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A Note on Range Extension of *Mazus surculosus* D. Don from Indian Desert and Addition for Flora of Rajasthan, India

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ABSTRACT: *Mazus surculosus* D. Don is a small sized herb distributed mainly in North and North Eastern India. The present study deals with range extension of *Mazus surculosus* D. Don to Rajasthan from Sikar district and addition for flora of Rajasthan. Photographs, herbarium sheet, description and habitat of the species are discussed here for its easy identification.

Keywords: Mazus surculosus, addition, flora, Rajasthan, Indian desert.

INTRODUCTION

The Indian desert lies in the western India and includes a vast area of around 170,000 km^2 (66,000 sq.mi.), expanding from Gujarat and Rajasthan upto Punjab and Haryana. It is bounded on the west by the irrigated Indus River plain, on the north and northeast by the Punjab Plain, on the southeast by the Aravalli Range, and on the south by the Rann of Kachchh. This region receives a little rainfall and remains dry throughout the year. The average temperature in the Indian desert ranges between 75–70 degree Celsius in summers and 39–50 degrees Celsius in winters having warm days and cooler nights. This desert experiences a subtropical desert climate with high pressure and strong winds. Inspite of harsh climatic and xerophytic conditions, this region harbours several plant, animal and birds species.

Several publications have been made dealing the floristic account of Indian desert, among which the 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 comprehensive work on the Indian desert floral wealth was done by Shetty and Singh (1991) 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, 1962; Gupta and Bhandari 1965; Meena, 2000; Purohit and Sharma 2006; Sharma & Purohit 2013; Kumar & Purohit 2015; Purohit, 2019; Purohit *et al.*, 2019; Purohit, 2020a, 2020b, 2020c, 2020d; Purohit *et al.*, 2020a, 2020b; Purohit, 2021, 2024, 2025; Indliya and Kumawat 2024; Purohit *et al.*, 2023, 2024, 2025; Ritu *et al.*, 2024; Purohit & Meena 2025) etc. have contributed to the flora of Indian desert of Rajasthan.

The genus *Mazus* was first described by Loureiro, Joao de in Flora cochinchinensis (1790). It contains 41 accepted species worldwide (POWO, 2025) and 05 species in India (Dash & Mao 2020). *Mazus surculosus* D. Don, belonging to family Scrophulariaceae, has been reported from Arunachal Pradesh, Himachal Pradesh, Jammu and Kashmir, Manipur, Punjab, Sikkim, Uttarakhand and West Bengal (Das & Mao 2020). This is the first time that this species has been found from Indian desert, Rajasthan.

METHODOLOGY

During the floristic survey of Indian desert, the authors noticed a population of *Mazus* species, different from *Mazus pumilus* (Burm.f.) Steenis. Voucher specimens were collected and preserved in BSJO. After detailed scrutiny of available literatures (Hooker, 1890; Blatter and Halberg 1921; Pandey *et al.*, 1983; Bhandari, 1990; Shetty & Singh 1991; Wu & Raven 1998; Grierson and Long 2001; Pusalkar & Singh 2012) and major herbaria (CAL, RRLH, M, BSJO, BSA, RUBL, JAC, BLAT, DCH), the specimen was identified as *Mazus surculosus* D.Don.

RESULT AND DISCUSSION

Mazussurculosus D. Don, Prodr. in Fl. Nepal. 87. 1825.

Herbs, upto 9 cm tall, stoloniferous, sparsely white villous. Stems short; stolons slender, internodes long. Basal leaves rosulate; hairy, lamina spathulate to obovate, 2–7 cm including petiole, tapering at base, margin crenate, obtuse at apex. Caulineleaves smaller, opposite, petiolate; leaf blade obovate. Flowers bluish white, in terminal racemes, bracteole smaller than pedicel. Pedicel 15–18 mm long.Calyx tube campanulate, 10–12 mm; 5–lobed, lobes ⅓ as long as calyx, ciliate, broadly ovate. Corolla bilabiate, twice the calyx; upper lip 2 lobed, 4–5 mm; lower lip 3 lobed, 7–10 mm long, spreading, larger than upper lip; middle lobe ovate and longer than lateral lobes. Stamen 4. Capsule ovoid, ca. 4–6 mm long. Seeds small, many (Fig. 1).

Flowering & Fruiting: Jun-Oct.

Specimens Examined*:* Rajasthan, Sikar, Kaledi Berry, 27˚45′33.38″N, 75˚14′16.76″E, Alt.- 411m, 24.10.2023, *C.S. Purohit & Amit Kumar 38248* (BSJO) [Fig. 2 & 3].

Distribution: Bhutan, China, Nepal and Pakistan. In India: Arunachal Pradesh, Himachal Pradesh, Jammu & Kashmir, Manipur, Punjab, Sikkim, Uttarakhand, West Bengal (Dash & Mao 2020) and Rajasthan (Sikar, present study) [Fig. 4].

Fig. 1. Shows plant *Mazus surculosus* D. Don.

Fig. 2. Herbarium sheet of *Mazus surculosus* D.Don.

Fig. 3. Habitat location of *Mazus surculosus* D.Don.

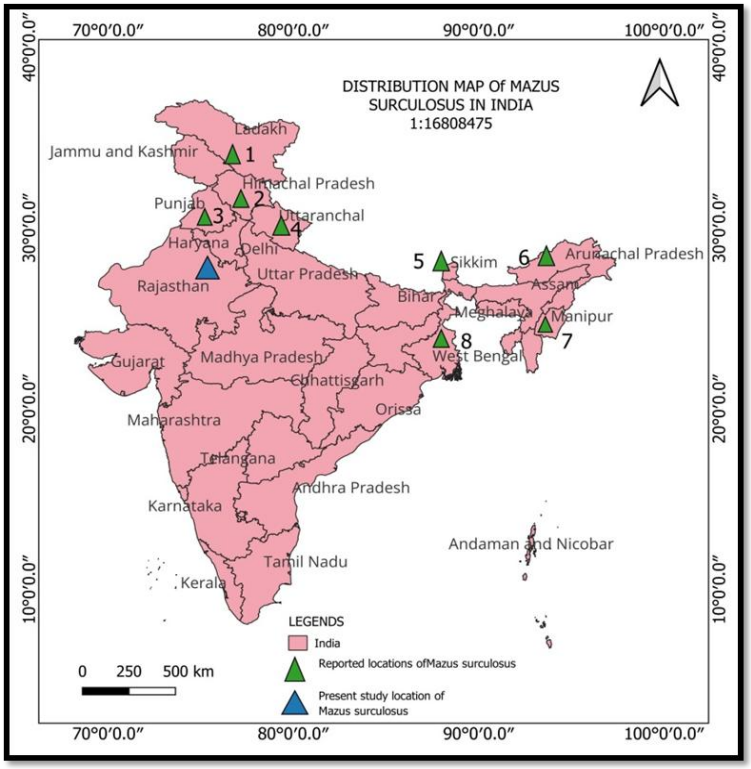

Fig. 4. Shows distribution of *Mazus surculosus* D. Don in India.

Habitat: The plant prefers marshy places or water logged regions along the road side and fields. In the present study the plant was located in open grassland near along the road in Kaledi Berry in Sikar district at an altitude of about 812.5 m along with some common occurring species like *Cenchrus purpureus* (Schumach.) Morrone (Poaceae; 38243); *Chloris gayana* Kunth. (Poaceae; 38246); *Clerodendrum phlomidis* L.f. (Lamiaceae; 38242); *Eleusine indica* (L.) Gaertn. (Poaceae; 38258); *Eragrostis amabilis* (L.) Wight &Arn. (Poaceae; 38249); *Erigeron bonariensis*L. (Asteraceae; 38250); *Euphorbia jodhpurensis* Blatt. & Hallb. (Euphorbiaceae; 38254); *Moringa oleifera* Lam. (Moringaceae; 38245); *Nyctanthes arbor-tristis* L. (Oleaceae; 38253); *Portulaca oleracea* L. (Portulacaceae; 38257); *Solanum nigrum* L. (Solanaceae; 38244), etc.

Conservation Status: *Mazus surculosus* D. Don has not yet been assessed on the IUCN criteria.

CONCLUSIONS

Mazus surculosus D. Don has been discussed here with its photo plates, keys for identification and habitat. This is the first instance that this species has been reported its extended distribution from the Indian desert and addition for flora of Rajasthan. Further exploration surveys are needed to disclose its more new locations in the arid regions. Also, IUCN assessment of this species is essential to understand its present conservation status.

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Conflict of Interest. None.

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