



## ***IPHIGENIA PALLIDA* BAKER (COLCHICACEAE): NEW DISTRIBUTIONAL RECORD TO THE FLORA OF RAJASTHAN (INDIA)**

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In India, seven species of the genus *Iphigenia* exist, with six of them being endemic to the country. The genus is represented by two species in Rajasthan, with a third species, *Iphigenia pallida* Baker, being reported in this communication as a new addition to the Rajasthan flora. The species had not previously been documented in this area. *Senna tora* (L.) Roxb., *Hyptis suaveolens* (L.) Poit., *Physalis pruinosa* L., *Parthenium hysterophorus* L., and other invasive species pose the biggest threat to this plant. These invasive plants overshadow this species, develop rapidly, and occupy the plant's habitat. Brief description, key to the whole species, distribution, phenology and photographs are provided to facilitate identification.

**Keywords:** Colchicaceae, Endemic, Invasive, *Iphigenia*, and Rajasthan.

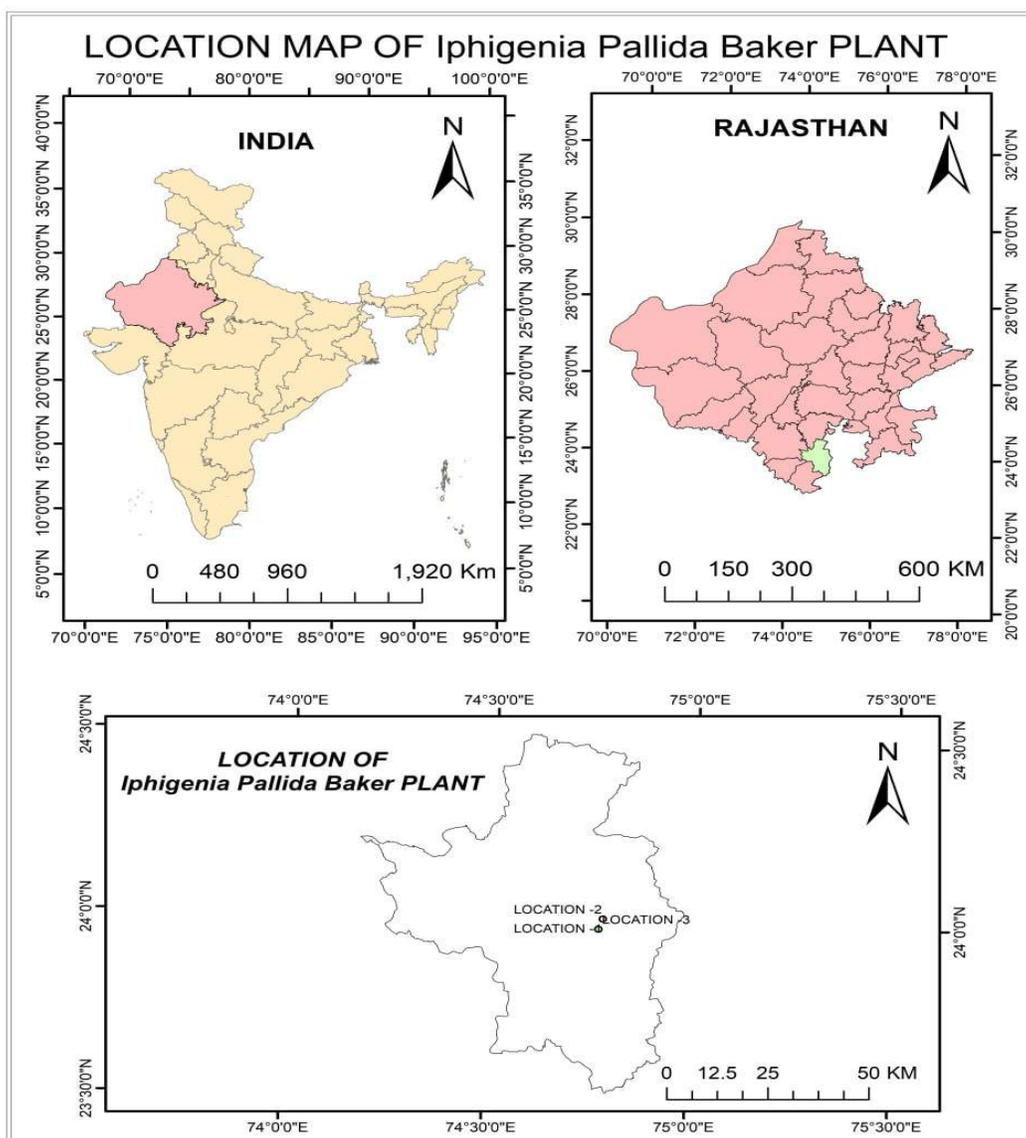
### **Introduction**

Rajasthan is the largest State of India and is situated between 23°3' and 30°12' N latitude and 69°30' and 78°17' E longitude. Pratapgarh is the 33<sup>rd</sup> district of the state of Rajasthan, India. The district was formed in 2008 and separated from the Banswara, Chittorgarh and Udaipur districts of Rajasthan. It is situated in the South-eastern part of Rajasthan, between 28°42'33" and 30°12'16" North latitudes and between 72°17'51" East longitudes. The district shares its borders with Banswara, Chittorgarh, Dungarpur and Banswara districts of the state, as well as Ratlam, Mandasaur, and Neemuch of Madhya Pradesh state. The district has vivid geography and a unique location. It lies at the junction of the Aravalli hills and the Malva plateau. It has high geographical and physical diversity, ranging from highly dense forests to hilly terrain and plateaus. It is the highest place in Rajasthan after Mount Abu. The main vegetation of the district is a dry deciduous type, and the majority of the forest areas are covered by

*Tectona grandis* L.f. (sagwan) and *Butea monosperma* (Lam.) Kuntze (plash) plants.

*Iphigenia* Kunth is a member of the Colchiaceae DC family, which was previously part of the Liliaceae s.l. (*sensu lato*). The family consists of perennial herbs with hypogynous flowers, six tepals and a subterranean corm or rhizome<sup>1</sup>. There are over 280 species in the family across 15 genera<sup>2</sup>. There are 13 species of *Iphigenia* Kunth in the world, and in Africa, Australia, and India<sup>2</sup>. In India, the genus is represented by seven species, viz., *I. indica*, *I. magnifica* Ansari & R.S. Rao, *I. mysorensis* Arekal & S.N. Ramaswamy, *I. pallida* Baker, *I. sahyadrica* Ansari & R.S. Rao, *I. stellata*, and *I. ratnagirica* S.M. Almeida & M.R. Almuida<sup>3</sup>. Of these, *I. indica* is widely distributed in tropical and subtropical Asia to Northern Australia, while the remaining five are endemic to India<sup>4</sup>.

In India, *Iphigenia indica* is commonly distributed, but the remaining species have restricted distribution and are reported from Andhra Pradesh, Karnataka,



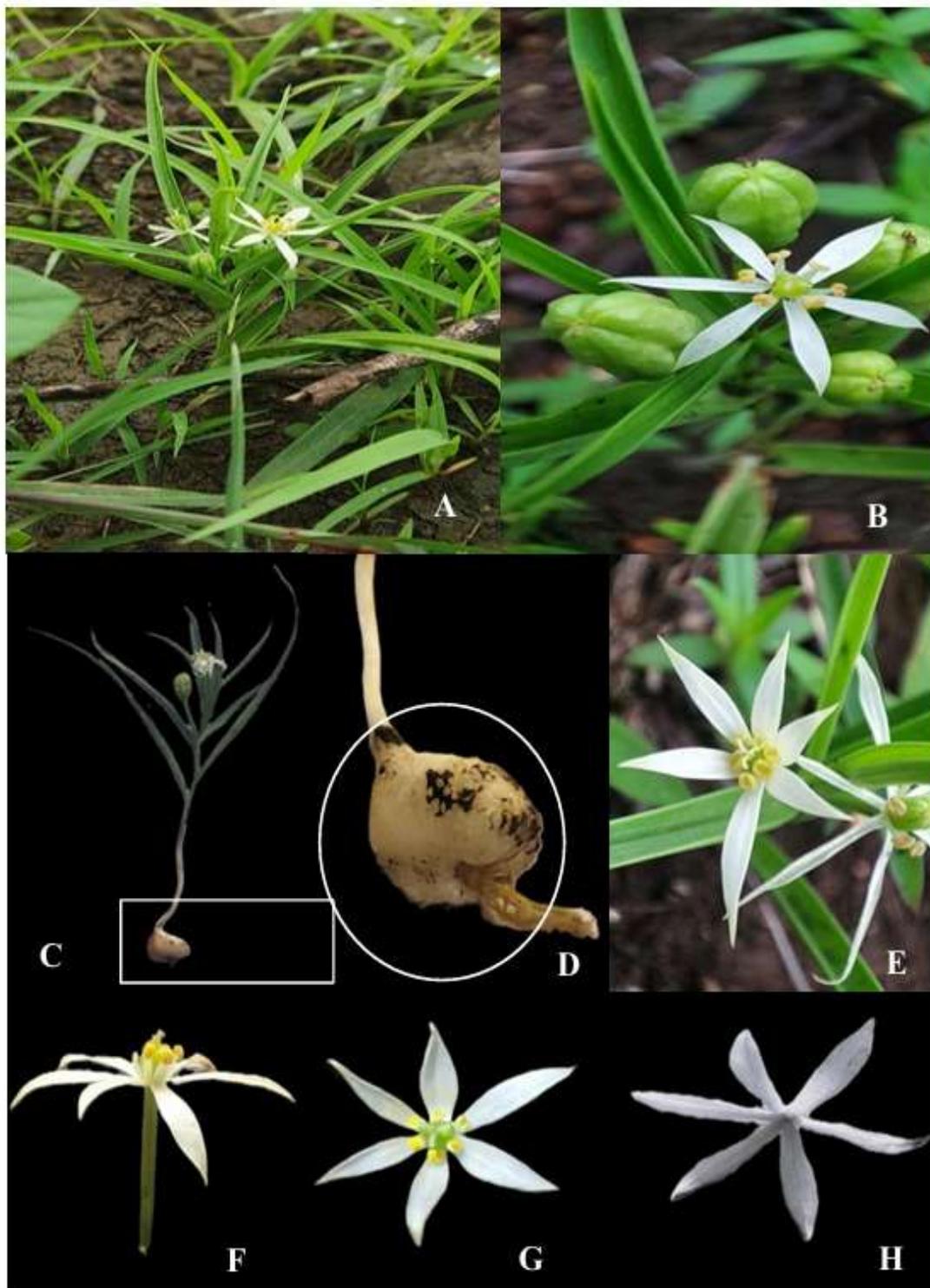
**Figure 1. Distribution map of *Iphigenia pallida* Baker in Pratapgarh district of Rajasthan.**

Kerala, Maharashtra, Rajasthan, Tamil Nadu, and Telangana<sup>4,5</sup>. Among them in Rajasthan, the genus is represented by two species, i.e. *I. indica*<sup>6</sup> and *I. magnifica*<sup>5</sup>. The species *I. pallida* has not been reported from Rajasthan; hence we have documented it.

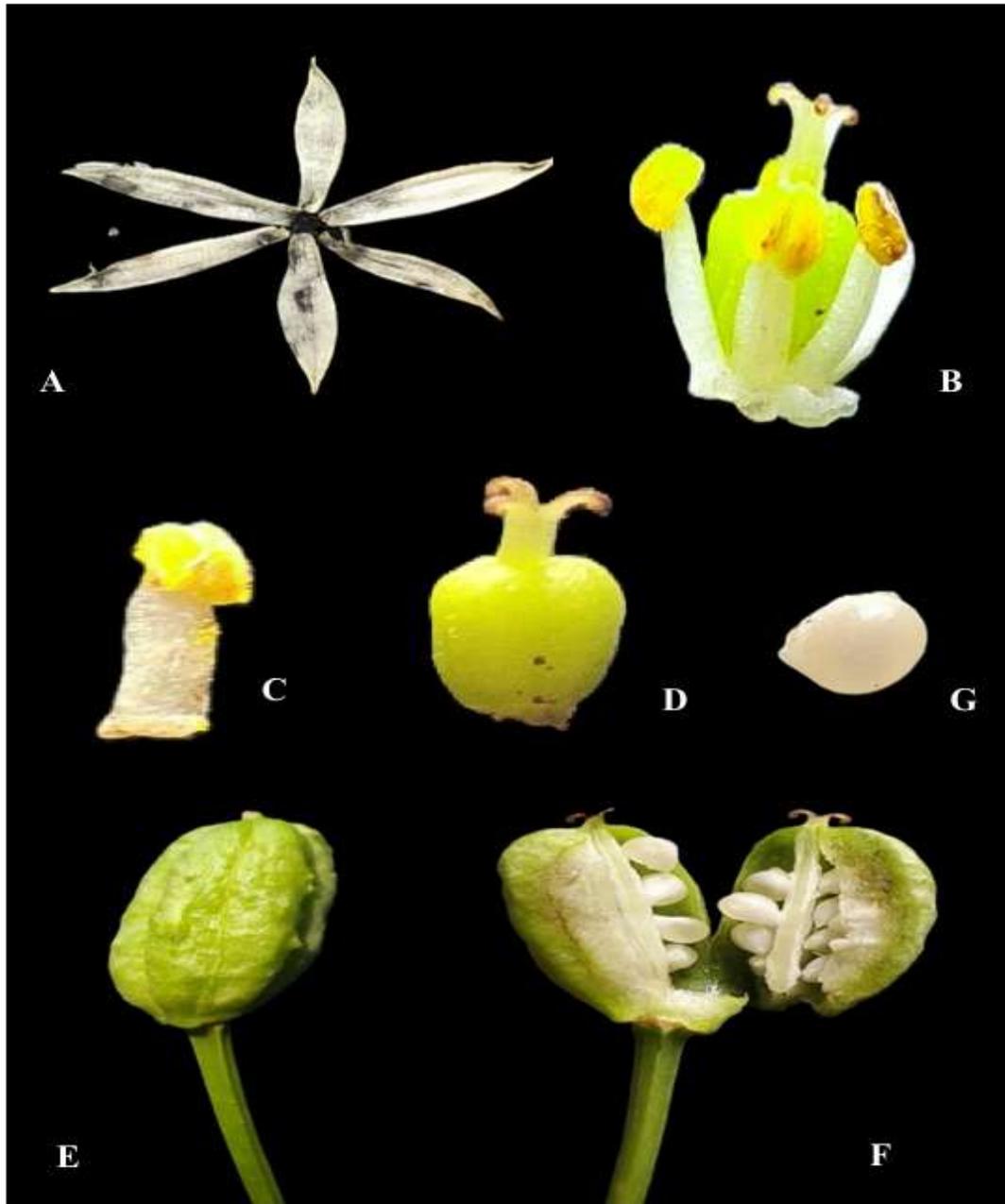
#### **Materials and Methods**

The study was conducted during rainy season. The live plant material was collected from the Pratapgarh district of

Rajasthan and identified with the help of several literatures, such as Digital Flora of Karnataka<sup>7</sup>. We observed that the species has not previously been documented from Rajasthan; thus, it is presented in this communication as a new addition to the Flora of Rajasthan. A voucher specimen of the plant has been stored in the Rajasthan University Herbaria in Jaipur (RUBL). Brief description, key to the whole species, distribution, phenology and photographs are provided to facilitate identification. The



**Figure 2.** *Iphigenia pallida* A. B. Habitat and Habit, C. Plant with corm, D. Corm, E. and F. Different view of Flower (Front and Side view), G. Tepals, H. Back view of Tepals.



**Figure 3.** *Iphigenia pallida* A. Tepals split opened, B. Androecium and Gynoecium C. Androecium, D. Gynoecium, E. Single fruit, F. Split of fruit, G. Seed.

area is the second highest place in Rajasthan and has a high rainfall. It is covered by a dry deciduous type of vegetation; the majority of the forest areas are covered by *Tectona grandis* L.f. (sagwan) and *Butea monosperma* (Lam.) Kuntze (plash) plants.

### Results and Discussion

#### (i) Taxonomic treatment:

*Iphigenia pallida* Baker in J. Linn. Soc. 17. 451. 1879; Hook.f., Fl. Brit. India 6 357. 1892; Reddy & Reddy, Fl. Telangana 3: 932. 2015<sup>8</sup>; Lakshmin & Prasad in

Lakshmin et al., (eds.), Fl. Karnataka (Monocot) 3: 317. 2019<sup>9</sup>.

Type: INDIA, Rajasthan, Pratapgarh District, Padmawati Vihar colony, (24.011208° N & 24.011258° N; 74.780216° E & 74.78018° E), (440.77±6.62 m & 497.68±4.81 m), Manohargarh, (23.982607° N & 74.770368° E) (Altitude 505.92±4.63 m), 13.07.2025 and 18.07.2025, Anoop Kumar specimen accession no. 21814 (holo RUBL) (Fig.1).

Perennial geophyte herbs, about 15-20 cm high. Corms tunicate with a pale brown sheath, 10-14 mm across. Leaves 7-12 × 0.3-0.6 cm, linear-lanceolate, acute at apex. Inflorescence is a 1-4 flowered corymb. Pedicels 9 mm long. Perianth white, tepals 6, oblanceolate, 8-10 mm long, acute and slightly recurved at apex. Stamens 6, 3-4 mm long; filaments 2-2.5 mm long, glabrous; anthers 0.6-0.8 mm long, yellowish. Ovary 2.5-3 mm long, greenish, oblong-obovate; style 3, ca. 1mm long, recurved in the upper half. Capsule oblong-obovoid, 7 mm long, many-seeded. Seeds are many, 0.8-1 mm across, brown (Fig. 2 & 3).

Flowering and Fruiting: June-August.

Distribution: Endemic to peninsular India.

Habitat: Found in open grassland.

**(ii) Conservation status:**

Currently, it is only known from the Pratapgarh district of Rajasthan. A good number of individuals were seen in this region. Extensive field surveys are required to assess the status of inhabitants

and individuals, hence evaluated here as Data Deficient (DD). The major threats to the plant are invasive species, i.e. *Senna tora* (L.) Roxb., *Hyptis suaveolens* (L.) Poit., *Physalis pruinosa* L. and *Parthenium hysterophorus* L., that overshadow the plant by vigorous growth.

Key to the allied species in Rajasthan

1a. Perianth purple; tepals linear-subulate or elliptic-linear:

2a. Stem branched; filaments glabrous..... *I. magnifica*

2b. Stems not branched; filaments hairy..... *I. indica*

1b. Perianth white; tepals oblanceolate..... *I. pallida*

The present study demonstrates that the examined material represents a distinct species within genus *Iphigenia*. Although this is superficially similar to *I. magnifica* and *I. indica*, it differs in having tepals white and oblanceolate. The species is restricted to plateau of Pratapgarh district of Rajasthan. Presently it is only reported from Pratapgarh district and it have small population size, thus needs for conservation attention. Hence this species is evaluated here as Data Deficient (DD). This finding contributes to improving the understanding of species diversity in *Iphigenia* genus and emphasizes the botanical significance of the Pratapgarh district.

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