



A Report on Collection of *Euphorbia prostrata* Aiton (Euphorbiaceae) from Rajasthan, India

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ABSTRACT: In Rajasthan, distribution of *Euphorbia prostrata* Aiton was found complicated. In the checklist of flora of India, its distribution was reported from Rajasthan but no any herbarium specimen could be collected from Rajasthan. During the survey of Indian desert, this species was recently collected from Sriganganagar district, along road side near Punjab border. So this paper reports its first herbarium collection from Rajasthan state and confirms its locality & occurrence from Rajasthan state. This study also deals with its distribution map, short description and photo-plates for easy identification.

Keywords: *Euphorbia prostrata*, Rajasthan, Euphorbiaceae, Indian desert.

INTRODUCTION

The genus *Euphorbia* belongs to family Euphorbiaceae, one of the largest family containing 229 genera worldwide (POWO, 2025). It contains 2060 accepted species globally (POWO, 2025), distributed in different parts of the world. In India, the family Euphorbiaceae is represented by 70 genera and 87 species of the genus *Euphorbia* are reported from different regions of the nation (Dash & Mao 2020). In Rajasthan, this genus is represented by 19 species (Shetty & Singh, 1991). The taxon, *Euphorbia prostrata* Aiton was first described by William Aiton in Hortus Kewensis in 1789. It is a native of American countries and introduced in several other countries of tropical and sub-tropical regions particularly in dry biomes. In India, this species is present in Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya Odisha, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh, West Bengal (Dash & Mao 2020; Balakrishnan *et al.*, 2012). However, no specimen has been cited from any literature or any herbaria of India showing its collection locality from any place of Rajasthan state (Bhandari, 1990; Shetty and Singh 1991; Kotiya *et al.*, 2020). So this paper reports its first herbarium collection from Rajasthan state and confirms its locality & occurrence in Rajasthan state.

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METHODOLOGY

During the field exploration survey of Indian desert, the authors collected samples of *Euphorbia* spp. having purple-red stem and capsules having ciliate hairs only on keels. The population was found along the roadside in Sriganganagar city area near Punjab border. The specimens were deposited at BSJO. Review of literatures like Milovic *et al.*, 2001; Balakrishnan *et al.*, 2012; Batori *et al.*, 2012; Kumar & Purohit 2015; Veljic *et al.*, 2017; Purohit *et al.*, 2019; Purohit, 2020(a, b), 2021; Purohit & Kulloli 2022; Upadhyay & Kapoor 2023; Purohit *et al.*, 2024 & 2025(a, b); Vladimirov *et al.*, 2024; and certain major herbaria (CAL, BSJO, K, RuBL, BLAT, BSI), revealed the identity of the specimens as *Euphorbia prostrata* Aiton.

RESULT AND DISCUSSION

Taxonomic treatment:

***Euphorbia prostrata* Aiton**, Hort. Kew. 2: 139. 1789; Hook.f., Fl. Brit. India 5: 266. 1887; Binojk. & N.P.Balacr., Genus *Euphorbia* in India 121, f. 7. 2010. *E. chamaesyce* auct. non L. 1753: Raizada, Suppl. Fl. Gangetic Plain 247. 1976. *Chamaesyce prostrata* (Aiton) Small, Fl. SE. U.S. 713. 1903 [Fig. 1 & 2].

Prostrate annual herb, branching from base, branches up to 25 cm long, terete, hairy, purplish-red in colour. Leaves opposite, ovate, obtuse, obliquely rounded at base, stipulate, serrulate to sub-entire, glabrous or sparsely pubescent, petiole

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1 mm. Cyathia single, axillary or 2 or 3 together, peduncles 2–3 mm, involucre campanulate, glands 4, purple. Male flowers many, usually shorter than involucre, anthers sub-globose; female lower exerted from involucre, stigma capitate. Capsule ovoid, 1.2 mm in diameter, hairy on keels, 3-angular; seeds 1 mm, four-angled with transverse ridges and grooves.

Fl. and fr.: May–November.

Specimen examined: India, Rajasthan, Sriganganagar, 29°55'20.52"N, 73°59'56.4"E, Alt.-

164m, 02.11.2023, C.S. Purohit & Amit Kumar 40935 (BSJO) [Fig. 2].

Distribution: India: Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya Odisha, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh, West Bengal (Dash & Mao 2020). Rajasthan-Sriganganagar (present study) [Fig. 3].

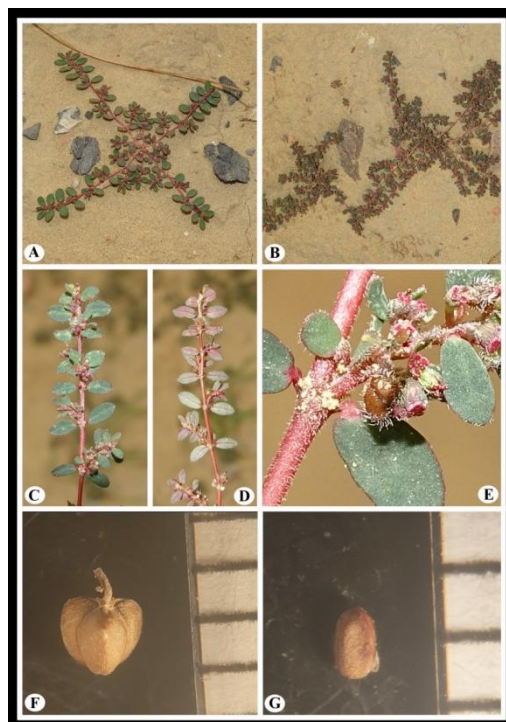


Fig. 1. *Euphorbia prostrata* Aiton: (A&B)– Habit of *E. prostrata*; (C)– Leaf arrangement; (D)– Inflorescence; (E)– Hairs on capsule keel; (F)– Close-up of Capsule; and (G)– Close-up of seed.



Fig. 2. Shows herbarium sheet of *Euphorbia prostrata* Aiton.

Habitat: The plant usually prefers dry habitat with sandy soil. It is widely spread in India and can be found in wastelands. In the present study the authors collected this species along the road side. The other species growing in association were i.e. *Abutilon bidentatum* Hochst. ex A. Rich. (Malvaceae; 38580), *Abutilon indicum* (L.) Sweet. (Malvaceae; 38579), *Convolvulus arvensis* L. (Convolvulaceae; 38587), *Delonix regia* (Bojer ex Hook.) Raf. (Fabaceae; 38581), *Eleusine indica* (L.) Gaertn. (Poaceae; 38585), *Fagonia schweinfurthii* (Hadidi) Hadidi ex Ghafoor (Zygophyllaceae; 40934), *Gossypium hirsutum* L. (Malvaceae; 38591), *Kochia indica* (Wight.) Scott. (Amaranthaceae; 38578), *Lablab purpureus* (L.) Sweet. (Fabaceae; 38586), *Luffa acutangula* (L.) Roxb. var. *amara* (Roxb.) Clarke (Cucurbitaceae; 38583), *Luffa cylindrica* (L.) Roem. (Cucurbitaceae; 38582), *Oligochaeta ramosa* (Roxb.) Wagenitz (Asteraceae; 40933), *Sida ovata* Forssk.

(Malvaceae; 40936), *Sorghum bicolor* (L.) Moench. (Poaceae; 38592), *Verbascum chinense* (L.) Santapau (Scrophulariaceae; 38590) and *Vitex negundo* L. (Verbenaceae; 40932).

CONCLUSIONS

During the field survey of Indian desert, authors collected plant species, *Euphorbia prostrata* Aiton from Sriganganagar district, Rajasthan. This species was observed in dry habitat near sandy plains which was exposed to open sun light. The present collection of this species from Sriganganagar district authenticates the occurrence of this species in Rajasthan and also reports its first herbarium collection for flora of Rajasthan and Indian desert. Authors suggest further field investigations to disclose its possible distribution in Rajasthan.

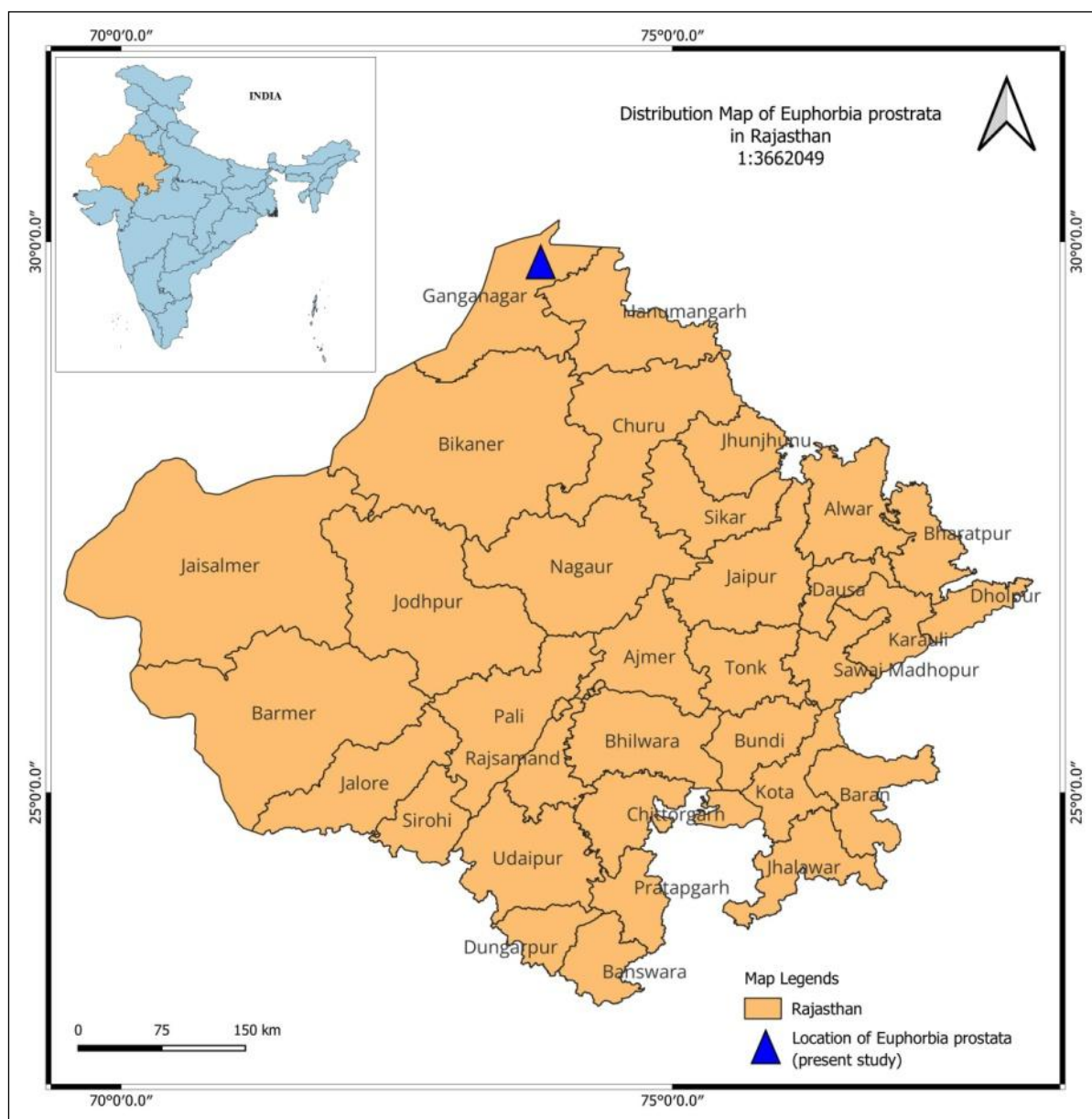


Fig. 3. Shows distribution map of *Euphorbia prostrata* Aiton in Rajasthan.

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Conflict of Interest. None.

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