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A Report on Collection of *Lantana indica* Roxb. and *Leucas lavandulifolia* Sm. from Rajasthan, India

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ABSTRACT: In Rajasthan, distribution of *Lantana indica* Roxb. and *Leucas lavandulifolia* Sm. were found complicated. In a checklist of flora of Rajasthan, their distribution were reported without mentioning any specific location of the collection and were considered under doubtful taxon and no herbarium specimen could be collected from Rajasthan. During the survey of Indian desert, we collected both species from Sikar district, Rajasthan. The purpose of this study is to indicate distribution in the state. In the present communication, a distribution map, short description and photo-plates are provided for easy identification.

Keywords: *Lantana indica*, *Leucas lavandulifolia*, addition, Flora, Desert, Rajasthan.

INTRODUCTION

Rajasthan is a land locked state of India, lying towards north-west of the nation. It also contains around 87 percent of the Great Indian Desert, a vast area of arid and semi arid regions. Many pioneer studies on the floristic account of this region have been done. Initial works were carried out by Duthie (1888); Blatter and Hallberg (1918–21); Sankhla (1951). The other two most pioneer works were carried out by Singh and Singh. (2006); (Biodiversity of Desert National Park) and Bhandari (1990) (Flora of Indian Desert). The other eminent work on Rajasthan floral wealth was done by Shetty and Singh (1987-1993) in the form of "Flora of Rajasthan" in three volumes. Some other publications on desertic plants include Ramachandra Rao (1941); Nair and Joshi (1957); Puri and Jain (1960); Gupta and Bhandari (1965); Meena (2000); Indliya *et al*. (2024) etc.

Lantana indica Roxb. and *Leucas lavandulifolia* Sm. are lesser known species of Rajasthan. *Lantana indica* was first described by Roxberg in a Catalogue of the Plants Growing in the Honorable East India Company's Botanical Garden at Calcutta, Serampore 1832. *Leucas lavandulifolia* was first described by Smith, James Edward in Cyclopaedia, The Universal Dictionary of Arts, Sciences and Literature by Abraham Rees, London (1812). Both species have been reported from several states of India (Dash & Mao 2020). In Rajasthan, both the species have been placed under doubtful taxon since there is no specimen collection of these species (Shetty & Singh 1991; Kotiya *et al.*, 2020). During our study, we collected both the species from Sikar district, Rajasthan. Both species were observed near sandy plains in degraded forest land which was exposed to open sun light. Hence, the present collection of these species from Sikar district authenticates the occurrence of the taxa in Rajasthan. A short description of both species, a note on distribution and photographs of the habitats and flowers (Fig. 1) are given for easy identification.

METHODOLOGY

During the plant exploration tour to Indian desert, the authors collected specimens of *Lantana* and *Leucas* at two different locations of Sikar. The specimens were preserved and herbarium sheets were deposited in BSJO. After a detailed scrutiny of literatures (Pandey *et al*., 1983; Bhandari, 1990; Shetty & Singh, 1991; Turner, 1995; Khanman and Abul Hassan 2005; Pandey and Dilwakar 2008; Pasha and Uddin 2013; Kumar & Purohit 2015; Kumar *et al.*, 2017; Deng *et al*., 2020; Purohit, 2020, 2021, 2025; Rajbhandari *et al.*, 2022; Purohit *et al.*, 2020a & b, 2023, 2024, 2025; Ritu *et al.*, 2024) and major herbaria (BSJO, BSD, BSA, CAL, DCH, RuBL, R, BLAT) these species were identified as *Lantana indica* Roxb. and *Leucas lavandulifolia* Sm.

RESULT AND DISCUSSION

(1) Lantana indica Roxb. in Fl. Ind., ed. 3: 89 1832., *Lantana alba* sensu Schauer in DC., Prodr. 11: 608. 1874. non Mill., 1768.

Erect, branched shrub, 1–3 m tall, hairy. Leaves opposite, ovate to lanceolate, 2.5–7 × 1–3.5 cm, thick, margin crenate-serrate, acute at apex; petiole short, scabrid above, pubescent below. Spikes oval to ovoid, cylindrical, 2–4 × 1–2 cm, pedunculate peduncles

longer than leaves, axillary. Bracts 4–9 × 3–6 mm, ovate, acuminate, pubescent. Flowers 3–5 mm across, white with yellowish tube. Calyx 7–9 mm long, pubescent. Corolla 9–14 mm long, 4 lobed, tube as long as the calyx, pubescent outside. Drupe 2.5–5.5 mm in diameter, glabrous, sub-globose, purple with a 2-celled stone, having 1 seed in each cell (Fig. 1: A, B, C).

(1a) ***Flowering & Fruiting:*** July – October.

(1b) ***Specimens Examined:*** Rajasthan, Sikar, Harshnath Parvat, 22.10.2023, C.S. Purohit & Amit Kumar, 36531 (BSJO).

(1c) ***Habitat:*** It generally prefers degraded lands, forest edges and grasslands. In the present study it was collected from the Harshnath hill, Sikar at an altitude of about 812.5 m along with some common occurring species like *Acanthospermum hispidum* DC. (36512); *Achyranthes aspera* L. (36530); *Anogeissus pendula* Edgew. (36532); *Aristida adscensionis* L. (36518); *Arthraxon lancifolius* (Trin.) Hochst. (36529); *Blainvillea acmella* (L.) Philipson (36553); *Cassia fistula* L. (36535); *Cenchrus pennisetiformis* Hochst. & Steud. ex Steud. (36522); *Cenchrus prieurii* (Kunth) Maire (36509); *Chamaecrista pumila* (Lam.) V.Singh (36551); *Chloris dolichostachya* Lag. (36523); *Corchoru aestuans* L. (36510): *Digitaria pennata* (Hochst.) T.Cooke (36546); *Dyerophytum indicum* (Gibs. ex Wt.) O. Ktze (36542); *Enneapogon desvauxii* P.Beauv. (36516); *Enteropogon prieurii* (Kunth) Clayton (36519); *Euphorbia chamaesyce* L. (36544); *Euphorbia hirta* L. (36507); *Evolvulus alsinoides* (L.) L. (36533); *Indigofera cordifolia* B.Heyne ex Roth (36513); *Indigofera linnaei* Ali (36536); *Ipomoea obscura* (L.) Ker Gawl. (36550); *Melanocenchris jacquemontii* Jaub. & Spach (36549); *Pavonia odorata* Willd. (36508); *Physalis minima* L. (36534); *Portulaca pilosa* L. (36552); *Rhynchosia minima* (L.) DC. (36524); *Setaria verticillata* (L.) P.Beauv. (36505); *Solanum virginianum* L. (36511); *Tetrapogon tenellus* (J.Koenig ex Roxb.) Chiov. (36539); *Triumfetta rotundifolia* Lam. (36545); *Vernonia cinerea* (L.) Less. (36514); *Vigna trilobata* (L.) Verdc. (36540) and *Zornia gibbosa* Span. (36527).

(1d) ***Note:*** Kotiya *et al.* (2020) reported this species from Rajasthan without mentioning any herbarium collection and location. The presence of this species in Rajasthan was doubtful.

(2) Leucas lavandulifolia Sm. in A.Rees, Cycl. 20: 2. 1812., *Leonurus indicus* L., syst. Nat. ed. 10, 2: 1101. 1759.

Erect, small herbs, up to 1 m tall, much branched from base, pubescent. Stems slender, much hairy. Petiole small; leaf blade linear to oblong, 2.0–6.5 × 1.0–1.4 cm, opposite, pubescent, base cuneate-attenuate, margin entire and undulate-serrate at tip, obtuse at apex. Verticillasters, many flowered, 1.3–2.8 cm in diameter; bracts linear, shorter than calyx tube, apex spinescent. Calyx obovoid, ca. 0.6 mm, pubescent outside, glabrous except for apex inside, veins inconspicuous, mouth oblique; teeth irregular, upper tooth largest. Corolla white, ca. 1.8 cm; tube ca. 8 mm, villous near enlarged throat outside, slightly villous annulate inside; lower lip horizontal, villous outside, glabrous inside, lateral lobes small. Nutlets brown, globose to ovoid (Fig. 1: D, E, F).

(2a) ***Flowering & Fruiting:*** September – October.

(2b) ***Specimens Examined:*** Andaman and Nicobars Islands, Hut Bay, Little Andaman, 05-05-1975, N. Bhargava 2372 (PBL); Andhra Pradesh, Seltigunta, 01-10-1983, A. Madhusudhana Rao, 151 (BSID); Rajasthan, Sikar, Tapkeshwar Dham, 23.10.2023, C.S. Purohit & Amit Kumar, 38231 (BSJO).

(2c) ***Habitat:*** It was found along the roadside in degraded lands near Tapkeshwar temple, Sikar, along with some common occurring species like *Aegle marmelos* (L.) Corr. (CSP 38229), *Aloe vera* L. (CSP 38227), *Arthraxon lancifolius* (Trin.) Hochst. (CSP 38235), *Echinochloa colonum* (L.) Link., *Guazuma ulmifolia* Lam. (CSP 38228), *Lindenbergia indica* (L.) Vatke. (CSP 38231), *Paspalum distichum* L. (CSP 38230), *Paspalum vaginatum* Sw. (CSP 38234) and *Verbascum chinense* (L.) Santapau.

(2d) ***Note:*** Nair & Malhotra (1961) reported this species from Lohargal based on his collection N.C. Nair 2048 and deposited in BSD. The presence of this species in Rajasthan was listed by Shetty & Singh (1991); Kotiya *et al.* (2020) stating that "the occurrence of this species in present day Rajasthan was uncertain and reported this species under doubtful taxa".

(3) Distribution of both species: *Leucas lavandulifolia* Sm. is primarily distributed in Indian sub-continent, China South-Central, China Southeast, East Himalaya, Jawa, Maluku, New Guinea, Philippines, Sulawesi, and Thailand (POWO, 2024). *Lantana indica* Roxb. is found in Afghanistan, Assam, Bangladesh, India, Myanmar, Nepal, Pakistan, Sri Lanka, Thailand and West Himalaya (POWO, 2024). In India, both the species are found almost throughout the country. In Rajasthan, these species were found in the sandy soil in degraded lands in Sikar (Fig. 2).

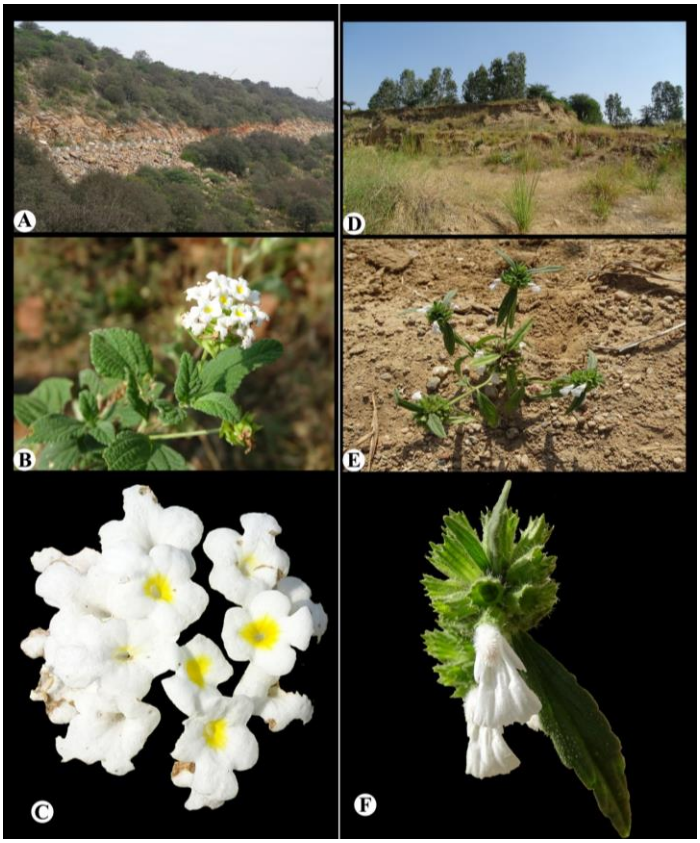

Fig. 1. *Lantana indica* Roxb.: (A): Habitat, (B) Inflorescence, (C); Close-up of Flower; *Leucas lavandulifolia* Sm. (D): Habitat, (E): Whole plant and (F): Close-up of Flower.

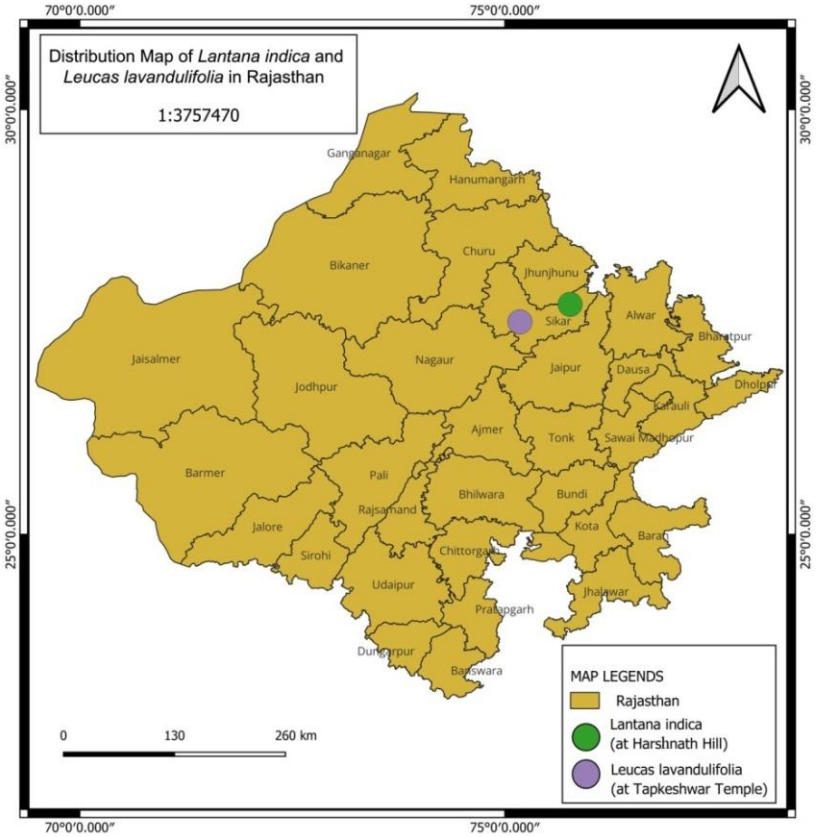

Fig. 2. Shows distribution map of *Lantana indica* Roxb. and *Leucas lavandulifolia* Sm.

CONCLUSIONS

During the field survey of Indian desert, authors collected both species i.e. *Lantana indica* Roxb. and *Leucas lavandulifolia* Sm. from Sikar district, Rajasthan. Both species were observed near sandy plains in degraded forest land which was exposed to open sun light. Hence, the present collection of these species from Sikar district authenticates the occurrence of two taxa in Rajasthan and also additions for flora of Rajasthan and Indian desert. Further field investigations are needed to disclose their possible distribution in Rajasthan.

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Conflict of Interest. None.

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