



New Addition to the family Asteraceae in flora of Allahabad, Uttar Pradesh, India

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(Published by Research Trend, Website: www.biobulletin.com)

(Received 10 April 2016; Accepted 14 May 2016)

ABSTRACT: During the reinvestigations of family Asteraceae in Uttar Pradesh, we have collected and identified 70 species of 50 genera. Out of these three species viz. *Cichorium intybus*, *Elephantopus scaber* & *Glossocardia bosvallea* are collected from different localities of Allahabad district which are new additions to the flora of Allahabad. In these *Cichorium intybus* growing common while *Elephantopus scaber* and *Glossocardia bosvallea* are occasional in Allahabad district.

Keywords: Addition, three species, Family Asteraceae, Flora of Allahabad, Uttar Pradesh

INTRODUCTION

Allahabad is located between 24°47' N & 25°47' N latitude and 81°09' E & 82°21' E longitude. The district covers an area of 70.5 km² (120.07sq.km). The average maximum & minimum temperature 48°C-02°C respectively. The districts is bounded on East by Sant Ravidas Nagar & Varanasi, Weste by Kaushambi & state of M.P, North by

Jaunpur & Pratapgarh and South by Mirzapur. All this species have been given along with their current valid name, upto date citation, description, flowering & fruiting, habit, locality and specimen voucher number. Specimens (Fig.1, 2 & 3) were deposited in Duthie Herbarium, Department of Botany, University of Allahabad, Allahabad.



Fig. 1. *Cichorium intybus* L. Fig. 2. *Elephantopus scaber* L. Fig. 3. *Glossocardia bosvallea* (L. f.) DC.

ENUMERATION

Cichorium intybus L., Sp. Pl. 813. 1753; Hook. f., Fl. Brit. India 3:391. 1881; Duthie, Flora of Upper Gangetic Plain 1: 496. 1903; Maheshwari, Fl. of Delhi 188. 1963; Singh & Kachroo Forest Fl. of Srinagar 191. 1976; Oliver, Fl. of Tropical Africa 446. 1979; Sharma & Kachroo Fl. of Jammu 1: 200. 1981; Varma, Fl. of Bhagalpur 216. 1981; Lindley, Fl. Medica 470. 1985; Hajra, Rao, Singh & Uniyal, Fl. of India 12: 248. 1995; *Cichorium glabratum* (C. Presl) Arcang. Comp., Fl. Ital. 413. 1882.

Herbs, annual, erect, branched. Stem simple or branched up to 30- 80 cm long, glabrous, hairy, angled or somewhat grooved. Leaves variable, lower leaves oblong-lanceolate, pinnatifid, runcinate or dentate margin 5-20 cm, upper leaves cordate- amplexicaul at base, dentate, 5-15 cm. Heads usually terminal and axillary, solitary or clustered, 1-1.5 cm, peduncle slender glabrous. Involucral bract 2 seriate, outer bracts ovate-lanceolate, 10-13 mm; inner ones linear lanceolate, 12-14 mm. Corolla homomerous, ligulate bright blue, rarely white, 5 dentate, 1.5-2 cm long. Achene pale, smooth, truncate, 5-angular, 2-2.5 mm long. Pappus scales 2 mm long.

Flowering & Fruiting: February- April

Common: found as a weed in cultivated fields.

Locality: Meja, Allahabad: PKS 27143

Specimen examined: Hamirpur, S. Narain: 12482; Gonda, K. Lata: 19194; Faizabad, K. Lata: 19100; Gazipur, P. Kumar: 24246; Betula (M.P), A. Kumar: 50269

Elephantopus scaber L., Sp. Pl. 814. 1753; Hook. f., Fl. Brit. India 3:242. 1881; Duthie, Flora of Upper Gangetic Plain 1: 442. 1903; Fischer, Fl. of the Anaimalai Hills 99. 1921; Gamble, Fl. Pres. Madras 676(476). 1921 Nairne, The flowering plants of Western India 154. 1976; Raizada, Fl. of Mussoorie 1: 361. 1978; Oliver, Fl. of Tropical Africa 3: 299. 1979; Varma, Fl. of Bhagalpur 203. 1981; Manilal & Sivarajan, Fl. Calicut 149. 1982; Lindley, Fl. Medica 449. 1985; Verma, Balakrishnan & Dixit, Fl. of Madhya Pradesh 1:584. 1993. Hajra, Rao, Singh & Uniyal, Fl. of India 13: 333. 1995; *Scabiosa cochinchinensis* Lour., Fl. Cochinch. 68. 1790; *Asterocephalus cochinchinensis* Spreng, Syst. 1: 380. 1825.

Herbs, perennial, erect dichotomously branched. Stem simple or branched up to 30-60 cm high, glabrous, circular. Leaves variable, lower leaves oblong- oblanceolate, rosettes, serrate or dentate

margin, 5-25 cm long, upper leaves small, spatulate, serrate, 3-6 cm.

Heads terminal and axillary, numerous fascicle, 3-20 cm long, peduncles slender strigose. Involucral bracts 2- seriate, outer bracts broadly ovate cordate, 1-2 cm long; inner ones ovate 2-4 cm. Corolla homomerous, tubular, violet, 5- lobed, 5-7 mm long. Achene pubescent, smooth, 3-5 mm long. Pappus bristles, 5 mm long.

Flowering & Fruiting: October- February.

Occasional: found in sandy soil fields.

Locality: Sankargarh, Allahabad: PKS 27068

Specimen examined: Gorakhpur, K. Lata: 19333; Banda, B. K. Sinha: 6108; Mandla (M.P), J. Joseph: 13446; Dugli (M.P), D.M. Verma: 23649

Glossocardia bosvallea (L. f.) DC. in Wight, Contrib. Bot. India 19. 1834; Gamble, Fl. Pres. Madras 709 (499). 1921; Maheshwari, Fl. of Delhi 197. 1963; Nairne, The flowering plants of Western India 161. 1976; Verma, Balakrishnan & Dixit, Fl. of Madhya Pradesh 1:584. 1993. Hajra, Rao, Singh & Uniyal, Fl. of India 12:391. 1995; *Verbesina bosvallea* L. f., Suppl. Pl. 379. 1781; *Glossocardia linearifolia* Cass., Dict. Sci. Nat. 19: 62. 1821; Hook. f., Fl. Brit. India 3: 308. 1881; Duthie, Flora of Upper Gangetic Plain 1: 471. 1903.

Herbs, annual, erect or prostrate, branched. Stem branched, up to 15 cm long, glabrous, grooved. Leaves linear apiculate, pinnatisect, entire 1-5 cm. Heads terminal or axillary, solitary, 1-2 cm, peduncle linear glabrous. Involucral bracts 2-seriate, outer bract ovate-lanceolate, ca 4 mm long; inner ones lanceolate, ca 7 mm long. Corolla heteromerous, ligulate, yellow, 2- dentate, ca 4 mm long; tubular, yellow, 4- lobed, ca 3 mm long. Achenes narrowly oblong, 8-9 mm. Pappus stiff awns, 1mm long.

Flowering & Fruiting: August- October.

Occasional: found open dry places.

Locality: Sankargarh, Allahabad: PKS 27150

Specimen examined: Hamirpur, S. Narain: 12100; Lalitpur, V. Ranjan: 10621, 10117; Banda, B. K. Verma: 5203

DISCUSSION

Cichorium intybus growing as in escape fields in India (Hook. f., 1881), Flora of Upper Gangetic Plain (Duthie 1903), Flora of Delhi (Maheshwari 1963), Forest flora of Srinagar (Singh & Kachroo 1976), wastelands Flora of India (Hajra *et al.*, 1995) and *Elephantopus scaber* in Sal forest Flora of Mussoorie (Raizada & Saxena 1978), orchards

Flora of Bhagalpur (Varma 1981), dry elevated soil Flora Medica (Lindley 1985), mixed dry deciduous forests Flora of M.P (Verma *et al.*, 1993) while *Glossocardia bosvallea* growing in sandy & rocky tracts Flora of Delhi (Maheshwari 1963), dry places & open rocky soils Flora of M.P. (Verma *et al.*, 1993), open dry places amidst grasses Flora of India (Hajra *et al.*, 1995).

ACKNOWLEDGEMENT

Authors are thankful to the Head, Department of Botany, University of Allahabad for providing laboratory facilities.

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