Open and Moist patches

Exsiccata: Bot/9839

PLATE: I



Plate 1: a) *Byttneria herbacea*, b) *Leucas longifolia*, c) *Vigna trilobata* var. *trilobata*, d) *Exacum petiolare*. e) *Ceiba pentandra*, f) *Persicaria barbata* var. *gracilis*, g) *Millettia peguensis*, h) *Cyanotis axillaris*, i) *Alysicarpus ovalifolius*, j) *Justicia betonica*

3. Bombacaceae

***Ceiba pentandra* (L.) Gaertn.** Fruct. Sem. Pl. 2:244, t. 133. 1791; Robyns in Dassan & Fosb. Rev. Handb. Fl. Ceylon 1:70. 1980; Nayar & Biswas in Sharma *et al.* Fl. India 3:400, f. 112. 1993. *Bombax pentandrum* L. Sp. Pl. 511. 1753. *Eriodendron pentandrum* (L.) Kurz in J. Asiat. Soc. Bengal 43:113. 1874. *E. anfractuosum* DC. Prodr. 1:479. 1824; Mast. In Hook.f. Fl. Brit. India 1:128. 1958 (Repr.). (Fig. e)

Tree, 15-25m. Leaves 15-25cm long; leaflets 5-8, 5-13cm long, lanceolate, glaucous beneath, apex

cuspidate, base acute, entire. Flowers 4-5cm across, dirty white, appearing along with young leaves at ends of branches. Capsules fusiform, blunt, lined with long, white, silky hairs. Seeds c 0.6 X 0.3cm, pyriform, black, enveloped in silky wool.

Flowering and Fruiting: January- June.

Location: Nearby Ravinagar area, Besides Nagpur University Campus area

Ecology: Open Conditions.

Exsiccata: Bot/9840

4. Gentianaceae

***Exacum petiolare* Griseb.** In DC.Prodr. 9:46. 1845; C.B.Cl. in Hook. f. Fl.Brit. India 4:98. 1883 p.p. (excl.syn.); Garg, Indian Gentianaceae 7. 1988. *E. pedunculatum* var. *petiolare* (Griseb.) Trim. Fl. Ceylon 3:182. 1893; Cooke, Fl. Pres. Bombay 2:253. 1958(Repr.). **(Fig. d)**

Herbs, 15-30 cm high, annual, erect; stems quadrangular. Leaves 2.5-6.0 x 1.5-3.0 cm, broadly elliptic. Inflorescence of terminal and axillary cymes. Flowers white. Capsules c 0.3 cm across, globose, smooth, shining.

Flowering and Fruiting: September-December

Location: Pench Forest area.

Ecology: Moist rocky patches

Exsiccata: Bot/9836

5. Lamiaceae

***Leucas longifolia* Bth.** Lab. Gen. Sp. 744. 1835; Hook.f. Fl. Brit. India 4:684. 1885; Cooke, Fl. Pres. Bombay 2:551. 1958 (Repr.); Mukerjee in Rec. Bot. Surv. India 14(1):170. 1940; Cramer in Dassan. & Fosb. Rev. Handb. Fl. Ceylon 3:182.1981. **(Fig. b)**

Herbs, 25-50cm high, rigid, annual with perennial rootstock; stems and branches 4-angular, hirsute or retrose pubescent below, less hirsute or scaberulus above. Leaves 3-6 x 0.2-0.4cm, linear to linear-lanceolate, finely pubescent on both sides, apex subacute, base tapering, margins entire. Flowers white, subsessile, in few 4-6 flowered whorls; bracts c 0.2 cm long, subulate, long ciliate; calyx 0.5-0.6cm long, annulate inside, hairs exserted, white; corolla 0.8-1.2cm long, tube finely pubescent above, upper lip very short, lower one wide, 3-lobed. Nutlets 0.2-0.25cm long, rounded at top.

Flowering and Fruiting: August- October

Location: Satnavari Forest

Ecology: Moist and Wet patches

Exsiccata: Bot/9845

Note: It is the first report for Vidarbha.

6. Acanthaceae

***Justicia betonica* L.** Sp. Pl. 15.1753; C.B.Cl. in Hook.f. Fl. Brit. India 4:525. 1885; Sant.In Univ. Bombay Bot. Mem. 2:85.1952. *J. betonica* L. var. *ramocissima* C.B.Cl. op.cit.; Cooke, Fl. Pres. Bombay 2:486. 1958(Repr.) **(Fig. j)**

Shrubby perennial herb up to 1 m tall. Leaves opposite, more or less narrowly lanceolate to ovate or elliptic, 2-16 cm long, hairless or finely velvety,

base somewhat decurrent along the petiole; margin entire to crenate; petiole 0-2 cm long. Inflorescences in terminal spikes 2-12 cm long. Bracts overlapping, white to pale green with more or less distinct darker green or purplish veins. Flowers 8.5-14 mm long, usually on one side of the spike, white with 2 pinkish ridges or spots in the corolla throat, finely velvety and with scattered stalked glands. Capsule 11-20 mm long more or less densely velvety.

Flowering and Fruiting: October-March

Location: Pench Forest area.

Ecology: Wild, Moist patches

Exsiccata: Bot/9843

7. Polygonaceae

***Persicaria barbata* (L.) Hara.** var. *gracilis* (Danser) Sojak in Preslia 46(2):152. 1974. *Polygonum barbatum* L. ssp. *gracile* Danser in Bull. Jard. Bot.

Bullten. Ser. 3,8:146, f.2.1927; Babu, Herb. Fl. Dehradun 441. 1977. *P. barbatum* var. *gracile* (Danser) Steward in Contr. Gray Herb. 88:55. **(Fig. f)** Herbs c 1m high, erect or procumbent-ascending. Leaves 5-16 x 0.5-1.5cm, lanceolate or linear-lanceolate, subsessile, appressed-hairy on both sides or sometimes glabrous, acute or acuminate at apex; ocreae 1-3cm long, strigose-hairy. Racemes erect; peduncles hairy. Perianth white or pinkish; bracts ciliate at mouth, eglandular. Nuts c 2cm long, trigonous, glabrous, black, shining.

Flowering and Fruiting: More or less throughout the year.

Location: Nearby Parseoni area, Adjoining Ramtek town.

Ecology: Along with the water streams

Exsiccata: Bot/9842

8. Commelinaceae

***Cyanotis axillaris* (L.) D. Don,** Prodr. Fl. Nepal. 46. 1825; Hook. f. Fl. Brit. India 6:388. 1892; Cooke, Fl. Pres. Bombay 3:305. 1958 (Repr. Ed.). *Tonningia axillaris* (L.) O. Ktze. Rev. Gen. Pl. 2:721. 1891; Karthik *et al.* Fl. Ind. Enum. Monocot. 23. 1989. *Commelina axillaris* L. Sp. Pl. 42. 1753. *Amischophacelus axillaris* (L.) Rolla Rao & Kammathy in J. Linn. Soc. Bot. 59:306.1966. **(Fig. h)** Herbs, annual; roots fibrous; stems slender, 15-45cm long, diffusely branched, leafy; branches suberect and creeping below or prostrate.

Leaves sessile, 5-15 x 0.43-0.75cm, narrowly linear or linear-lanceolate, apex acute or acuminate; sheaths inflated, ciliate. Flowers violet-blue. Capsules more than 0.6cm long, oblong-ellipsoid, shortly stipitate. Seeds c 0.25cm long, oblong, compressed, truncate at base, rounded at apex with short, conical tip, dark brown, shining.

Flowering and Fruiting: July- December

Location: Gorewada Forest

Ecology: Wetlands

Exsiccata: Bot/9844

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