

# Notes on the Taxonomy and Distribution of the Desert Thorn Apple *Datura discolor* (Solanaceae) in India

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## रेगिस्तान का कंटिला सेब – दतूरा डिस्कलर (सोलेनेसी) के भारत में वितरण एवं वर्गिकी पर टिप्पणी

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### सारांश

दतूरा डिस्कलर बर्नह (सोलेनेसी) जाति को मूलतः भारत से वर्णित किया गया है और यह दक्षिण-पश्चिम संयुक्त राज्य अमेरिका, उत्तरी मेक्सिको एवं करेबियन द्वीप मूल का पौधा है। भारत में इसे अभी तक केवल दक्षिणी पठारी क्षेत्र में कर्नाटक से ही अभिलेखित किया गया था, इसे अब प्रथम बार आंध्र प्रदेश के तटीय क्षेत्र से संग्रहित किया गया है। प्रस्तुत पोद्य पत्र में इसके सम्पूर्ण वर्णन, छाया चित्रण के साथ उपयुक्त वर्गिकी टिप्पणी भी दी गई है।

### ABSTRACT

*Datura discolor* Bernh. (Solanaceae), a species originally described from India and native to south-west of the USA, northern Mexico and Caribbean Islands, which was hitherto recorded only from western peninsula (Karnataka), is reported for the first time from the coastal region of Andhra Pradesh. Detailed description, photo plate and relevant notes are provided.

**KEY WORDS:** Andhra Pradesh, *Datura*, new distributional record, Peninsular India, Solanaceae

### INTRODUCTION

The genus *Datura* L. native to Mexico, southwestern USA and northern Central America, represented by 14 species (POWO, 2019) and widely naturalized many parts of the world (Luna-Cavazos & Bye, 2011). In India, it is represented by 6 species viz., *D. discolor* Bernh., *D. ferox* L., *D. innoxia* Mill., *D. metel* L., *D. quercifolia* Kunth and *D. stramonium* L. (Kumbhalkar & Nandikar, 2017) distributed in different environmental conditions all over the country either in cultivation or naturalized.

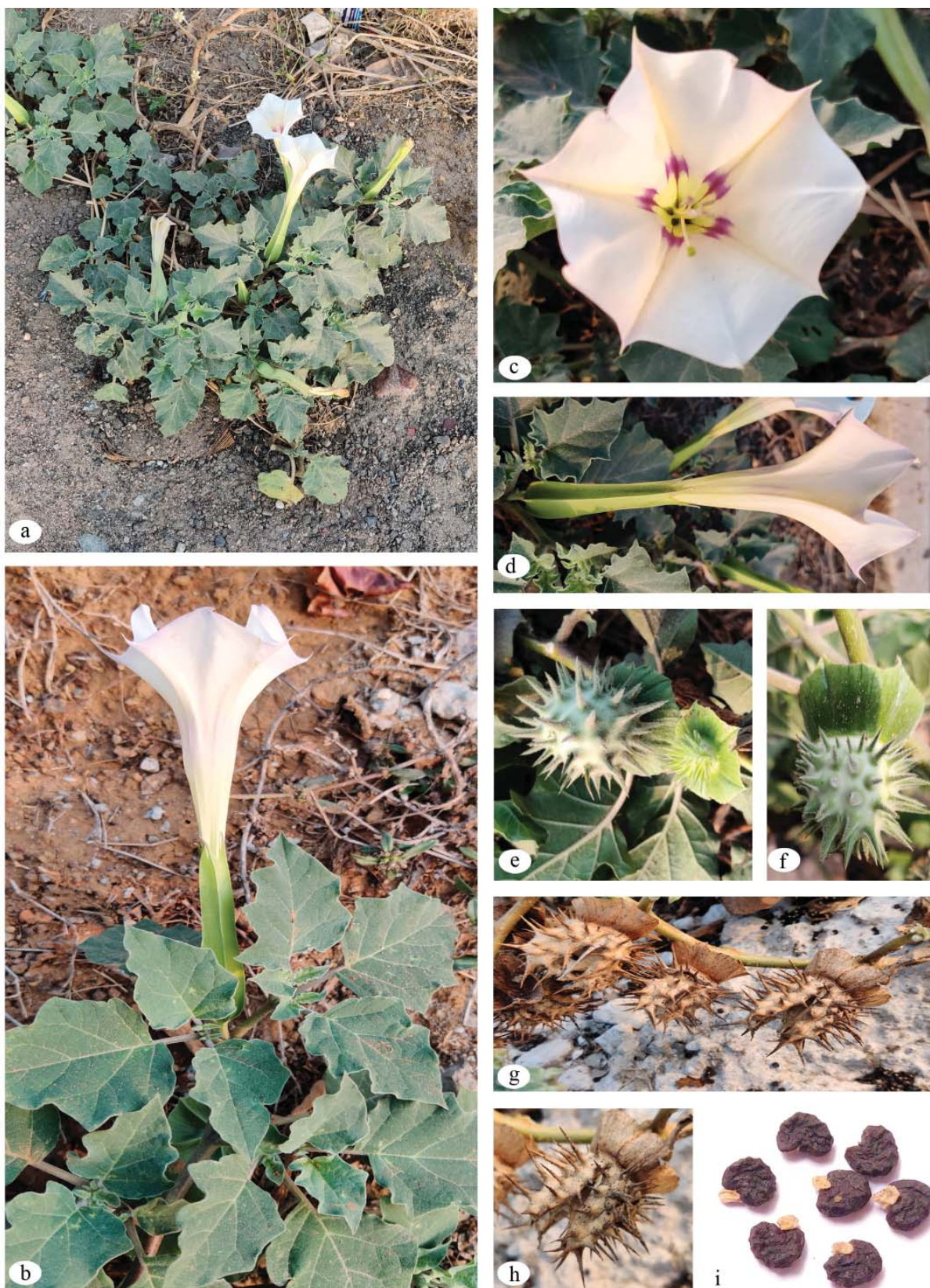
While exploring the flora of Srikakulam District in Andhra Pradesh, the authors collected an interesting *Datura* species in flower and fruit, which was later identified as *D. discolor* Bernh. Scrutiny of literature revealed that the species was collected from western region of the India and described by Bernhardt in 1833. After the type collection, in lapse of 183 years the species was collected in 2016 from western peninsula (Kumbhalkar & Nandikar, 2017).

The present collection from coastal Andhra Pradesh is noteworthy and confirms its extended distribution from western to eastern peninsula. A detailed description with photographs is provided to facilitate easy identification.

### TAXONOMIC TREATMENT

***Datura discolor*** Bernh. in Neues J. Pharm. Aerzte 26: 149. 1833; Kumbhalkar & Nandikar in Curr. Sci. 113 (5): 855-856. 2017. *Datura thomaslii* Torr. in Pacif. Railr. Rep. Parke, Bot. 5: 362. 1857. (Fig. 1).

Annual herb with spreading branches, up to 50 cm high; stem light purplish green, terete, dense pubescent on younger parts, sparsely pubescent or glabrous on older parts. Leaves simple, alternate, sub-opposite at apex; petiole 1-3 cm long; lamina deltoid to apparently pedate, 3-7 × 5-9 cm, oblique – unequal at base, sinuate to dentate along margin, acuminate at apex, glabrescent above, dense pubescent (specially on nerves) beneath,



**Fig. 1.** *Datura discolor* Bernh. **a.** Habit; **b.** Flowering branch; **c-d.** Flower top and side view; **e-h.** Young and matured capsules; **i.** Seeds.

rectipinnate, lateral nerves 4-5 per side. Flowers white, solitary, from the fork of branches; pedicle 1-1.5 cm long. Calyx tubular; tube 7-10 cm long, sparsely pubescent, angular fluted, 5 lobed; lobes 1-1.5 cm long, unequal, triangular, acuminate at apex. Corolla funnel shaped, 14-18 cm long, white with streaks of lilac to purple throat, 5-lobed; lobes alternated with short five acute teeth. Stamens 5, epipetalous, included; filaments 5-8 cm long; anthers 0.3-0.8 cm long. Ovary 0.2-0.4 cm long; style 13-16 cm long; stigma bifid. Capsule nodding, ovoid-globose, 2-4 cm across with persistent calyx, grayish densely glandular pubescent, sparsely aculei – echinate spines; spines 40-50, up to 1.2 cm long, dense glandular pubescent, dehiscent from top in to 4 valves. Seeds 2.5 - 2.75 x 3 mm, reniform with white hilar residue, black, bullate – verrucose.

*Flowering and fruiting:* December- April.

*Distribution:* Western peninsular India (Karnataka) and now from eastern peninsula (Coastal Andhra Pradesh), South-west of the USA, northern Mexico and Caribbean Islands.

*Habitat:* Occasional along the road sides; associated with *Datura innoxia* Mill., *Malvastrum coromandelianum* (L.) Garcke, *Sida acuta* Burm.f., *Spermacoce hispida* L. and *Tridax procumbens* (L.) L.

*Specimens examined:* India, Andhra Pradesh, Srikakulam District, along the N.H-16 road side from Nelivada to Derasam, 18.160193° N, 83.65613197309° E, 10.5 m.s.l., 16.03.2020, P.V. Ramana & J. Swamy 4353 (BSID).

*Notes:* Population of this species often intermixed with the population of *D. innoxia* and it has been observed along the N.H.-16 road side from Nelivada to Derasam

of Srikakulam District. The species might be entered in eastern peninsula through the transport from the western peninsula.

The species often confused with *D. ferox* and *D. innoxia* but, it is easily differentiate with former species by its densely glandular pubescent spines on the capsule and with the latter species by its black seeds with bullate – verrucose surface.

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