

The Study of Plant Names in World Linguistics

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Abstract: The investigation of plant names, or phytonymy, represents a dynamic intersection of linguistics, anthropology, ethnobotany, and cultural studies. This article explores the multifaceted nature of plant name studies across global linguistic traditions, emphasizing the significance of nomenclature in shaping human interaction with flora, encoding ecological knowledge, and reflecting cultural values. Through a comparative analysis of diverse language families and historical contexts, this work uncovers patterns in naming, semantic evolution, borrowing, and cultural symbolism. Special attention is paid to the mechanisms underlying plant name formation, the transmission of botanical knowledge through language, and the challenges of standardization in scientific and folk contexts. The research draws upon both theoretical models and practical examples from various regions, highlighting the value of phytonymy in linguistic typology, translation studies, and cross-cultural communication. The conclusion proposes a framework for further interdisciplinary research and emphasizes the relevance of plant name studies in preserving intangible cultural heritage and supporting biodiversity conservation.

Keywords: Phytonymy, plant names, linguistics, ethnobotany, nomenclature, cultural symbolism, language typology.

Introduction: The names attributed to plants by different linguistic communities constitute a unique domain within the broader study of language and culture. Known as phytonymy, the study of plant names reveals a wealth of information about a community's environment, traditional knowledge systems, and worldview. Plant nomenclature not only reflects the ecological landscape in which a language evolves but also encapsulates the cultural, symbolic, and utilitarian relationships that humans maintain with their natural surroundings. Historically, the field has developed at the crossroads of linguistics, ethnobotany, folklore, and taxonomy, often mirroring shifts in scientific paradigms and societal attitudes towards nature.

The relevance of plant name studies in world linguistics is multifaceted. On the one hand, it contributes to understanding the processes of lexicalization, semantic change, and lexical borrowing. On the other hand, it provides valuable insights into the mechanisms of knowledge transmission, cultural adaptation, and linguistic typology. Furthermore, the globalization of

botanical science and the increasing need for standardized nomenclature highlight the practical implications of this field, particularly in translation, ethnobotanical surveys, and biodiversity documentation. This article aims to synthesize current theoretical approaches and empirical findings related to plant names, tracing their significance in world linguistics and offering perspectives for future research.

The present research adopts an interdisciplinary methodology, drawing on descriptive linguistics, comparative philology, ethnobotanical fieldwork, and semiotic analysis. Primary sources include botanical glossaries, historical dictionaries, and folk taxonomies from various language families, such as Indo-European, Uralic, Turkic, Sino-Tibetan, and Niger-Congo. Data were collected from published monographs, field reports, and open-access digital corpora, with special attention given to regional studies from Europe, Central Asia, Africa, and the Americas.

Secondary sources involve recent linguistic literature

on phytonymy, language contact, and semantic change, as well as foundational works in anthropology and the history of science. The methodological framework combines qualitative and quantitative analyses: the qualitative aspect examines the semantic and pragmatic dimensions of plant names, while the quantitative aspect involves the frequency and distribution of lexical patterns across languages and regions. Comparative methods are used to analyze naming conventions, patterns of lexical borrowing, and semantic shifts in relation to cultural contact and ecological adaptation. Fieldwork data, where available, provide context-specific examples and reflect the living dynamics of plant name use in oral traditions.

Special emphasis is placed on the challenges of standardizing plant names across different linguistic and cultural settings, drawing on the International Code of Nomenclature for algae, fungi, and plants (ICN), and the implications for cross-cultural communication and documentation.

Analysis of plant names across world languages reveals several core tendencies in naming conventions, semantic structure, and cultural associations. One key observation is the prevalence of metaphorical and descriptive naming, whereby plant names encapsulate physical features, habitat, or utilitarian properties. For instance, many languages use analogies with animals, body parts, or colors to construct plant names, reflecting both sensory perception and symbolic meaning. In Slavic languages, for example, the common nettle (*Urtica dioica*) is referred to as “крапива” (*krapiva*), deriving from an old verb meaning “to scratch” or “to sting,” thus encoding the plant’s tactile property within its very name.

A second notable pattern involves the role of folk taxonomy. Unlike scientific taxonomy, which seeks universal, stable, and systematic classification, folk taxonomy is embedded in local knowledge and practices. Plant names in many indigenous and rural communities reflect local ecological relationships, cultural salience, and traditional uses, rather than strictly biological criteria. The same plant may have different names depending on its stage of development, use, or associated myth. In the languages of the Amazon basin, one tree species may bear multiple names, each tied to a particular ecological niche or cultural function.

The transmission and transformation of plant names in the context of language contact also present important findings. Lexical borrowing is particularly evident in regions of intense cultural exchange. For example, the spread of crop plants such as maize, potato, or tea led to the adoption and adaptation of foreign plant names

in dozens of languages, often accompanied by semantic shifts. In Central Asia, the Persian word “چای” (*chai*) for tea became embedded in Turkic, Russian, and even European languages, evolving into forms such as “чай” (Russian), “çay” (Turkish), and “chai” (English).

Comparative analysis also uncovers processes of calquing and hybridization, where new plant names are formed by translating components of borrowed terms or combining local and foreign elements. In many African languages, the introduction of New World crops prompted creative linguistic responses, merging native naming strategies with imported concepts. The sweet potato, originally from South America, is called “batata” in many Romance languages, but local variants often reference its taste, color, or growing conditions.

The research further documents the challenges inherent in standardizing plant names. Scientific nomenclature, governed by Latin binomials, aims for universal precision but often coexists uneasily with local naming traditions. The process of assigning scientific names sometimes disregards indigenous knowledge, leading to confusion or loss of cultural information. Ethnobotanical surveys repeatedly underscore the importance of documenting both scientific and vernacular plant names to ensure accuracy and cultural sensitivity in research, conservation, and healthcare.

Semantic evolution is another central theme. Over time, plant names may shift in meaning, expand to cover new referents, or become polysemous. The English word “daisy,” for instance, originally meant “day’s eye,” referring to the flower’s opening at dawn; its semantic field has broadened to encompass multiple related species in popular usage. Similarly, metaphorical extensions frequently occur, where plant names are applied to objects, phenomena, or even people, as seen in nicknames, toponyms, and folk expressions.

Cultural symbolism attached to plant names reveals deep layers of meaning. In many traditions, certain plants acquire sacred or taboo status, and their names are invoked in rituals, proverbs, and literature. The lotus in South and East Asian cultures, the olive in the Mediterranean, or the oak in Celtic and Slavic mythologies exemplify how plant names become vehicles for shared identity and values. Linguistic analysis of plant names thus provides access to the symbolic landscapes of different societies.

The role of plant names in translation studies is equally significant. Translators must navigate between literal rendering, cultural adaptation, and scientific accuracy when conveying plant names between languages.

Misinterpretation can lead to loss of ecological nuance or cultural context. In literary translation, the treatment of plant names often involves negotiation between exoticization, domestication, or explanatory annotation.

Finally, ongoing research highlights the role of plant name studies in preserving intangible cultural heritage and supporting environmental education. Documenting and revitalizing vernacular plant names contribute to the resilience of endangered languages and the maintenance of traditional ecological knowledge. In the context of global biodiversity crises, linguistic documentation of plant names supports conservation initiatives, facilitating communication between scientists, policymakers, and local communities.

The study of plant names in world linguistics illuminates the complex interplay between language, culture, and the environment. At its core, phytonymy demonstrates how linguistic systems encode, transmit, and transform ecological knowledge across generations. The formation and evolution of plant names are shaped by a constellation of factors: perceptual salience, utilitarian value, historical contact, symbolic meaning, and social organization.

The analysis presented in this article underscores the importance of considering both scientific and folk perspectives in plant nomenclature. While the standardization of botanical names is indispensable for global scientific communication, local naming traditions hold critical information about ecological adaptation, medicinal properties, and cultural practices. The coexistence and interaction of scientific and vernacular nomenclatures reflect broader dynamics of power, authority, and cultural negotiation.

The findings also highlight the creative capacity of language in responding to ecological change and cultural contact. The processes of borrowing, calquing, and hybridization in plant naming exemplify linguistic flexibility and innovation. However, they also bring challenges in terms of semantic precision and cross-cultural intelligibility, especially in translation and education.

From a methodological standpoint, the integration of linguistic, ethnobotanical, and anthropological data provides a holistic perspective on plant name studies. Fieldwork and community engagement are crucial for capturing the living dynamics of plant nomenclature and avoiding the erasure of marginalized knowledge systems. The digitalization of botanical and linguistic corpora offers new opportunities for comparative research, although it also raises questions about data ownership and ethical documentation.

The preservation and revitalization of vernacular plant names have significant implications for language maintenance, cultural identity, and environmental stewardship. In many regions, the erosion of traditional knowledge due to urbanization, language shift, and ecological degradation threatens the continuity of plant name systems. Efforts to document and integrate this knowledge into formal education, conservation, and public health can foster both linguistic diversity and sustainable development.

Looking forward, the study of plant names offers fertile ground for interdisciplinary collaboration. Advances in computational linguistics, geospatial analysis, and citizen science open new avenues for large-scale mapping and analysis of plant nomenclature. At the same time, respect for local epistemologies and participatory research models remain essential for equitable knowledge production.

Plant names occupy a pivotal position at the nexus of language, culture, and environment. The study of phytonymy in world linguistics reveals the intricate ways in which linguistic communities name, classify, and attribute meaning to the plant world. Through comparative analysis, this article has highlighted patterns of naming, processes of borrowing and hybridization, and the cultural symbolism embedded in plant nomenclature. The coexistence of scientific and vernacular naming systems underscores the value of integrating local knowledge with global standards.

Preserving and studying plant names is not merely an academic pursuit but a necessary endeavor for sustaining biocultural diversity and fostering intercultural understanding. As linguistic and ecological systems face unprecedented pressures, documenting and revitalizing plant nomenclature contributes to the resilience of both natural and cultural heritage. Future research should continue to bridge disciplinary boundaries, prioritize community involvement, and leverage technological innovations to support the dynamic field of plant name studies in world linguistics.

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