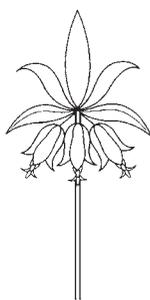


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Hunt Institute for Botanical Documentation
Carnegie Mellon University
5000 Forbes Avenue
Pittsburgh, PA 15213-3890
Telephone: 412-268-2434
Email: huntinst@andrew.cmu.edu
Web site: <http://huntbot.andrew.cmu.edu/HIBD/Publications/HI-Pubs/Pub-Huntia.shtml>

Editor and layout	Scarlett T. Townsend
Book Reviews and Announcements Editor	Charlotte A. Tancin
Associate Editors	Gavin D. R. Bridson T. D. Jacobsen Angela L. Todd Frederick H. Utech James J. White
Designer	Lugene B. Bruno
Photographer	Frank A. Reynolds

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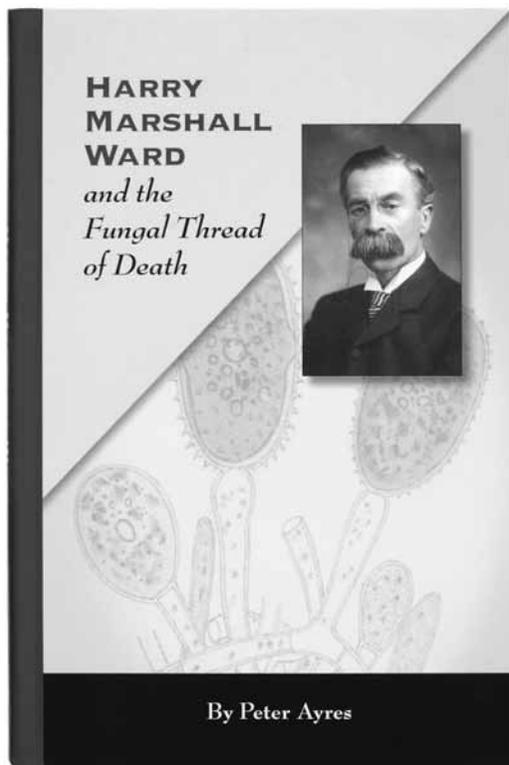
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Book Reviews and Announcements

Ayres, Peter. *Harry Marshall Ward and the Fungal Thread of Death*. St. Paul, Minn.: The American Phytopathological Society, 2005. vii, 168 pp., illus., facsimis., map, ports. \$79.00. ISBN 0-89054-333-X (hardcover).

Ayres writes in his prologue that “Harry Marshall Ward’s reputation has until now rested on discoveries about the transmission of plant diseases that he made while studying coffee leaf disease in Ceylon, during his first employment after graduation. Important as these were, both biologically and in establishing his reputation as a researcher, historical perspective shows that they are much less significant than his role in establishing the pre-eminence of British botany in the early years of the 20th century and his part in the origins of physiological plant pathology” (pp. vi–vii). Indeed, one of the strengths of this work is its emphasis on historical perspective. That first job in Ceylon is a case in point. Coffee leaf rust, caused by a previously unidentified fungus, had been in full swing in Ceylon for ten years when Marshall Ward (1854–1906) was sent by William Thiselton-Dyer (1842–1928) to address the problem. There simply was no cure to recommend to growers. Not until 1885 was there even a fungicide to fight mildew on grape vines. Marshall Ward could not cure infestations but worked to prevent their spread, to promote new growth on the existing plants, and to understand the disease’s origins and lifecycle. Planters had removed forests that served as barriers between the coffee fields, and that fact, combined with a lack of host diversity, meant the fungus was free to spread. Ayres sketches the historical moment evenhandedly: “To make the situation worse, he was faced with ... an epidemic which could not have been stopped with modern chemicals. In his favour, there were few men in 1880 who did have any relevant experience and he was bursting with the ideas and lessons he had recently learned at Cambridge and in the Strassburg laboratory of the great Anton de Bary [1831–1888]” (p. 6). Ayres does not stoop to hero worship but details the struggles within the science.

A second strength of this biography is the science. A scientist is writing, and this shows in the pathogen and experiment explanations as well as in the quotes chosen. Ayres is an experienced pathologist who understands parasites, and he shares his knowledge about life cycles, the history of understanding those life cycles, even in-depth cell structure details in a readable fashion—for example, “In order to find how a pathogen might spread from plant to plant, [Marshall Ward] trapped the reddish-brown spores ... on sticky microscope slides hung like leaves among the crop canopy” (p. 7). Marshall Ward was first to show that a disease can spread aurally via



spores. He “[f]ound how each papillate uredospore of *Hemileia* germinates on the leaf surface, giving a fine thread, or hypha, which penetrates the leaf. ... after the thread-like hypha branches ramified through the leaf, the fungus inserted ‘tapping’ or ‘exhausting’ organs (nowadays called haustoria) into the cells of the leaf; it next burst back to the surface, releasing into the air 150,000 or more spores from each small infection site” (p. 7). As a layperson I was fascinated by the descriptions of the processes, searching for the “fungal thread of death” of the title. Hinted at above, the question was closed in a discussion of Marshall Ward’s soft rot research in the late 1880s: “Each hypha was truly a thread of death” (p. 84).

A third strength of this traditional biography is its use of visual and archival materials. Sprinkled with photos of people and places, reproductions of entertainment invitations, family cartoon drawings and long quotes from letters, readers get the feel of Marshall Ward and the historical moment. For example, Marshall Ward is quoted from Ceylon: “We have great swells come here

now and again; but I am very glad that [Henry] Trimen [(1843–1896), director of the Peradeniya Botanical Garden] entertains and talks with them. I like to be left alone with my books and manuscripts, and it is a rare pleasure to me to be so delightfully alone” (p. 15). Later Ayres reproduces some very pragmatic “love” letters from Marshall Ward in Ceylon to his bride-to-be, Selina Kingdon. Marshall Ward’s letter to his mother around the same time comments on his romantic priorities: “The fact is, I am already wedded to my work, and for some years have played the bigamist” (p. 62). This old-school biography has no armchair psychoanalysis or high theory—the foci are Marshall Ward’s impressions, family history, what he was up against, place in history, and social circles. Indeed, there are small biographical sketches of all the men in Ward’s circle: William Thiselton-Dyer, Louis Lucas (1851–1876), Anton de Bary (including a portrait from our collection), William Gilson Farlow (1844–1919), William Crawford Williamson (1816–1895), Isaac Bayley Balfour (1853–1922), Charles C. Babington (1808–1895), and, of course, the subject’s son, Frank Kingdon-Ward (1885–1958).

Marshall Ward was a popular teacher; at Owens College, students asked for an extra lecture from him over the Christmas 1885 break. He was employed at Coopers Hill (now the Runnymede campus of Brunel University) for ten years beginning in 1885. “New Botany in Britain,” or “The Cause” as Marshall Ward called it (according to A. G. Morton, this was marked by

a new sense of “synthetical unity” of general relationships embracing the totality of plant structure, activity and modes of development” [*History of Botanical Science*, London and New York, 1981, p. 412], accelerated by increasing numbers of research schools and recognition of a common cellular basis of all living organisms), took a major step forward in 1887 when *Annals of Botany* was launched by three of its leading figures, Sydney Howard Vines (1849–1934), Bayley Balfour, and William Gilson Farlow. Marshall Ward was a frequent contributor to *Annals* and by request wrote de Bary’s obituary for *Nature*. A well-rounded contributor to his field, he was appointed chair of botany at Cambridge University in 1895. “New Botany” was a late arrival at Cambridge, and Marshall Ward ushered it in with new buildings; increases in staff, students, and research; a royal visit in March 1904; and by hosting the British Association’s annual meeting later that year. In short, Marshall Ward revitalized the Botany School at Cambridge. On 26 August 1906, he died of diabetes, untreatable at the time.

The book includes references, an appendix listing Ward’s publications, acknowledgments, and an index. The American Phytopathology Society Press includes a disclaimer: “No proofreading has been done by the Press.” Indeed there is an occasional stumble over a typo, but they are few, and by no means do those instances distract from the pleasures and insights held within.

—Angela Todd, Archivist

Jones, Ronald L. *Plant Life of Kentucky: An Illustrated Guide to the Vascular Flora*. With the assistance of John W. Thieret and Charles J. Lapham. Lexington, Ky.: University Press of Kentucky, 2005. xvi, 834 pp., illus., maps, ports. \$75.00. ISBN 0-8131-2331-3 (hardcover).

Plant Life of Kentucky is a comprehensive state accounting of the native and naturalized plant species of Kentucky. It contains accurate identification keys to families, genera and species. Generally, the family descriptions contain extensive and detailed information on uses, weed status, and toxic and medicinal elements. The species accounts provide common local names, flowering periods, habitat distribution, and state and federal designation and wetland ranking, but lack descriptions. There are 179 families, 856 genera and 2,600 species and infraspecific taxa included in the book.

The introduction includes information on the history of the flora, vegetation types, the physical features of Kentucky, as well as an extensive bibliography. The vast majority of the well-reproduced line drawings (1,908 out of 1,984) were scanned from the 1913 edition of Britton and Brown’s *An Illustrated Flora of the Northern United States and Canada*. The glossary is straightforward and will be very useful to the amateur as well as the professional botanist. The physical book is well bound and is printed on acid-free paper. It should hold up to extensive field and herbarium usage. *Plant Life of Kentucky* is a very usable guide to the flora of Kentucky and will be even more so when used with comprehensive floral treatments such as *The Flora of North America*.

—T. D. Jacobsen, Assistant Director

Lack, H. Walter. *Jardin de la Malmaison: Empress Josephine's Garden.* With an essay by Marina Heilmeyer. Munich, Berlin, London and New York: Prestel Verlag, 2004. 327 pp., including 120 color plates, color illus., facsimils, ports. \$180.00. ISBN 3-7913-3185-X (linen in slip-case).

"Gardens are temporary human creations"—no better introduction could be made for this sumptuous volume chronicling the ephemeral history of Malmaison. This estate with gardens outside Paris was owned and made famous by Napoleon Bonaparte's first wife Empress Josephine, who lived there periodically from 1799 until her death in 1814—during her marriage to Bonaparte and his abdication. Her architects and gardeners created an extravagant world of ordered beauty, exoticism and serenity on the grounds of this summer residence. The glasshouse and gardens were filled with ornamental flowers, shrubs and trees acquired from expeditions to Africa, America, Asia, Australia and other parts of Europe, and the parks were inhabited by an assortment of tamed or harmless exotic animals, including llama, gazelle, zebra, orangutan, wallaby, emu and the Australian black swan. She continued the tradition of having the rare plants in her garden illustrated by artists and described by botanists for *Jardin de la Malmaison*, which was published in 20 installments from 1803 to 1805 and included color stipple engravings after the original watercolors by Pierre-Joseph Redouté, with descriptions of the mostly hothouse plants by Étienne-Pierre Ventenat. Between 1812 and 1817, *Description des Plantes Rares Cultivées a Malmaison et a Navarre* was printed in 11 installments and included illustrations by Pierre-Joseph Redouté and Pancrase Bessa.

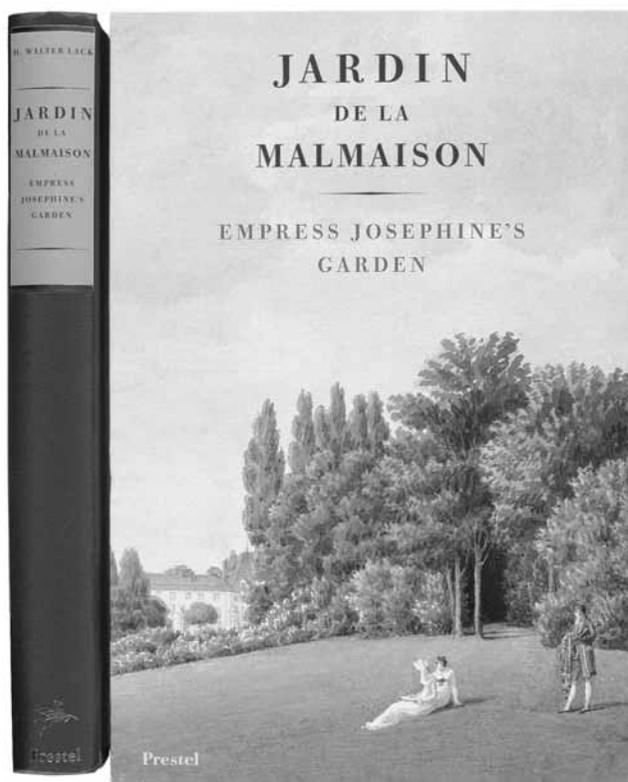
Sadly the extravagance of accumulating over 7,000 acres and creating such a beautiful estate led to a corresponding debt of over 3 million francs. Empress Josephine left no will, and her son Eugène (and after

his death, his wife Augusta Amalia) had no choice but to begin selling much of her valuable collection of art, furniture, jewelry and plant material at Malmaison. The eventual decline and division of the property began when Malmaison was sold in 1827. Sold again in 1842 to Napoleon III, the estate experienced a short period of rejuvenation, but when France declared war on Prussia in 1870, Malmaison stood empty and barely survived looting and its use as a French barracks. In 1903 the final owner turned over the palace and land (which then included only one hundredth of Empress Josephine's property) to the Republic of France on orders that it be maintained as a public museum.

Accurately restoring the gardens to reflect Josephine's years at Malmaison has been impossible. An invaluable aid was Auguste Garnerey's watercolor illustrations of the palace and grounds—reproduced throughout the text of this publication—that were commissioned by Josephine in 1813 and completed in 1823, but even with this visual record and written descriptions, inventories of plant material in her garden and glasshouse are incomplete. Also, much of the property was sold and now is attached to adjoining estates, so that original pathways and vistas

are dissected or interrupted by walls, fences, shrubs, and trees. Even significant pieces of architecture such as the Temple of Love and the large glasshouse, Grande Serre Chaude, are now part of private properties. One gets a sense from Marina Heilmeyer's thoughtful essay, "Malmaison Today," that even though what remains of the palace and grounds is a remnant of its former glory, one still can experience the spirit of Josephine's "temporary garden."

Included in this publication are a list of the plants (with titles and current binomials) that were included in *Description des Plantes Rares Cultivées a Malmaison et a Navarre* (Paris, 1812–1817), along with reproductions of



the 120 stipple engravings from *Jardin de la Malmaison* (Paris, 1803–1805), with plant descriptions given by Étienne-Pierre Ventenat. Currently owned by Deutsche Bank, this copy of *Jardin de la Malmaison* was presented by Napoleon to Franz I Emperor of Austria (the binding is post-August 1806). It is most fitting that images of some of the plants collected for Josephine's Malmaison accompany a history of the estate. My only criticism is that for technical reasons the background of the stipple engravings was dropped out, along with the plate number and the names of the illustrator and the

engraver. Although each engraving is reproduced with a consistent tonality in the background, the subtlety of color against the edges of leaf, flower and stem and the inherent imperfections and quality of the paper surface on which they were originally printed are lost. Also the tonality of the background is missing from the interior of the uncolored plant details, so they appear white. Nevertheless, H. Walter Lack has presented a well-researched and thoughtful history of the life, death and partial rebirth of the gardens at Malmaison.

—Lugene Bruno, Assistant Curator of Art

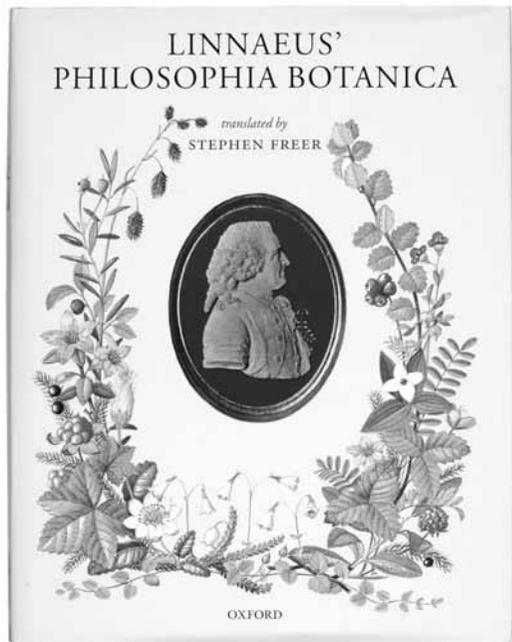
Linnaeus, Carl. *Linnaeus' Philosophia Botanica*. Translated by Stephen Freer. Oxford: Oxford University Press, 2003. xxv, [i], 402 pp., illus., ports., facsimils., text figs. \$180.00. ISBN 0-19-850122-6 (hardcover). \$89.50. ISBN 0-19-856934-3 (paperback).

"... I here present the digest of the Science of Botany; it is small in extent, inasmuch as it comprises the preliminary outlines and rudiments of botany, published only for the sake of my pupils..." writes Carl Linnaeus in his note to the botanical reader at the beginning of *Philosophia Botanica*, now presented in its first full English translation by Stephen Freer. Originally published in 1751, *Philosophia Botanica* was an expansion of Linnaeus' earlier *Fundamenta Botanica* (1736), which contained 365 aphorisms. Freer suggests that the added material was probably based on Linnaeus' lecture notes.

Following Freer's preface is an introduction by Paul Alan Cox of the National Tropical Botanical Garden, Hawaii. Although the work would stand just fine without it, Cox's introduction is truly a useful enhancement, giving an overview of the life and work of Linnaeus that focuses on Linnaeus "first and foremost" as a teacher and on his impact on his many students. Cox notes that Linnaeus' excitement about botany caught an entire generation of students but adds that this raw excitement is not readily seen in Linnaeus' scholarly publications. Cox suggests that Freer's translation lets us tap into Linnaeus' ideas as they were presented to students, enthusiastically, informally, and easily accessible to a lay audience.

Cox adds that *Philosophia Botanica* provides insight into the evolution of Linnaeus' thoughts leading up to his landmark work, *Species Plantarum* (1753). Indeed, we see this impending publishing event foreshadowed in Linnaeus' conclusion to his preliminary note to the botanical reader:

As I am now occupied in collecting *species of plants*, I vehemently request and implore the most eminent botanists throughout Europe to send me plants complete with flowers, if they



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have in duplicate any of the comparatively rare plants that I have not described; this would make it possible for me to refer them to their genera, with adequate definitions; in exchange on my part I will express in the work my gratitude to those who have sent them.

Linnaeus' *Philosophia Botanica* includes: Title page, Dedication, Note to the botanical reader, Introduction, The library, Systems, Plants, The fruit-body, Sex, Characters, Names, Definitions, Varieties, Synonyms, Sketches, Potencies, Plates, Memoranda, Addenda,

Omissa, and Errata. Freer has provided facsimiles of the 1751 title page, the dedication, the first page of the note to the reader, and the first pages to each of the 12 major sections, so that the modern reader can get a sense of what each part of the work looked like in the original. Freer has also added translator's notes, six appendices, an index of contents and terms, and an index of genera. Linnaeus' original contained three indexes of terms, genera and contents, and while those are not included in this translation, two modern indexes done by Claire Stenson are provided instead.

As translator, Freer is in a sense invisible in this work, and yet his hand is on every page, presenting Linnaeus'

ideas and teachings to a new and wider audience. The translation comes across as being straightforward and very readable. This translation is an important contribution to science and its history—while this material has been available in Latin for centuries, that limitation has kept Linnaeus' thoughts and ideas as presented in *Philosophia Botanica* restricted to a fairly small audience. This new version will be read and discussed by many more English readers in the modern scientific and scholarly communities now and in the future.

—Charlotte Tancin, Librarian

Marinelli, Janet, editor-in-chief. *Plant*. First American edition. New York: DK Publishing [in association with Brooklyn Botanic Garden]. 512 pp., color illus. \$50.00 (U.S), \$70.00, (Canadian). ISBN 0-7566-0589-X (hardcover).

Janet Marinelli of the Brooklyn Botanic Garden, who specializes in ecological garden design and plant conservation, has created in *Plant* a platform from which to promote her vision for both. *Plant* represents an ambitious undertaking: to publicize global plant conservation problems, highlight about 2,000 of earth's rarest and most imperiled species, and explain many complex and interrelated issues in a way that shows gardeners how they can have a positive impact on the overall conservation situation and the health of the planet through responsible gardening. It's quite a big task, but Marinelli, working with a group of expert consultants and correspondents, has packed an enormous amount of complex and interrelated information into one volume and made it accessible and engaging.

The first part of the book discusses the biology and conservation of plants as well as global habitats. Marinelli shows how a plant's native habitat determines its growing requirements, and she recounts success stories of gardeners rescuing plant species from extinction. On the publisher's Web site, Marinelli is asked about the role that gardeners can play in plant conservation. She replies: "As wilderness shrinks and garden acreage increases, our role in the current extinction crisis is growing greater every day. When we garden, we are essentially rearranging the planet's flora. So it seems obvious to me that we not only have a responsibility to be aware of the consequences of our actions as gardeners, but also an enormous opportunity to foster biodiversity on our own properties. We can create gardens that help connect shrunken and fragmented nature preserves, support butterflies, bees, and other pollinators, and help augment the genetic diversity of the shrinking populations of many plants." This quotation gives a feel for how she frames gardening as both an opportunity and a threat

for the ongoing survival of the world's flora and how she hopes to help make gardeners aware of their power and their potential beyond the confines of their gardens.

The majority of the book is an encyclopedia of endangered plants, arranged in broad categories, each with an introduction discussing where and how those types of plants grow, their ecological niches, their survival strategies and their exploitation. Each category's introduction is followed by alphabetically arranged entries for individual species, with information on distribution, hardiness, cultivation requirements and conservation status. Interspersed throughout the encyclopedia are informative sidebars on history, threats, habitats, people, plant uses, wildlife, and more. Marinelli adds a detailed chapter on invasive plants, and a reference section containing useful addresses, publications, Web addresses, conservation resources, a glossary and an index.

This publication was endorsed by the Botanic Gardens Conservation International (BGCI) and the World Wildlife Fund. The U.K. edition was published in association with the Royal Botanic Gardens, Kew. DK Publishing describes it as "an extraordinary global project to promote a sustainable attitude towards plants" and notes that part of the profits from sales of the book goes to the various supporting organizations to further their plant conservation efforts.

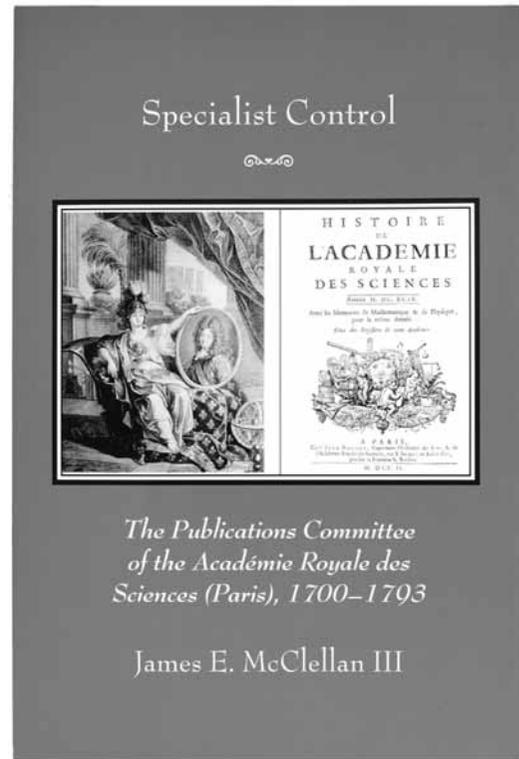
There is a wealth of information packed into *Plant*, and it is well organized and well presented, with strong messages about biodiversity and conservation, and beautiful photos drenching every page in color. The book functions as a book on garden plants, a reference work on threatened and invasive plants, an overview of plant life all over the planet, and a source of conservation information and inspiration. It is aimed at a general and intelligent readership and deserves space in libraries as well as in the homes of gardeners, plant enthusiasts and nature lovers.

—Charlotte Tancin, Librarian

McClellan, James E., III. *Specialist Control: The Publications Committee of the Académie Royale des Sciences (Paris), 1700–1793*. Philadelphia, Pa.: American Philosophical Society, 2003. xii, 134 pp., illus., facsimils. \$24.00. ISBN 0-87169-933-8 (paperback).

Up to the middle ages, private knowledge was *sub rosa* while public knowledge was subject to vigilance of an authority—the Roman Catholic church, the Court, the temple. This began to change in the 17th century, with the rise of institutional knowledge generated by scientific societies emerging in Europe. By the 18th century, scientists in the Parisian Academy of Science's Comité de Librairie served as guarantors of the accuracy and reliability of the publications of the academy. As such, the academy instituted strict standards of peer review and served as “a ferocious gatekeeper” (p. 4). McClellan takes an extensive and detailed look at the archival documents of the Paris Academy of Sciences to tell the story of the academy's evolving structures for regulating science. He also tells many smaller stories of how those controls evaded controversy or were overtly political, tracing events through the papers and private correspondence of the science practitioners whose projects were edited, delayed, or denied.

The academy started off as communal and over time moved from acting as a collective to acting as a judge, allowing individual authors to write, present and take credit for their own research, so long as it successfully passed through the Comité—“The Academy acted in lieu of other state censorship for much of the science published in eighteenth-century France” (p. 13). The academy was founded in 1666; by 1678 the committee system had emerged to evaluate scientific research and proposed papers. By 1685 the academy was issuing standardized “approvals”; in 1688 it established the rule whereby academics wishing to publish had to present their research at an academy meeting, pass peer review by the academy and not be published elsewhere. McClellan writes that “[t]hose standards seem self-evident and elementary to us today, but it was their consistent application over the course of a century that helped transform them into common scientific practice. Then, as now, papers had to conform to a host of unstated parameters that made them recognizable and acceptable as contributions to the science of the day” (p. 29). Papers could be simply rejected as “nothing new, do not print” (p. 31). Michel Adanson's (1727–1806) paper on the baobab tree was excluded because it was “taken from his book” (p. 31). Indeed, McClellan recounts the stability and surety brought on by the Comité's filtering, but he also details how Adanson's early work that contradicted Linnaeus was squelched in the 1760s, Charles-Marie de La Condamine's (1701–1774) research opposing inoculation was refused in the 1770s, and Jean-Jacques Paulet's (1740–1826) proof of the mandrake's powers to



induce miscarriage could not be articulated in the face of the state's opposition to abortion in the 1760s.

McClellan writes: “In some meaningful senses, for knowledge to become knowledge it has to enter the public sphere. That the Academy of Sciences judged science and that the Comité de Librairie closely supervised the Academy's publications highlight the institution and its committee as bottlenecks through which claims had to pass on their way to becoming public knowledge. The control exercised by the Academy was not total or exclusive, to be sure, and even though the Academy repudiated the ‘science’ of Mesmer, Marat, and other lesser lights, the views of these outsiders did make their way to the public, although not as sanctioned conceptions. From this perspective it might be said that the Academy shaped knowledge by defining a line between what was deemed genuine knowledge and what was branded as charlatanry” (p. 64).

McClellan cites several valid reasons for his study: first, there is the power of the Comité and its relatively unstudied position in the history of science; second, the Comité de Librairie constitutes an important piece of scientific publishing. Finally, “[t]he most compelling reason for presenting this study... lies in the fact that with the Academy's Comité de Librairie, scientists

themselves—the producers of knowledge—for the first time gained control over the process of publishing the results of their research. With the Comité de Librairie a novel type and level of professional autonomy appeared in the history of science, in which scientific institutions and the producers of science first came to oversee the publication of science and making knowledge public. The individuals involved were savants, of course, and academicians, not scientists in the nineteenth-century sense, but more than any previous scientific group the Paris Academy and its Comité de Librairie came to

oversee scientific publishing and to shape the content of what appeared as natural sciences” (pp. 2–3). Certainly I agree. However, as a student of the 18th century, I am most gratified by his detailed accounts of *how* these institutional and intellectual bodies interact, how the controversies play out on both sides of the academy’s scientific boundary. McClellan’s astute use of archival documents to tell fascinating scientific dramas makes this book required reading. The work also includes two appendices, notes, bibliography and an index.

—Angela Todd, Archivist

McCook, Stuart. *States of Nature: Science, Agriculture, and Environment in the Spanish Caribbean, 1760–1940*. Austin: University of Texas Press, 2002. xiv, 201 pp., illus., maps, ports. \$79.00. ISBN 0-292-75257-1 (hardcover).

This book is a fine example of those sociology of science endeavors—combining intellectual and institutional history—that have changed what counts as academic inquiry over the past couple of decades. McCook tells an exciting story with insight and a new focus on both global impact and the limits of human efforts: “The planters’ simple-minded pursuit of profit generated a host of environmental changes. To expand export crop production, planters cleared extensive tracts of forest. Deforestation unleashed other environmental problems, including large-scale erosion. I devote particular attention to the widespread outbreak of epidemic crop diseases, some of which had originated on the other side of the globe, that assailed the region’s export crops with increasing frequency and severity during the late nineteenth century. I contend that this phenomenon was a *consequence* of the way in which planters had organized their landscapes to maximize the production of export crops. The epidemic crop diseases also point to the limits of the power of governments, corporations, and scientists to control the natural world. I follow migrations of specific people, plants, and pathogens from one country to another” (p. 6). Part economic history, part history of exported American agricultural endeavors, this book gives a balanced, jargon-free picture of the liberal goals and complicated results of Latin American export agriculture. Notes, a bibliography and an index are included.

This book sketches the history of colonial science in the Spanish Caribbean, recounting that botanical research “offered the empire potentially valuable commercial information” (p. 13). Then McCook addresses Henri Pittier’s (1857–1950) national floras; the sugarcane hybrids introduced as a response to sugar mosaic disease; Carlos Chardon’s (1897–1965) efforts to combat mosaic disease through five countries in the Spanish Caribbean: Cuba, Puerto Rico, Venezuela, Colombia, and Costa

Rica; and the eventual understanding of “science as part of a broader program of rationalizing all facets of agriculture” (p. 134).

McCook’s chapter on Swiss-born Henri Pittier fleshes out how his “floras of Costa Rica, produced between 1885 and 1910, made that nation’s plants among the best studied in Latin America” (p. 28). He marks Pittier as part of a new wave of foreign scientists employed by Latin American governments, as opposed to the former model, in which foreigners explored the area to promote the agendas of their foreign sponsors. Pittier’s position was, of course, not without tension, and McCook attends to it matter-of-factly. Pittier was part of a group of naturalists working on a national flora of Costa Rica with a two-pronged approach: “First, they collected, collated, and translated European and North American publications on the plants of Central America and Costa Rica. . . . Second, Costa Rican naturalists amassed large plant collections of their own” (p. 29). Pittier published widely in a range of intellectual and commercial journals and publicly championed Latin American natural history and natural history museums and herbaria. He published the first ecological map of Venezuela in 1920 and a guide to its common plants in 1926, in which even at this late date his goal was to push toward “the great work of stabilizing the nomenclature, so important from the point of view of the world economy” (p. 43).

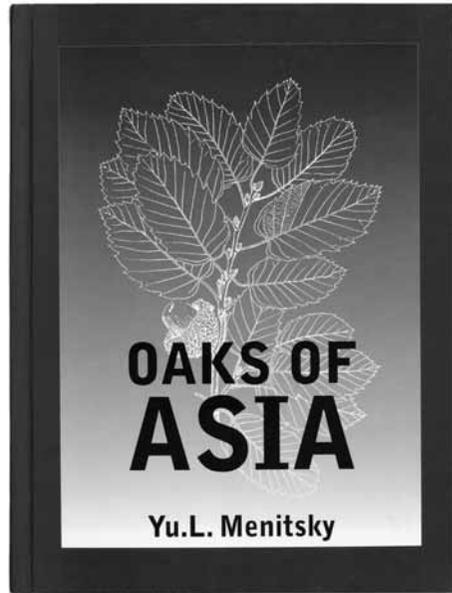
McCook goes on to examine the work of Edwin Atkins (1850–1926) and the Atkins Garden’s “quest to rationalize sugar production” (p. 56) in Cuba, along with the succeeding appearance of the viral sugar cane mosaic disease there. Puerto Rico, in the late 19th and early 20th centuries, promoted its cash crops, sugar and coffee, rather than staple food crops (except briefly during World War I), and the mosaic sugar cane disease followed on the heels of farmers’ consequent over-fertilization and lack of crop rotation. *States of Nature* suggests that global problems are not a new phenomenon and examines the shortcomings of 19th-century liberal politics. This is a good read even if you are just looking for engaging reading and not stocking a library.

—Angela Todd, Archivist

Menitsky, Yu. L. *Oaks of Asia*. Enfield, N.H.: Science Publishers, 2005. ix, 549 pp., illus., maps. \$125.00. ISBN 1-57808-229-3 (hardcover).

Originally published in Russian in Leningrad in 1984, this monograph follows on work done by E. Schottky in 1912 on the oaks of eastern Asia, with expanded coverage of all known oaks throughout Asia, a critical review of the genus, and attention to problems of classification, phylogenetic relationships, evolution, distribution according to climatic regions, ecology and morphology. The author reports that this work is based on nearly 20 years of study of the systematics of oaks in Asia and that this was a project entrusted to him by A. L. Takhatajan in 1963. Menitsky's research sources included his own extensive herbarium collection as well as those of the V. L. Komarov Botanical Institute and of institutions throughout the world, as listed in the preface. The bibliography contains 860 citations, and there is a 37-page Latin name index.

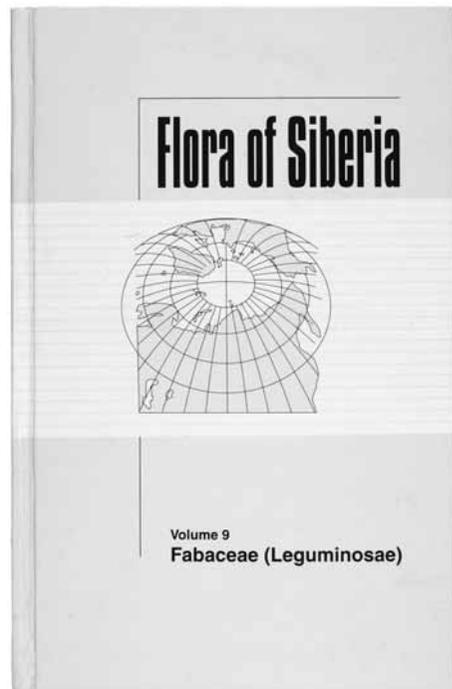
—Charlotte Tancin, Librarian



Polozhij, A. V. and L. I. Malyshev, principal editors. *Flora of Siberia*. Vol. 9, Fabaceae (Leguminosae). (Translation of *Flora Sibiri*, [vol. 9], Novosibirsk: All-Union Combine "Nauka," 1994.) Enfield, N.H.: Science Publishers, 2006. [xi], 276 pp., illus., maps. \$96.00. ISBN 1-57808-108-4 (vol. 9, hardcover), ISBN 1-57808-071-1 (set).

Volume 9 covers 351 species and subspecies of 27 genera of Leguminosae, including 120 species of *Oxytropis* and 96 species of *Astragalus*. Four new species are described, twenty species are being cited for Siberia for the first time, and six species, formerly treated as synonyms, are here restored to species rank. Collections studied include those of the P. N. Krylov Herbarium and the herbaria of the Botanical Institute of the Russian Academy of Sciences, Moscow State University, Central Siberian Botanical Garden of the Russian Academy of Sciences, and the Institute of Biology of the Russian Academy of Sciences in Yakutsk. Additional specimens were collected in Gorno-Altay and eastern Siberia. The text includes nomenclature, descriptions, ecological data, and chromosome numbers when available. The text is accompanied by 35 plates, 185 plant distribution maps, and an index of Latin names of plants.

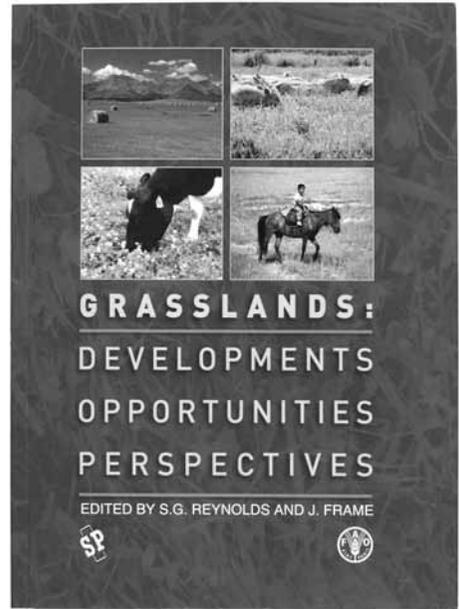
—Charlotte Tancin, Librarian



Reynolds, S. G. and J. Frame, eds. *Grasslands: Developments, Opportunities, Perspectives*. Enfield, N.H.: Science Publishers, in association with the Food and Agricultural Organization of the United Nations, Rome, Italy, 2005. xvi, 539 pp., illus., col. plates, maps. \$74.00. ISBN 1-57808-359-1 (paperback).

This book provides a collection of expert perspectives from grass scientists from all over the world on problems and issues concerning grasslands, their functions, their current health, increasing threats to their sustainability in the long term, and how technological advances might be brought to bear in their study and management. Increased demands and pressures brought about by population growth are the basic concern underlying this collection of studies. Papers are grouped in seven sections: forage germplasm; forage conservation; grass-based systems and organic production; climate change, biodiversity and biotechnology; geographical information systems; farmer and pastoralist participation; and regional developments. Topics range from ecology and biodiversity to economic policies, discussing grasslands as both habitats and key links in feeding the earth's population. Bibliographical references are included.

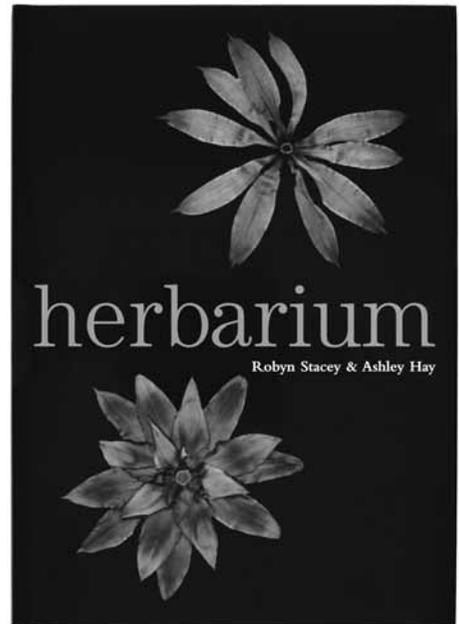
—Charlotte Tancin, Librarian



Stacey, Robyn and Ashley Hay. *Herbarium*. Cambridge, U.K.: Cambridge University Press, 2004. vii, [i], 155, [1] pp., color ill. \$75.00. ISBN 0-521-84277-8 (hardcover).

Herbarium is a thoughtful look into the history and collections of the National Herbarium of New South Wales at the Royal Botanic Gardens, Sydney. Text by Robyn Stacey and photography by Ashley Hay combine to yield a work with a satisfying and complementary treatment of both the herbarium and its storied history as well as a nearly-breathtaking photographic sampling of its spectacular contents.

One of the chief successes of the book is the manner in which it illustrates (literally and analogously) the eminent importance of the past in availing future accomplishment. Herbaria exist as interesting scientific theatres and rich historical repositories, with collections often built over centuries by generations of field botanists, collectors, plant researchers, taxonomists, directors and curators, all of whom contribute to an ongoing, ever-inspiring cabinet of nature's curiosities. At the same time, herbaria are uniquely poised to address contemporary and future research in morphology, distribution, floristics, modern classification, and indeed all manner of plant science.



This temporally and scientifically broad scope of herbaria is well addressed by Stacey, who sets up sections that serve to treat the various facets of the history of the herbarium in a manner that is simultaneously substantive and light. She tells the story, with accompanying botanical notes, through a single herbarium specimen at a time: leaf, twig, berry, petal. The section headings are clever and hold the scheme throughout. There is a section on women collectors, a group too often overlooked in histories of collectors.

What makes the book most remarkable, though, is Hay's photography, which is simply outstanding. Many with stark black or white backgrounds, the images are sometimes surreal, sometimes grotesque, but all are irresistibly beautiful. The photos, all of dried specimens

representative of the collection, begin with remarkably artful subjects and are thoroughly artistic treatments thereof.

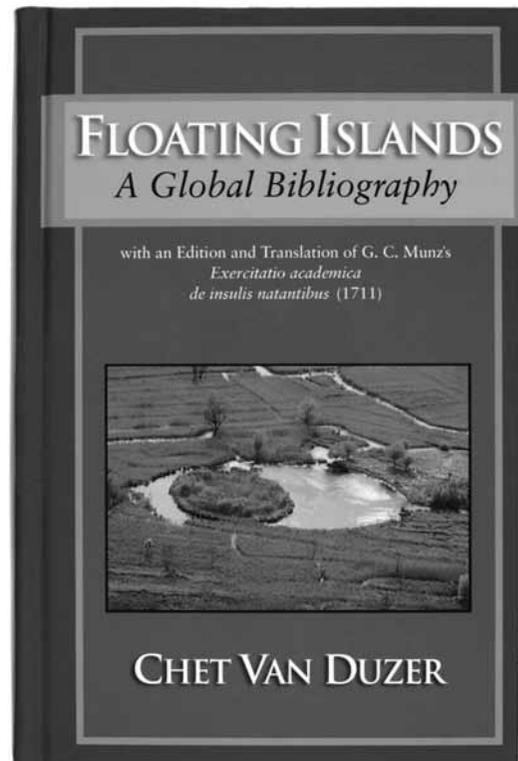
While this work has the finish and flair of a standard-fare coffee-table book, it is certainly more than just a collection of pretty images. There is enough textual substance to give the reader a good glimpse into the history and nature of the National Herbarium of New South Wales, while the images, in these reviewers' opinions, are extraordinarily striking and leave a truly lasting impression.

—Donald W. Brown, Assistant Librarian
and Assistant Bibliographer
—Jamie Shriver, Assistant Archivist

Van Duzer, Chet. *Floating Islands: A Global Bibliography with an Edition and Translation of G. C. Munz's Exercitatio Academica de Insulis Natantibus (1711)*. Los Altos Hills, Calif.: Cantor Press, 2004. xi, 404, [12] pp., illus. (chiefly color), facsim. \$44.95. ISBN 0-9755424-0-0 (hardcover).

Floating islands are common natural phenomena found world wide. They are generally associated with marshlands, lakes and similar wetland habitats, and vary in size. By definition the structure of floating islands is such that they commonly share vegetation growing on a buoyant mat consisting of plant roots or other organic detritus. The references on this subject vary among scientific, literary and even mythological sources and are distributed throughout the literature over the last 1,000 years. Chet Van Duzer has examined in great detail these varied references and has presented not only an extraordinarily annotated bibliography but also an explanation of the great diversity of these floating islands, their development, distinctiveness, and relationships to the environments in which they occur.

This global bibliography by Van Duzer is preceded by a reproduction of G. C. Munz's *Exercitatio Academica de Insulis Natantibus*, a brief and rare 1711 dissertation on the natural history of floating islands, with Latin and translated English text on opposite pages. Following this presentation is a section of exhaustive notes on Munz's discussion. Both Munz's work and the thoroughly researched notes by Van Duzer, in which he examines many of the original references, provide some of the most extensive limnological notes and observations available on early aquatic ecosystems. All continents are represented in the source materials. In addition to



this extensively annotated, historic ecological thesis on floating islands, there is almost a second book for the price of one—the bibliography itself.

The detailed, annotated global bibliography on floating islands contains more than 1,800 citations from some 20 languages. Each cross-referenced annotation provides sufficient information for readers to gain a reasonable understanding of the referenced scientific papers, magazine articles, or books on the subject. The bibliography concludes with a series of extensive indices. The thematic index is perhaps the most useful in that the bibliographic citations are organized into themes and processes. An additional index groups the citations according to geographical location. The wide diversity of floating islands is illustrated in 24 photographs, mostly in color.

This scholarly work makes a great contribution towards our understanding of the natural phenomena of floating islands. Essentially every aspect of floating

islands is considered—their origins, their buoyancy mechanisms, related flora and fauna, and their interactions with associated wetland, lake and river habitats. The bibliography's comprehensive coverage also extends to artificial floating islands, to their uses—including human habitation—and into classical literature and mythology. This exhaustive work will be undeniably useful to wetland biologists and environmental managers as well as to the general reader interested in natural history.

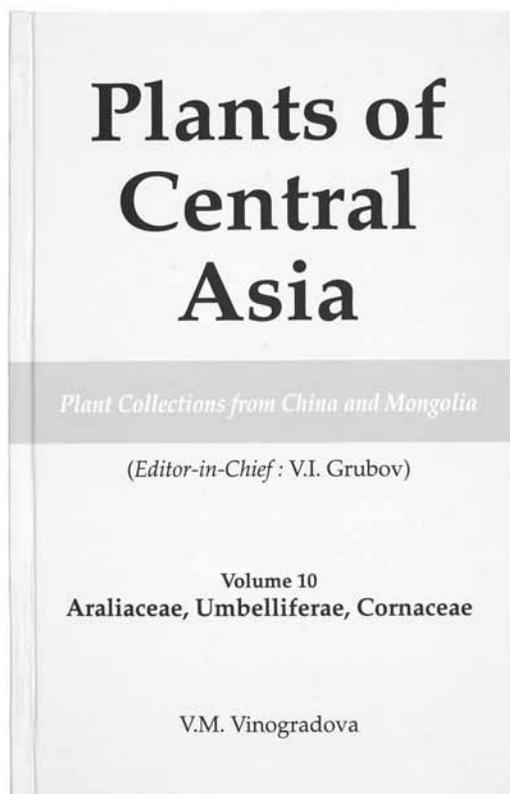
Note: Chet Van Duzer has also produced a 47-page addendum containing 200 new citations and additional photos. It is available as an e-book in Adobe Acrobat PDF format from the publisher at <<http://cantorpress.com/floatingislandsaddenda/>>.

— Frederick H. Utech,
Principal Research Scientist,
Flora of North America

Vinogradova, V. M. *Plants of Central Asia: Plant Collections from China and Mongolia*. Vol. 10, Araliaceae, Umbelliferae, Cornaceae. (Translation of *Rasteniya Tsentral'noi Asii*, vol. 10, St. Petersburg: "Mir i Sem'ya," 1994.) Enfield, N.H.: Science Publishers, 2005. [iii], 139, [4] pp., 8 plates, 4 distribution maps. \$77.50. ISBN 1-57808-122-X (Vol. 10, hardcover), ISBN 1-57808-062-2 (set).

The information presented in *Plants of Central Asia* is based on the Central Asian collections of leading Russian travelers and naturalists as well as on material collected by Soviet expeditions and held in the Herbarium of the V. L. Komarov Botanical Institute. The plants treated are generally within China and Mongolia. The text includes keys, references to specific collection material, and information on when and where plants were collected and about their general distribution. Indexes to Latin plant names, plant distribution ranges, and plant drawings are provided. Volume 10 covers 3 families as found in China and Mongolia: Araliaceae (2 genera, 4 species), Umbelliferae (56 genera, 189 species), and Cornaceae (1 genus, 3 species). In addition, also treated are 5 species of Araliaceae and 2 of Umbelliferae from the adjoining region, and another 75 Umbelliferae species found in Kirghizia, Kazakhstan, and Eastern Pamir in the former Soviet part of Central Asia. A number of species have been recorded in the target territory for the first time, including 8 previously unknown species.

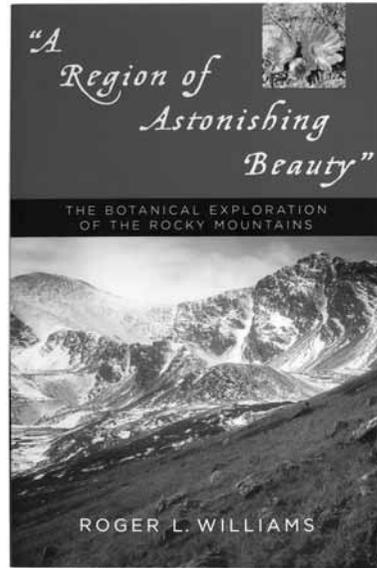
— Charlotte Tancin, Librarian



Williams, Roger L. *A Region of Astonishing Beauty: The Botanical Exploration of the Rocky Mountains*. Lanham, Md.: Roberts Rinehart, 2003. xii, [ii], 209 pp., port. frontisp. \$19.95. ISBN 1-57098-397-6 (paperback).

Roger L. Williams, professor emeritus of history at the University of Wyoming, has written an account of botanists, naturalists, explorers and plant collectors who worked to bring the flora of the Rocky Mountains to the world's attention over a century that began with the Lewis and Clark expedition. On the one hand, he frames this period of collecting and exploration in relation to international botany and European history, with the explorers being of either European birth or descent, with botanical traditions and protocols inherited from European botany, with the classification systems of Carolus Linnaeus (1707–1778) and Antoine-Laurent de Jussieu (1748–1836) used to interpret the flora being collected, and with other major European figures such as William J. Hooker (1785–1865) and Joseph Dalton Hooker (1817–1911) playing key roles in influencing thought and action. On the other hand, the story also shows ways in which American botany was pursued differently from that of Europe and how the Rocky Mountain flora was distinctive, even from that of the eastern part of North America. Historical watersheds noted by Williams in his introduction include the fact that Linnaeus' classification system was still in use in America in the early 19th century, with later adoption of Jussieu's natural system following its use in publication by John Torrey (1796–1873). Another such watershed was the 1859 publication of *On the Origin of Species* by Charles Darwin (1809–1882) and the relative ease with which the theory of evolution was apprehended by the botanical community—in contrast to the resistance the theory met with in other areas of science—because of many botanists' prior acceptance of natural classification.

Having outlined the context for these stories, in 19 chapters Williams explains the circumstances surrounding the work of several dozen plant collectors. Some were part of government-sponsored exploring expeditions or geological and railroad surveys, while some worked on behalf of universities or botanical gardens, and others were exploring for adventure. To varying degrees they shared a passion for botanical field work, but while some collectors were content to turn over their specimens to others to identify and publish, others claimed the right to do that work themselves by virtue of their familiarity with the western flora and environment. A theme that runs through much of the book is the chasm of distrust and disdain that developed during this period between field collectors and academic/professional botanists working with plants primarily as specimens divorced from the landscape from which they were taken. Asa Gray's (1810–1888) reluctance to recognize new species from among the western flora was



a contributing factor to the split and to the determination of some field collectors to describe and publish their own collections.

Another theme involves the growing interest of both Joseph Dalton Hooker and Asa Gray in how plants are distributed around the globe, an interest that Williams notes was a logical development given the vast number of plant specimens from around the world available to botanists in the late 19th century. Botanical discoveries in the Rocky Mountains helped to spur both recognition and understanding of problems of plant distribution.

The roster of collectors covered is large and includes Meriwether Lewis (1774–1809), Edwin James (1797–1861), Thomas Drummond (1780–1835), Thomas Nuttall (1786–1859), George Engelmann (1809–1884), John Charles Frémont (1813–1890), Charles Parry (1823–1890), Joseph Dalton Hooker (1817–1911), John Merle Coulter (1851–1928), Edward Lee Greene (1843–1915), Marcus E. Jones (1853–1934), Alice Eastwood (1859–1953), Per Axel Rydberg (1860–1931) and Aven Nelson (1859–1952). Each chapter includes lists of new species that were published as a result of the work of the collectors discussed. The book also includes author's notes, bibliography and index.

Williams' strong background in western botany, French botanical history and European history make him exceptionally well-suited to tell the story of the botanical exploration of the Rocky Mountains in this period, "recalling the dedication and exploits of remarkable individuals." As noted in the epilogue, the scientific and cultural contributions of these individuals are usually omitted from histories of the American West. It is to be hoped that *A Region of Astonishing Beauty* will help to rectify that omission.

—Charlotte Tancin, Librarian