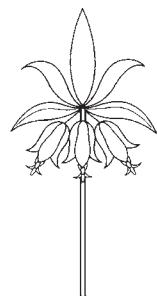


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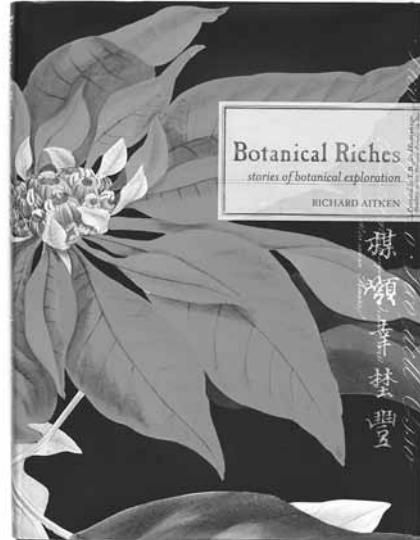
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Book Reviews and Announcements

Aitken, Richard. *Botanical Riches: Stories of Botanical Exploration*. Aldershot, Hampshire and Burlington, Vermont: Lund Humphries, 2007. xi, 243 p., illus. (chiefly col.), maps. \$50.00. ISBN 0-85331-955-3 (hardcover).

Joining in the seemingly endless stream of approachable, visually-captivating, larger-format botanical works coming out of Australia in recent years, Richard Aitken's offering, *Botanical Riches: Stories of Botanical Exploration*, delivers a pleasing, informative and well-balanced look into the fascinating stories surrounding many of the more recognizable early visual renderings of some of the world's most notable botanical imagery and the explorations that afforded them. The work is saturated with images to the extant that there are but a handful of pages that are without at least one visual gem. The artworks selected for Mr. Aitken's presentation are all high quality photo-reproductions of some of the most illustrious images in the history of plant literature, comprising plant portraiture, maps, title pages and garden plans. The botanical art scholar, historian or biographer will likely not find much new ground covered here, but for Mr. Aitken's likely intended audience (those already possessing some familiarity with botanical art and/or exploration), this work delivers an engaging and thoughtful treatment of many important works in the botanical art canon and the interesting characters and histories behind their creation. Moreover, *Botanical Riches* would be a wonderful introduction to these topics even for someone completely unfamiliar; the stories are exciting and concisely written, and the associated images are truly high-order beauties.

Considering the preponderance of images when first examining this work, one might easily assume it to be a coffee-table "pretty picture" book. In noting the visual splendor contained within, it would be easy to forgive Mr. Aitken would he simply allow the efficacy of the images to merit this work's publication, but the real strength here lies in his remarkable aptitude for synthesis and narrative fluidity. Considering what must have seemed a daunting breadth of scope (vast historical and geographical ranges), and very likely an over-abundance of possible content (considering the State Library of Victoria's wealth of holdings), Mr. Aitken's text admirably leads the reader effortlessly through time and locales, from one lovely image to another, gracefully imparting relevant references and notes, and framing the stories solidly in their greater historical and scientific contexts. His notes on sources and select bibliography are, as well, both well written. In the introduction Mr. Aitken expresses that he had first intended this work to be a "modest showcase of perhaps twenty-five or thirty great botanical books held



by the State Library of Victoria," but this charge was then broadened when his publisher suggested: "Why not tell stories of botanical exploration?" The resulting publication is truly the coalescence of those ideas, drawing the strength of the State Library of Victoria's holdings into Mr. Aitken's historical narration.

The organizational method for the stories is primarily chronological, but they are also then grouped geographically. Four main sections—"Plants of the ancient and classical worlds" (from the dawn of time to the 1450s), "The great age of maritime exploration" (from the 1450s to the 1750s), "Scientific imperialism and exotic botany" (from the 1750s to the 1900s), and "Living fossils" (the 1900s and beyond)—bring us tales and imagery from a surprisingly varied set of locations about the globe. While almost all of the images are captioned with additional, often narrative or descriptive, information, and while there is a list of image citations in the rear of the book, I would have liked to have seen the source citations more proximate to the images. This is a very minor complaint, however, and overall I feel the book presents its contents both handsomely and with a nicely reserved aplomb. Richard Aitken deserves much praise for his poise and evenhandedness, and moreover, it is my belief that these sorts of works will do much to stir a greater interest in the rich history of plants and the people who have brought them into our lives.

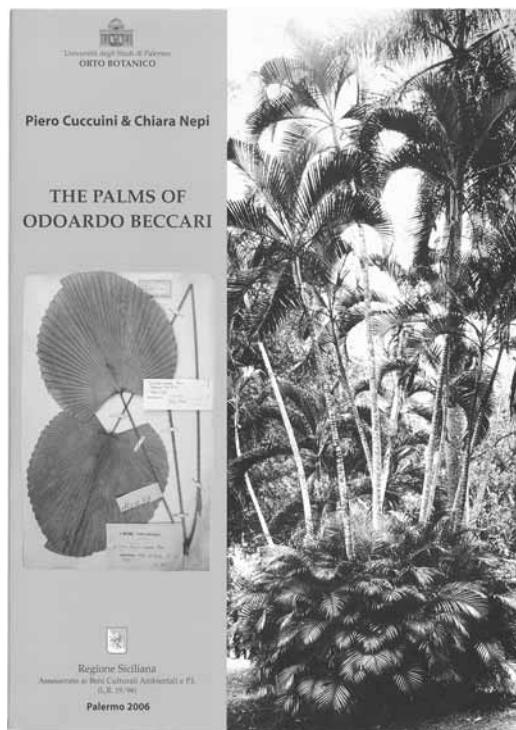
—Donald W. Brown, Assistant Librarian
and Assistant Bibliographer

Cuccuini, Piero and Chiara Nepi. *The Palms of Odoardo Beccari.* (Quaderni di Botanica Ambientale e Applicata 17(1).) Palermo: Dipartimento di Scienze Botaniche dell'Università di Palermo, 2006. 251 pp., illus. (part col.), facsimis., maps, port. ISSN 1121-3752. Available at no charge except shipping cost by international postal order: Europe (including Mediterranean Africa and Asia), €6.00; Africa, Asia and America, €9.00; Oceania, €12.00. For more information, see <<http://www.msn.unifi.it/Article87.html>> or contact Dr. Piero Cuccuini at <musbot@unifi.it> or at Sezione Botanica, Museo di Storia Naturale, Via La Pira 4, I-50121 Firenze, Italy.

This bio-historical tribute and scientific catalogue was published in English and made available for just the price of postage in an effort by the authors and publishers to spread the story of Odoardo Beccari as widely as possible and “to tell the world about someone who to the world belongs.” Beccari (1843–1920) was a Florentine naturalist with an intense interest in the Arecaceae, the Palm family. The authors, who are curators of the Botanical Section of the Museo di Storia Naturale at the University of Florence, hope that those interested in the Palm family will find this work useful and that those who manage naturalistic collections of any kind might find in it an exemplar. To that end, the study includes information on Beccari’s life and work, as well as on his collections and the other collectors involved in building them, in a format that documents the collections scientifically, biographically and historically.

In the presentation, Beccari is referred to as “one of the most extraordinary scientists and explorers of the nineteenth century.” His two collections of Arecaceae specimens are now in Florence in the Herbarium Palmarium and the Erbario della Malesia, the former containing over 6,800 exsiccata of Palms, plus carpological specimens, drawings, prints, and photographic plates, and the latter containing 405 exsiccata and 28 carpological specimens. The combined Palm collection is rich in type material and is one of the most consulted herbaria in Florence.

A general overview of Beccari’s life is given in the introduction. Beccari had an early interest in botany and studied at the Faculty of Natural Sciences at the University of Pisa and later at the university in Bologna, getting his degree in 1864. Soon afterward he made the first of several exploration journeys to Southeast Asia. His first visit to the Malaysian region gave him his first experience of the tropical flora. He also visited Kew and the British Museum to study the Malaysian collections there. Beccari eventually completed three expeditions to Malaysia, New Guinea, Australia and New Zealand between 1865 and 1878, as well as trips to East Africa in 1870 and again in 1879–1880. He also visited botanical gardens along the way, making contacts that would facilitate scientific exchanges later. Malaysia



in particular was little known by Europeans at the time, and Beccari advanced that knowledge through his extensive collecting as well as his detailed topographic surveys and his writings. His diary of his explorations in Sarawak, Borneo, is characterized “not only by a great scientific exactitude but also by his enthusiastic way of writing, his philosophical and sometimes even poetical observations.”

At some point he had a falling out with the Florentine Museum, leading him to pull back from his studies there, a situation that would continue until the beginning of 1900. At that point, returning to his work, Beccari focused more narrowly on the Palm family, dedicating the remainder of his scientific work to Palms. He observed, studied, described and illustrated them, also photographing them with a specially outfitted camera. He produced over 150 scientific publications, half of them about Palms. His key work in this area was *Asiatic Palms*, published in the *Annals of the Botanical Gardens of Calcutta*, with life-size prints of the specimens he photographed. Many of the more than 6,000 specimens in the Palm Herbarium are accompanied by his illustrations and photographs. He made nearly 1,400 photographic plates of Palms.

Beccari’s only disciple was Ugolino Martelli (1860–1934), who inherited the Palm collection and eventually

saw it transferred to the Florence Herbarium. Martelli also posthumously published some additional writings by Beccari so that the new species he had described could find their way into the printed record.

Following the overview of Beccari's life, the authors provide information on the Herbarium Palmarum today, including general descriptions of the packets of exsiccata, the specimens and the photographic plates. This is followed by a detailed 138-page catalogue of the Herbarium Palmarum. Then the accessions and collectors associated with the herbarium are discussed, followed by an annotated list of collectors arranged alphabetically by surname and systematic and geographical indexes of the collectors. Next the authors present a section listing the type material in the Beccari Palm collections and then a section on "iconography" with photographs of the original and revised labels for the type specimens.

Finally, there are a number of bibliographies provided: cited bibliography, reference bibliography, Web sites consulted, unpublished bibliographical references, a historical bibliography and then a selected bibliography of the writings of Beccari himself. The final page is a table of contents.

The authors are to be congratulated on their production of this detailed tribute to the life and work of Odoardo Beccari, containing such detailed information on the Palm collections that he built and left, along with his writings, as his legacy. They have surely accomplished their goal to bring knowledge of him and his work to many more people than had already known of him, and we are grateful for this contribution to the study of the history of botany.

—Charlotte Tancin, Librarian

Ewan, Joseph and Nesta Dunn Ewan. *Benjamin Smith Barton: Naturalist and Physician in Jeffersonian America.* Victoria C. Hollowell, Eileen P. Duggan and Marshall Crosby, eds. (Monographs in Systematic Botany from the Missouri Botanical Garden, volume 100.) St. Louis, Missouri: Missouri Botanical Garden Press, 2007. xxvi, 1,127 pp., including 95 uncol. plates; port. frontisp. \$55.00. ISBN 1-930723-35-1 (hardcover).

This enormous compendium is nearly a research project run amok—but it is not. The Ewans have plumbed the archives, and much of this book's significant girth is constituted by their inclusion of a vast array of evidence, including letters transcribed in their entirety, lengthy letter excerpts, text fragments, journal entries, portraits, engravings, advertisements published in magazines, medical recipes, even a poem. Including this wealth of original texts gives the book a richness for which it is well worth making time.

Benjamin Smith Barton (1766–1815) was an explorer, medical doctor, professor at the University of Pennsylvania Medical School, journal founder and editor, vice president of the American Philosophical Society, and professional correspondent. He was also a difficult man. Indeed, Barton's shortcomings and failures are foregrounded in G. M. Trevelyan's introduction:

The great handicaps he must surmount were his precarious health, his taking (borrowing?) funds entrusted to him by the Royal Edinburgh Medical Society, and his arriving home without a genuine diploma to show the University professors who had helped finance his trip. Picture his embarrassment and distress when he

returned to Philadelphia without his medical degree, his trying to hide his disgrace with a "diploma" from an institution that had no medical standing (p. xi).

Although it is not simply an apology, asking readers to picture Barton's situation is certainly one of the goals of this text: "Considering available sources we have attempted to correct some printed impressions, and to give an appropriate appreciation of our subject, a handicapped, but exceptional human" (p. xv). As part of its recovery project, this book also recounts the ways that Barton was slighted by others: Jefferson resigned as head of the American Philosophical Society at a time when Barton was out of the country and could not replace him; Barton did not receive Lewis and Clark's journals until he was ill and pushing to get his work published—in order to keep him from publishing on the pair's natural history. But the book is too enormous and inclusive to simply serve as an apology for Barton's failings.

The Ewans' "Barton chronology" is notable in that it does not end with his death but rather includes notes on the disposal of Barton's papers. These include the 1816 purchase of various parts of Barton's library, the 1824 deposit of Barton papers at the newly founded History Society of Pennsylvania, 1869's acquisition of Barton papers by Boston Public Library, even the 1970–1972 installment purchase by the American Philosophical Society of privately held Barton papers. The book includes a chapter on the settlement of Barton's estate that fleshes out the dispersals mentioned in the chronology. Chronicling these archival deposits is a help to scholars, and the Ewans were meticulous about noting the location of each item quoted, which is an additional strength.

The biography proper starts with Barton's great-grandfather, Reverend John Barton (1653–1717), and shows a family history of religious and natural interest, as evidenced in their publications. This book is as much cultural history and family genealogy as it is single-subject biography. Thus biographies of, and letter excerpts from, each of Barton's seven siblings make up the first chapter, with special attention to Barton's close relationship with his eldest brother William (1754–1817) and nephew William Paul Crillon Barton (1786–1856). The book then moves to Barton's biography, but still it is happily rife with biographies of those around him. The broad contexts into which Barton is placed serve as an interesting personal glimpse of generations living in early America.

Financial and material concerns open the preface, and those concerns open the book, too. As with many early naturalists who were not born into the money that would allow such a precarious avocation, Barton struggled: "For most of his life Benjamin Smith Barton had poverty to contend with, and the pressure of debts assumed while studying at the University of Edinburgh impeded his ambitions to become America's leading naturalist" (p. 1). Barton's churchman father's inheritance was negated by debt, too, so Barton did not get the familial support that some did. Though popular with his followers, the father was a Tory sympathizer who refused to stop praying for the King of England and thus was forced to close down his churches in 1776:

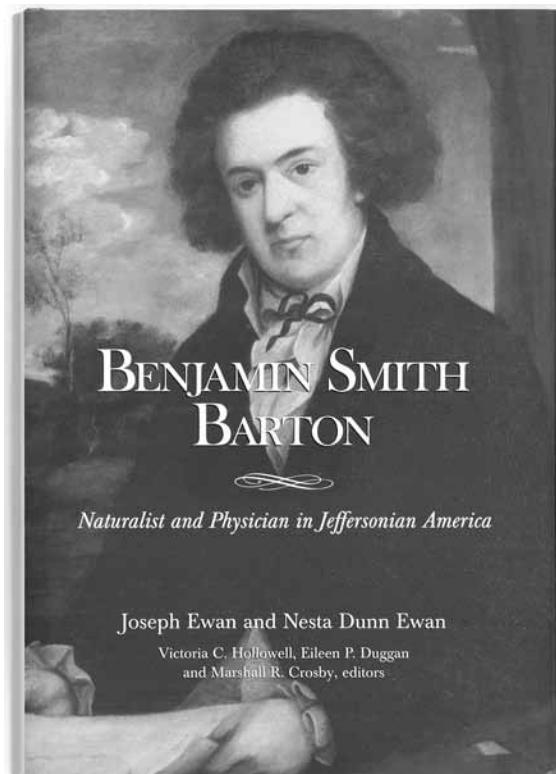
Not granted the protection he sought, Rev. Barton petitioned the Council for leave to sell his house and lots and to move out of the state to British-held New York.... The Council, on granting his departure, had stipulated that the children must stay and be educated in loyalty

to the United States of America. The six younger children, one of them Benjamin Smith Barton, would live in a house under the care of... [their] devoted housekeeper (p. 9).

The Ewans delve into personal history, but they also place Barton in a broader scientific context.

The Bartrams figure largely in this text, as do William Clark (1770–1838), Meriwether Lewis (1774–1809), John Lyon (1765–1814), André Michaux (1746–1843), Thomas Nuttall (1786–1859), Frederick Pursh (1714–1820), and Constantine Samuel Rafinesque (1783–1840), among others. The Ewans cast a wide net in terms of the details of cultural history that they include: Native Americans are documented, the 18th-century Edinburgh academic scene is well described, as is colonial Philadelphia. In 1797 Barton was barely elected professor of *materia medica* in addition to his post in botany and natural history at the University of Pennsylvania, and the sometimes contentious academic scene at the university is revealed.

One of Barton's greatest impacts on botanical history was his 1803 *Elements of Botany* (one of three different books by that title), America's first botany textbook. The Ewans include a great deal of correspondence between Barton and



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William Bartram (1739–1823) regarding the illustrations for *Elements of Botany*. This section gives a good sense of the tenuousness of the parameters of botany education, the back-and-forthness of editorial decisions, and yet the urgency of catching plants at the desired moment (fullest bloom, fruiting, going to seed) and of working quickly in light of Bartram's failing eyesight. When Bartram could no longer draw, he sent Barton his observations. Barton then engaged Pierre Jean François Turpin (1775–1840) for illustrations. Though only one ended up in *Elements*

of Botany, the Ewans have published here 9 of the 48 that they found in Barton's papers.

This book also lays out some of the tangles of doing botanical history, which are helpful examples for understanding the tenuousness of that history. For example:

A William Bartram drawing in Barton's collection gives us a good example of the difficulty in establishing the first collector and date of the first collection of a particular plant, when and where the species was first grown in cultivation, and the first illustration, published or unpublished. *Aralia hispida*, published by Ventenat in 1800 (pl. 41), is said to have been first collected by André Michaux between Quebec and Hudson Bay. This would therefore have been Michaux's trip of August 1792. Ventenat says that the plant was introduced into cultivation by Cels in 1797. We have, however, before us an unpublished Bartram drawing with a legend of the plant parts illustrated (7 small figures), but with no accompanying information as to its source. Now, was Bartram's drawing from fresh material growing in the family garden, possibly from seed or plants brought back from an excursion? No mention of the Bristly Sarsparilla *Aralia hispida* appears in the Bartram journals. We conclude that it was collected by Michaux, and that Michaux gave Bartram the opportunity to draw it for Barton.

John Lyon, however, is credited with its introduction by *Botanical Magazine* in 1808, but there is no mention of the *Aralia* in Lyon's journal although "Aralia hispida (curious)" appears in his sales *Catalogue of Plants* (London, [1812]). Did Bartram then learn of this species from Lyon's growing garden? And possibly obtain a plant or seeds from him for his own living collection? Aiton's *Hortus Kewensis* (London, 1789, 3 vols.), so widely quoted by garden historians, curiously informs us that it was "Introd. 1799, by Messrs. Loddiges." We know Loddiges Nursery, enthusiast for American "exoticks," was in touch with both Lyon and Cels. Or was it possibly an earlier Bartram discovery, antedating Michaux, but not published? *Aralia hispida* is generally distributed in Pennsylvania and would most probably have been noticed before Michaux's first collection of 1792. There is, however,

no mention of this Bartram plant in Thomas Martyn's edition of Philip Miller's *Gardener's and Botanist's Dictionary* (London, 1807, 2 vols.), which over the years had chronicled Bartram's Introductions (pp. 412–413).

The discussion ends there, and the puzzle is never definitively solved. Though it is thus a bit jarring to read if one has become accustomed to an author's tightly woven arguments to prove conclusions, I think the above quote is a good example of the intricacies of botanical documentation. It is also a good example of the kind of narrative history that makes up this text. The Ewans present evidence that suggests the tenuousness of textbooks in terms of information, illustrations, and the politics of publishing, but those kinds of analyses or conclusions are often left to the reader.

I visited the Missouri Botanical Garden in the late 1990s and saw the Ewans' garden library in "The Museum Building" and thought of that academic haven from another era frequently as I read the Ewans' rather 19th-century sounding prose. Overall, that sensibility works well with the amount of evidence presented and the authors' goal to correct some impressions. There is some conjecture that seems unneeded in light of all the evidence at their hands (Rev. Thomas Barton must have read the children John Ray's *Wisdom of God Manifested in the Works of the Creation*; Barton's reply to a letter does not exist, but "we suspect there was little encouragement in it"; or Bartram "may have shown" Barton his drawing *Cineraria*). Sometimes, too, the generation gap is downright distracting, and the language of "marauding Indians" and "defenseless friendly Christian Indians" seems a little dated, for example.

The book includes a foreword, an editor's foreword, a preface, an introduction, a chronology, a bibliography of Barton's writings, a roster of Barton's medical pupils, a genealogy, references, figures and indexes of flora, fauna and people. While its combination of breadth and depth makes it a little unwieldy, this text is a must-have for botanical libraries due to all the naturalists that are covered in its pages. The book should be in all Pennsylvania historical libraries due to its emphasis on local histories and documentation of our western wilds. This text also belongs in collections that emphasize the formation and early days of the United States by virtue of its attention to early party politics, religions, and their effects, as well as period descriptions of Native Americans—particularly on Barton's 1785 surveying expedition in the wilds of Ohio and Pennsylvania.

—Angela L. Todd, Archivist

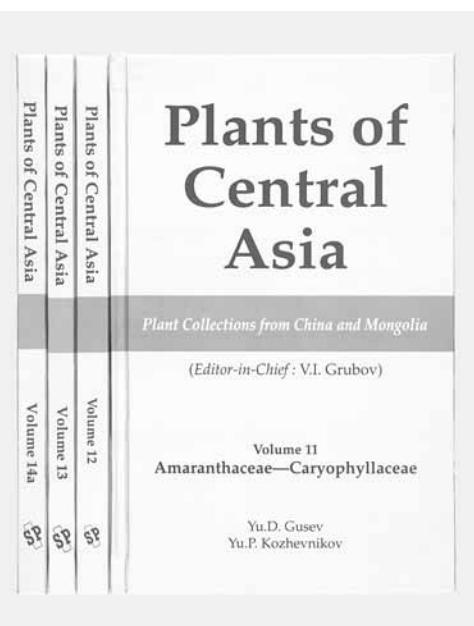
Grubov, V. I., editor-in-chief. *Plants of Central Asia: Plant Collections from China and Mongolia*. Enfield, New Hampshire: Science Publishers, 1999–. ISBN 1-57808-062-2 (set).

Publication of an English translation of the *Rasteniya Tsentral'noi Asii* continues with the appearance of four more parts in 2007. The information 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 within the People's Republics of 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.

Gusev, Yu. D. and Yu. P. Kozhevnikov. Vol. 11, Amaranthaceae–Caryophyllaceae. (Translation of: *Rasteniya Tsentral'noi Asii*, vol. 11, Leningrad: Nauka Publishers, 1994.) 2007. viii, [ii], 136, [1] p., illus., maps. \$68.00. ISBN 1-57808-123-3 (hardcover). Volume 11 concludes the description of the families of order Centrospermae, covering a total of 171 species in 26 genera.

Borodina-Grabovskaya, A. E., V. I. Grubov and M. A. Mikhailova. Vol. 12, Nymphaeaceae–Ceratophyllaceae–Ranunculaceae–Berberidaceae–Menispermaceae. (Translation of: *Rasteniya Tsentral'noi Asii*, vol. 12, [St. Petersburg]: St.-Petersburg Chemical-Pharmaceutical Academy Press, 2001.) 2007. ix, [iii], 190, [3] p., illus., maps. \$95.00. ISBN 1-57808-441-8 (hardcover). Volume 12 covers 268 species in 33 genera.

Grubov, V. I. Vol. 13, Plumbaginaceae, Oleaceae, Buddlejaceae, Gentianaceae, Menyanthaceae, Apocynaceae, Asclepiadaceae. (Translation of: *Rasteniya Tsentral'noi Asii*, vol. 13, St. Petersburg: St. Petersburg



State Chemical-Pharmaceutical Academy Press, 2002.) 2007. ix, [iii], 149, [4] p., illus., maps (1 folded). \$85.00. ISBN 1-57808-421-0 (hardcover). Volume 13 covers the treatment of 7 families, comprising 180 species in 24 genera.

Filatova, N. S. Vol. 14a, Compositae (Anthemideae). (Translation of: *Rasteniya Tsentral'noi Asii*, vol. 14a, St. Petersburg: St. Petersburg State Chemical-Pharmaceutical Academy Press, 2003.) 2007. x, [ii], 176, [1] p., illus., maps. \$88.00. ISBN 1-57808-422-7 (hardcover). Volume 14a treats 242 species in 22 genera.

—Charlotte Tancin, Librarian

Hoquet, Thierry. *Buffon Illustré: Les Gravures de l'Histoire Naturelle (1749–1767)*. Paris: Muséum national d'Histoire naturelle, 2007. 816 pp., including 599 plates, illus., maps. €59.00 plus postage. ISBN 2-85653-601-8 (paperback).

Georges Louis Leclerc, comte de Buffon (1707–1788), was a controversial figure in the history of the natural sciences, and to some extent he remains so today. Thierry Hoquet's new book sidesteps that issue, focusing instead on a specific aspect of Buffon's work, namely the extensive use of illustrated plates in his *l'Histoire Naturelle Générale et Particulière* (Paris: Imprimerie Royale, 1749–1789, 36 vols.). Hoquet concentrates on

the first 15 volumes, and all of the engravings from those volumes are reproduced in his book, complimented by an approximately 160-page introduction in French on the use and meaning of illustration within the context of Buffon's philosophy and conception of science.

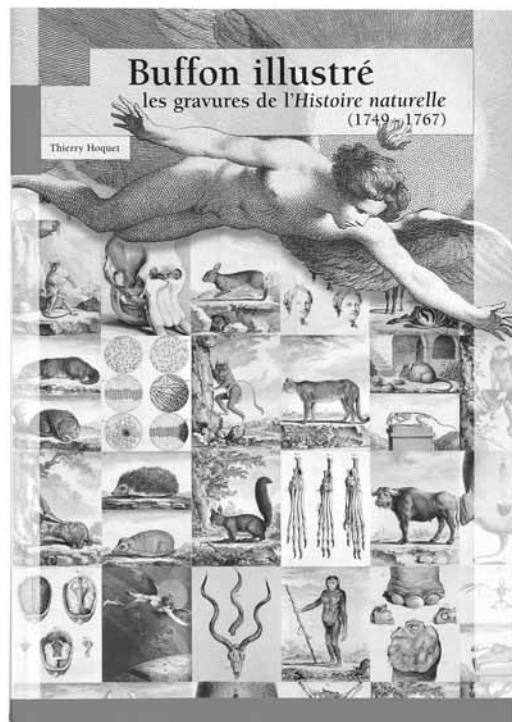
Thus Hoquet's book has two goals: interpretive and documentary. His introduction provides a historical and analytical study of the images as they are presented in the source work, discussing aspects such as their purpose, their organization and the choice of subjects, as well as their use in framing several classic problems in natural history. He compares *l'Histoire Naturelle* to other illustrated works, particularly *Mémoires pour Servir*

à l'*Histoire des Animaux* (Paris: Imprimerie Royale, 1671–1676) by Claude Perrault (1613–1688), and also weighs the relative value of illustrated and non-illustrated presentations as discussed by Carolus Linnaeus (1707–1778). This introduction is illustrated by 21 figures, including a number of illustrations from other natural history works of the period and earlier.

Beyond the introductory essays and the plates themselves, *Buffon Illustré* includes two appendixes, a bibliography, a list of the added illustrations from other works found in the introduction, and indexes of personal names and of the illustrations found in the plates.

Thierry Hoquet is co-director of the philosophy department of the University of Paris at Nanterre, where he specializes in the philosophy of the Enlightenment and the philosophy of biology. He also oversees a Web site <<http://www.buffon.cnrs.fr>> about Buffon. In an email message he expressed the hope that this book will stimulate and support new research on Buffon, as well as allow a wider audience to “read” the illustrations, whether to analyze or contemplate them. This exhaustive reproduction of the plates from the first 15 volumes of *l'Histoire Naturelle* in a single book, along with Hoquet’s knowledgeable discussion of the plates and their role in Buffon’s work, and the book’s compact size and affordable price, all combine to ensure that *Buffon Illustré* will be a useful and important tool for researchers. The work should also attract new attention to the Buffon corpus from people working in disciplines outside the natural sciences.

—Charlotte Tancin, Librarian



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Mee, Margaret. *Flowers of the Amazon Forests: The Botanical Art of Margaret Mee*. Woodbridge, Suffolk: Natural Wonders Press [a division of Antique Collectors’ Club Ltd.] in association with The Royal Botanic Gardens, Kew, 2006. 167 pp., including 61 color plates; additional col. illus. \$39.50. ISBN 1-905377-06-1 (hardcover).

Margaret Mee was an intrepid artist and traveler and a remarkable person. We are fortunate that she maintained elaborate diaries of her 14 Amazonian journeys from 1956 to 1984—beginning at age 47! She endured the elements and wild critters, suffered several severe illnesses and operations, and in her campsite once held off a drunken prospector with her revolver. Not the least of her scientific achievements was the discovery of nine plants, which now bear her name.

She wrote of astonishing beauty—a *Neoregalia* with its rosette brilliant scarlet, merging to olive green with florets ranging from violet to white; “the loveliest glade,

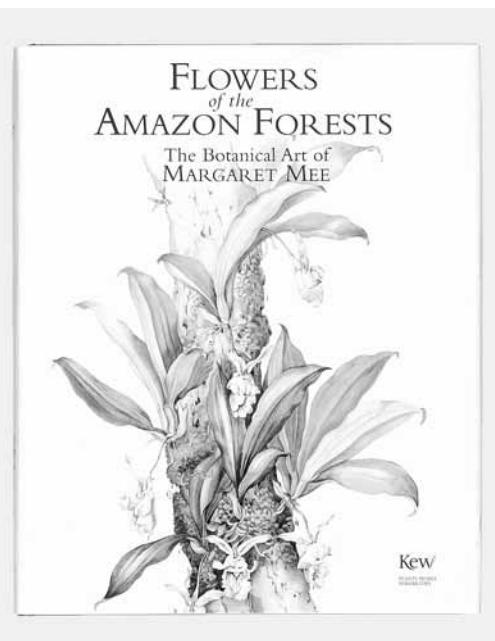
green with ferns and mosses, where little streams trickled through the rock crevices”; “sparkling, splashing fishes”; black ducks flying in arrowhead formation over a lake at twilight; a detailed description of an intense green iguana, rapidly sketched.

However, tales of ecological disaster also are rampant throughout her writing. Painfully aware of the continual destruction of the Amazon forest, she noted a vile discharge in the Rio Negro from an oil refinery destroying the vegetation and “ghastly development” in a nearby reserve that caused her to burst into tears. In another locale she described a valley of death: “A red-brown sea of bauxite residue swamped the most glorious virgin forest. Great trees, species extinct in many areas, were being grubbed out, for this sea, as dead as the Red Sea, extended for ten kilometers down a valley of considerable width... Dead and bleached trees stood by the thousand, deathly warnings of what is to come, when the seeping tide envelops other areas.”

My first acquaintance with her work was from six large watercolors of bromeliads displayed in a botany seminar room at the Smithsonian Institution, where I was then employed—the paintings resulted from collaboration between Mee and Smithsonian bromeliad authority Lyman B. Smith. Later I just missed meeting her on a visit to Rio de Janeiro, but at least we spoke by telephone. The Hunt Institute borrowed two of her exhibitions, one from the Missouri Botanical Garden in 1987 and one from the Margaret Mee Trust in 2005. A chance viewing of her interview in 1988 with Robert MacNeil of the then MacNeil-Lehrer NewsHour on the Public Broadcasting System increased my admiration for Mee a hundredfold. At press time PBS was in the process of adding the interview to its Web site <www.pbs.org/newshour>.

Chapter titles in the current book generally include the name of a plant or group of plants and a locality and year, such as "Heliconias Around Uaupés 1964/5." The book contains a generous number of full- and partial-page color illustrations, a selection of Mee's sketches and her own photographs of locales that she visited and people she met on her journey, as well as some late 18th-century birds, fish and animals by Alexandre Rodrigues Ferreira.

This book is a condensed version of *Margaret Mee's Amazon: Diaries of an Artist Explorer*, published in 2004 by Antique Collectors' Club in association with The Royal Botanic Gardens, Kew. The text of each chapter—roughly between four and eight pages, liberally embellished with color reproductions—has been extracted from Mee's diary. For example, in chapter two a sentence about equipment, materials, food, medicine and clothing was omitted, and the first and third sentences were merged. The next paragraph about joining an anthropologist and his wife was omitted; a paragraph was retained; and the next one describing Cuiabá was skipped. None of the meaning has been changed, and the account has been tightened for a smaller production. The editing seems to be well done, and few



readers will ever catch the difference, and perhaps it's a bit trifling, except to a purist, to so analyze the cuts.

A related and even earlier book is *Margaret Mee: In Search of Flowers of the Amazon Forests: Diaries of an English Artist*, published in 1988, the year of her death, which included an author's note by Mee (August 1988). Tony Morrison edited that title for Nonesuch Expeditions.

If you own neither the 1988 nor 2004 titles and a sampling is sufficient, this 2006 one may be a good buy. The pages are slightly larger than the *Diaries* with only 168 instead of 320. The Natural Wonders Press is a division of Antique Collectors' Club, and this book, printed in Spain, maintains the high quality we expect from the Club.

—James J. White, Curator of Art

Ogilvie, Brian W. *The Science of Describing: Natural History in Renaissance Europe*. Chicago: University of Chicago Press, 2006. xvi, 385 pp. illus. \$45.00. ISBN 0-226-62087-5 (hardback).

Gardens, herbaria, and cabinets were more than tools for natural history. With the exception of herbaria, they had existed before being adopted by naturalists.... Their adaptation by naturalists demonstrates...the creative ways naturalists recognized and solved the problems

created by their project of cataloguing the world. Hours spent in the garden or leafing through the herbarium could substitute—with some limitations—for days or weeks spent in the field; they thus allowed naturalists to have a richer, if in some ways less immediate, experience, but only by removing *naturalia* from their natural setting. By doing so, gardens and herbaria helped concentrate, even as they furthered, Renaissance naturalists' concern with description (p. 150).

In *The Science of Describing*, Brian Ogilvie has crafted a thorough, accurate and *interesting* narrative about a complicated historical trajectory. He takes an amorphous object of study—the discipline of natural history. As a quick measure of its solidification as a discipline, Ogilvie charts how natural history came to be represented in disciplinary surveys.

In the late fifteenth and early sixteenth centuries... natural history had no place in the encyclopedia of the disciplines. It was subordinated to natural philosophy and medicine; at best, it represented a stage in the production of valid knowledge about nature. By the early seventeenth century... natural history was no longer simply an intermediate form of knowledge; it had become a distinct discipline (pp. 1–2).

One step toward natural history's recognition as a discipline was its acknowledgment by one of the period's most influential thinkers. In

Advancement of Learning (1605), Francis Bacon [1561–1626] located natural history as a species of history, along with civil and ecclesiastical history. As such, natural history corresponded to the mental faculty of memory. It was concerned with facts rather than causal explanations, which Bacon... reserved to philosophy. Natural history, in turn, was subdivided into three kinds: history “of nature in course, of nature erring or varying, and of nature altered or wrought; that is, history of Creatures, history of Marvels, and history of Arts” (p. 4).

Ogilvie points out that Bacon's early articulation was important because it “gave natural history a distinct place

in the encyclopedia of the disciplines, a place that it had lacked a century earlier” (p. 4). Bacon's definition of natural history was also markedly different from earlier conceptions.

The contrast between [Juan Luis] Vives [1492–1540], for whom natural history was a form of writing about nature, and Bacon, for whom it was a kind of learning in its own right, shows in the coarsest form the transformation that the rest of this book will describe in detail.

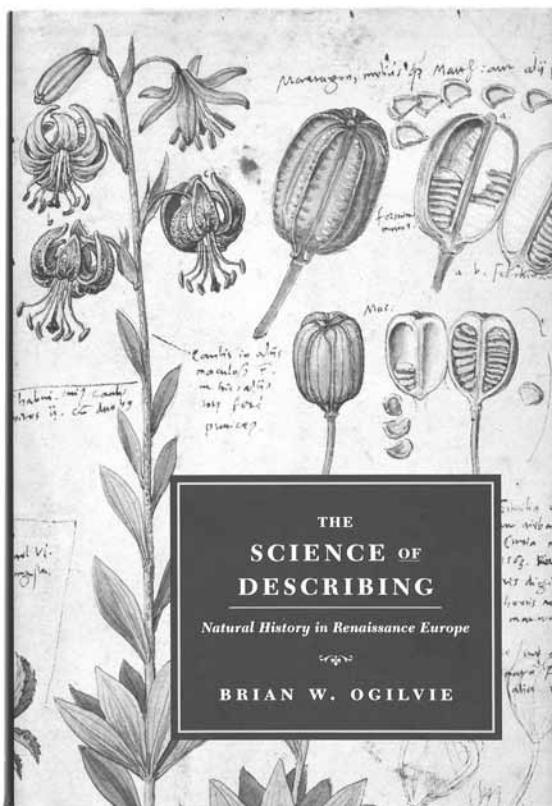
Of course, for Bacon, natural history was still a matter of books, just as Vives admitted that natural histories were kinds of books. But the books whose contents [Bacon] weighed, and eventually found wanting, were only the last stage in the production of knowledge (p. 5).

Ogilvie's point is a delicate one, but he makes it clear that natural history went from being an exercise of technical skill to being the acquisition of a body of information that knew no limits at the time.

Ogilvie's project is not exactly a cultural history, but rather an intellectual history of a discipline's aggregation and formation. How does one write about science when it is *in formation*, before the boundaries of what counts as professional

or amateur are even solidified? Ogilvie does it with aplomb, concentrating on the naturalists' words and experiences. One thing that I respect about this account is that it does not naturalize modern categories of natural history or take historical developments as inevitable: it takes a close read and open mind to see the tenuousness and construction of such modern concepts as “naturalist” or “professional.” He explains:

The term “discipline” seems especially appropriate for natural history: its Renaissance sense of a field of inquiry with accepted



principles reflects the emergence of natural history as a recognized field, while its connotation in the twenty-first century suggests the process of socialization and self-control that were required to make a serious naturalist. . . . Calling natural history a discipline also helps us avoid the anachronistic distinction between professional and amateur science and scholarship. Like the humanist philology of the late fifteenth century, sixteenth-century natural history required training that was informal yet rigorous; it demanded . . . knowledge of a broad range of literature and mastery of precise skills of observation and description. Yet there were no professional qualifications for becoming a naturalist, nor was it possible for most naturalists to make a living from natural history. We could call naturalists amateurs, then, but only in a restricted sense: they practiced natural history out of devotion to the subject, but there was nothing amateurish about how the best of them pursued their studies. This combination of high standards and open boundaries often provoked anxiety about naturalists' status and occasionally led to polemics (pp. 5–6).

I am wary of Ogilvie's divorcing natural history from economics repeatedly throughout this text, as economics certainly delimited who could do natural history and to what extent. Nonetheless, early naturalists who did *make their living* in natural history, such as John Bartram (1699–1777) or William Prince (1725–1802), indeed came later. At this earlier stage, greater emphasis was placed on status.

Much of what counted as status came from naturalists' articulations of their experiences and new observations. Indeed, naturalists' experiences revealed the inadequacies of their predecessors' descriptions of nature that in turn demanded a re-thinking of the natural world.

[D]escription lay at the heart of Renaissance natural history. Unlike their medieval predecessors, Renaissance naturalists condemned the inaccurate or inadequate descriptions of the natural world that had been bequeathed from antiquity. The disparity between what they saw and what they read motivated careful investigation into the variety of the created world, and prompted the development of new descriptions modeled after the old. Initially, these descriptions were pictorial, but soon a technical descriptive language was elaborated that eventually took precedence, within the community, over pictures. From the 1530s to the 1630s, the task

of natural history . . . was describing nature, cataloguing its marvelous and mundane products (p. 6).

Ogilvie leads readers carefully through this century-long emergence of a discipline.

Part of Ogilvie's project in this work is also clearing away the obfuscations of those preceding histories that have not weeded out anachronistic terms.

Renaissance naturalists grappled with the practical and theoretical problems of description—especially the practical—as their predecessors had not and their successors would not need to. The existing historiography on natural history has not adequately grasped this point. . . . [G]eneral histories have treated Renaissance natural history as part of a broader history of biology, even though the word “biology” was coined only in the nineteenth century. In so doing, they have overemphasized the theoretical and philosophical elements in natural history, particularly taxonomy and classification, while neglecting or treating as self-evidently worthwhile the specific achievements of Renaissance natural history: the recognition of the vast diversity of the animal and vegetable world, the establishment of a community of scholars engaged in a common enterprise, and the elaboration within that community of methods for discovering new natural kinds and describing them precisely. This book aims to demonstrate that their thoroughgoing, fine-grained empiricism took intense effort and intellectual resources; it was far from self-evident, and the problems of classification that characterized later natural history were a consequence of the attempt to describe the world. Empiricism, in short, is neither easy nor self-evident, and the novel empiricism of Renaissance natural history deserves to be at the center of its history (p. 8).

Ogilvie's truck with traditional histories is the tendency to retrospectively undervalue what has *come to be* evident in modern natural history. He instead examines works from the period to extricate the real conditions under which naturalists worked.

All too often, natural history has been seen as a nearly continuous tradition from the investigations of Aristotle and his pupils at the Lyceum, through the foundation of modern systematic botany and zoology by Linnaeus, to the synthesis of systematics and evolution in the work of Darwin and his successors. In this narrative . . . the early Middle Ages

represent something of a hiatus, but with the recovery of Greek learning in the twelfth century, the story picks up anew. This tendency has been reinforced by the fact that most histories of science, until quite recently, were written by scientists who, in general, stressed the continuities and focused primarily on intellectual content (i.e., theories). In other words, historians have bought Renaissance naturalists' imagined history of their discipline and continue to peddle it today (pp. 10–11).

By destabilizing how we think about professionalism and historical continuity, Ogilvie entices his readers to think about this historical period in natural history in a new way.

One way around anachronistic modern terms is to focus closely on the actual practices used in the field at a given historical moment. Ogilvie does just that:

Naturalists formed a community of curious observers. . . . The social bonds of the community, forged and maintained through correspondence and travel, were based on two factors, one affective and one cognitive: voluntary association based on “friendship” or even “love,” and curious—that is, painstaking and inquisitive—observation of *natura*, above all plants, and careful description of those that were unknown to their predecessors. Observation and description was the community’s *raison d’être*, but it was sustained, in the absence of more than a handful of professional positions in natural history, through its affective bonds, bonds expressed in the humanist idiom of friendship (p. 27).

Ogilvie shows that a widely cast net of international correspondence, combined with letters read at meetings and published letters, resulted in so much epistolary boundary-making.

Disciplinary boundaries moved slowly from informal to formal, and Ogilvie meticulously traces these developments over four generations of early naturalists. The first generation, medical humanists and critics (1490–1530),

quickly came to agree that investigation of the natural world through firsthand observation and experience was the only way to understand natural history, and they taught those methods to their students [who], in turn, would form the core of the next generation of naturalists, the first to begin to think of their study of nature as something distinct from medicine and scholarship, if still intimately linked with the disciplines that gave it birth (p. 30).

This generation found paradigm-shaking disparities when they “attempted to establish correspondences between the plants described by the ancients and those that grew around them” (p. 139), but there were also real professional quality-control reasons for aligning local and ancient plants.

The next generation could not have been formed, however, without the work of other medical reformers, intent not on reforming *materia medica* on a classical basis but on establishing medical faculties’ rights to oversee the profession of apothecaries. If physicians were to judge how competent apothecaries were in their trades, they had to know not only the formulas for compound medicines but also how to identify the simple medicines that went into compounds. Most of those simples came from plants. Hence leading medical faculties came to require courses in *materia medica*, above all medical botany, of their students (p. 33).

So this first generation realized the shortcomings of existing descriptive literature and set out to correct, organize, and disseminate the information upon which life and death decisions were made. Luca Ghini (1500–1556), Niccolò Leonceno (1428–1524) and Pandolfo Collenuccio (1444–1504) were some of the leaders of this generation.

The first phytographers (1530–1560) make up Ogilvie’s second generation. They

established natural history firmly as a discipline with a recognized set of authoritative texts and techniques, practiced by a vibrant, diverse community of scholars. Its membership was international: its leading lights included the German “fathers of botany,” Otto Brunfels [1488–1534], Hieronymus Bock [1498–1544] and Leonhart Fuchs [1501–1556]; Pietro Andrea Mattioli [1501–1577], the Sienese physician whose commentary on Dioscorides became the standard herbal . . . ; Jean Ruel [1479–1537], author of three books on the history of plants as well as a translation of Dioscorides, and Euricius Cordus’s son Valerius [1515–1554] (p. 34).

Physicians and apothecaries continued to populate this generation of naturalists and to read the herbals and ancient texts that dominated the literature, but there was a simultaneous expansion, too: “also involved were the intellectual elite of the late Renaissance: theologians, professors of philosophy and letters, and lawyers. Humanistically educated and university trained, they had the skills, resources, and leisure to pursue interests in natural history” (p. 35). The new

herbals of this generation fused elements of the ancient texts with firsthand observation and medicinal virtues, thus attracting new, more popular audiences. This generation

did not intend merely to establish correspondences between ancient names and modern plants. Their goal was more ambitious: to establish a new catalogue of nature, starting from the premises that the ancients did not know everything, that they had described only a fraction of the natural world, and that their modern successors could best follow their example by surpassing them, by describing the living world more precisely and more extensively. When possible, they noted identifications between ancient and modern descriptions, but that was a secondary aspect of their effort to create a science of describing (p. 139).

This generation shared not only a new sense of the discipline but also a new understanding of both the world and the need for global cooperation to know and catalogue it.

[T]his community facilitated the rapid and reliable exchange of natural history material and descriptions, allowing naturalists to compare—and especially, to contrast—specimens and species in their own areas with those that were found elsewhere. The science of describing, the new discipline of natural history, was a product of this communal enterprise (p. 140).

This discussion points to how economics did impact who practised natural history precisely *because* it was not a vocation.

For the third generation, that of cataloguers and collectors (1560–1590), the discipline continued to change.

Despite the preponderance of physicians and apothecaries among those involved in the *res herbaria*, medicine now defined natural history neither professionally nor intellectually. There were no formal qualifications for the subject—unlike, for instance, natural philosophy, taught in the universities as part of the arts course. ... What united [them] was not medicine but collecting (pp. 38–39).

This generation included Rembert Dodoens (1517–1585), Carolus Clusius (1526–1609), Pieter Coudenbergh (1520–1594), Christophe Plantin (1520–1589) and Jean de Brancion (n.d.). “As collecting became more and more popular, collectors could no longer get away with merely

owning curiosities. By the 1560s, a collector also had to possess his collection intellectually: he had to be able to explain his wonders to visitors” (p. 40). Natural history emerged at this point as a public interest.

The relations between natural history and the culture of curiosity are complex. ... [T]he naturalists of the third generation could not have continued their intellectual labors without collecting. Gardens, herbaria (collections of dried plants), cabinets with animal bones—and collections of notes and drawings—provided much of the empirical substrate of late sixteenth century [*sic*] natural history. But naturalists like Clusius approached these collections with a different sensibility than collectors. For the latter, the collection was a treasure to preserve and display; for the former, it was a tool to dismember and describe. Collectors fashioned themselves as *virtuosi* by gathering and showing rare and precious items; naturalists fashioned knowledge by studying the productions of nature, both exotic and humble, rare and common (p. 42).

Thus this generation of naturalists brought natural history into the realm of public display and expanded its audience.

Of course, few naturalists were not bitten by the collecting bug, and most collectors wanted to know something about their curiosities. Usually naturalists were located somewhere between the two poles. Caspar Bauhin [1560–1624] used his herbarium above all [as] a research tool, but in his *Pinax* he advertised that it was open to visitors. University botanical gardens were also planted with decorative flowers. They served the communities in which they were located by providing room for promenades, conversations, and courting, as well as for study. Nonetheless, collectors and gardeners on the one hand, and scholarly naturalists on the other, were driven by different impulses. A small group of scholars produced knowledge; this group included not only those who wrote or edited books but also the correspondents and conversation partners who provided them with descriptions and material. A much larger group of collectors consumed this knowledge so that they could reproduce it on demand when showing off their collections. This dialectic between producing and consuming knowledge created a market for books on natural history in the late sixteenth and early seventeenth century [*sic*] (p. 43).

Advances in printing and literacy allowed for an audience for such work. This dispersal of natural information to a growing group of collectors, who in turn passed it to a much larger group of interested visitors, changed in the next generation.

The fourth generation, made up of systematizers (1590–1620), marked a turn from expansion to a contraction of the naturalist community that more firmly separated the scholarly and the public elements of natural history:

By the last decade of the 1590s, scholarly naturalists' circles of correspondence were progressively limited to their peers. . . . [I]ncreasingly, specialized naturalists like Bauhin carried on their work in a community of like-minded scholars, while those interested in collecting and gardening relied on the market in books and *naturalia*. This process continued into the seventeenth century. By that time, the market for natural history books was large enough, and differentiated enough, for the emergence of a new genre: the florilegium. Florilegia included detailed copperplate engravings or etchings of flowers, often from particular gardens, such as Basilius Besler's [1561–1629] *Hortus Eystettensis* [sic] (1613), which depicted the episcopal gardens in Eichstätt, or Crispijn van de Passe's [1594–1667] *Hortus floridus* (1614). These were only the first of dozens of picture-books catering to the *amateurs de fleurs* in Baroque Europe. . . . [T]he leading naturalists of the early seventeenth century produced more specialized, detailed studies of plants and their geography. The local floras of the early seventeenth century make a sober contrast to the richly illustrated florilegia: they were lists of plants, sometimes with brief descriptions, aimed at university students. . . . At the same time, scholarly naturalists emphasized the demands of their studies. By 1600, natural history was hard work (pp. 46–47).

Thus the beautiful and scholarly were extricated from one another. This discussion of the emergence of florilegia implies the necessity of the right economic preconditions to literally afford this new genre.

[Naturalists] collaborated because they were aware that they had to identify and describe an enormous, swiftly-growing number of plant and animal species; no one naturalist, no matter how indefatigable, could suffice. The catalogue of nature would be the work of many hands. And for those hands to produce a useful product, their work had to be standardized. . . . For

descriptions to be standardized, in turn, naturalists had to be disciplined (p. 53).

In addition, this early botanical community rather imagined itself as egalitarian and well-focused. "Naturalists... imagined their community in opposition to both the hierarchical society of the court and the increasingly commercial society of the town and marketplace" (p. 58). Though naturalists strove to be free of hierarchical and commercial interests, the intellectual elite that Ogilvie describes points to a distinct economic situation, and the naturalists' insistence otherwise needs to be examined.

In "A science of describing" Ogilvie shows how a "technology of observation" developed for the Renaissance naturalist who was faced with a plant or animal in the field, perhaps with a new (unreported) species that could enhance his reputation:

[e]xperience thus involved three layers: the immediate observation, the naturalist's own memories, and the collective experience of the community as expressed in its verbal and pictorial productions. Naturalists developed techniques for handling each of these layers. They left the town to experience nature in the forests, meadows, hills, and mountains around them. They created gardens where they could observe species repeatedly, over the course of one or many life cycles, without the effort of travel. They invented the herbarium, a collection of dried plants that allowed repeated observation of specimens collected on one expedition. Expeditions, gardens, menageries, and herbaria allowed naturalists to deepen their experience, while field notebooks compensated for the faults of memory. At the same time, naturalists built on the model provided by Dioscorides to develop a precise form of verbal representation, allowing them to condense and communicate their experience efficiently. Finally, they seized on the possibilities offered by the realistic art of the Renaissance and the technology of woodcut illustration to communicate not only in words but also in pictures (pp. 140–141).

I thoroughly enjoyed Ogilvie's vision of how the naturalist's experience of "nature" was expanded geometrically during this time, and his assessment of that experience as being both broadened and highly focused is accurate.

Wider experience of the natural world thus brought with it a substantial alteration in the way experience itself was structured. It became both more localized, as particular

areas were ever better known, and—in an important sense—less immediate. As we have seen, Hieronymus Bock and Valerius Cordus took careful notes on what they observed, and Bock at least also grew plants in his garden to observe them more closely. Their successors would elaborate these techniques and develop others for deepening experience, a process that was necessary if the naturalist was to be able to determine whether a plant was really new, given the range of new discoveries and publications that characterized the second half of the sixteenth century. The garden and herbarium allowed them to repeat their observations, either by watching other individuals of the same species go through their life cycle again, or by fixing a particular plant at the moment of observation (p. 150).

Natural history expanded greatly from the 15th to 17th centuries, but Ogilvie does not succumb to a teleological history of unmitigated growth of the discipline. That growth was qualified—participants had to follow disciplinary conventions, and experiences had to be both reproducible and legible:

Botanical gardens and herbaria structured experience by presenting material itself to be examined more or less at will. On a less immediate plane, naturalists adopted artistic and humanist literary techniques to preserve their experiences and render them accessible to others: the manuscript illustration and the commonplace book. For the phytographer needed his careful notes to be sure of what he had seen (p. 174).

... Illustrations were not only memoranda for their author or commissioner; they were also means of communicating descriptions to one's fellow naturalists, or to those who wished to join the community (p. 177).

This book ends the way it began, with description. Contemplating how such things as carnivorous plants and heliotropism escaped notice by Renaissance naturalists, Ogilvie ends with an assessment of the limits of observation: "As morphology and its variations came to consume naturalists, other aspects of the natural world faded into the background" (p. 268). These early cataloguers were blinded by particularity, even when it was mediated by the garden or herbarium: "the careful vicarious descriptions of Clusius and the herbarium-based work of Bauhin were products of the same impulse to describe and love the particular" (p. 269). Ogilvie sees the major motivator of these driven men as intellectual self-satisfaction and aesthetics.

The aesthetic impulses that drove early modern naturalists led, in a certain sense, to a less anthropocentric study of nature. *Materia medica*, with its focus on the practical employment of plants and animals to restore and preserve human health, was unabashedly anthropocentric. Unlike the natural history of the Enlightenment, Renaissance naturalists had little interest in the economic aspects of their pursuit, aside from the occasional gain to be made by selling rare plants (p. 270).

After a scintillating, thought-provoking investigation of early modern cultures, Ogilvie sells his own work short with this reductive discussion of aesthetics and economics. Early modern natural science is, as his work shows, far more complicated than these two intellectual categories allow.

My only other arguments with the book are small and not with the history itself. First, I would like to know more about Ogilvie's thinking about textuality. In the introduction he takes pains to reinforce naturalists' awareness of the differences between symbolic productions and reality. However, Ogilvie quotes Rabelais' fictional *Gargantua and Pantagruel* as a piece of evidence of equal weight with the other items under discussion, and he traces out a textually based history of humanism. Further, Ogilvie writes of

the myriad ways observations were represented and transmitted: individual field notes, verbal descriptions, and illustrations. Experiencing nature and representing that experience were intimately combined in Renaissance natural history, so intimately that it would be historically unsatisfying to treat them distinctly. Renaissance naturalists strove to create a kind of vicarious experience in their writings, which thus not only condensed but also recapitulated their own experience of nature (p. 141).

Finally, Ogilvie does not give original publication dates in the bibliography, which would help, for example, place Rabelais' work as a piece of evidence if I knew when it was published, which was certainly not 1990. The book is nonetheless rounded out nicely with notes, a bibliography, and an index.

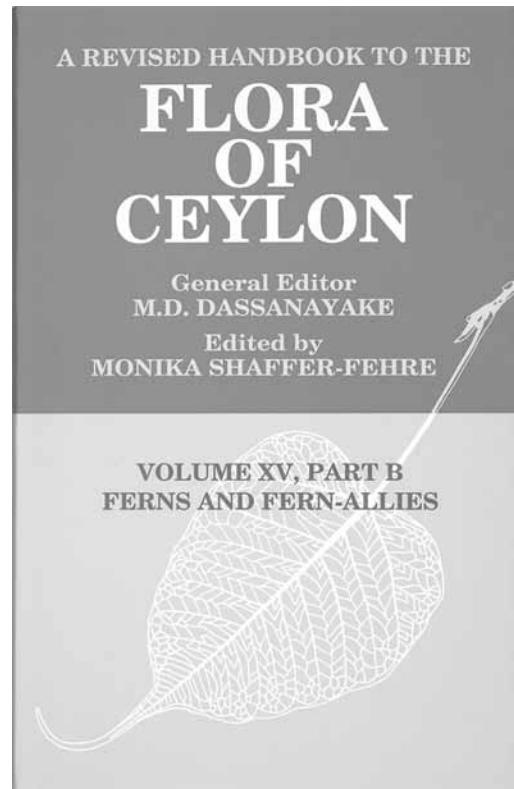
There is lots to think about in this book: Ogilvie discusses geography, city/country travel and movement of naturalists, natural history as a form of labor, international and local communities, what counts as experience, and naturalists' relationships to "the ancients." This thoroughly enjoyable and thought-provoking work belongs in any library that collects modern histories of science or scholarship on early modernism or history of natural history, especially botany.

—Angela L. Todd, Archivist

Shaffer-Fehre, Monika, ed. *A Revised Handbook to the Flora of Ceylon*. Volume XV, Part B, Ferns and Fern-allies. Enfield, New Hampshire: Science Publishers, 2006. xxix, 311–616 pp. \$89.95. ISBN 1-57808-384-8 (hardcover).

The original *Handbook to the Flora of Ceylon*, by Henry Trimen, was published in 1893–1900, and a revised version was begun in 1968 under the auspices of the Smithsonian Institution, the Ceylon Department of Agriculture and the University of Ceylon. This volume is a supplement to that project. Ferns were not included in the original work, but they are very much in evidence in the landscape under consideration, and so it was decided to develop volume XV, Ferns and Fern-allies. The editor points out that this volume was developed after the index for the main work was produced, and so it contains its own index. The book treats 351 fern species, of which 58 are endemic, while another 30 species are specific only to Sri Lanka and southern India. It is also noted in the foreword that about 50% of all fern taxa are part of the floras of South Asia, Southeast Asia and China, and that an estimated 25% of the fern flora of Sri Lanka is thought to be endemic, based on statistics.

Covered in volume XV, part B are the following: Aspleniaceae, Azollaceae, Blechnaceae, Cyatheaceae, Davalliaceae, Dennstaedtiaceae, Dryopteridaceae, Equisetaceae, Gleicheniaceae, Grammitidaceae, Hymenophyllaceae, Isoetaceae, Lomariopsidaceae, Loxogrammaceae, Lycopodiaceae, Marattiaceae, Marsileaceae, Oleandraceae, Ophioglossaceae, Osmundaceae, Parkeriaceae, Polypodiaceae, Psilotaceae, Pteridaceae, Salviniaceae, Schizaeaceae, Selaginellaceae, Thelypteridaceae, Vittariaceae and Woodsiaceae.



Also published in 2006, but not seen here: Volume XV, Part A, Ferns and Fern-allies. \$89.95. ISBN 1-57808-384-8 (hardcover).

—Charlotte Tancin, Librarian

Sheffield, Suzanne Le-May. *Women and Science: Social Impact and Interaction*. (Science and Society series edited by Mark A. Largent.) New Brunswick, New Jersey: Rutgers University Press, 2006. xxxv, 407 pp., illus., ports. \$29.95. ISBN 0-8135-3737-1 (paperback).

The Science and Society series operates on the premise that although the accepted history of, say, eugenics or nuclear weapons has changed considerably in recent decades, historical narratives about science in U.S. history books are unchanged. This series addresses that lag in representation, and *Women and Science* does a remarkable job. By writing women into the history of science, this text broadens our understanding of early science, introduces readers to some of the women throughout history who have practiced science, tells a new story about science as a profession, and finally, asks hard questions about the relationships between gender

and science. This book is not the typical women-in-science text, chronicling the women who have overcome “the odds” to succeed in science. This book chronicles “the odds,” as well:

Often women were barred by their inability to gain access to knowledge and learning, or by rules of social behavior that dictated that science was not for girls, roles that funneled women toward socially acceptable and respectable positions as wives and mothers in western society. At other times, male scientists have used scientific knowledge itself to “prove” that women’s minds were incapable of practicing science, and that their bodies were unable to stand the intense intellectual work and physical labor required (p. xiii).

In writing, for example, of Marie Curie's triumph in a man's field, Sheffield also writes eloquently and more broadly of European gender inequities. Her account moves easily and smartly from the meticulous documentation of duties in the egalitarian work of Marie and husband Pierre to the ways that their work was represented in the popular press.

Sheffield's first chapter, "Constructing a new science," moves from larger generalizations about early modern science history to describe a few select women. In part, of course, Sheffield has to—science was not yet fully defined, there were fewer women making those leaps into science, and fewer records of women in general. Sheffield's synthesis is concise yet thorough, and, combined with the few numbers of women with which she must contend and her implications for what should be included in a history of science, it is worth quoting her at length:

The association of women with reproduction meant that medieval society took for granted that women would have more knowledge about the human body than would men. As a result, women oversaw reproductive and healing processes, fulfilling roles as midwives and healers in their communities.... Yet despite this separation of men and women's spheres in regard to natural reproduction, men and women could nevertheless be considered partners in economic production. Women born into peasant farming families or into urban artisan families certainly did their fair share of the work. Male family members clearly recognized the paramount importance of women to the economic survival of the family, and these women's contributions to the family economy were also more formally

recognized by the craft guilds, organizations that regulated the workers of specific skilled trades. The recognition of women by such institutions and in law, as either their husband's partners or, after their husband's death, the rightful heir to the family land or trade, could result in a strong economic position for women within society.... Similarly, aristocratic men considered their wives capable of overseeing their business interests when they were away

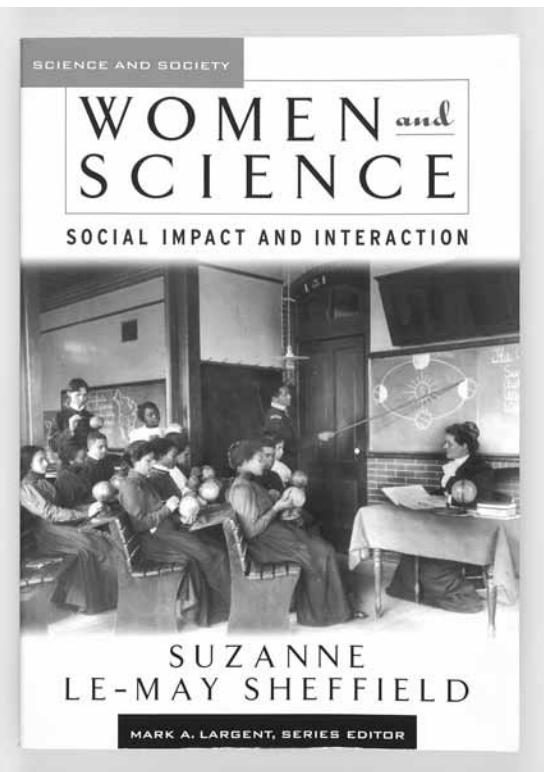
from home and of having the ability to take over the running of a business after their husbands' deaths (pp. 6–7).

Sheffield notes that women also entered the realm of knowledge through convents, but

[p]erhaps the most explicit practice of scientific learning by women took place in the household. The medieval and Renaissance tradition of the aristocratic housewife, familiar with the domestic sciences including a knowledge of medicine, pharmacy, and chemical science, meant that women could be as equally well-versed in science as men. Technical books for women proliferated in the

sixteenth century, attesting not only to their participation and skill in such activities, but also to their increasing literacy, their familiarity with Greek mythology and Latin pharmacological terms, the importance society placed in women's education and training in these fields, and, in essence, ... their "freedom to enter fully into the world" (pp. 7–8).

Though things were not "equal" as we understand the term today, women had power and opportunities in the 16th century, and it is one of the merits of this text that it shows those powers in detail, as well as women's hindrances.



The breadth of knowledges women needed to know was a surprise to me, even though women in science and early modern culture are interests of mine.

The mistress of the house had to know and understand recipes and instructions for everything used in the house, including for cooking, planting and harvesting of crops, dyeing, medical treatments, midwifery, cleaning products, making of ink, brewing and distillation, wine preparation, bread-making, beekeeping, animal husbandry, horse training, silkworm production, dairy work, drying, storing, pickling, brining, and conserving. A knowledge of gardening did not go amiss, either. John Gerard's well-known *The Herbal or Generall Historie of Plantes* (1597) acknowledged that in many instances women were the source of the knowledge he conveyed in recipes attached to specific plants for medical or food preparations. Knowledge of how to grow medicinal ingredients was of the utmost importance for women (p. 8).

The thin line between science and domestic affairs seems unusual from our historical vantage point, but it was an important way that men and women shared knowledge.

Sheffield does a great job of narrating how domesticity overlaps with, and pulls away from, scientific endeavors and uses specific examples to flesh out her historical overview. Again I quote her at some length to do justice to her text:

Though sixteenth-century scientific men would have preferred to keep women out of their scientific practice, the lack of institutional support of any kind for science at this time meant that women were often involved in one way or another. John Dee ... and Ulisse Aldrovandi ... both shared the same situation. They had to practice their science in the domestic sphere. Although both men were relatively wealthy in the context of the times, they, like their other counterparts in science, had no official place of work. John Dee, employing several apprentice-assistants who lived and worked in his home, found that it was nearly impossible to keep his scientific work separate from the domestic work of the household performed and overseen by his wife, Jane Dee. Although John Dee had many outbuildings on his property that accommodated his work, Jane Dee often found him and his work underfoot. Though John notes ... his wife's anger at the poverty and

disreputable reputation his practices brought upon their household, the fact of the matter was that he needed his wife's assistance to be able to practice science (p. 8).

Ulisse Aldrovandi, fearing similar difficulties, made strenuous attempts to physically separate the domestic household from his scholarly endeavors. At his palace in the city he not only had a separate study room but also built a separate museum building for his collections. He believed that the life of the mind was a masculine activity, separate from the daily workings of the household, which his wife, Francesca Fontana, oversaw. So insistent was he upon this separation that when he built a villa in the country to better accommodate his study and writings on nature, he constructed separate apartments for his wife. Just in case there was any doubt about her position, he had inscribed above the entrance to her dressing room, "It is proper that women be clever not in civic but in domestic affairs." Yet despite these efforts Aldrovandi was no more successful than Dee in keeping his wife secluded from his work in the domestic realm (p. 9).

... Ulisse Aldrovandi also needed Francesca's assistance when women visitors came to view his museum. Moreover, it was Francesca's dowry that allowed Aldrovandi to build his country villa. But most important, she was a learned lady in her own right. As such she helped Aldrovandi assemble his books by editing his writing and finding useful passages for his books. For the posthumous 1606 work, *On the Remains of Bloodless Animals*, which was their shared work, she was responsible for writing the Latin preface. For ten years after his death she controlled access to his museum. ... Deborah Harkness has argued that sixteenth-century natural philosophy was "a world among women, for natural philosophy was the guest of the household during this period" (251) (p. 9).

Narratives about early science have changed in the last couple of decades as much as narratives of recent scientific events, and this work does well to include those new early modern narratives. As the quote from Harkness above suggests, this text is also a synthesis of other historians' accounts, a kind of history of histories presenting, albeit in mere sketches, the major paradigms of historical thought about science.

In the first chapter's section "Women's science practice in the seventeenth century," Sheffield writes:

In England, Katherine, Lady Ranelagh (ca.1614–1691), the older sister of Robert Boyle, who was one of the Founding Fellows of the Royal Society and who epitomized the experimental method through his work in chemistry, was part of an intellectual circle of women who produced books on household science, including medicine and pharmacy. Her works exhibited a practice of chemistry and a knowledge of herbals. Boyle had his sister to thank for his early introduction into the inner circles of London literary and philosophical society. As well as sharing the same social circle, the brother and sister also shared laboratory facilities, built by Boyle onto the back of Katherine's house in Pall Mall. The similarity between chemical and kitchen technologies may also have meant that Katherine performed her scientific work in her kitchen. Though Katherine was still ostensibly working in the older traditions of a home-based, domestic science, she was nevertheless using new experimental techniques. Obversely, while reaching into new and uncharted territory in chemistry, Robert Boyle nonetheless recognized the usefulness of the kind of knowledge his sister produced to his own work. Only in the 1660s, the first decade of the existence of the Royal Society, did evidence arise of the disparaging of "Ladies Chemistry" to separate it from the more gentlemanly and aristocratic endeavors of chemists working within the new science (p. 18).

This section starts the project of writing about women in science—not a matriline of women following in each others' footsteps, but a real recovery of women's names and practices. For the sake of assisting Sheffield's recovery project, I include the names of women working in areas related to the plant sciences here. Sheffield cautions that not all women needed to have familial connections to a man to practice science and points out that Queen Christina of Sweden (1629–1689) studied philosophy; Princess Elisabeth of Bohemia (1618–1680) corresponded with Descartes; Anne Finch, later Lady Conway (1631–1679), was tutored in Latin and philosophy as a child and corresponded with Henry More in adulthood; Margaret Cavendish, Duchess of Newcastle (1623–1673), studied and wrote philosophy, rejecting the experimental method of the Royal Society. Maria Sybilla Merian (1647–1717) was an accomplished artist who left her husband for study in a Labadist community and in her 50s sailed to Surinam.

Chapter two, "Women's bodies, women's minds," recounts how physical sex characteristics have determined women's possibilities, from Aristotle to Linnaeus and

Goethe. This chapter is a mere sketch, to be sure, but the strength of this is that, rather than a comprehensive chronology in which the details and patterns may be lost, this history of sex and gender gives the big ideas and how they changed, allowing students a starting place from which to ferret out details and conceive a context of the history of these ideas.

Chapter three, "Women doing science: Multiple avenues," traces the trajectory of middle-class women's education as one of loss. Sheffield notes that, "As the world of men expanded with new ideas, the world of women seemed to contract" (p. 58). Men and women were relegated by gender to the public or private spheres. Still, 18th-century educators saw the importance of educating women, and some scientific knowledge was approved as suitable for ladies, especially botany, chemistry and astronomy. At the same time, men began to professionalize science, away from informal amateur practice. Some women were able to fill niches ignored by male scientists, even occasionally moving into the networks of masculine science. The boundaries of scientific practice were still permeable, and Sheffield extrapolates on the ways women could capitalize on that permeability, as well as on how science's flexibility could shift boundaries to exclude women, too.

"As the century progressed, women increasingly engaged in ["drawing room"] polite science, which was largely considered to be an appropriate sphere of learning for women" (pp. 61–62). For example, Jane Webb Loudon (1807–1858) assisted her amputee husband in horticultural work; Margaret Gatty (1809–1873) instructed women in collecting seaweed; Priscilla Wakefield (1750–1832), Maria Elizabeth Jacson (1755–1829), and Sarah Atkins Wilson (1801–1863?) wrote botany manuals for children; Almira Hart Lincoln Phelps (1793–1884) and her sister Emma Willard (1787–1870) promoted science education for women. Women were empathetic toward the natural world and argued that this made them the best spokespersons for the protection of nature. Octavia Hill (1838–1912) petitioned for more open spaces in urban London, and Arabella Buckley (1840–1929) wrote of a sympathetic form of evolution.

Sheffield is careful not to simply reinstate the battle of the sexes in her work and shows us moments when men are supportive of women in science, even if that support—though heartfelt—is sometimes limited:

Some scientific men understood that educating women in science could take them beyond its entertainment value and become for some women more than a hobby. Such men were well aware that a reasonably well-educated female family member might provide valuable unpaid assistance to their own scientific endeavors. Though some historians have argued that the role of assistant is a passive and subordinate one,

women saw such a role as a socially acceptable avenue to scientific studies. They could fulfill roles as gatherers of specimens, data collectors, note takers, copyists, observers, laboratory assistants, and illustrators (p. 72).

During this time Elizabeth Gould (1804–1841) worked as an illustrator for her husband John Gould (1804–1881); Elizabeth Cary Agassiz (1822–1907) was interpreter and translator for husband Louis Agassiz (1807–1873) and also wrote teachers' guides to natural history; Ellen Hutchins (n.d.) was an amateur botanist who sent specimens and drawings to Dawson Turner (1775–1858). Mary Anning (1799–1847) was a self-educated paleontologist and fossil dealer that supplied men who made their names identifying her specimens; Louisa Twamley Meredith (1812–1895) emigrated to Tasmania and wrote to educate British audiences back home about her new natural world. Mary Somerville (1780–1872) gained a reputation for her astute understanding of the full range of sciences; Eleanor Anne Ormerod (1828–1901) communicated scientific findings to the agricultural community. By the second half of the 19th century, professional male scientists "began to feel uneasy about the presence of women amateurs in their midst" (p. 79).

Chapter four, "Women's education in science," traces the 20th-century introduction of home economics as a viable scientific option for women and the gradual inclusion of women in postsecondary science studies. Educators grappled with the issue of what sort of science might reasonably be pursued by women, and many girls interested in science were funneled into home economics courses. This was not simply a return to Francesca Fontana's kitchen science. Although originally introduced to educate working-class girls so they could manage households, by the early 20th century it was believed that home economics would make science attractive to girls and relevant to their experience.

As for women and science in postsecondary education, first women had to be allowed in the colleges, then came the question of how women and science could coexist.

London University was the first British university to admit women, beginning in 1878.... Oxford and Cambridge both had women's colleges early on. Girton College was founded in Cambridge in 1869, and Newnham College followed in 1871. In 1878 and 1879 respectively, Lady Margaret Hall College and Somerville College were founded at Oxford. As was the case at the elementary and high school levels, some women's colleges upheld equal opportunities for women, and others advertised a female education especially suited to women (pp. 103–104).

Before that, at Cambridge University women were permitted to attend lectures but not officially recognized. In 1856 they could take special exams to become teachers or governesses but were not allowed to sit for degree exams until 1874. The gradual, hard-won influx of women into postsecondary education was just the beginning, as the next chapter illustrates.

Chapter five, "Professionalizing women scientists," addresses the shifting restrictions of the glass ceiling in science:

Female assistants had, for the most part, nowhere else to go and thus once trained became highly experienced and dedicated workers. Meanwhile, male [scientists] were freed from tedious work and could seek better positions in the growing field. ... The process, whereby women were permitted to gain some access to the science profession, has been termed the *feminization* or *ghettoization* of women's work in science, relegating them to the low-paid, low-status occupations within the scientific hierarchy. This was the drudge work of science that the majority of men were not interested in doing (pp. 127–128).

The influx of women in education was answered with rigid boundaries in employment and in work-related social circles. Professional networking was vital for professional science and was quite difficult for women to pursue, being restricted as they were to assistant functions and thus unlikely to make contacts with other scientists. In addition to education and employment, there were the professional development aspects of scientific careers, and eventually the coterie of women in science could support parallel professional enhancements. Many women scientists felt ostracized from other scientists, but some formed female scientific subcultures allowing them to enjoy a sense of professionalism. Some established their own scientific awards to compensate for the ongoing lack of recognition for female scientists in a male-dominated profession.

Chapter six, "Women's advancement in science since World War II," tells the modern story of women's participation in science as one of both gains and losses.

Despite women's interest in and intellectual capacity to practice science, and despite legislation that should have enabled women to achieve equality with men, women in the second half of the twentieth century still faced many of the same barriers women faced one hundred years earlier. ... At every stage of their education, girls were reminded of their differences from men and of their lesser status in western society. Women were taught that they should not be naturally inclined toward science,

and that women who are good at science are not feminine. Many women overcame these barriers and disadvantages and entered undergraduate, graduate, and post-graduate science studies, but at each level a significant number of women dropped out (pp. 159–160).

Though it is easy to charge these women with making individual choices, Sheffield does show the pressures they were under to conform to contradictory ideals of womanhood. Women were encouraged to study science during the Cold War so that when men were needed for military purposes there would still be highly trained scientists available, and yet at the same time women in the 1950s were pressured to conform to traditional roles. Sheffield provides examples throughout, moving away from the natural sciences somewhat as women in more recent history have entered the frontiers of other scientific fields. She also addresses organized efforts to redress the gender imbalance in science, as well as traditional science historians' responses.

Feminists' continued vigilance about addressing women's place in science and thus in the larger social world is underscored by the advent of the so-called science wars of the 1990s. The majority of scientists agree that there should be more women in science and that women's questions in science need to be addressed. The idea that there can be or ought to be a feminist science, or indeed that the science that is practiced today and the knowledge that is acquired by it is in any way "masculine" or tainted by the politics of gender, is an anathema to some scientists. The strongest indictment of feminist epistemology of the sciences comes from Paul Gross and Norman Levitt's *Higher Superstition: The Academic Left and Its Quarrel with Science* (1994). . . . Gross and Levitt believe that science methodology is self-correcting and therefore cannot be affected by the social and cultural world of its practitioners. . . . What difference does it make, they argue, if mathematics problems are couched in stereotypical gender situations or if descriptions of sperm and ova are characterized with stereotypical gender characteristics? . . . What really matters, they argue, is that the knowledge obtained through mathematics and the sciences is correct, proven by scientific methods to which all scientists strictly adhere (pp. 169–170).

Sheffield does not take sides and even offers a third view that shows the commonalities of the "sides" she has described.

These concerns raised by the "science wars" may seem at first sight to have some legitimacy, notes historian Londa Schiebinger, . . . [b]ut generally speaking they all . . . miss the point. As Schiebinger has noted, "language shapes even as it articulates thought." Scientists cannot help but draw upon their own cultural ideas and ideals in the language they use to express their scientific ideas. . . . In turn, science, supposedly objective in its determinations, reads back onto our culture scientific ideas permeated with the ideological norms of a given time and place in history (p. 171).

Chapter seven, "Creating a future for women in science," ponders our next step and quotes statistics on increasing numbers of women in science. Sheffield notes that the generally positive statistics do not reveal the numbers of women lost to professional science, whether through academic attrition, early discouragement, or inability to break through the glass ceiling. She ends by examining new approaches to scientific education and asks, can there be a feminist/feminine science?

This book is wonderful and bridges a gap in the history of science without being limited to one position. The book's strength and weakness are the same quality: its attempt at comprehensiveness. On one hand Sheffield shows how women's limitations were multiply-determined by larger social and cultural institutions and the ways in which they intersected—the blatant rule forbidding women in universities, the expense of education, the university language requirement, the governess alternative and its limits, and women dropping out at various points along their career paths. On the other hand, narrating all the ways that the deck was stacked against women reads sometimes like a gallop through big ideas that are not fully fleshed out. In the end this work successfully performs different kinds of historical work: traditional biography, cultural history contextual analyses, the recovery work that finds women around the edges of the masculine paradigm, and history that maps a parallel *women's* tradition. Though it is not always clear which documents are being quoted in the text, each chapter ends with a bibliographic essay that should allow a student to track down quotes. Important supplementary material includes a chronology, glossary, documents (transcribed from originals), bibliography, and index. I would happily recommend this book for undergraduate history, history of science or women's studies courses. The biographies and portraits of women in science that pepper the book make it a good one for botanical, natural history or science libraries, as well.

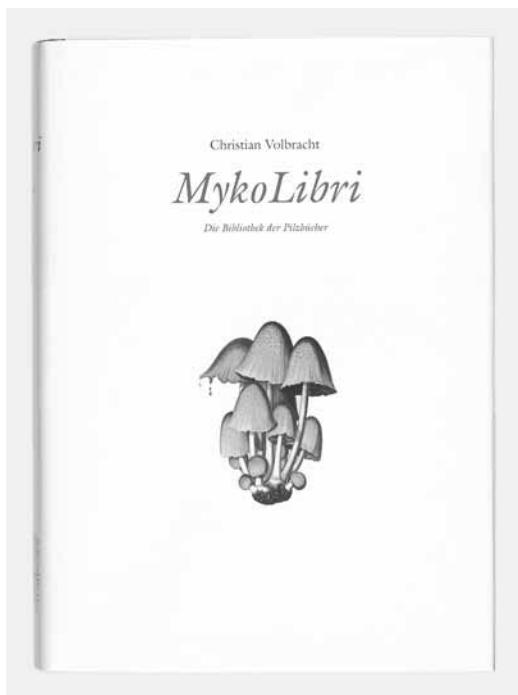
—Angela L. Todd, Archivist

Volbracht, Christian. *MykoLibri: Die Bibliothek der Pilzbücher.* Pilzführer, Grosse Ikonographien, Meilensteine der Mykologie, Floren und Spezialmonographien, Taxonomie und Systematik, Bibliographie, Mykogastronomie, Ethno-Mykologie, Halluzinogene, Giftpilze, Trüffel. Hamburg: MykoLibri, 2006. xii, 13–528 pp., incl. 90 col. plates, col. illus. English translation of the Introduction, pp. v–xii, laid in. Edition limited to 750 copies, numbered and signed by the author. Obtainable only from Christian Volbracht, MykoLibri, Isestrasse 79, 20149 Hamburg, Germany; email <Mykolibri@aol.com>; Web site <www.mykolibri.de>. Regular issue (675 copies), €140.00 plus postage; Special edition (50 copies), €220.00 plus postage; Deluxe edition (25 copies), €540.00 plus postage. Hardcover, no ISBN given.

In an age when e-books are rapidly becoming a reality and many people are speaking of the death of the book as we know it, there are still distinct pleasures to be gained from handling and perusing a beautifully designed and carefully produced book made up of good paper, finely printed, with superb illustration and a sturdy binding, sensations that a Sony PRS or similar device can never arouse. Christian Volbracht's *MykoLibri* evokes that feeling; it is a very handsome, indeed delicious, production.

Mr. Volbracht is a German "casual mushroom collector," amateur mycologist, and collector and seller of mycological books who, while spending years as a foreign correspondent in Paris and elsewhere, developed a passion for collecting books about his "leisure-time hobby," amassed one of the most remarkable retrospective libraries on the subject, and in the end became a specialist mycological *antiquariat*. The decision to produce a bibliographic record of his collection happily led to the creation and personal publication of this remarkable volume. Along the way he met and made friendships with other distinguished collectors of mushroom books, Joachim Schliemann, Robert E. Machol, Ernesto Rebaudengo, Meinhard Moser, Jacques Nègre, and others who preferred not to be identified here, and, of course, specialist natural-history booksellers Howard K. Swann, Madame Rousseau-Girard, Julius Steiner and many others.

Mr. Volbracht clearly enjoys his collection on several levels. As an amateur mycologist he has gone to considerable lengths to collect the sort of book that first aroused and encouraged his own enthusiasm for fieldwork, a very impressive corpus of field guides. Getting deeper into the literature he took account of the importance of taxonomic literature and diligently collected monographs and full-scale floras, learning in the process much about the history of this field, and gathered both the key and commonplace works in its evolution, ranging from a 1481 edition of Pliny's *Historia*



Naturalis to a 16-page, 1959 German pamphlet on the food value of fungi. But one feels that his heart beats faster when he focuses on the great iconographic tradition in mycology. The "fruiting bodies" of fungi are not easy to describe in words, a situation that supports the adage of a picture being worth a thousand words. Furthermore, fungi, in comparison to other forms of plant life, are more ephemeral, and diurnal changes are sometimes remarkable. Many mycologists have had to develop some expertise with brush and watercolour *in the field* in order to capture the subtlety of form and colour of the living specimen, "descriptions that were vivid and true to life," as Volbracht remarks. Over the centuries printers have employed various printing techniques to translate these images into printed book illustrations. The result is a long history of painstakingly and beautifully produced iconographies of fungi, often ablaze with colour as the fungi themselves can be. So, when Mr. Volbracht says, "The nucleus of my collection, therefore, are the grand, mainly coloured, illustrated mycological works from the 17th to the 20th centuries, such as those of Schäffer and Sturm in Germany, Bolton and Sowerby in England, Bulliard and Paulet in France, Vittadini and Bresadola in Italy, and Holskjold and Fries in Scandinavia," and waxes enthusiastic about the history of illustration and the techniques for printing mycological pictures, one senses that he is on his favourite ground. Add to that the

extraordinary array of finely printed colour reproductions that grace virtually every opening of this bibliography and you feel a sense of personality, a reflection of its collector's feeling for what he has assembled.

The catalogue proper runs to 482 pages printed in double columns and interspersed with numerous colour illustrations, from full-page to playing-card size, pictures of the finest and rarest mycological illustrations, ornamental and plain book covers and dust-jackets, title pages of books, theses and even the odd offprint. "The catalogue," alphabetically arranged by author or title, Volbracht tells us in his lucid and informative introduction, "illustrates the development of a collection that has taken 30 years to grow and that now includes all the 'Great fungal books' as well as many considered rare ('rara'), very rare ('rarissima') or nearly impossible to find ('unfindables'). . . . The catalogue describes more than 3000 old books, writing, and prints from 1481 to 1959, chiefly about the higher fungi." He excludes entries for reprints from periodicals for which he has complete runs in his library "unless they have special interest or important provenance. . . . I tried . . . to pay special attention to the taxonomic literature from 1931 to 1942, which in general has been incompletely described. My emphasis on what I have collected has changed with time. The library was started with books on identification followed gradually by the important iconographies, specialized monographs and popular field guides, and eventually by books on gastronomy and the truffles." Each entry is set out on a consistent and elegant typographical scheme that is very easy to peruse, with the heading and title in bold, the body of the entry in ordinary type. Concise pagination and plate statements are given noting the illustration reproduction process, followed by conventional size distinctions accompanied by the metric dimensions of his copy, a note on provenance and brief references to authoritative bibliographic sources. Many entries are concluded with the compiler's remark on the rarity and importance of the item or any other pertinent point. The user is provided with a brief prefatory advice page that explains the make-up of entries and, as part of the English language version of the introduction, there is a short glossary of terms used with German/English/French equivalents. The catalogue is prefaced by tabular analyses of the various subjects covered, i.e., Countries, Iconographies, Herbarium technique etc., Myxomycetes, Popular fungus books, Juvenilia and games, Poisonous fungi and hallucinogens, Cookery books & mycogastronomy, Truffles pre-1900, Fungus cultivation (other than

truffles), Exsiccata, Manuscripts, Periodicals, and Anonyma, each a chronologically arranged author/short-title list, similar to the lists provided by Nissen in his bibliographies of natural-history illustration. Following the main catalogue is a list of addenda and another of bibliographies and histories of mycology. Finally there is an index to illustrated works arranged alphabetically by author.

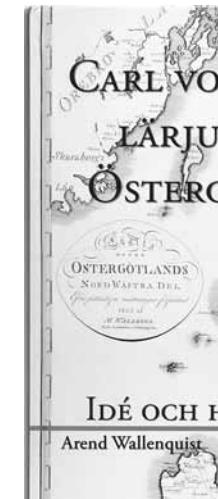
Every aspect of this book speaks of great care and attention to detail, both of content and physical make-up. Clearly an immense amount of personal effort went into its production, and to this writer, at least, the total effect is very satisfying. Mr. Volbracht remarks that, "Producing a new book catalogue is certainly a risky undertaking because it could simply reflect the vanity of the collector. 'Whoever shows something, exposed himself,' wrote Manfred Sommer. Yet after many years in dealing with old books on fungi as collector and seller, I am aware that a good overview of the older literature of this special subject remains desirable." With some of its notes on rarity one might sense a whiff of vanity here and there, but the point is that there is *information* about some of these almost legendary rarities that is important and perhaps not to be found elsewhere. Volbracht tells us that his catalogue "is intended to be useful to amateurs and experts, including mycophiles, book collectors, mycologists, librarians, and book dealers." There has never been such an elaborate or extensive bibliography or catalogue of mycological literature before so his work stands as a uniquely important reference in this field. That many of the "intended" will value this work, costly though it is, cannot be denied. But it is as a "subject bibliography" that it is probably weakest. His subject analyses provide little guidance to the content on the *biology* or taxonomy of fungi that a mycologist or librarian might seek. Of the significance of his collection of works on what to me are fringe subjects, mycogastronomy or ethnomycology, I am not qualified to pass comment, but Volbracht's introductory notes suggest that he is knowledgeable about their literatures and has applied the same assiduous attention to collecting these subjects as the floristic, systematic and biological branches of mycology.

I am certain that, as a botanical bibliographer, I shall be making frequent forays into Mr. Volbracht's pages and returning with baskets of choice bibliographic morsels. Natural-history libraries will certainly need to acquire this important bibliographical catalogue even if it requires some stretch of their funds.

—Gavin Bridson, Bibliographer

Wallenquist, Arend. *Carl von Linnés Lärjungar i Östergötland: Idé och Handling.* (Linköpings Biblioteks Handlingar, N.S., bd. 18.) Linköping: Linköpings Stadsbibliotek, 2007. 219 pp., illus. (chiefly col.), facsimis., ports., maps. SEK 170 plus postage. ISBN 91-633-0236-7 (hardcover). To purchase, contact Mathias von Wachenfeldt at <mathias.vonwachenfeldt@linkoping.se>.

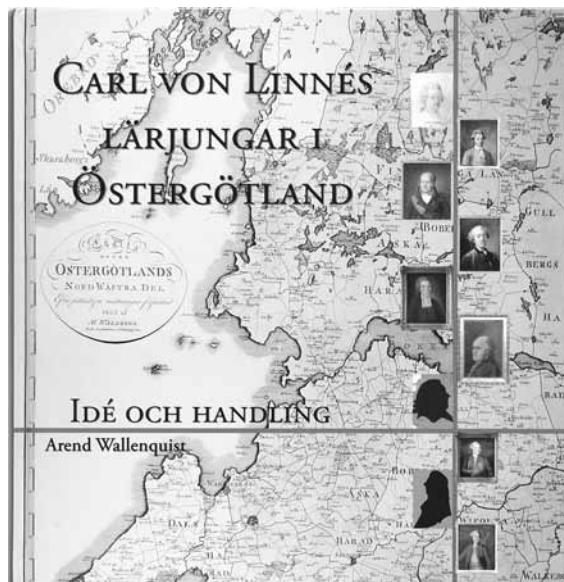
In this tercentennial year of the birth of Carolus Linnaeus (1707–1778), Arend Wallenquist has published a book about those pupils of Linnaeus who were born in the county of Östergötland in Sweden, along with two more students who were active there although born elsewhere. Biographical essays about these individuals have been brought together to highlight Östergötland's contribution to the Linnaean legacy through their ideas and their work. The first 50 pages provide historical context, followed by the biographical essays, a short section highlighting dissertations, and a bibliography. The text is in Swedish.



The book cover features a map of Sweden with a focus on the Östergötland region. The title 'CARL VON LINNÉS PUPILLER I ÖSTERGÖTLAND' is prominently displayed at the top. Below the title is a circular emblem containing the text 'ÖSTERGÖTLANDS SÖDRA VÄSTRA DEL' and 'Geographia Suecica'. The author's name, 'Arend Wallenquist', is at the bottom of the cover.

The Östergötland students of Linnaeus went on to pursue active careers in diverse fields. Many became physicians, and other occupations represented include teaching, engineering, botany and the natural sciences, the priesthood, linguistics, ethnography, history, journalism, bookselling, farming, librarianship, as well as other areas of endeavor. The impressions and ideas that they gained from Linnaeus informed their work to benefit their region, their country, and even the larger world through their various professional achievements.

A number of these men published books, and *Carl von Linnés Lärjungar i Östergötland* is illustrated in part with photographs made from copies in Linköpings stiftsbibliotek at the Linköping public library, including the Stadtsbibliotek and other sources. Of the 31



Cover designed by Magnus Wallenquist.

students discussed, 22 also produced botanical or medical dissertations whose title pages are reproduced in the book. Additional illustrations include portraits, manuscript reproductions, and other published and unpublished material relating to the life's work of these students.

The Linnaean pupils treated in this volume are Eric Acharius (1757–1819), Bengt Berzelius (1739–1777), Hieronymus von der Burg (1730–1811), Johan Adolph Dahlberg (1744–1797), Nils Ericsson Dalberg (Dahlberg)

Davidsson Pontin (1733–1809), Christian Fredrik Rosenthal (1740–1810), Jacob Rudberg (1725–1778), Eric Olof Rydbeck (Rydbäck) (1732–1795), Henric Sparschuch (1742–1786), Isaac Svensson (1726–1796), Johan Peter Westring (1753–1833), Anders Magnus Wadsberg (Hjoberg) (1757–1798), Matthias Jonas Wallberg (1737–1808), Johan Peter Westring (1753–1833), Anders Magnus Wählén (1731–1797) and Peter Zetzell (1724–1802).

Arend Wallenquist is a physician with strong interests in medical history and the history of ideas. These interests are evident in his tribute to the intellectual heritage of the Östergötland region of Sweden and its place in the legacy of Carolus Linnaeus.

—Charlotte Tancin, Librarian

Walpole, Josephine. *A History and Dictionary of British Flower Painters, 1650–1950*. Woodbridge, Suffolk: Antique Collectors' Club, 2006. 236 pp., including 103 color plates; col. frontispiece, uncol. illus. \$69.50. ISBN 1-85149-504-5 (hardcover).

The author states in the introduction that hers is an unconventional history and dictionary and that the artists cited are her personal choices. This statement almost preempts any criticism that may follow, but some comments are in order.

A brief, eight-page “Introduction to floral art” cites the names of Ehret, the Bauers, Redouté, Bessa and others mostly in one sentence. Of course, there are books about them if one wants more information. This chapter, however, contains a shopping list of many names—a jumping off point for further investigation. What a frustration to the reader, though, to note the exclusion from the *Dictionary per se* of any of the foreign-born artists, such as Franz Bauer and Georg Ehret, who spent much of their lives in England. (I note that Samuel Redgrave's *A Dictionary of Artists of the English School* (1874) includes many such artists.)

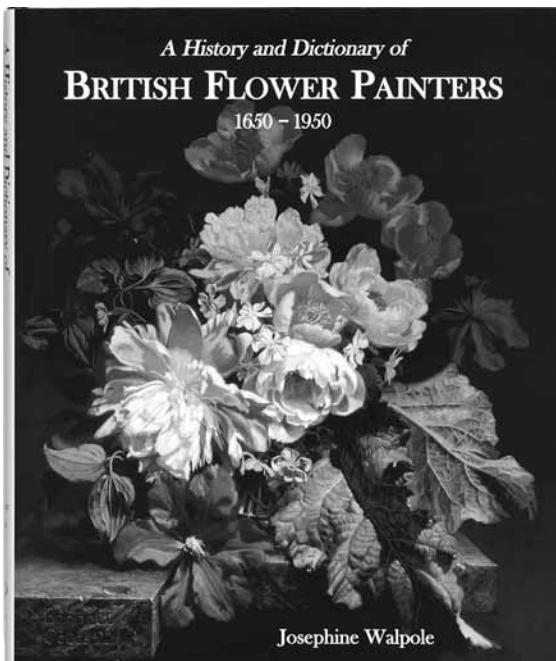
Subsequent chapters describe British flower painting in the 17th through 20th centuries (roughly the equivalent of 2, 8, 12, and 23 pages respectively, plus ample images). The 17th-century chapter mentions John White, John Parkinson, John Ray, Richard Waller and Alexander Marshal. The 18th includes John Baker, Mary Moser, James Hewlett, Thomas Keyse, James Sillett, Isaac Johnson, Trajan Hughes, Robert J. Thornton, Philip Reinagle, Peter Henderson, Abraham Pether, Mark Catesby, James Sowerby, William Kilburn, Sydenham Teast Edwards, Sydney Parkinson, Frederick Nodder and Francis Masson.

Not quite 1,000 names of flower painters are included in the chapter titled “Dictionary of British flower painters.” These 89 pages including small black-and-white images take the form of paragraphs rather than

categories such as “exhibitions” and “awards,” which make them more interesting to read and quite flexible in the choice of content. The title's time span of 1650 to 1950 makes a tidy 300 years, though some of the artists, such as Ann Farrer (see catalogue of Hunt Institute's 8th International Exhibition of Botanical Art & Illustration), just made the cut, but the amazingly talented Lizzie Sanders (see 11th International), also born in 1950, did not, while Elisabeth Dowle (see 9th International), born in 1951, was included! Perhaps years the artists were productive might have been preferable to birth years.

We are aware of the immense challenge in compiling biographies for publication, especially in making data consistent. In checking a few names of artists whose works are represented in the catalogues of our International Exhibitions of Botanical Art & Illustration, I was pleased to note a number of references to Hunt Institute. However, only numbers 7 and 9 of these catalogues (1992 and 1998 respectively) were cited, suggesting that none of the others in our series were examined. Although number 11, published in fall 2004, may not have been available before Walpole's book went to press, the list of artists was publicized earlier in the year.

Some entries in the *Dictionary* cite locations of original work. Information could have been added about our holdings, as the Catalogue of the Art Collection at the Hunt Institute database would have confirmed the presence of artworks by over a dozen artists whose works are in our collection, notably 135 by Greville, 245 watercolors by James Bolton (18th century), 168 by James Goddard (19th century), 33 watercolors by Lilian Snelling (1879–1972), 49 by John Wilkinson (1934–), and a smaller number of works by E. Cameron, Coombs, Farleigh, Furse, Grierson, Mee, Stephenson (cover of our 10th International), Stones, Webster, West and an album of watercolors for Maund's *The Botanist*, including originals by Priscilla Bury, J. S. Henslow, S. Humble, Miss S. Maund, Mills, Miss Taylor and Augusta Withers. Our collection also contains over 700 watercolors by



Edward Donovan (1879–1837), 14 by Emily Eden (1797–1869), 49 by Lady Cockerell, and 100 by Josiah Galleymore (1801–1868). I would have considered for inclusion Andrew P. Brown (1948–) with 22 works at the Hunt, as well as others in the Chelsea Physic Garden Florilegium Society. Granted, some of the works listed in our catalogues as loans were subsequently added to the Hunt's collection, but we would have been only too pleased to provide information and hope to do so perhaps for a second edition.

On another note, while writing this review, I needed some information about W. H. Edwards, whose 25 watercolors we own, and found a brief entry in Walpole's *Dictionary*. However, she apparently and incorrectly transcribed the information from Desmond (*Dictionary of British and Irish Botanists and Horticulturists*, London,

1994) that Hooker and Roxburgh were the authors of Edwards' own *Young Artist's Guide to Flower Drawing and Painting in Watercolours* (1822).

The book concludes with a two-page bibliography, which includes only one of the three Sherwood catalogues and lists *In Search of the Flowers of the Amazon Forest* (1988) under Mee (published by Lefebvre & Gille?) and also under editor Tony Morrison (published by Antique Collectors' Club), and an index of artists and illustrations in the first five chapters. Publications from the Antique Collectors' Club—interestingly, this one was printed in China—consistently maintain a high standard in printing. This work is a useful reference and introduction to British flower painters but could be more complete.

—James J. White, Curator of Art

