J. Phytol. Res. **20**(2) : 243-245, 2007

ADDITIONS TO THE FLORA OF JAMMU AND KASHMIR STATE - NEW REPORTS

B. L. BHELLUM and RANI MAGOTRA*
Department of Botany, Govt. College for Women, Parade, Jammu-180001, India.
*Department of Botany, University to Jammu-180006, India.

The paper gives toxonomic accounts of *Ceropegia bulbosa Roxb.* (Asclepiadaceae R. Br.), *Merremia hederacea* (Burm. f.) Hallier f. and *Ipomoea triloba* (Convolvulaceae Juss.). All the species along with their floral parts have been illustrated and recorded for the first time for Jammu and Kashmir state.

Keywords : Flora J&k State; New reports.

Introduction

During the plant exploration in Jammu district of Jammu and Kashmir state the authors collected some specimens of genus *Ceropegia* Linn. (Asclepiadaceae), *Merremia* Dennst. ex. endl. and *Ipomoea* L. (Convolvulaceae) between 2003 to 2005. On examination these specimens were identified as *Ceropegia bulbosa* Roxb., *Ipomoea triloba* L. and *Merremia hederacea* (Burm. f.) Hallier f.

Perusal of floristic literature including Royle[1], Hooker[2], Rao[3], Singh and Kachroo[4], Kachroo *et al.*[5] Sharma and Kachroo[6], Sharma and Jamwal[7-8], Kapur and Sarin[9], Swami and Gupta[10], reveals that the species have never been reported from Jammu and Kashmir state. Therefore, these species represent new records for the flora of Jammu and Kashmir state.

Stewart[11], has reported *Ceropegia bulbosa* Roxb. from Multan, Lahore and Rawalpindi all in West Pakistan. The authros have collected this speces from Raya located on east of Jammu district of J&K state.Genus *Ipomoea* Linn. is represented by 500 species in the world and 60 species have been reported from India[12]. The present authors (Bhellum and Magotra) have compiled a list of 16 species of *Ipomoea* Linn. from Jammu and Kashmir state. The collection of *Ipomoea triloba* L. has been made from margins of canals, Greater Kailash, Jammu. *Merremia hederacea* (Burm. f.) Hallier f. (Convolvulaceae), a beautiful climber has been collected from R.S. Pura Tehsil of District Jammu in 2004.

A brief decription of the plants and illustrations thereof have been given to facilitate their identification in the field.

Taxonomic Description

1. *Ceropegia bulbosa* Roxb. Corom. Pl. **1** : 11. Pl. 7. 1795; Hooker, f., FBI. 4 : 67. 1883; Stewart, Ann. Cata. Vasc. Pl. W. Pak. & Kash. 567. 1972; Saldana and Nicolson, Fl. Hassan Dist. 443. 1976.

Root tuberous, stem slender, twining, glabrous, fleshy; leaves variable, from orbicular to ovate, lanceolate, 3-5 cm long, apex, acuminate; inflorescence pedunculate, 3-5 flowered cyme, shorter than leaves; calyx segments 5, much shorter, corolla subclavate, whitish-green, purple, striate ±2.5 cm, base moderately inflated, segments of limb 5, enclosing upwards, much shorter than the tube, deep purple, pilose; coronal scales in two series, equalling the gynostegium; filaments united forming a short tube, follicle ± 10 cm long, slender, terete, pericarp thin; seeds linear and oblong with membranous wings.

Fig.1. *Ceropegia bulbosa* Roxb. : A, Tuber and basal portion of plant; B, twig in flower; C, flower; D, fruit.

Habit : Grows as climber on *Zizyphus* shrubs
Fls. & Frs. : June-August
Specimens Examined : Jammu and Kashmir State, District Jammu, locality Raya, 16.08.2003, *Bhellum* JUH. 7545.
2. *Ipomoea triloba* Linn. Sp. Pl. 161. 1753; Shah, Fl. Gujrat **1** : 475. 1978; Singh and Pandey in Bull. Bot. Surv. Ind. **21** 92. 1979.

Slender, twining, rarely repend annual, upto 3 m long; leaves petiolate, petiole 3-8 cm long, lamina broadly ovate or cordate, often 3-lobed, 2.5-8.2 x 2.4-7 cm, base cordate, margin entire or coarsely dentate; flowers 1- few flowered, pedunculate, umbellate cymes; sepals ovate, lanceolate, acute, pubescent; corolla funnel-shaped, ± 16mm long, 5-lobed, 5-plaited, lobes acute; stamens 5, filaments hairy at base; ovary 2-celled, hirsute, stigma globose, bilobed; capsules ±6 mm across, hirsute, seeds ± 4 mm long.

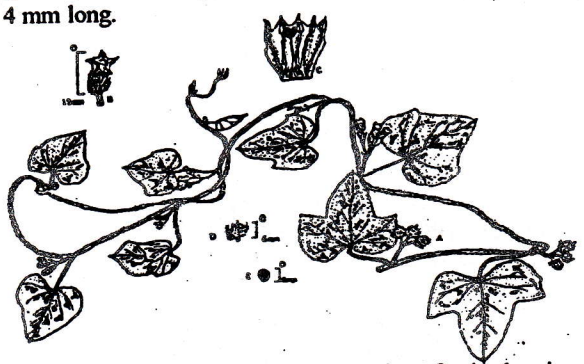

Fig. 2. *Ipomoea triloba* Linn. : A, portion of twig showing habit; B, flowers; C. Corolla opened to show stamens and pistil; O, Capsule with persistent calyx; E, Seed.

Occurrence : Common along the margins of canals
Fls. & Frs. : July-October
Specimens examined : J&K State, Jammu towards east, near Greater Kailash, *Bhellum* 6677.
Distribution : India : Gujrat, Rajasthan and Maharashtra; Pantropical; Native or America.

3. *Merremia hederacea* (Burm. f) Hallier f., Bot. Jahrb, **18** 118 : 1894; Ooststr in Blumea **3** : 302. 1939 & in Steenis, Fl. Males. Ser. 1, **4** : 441. 1953; Bennet, Fl. Howrah dist. 292. 1979; *Evolvulus hederaceus* Burm. f., Fl. Ind. 77.t. 30 f. 2. 1768; *Ipomoea Chryseids* Ker-Gawl. In Bot. Reg. t. 270. 1918; Clarke in Hooker f., FBI. **4** : 206. 1883; *Merremia convolvulacea* Dennst. Ex Hallier f., Bot. Jahrb. **16** : 552. 1893.

Annual climbing herbs; stem slender, glabrous or hairy, often muricate; leaves ovate, cordate, glabrous, entire, toothed or 3-lobed, 2.5-6 x 2-3.5 cm, petiole 1.5-5 cm long; Inflorescence 1-many flowered cymes; peduncle 1.5-8 cm long; bracts small caducous; sepals ± 5 mm long, apiculate, margin entire or toothed, glabrous, spreading in fruits; corolla pretty, yellow, campanulate, glabrous without, tube short, limb 5-plaited, mid petaline nerves 5, distinct, stamens 5, unequal, filaments filiform; stigma 2-lobed, globose; capsule ovoid ± 6 mm long, 8 mm wide, angular at top, depressed, 2-celled, 2-4 seeded; seeds 4 mm long, blackish brown, puberulous, trigynous.

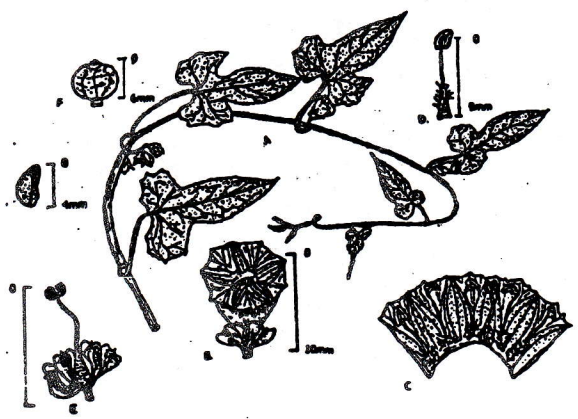

Fig.3. *Merremia hederacea (*Burm. f.) Hallier f. A, twig showing habit; B. flower; C, corolla opened to show stamens and pistil; D, stamens; E, pistil with persistent calyx; F, capsule; G, seed.

Occurrence : Rare at R.S. Pura, Climbing on shrubs
Fls. & Frs. : September-November
Specimens examined : Jammu and Kashmir, Jammu locality, Chakrohi (R. S. Pura) *Bhellum* BLB 6775
Distribution : Throughout India; Ceylon; Malaya; China; Australia and Tropical Africa.

Acknowledgements
The authors are grateful to Prof. A. K. Koul for going through the manuscript and to Prof. A. K. Wakhlu, Head, Department of Botany, for providing the necessary laboratory facilities.

References

1. Royle J F 1839, *Illustrations of the Botany and other branches of the natural history of the Himalayan Mountains and the flora of cashmere.* Vol. I & II W. N. Allen, London.
2. Hooker J D 1883, *Flora of British India,* Vol. IV Reeve and Co. Ltd. London.
3. Rao T A 1960, A Further contribution to the flora of Jammu and Kashmir State. *Bull. Bot. Surv. Ind.* **2** (2,4) 387-423.
4. Singh G and Kachroo P 1976, *Forest Flora of Srinagar and neighbourhood,* Bishen Singh Mahendra Pal Singh, Dehradun.
5. Kachroo P, Sapru B L and Dhar U 1977, *Flora of Ladakh,* Bishen Singh Mahendra Pal Singh, Dehradun.
6. Sharma B M and Kachroo P 1981, *Flora of Jammu and Plants of neighbourhood,* Vol. 1 Bishen Singh Mahendra Pal Singh, Dehradun.
7. Sharma B M and Jamwal P S 1988, *Flora of Upper Lidder Valley of Kashmir Himalaya,* Vol. I Scientific Publishers, Jodhpur.

8. Sharma B M and Jamwal P S 1998, *Flora of Upper Lidder Valley of Kashmir Himalaya,* Vol. II Scientific Publishers, Jodhpur.
9. Kapur S K and Sarin Y K 1990, *Flora of Trikuta Hills* (Shree Vaishno Devi Shrine) with special reference to the distribution pattern of minor forest products. Bishen Singh Mahendra Pal Singh, Dehradun.
10. Swami A and Gupta B K 1998, *Flora of Udhampur,* Bishen Singh Mahendra Pal Singh, Dehradun.
11. Stewart R R 1972, *Annotated Catalogue of vascular plants of West Pakistan and Kashmir.* Fakhri Printing Press, Karachi, Pakistan.
12. Santapau H and Henry A N 1973, A *Dictionary of flowering Plants in India,* PID (CSIR) - New Delhi.