

Argemone ochroleuca: A New Record For Muzaffarnagar District (U.P.)



Botany

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ABSTRACT

While inventorying the angiosperms of Muzaffarnagar district Uttar Pradesh, India, I came across an interesting collection of *Argemone ochroleuca* for the first time. After critical evaluation and studies, it has been proved to become a new record for Muzaffarnagar (Uttar Pradesh) which is given here with images.

Introduction

The district Muzaffarnagar is the western part of U.P. and lies in the upper Indo- gangetic plain. The whole area is fertile with sugarcane, wheat, and rice being the principal crops. It is one of the most fertile farming land in India. The district Muzaffarnagar lies in the south of Saharanpur and is located at 29° 28' N latitude and 77° 44' E longitude. Rainfall is the most important climatic factor which affects vegetation of this area. 80-90% rainfall occurs during monsoon season from mid June to mid September and temperature varies from very high to very low in summer and winter respectively. In the month of May and June maximum temperature shoots up to 45 °C and falls to a minimum up to 1 °C in December and January. The vegetation of this area is basically similar to that of the state U.P. and Upper Gangetic Plain, with variation due to its geographic and climatic features. During fields surveys and floristic study author collected thousands of plants and recorded 885 species. During field survey I collected an interesting collection of *Argemone ochroleuca* (Papaveraceae) which after critical evaluation and studies was found to be a new record for Muzaffarnagar (Uttar Pradesh) which is given here with images.

Material and Methods

In the course of investigation from 1995-1998 & 2010-2011, the entire district was frequently surveyed. Several attempts were made for collection and study of plants in different seasons. During field trips plants were collected from different localities like roadsides, gardens, parks, and cultivated lands of Sugarcane, Rice, Wheat, Jowar, etc. Efforts were made to collect specimens in flowering and fruiting stage and at the same time they were numbered with tags and collected in polythene bags. The collected plants were processed, preserved and mounted on herbarium sheets following the standard herbarium techniques (Jain and Rao, 1978). The dried specimens were identified by consulting different literatures (Hooker, 1876; Duthie, 1903-29; Kanjilal, 1028 and Babu, 1977). Besides dried sheets were also matched and confirmed with the DD Herbarium, FRI, Dehradun.

Description

Argemone ochroleuca Sweet Brit. Fl. Gard. 3:242. 1828; Maheshwari, Fl. Delhi 55. 1963; Murty & Singh in Sci. & Cult. 32 : 597 – 598. 1966; *A. Mexicana* Linn. Var. *ochroleuca* (Sweet) Lindl. Bot. Reg. 1843. 1830; *A. maxicana* subsp. *ochroleuca* Ownb. Mem.. Torrey Bot. Club. 21: 29 – 31. 1958.

Erect, white- tomentose, upto 60 cm tall, prickly herbs. Stems with yellow sap, branched. Leaves sessile, 10-20 cm long, half amplexicaul, sinuate pinnatifid, glaucous, prickly on nerves. Flowers sessile, white or light yellowish-white. Sepals 3, 1.2 cm long, with spines. Petals 6, obovate. Stamens upto 1 cm long, many. Carpels covered with erecto- patent spines. Stigma 5-lobed. Capsules ovate- lanceolate, covered with erecto- patent spines (Fig-1).



Fig-1 (a). Image of flower



Fig-1 (b) Image of fruits

Flowering & Fruiting: March- August.

Habitat & Ecology: This species is locally known as Satyanashi. This species has been seen along river banks, road sides and in agricultural fields of study area.

Distribution: It is native to Tropical America. This species is naturalized in Australia, Africa, Tropical Asia, New Zealand and in some oceanic islands. It is invasive in East Africa.

Notes: This species is toxic to animals and human being. When field is infested with this species, it became difficult to harvest a crop. This species must be eradicated and uprooted manually from crop field before flowering or fruiting stage. There is no use of this species in the study area.

Conclusion and Discussion

The history of taxonomic research of this area goes back hundreds of year when several workers like J. F. Duthie, J. F. Royle etc collected and described the plants of this region. Previously flora of Muzaffarnagar has been worked out by several workers (Gupta, 1961; Tayal and Bhasin, 1970; Malik, 2010). Our Universities can do excellent work in the selected areas in the neighbourhood of their headquarters (Santapau, 1958). Similar suggestions were made by at summer school in taxonomy and Botany, held at kodaikanal in 1962 and by some eminent worker (Subramanyam and Sreemadhavan, 1970). Keeping all this in mind an attempt has been made to study of flora District Muzaffarnagar. During fields surveys author collected thousands of plants and recorded 885 species. Of these *Argemone ochroleuca* proved to be a new record for this area. I hope this information would be helpful for Foresters, Environmentalists, Ecologists, Taxonomists, and the general public who are interested in the conservation of plant wealth of India.

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