

Ancient Plant Classification and Its Modern Botanical Relevance:

A Study Based on Upavana Vinoda

Sachin N. Bhadoriya ¹

Abstract - This research paper explores the ancient Sanskrit text Upavana Vinoda and its classification of plants into four main types-Vanaspati, Druma, Lata, and Gulma. Despite its age, this taxonomy reflects deep ecological and botanical understanding. The study draws comparisons between these traditional categories and modern botanical principles, highlighting how ancient observational methods align with contemporary biological science. This bridge between traditional knowledge and modern botany has significant implications for sustainability, agriculture, and conservation.

Keywords - Botany, Upavana Vinoda, Sanskrit, Plant Classification, Vanaspati, Druma, Lata, Gulma, Propagation, Ethnobotany

INTRODUCTION

The ancient Indian knowledge systems preserved in Sanskrit texts contain not only spiritual and philosophical insights but also scientific understanding of the natural world. One such text, Upavana Vinoda, offers a poetic yet precise description of various types of plants, their growth patterns, and their modes of propagation. This paper investigates verses 43 to 45 of Upavana Vinoda, decoding their meaning and comparing them with modern botanical knowledge to demonstrate the relevance and scientific rigor of traditional plant classifications.

RESEARCH OBJECTIVES

- To examine the Sanskrit verses from Upavana Vinoda that classify plants into four categories.
- To compare ancient plant classification with modern botanical taxonomy.
- To identify the implications of this classification in modern sustainable agriculture, herbal medicine, and ethnobotany.
- To promote awareness of ancient ecological knowledge as a complement to modern scientific research.

ANCIENT SANSKRIT CLASSIFICATION OF PLANTS:

Sanskrit Verses and Translation

Verse : वनस्पतिद्रुमलतागुल्मा: पादपजातयः ।

बीजात्काण्डात्तथा कन्दातज्जन्म त्रिविधं विदुः ॥ ४३ ॥

Translation: Plants are classified into Vanaspati (fruiting trees without flowers), Druma (trees with both flowers and fruits), Lata (creepers), and Gulma (shrubs), and they propagate through seeds, cuttings, and tubers.

Verse : ते वनस्पतयः प्रोक्ता विना पुष्टैः फलन्ति ये । द्रुमाश्वते
निगदिताः सह पुष्टैः फलन्ति ये ॥ ४४ ॥

Translation: Those that bear fruit without visible flowers are Vanaspatis; those that bear both flowers and fruits are called Drumas.

Verse : प्रसरन्ति प्रतानैर्यस्ता लताः परिकीर्तिताः । बहुस्तम्बा
विटपिनो ये ते गुल्माः प्रकीर्तिताः ॥ ४५ ॥

Translation: Plants that spread on the ground are Latas (creepers), while those that spread slightly above the ground with many branches are Gulmas (shrubs).

INTERPRETATION

The classification of plants in Upavana Vinoda is deeply aligned with modern botanical principles:

Ancient Term	Description	Modern Equivalent
Vanaspati	Fruiting plants without visible flowers	Possibly gymnosperms or early-flowering angiosperms
Druma	Plants with both flowers and fruits	Typical angiosperms like mango, neem
Lata	Creepers that spread on the ground	Vines and creepers like pumpkin, cucumber
Gulma	Multi-branched shrubs spreading above ground	Bushes like hibiscus, rose

Propagation Types:

बीज (Seed): Sexual propagation - standard in most flowering plants.

काण्ड (Stem cutting): Asexual propagation - common in sugarcane, rose.

कन्द (Bulb/Tuber): Vegetative propagation - seen in onions, potatoes.

CONCLUSIONS

The insights from Upavana Vinoda offer not just cultural or poetic value but also scientific merit. Its classification of plants based on morphology and reproduction provides a

foundational understanding still useful today in fields such as sustainable agriculture, herbal pharmacology, and landscape design. By recognizing the scientific intuition of ancient texts, we can build a more integrated knowledge system-blending tradition with modern research for ecological sustainability and cultural continuity.

References

- [1] Upavana Vinoda, Pādapa-vivakṣā, Ślokas 43–45
- [2] Translations and commentary provided in the document “Botany.docx”
- [3] Kochhar, R. K. (1992). Botany in Ancient and Medieval India. Indian Journal of History of Science
- [4] Singh, G. (2019). Plant Systematics: Theory and Practice. Oxford & IBH
- [5] Jain, S. K., & Rao, R. R. (1977). A Handbook of Field and Herbarium Methods
- [6] Kumar, A. (2010). Ethnobotany and Medicinal Plants of India. Daya Publishing
- [7] Frawley, D. (2000). Ayurvedic Healing: A Comprehensive Guide

■ ■ ■