

Robert Lynch Wilbur: Botanist, Mentor, Family Man

Authors: Levy, Foster, and Taylor, Charlotte M.

Source: Rhodora, 124(998-9): 115-132

Published By: New England Botanical Society

URL: https://doi.org/10.3119/22-07

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Robert Lynch Wilbur: botanist, mentor, family man

Foster Levy 1* and Charlotte M. Taylor 2

Department of Biological Sciences, East Tennessee State University, Johnson City, TN 37601 *levyf@etsu.edu

²Missouri Botanical Garden, 4344 Shaw Boulevard, St. Louis, MO 63110

DEDICATION

Robert Lynch Wilbur (4 Jul. 1925–31 Oct. 2022; Figure 1) spent a well-lived botanical life as a professor, a plant taxonomist of both temperate and tropical floras, and a mentor to numerous students. He focused his efforts on floristics, field work, teaching at both undergraduate and graduate levels, collecting and herbarium development, and botanical nomenclature. His contributions are notable in all of these areas. Nearly all of his career was spent at Duke University. The Duke University Herbarium (DUKE) today contains ca. 400,000 specimens of vascular plants—quite a large collection for a university of its size—with most of these accessioned during his tenure. His students belong now to five generations; all called him "Dr. Wilbur" until and often after finishing their studies, and all continue to think of him by this name. He was characteristically exact and exacting, generous, dryly witty, deeply knowledgeable, and stubbornly independent-minded. He trained his students professionally and also kept track of them as they navigated college years, and we take the opportunity here to acknowledge his contributions to botany and to us and make these contributions more widely known.

EARLY YEARS

Robert L. Wilbur was born in Annapolis, Maryland, but his family soon moved to Durham, North Carolina, where his father was a professor of engineering at Duke University. As the son of a Duke University faculty member, young Bob Wilbur was able to enroll as faculty offspring and complete his BS (1946) and MA (1947) degrees, both in botany, at Duke. His early interest in plant taxonomy was evident in his master's thesis topic, "Taxonomic Studies of Some Families in the Piedmont Flora," and his choice of advisors, ecologists H.L. Blomquist and H.J. Oosting.

Between his masters and doctoral degree studies, Wilbur had an appointment as a graduate assistant for Harold St. John (1892–1991) to work on the taxonomy of *Gossypium* in Hawaii (1947–1948). This work presaged the extensive tropical travels and botanical focus that he would continue during graduate school, and the return to the tropics in his professional career a few decades later. It was later discovered that he and Jeanne Marie Doucette, the future Mrs. Wilbur, both had professional appointments in Honolulu at that time, when she was working in Queens Hospital engaged in research on human infectious diseases, but they did not meet until later in Durham.

Wilbur's field-oriented, taxonomic botanical focus continued with his PhD research

RHODORA, Vol. 124, No. 998/999, pp. 115–132, 2022 © Copyright 2022 by the New England Botanical Society

doi: 10.3119/22-07

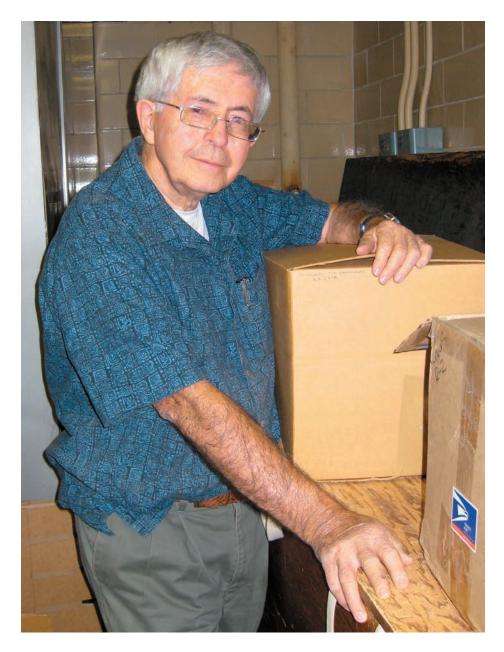


Figure 1. Dr. Robert Wilbur in the drying room of Duke Herbarium, 2008. Photo by Mengchi Ho.

at the University of Michigan, where he was Rogers McVaugh's (1909–2009) third graduate student. He accompanied McVaugh on some of the extensive, rigorous field work in western Mexico for McVaugh's *Flora Novo-Galiciana* project (McVaugh 1983–2001) and traveled through the U.S. and the Caribbean with fellow graduate students, including Grady Webster (1927–2005).

Wilbur's doctoral studies were successfully completed in 1953 with his dissertation, "A revision of the North American genus *Sabatia* (Gentianaceae)." The publication of this study, in *Rhodora* (Wilbur 1955), won the prestigious George R. Cooley Award of the American Society of Plant Taxonomists (ASPT) that year. The choice of *Sabatia* as a dissertation topic was part of his lifelong interest in the flora of the Southeastern U.S. (Wilbur 1955, 1989b). *Sabatia* encompasses approximately 20 species, with the Southeastern U.S. as its center of diversity. Within this region, most of the species are associated with the Coastal Plain physiographic province (Mathews et al. 2015; Wilbur 1955), a formation that had long attracted Wilbur's interest. *Sabatia* also satisfied some of his criteria for choosing a study group: the plants should have big showy flowers (Figure 2) on short stems and thus be easy to find, collect, and study. *Sabatia* plants are herbs of open meadows with bright pink flowers that are some of the loveliest gems of the North American flora. However, he was not much interested in the "prettiness" of these flowers, but in the morphology and systematic problems of the genus.

Wilbur's work on *Sabatia* also set the stage for several of his career-defining foci: on morphological taxonomy backed by extensive field work and study of historical aspects and nomenclature, and on projects centered on the flora of the Southeastern U.S. His research on *Sabatia* and the Gentianaceae continued after he completed his doctoral research, as both he and James D. Perry, one of his first graduate students, published continuing studies of members of this family in *Rhodora* (Perry 1971; Wilbur 1955, 1984b, 1989b) and other journals (Wilbur 1984a, 1988c). These articles began Wilbur's extensive series of contributions to *Rhodora* (26 articles from 1955 to 2008).

Wilbur's work on *Sabatia* also showed the intellectual rigor, careful observation, and search for adequate data to support conclusions that characterized his career's output. Although not a "numerical taxonomist" (taxonomists who use an approach based on statistical analysis of phenotypic characters) in either the strict or colloquial sense of the term, he compiled as much morphological data as possible and then evaluated the characters of the species through consideration of the mean and range of variation within the overall evidence, as demonstrated by his comments on a taxon of dubious distinction:

The specimens of *S. recurvans* available to Small at New York were too few to be significant in evaluating the supposedly distinguishing characters. This is especially true in regard to the overlapping size-ranges of the corolla-lobes and capsules published as additional evidence. These overlapping ranges might be of some significance if based upon a large series of specimens but in this case furnished only "padding" to an otherwise scantily characterized entity (Wilbur 1955:14).

The study of *Sabatia* also started Wilbur on another lifelong area of professional interest: botanical nomenclature. Writing a treatment of *Sabatia* required analysis of the status of names published in Adanson's *Familles des Plantes* (Adanson 1763; Wilbur



Figure 2. Flower of *Sabatia angularis* (L.) Pursh. The Gentianaceae were a focus of Dr. Wilbur's work. Photo by Marty Silver.

1989b) and of the cryptic botanical works of Constantine Rafinesque (1783–1840). Rafinesque studied *Sabatia* among many other genera, and he left a complicated plant taxonomy for later botanists to tease apart and a large set of names of problematic status under the rules of the current *International Code of Nomenclature for algae, fungi, and plants* (Turland et al. 2018). Rafinesque has been poorly regarded and heavily criticized as both a person and a taxonomist, and his work interested Wilbur partly because the names presented a complex nomenclatural puzzle with aspects both of botany and southern history, and partly because Wilbur's first reaction was always to stand up for the disregarded Southern underdog—and Rafinesque surely qualified as one.

PROFESSIONAL CAREER

Newly minted Dr. Wilbur was appointed assistant professor at the University of Georgia for one academic year (1952–1953). After this, he happily returned to North Carolina. His first appointment there was as assistant professor and herbarium curator in the Department of Botany at North Carolina State College in Raleigh (1953–1957; now North Carolina State University). In 1957, he moved to Duke University, where he remained for the rest of his career. During these early years, he began work on *The Leguminous Plants of North Carolina* (Wilbur 1963b), a comprehensive and much-cited work to this day (e.g.,

Cardina 2021; Sorrie 2021; Weakley 2022; Weakley et al. 2012). His longstanding love of the Atlantic Coastal Plain flora surely matured during the field work for this volume, along with his personal future: in 1955, he married Jeanne Marie Doucette (b. 1925), who went to Duke to pursue her PhD in microbiology. They met in Duke's Perkins Library and attended the same church, and she finished her degree around the time they were married. For this event, he was willing to make a rare trip outside the South, all the way to Chicago.

Most of Wilbur's long academic career was spent at Duke University, and most of it in the Department of Botany; he never changed his office, classes, or botanical focus, but in the 1990s, the Botany Department did change, merging with the Zoology Department to form the Department of Biology. Over the years, Wilbur advanced from assistant professor (1957–1963) to associate professor (1963–1970), obtained tenure (1964), and then advanced to professor (1970–2007), and finally Professor Emeritus (2007–2022). He also served as rotating chair of the Botany Department for several years (1971–1977).

From early in his career, it was clear that Wilbur's primary interests and main accomplishments were going to be in teaching, student training, field work, plant taxonomy, floristics, botanical nomenclature, and herbarium curation. His professional productivity was notable in each of these areas, likely facilitated by his need for only a few hours of sleep each night. Many nights after his family went to bed, he settled down to work reading journals and writing articles.

Wilbur retired from his academic responsibilities in 2007, but he remained active in collecting and curating specimens. In fact, after retirement he expanded his Southeastern U.S. collecting activities, which he conducted with his dogs and a few field associates, particularly Mengchi Ho.

UNDERGRADUATE TEACHING

Throughout his university career, Wilbur taught classes in general botany, field botany, and botanical nomenclature. His graduate students often served as teaching assistants, and his classes usually included extensive field work. This was facilitated by the proximity of the 2800+ ha Duke Forest, but his botany classes also explored all of Duke's West Campus. Wilbur considered field botany the primary pathway for understanding the diversity of plants, their variants, and their relationships. His lectures were accurate and well organized, and the material was covered completely and with high standards, but often neither he nor the students were deeply enthused about this aspect of his classes. The most memorable and instructive parts of Wilbur's classes were conducted in the field and the lab, where living plants were the focus and students had ample material for examination. Many undergraduates supervised by Wilbur conducted and finished their botany projects and then pursued other careers, but several of them continued into careers in botany.

GRADUATE STUDENTS

Fourteen graduate students finished degrees under Wilbur's direction, and he served as a committee member or informal advisor for a large number of other students and post-docs working on a wide diversity of plant taxa. Most of these students continued with careers

in botany at botanical institutes (Arnold Arboretum, Richard E. Weaver, Jr.; Botanical Research Institute of Texas, Peter W. Fritsch; Brooklyn Botanical Garden, Gerry Moore; California Academy of Sciences, Frank Almeda and Thomas F. Daniel; Missouri Botanical Garden, Barry E. Hammel and Charlotte M. Taylor; National Herbarium of Panama, Mireya Correya; New York Botanical Garden, James L. Luteyn) or universities (Duke University, Mengchi Ho and Layne Huiet; East Tennessee State University, Foster Levy; Eastern Illinois University, Gordon C. Tucker; University of Baghdad, Hazim S. Daoud; University of Michigan, William R. Anderson; University of New Orleans, Kathleen B. Utley; University of North Carolina-Asheville, James D. Perry; University of Southern Mississippi, Mac H. Alford). Only one of his students did not continue in the field, Priscilla A. Sherwin. Wilbur was an exceptional professor in the amount of time he gave to his students, and he developed close relationships with many. He was in the herbarium and available to chat six days a week. At noon each day he ate lunch in the herbarium lab with the collections manager, Sherri Herndon, any students who were around, and various faculty colleagues. The lunch discussions covered all aspects of botany, from interesting plants and new articles to recent accomplishments of others in the department to personal stories about other botanists.

Wilbur strongly encouraged his students to obtain their own funding to support their field work and to gain expertise in grant writing. During many of his teaching years, National Science Foundation (NSF) funds were frequently available for these projects. He also ensured that his students' research was formally published, a critical step for a professional career in science and a critical component of the research process. He further encouraged publishing some results before the final dissertation was defended, to gain critical experience. This approach was intimidating for a beginning student but resulted in a feeling of ownership and professionalism.

PLANT TAXONOMY, FLORISTICS, AND FIELDWORK

With his view that taxonomic patterns could best be detected by careful examination of a large set of specimens from throughout a taxon's geographical and ecological range, Wilbur always relied on extensive herbarium material as the basis for his research. His approach to taxonomy required detailed morphological examination backed by strong familiarity with the habitats, phenology, and range of variation observed firsthand in the field. For these reasons, throughout his career he spent uncounted hours in the field with the living plants and was an indefatigable collector of the entire flora and of local variation within a species. In 70 years, he made more than 100,000 numbered collections in the United States and six other countries. While still a student, Wilbur had already collected in several U.S. states outside the core of the Southeast (Florida, Michigan, Texas) and the territory of Hawaii as well as in Mexico. After completion of his North Carolina legume treatment (Wilbur 1963b), he continued to collect widely in North Carolina but also began three decades of tropical field work in Central America. His tropical collections at DUKE are from Belize (1970), Costa Rica (1967–1998), Dominica (1964), El Salvador (1972), Mexico (1984), Nicaragua (1972), and Panama (1970s).

Wilbur's specimens were very generous in the amount of plant material mounted on each herbarium sheet, in part to provide ample material for future destructive sampling.

He frequently instructed, "Get enough to fill a sheet." At each collecting stop or site, his goal was to document all fertile taxa, to provide specimens from throughout a plant's range even for common species, and to fill out floristic data. His specimen numbers averaged 70 per day, collected on 12- to 14-hour workdays during which he rarely stopped to eat. He usually finished the end of a field day by collecting all the weeds along the road on the way to the car, a practice that was considered a waste of time by some colleagues; however, various adventitious species were first documented from countries such as Costa Rica by his "weed patrol." Most of Wilbur's collection numbers included sets of duplicates, to take advantage of precious field time to get material for other institutions. These sets varied from two to a dozen or more duplicate sheets. He was blessed with a strong constitution, and even in the heat of the day he would choose a sunny spot to sit on the ground to press plants (Figure 3). Then, after dinner at home or in a hotel, he would spend the evening emptying field presses, writing field notes, and pressing that day's plants.

Wilbur's taxonomic research focused on vascular plants, and it proceeded through the study of individual groups, often at the genus rank, for later synthesis into larger treatments. His approach was two-pronged, via revisionary study and compilation of floristic treatments. He published a large number of taxonomic works, on his own and with students, addressing problems in a diversity of taxa with all of these based on extensive field work. He discovered and described three new genera, 63 new species, and one new variety (Appendix 1), and 28 new species were named for him by others (including three in this issue; Appendix 2) as a way of honoring his work.

Wilbur intensively studied large and/or complicated groups, even while conducting his general collecting and study of the overall flora. His rule of thumb for tropical plants, evolved from his temperate work, was recommended to students who were choosing a project: a good study group is composed of woody shrubs with large showy flowers borne at eye level, because there are more collections of these and it is easier to find your plants in the field; and he disfavored groups that "muck up the press," such as aroids and palms.

Wilbur's manuscripts were always handwritten on legal pads in an exquisite though rather large script, followed by extensive self-editing, and finally these were typed by Sherri Herndon or the Botany Department secretaries. The majority of his publications are single-authored, but several studies were also co-authored with former students: notably, nine with James Luteyn (1970s–2000s) and five with Hazim Daoud (1960s). The papers co-authored with Luteyn report collaborative work conducted both while Luteyn was a student and later when he worked at the New York Botanical Garden.

Wilbur's taxonomic work had a clear focus on Ericaceae (11 papers), Campanulaceae *s.l.* (9 papers) and Gentianaceae (5 papers), but his choice of study group was little constrained by family preference and spanned the monocots through Magnoliids and many of the eudicots. His choice of project was based on his perception of a group that was incompletely known and clearly in need of revision. In contrast to the ecumenical nature of the groups he studied (species from more than 50 genera are found in the paper titles), the geographical areas of where these taxa occurred showed a clear focus on Central America (primarily Mexico and Costa Rica) and the North American Atlantic and Gulf Coastal Plains.

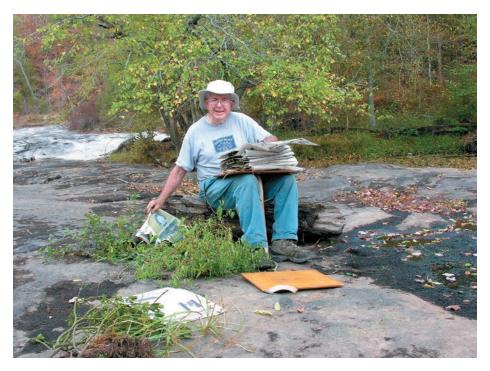


Figure 3. Dr. Robert Wilbur pressing plants on the Mitchell Mill granite outcrop, Rolesville, NC, 2007. Photo by Mengchi Ho.

TROPICAL AMERICAN EMPHASIS

Exploration of the New World tropics by scientists from North American universities was increasing in the 1960s, at a time when Duke initiated botanical and zoological exploration in Central America and the Antilles (Raby 2017; Taylor and Gereau 2021). The work at Duke had strong support from the NSF as well as indirectly through the Peace Corps. because in the 1970s several graduate students arrived with Spanish fluency and botanical experience in Latin America from their recent time as volunteers. Duke began its most intensive tropical plant collecting program in the late 1960s, with focused floristic exploration in Costa Rica and Panama and support from NSF (Figure 4). Wilbur's first collecting trip to Costa Rica was with Duke colleague Donald E. Stone (1930–2011) in 1968. It was probably that trip that ignited his interest in the Neotropics and gave him the resolve to return to study what were then little-known tropical plant families in need of taxonomic attention. Wilbur first traveled with his students James Luteyn and Frank Almeda to Costa Rica and Panama in 1971. He was particularly interested in the montane flora of this region, with its representatives of temperate groups, and here initiated his own work on Central American Campanulaceae and Ericaceae, which have high diversity in both this region and the Southeastern U.S. During this time, Wilbur also started a long collaboration with William Burger (b. 1932) of the Field Museum and his Flora Costaricensis



Figure 4. Dr. Wilbur with young children in Costa Rica, 1977. Photo by Tom Daniel.

project (Burger 1961–2010). Burger and Wilbur exchanged numerous specimens, especially in the 1970s, and they collaborated on identifications and prioritization of taxonomic problems for study.

In the 1960s, the Organization for Tropical Studies (OTS) arose from a series of informal meetings among U.S. tropical biologists. At first this was a network for collaboration, then in 1963 it became a formal institution to provide logistical support and accredited tropical field classes to North American students (Raby 2017). After Stone was appointed director, the OTS administration was moved to Duke. In 1968, OTS acquired ownership of a tract of land in lowland northeastern Costa Rica that had been a private natural area belonging to the tropical ecologist and forester Leslie Holdridge (1907–1999). Holdridge's Finca La Selva became OTS's La Selva Field Biological Station with rustic facilities, a program of scientific study in tropical ecology and biodiversity, and field classes. Duke students, supervised mainly by Stone and Wilbur, conducted research there, with significant support from Duke University and in the company of graduate students and faculty from other U.S. universities. Soon after this, OTS began acquiring other reserves and developing additional field stations. The reserves were located in unexplored locations, so little was known about their flora or fauna. With support from NSF, OTS sponsored collecting and inventory projects to support the ecological work and teaching at those sites. Wilbur was very interested in collaborating on that work and in elucidating the

flora of the region. Based on this and OTS's administrative connection to Duke, he took on the Flora of La Selva Project and the Duke herbarium became its home base. This work included extensive collecting efforts, writing flora treatments, developing a repository for La Selva specimens, and student training.

The Flora of La Selva Project received several rounds of NSF funding, and Duke also helped support student field work there. Project funding paid for travel to La Selva for visiting researchers and for a year-round resident plant collector at the station. The resident collector was usually a student, who made extensive field observations and collected herbarium specimens at La Selva and had funding to continue their studies in person at Duke. Wilbur collected ca. 8,000 specimens at La Selva himself; in total, the project compiled at least 18,000 collections under his direction, and another 4000 specimens were deposited by others. The specimen processing (creation of labels, mounting of DUKE herbarium sheets, and distribution of duplicates) was conducted at DUKE and mostly by Sherri Herndon. Several fascicles for the Flora Project were published in *Selbyana*, but Wilbur considered the knowledge of La Selva's flora to be still inadequate for writing treatments. In the late 1990s, the La Selva Flora Project was revived after a pause with continuing NSF support but a new staff and organization based in Costa Rica at the (now) La Selva Biological Reserve.

THE DUKE HERBARIUM

Throughout his career, the Duke University herbarium was Wilbur's professional passion and central focus. Although founded in 1921, it had served primarily as a teaching and ecological reference collection until he was named its curator in 1957. The herbarium now has more than 800,000 specimens, almost 400,000 of which are vascular plants, and includes 821 types. The herbarium is remarkable for its size in relation to the size of the university, in both its vascular and cryptogamic collections. Wilbur's enthusiasm and energy for adding collections via both direct collecting and specimen exchange tripled the number of vascular plant specimens during his tenure, from ca.130,000 to ca. 400,000. He also worked to stimulate collecting of lichens, algae, and bryophytes by other Duke faculty members and students. Duke University consistently supported the herbarium with space, equipment, and personnel, including a full-time collections manager. This position was held for four decades by Sherri Herndon, who mounted most of Wilbur's specimens and handled day-to-day problems for his students while ensuring that Wilbur did not miss classes or meetings.

PLANT NOMENCLATURE

A stable nomenclature is fundamental to plant taxonomy, and Wilbur was a productive nomenclaturalist in both his own studies and as a member of the Nomenclature Committee of the International Association for Plant Taxonomy (IAPT) for 21 years (1981–2002). A large proportion of his publications are nomenclatural clarifications and historical analyses, and he specialized in the works of several taxonomists, notably Constantine Rafinesque and the great botanist of Southeastern U.S. plants, John Kunkel Small (1869–1938). Wilbur also focused on nomenclatural studies of plants found in the Southeastern U.S.



Figure 5. Dr. Wilbur and daughter Margaret Wilbur in the Duke Herbarium, summer 2021. Photo by Jim Luteyn.

Regarding plant nomenclature, Wilbur was a stringent rule-follower, and as with other aspects of his botanical work, he was knowledgeable and rigorous. He was not enamored with formal conservation of generic names, and he was uncomfortable with the conservation of species names. He offered one of the few formal classes available then in plant nomenclature, at the graduate level. This was a well-organized pass through the Code of Botanical Nomenclature, as it was then called, which he considered essential for training in plant taxonomy.

Accompanying the long list of professional accomplishments was Wilbur's devotion to his family (Figure 5) and his religious beliefs. Jeanne and Robert Wilbur were married for 67 years and nurtured a close-knit family. They raised six children in a principled Roman Catholic household. They dearly loved and maintained close ties to all their children: Ralph, Martha, Mark (deceased), Ellen, Lenore, and Margaret. The family atmosphere was always enhanced by cherished companion dogs, who often were taken along to the herbarium and the field. Some of the dogs were given preference over colleagues and students; as Foster Levy recalls: on a field trip in dense vegetation, Wilbur instructed

him to go ahead, "in case there is a snake, it will bite you first rather than my dog." The lives of Dr. Wilbur's students and family were enhanced by his gentle humor, faithfulness, and kindness.

ACKNOWLEDGMENTS

We thank Frank Almeda, Tom Daniel, Layne Huiet, Jim Luteyn, and Margaret Wilbur for invaluable help researching many aspects of the manuscript; Ihsan Al-Shehbaz and Michael Grayum for helpful information; Marty Silver, Tom Daniel, and Jim Luteyn for their photos; and Melanie Schori, Janet Sullivan, and an anonymous reviewer for helpful comments on the manuscript.

LITERATURE CITED

(exclusive of R.L. Wilbur references)

- Adanson, M. 1763. Familles des Plante. Vol. 1. Vincent, Paris.
- Burger, W. 1961–2010. Flora Costaricensis. Fieldiana, Botany (multiple volumes).
- CARDINA, J. 2021. Lives of Weeds: Opportunism, Resistance, Folly. Cornell University Press, Ithaca, NY.
- MATHEWS, K.G., M.S. RUIGROK, AND G. MANSION. 2015. Phylogeny and biogeography of the eastern North American rose gentians (*Sabatia*, Gentianaceae). Systematic Botany 40:811–825.
- McVaugh, R. 1983–2001. Flora Novo-Galiciana. University of Michigan Press, Ann Arbor, MI. (Eight of 17 volumes published.)
- Perry, J.D. 1971. Biosystematic studies in the North American genus *Sabatia* (Gentianaceae). Rhodora 73:309–369.
- RABY, M. 2017. American Tropics: The Caribbean Roots of Biodiversity Science. University of North Carolina Press, Chapel Hill, NC.
- SORRIE, B.A. 2021. Vascular flora of the Outer Banks, North Carolina, USA. Journal of the Botanical Research Institute of Texas 15:607–710.
- Taylor, C.M., and R.E. Gereau. 2021. Walter H. Lewis: A life spent pushing back the frontiers of botany (1930–2020). Annals of the Missouri Botanical Garden 106:469–489.
- Turland, N.J., J.H. Wiersema, F.R. Barrie, W. Greuter, D.L. Hawksworth, P.S. Herendeen, S. Knapp, W.-H. Kusber, D.-Z. Li, K. Marhold, T.W. May, J. McNeill, A.M. Monro, J. Prado, M.J. Price, and G.F. Smith. 2018. International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code) adopted by the Nineteenth International Botanical Congress Shenzhen, China, July 2017. Regnum Vegetabile 159. Koeltz Botanical Books, Glashutten, DE.
- Weakley, A.S. 2022. Flora of the Southeastern United States. University of North Carolina Herbarium, North Carolina Botanical Garden, Chapel Hill, NC.
- ——, J.C. Ludwig, J.F. Townsend, and B. Crowder. 2012. Flora of Virginia. Botanical Research Institute of Texas Press, Ft. Worth, TX.

PUBLICATIONS AUTHORED OR CO-AUTHORED BY ROBERT L. WILBUR

- Buell, M.F. and R.L. Wilbur. 1948. Life-form spectra of the hardwood forests of the Itasca Park region, Minnesota. Ecology 29:352–359.
- WILBUR, R.L. 1954. A synopsis of *Jatropha*, subsection *Eucurcas*, with the description of two new species from Mexico. Journal of the Elisha Mitchell Scientific Society 70:92–101.
- ———. 1954. An undescribed dwarf species of *Amorpha* from Georgia. Rhodora 56:261–265.
- . 1955. A revision of the North American genus *Sabatia* (Gentianaceae). Rhodora 57:1–33, 43-71, 78-104.
- ——. 1959. Leguminosae, pp. 92–104. *In*: Blomquist, H.L. and H.J. Oosting, A Guide to the Spring and Early Summer Flora of the Piedmont, North Carolina. Seemany Printery, Durham, NC.

— 1960. The nomenclatural status of Aristolochia serpentaria var. nashii. Journal of the Elisha Mitchell Scientific Society 76:80-81. —. 1961. A new name for the puberulent sessile-leaved *Uvularia*. Rhodora 63:36–39. - AND H.S. DAOUD. 1961. The genus *Lechea* (Cistaceae) in the southeastern United States. Rhodora 63:103-118. —. 1962a. Nomenclatural notes on two southeastern *Rhynchosias*. Rhodora 64:60–62. —. 1962b. The identity of Walter's species of *Anonymos*. Journal of the Elisha Mitchell Scientific Society 78:125-132. —. 1963a. A revision of the North American genus *Uvularia* (Liliaceae). Rhodora 65:158–188. . 1963b. The Leguminous Plants of North Carolina. North Carolina Agricultural Experiment Station, Raleigh, NC. —. 1963c. A prior name for the Hawaiian *Gouldia terminalis*. Pacific Science 17:421–423. Mitchell Scientific Society 80:51–65. —. 1964b. Notes on the genus *Diamorpha* (Crassulaceae). Rhodora 66:87–92. —. 1964c. The correct name for the Hawaiian Gossypium sanvicense. Taxon 26:140. —. 1964d. Fabaceae, pp. 189–212. In: A.E. Radford, H.E. Ahles, and C.R. Bell. Guide to the Vascular Flora of the Carolinas. University of North Carolina, NC Book Exchange, Chapel Hill, NC. - AND H.S. DAOUD. 1964. The genus Helianthemum (Cistaceae) in the southeastern United States. Journal of the Elisha Mitchell Scientific Society 80:38–43. DAOUD, H.S. AND R.L. WILBUR. 1965. A revision of the North American species of Helianthemum (Cistaceae). Rhodora 67:63-82, 255-312. WILBUR, R.L. 1965a. Nomenclatural notes on Hawaiian Myrsinaceae. Pacific Science 19:522. —. 1965b. Nomenclatural note: Aster tortifolius vs. A. bifoliatus. Journal of the Elisha Mitchell Scientific Society 81:54. —. 1965c. The lectotype of the mimosaceous genus *Leucaena* Benth. Taxon 14:246. Science 20:260. —. 1966b. Notes on Rafinesque's species of *Lechea* (Cistaceae). Rhodora 68:192–208. - AND H.S. DAOUD. 1967. A synopsis of the genus Helianthemum (Cistaceae) in Mexico and Central America. Southwestern Naturalist 12:87–96. - AND H.A. HESPENHEIDE. 1967. The genus Clethra (Clethraceae) in the United States. Journal of the Elisha Mitchell Scientific Society 83:82-88. - AND J.D. Perry, 1967. Palynological notes on American species of Helianthemum (Cistaceae). Rhodora 69:184-194. —. 1967. The identity of *Psoralea multijuga* Ell. (Leguminosae). Rhodora 69:48–50. —. 1968a. The status of *Hedyotis procumbens* var. *hirsuta* (Rubiaceae). Rhodora 70:306–311. — 1968b. Fabaceae, pp. 569–645. In: A.E. Radford, H.E. Ahles, and C.R. Bell. Manual of the Vascular Flora of the Carolinas. University of North Carolina Press, Chapel Hill, NC. CORREA, A.M.D. AND R.L. WILBUR. 1969. A revision of the genus Carphephorus (Compositae-Eupatorieae). Journal of the Elisha Mitchell Scientific Society 85:79–91. WILBUR, R.L. 1969a. (242). The legitimacy of the generic name *Pilotrichum P. Beauv. Taxon* 18:345–346. —. 1969b. A new Costa Rican species of Centropogon (Campanulaceae–Lobelioideae). Brittonia 21:355-358. -. 1969c. The correct name of an Hawaiian rubiaceous tree: Gouldia affinis vs. Gouldia terminalis. Brittonia 21:224–226. —. 1970a. Infraspecific classification in the Carolina flora. Rhodora 72:51–65. —. 1970b. Taxonomic and nomenclatural observations on the eastern North American genus

Asimina (Annonaceae). Journal of the Elisha Mitchell Scientific Society 86:88–96.

Manual of the Vascular Plants of Texas. Texas Research Foundation, Renner, TX.

—. 1970c. Cistaceae, pp. 1070–1032. *In*: D.S. Correll, M.C. Johnston, and Collaborators.

- ——. 1970d. Cistaceae, pp. 1–17. *In*: Lundell, C.L. and Collaborators. Flora of Texas, Vol. 2. Texas Research Foundation, Renner, TX.
- ——. 1970e. Clethraceae, pp. 18–20. *In:* Lundell, C.L. and Collaborators. Flora of Texas, Vol. 2. Texas Research Foundation, Renner, TX.
- Sherwin, P.A. and R.L. Wilbur. 1971. The contributions of floral anatomy to the generic placement of *Diamorpha smallii* and *Sedum pusillum*. Journal of the Elisha Mitchell Scientific Society 87:103–114.
- WILBUR, R.L. 1971. A reconsideration of Bartram's binomials. Journal of the Elisha Mitchell Scientific Society 87:56–73.
- —— AND C.H. RACINE. 1971. The genus *Leiophyllum* (Ericaceae): morphological variation, distribution, and classification. Journal of the Elisha Mitchell Scientific Society 87:222–226.
- WILBUR, R.L. 1972. A new Costa Rican species of *Centropogon: C. irazuensis* (Campanulaceae-Lobelioideae). Brittonia 24:420–424.
- ——. 1974a. A new Panamanian species of *Lobelia* (section *Tylomium*). Annals of the Missouri Botanical Garden 61:889–891.
- 1974b. A new species of *Lechea* (Cistaceae) from peninsular Florida. Rhodora 76:478–483.
 1974c. The Central American species of the genus *Disterigma* (Ericaceae: Vaccinieae).
 Bulletin of the Torrey Botanical Club 101:245–249.
- . 1975a. A revision of the North American genus *Amorpha* (Leguminosae–Psoraleae). Rhodora 77:337–409.
- ——. 1975b. A synopsis of the Costa Rican species of *Burmeistera* (Campanulaceae: Lobelioideae). Bulletin of the Torrey Botanical Club 102:225–231.
- ——. 1976a. A synopsis of the Costa Rican species of the genus *Centropogon* Presl. (Campanulaceae, Lobelioideae). Brenesia 8:59–84.
- ——. 1976b. Illegitimate names: *Rhododendron nudiflorum* (L.) Torr. and *Rhododendron roseum* (Loisel.) Rehd. Taxon 25:178–179.
- Woodson, R.E., R.W. Schery, and R.L. Wilbur. 1976. Flora of Panama. Part IX. Family 183. Campanulaceae. Annals of the Missouri Botanical Garden 63:593–655.
- LUTEYN, J.L. AND R.L. WILBUR. 1977. New genera and species of *Ericaceae* (Vaccinieae) from Costa Rica and Panama. Brittonia 29:255–276.
- WILBUR, R.L. 1977a. Nomenclatural notes on the genus *Diamorpha* (Crassulaceae). Taxon 26:137–139.
- ——. 1977b. The correct name of the Hawaiian Gossypium: G. sandvicense. Taxon 26:140.
- —— AND J.L. LUTEYN. 1978. Flora of Panama. Part VIII. Family 149. Ericaceae. Annals of the Missouri Botanical Garden 65:27–143.
- ———. 1980. The lectotype of the generic name *Bignonia*—again. Taxon 29:299–304.
- ——. 1981a. Additional Panamanian species of *Burmeistera* (Campanulaceae: Lobelioideae). Annals of the Missouri Botanical Garden 68:167–171.
- . 1981b. Generic typification and Article 10.1 with comments on the typification of the generic names *Diamorpha*, *Leucaena*, *Odontonema*, *Picrodendron* and *Pseudolarix*. Taxon 30:449–456.
- ——. 1981c. Oreomunnea vs. Oreamunoa: the orthography of a generic name. Taxon 30:309–311.
 ——. 1981d. The lectotypification of Gossypium tomentosum Seem. and the name of the Hawaiian endemic Gossypium. Taxon 30:478–481.
- ——. 1981e. The typification of the genus *Forestiera* (Oleaceae). Rhodora 83:465–470.
- . 1981f. The unnecessary conservation of generic lectotypes. Taxon 30:39–42.
- —— AND J.L. LUTEYN. 1981. Additions to the Ericaceae of Panama. Annals of the Missouri Botanical Garden 68:154–166.
- ——. 1984b. A synopsis of the genus *Halenia* (Gentianaceae) in Central America. Bulletin of the Torrey Botanical Club 111:366–374.

- AND COLLABORATORS. 1986a. An undescribed Panamanian Vaccinium: Vaccinium bocato-

—. 1985. A proposed lectotype for *Lepianthes* Raf. (Piperaceae). Taxon 34:287–288.

rensis (Ericaceae). SIDA, Contributions to Botany 11:441–443. -. 1986b. The vascular flora of La Selva Biological Station, Costa Rica. Introduction. Selbyana 9:191. —. 1987a. Lectotypification of *Phlox ovata* L. (Polemoniaceae). Taxon 36:130–132. —. 1987b. The lectotype of *Lepianthes* Raf. (Piperaceae). Taxon 36:113–115. —. 1988a. The authority for *Lepuropetalon spathulatum* (Saxifragaceae). Castanea 53:306–308. —. 1988b. The authority of the binomial *Polygonella gracilis* (Polygonaceae). Castanea 53:167-168. 1988c. The correct scientific name of the pale, yellow or white gentian of the eastern United States. SIDA, Contributions to Botany 13:161–165. —. 1988d. The unwarranted extension of Article 72. Taxon 37:464–467. —. 1988e. What do we know about *Diamorpha smallii* (Crassulaceae), "one of the betterknown taxa in the southeastern flora?". SIDA, Contributions to Botany 13:1-16. -. 1989a. The status of the binomial *Sesbania macrocarpa* Muhl. (Leguminosae). Castanea 54:121-127. 1989b. The type species of the genus Sabatia Adanson (Gentianaceae). Rhodora 91:167–171. . 1990a. Identification of the plants illustrated and described in Catesby's Natural History of the Carolinas, Florida and the Bahamas. SIDA, Contributions to Botany 14:29–48. -. 1990b. Isn't the generic name part of the protologue of a new species? Taxon 39:297–298. LEVY, F. AND R.L. WILBUR. 1990. Disjunct populations of the alleged serpentine endemic, Aster depauperatus (Porter) Fern., on diabase glades in North Carolina. Rhodora 92:17-21. WILBUR, R.L. 1991a. Synopsis of the Mexican and Central American representatives of Lobelia section Tylomium (Campanulaceae: Lobelioideae). SIDA, Contributions to Botany 14:555–567. —. 1991b. The recent neotypification and proposal (977) to reject the name Cenchrus carolinianus Walter (Gramineae). Taxon 40:326-330. -. 1992. A synopsis of the genus Disterigma (Ericaceae: Vaccinieae) in Mexico and Central America with the description of two previously undescribed species. Bulletin of the Torrey Botanical Club 119:280-288. -. 1994a. The Myricaceae of the United States and Canada: genera, subgenera, and series. SIDA, Contributions to Botany 16:93–107. -. 1994b. An interim checklist of the vascular plants of La Selva Biological Station, Costa Rica, pp. 350-378. In: L. McDade, ed. La Selva: Ecology and Natural History of a Neotropical Rainforest, University of Chicago Press, Chicago, IL. -. 1995. The orthography of the name of a southeastern endemic shrub, *Hypericum buckleii* M.A. Curtis. Castanea 60:166–167. -. 1997. Calcaratolobelia (Campanulaceae): a new genus of spurred lobelioids from Mexico and Central America. SIDA, Contributions to Botany 17:555-564. -. 2001a. Five new combinations in the genus *Morella* (Myricaceae) for neotropical species. Rhodora 103:120-122. -. 2001b. Campanulaceae. In: W.D. Stevens, C. Ulloa Ulloa, A. Pool, and O.M Montiel. Flora de Nicaragua. Monographs in Systematic Botany from the Missouri Botanical Garden 85:557–566. 2001c. Ericaceae. In: W.D. Stevens, C. Ulloa Ulloa, A. Pool, and O.M Montiel. Flora de Nicaragua. Monographs in Systematic Botany from the Missouri Botanical Garden 85:822–831. -. 2001d. Gentianaceae. In: W.D. Stevens, C. Ulloa Ulloa, A. Pool, and O.M Montiel. Flora de Nicaragua. Monographs in Systematic Botany from the Missouri Botanical Garden 85:1105-1113.

—. 2001e. Monotropaceae. *In*: W.D. Stevens, C. Ulloa Ulloa, A. Pool, and O.M Montiel. Flora de Nicaragua. Monographs in Systematic Botany from the Missouri Botanical Garden

85:1513.

- 2001 f. Pyrolaceae. In: W.D. Stevens, C. Ulloa Ulloa, A. Pool, and O.M Montiel. Flora de Nicaragua. Monographs in Systematic Botany from the Missouri Botanical Garden 85:2187. — 2001g. Sphenocleaceae. *In*: W.D. Stevens, C. Ulloa Ulloa, A. Pool, and O.M Montiel. Flora de Nicaragua. Monographs in Systematic Botany from the Missouri Botanical Garden 85:2426-2427.
- —... 2002a. The identity and history of *Myrica caroliniensis* (Myricaceae). Rhodora 104:31–41. — . 2002b. Thomas Walter's oaks from the coastal region of South Carolina. Rhodora 104:134-150.
- 2003. What is the correct name for the bristly greenbrier? Rhodora 105:250–259.
 2004. The subgeneric nomenclature for the herbaceous-stemmed *Smilax* species (Smilacaceae) of North America. Brittonia 56:166-168.
- AND S. BLOODWORTH. 2004. Notes on the box huckleberry, Gaylussacia brachycera (Ericaceae), and its unexpected presence in North Carolina. Rhodora 106:371–377.
- LUTEYN, J.L. AND R.L. WILBUR. 2005. Flora Costaricensis: Family #172 Ericaceae. Fieldiana Botany 45:1-104.
- R.L. WILBUR, 2005. Systematic notes on the Rubiaceae tribe Spermacoceae. I. The author and the type of the genus *Diodella*, with comments on tribal delimitation. Rhodora 107:408–413.
- AND J.L. LUTEYN. 2005. Three previously undescribed species of *Vaccinium* (Ericaceae) from Costa Rica and Panamá. SIDA, Contributions to Botany 21:1607–1614.
- AND M.K. WHITSON. 2005. The identity of Riddell's seven validly published but overlooked Pteridophytic binomials. American Fern Journal 95:160–170.
- 2006. Addendum to "The subgeneric nomenclature for the herbaceous-stemmed Smilax species (Smilacaceae) of North America" and comments on the problems of infrageneric nomenclature. Brittonia 58:88-89.
- AND M.K. WHITSON. 2007. Taxonomic assessment of the North American taxa published by John L. Riddell in 1853. Rhodora 109:161-186.
- AND M. Ho. 2008. In defense of the binomial *Quercus elliottii* (Fagaceae) for the running oak of the southeastern United States. Rhodora 110:479-483.
- AND J.L. LUTEYN. 2008. A synopsis of the Mexican and Central American species of Vaccinium (Ericaceae). Journal of the Botanical Research Institute of Texas 2:207-241.

APPENDIX 1

Names published by Robert L. Wilbur and co-authors.

Apocynaceae

Bleekeria compta (K. Schum.) Wilbur

Campanulaceae

Burmeistera almedae Wilbur Burmeistera chiriquiensis Wilbur Burmeistera chirripoensis Wilbur Burmeistera darienensis Wilbur Burmeistera dukei Wilbur Burmeistera hammelii Wilbur Burmeistera kirkbridei Wilbur Burmeistera mcvaughii Wilbur Burmeistera morii Wilbur Burmeistera panamensis Wilbur Burmeistera pirrensis Wilbur Burmeistera toroensis Wilbur Burmeistera utleyi Wilbur Burmeistera zurquiensis Wilbur

Calcaratolobelia Wilbur

Calcaratolobelia aurita (Brandegee) Wilbur Calcaratolobelia cordifolia (Hook. & Arn.) Wilbur

Calcaratolobelia flexuosa (C. Presl) Wilbur Calcaratolobelia flexuosa var. intermedia (Hemsl.) Wilbur

Calcaratolobelia gibbosa (S. Watson) Wilbur Calcaratolobelia goldmanii (Fernald) Wilbur Calcaratolobelia knoblochii (T.J. Ayers)

Wilbur

Calcaratolobelia macrocentron (Benth.)

Calcaratolobelia margarita (E. Wimm.)

Calcaratolobelia mcvaughii (T.J. Ayers) Wilbur

Calcaratolobelia pringlei (B.L. Rob.) Wilbur Calcaratolobelia tenella (Turcz.) Wilbur Calcaratolobelia villaregalis (T.J. Ayers) Wilbur

Centropogon darienensis Wilbur Centropogon irazuensis Wilbur Centropogon luteynii Wilbur Centropogon panamensis Wilbur Centropogon talamancensis Wilbur Lobelia calochlamys (Donn. Sm.) Wilbur Lobelia dressleri Wilbur Lobelia guatemalensis (B.L. Rob.) Wilbur Lobelia zelayensis Wilbur Siphocampylus darienensis Wilbur

Cistaceae

Lechea lakelae Wilbur

Colchicaceae

Uvularia caroliniana (J.F. Gmel.) Wilbur

Combretaceae

Bucida correlliana Wilbur

Ericaceae

Arctostaphylos arbutoides var. costaricensis (Small) Wilbur & Lutevn Didonica Luteyn & Wilbur Didonica panamensis Lutevn & Wilbur Didonica pendula Luteyn & Wilbur Disterigma fortunense Wilbur Disterigma hammelii Wilbur & Lutevn Disterigma luteynii Wilbur Disterigma pilosum Wilbur Disterigma trimerum Wilbur & Luteyn Disterigma utlevorum Wilbur & Luteyn Lateropora santafeensis Wilbur & Luteyn Lateropora tubulifera Wilbur & Luteyn Lysiclesia panamensis Luteyn & Wilbur Macleania megabracteolata Wilbur & Luteyn Macleania talamancensis Wilbur & Luteyn Psammisia darienensis Luteyn & Wilbur Sphyrospermum tuberculatum Wilbur & Lutevn

Themistoclesia costaricensis Luteyn & Wilbur Themistoclesia horquetensis Luteyn & Wilbur Themistoclesia revoluta Wilbur & Luteyn Utleya Wilbur & Luteyn Utleya costaricensis Wilbur & Luteyn Vaccinium almedae Wilbur & Luteyn

Vaccinium bocatorense Wilbur
Vaccinium campanense Wilbur & Luteyn
Vaccinium chihuahuense Wilbur & Luteyn
Vaccinium costaricense Wilbur & Luteyn
Vaccinium floccosum (L.O. Williams) Wilbur
& Luteyn

Vaccinium furfuraceum Wilbur & Luteyn Vaccinium jefense Luteyn & Wilbur Vaccinium luteynii Wilbur Vaccinium monteverdense Wilbur & Luteyn Vaccinium orosiense Wilbur & Luteyn Vaccinium racemosum (Vahl) Wilbur & Luteyn

Vaccinium santafeense Wilbur & Luteyn

Euphorbiaceae

Jatropha bartlettii Wilbur *Jatropha hintonii* Wilbur

Fabaceae

Amorpha georgiana Wilbur Amorpha georgiana var. confusa Wilbur Amorpha herbacea var. floridana (Rydb.) Wilbur

Amorpha ouachitensis Wilbur Rhynchosia cytisoides (Bertol.) Wilbur

Fagaceae

Quercus elliottii Wilbur

Gentianaceae

Halenia alleniana Standl. ex Wilbur Halenia crumiana Wilbur Sabatia bartramii Wilbur Sabaita dodecandra var. foliosa (Fernald) Wilbur

Sabatia macrophylla var. recurvans (Small) Wilbur

Sabatia quadrangula Wilbur

Myricaceae

Morella subgen. Cerothamnus (Tidestr.) Wilbur

Morella ser. Cerothamnus (Tidestr.) Wilbur Morella ser. Faya (Webb & Berthel.) Wilbur Morella californica (Cham.) Wilbur Morella faya (Aiton) Wilbur Morella holdridgeana (Lundell) Wilbur Morella phanerodonta (Standl.) Wilbur Morella picardae (Krug & Urb.) Wilbur Morella pringlei (Greenm.) Wilbur *Morella pubescens* (Humb. & Bonpl. ex Willd.) Wilbur

Primulaceae

Myrsine hosakae Wilbur Myrsine meziana (H.Lév.) Wilbur Myrsine punctata (H.Lév.) Wilbur

Rubiaceae

Gouldia affinis (DC.) Wilbur

Selaginellaceae

Selaginella corallina (Riddell) Wilbur & Whitson

APPENDIX 2

Taxa named for Robert L. Wilbur.

Taxa preceded by an asterisk are newly published in this issue of *Rhodora*.

Acanthaceae

*Justicia wilburii T.F. Daniel Razisea wilburii McDade

Araceae

Philodendron wilburii Croat & Grayum

Asteraceae

Critonia wilburii R.M. King & H. Rob. Munnozia wilburii H. Rob. Pentacalia wilburii H. Rob. Perymenium wilburorum McVaugh Schistocarpha wilburii H. Rob.

Begoniaceae

Begonia wilburii Burt-Utley & Utley

Bromeliaceae

Pitcairnia wilburiana Utley

Campanulaceae

Centropogon wilburii Lammers

Cyperaceae

Cyperus wilburii G.C. Tucker

Ericaceae

Vaccinium wilburii Almeda & Breedlove

Euphorbiaceae

Bernardia wilburii McVaugh Croton wilburii McVaugh

Malpighiaceae

Banisteriopsis wilburii B. Gates Jubelina wilburii W.R. Anderson Malpighia wilburiorum W.R. Anderson

Melastomataceae

Blakea wilburiana Almeda
*Marcetia wilburiana Almeda, R.B. Pacifico
& Fidanza

Poaceae

Panicum wilburii H.St.John

Primulaceae

Auriculardisia wilburiana Lundell

Rubiaceae

*Palicourea wilburiana C.M. Taylor Psychotria wilburiana Dwyer

Salicaceae

Neosprucea wilburiana M.H. Alford