

NEW PLANT RECORDS FOR JAMMU AND KASHMIR STATE

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Cassia floribunda Willd. (Caesalpiniaceae), *Euphorbia dracunculoides* Lamk. (Euphorbiaceae) and *Sida acuta* Burm. f. (Malvaceae) are reported as new distributional records for Jammu and Kashmir State.

Keywords : New Record.

Introduction

Perusal of available relevant literature on the phanerogams of Jammu and Kashmir State has revealed that *Cassia floribunda* Willd., *Euphorbia dracunculoides* Lamk. and *Sida acuta* Burm. f. collected by one of us have not been reported from Jammu and Kashmir State and as such are recorded here for the first time. Detailed description of each of these taxa is appended with upto date nomenclature, flowering and fruiting period, occurrence and distribution and critical notes to facilitate their easy identification. The voucher specimens are deposited in the herbarium of Jammu University, Jammu and Regional Research Laboratory, Jammu.

Enumeration

1. *Cassia floribunda* Cav., Deser 132. 1802; de wit, Webbia 11: 245. 1955; Ohashi in Enum. Fl. Pl. Nep. 2: 111. 1979; Sharma. Geobios New reports 2: 5. 1983 ; Bennet¹, Name changes in Fl. Plants of Ind. and Adjacent regions, 105. 1987; *C. laevigata* Willd., Enum. Pl. Hort. Berol. 441. 1809; Prain, Journ. Asiat. Soc. Beng. 66; 476 1897; Gamble², Fl. Pres. Madras 1: 402. 1918; Osmaston, For. Fl. Kumaon 188. 1927; Fyson, Fl. S. Ind. Hill. St. 2: t. 140. 1932; Kanji Lal *et al* Fl. Assam 2: 133. 1938; Razi³, Rec. Bot. Surv. Ind. 18(1) : 10. 1959; Babu⁴, Herb. Fl. Dehra Dun 176, 1977; Naithani⁵, F. Pl. Ind. Nep. & Bhutan 130. 1990.

Eract, 2-3 m tall, perennial shrub., leaves paripinnate, with 3-4 pairs of leaflets 4-10 x 1-2 cm., ovate- oblong or lanceolate, entire, acuminate, glabrous and glaucous; rachis bearing a gland between each or most pairs of leaflets except the terminal pair : flowers yellow, in axillary and terminal racemes; racemes pedunculate, 5-12 cm long, 4-10 flowered; bracts lanceolate, acuminate or acute, 5-8 mm long; pedicels 10-18 mm long; sepals 8-10 x 4-5 mm; petals 10-16 mm long; fertile stamens 7; staminodes 3; pods cylindrical, 6-10 cm long; seeds numerous.

Flowering and Fruiting : July - October

Occurrence : Collection made from Poonch township (H.S. Kirn-4246) Distribution : Native of Tropical America introduced and naturalized elsewhere.

Critical note :

It is often mistaken for *Cassia occidentalis* Linn., which however, can be differentiated from this taxon by the following contrasting characters.

C. floribunda Cav.

1. Perennial shrub
2. Foliar glands present between each or most pairs of leaflets except for the upper most pair.
3. Pods cylindrical 6-18 cm long

C. occidentalis Linn.

1. Annual herb.

2. Foliar gland is present between the uppermost pair of leaflets only.

3. Pods laterally compressed and slightly curved upwardly, 12-16 cm long.

2. *Euphorbia dracunculoides* Lamk. Meth. Bot. 2 : 428. 1788; Boiss., DC. Prodr. 15(2) : 139. 1862; Hook⁶.f., Fl. Brit. Ind. 5 : 262. 1887; Rech. F. & Schiman - Czeika in Fl. Iran 6 : 30. 1964; Maheshwari⁷, Illus. to Fl. of Delhi, 192, Fig. 192. 1966; Stewart, Annot. Cat. Vas. Pl. W. Pak & Kashm. 448. 1972; Babu, Herb. Fl. Dehra Dun 457. 1977; Short & Vickery in Enum. Fl. Pl. Nep. 3:195. 1982; Radcliff-Smith in Nasir & Ali's Fl. Pak. 172. 144. 1986 sub sp. *dracunculoides* (Fig. 29. E-H).

Euphorbia angustifolia Buch.-Ham. ek D. Don Prodr. 62. 1825; Hook.f. fl. Brit. Ind. 5 : 265. 1887.

Erect, glabrous annual herb, upto 40cm tall, often branched from the base; cauline leaves alternate, sessile or subsessile, linear-lanceolate; 1.5-8cm x 1.5-5mm, acute or subobtuse at the tip, tapering at the base, entire or subentire, palminerved; pseudombels 3-rayed, the rays many times bifid, usually with few axillary rays below the pseudumbel; cyathia shortly pedunculate; glands bihorned, greenish, semilunate; fruit roundly trilobate, 3 x 3.5mm, smooth, pale green, styles nearly erect, connate at the base, 1 mm long, bifid; seeds ovoid - oblong, with whitish, rugose or tuberculate testa.

Flowering and Fruiting : April - October

Occurrence : Common on open, grassy slopes. Specimens collection numbers H.S. Kirn 4052 and 7025. dt 17.5.98; Sunderbani in district Rajouri, Bamla in district Udampur; 7028 dt 20.5.98 and 7012 dt 24.4.98 respectively.

Distribution :

Egypt, Iraq, Kuwait, Arabia, Afghanistan, Pakistan, India, Tropical Africa and

Mascarenes.

Critical note :

It is closely allied to *E. prolifera* Linn. which however, is a perennial herb with a woody base, yellow glands and reddish brown, globose, smooth seeds.

3. *Sida acuta* Burm.f., Fl. India. 147. 1768; Forbes & Hemsl. in Jour. Linn. Soc. Bot. 23 : 84 (Ind. Fl. sin. 1) 1886; Matsum. & Hayata in Jour. Coll. Sci. Univ. Tokyo 22 : 51 (Enum. Pl. formosa) 1906; Hayata, Ic. Pl. formosa 1 : 96. 1911; Merr. in Lingn. Sci. Jour. 5:125. 1928; Tanaka & Oldashima in Jour. Soc. Trop. Agr. Formosa 10 : 374. 1928; Merr. in Trans. Am. Phil. Soc. n.s. 24 : 259. 1935; Masam, Fl. Kain. 198. 1943; Hu⁸. Fl. China Fam. 153. 18.t. XVI. 3. 1955. Subsp. *acuta* Borss. Blumea 14:187. 1966; Bubu, Herb. Fl. Dehra Dun. 90 1977; Bennet, Name changes in flowering plants of India and adjacent regions 522. 1987; *Sida carpinifolia* sensu Masters in Hook f. Fl. Brit. Ind. 1 : 323. 1874, non Linn. f. *Sida scoparia* Lour. Fl. Cochinch. 414. 1790, ed. Willd. 504. 1793; *Sida stauntoniana* Dc., Prodr. 1 : 460. 1824; *Sida lanceolata* Retz. Obs. Bot. 4 : 28. 1786; Roxb., Fl. Ind. ed. 2, 3 : 175. 1832.

A perennial undershrub 50-100 cm in height, glabrous or subglabrous; leaves lanceolate or linear-lanceolate roundish or subobtuse at the base, acute, serrate or dentate, glabrous on both the surfaces, petioles 4-6 mm long, villose, the hairs tufted; stipules linear, longer than the petioles; flowers yellow axillary solitary or in pairs; pedicels 2 mm - 1.8 cm long, the longer ones jointed at the middle; calyx 5-6 mm long, membranous, cyathiform, divided half way down, 5-lobed, the lobes ovate-triangular sharply acute-acuminate, ciliate or glabrous; corolla 8-10 mm across, the petals obovate-cuneate, obliquely truncate at apex, ciliate, as long as the calyx; fruit subglobose, 4-5mm

across, the mericarps 6, carpels birostrate, reticulately striate and sulcate; seeds triangularly ovoid, glabrous and smooth.

Flowering and Fruiting : September - March.

Occurrence : Common weed in waste places, Jammu-Pathankot Highway, Jammu cantt area and along roadsides in Jammu township.

Specimens examined : H.S.Kirn 3105, 15.12.84 Kunjwani Jammu, 3999 dt 15.1.1990, along highway near Satwari, Jammu ; 3864 dt. 12.11.1988. Common weed in Jammu Univ. Campus, Bahuwali Rakh Jammu.

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