

***Physalis pruinosa* : A New Distributional record to Wardha district, Maharashtra, India**

***Darshan R. Talhande¹, Ajinkya K. Borkar², Suvarna P. Patil³ and Sachin K. Tippat⁴.**

¹Department of Botany,

Sharadchandra Arts, Commerce & Science College,
Naigaon Dist. NANDED-431709 (MAHARASHTRA) INDIA.

²Birjlal Biyani Science College,
AMRAVATI-444605 (MAHARASHTRA) INDIA.

³Taywade College Koradi
Dist. NAGPUR-441111 (MAHARASHTRA) INDIA.

⁴Department of Environmental Science,
Shrimati Narsamma Arts, Commerce & Science College,
AMRAVATI-444606 (MAHARASHTRA) INDIA.

*Corresponding Author

Email: talhandedarshan@gmail.com

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ABSTRACT

The research deals with new distribution of a plant species and its addition to the Angiospermic flora of Wardha district Maharashtra state, India along with the detailed description, phenology and ecology. A comprehensive review of standard regional floras, monographs, and recent literature revealed that this species has not been previously reported from Wardha, nor listed in the classical works of Acharya and Ramteke & Srinivasu on the district flora. Notably, contemporary studies consider *Physalis pruinosa* to be invasive or potentially naturalized, owing to its rapid establishment in disturbed sites, agricultural margins, and open waste lands. Its presence in Wardha therefore indicates a recent range expansion within Vidarbha region of Maharashtra.

During the regular exploration of the study area, samples of *Physalis pruinosa* of family Solanaceae were collected. After microscopic observation and critical review of the available references, this species is found to be a new distributional record to the Wardha district of Maharashtra.

Figure : 01

References : 20

Table : 00

KEY WORDS : Flora, Herb, Maharashtra, *Physalis pruinosa*, Wardha.

Introduction

In India total species of *Physalis* are reported as *P. alkekengi*, *P. angulata*, *P. ixocarpa*, *P. longifolia*, *P. peruviana* and *P. minima*, *Physalis pruinosa*, *P. angulata*, *P. longifolia*, *P. peruviana* and *P. minima*.

Floristic studies² enriched the diversity of the genus in Maharashtra by describing *P. joe-diasii* as an endemic species, but did not mention anything about *P. pruinosa*². BSI's Flora of Maharashtra (dicotyledons) also does not include *Physalis pruinosa*, reflecting that

the species wasn't known from the state at the time of publication¹⁸. Distribution of *Physalis pruinosa* and *Physalis minima* in Maharashtra is documented in classical floras such as Hooker's Flora of British India⁹ and Cooke's Flora of the Presidency of Bombay⁵, and the Flora of India series¹⁷. In Maharashtra, earlier floristic works¹ did not mention *Physalis pruinosa*, Bhogaonkar's Flora of Melghat, Amravati³ documented species like *P. minima* and *P. angulata*, but both did not report *P. pruinosa*, indicating its absence in the region during those

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Fig. 1 : *Physalis pruinosa* : (A-B) Habit of the plant (C) Leaves Showing light green coloration with istinctly dentate margins (D) Fully Bloomed flower (E) Dense villous pubescence covering the entire body part (F) Fruit containing a greenberry.

surveys.

The species has been reported for the first time in Maharashtra, from Nagpur district as a new addition to the flora of Maharashtra, highlighting its distribution²⁰. Occurrence data from the India Biodiversity Portal further supports its distribution in Dhule, Thane, and Satara districts, suggesting it may be under-reported in older checklists¹⁰. Field surveys around Tamhini Ghat and parts of the Western Ghats fringe have noted its occasional presence. These records together indicate that *P. pruinosa* is becoming an increasingly frequent component of Maharashtra's ruderal flora. These data are reinforcing the view that *P. pruinosa* is an underreported but established component of the ruderal flora of central Maharashtra.

Material and Methods

Study Area

The field survey was conducted in the monsoon season, in the Shaur, of Ashti tehsil of Wardha District, Maharashtra (21° 17.8 N, 78° 12.63 E). This region comprises a mosaic of peri-urban and semi-rural ecosystems, characterized by diverse land-use patterns.

Data Collection and Identification

Plant specimens of the suspected *Physalis* species was collected from Sahur, Arvi tehsil of Wardha district area, (21° 17.8 N, 78° 12.63 E). Standard floristic methods were employed for specimen collection, pressing, drying, and preservation⁴.

Detailed morphological features, including habit, leaf structure, flower characteristics, and fruit morphology, were meticulously recorded in the field. The collected specimens were then brought to the herbarium of Shrimati Narsamma Arts, Commerce & Science College, Amravati, for critical examination and definitive identification. Morphological features were cross-referenced with established taxonomic keys from regional floras^{7,8,10-13,15,19,20}.

Observation and Results

Authors have collected some specimens belonging to family Solanaceae. Authentication has been done with the help of floras and available literatures, the specimens illustrated below. The flowering and fruiting seasons, habitats and localities in the district of the plants are also cited in the text.

Family: Solanaceae

Physalis pruinosa Fig. 1 (A-F).

Viscid, robust, and erect pubescent throughout. Young stems and principal veins of leaves with short-stemmed glands interspersed with villous pubescence; fistular, angular-ribbed. Simple, spirally organized, oval, rounded, base oblique, border sinuate-dentate above middle, acuminate, 5-12×4-8 cm, with a single leaf at each node. Small, solitary, axillary flowers that are 1.5–2 cm across with upright, 2 to 5 cm pedicels. With subulate apex calyx up to 0.8 cm. Pale yellow campanulate Corolla, 1.5–2 cm across, five faint to dark green spots on the neck. Ovary globose; terminal style, with green stigma.

Pedicels are drooping, Fruiting calyx apex 1-2.5 cm long, downy, inflated, deeply recessed at base, 5-angled, reticulately veined, glabrescent, and progressively acuminate. Fruiting calyx apex is longer than broad. Berries are gray-green and 1-2 cm across; fruits are tenacious and, numerous ovoids, reniform, brownish, pitted seeds, 0.3–0.4 cm in size.

Location: Sahur, Ashti tehsil, Wardha.

Exsiccata: SNACS/BOT/1306

Additionally, *Physalis pruinosa* has long been utilized in a number of ethnomedical systems. Bioactive substances like flavonoids and anolides are found in its fruit and aerial portions. It is used as a moderate diuretic, antipyretic, and to treat inflammation and sore throats in traditional medicine. Its anti-inflammatory and antioxidant properties have been shown in studies, indicating pharmacological value in treating illnesses linked to oxidative stress^{14, 16}.

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