

HARVARD PAPERS IN BOTANY: A NEW GENERATION OF BOTANICAL SCHOLARSHIP

JEANNINE CAVENDER-BARES¹, STEVEN AUGUSTINE², DAVID BOUFFORD¹, JEANNETTE EVERITT¹,
BRETT FREDERICKSEN³, KANCHI GANDHI¹, DANIEL SÁNCHEZ MATA^{4,1}, SYDNE RECORD⁵,
RACHEL SWENIE¹, DAWSON WHITE¹, AMITY WILCZEK⁶

After nearly four decades of publications focused mostly on systematic botany and taxonomy, *Harvard Papers in Botany* is expanding its scope and changing its look with the introduction of new cover photography and art. These decisions seek to unite and highlight the interdependence of the many fields of botanical science and meet the urgent need for more open-access biodiversity science publications today.

We define botany as the scientific study of plants, algae, and fungi in their various forms and entanglements, encompassing their biology, diversity, evolution, ecology, and interactions with humans and ecosystems. We embrace understanding the physiology, structure and development, genetics, ecological interactions, biogeography, classification, biocultural interactions, and contributions to people of botanical organisms. Our definition spans evolutionary scales from quantitative genetics to phylogenetic systematics, and ecological scales from molecules and organisms to ecosystems and the biosphere. In our definition, *botany* encompasses dimensions of both the botanical and human world, including human relationships with plants and fungi, anthropogenic impacts on botanical life, and human efforts to document plant and fungal diversity. These efforts include the curation and history of collections, accounts of expeditions and events, and biographies of those who have spent their lives dedicated to biodiversity discovery and documentation.

We have established a new Editorial Board that covers this range of topical areas and expertise. The Board comprises early, mid-, and late-career academics with connections to the Harvard University Herbaria, including

native Spanish language speakers, and welcomes authors from around the world to contribute to this expanded range of botanical disciplines. *Harvard Papers in Botany* is a refereed, invitation-only journal that publishes original contributions in the botanical and biodiversity sciences, with submissions accepted in English or Spanish. Two issues are published annually, and authors are encouraged to send pre-submission inquiries to papers@oeb.harvard.edu outlining prospective contributions, which are considered on a case-by-case basis.

WHY AN EXPANDED DEFINITION?

Expanding the fields of scholarship in this journal reflects the global need for diverse contributions to biodiversity science. In our time of rapid biodiversity loss, we need more venues to discuss and celebrate what plants and fungi bring to the world. With our broader definition, we hope to provide a place for cross-cutting botanical works that may not fit neatly within traditional academic publications but remain integral to biodiversity science. We also seek to highlight alpha taxonomy, nomenclature, and systematics as a classical and practical foundation for broader fields of investigation in ecology, evolution, and contemporary plant science. While research in plant taxonomy remains as important as ever for refining our fundamental communication about biodiversity, publishing these articles alongside research in other subfields within the botanical and biodiversity sciences will serve to emphasize their interdependence.

¹ Harvard University Herbaria, Harvard University, 22 Divinity Avenue, Cambridge, MA 02138

² Department of Biology, University of Central Arkansas, 201 Donaghey Avenue, Conway, AR, 72035

³ Department of Biological Sciences, Southern Illinois University Edwardsville, 44 Circle Dr, Edwardsville, IL 62025

⁴ Department of Pharmacology, Pharmacognosy and Botany Complutense University of Madrid, Plaza de Ramón y Cajal, E-28040 Madrid, Spain

⁵ Department of Wildlife, Fisheries, and Conservation Biology and Maine Agricultural and Forest Experiment Station, University of Maine, Nutting Hall, Orono, ME 04469

⁶ Amity Wilczek, Concord, MA

WHY A HERBARIUM-BASED JOURNAL?

Harvard Papers in Botany is grounded in one of the world's largest university herbaria collections and is dedicated to publishing botanical literature in either English or Spanish to be accessible to all without cost to the author. The world's herbaria house permanent records of plant and fungal biodiversity. Many species in herbaria are now rare, critically endangered, or already extinct in the wild. Herbaria are not merely museums of the past, they are laboratories and tools for the future. At a moment when biodiversity loss is faster than direct observation, herbaria provide evidence, context, continuity, and hope that informed action is still possible.

HISTORICAL PERSPECTIVES

This expanded definition of botany also reflects the long and diverse publishing traditions of Harvard's botanical institutions. Beginning in the 1970s, separate units such as the Gray Herbarium, Farlow Herbarium, Botanical Museum, and the Arnold Arboretum herbarium gradually merged administrative functions and integrated their specimen collections. These institutions have been united as the Harvard University Herbaria (HUH) since 1996.

Historically, botanical scholarship at Harvard appeared across multiple journals. *Contributions from the Gray Herbarium of Harvard University* (1891–1984) emphasized taxonomy, floristics, and nomenclature and was unusual in publishing both original articles and reprints—sometimes even preprints—of papers that also appeared elsewhere, complicating the determination of official publication dates for new names. This practice likely reflected the intent of director Merritt L. Fernald to annually consolidate the work of Gray Herbarium staff and associates in a single venue. Although preceded by other Arboretum journals, the *Journal of the Arnold Arboretum*, first published in 1920, focused on woody plants, living collections, physiology, and global floras. *Botanical Museum Leaflets* (1932–1986) broadened this tradition by incorporating studies of plant use, domestication, and cultural history alongside taxonomic and floristic research. Cryptogamic botany, including fungi, lichens, algae, and bryophytes, was represented by *Farlowia: A Journal of Cryptogamic Botany* (1943–1955) and the *Occasional Papers of the Farlow Herbarium of Cryptogamic Botany* (1969–1987), which featured monographic and specialized studies of cryptogams with emphasis on taxonomy, systematics, morphology, and nomenclature.

These publications were consolidated in 1989 with the launch of *Harvard Papers in Botany* under HUH director Donald Pfister. Until December 2024, the journal was primarily edited by Dr. Gustavo A. Romero, a distinguished

botanist and orchidologist whose work at the HUH advanced plant systematics, particularly orchid taxonomy. As editor, Romero upheld rigorous scholarly standards, strengthened collections-based research, and promoted the integration of historical, herbarium, and field data, helping to disseminate high-quality studies on plant diversity, nomenclature, and biogeography in both English and Spanish. We are deeply grateful for his leadership and dedication and wish him well in his retirement.

Together, these journals—now accessible through the Biodiversity Heritage Library (BHL)—document a breadth of botanical inquiry extending well beyond systematics alone. By broadening the scope of *Harvard Papers in Botany*, we intentionally recapitulate this historical diversity of subjects within a single journal, place greater emphasis on spanning scales in ecology and evolution, and expand into emerging areas such as spectral biology and remote sensing. In doing so, we reaffirm Harvard's tradition of integrative, collections-based botanical science while adapting it to contemporary research questions and global challenges.

WHAT WE ARE NOT

We are not aiming to have an impact factor or to compete with major botanical journals. We aim to publish high quality, peer-reviewed and well-edited articles written by botanical experts who love what they do. We provide opportunities for free publication at a time when publication costs have become prohibitive for many authors. We do not have strict word limits or formatting requirements.

ARTICLES IN THIS ISSUE

The winter 2026 issue of *Harvard Papers in Botany* brings together eight manuscripts spanning botanical history, taxonomy, ecology, conservation, and plant biology: David Boufford's, "Asian botany at Harvard University: 1800–present" traces the development of Harvard University Herbaria's Asian collections from Asa Gray's 19th-century foundations through Arnold Arboretum-driven expansions, highlighting how they became among the world's most comprehensive collections of their kind. Cornejo and Prance formally describe and illustrate two new Lecythidaceae species from western and Amazonian Ecuador in their paper, "*Scottmorina apilingua* and *S. felix-mangingi*" and compare these species with related taxa. Daniel's, "Mexican Acanthaceae" provides a comprehensive taxonomic synthesis of the family in Mexico, including a key to genera and a state-by-state, voucher-based catalog documenting nearly 400 species, many of them endemic. Minorta-Cely et al.'s "Multicriteria assessment of vegetation threats in the Colombian Orinoquia" applies an analytic hierarchy

process integrating species conservation status, local uses, dominance, and habitat quality to identify highly threatened forest and grassland vegetation types and to inform land-use planning. Mohn et al. use a common-garden experiment to show how growth, genetics, and provenance influence early reproductive maturity and unexpected patterns of pistillate flowering in *Quercus macrocarpa* in their paper on, “The effect of height and seed provenance on early flowering in bur oaks.” Molina and Navarro compare high-elevation tropical and extratropical wetlands, revealing analogous zonation structures shaped by flooding duration but differing in dominant life forms in their paper, “Plant zonation patterns along a water-level gradient.” Schwarzer and Capelo document morphological and ecological distinctiveness in southwestern Portugal and describe the new endemic species *Euphorbia vincentina* in the paper on, “Taxonomical differentiation of the complex *Euphorbia characias* s.l.” Finally, Vega explores the scientific and artistic significance of Johannes Fortuijn’s hand-colored copies of Linnaeus’s *Hortus Cliffortianus*, situating them within Enlightenment-era botany and advocating for their

digitization and broader access in his paper on “Rare beauties.”

Collectively these papers span botanical history, systematics, floristics, plant ecology, conservation science, and plant reproductive biology, covering historical collections and rare botanical books with modern taxonomic discovery, quantitative vegetation assessment, and experimental studies of growth and reproduction. Together, they highlight how herbaria, field exploration, analytical methods, and historical scholarship inform our understanding of plant diversity, evolution, ecology, and conservation across regions ranging from temperate and tropical Asia and the Americas to Mediterranean Europe.

After centuries of inquiry, botany continues to evolve, providing the core conceptual and practical foundations for expanding disciplines that investigate the plant and fungal world. As an editorial board, we are grateful to be part of a global community of scientists, collections managers, and knowledge keepers who advance botanical science, steward collections, and deepen understanding in a rapidly changing world.