

SOME ANGIOSPERMS NEW FOR THE FLORA OF SONBHADRA DISTRICT, UTTAR PRADESH, INDIA

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ABSTRACT

About 10 species belonging to 10 genera and 5 families namely Malvaceae, Bombaceae, Tiliaceae, Fabaceae and Asteraceae of angiosperms have been reported as an addition to the Flora of Sonbhadra district., U.P. The paper provides nomenclature, description, locality, phenology and field number of each species from Sonbhadra district.

Key words: Addition, species, Sonbhadra district.

INTRODUCTION:

The district Sonbhadra is known to have rich flora of medicinal plants and it occupies the southernmost part of Uttar Pradesh, surrounded in the north by Mirzapur and Varanasi district of U.P., in the south by Surguja district of Chattisgarh, in south east by Palamu district of Jharkhand. The district lies in the Vindhyan plateau between 23°45' to 24°34'N Latitude and 82°45' to 83°23' Longitude. The elevation above the mean sea level ranges between 315m to 485m (Singh and Singh, 1992). The ethnobotanical and floristic exploration have been conducted by many till date (Srivastava, 1995; Bhattacharya, 1963, 1964; Maheshwari and Singh, 1986; Jain, 1991; Singh *et al* 2002; Narain and Singh, 2005; Narain *et al*, 2005, 2006; Singh *et al* 2010; Singh and Narain, 2010; Lata and Singh, 2015). Although the flora of Sonbhadra district dealing with about 460 species has been published (Bhattacharya, 1963, 1964; Srivastava, 1955) but it has been based on 40% of the area surveyed. The large area still remains unexplored. It is

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expected that if more surveys are made, more species are added to the flora of the district. In this direction during the survey in 2016 the author collected number of plant specimens out of which 10 species turned out to be the addition to the flora of Sonbhadra district, Uttar Pradesh. The species were identified with the help of various published worldwide flora (Hooker, 1872-1897; Duthie, 1903-1929; Verma *et al.* 1994; Mudgal *et al.* 1997; Singh *et al.*, 2001; Khanna *et al.*, 2001; Misra and Verma, 1992). The identity of these species were also confirmed by comparing with authentically identified specimens of herbarium of Botanical Survey of India, Central Circle, Allahabad and Duthie Herbarium, Department of Botany, University of Allahabad, Uttar Pradesh. Correct nomenclature of each species with citation, description of the plant, flowering and fruiting period, place of occurrence, field number and habitat have been provided.

ENUMERATIONS:

1. Malvaceae

Thespesia lampas (Cav.) Dalz. & Gibs var. *longisepla* Borss. in Blumea 14:118.f.14C. 1996.

Arborescent shrubs; twigs densely stellate hairy, glabrescent with age. Leaves orbicular, membranaceous to subcoriaceous, 3-5 lobes deltoid, acuminate at apex; petioles and stipules densely hairy. Flowers solitary axillary. Epicalyx- segments 5, free. Calyx copular; lobes subulate to triangular, 1-3mm long. Corolla yellow with dark purple centre. Fruits ovoid to globose.

Locality: Makramauja; FN: 210007

Fl. & Fr: August.

2. Bombaceae

Ceiba pentandra (L.) Gaertn., Fruct. Sem. Pl.2:244.t.133.f.1.1791.

Trees upto 12m high. Stems and branches green. Leaves digitate; leaflets 5-8, lanceolate, upto 12.5x3.8 cm, cuspidate at apex of branches. Calyx campanulate, 5 lobed. Petals 5, dull white. Stamens in 5 bundles, opposite the petals. Fruit a capsule. Seeds pyriform, silky hairy.

Locality: Babhani: FN: 210078 Fl. & Fr: Feb-May.

3. Vitaceae

Cissus adanta Roxb., Fl. Ind.(Carey & Wallich ed.) 1:423.1820. *Vitis adanta* (Roxb.)Wallich, Num. List. No.5998.1831-33; Lawson in Hook.f.,Fl. Brit. India 1:649.1875.

Climbers. Leaves broadly ovate, sometimes 3-5 lobed, 4-15x3-13 cm, acuminate at apex, cordate at base, serrate- dentate, tomentose beneath. Flowers red, in terminal, dichotomous cymes. Calyx saucer shaped. Petals broadly oblong-ovate, spreading, hairy outside. Berries ovoid, ca 8mm long beaked.

Locality: Chopan; FN; 210028

Fl. & Fr.: Dec- March.

Cyphostemma setosum (Roxb.) Alston in Trimen, Handb. Fl. Ceylon 6(Suppl.): 53.1931. *Cissus setosa* Roxb., Fl. Ind. (Carey & Wallich ed.) 1:410. 1820. *Vitis setosa* (Roxb.) Wallich ex Wight, Cat. 26.1833 & Prodr. 127.1834; Lawson in Hook. f., fl. Brit. India 1:654.1875.

Herbs, climbing. Branchlets fleshy, bristly setose; tendrils forked. Leaves 3-foliolate; leaflets oblong-obovate, 4-8x3-5cm, rounded at apex and base, glandular puberulous, dentate- serrate; terminal leaflet larger. Flower greenish, dichasial, divaricate, glandular pubescent cymes. Calyx obscurely 4-lobed. Petals 4, ovate- oblong. Berries red when ripe, ovoid, ca 8mm long.

Locality: Hanthinala; FN: 210728

Fl. & Fr.: Sept- Jan.

4. Fabaceae

Alhagi maurorum Medik. In Vorles, Chrupf. Phys. Oek. Ges. 2:397.1787; Baker in Hook. f., Fl. Brit. India 2: 145.1876. *Hedysarum pseudalhagi* M. Bieb., Fl. Taur.-Cauc. 2:174.1808. *Alhagi pseudalhagi* (M.Beib.) Desv. in *J. Bot.* 2, 1: 120.1823.

Shrubs armed, upto 75cm high. Leaves simple, oblong or obovate, up to 12x5.5cm, mucronate at apex, cuneate at base. Flowers red, 4-7 on axillary, 2-3 cm long spinous shoots. Calyx- teeth triangular, auricled at the base. Pods moniliform, 1.5-2.5 cm long, falcate. Seeds many.

Locality: Mircihihoori; FN; 210007

FL. & Fr.: Aug.-April.

Canavalia virosa (Roxb.) Wight & Arn., Prodr. 253.1834. *Dolichos virosus* Roxb., baker in Hook. f., Fl. Brit. Ind. 2:196.1876.

Trailing or climbing shrubs, 3-5m high; stem and branches appressed pubescent when young, glabourous afterwards. Leaves pinnately 3 foliate; petioles 3-16 cm long; leaflets ovate or

orbicular, subacute, obtuse or rarely shortly mucronate at apex, cuneate or sub-truncate at base, 6-16x3.5-10cm, pubescent on both sides. Flowers in pedunculate 12-28cm long axillary racemes. Calyx bilabiate, upper lip emarginated, lower 3 toothed, pubescent. Corolla rose purple, standard, 2.7 -3 cm long, reflexed, auricled at base. Pods elliptic oblong, compressed, 10- 16 x 2-3 cm, thickened along both sutures, sparsely hairy or glabrous. Seeds 4-8, ovoid or ellipsoid.

Locality: Dudhi; FN: 210089

Fl. & Fr.: Oct-April.

Crotolaria verrucosa L., Sp.Pl.715.1753; Baker in Hook.f., Fl. Brit. India 2:77.1876.

Herbs upto 1m high. Branches acutely angled. Leaves ovate- rhomboid or ovate- deltoid, upto 15 x7 cm, obtuse or acute at apex, tapering at base, pubescent beneath; stipules foliaceous, sublunate. Flowers in terminal or lateral, 12- 20 flowered, upto 20 cm long racemes. Calyx 6-8 mmlong; teeth triangular, acute; tube campanulate. Corolla bluish purple and white, up to 2 cm long. Pods oblong- cylindrical, upto 3 x 0.8 cm, villous when young, pubescent when ripe, 10 - 15 seeded. Seeds yellow, ca 5mm long, reniform.

Lcality: Babhni; FN: 210088

Fl. & Fr.: Oct- Nov.

Galactia longifolia Benth. In Ann Wein. Mus. Nat.2:127.1838.

Slender twiners, generally spreading on the rocky ground; latex present. Leaves 3 foliate; leaflets linear or oblong, upto 9 x1.8 cm, obtuse, mucronate at apex, subcoriaceous, appressed villous beneath; stipules subulate. Calyx- lobes rather broad, acuminate. Corolla slightly exerted. Stamens diadelphous. Pods linear, up to 7 x1 xm flat. Seeds somewhat compressed.

Locality: Babhni; FN:210056

Fl. & Fr.: Sept- Dec.

Sophora bakeri C.B. Clark ex Prain in J. Asiat. Soc. Bengal 64:466. 1906.

Shrubs upto 2m high. Stem tomentose. Leaves imparipinnate, 12-20 cm long; leaflets 6-8 pairs, subopposite, oblong, up to 4x 2cm silky. Flowers in leaf opposed racemes. Calyx –tube campanulate; mouth oblique. Corolla purple, exerted. Stamens 10 free. Pods in bunches of 6-7, moniliform, tapering at both ends.

Locality: Myorpur; FN: 210002

FL. & FR.: May- March.

5. Asteraceae

Adenostemma lavenia (L.) Kuntze var. *latifolium* (D. Don) Panigrahi in Kew Bull. 30:651.1975. *A. latifolium* D.Don, Prod. Fl. Nepal. 181.1825. *A. viscosum* J.R. Forster & G. Forster var. *latifolium* (D. Don) C.B. Clarke, Comp. Ind. 29. 1876 ; Hook. f., Fl. Brit. India 3: 242.1881.

Herbs. Stems decumbent- ascending. Leaves opposite, broadly ovate, up to 16.5 x 10.5 cm, acute or obtuse at apex, entire or serrate. Heads corymbose. Involucral bracts sub 2 seriate, ciliate on margins. Achenes more densely muricate in the upper half than in the lower. Pappus hairs 4-5, ending in a knob.

Locality: Myorpur; FN: 210009

Fl. & Fr.: Nov- Feb.

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