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### RESEARCH ARTICLE

#### **SOLANUM DIPHYLLUM L. (SOLANACEAE) - A NEW RECORD TO THE FLORA OF GUJARAT STATE, INDIA**

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#### Abstract

*Solanum diphyllum* L. (Solanaceae) is a perennial shrub reported here for the first time was formerly seen in different districts of Gujarat state like Morbi, Gir-Somnath, and Baroda. A brief description of the species along with flowering and fruiting period, remarks and photographs are provided for easy identification of the species.

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#### Introduction:-

*Solanum* L. is large and diversified genus belonging to the economically cosmopolitan family Solanaceae. In India the family Solanaceae is represented 122 taxa (116 species, 2 sub-species, 3 varieties and 1 forma) belonging to 29 genera (Reema Kumari, 2004). The genus *Solanum* L. is the most specious with 48 species distributed throughout the country (Reema Kumari, 2004). Recently few specimens are belonging to the genus *Solanum* collected from the three districts of Gujarat. After close examination in the field and specimens are also crosschecked with relevant literature (C. Kalidass & P. C. Panda, 2019), the species identified as a *Solanum diphyllum* L. In Gujarat state these species was mentioned in one recent checklist of Bhal region (Bhoomi et al. 2020) but due to lack of authentic evidence present literature revealed that the *Solanum diphyllum* L. was a new record for the Flora of Gujarat.

The first occurrence of this species in India was reported from Howrah district of West Bengal (Das et al., 1997; Paul & Biswas, 1995). Two more authentic new record published on *S. diphyllum* from Southern India (Reema Kumari, 2013) and Northern India (Singh et al. 2015). During the field work useful information collected from the local inhabitants, that this species growing in areas about 4-5 years back. Currently, the species has naturalized in wasteland, botanical gardens and nurseries. The present paper provides its occurrence in the state along with remarks, detail description and photographs for facilitate easy identification. The specimens are deposited at VVRL (Vande Vasundhara Research Laboratory, Bhuj-Kachchh)

#### Taxonomy

*Solanum diphyllum* L., Sp. Pl. 184. 1753; D' Arcy in Ann. Missouri Bot. Gard. 61:845. 1974; M. Das et al. in J. Econ. Taxon. Bot. 21:158. 1997; T. K. Paul & M. C. Biswas in Bull. Surv. India 37:137. 2000; M. Reema Kumari in Rheedea 23(1):50. 2013; R. K. Singh & Arti Garg in Geophytology 45(2): 253-256. 2015.

Undershrub or shrub, 1-3 m high, erect, glabrous, unarmed. Stem terete, older stem brown in colour with lenticel. Two leaves at each node, unequal; major leaves 3-13 × 1.5-4 cm, obovate-elliptic, apex obtuse or acute, cuneate at the base, entire; minor leaves 0.5-3 × 0.5-2.5 cm, obovate-roundad, apex obtuse or rounded, entire; Inflorescence

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in leaf opposed, fascicle, up to 10-flowered, peduncle up to 1 cm long. Calyx 5 lobed, lobes 0.5-1.1 mm, green, ovate, acute; Corolla 5 lobed, 3-5 × 2.5-3 mm, creamy white, elliptic-ovate, acute. Stamens 5, 1-2 mm long, equal, epipetalous, oblong, 2 mm, yellow, dehiscent poricidally. Ovary globose, 1 mm long, style 3-5 mm long. Berries globose, slightly constricted in middle, glabrous, yellow or yellowish orange when ripe; seeds reniform or discoid, creamy yellow.

**Flowering & fruiting:**

February – November

**Specimens examined:**

India, Gujarat, Morbi district, Sadulka nana, 16.11.2020, Kishan Prajapati. Gir-Somnath district, Gorakhmadhi, Prachi, 25.11.2020, Kishan Prajapati. Baroda district, Arboretum of Maharaja Sayajirao University, 5.2.2021, Kishan Prajapati.

**Distribution:**

Native to Mexico and Central America. A plant naturalized in India. (Bihar, Chhattisgarh, Madhya Pradesh, Maharashtra, Tamil Nadu, Karnataka, Uttar Pradesh, West Bengal) and recently in Gujarat.

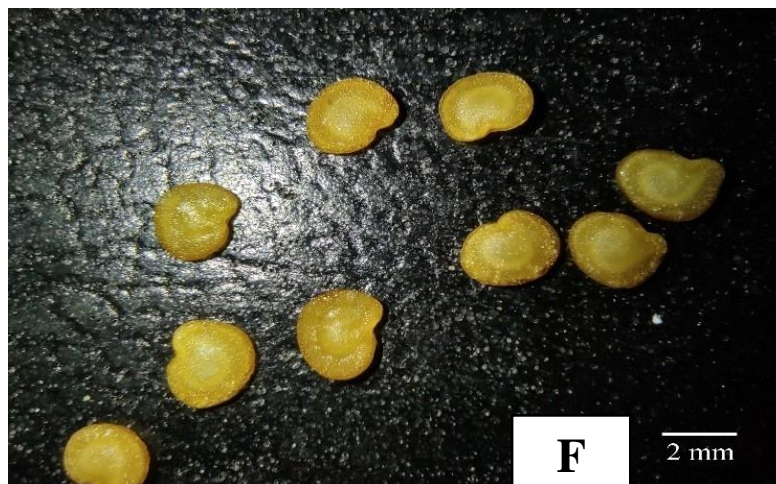
**Remarks:**

Present field observation and investigation from locals revealed that this weed was brought to India by nurseries, the species starts spreading but went unnoticed until it was reported recently from Gujarat. Recent field observation confirmed that this species was found in a plant nurseries, botanical gardens, and also found in wastelands (Bhal region). During our field exploration it was found that birds fed the small berries and aid that causes long distance seed dispersal. The fact that *Solanum diphyllum* is reported from three districts of the Gujarat suggests possibility of the species in other districts of Gujarat as well. Localities of study areas comprise of population e.g. MSU arboretum up to 10 individuals, Morbi 2 individuals, Prachi 1 individual recorded.









A. Twing with flowers B. Phyllotaxy C. Flower D. Anthers E. Fruits F. Seeds

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