



***Epilobium hirsutum* L. (Onagraceae): A New Distributional Report For Western Uttar Pradesh, India**

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Abstract: The paper presents a taxon namely *Epilobium hirsutum* L. a showy member of Onagraceae and a Eurasian species collected and identified for the first time from district Saharanpur, Western Uttar Pradesh.

Keywords: *Epilobium*, Eurasian, Western Uttar Pradesh.

Introduction

The genus *Epilobium* L. with more than 300 species occurs in all continents relatively at high altitudes. Clarke (1879) described 12 species under the genus *Epilobium* from East and North-East Himalaya. Raven (1962) recognized 37 species, which include 13 new taxa from the Himalayan region and recorded 31 taxa from India. In the 20th century Peter H. Raven (1976) has researched phylogeny, systematics and taxonomy of willow herbs extensively. Giri and Banerjee (1984) wrote identification and distributional note on a few species of *Epilobium*. In Western Himalayas *E. hirsutum* is found in mesotrophic grassland with *Dactylis glomerata* and *Urtica dioica*. The earliest collection records from north western India are from Wagil, Sind valley, Kurram valley, Astor, Jhelum valley from Jammu and Kashmir and between Chamba to Rakh from Chamba and Ganga valley from Tehri Garhwal and some specimen from the Himalayan region of Uttarakhand, growing in wet ground. Murty and Singh (1964) reported and collected few specimens from Meerut region near Ganga canal. During the survey of district Saharanpur authors reported seven sites of this species, covering an estimated 3325 km square area. Collected specimens were critically examined with relevant literature and identified with the help of DD herbarium and BSD herbarium Dehradun. Identified specimens have been deposited in DD herbarium Dehradun (Accession No. 164278 A & B).

Epilobium hirsutum Linnaeus, Sp. Pl. 347. 1753; Boiss., Fl. Or. 2: 746. 1872; Clarke in Hook. f., Fl. Brit. Ind. 2: 583. 1879; Raven, Bull. Brit. Mus. (Nat. Hist.) Bot. 2: 352. 1962; Raven, Notes Royal Bot. Gard. Edinburgh 24: 189. 1962; Raven in Rech.f., Fl. Iran. 7:7.

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Description

Annual, slightly woody 3-6 feet long high stem with glandular pubescent hairs and with long white hairs on stem, specific to (*hirsutum*) species name. The derivation of *Epilobium* is from the greek epi, upon, and lobos, a pod; the petals are born on a pod like ovary (Hyam and Pankhurst, 1995). The species name *hirsutum* from the Latin *hirsutus*, so *hirsutum* literally means hairy stem and leaves. Leaves cauline, opposite and alternate, dentate-serrulate, 20- 60 dentines on one side (edge or margin) of leaf. Leaves 4-8 cm long, 0.6- 0.8 mm wide, lanceolate, sessile, slightly cordate, mid-rib dominant, secondary nerves 7- 10 pairs. Flowers solitary axillary, pink, pedicel hardly 1 cm long or sometimes more long; ovary inferior; calyx 4, green, valvate, hirsute, heavy pubescent below, ovate lanceolate, lobes 5-6 mm long hardly reached to the corolla; corolla 4, pink, imbricate, 5-7 mm long, emarginate, clavate, 9-11 veins; stamens 8, 4 long, 4 short, attached near the base of calyx, stamens dorsifixed or basifixed, whitish yellow, short stamens attached below and long stamens attached upper side; style 1, yellowish white, 4-5 mm long, stigma 4, pubescent, cross shaped, swollen 2 mm long; fruit capsule, 2-6 cm long and hairy; seeds comose, 0.1-0.2 mm long, 0.5 mm wide, hairs hardly 5-8 mm long found near, sometime papillose; dispersal through air and water.

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Flowering: June- August

Fruiting: July-September

Distribution: Mediterranean region, Europe, Asia, Africa, Norway and temperate Himalayan regions

Specimen Examined: INDIA, Uttar Pradesh, Saharanpur District, Deoband (29.7000⁰ N and 77.6800⁰ E), 10.07.2012 Malik & Mohammad 164278 A (DD) and Talheri Bujurg, 15.07.2012 (29.7706⁰ N and 77.6623⁰ E) Mohammad & Malik 164278 B (DD); Duthie 12248 (DD), Astor Valley, Kashmir, 25.07.1892; Stewart 88830 (DD), Wagil, Sind Valley, Kashmir, 03.09.1940.

Ecological Notes

It is a native of Eurasia where it is found in moist waste ground of the Mediterranean region, Europe, Asia and Africa. It is reported as a nursery weed in Norway. In India this herb co-exists with *Mentha arvensis*, *Alternanthera hypocrateriformis* and *Pouzolzia indica*. All these species grow faster in summer and rainy seasons and all species require habitat with a pH of 5.5 or higher for seed germination.



b. Flower

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Fig. 1: *Epilobium hirsutum* L.: a. Habit;

Source of support: Nil

Conflict of interest: None Declared