



Solanum chrysotrichum Schltdl. A new distributional record from Western Uttar Pradesh

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General Note



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ABSTRACT

While inventorying the dendroids of North West Uttar Pradesh, the authors collected *Solanum chrysotrichum* a wild species of Solanaceae for the time from district Saharanpur UP. After reviewing its distribution through flora and available literatures, it has been found that this species is a new distributional record for the flora of north-west Uttar Pradesh. A detailed description of the species along with coloured illustration and specimen examined are provided here for easy identification.

Keywords: *Solanum chrysotrichum*, Saharanpur, Western Uttar Pradesh.

1. INTRODUCTION

Solanaceae include ca. 3000-4000 species under 90 genera. The plants are worldwide in distribution having major species diversity in America, Australia and Africa (Bohs & Olmstead, 1997; Olmstead et al., 1999 & 2008 and Knapp et al., 2004). *Solanum* L. is a large and diverse type genus of Solanaceae which include 1300 species in world (Christenhusz et al., 2017) and 49 species in India (Kalidas and Panda, 2019). A total of 5 wild and 2 cultivated species of *Solanum* have been reported from upper gangetic plain (Duthie, 1903-1929). Recently while inventorying the dendroid of North West Uttar Pradesh, the authors collected few specimens belonging to the genus *Solanum* and it was found that the collected specimens are quite different from the element of *Solanum* species recorded and described previously for the north-west Uttar Pradesh. This species was reported from Behat and Nanauta region district Saharanpur, Western Uttar Pradesh. On critical examination with the help of relevant literature (Mishra and Kumar, 1992; Yadav & Menna, 2007; Srivastava et al., 2015), eflora of Pakistan and China, and matching with isotype K000532500 (<https://apps.kew.org>), it has been identified as *Solanum chrysotrichum*. Reference to regional floras and other research works (Khanna et al., 1999; Malik et al., 2012) have shown that hitherto, there is no published record of this species from north-west Uttar Pradesh i.e. it remained unnoticed or absent from this region. A herbarium specimen of this has been deposited in DD (Accession Number, 172714) for future reference. A floral formula and floral diagram for formal taxonomic description and diagnosis (Prenner et al., 2010) has been suggested for *Solanum chrysotrichum*. A detailed taxonomic description of this species along with colored illustration and specimen examined is presented here for easy identification and validation (Plate-1 & 2).

2. DESCRIPTION

Solanum chrysotrichum S C Schtld. Linnaea 19(1): 304-305 (1847). *Solanum warszewiczii* H. ex Lambertye Rev. Hortic. 1865: 429. *Solanum warszewiczoides* Huber Cat. Graines 1870: 3. *Solanum antiguense* J.M. Coult in Donn. Sm. Enum. Pl. Guatem. 4: 187. 1895. *Solanum pynaertii* D.Wild Miss. Em. Laurent 1: 437, tab. 119. 1907. *Solanum torvum* var. *pleiotomum* C.Y.Wu & S.C. Huang, Acta Phytotax. Sin. 16(2) : 73. 1978.

Common name

Giant devil's fig

Habit

Shurb or small tree 4-5 meter tall. Stem: Green pubescent with more stellate hairs, rusty, herbaceous or woody, spin (1-1.5cm) present stem as well as both surfaces of leaves. Leaf: alternate opposite, broadly ovate or elliptic, base obtuse or cordate, 8 -20 cm long, 5-15 cm broad (some times more large in the young stage), deeply lobed, spine both surface; petiole hairy, 1-4 cm long. Inflorescence: Extra auxiliary many flowers recemose panicles; Peduncle 10-15 mm long. Flower: Creamish white, 20-24× 28-32 mm across, flowers present in the bunch, ebracteate, pedicellate, hermaphrodite, pentamerous, actinomorphic. Calyx: 5 Sepals, Green, 6-10 mm long, Lanceolate, hairy, fused, valvate, persistent. Corolla: 5 Petals, whitish, 15-17 mm long, Lanceolate, gamopetalous, valvate. Androecium: Stamen infinite, filament 1-3 mm long, anther oblong, 6-12 mm long, epipetalous, dithecous, basifixed. Gynoecium: Style 6-10 mm long, bicarpellary, superior ovary. Fruit: Berry, yellow to orange yellow. Seeds: discoid, 1-2 mm in diameter.

Differences with *Solanum torvum* & *Solanum chrysotrichum*

This species has close similarity with *Solanum torvum* and sometime it confuses with *Solanum asperolatum* (previously known as *S. hispidum*) and some online sources have mentioned *Solanum asperolatum* as misapplied name of *Solanum chrysotrichum*.

Solanum chrysotrichum: It has quite large to very large leaves 8-20 cm long with 8-14 deep lobes, large white flowers 20-24×28-32 mm across, sepals 6-10 mm long, rusty star shaped hairs on the stem, Equal size spines are present on both surfaces of leaves and stem in young and old stage.

Solanum torvum: It has quite large leaves 4-15 cm long with several lobes, flower approx. 8×15 mm across, sepals 3-5 mm long, white star shaped hairs on the, spines present more in the young stage, smaller than *S. chrysotrichum*.

Flowering and Fruiting: February- June

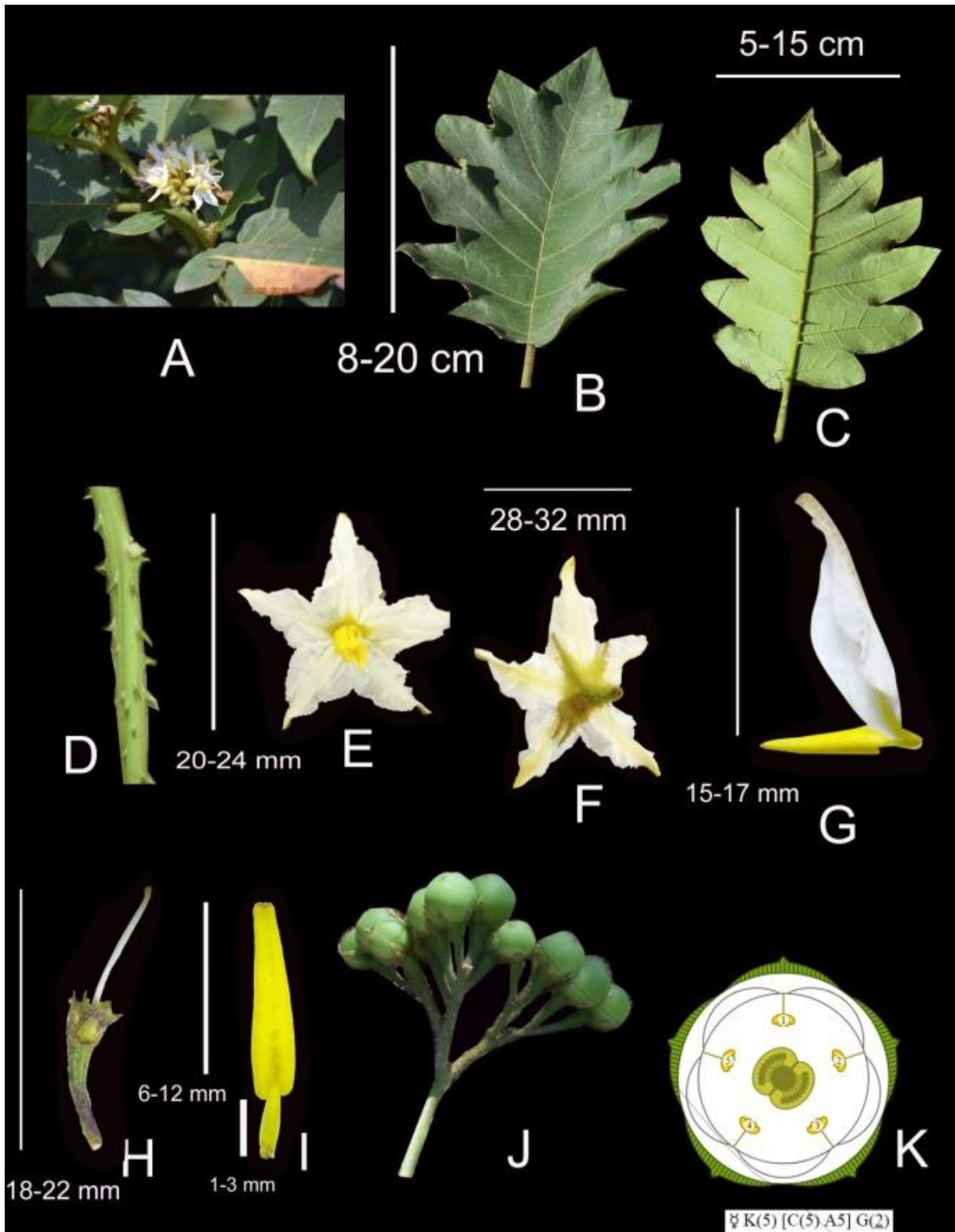


PLATE 1 *Solanum chrysotrichum* A-K. A. Flowering Twig; B. Leaf (Upper Surface); C. Leaf (Lower Surface); D. Stem Twig Showing Spine; E. Front View Of Flower; F. Ventral View Of Flower; G. Petal Connected with Stamen; H. Carpel; I. Stamen; J. Fruiting Twig; K. Floral Diagram and Floral Formula.

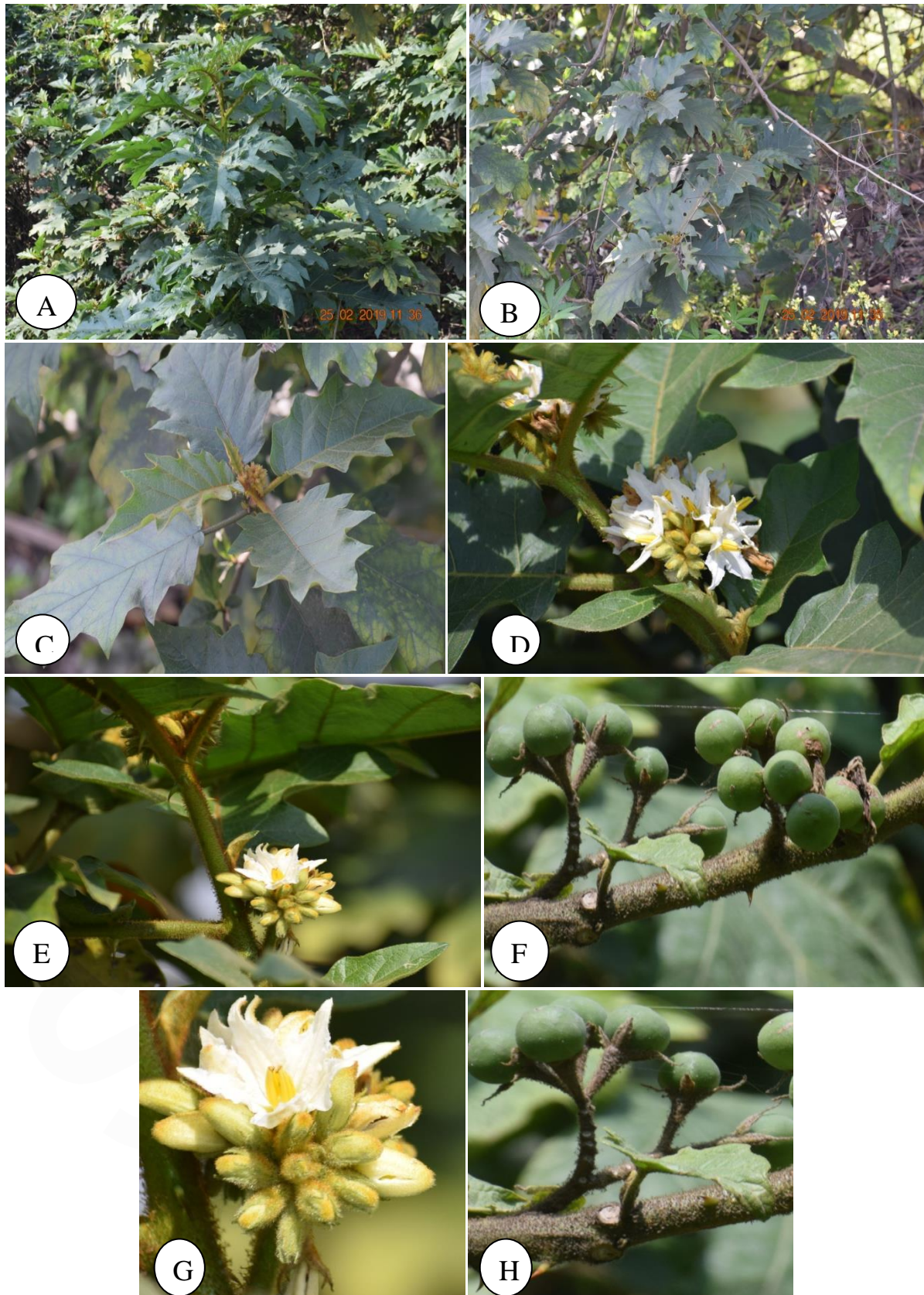


Plate 2 *Solanum chrysotrichum* showing different stages of plant A-H. A. Showing Early stage of plant (Approx. one month); B. Young stage; C. Leaf close up view; D-E Flower; F. Fruit; G-H. Close up view of flower and fruit.

Characteristic features: Deeply lobed leaves, more stellate hairs on stem with rusty appearance.

Distribution: Native to tropical Central America.

Voucher Specimen

India: Uttar Pradesh: District Saharanpur, Behat (N 30 17' 14"; E 77 61' 64"), and Nanauta (N 29 71' 41"; E 77 41' 57"), 10.04.2019, Saini, Malik, Mohammad & Tyagi Acc. No.172714 (DD).

Specimens examined

Gautemala; 4/1890; Collector & No.: Donnell Smith J 2260; Isotype K000532500.

Author's Contribution

LS, VM, IM and AT collected and prepared herbarium specimen. LS prepared illustration and described this species. VM edited and prepared this manuscript. All authors have read and approved the final manuscript.

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Conflict of Interest: The authors declare that there are no conflicts of interests.

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