

SOME NEW PLANT RECORDS FOR THE PUNJAB PLAINS III

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The plants which form the subject of this note have not been mentioned in any of the works on the Flora of the Punjab and therefore a report on them was considered desirable. The specimens mentioned are deposited in the Herbarium of the Botanical Survey of India, Northern Circle, Dehra Dun.

Cuscuta hyalina Roth, Nov. Pl. Spec. 100, 1821; Clarke in Hook. f. Fl. Brit. Ind. 4: 226, 1883. *C. arabica* Wight Ic. t. 1371, 1848 (non Fresen.). *C. boissieri* Stocks in Hook. J. Bot. et Kew Gard. Misc. 4: 173, 1852.

A very slender twining total parasite often forming tangled masses. Branches yellow, filiform. Flowers in cymes, bracteate, pedicellate. Bracts triangular. Pedicels as long as flowers. Calyx campanulate, longer than the corolla tube, lobes triangular, acute or slightly acuminate. Corolla campanulate, lobes longer than the tube, ovate lanceolate, acute. Stamens shorter than the corolla lobes; filaments glabrous, short, inserted at the base of the sinuses; anthers oblong, dorsifixed. Scales absent. Ovary globose with a ring at the base of the unequal pair of styles. Stigma capitate. Capsule globose or sub-globose with a narrow aperture at the tip, enclosed by the persistent wrinkled corolla. Flowering time February. Parasitic on *Tribulus terrestris* and *Trianthema triquetra*. Hissar N. C. Nair 24875, 24877.

Cyperus bulbosus Vahl Enum. 2: 342, 1806; Clarke in Hook. f. Fl. Brit. Ind. 5: 611, 1893. *C. jemicus* Retz. Obs. 4: 11, 1786 (non Rottb. 1773); Clarke in J. Linn. Soc. 21: 175, 1884.

A glabrous stoloniferous herb. Bulb when mature covered with black acuminate scale leaves. Stem trigonous. Leaves all towards the base of the stem; sheath long membranous. The primary rays of the inflorescence arranged in umbels. Spikelets linear, brown. Glumes with hyaline margins continued downwards as wing of the internode. Nut trigonous, black. In sandy places near water margin. Nilokheri N. C. Nair 15846.

Enneapogon persicus Boiss. Diag. (ser. 1) 5: 71, 1844; Bor, Grass. Burm. Cey. Ind. Pak. 610, 1960. *Pappophorum aucheri* Jaub. et Spach Ill. Pl. Or. 4: 32, t. 323, 1851; Duthie, Grass. N. W. Ind. 35, 1883; Hook. f. Fl. Brit. Ind. 7: 301, 1897.

Perennial tufted grass, branches ascending. Leaves convolute, filiform; ligule a pubescent ridge. Spikelets arranged on bristly, narrow, silvery yellow

panicles, 3 flowered. Lower flowers bisexual, upper ones male or barren. Glumes similar 7-nerved, membranous. Lemma 9-nerved, nerves prolonged into ciliate awns, 4 of the awns much shorter than the other 5. Palea about as long as the lemma, ciliate on the keel. Rare grass on dry slopes of hills. Mahendragarh N. C. Nair 16303. Khanak (Hissar Dist.) N. C. Nair 16253.

Bor (loc. cit.) gives the distribution of the species as "Persia to Northwest India above 1000 m." The present collections are made from places hardly 250 m.

Euphorbia bombayensis Santapau in Bull. Bot. Soc. Beng. 8: 15, 1954. *E. microphylla* Heyne ex Roth Nov. Pl. Sp. 229, 1821, (non Lamk.); Hook. f. Fl. Brit. Ind. 252, 1887. *E. thymifolia* var. *microphylla* Thellung in Asch. et Graebn. Syn. 7: 475, 1916.

Prostrate herbs, adpressed to the ground in shady, sandy areas. Leaves and stem yellowish green or reddish green. Leaves opposite, obliquely oblong, entire, toothed only at the broader region. Stipules minute, bifid, or often lacinate or toothed. Cyathia minute, axillary, often solitary. Limb of involucre bracts subequal. Capsule glabrous. It resembles *E. thymifolia* and *E. prostrata* from both of which it differs in being entirely glabrous. Flowers during the cold season.

This taxon is characteristic of the humid parts of the country. According to Duthie (Fl. Upp. Gang. Pl. rep. ed. 2: 189, 1960) the species is distributed in the upper gangetic plain (Bundelkhand, sub-Himalayan tracts of north Oudh in the districts of Gonda, Bahraich and Gorakhpur), Bengal, Behar, Konkan and Madras extending to Burma and Java. In the Punjab it is fairly common in the Hissar District. Hissar N. C. Nair 18760. Bahuna N. C. Nair 18894, 18895. Sirsa N. C. Nair 18916.

Ipomoea sinensis (Desv.) Choisy in Mem. Phys. Ser. Genève. 6: 459, 1834. *Convolvulus sinensis* Desv. in Lam. Encycl. 3: 557, 1791. *Convolvulus calycinus* Roxb. (Hort. Beng. 13, 1814 nom. nud.) Fl. Ind. 1: 471, 1832. *Aniseia calycina* Choisy Conv. Or. in Mem. Soc. Phys. Hist. Nat. Genève. 6: 482, 1833. *I. calycina* Clarke in Fl. Brit. Ind. 4: 201, 1883. (see Verdcourt in Kew Bull. 1958: 24).

A twining herb. Branches sparsely clothed with spreading hairs. Leaves ovate, acuminate, sparsely hairy; petiole with long spreading hairs. Peduncle and pedicel equal in length, hairy. Flowers 1-3 in each peduncle. Sepals unequal, ciliate. Corolla

white tubular. Seeds with white hairs. Hissar *N. C. Nair* 24859, 24896.

Merremia aegyptia (Linn.) Urban, Symb. Antill. 4: 505, 1910. *Ipomoea aegyptia* Linn. Sp. Pl. (ed. 1) 162, 1753. *Convolvulus pentaphyllus* Linn. Sp. Pl. (ed. 2) 223, 1762. *Ipomoea pentaphylla* Jacq. Collect. 2: 297, 1788. Clarke loc. cit. 202. *Batatas pentaphylla* Choisy loc. cit. 436. *Merremia pentaphylla* Hallier f. Bot. Jahrb. 16: 552, 1893.

A twining annual herb, hirsute with yellowish brown hairs. Leaves palmately compound. Leaflets 5, sessile, pilose on both surfaces, elliptic oblong, or elliptic, acute at the apex. Peduncles, axillary, few flowered, hirsute. Bracts lanceolate, caducous. Three outer sepals ovate-lanceolate, acute or acuminate, densely hairy; two inner sepals shorter, glabrous. Corolla campanulate, white. Capsule globose, glabrous. 4-seeded; seeds glabrous. Hissar *N. C. Nair* 24861.