Huntia publishes articles on all aspects of the history of botany and is published irregularly in one or more numbers per volume of approximately 200 pages by the Hunt Institute for Botanical Documentation, Carnegie Mellon University, Pittsburgh, Pennsylvania 15213-3890.

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Page charge is $50.00. The charges for up to five pages per year are waived for Hunt Institute Associates, who also may elect to receive Huntia as a benefit of membership; please contact the Institute for more information.

Subscription rate is $60.00 per volume. Orders for subscriptions and back issues should be sent to the Institute.

Printed and bound by Allen Press, Inc., Lawrence, Kansas.

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ISSN 0073-4071
A botanist and botanical illustrator, Helen Hewson is also an enthusiastic champion of Australian botany and of the role that plant portraits have played in its history. That Australia has inspired and enjoyed a rich and varied heritage of botanical art should come as no surprise, if for no other reason than because of the astonishing variety of its flora. In fact there are numerous additional reasons for this rich artistic heritage, and Hewson does a good job of outlining and connecting them. Geographic exploration, political forces, economic necessity, professional rivalries, synergistic collaborations, scientific curiosity, rehabilitation of convicted criminals, amateur and professional artistry, a fledgling nationalism, and the love of nature and beauty all play a part in this colorful and dramatic story. Hewson has carefully selected 160 illustrations, many in color, to show the depiction of the Australian flora over three centuries, interrelating the scientific quest for plant knowledge and the critical role of botanical illustration, especially in the years before photography. In doing so she has provided a great service to historians of science, bringing together in one volume a detailed survey of many of the men and women whose art brought the Australian flora to the attention of the broader scientific community, facilitating the study and identification of plants previously unknown to European science.

As the late Frans Stafleu noted in his preface, the task of exploring the Australian flora necessitated comparison of species, often at a distance, through the use of illustrations, plants grown in botanical gardens, and herbarium specimens. The long process of building up botanical data over several centuries is interestingly conveyed in the text, as person after person takes on another piece of the task and builds on the work of predecessors. The changing technical means of producing and reproducing images and the varied venues and contexts in which the images were employed are part of the story of the gradual documentation of the Australian flora.

On reading Australia, one is struck by how much of the history of its botany and botanical illustration is the history of European interest in Australia and its natural resources. The study of the flora has often been intertwined with projects based in major European herbaria. From the earliest days of European voyages seeking to confirm the existence of Terra Australis, to the eventual and hard-won development of an Australian scientific establishment, the study, description and depiction of Australian plants were driven by an intense desire to explore, map and exploit this flora so often unlike that of Europe. The exploration, settlement and colonization of this land by Europeans fueled the need to understand and use the plant life of Australia to support development of an infrastructure and network of social enterprises modeled in many cases on European practice. Meanwhile, the quest for self-sufficiency and self-determination runs underneath Hewson’s story like an underground river, eventually coming to the surface as Australia gains scientific independence.

The text begins with a chapter on the art of illustration, relating various printing techniques throughout history to the artists and authors who employed them to depict the Australian flora. A chapter on discovery traces various voyages of exploration in the 16th to 18th centuries and emphasizes, of course, the outstanding contributions made by artist Sydney Parkinson, botanist Daniel Solander, naturalist Joseph Banks, and others on James Cook’s expedition on the Endeavour, which landed at Botany Bay in 1770. “Colonisation” discusses varied strands in the ongoing story, such as England’s plans in 1786 for a penal colony in New South Wales, the Matthew Flinders’ expedition on the Investigator that included the indefatigable artist Ferdinand Lucas Bauer, and the development of collections of plant specimens and drawings, which subsequently were taken to England for study. Using these collections, James Edward Smith published Australia’s first flora, A Specimen of the Botany of New Holland (1793–1795). Australian floristic works by Robert Brown, Prodromus Florae Novae Hollandiae et Insulae van-Dieman (1810) and Illustrationes Florae Novae Hollandiae (1813), are also noted.

“The French Impression” calls attention to yet another significant flora, Labillardière’s Novae Hollandiae Plantarum Specimen (1804–1806), and to the strong French interest in the same areas that the British had been exploring, surveying and documenting. “The Banksian Collectors” surveys the English figures, societies and publications important to Australian botany at the end of the 18th and beginning of the 19th century, much of this rooted in the interest and patronage of Joseph Banks. The late-18th-century proliferation of scientific periodical publications and their role in information dissemination is also discussed. “Hooker, Lindley and the Private Collectors” includes the names of many botanists, most English, associated with Australia in the first half of the 19th century. The dual roles of Hooker and Lindley as contributors to the scientific record of the flora are emphasized, and Robert Sweet’s Flora Australasica (1827–1828) is noted.
“Establishment” covers Australian botanical illustration during the first half of the 19th century, as European settlement increases and each colony establishes botanical gardens to study the local flora, knowledge of the local botany being requisite for the success of the settlements. Ferdinand von Mueller and Joseph Maiden and the Floras discuss the central importance of these men and many associated with them, from the mid-19th century up to the early 20th. Mueller's boundless energy and his vast network of illustrators (including many women) are described, as are Maiden's career as a government botanist and the resulting publications. Also in this period, Bentham provides a solid scientific foundation for a century of plant studies with his *Flora Australiensis* (1863–1878).

Finally, “The Revival” celebrates the resurgence of interest and skill in botanical art and illustration in Australia and summarizes artists of the later decades of the 20th century, such as Margaret Stones and Celia Rosser. Possibly because he was less associated with botanical institutions, Paul Jones (1921–), cited in Blunt and Stearn's *The Art of Botanical Illustration* (1994) as an artist of notable achievement for his books *Flora Superba, Flora Magnifica*, and *Camellia*, is not mentioned.

A few minor complaints are that the book would have benefited from maps from critical periods in the history of botanical illustration; it would be nice if the index entries would differentiate between text and illustration references; being discussed; it would be nice if the index entries would benefit from maps from critical periods in the history of botanical illustration; and “The Art of Botanical Illustration” (1994) as an artist of notable achievement for his books *Flora Superba, Flora Magnifica*, and *Camellia*, is not mentioned.

We wish that comparable volumes were available for other regions of the world.

Charlotte A. Tancin and James J. White
Hunt Institute


A brief review of the first volume of B. M. Johnri’s review of significant contributions of Indian botanists over a period of 100 years appeared in *Huntia* 9(1). The introductory pages (through xxxi) of volume 2 are virtually identical to those in the earlier volume, except that there are some slight changes in the lists of authors. Even the six pages of portraits of botanists have been repeated. Johnri’s introductory text for each topic often contains good general information. For example, the first page on gymnosperms informs the reader that gymnosperms are generally evergreen trees, but sometimes a climber or rhizomatous; that they are monoecious or dioecious; and that, with a few exceptions, they bear male and female cones. Examples of plants are cited for each category. Alphabetical lists of references (by author and without title) conclude each chapter. The plant index in each volume is comprehensive.

**This second volume includes 15 chapters:** “Gymnosperms: Morphology, systematics, reproductive biology”; “Gymnosperms: Morphogenetic studies”; “Angiosperms: Floral anatomy”; “Embryology of angiosperms”; “Pollen physiology and pollen-pistil interaction”; “Morphology of pollen (palynology)”; “Cytology and cytogenetics of flowering plants”; “Genetics of wild and cultivated plants”; “Genetic diversity and its role in the improvement of cereals, pulses and oil seeds”; “Physiology, biochemistry and molecular biology”; “Morphogenesis and plant tissue culture”; “Secondary metabolites from plant tissue cultures”; “Cytology and genetics of plant tissue cultures”; “Cytology”; “Ecology”; and “Palaeobotany.”

Johnri’s comment that the book is a must for all science libraries would seem to hold true, especially since these volumes cover almost all areas of botanical study until about 1991.

James J. White
Hunt Institute


*The Great Herbal of Leonhart Fuchs* is dedicated to Fuchs (1501–1566), “who perfected the herbal as a botanical document, at a critical period when modern science was in its infancy,” and to herbal scholars Agnes Arber and Thomas Archibald Sprague. Beyond the facsimile, this extensive study of Fuchs’ life, his work, and the circumstances surrounding production of his herbal is impressive, and the Potomac Unit of the Herb Society of America should be proud to have initiated, sponsored, contributed to and nurtured this project. In the preface we read of the long history of the present work, conceived in 1967 and originally entrusted to Emily Trueblood, who worked on it until 1980 when illness prevented her from completing it. Frederick Meyer, who had been an advisor for the project, then consented to take over responsibility for it. This led to a long period of research, correspondence, consultation, collaboration, and more writing. John Heller was also
The life and work of Fuchs

A few facts here can give the flavor of Fuchs’ biography, but chapter 2, on his life, is recommended for an appreciation of the man. Fuchs was a precocious student and excelled early at school. He received a bachelor of arts degree at age 16, followed after interruptions by a masters degree in liberal arts, and doctoral honors by age 23. As a student he formed a lifelong friendship with fellow student Joachim Camerarius, sharing with him a common interest in humanistic philosophy and natural history. Correspondence between these friends still exists and provides insight into their thinking and their work.

Raised Catholic, Fuchs was exposed to Protestant ideas at school and became a strong supporter of Protestantism. He practiced medicine for awhile and then took a position lecturing on medical subjects. Around this time he married Anna Friedberger, with whom he had ten children and a long and happy relationship. Teaching excited Fuchs, and eventually so did writing. He became a prolific and influential author, publishing one or more books a year on a wide range of medical subjects, and he was something of an authority as well as a figure of controversy. He eschewed astrology and mysticism in the healing arts, and also rejected use of animal parts or tissue in remedies, breaking with the practice and beliefs of many of his predecessors. He opposed Muslim medical teachings then popular in Europe, complaining that Avicenna had copied from the Greek authorities without understanding them. His independent and humanistic stance earned him some enemies, as did his publication of treatises on what he perceived as errors in thought in the contemporary medical establishment.

One area in which he published such corrections involved the identification and use of various medicinal plants, and some of this material was published in Otto Brunfels’ Novi Herbarii in 1531. After this successful collaboration, Fuchs began work on his own herbal, which would become his core life’s work, in addition to his other publications, teaching, and related activities. In 1535, following a complex set of politico-religious struggles in Germany affecting regional loyalties, Fuchs relocated to the university at Tübingen, where he accepted a position and remained for the rest of his life.

He published De Historia Stirpium in 1542 and then worked on an expanded version over the remaining twenty-four years of his life, but he died before this master work could be published. Fortunately, the manuscript, which includes 1,525 illustrations drawn from life — 400 not mentioned by the ancients — survives in the Austrian National Library in Vienna and was known in recent decades as the Codex Vindobonensis Palatinus. The authors of the present work refer to it as the Vienna Codex, and they note that the fact that this much larger, corrected and more complete work was never published is “a loss to botany, herbal medicine, and early science at the high tide of the German Renaissance.”

The authors also suggest that Fuchs’ aggressive and ambitious nature enabled him to accomplish so much through publication and to influence reforms in the medical curriculum that would eventually have effects reaching across Germany. His work was influential and thought-provoking and was seen as authoritative enough that a number of his writings, such as a popular vade mecum on the art of healing published in 1531, went through numerous reprints into the seventeenth century.

De Historia Stirpium

Fuchs was an independent thinker, and this trait enabled him to produce one of the most important herbals of the sixteenth century, a work endowed with two features missing from or less satisfactorily present in similar works: a full complement of illustrations drawn from life and dependably identifiable, and an alphabetically-arranged glossary of botanical terms.

De Historia Stirpium was published in folio, with 896 pages of Latin text and illustrations; it included indices of names in Latin, Greek, German, and those used by druggists and herb-gatherers, as well as a glossary of what Fuchs referred to as difficult terms (vocum difficilium), which Heller called the first published vocabulary of botanical terms. The book also included the unusual additions of portraits of himself and his artists and wood-carver, emphasizing the critical role that the illustrators and illustrations played in his conception of the work. He hoped that his elevation of illustrations to a central role in plant identification would reform the German pharmacopoeia. With few exceptions, the illustrations are original with this work.

While the illustrations are of very high quality almost unparalleled in their time, the authors of the present work are careful in their critical assessment. They note that in the mid-sixteenth century sexuality in plants was unknown and flower structure was not understood, and thus the flower details in these illustrations are not carefully delineated. However, the overall detail and level of accuracy are of high quality, each illustration showing roots, stems, leaves, flowers and fruits as appropriate. The authors also observed that the quality of the illustrations, good to begin with, improved over the 10 years in which the herbal was produced.

The plan for the work was largely original and required a greater scale than that found in works of Fuchs’ immediate predecessors. The text included much material from venerable ancient writers. Fuchs was a physician, not a
botanist, and so he aimed not to list all plants known, but only (with a few exotic exceptions) those with known medicinal properties, in accordance with a long tradition that placed botany as a subspecialty of herbal medicine. Although not a botanist, Fuchs had an intuitive love of plants and a belief that they provided humans with materia medica. He emphasized in both his teaching and his writing the importance of plants and the necessity of being able to identify and use them properly. To this end, he provided in his De Historia Stirpium 511 plant illustrations that were identifiable to species (with a few exceptions) and true to nature. For Fuchs, the provision of these plant portraits obviated the need for lengthy verbal descriptions and made his herbal an improved and more precise tool for those interested in medicinal plants.

The number of copies produced in the original press run of De Historia Stirpium is unknown. The work was published in both colored and uncolored versions, and of course many copies were colored later by subsequent owners or sellers. In 1543 an abridged folio edition was published in German as New Kreuterbuch, intended for the German general public unable to read Latin. In Fuchs’ lifetime, De Historia Stirpium and various abridged editions went through 39 imprints in 5 languages. He retained controlling rights through a privilege for 10 years, after which the work was published in numerous formats, with or without illustrations, with or without text, and often in deteriorating quality over time (some with woodcuts as crude as those commonly seen in medieval printed herbals). After Fuchs’ death, it was published in over 20 additional imprints, but the original Latin edition of 1542 was never reprinted until the production of the current facsimile.

The authors of the current work link Fuchs’ importance to that of his countrymen, Hieronymus Bock and Otto Brunfels. As Renaissance humanists, these men broke with the crude illustrations of their medieval predecessors and with the ambiguity inherent in those earlier works. The authors assert that Fuchs’ herbal is part of the beginnings of modern taxonomic botany, largely due to the woodcuts, and that his herbal changed the course of botanical iconography and plant identification. Fuchs’ insistence on accurate pictures, solid and basic plant information, and no astrology, mysticism, or other extraneous influences, established a professionalism in this work that, coupled with his influential reputation as a medical writer, led to the success of his herbal in his lifetime, and helped to set a new standard for herbals. He cites collecting locales for some of his plants, and his work documents wild and cultivated medicinal plants of his time. He had a strong philological interest in plant names, and his documentation of synonymy provides valuable insights into late-fifteenth-century, medieval and ancient botany. De Historia Stirpium is a major work of the German Renaissance and a landmark publication in the history of botany and botanical iconography.

The Great Herbal of Leonhart Fuchs

The uncolored facsimile of De Historia Stirpium was produced from a hand-colored copy of the herbal held in the library of the Hunt Institute for Botanical Documentation at Carnegie Mellon University. The original pages are reproduced at two-thirds their actual size.

The commentary in volume one is presented in a clear and interesting manner. The main chapters cover the herbal tradition up until 1542, Fuchs’ biography, background for the De Historia Stirpium, background on and later uses of the pear wood woodblocks (which were also used in later works by Hieronymus Bock, Rembert Dodoens, Valerius Cordus, William Turner, Henry Lyte and others), and Fuchs’ work on the Vienna Codex. A substantial set of appendices examine the dedicatory epistle, the glossary of terms, Fuchs’ funeral oration, and manuscripts of Fuchs and his correspondents and survivors. Appendices also provide a systematic summary of the plants listed in the 1542 edition, translations of several chapters from the Latin, a chronological list of Fuchs’ published and cognate works, an index of printers and publishers, a few words about Fuchisia and its dedication to Fuchs, information on Fuchs’ literary sources, a list of his adversaries and the basis of the adversarial relationships, and finally a bibliography, general index and index of scientific names. Enhancing the appendices are numerous lists and tables elucidating various aspects of Fuchs’ works, such as known collecting sites for a number of the plants, and non-European introductions and garden domesticates.

The authors of The Great Herbal of Leonhart Fuchs state in the introduction, “Our aim has been to bring this important sixteenth-century book on plants within reach of the public and to evaluate its importance in the history of science, botany, and medicine.” They certainly have accomplished this. Renaissance herbals in their original form are rare and fairly inaccessible. A more lavishly produced facsimile would have been considerably more expensive, and so would be purchased by fewer libraries and individuals. The current publication provides a relatively affordable facsimile reproduction of the original De Historia Stirpium (never before reprinted in the original edition), along with a valuable commentary volume. This work is highly recommended to all with an interest in botany, medical botany, botanical illustration, herbals, and the history of a number of subjects, including botany, medicine, science, and the publication of books in the Renaissance. It would be a valuable addition to libraries whose collections cover any of those areas.

The facsimile alone would be worthwhile, had that been all that was published. The commentary volume alone would contribute substantially to scholarship and would create a demand for a facsimile. Together, these volumes present a high level of mid-sixteenth and late twentieth-century scholarship. They are a fitting tribute to Leonhart Fuchs.
Note

A minor correction must be made to the note at the beginning of the bibliography, concerning the reference source used for the botanical serial titles. The authors cited it as B-P-H/S Botanico-Periodicum-Huntianum/ Supplementum, ed. G. D. R. Bridson and Elizabeth R. Smith (Pittsburgh: Hunt Institute for Botanical Documentation, Carnegie-Mellon University, 1969; reprint, Lawrence, Kans.: Allen Press, 1991.)


Charlotte A. Tancin
Hunt Institute


In 1602 doctor Anselm de Boodt wrote Clusius in lieu of a winter garden for teaching works. in 1602 artist Jacques de Gheyn II appraised the Clusius, originally hired to perform them. after Clutius’ death in 1598 artist Jacques de Gheyn II appraised the Clutius was hired to teach and to oversee the garden, duties neglected by Clutius. However, there is a connection — Clutius was actually they are confusing two separate publications. The first is: Lawrence, George H. M. [et al.]. B-P-H, Botanico-Periodicum-Huntianum. Pittsburgh, Pa.: Hunt Botanical Library, 1968. The second is a supplement to the first: Bridson, Gavin D. R. and Elizabeth R. Smith. B-P-H/S. Botanico-Periodicum-Huntianum/ Supplementum. Pittsburgh, Pa.: Hunt Institute for Botanical Documentation, Carnegie Mellon University, 1991. This latter publication was printed by Allen Press in Lawrence, Kansas.

Charlotte A. Tancin
Hunt Institute


The publisher notes that this compendium is the first to present keys to all of the plant families in Siberia and that the Flora of Siberia will be published in English in fourteen volumes; thirteen volumes of the Russian edition have been published to date, and the fourteenth is in preparation. The Flora of Siberia is intended for botanists, ecologists, biologists, geographers, agricultural and forestry workers, resource specialists, and regional specialists in natural conservation. In the preface, L. I. Malschev explains that data collection on the flora of Siberia has been going on for nearly a century, but publication was intermittent until the establishment of the Flora Sibir program. The arrangement of material essentially follows the format of Flora SSSR, but using the Englerian system. The major task of the compilers has been taxonomic correlation and revision of data on the composition of species and subspecies of plants of Siberia. The flora covers only “natural flora, including well-naturalized feral, cultivated and introduced plants,” and the overall work is described as being “not so much floristic as taxonomic and chorological.” Contents also include references, keys to families, maps of plant distribution, and an index of Latin names of plants. Having

Reviews and Announcements

Announcements


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this flora available in English makes it accessible to a much wider audience and will further the aims of international scientific study, cooperation and collaboration.

Charlotte A. Tancin
Hunt Institute


[Note: Available from Dennis Kruska, 4065 Woodman Canyon, Sherman Oaks, California 91423.]

Part biography, part botanical cultural history, part epistolary memorial, Kruska’s book is, as it claims, a celebration. Clifton Smith was a botanist, historian, collector, and by all accounts a gentleman. Kruska’s *Celebration* begins with a short biography and includes black and white photographs throughout, dating back to Smith’s infancy.

The author has deftly created in this work a text with the personal feel of an oral history; Clifton Smith’s own voice comes through clearly. The “Reminiscences” section consists of anecdotal letters from many of Smith’s admirers, several of which quote from letters and postcards they received from Smith. This section, for all its poignancy, is also bound to bring laughs from the reader with its stories of Smith’s innovative Jeep repairs, mice in a Santa Cruz bunkhouse, even Smith’s chosen epitaph.

The book wraps up with a reprint of one of Smith’s earliest published articles, a bibliography of articles by and about Smith, and a chronology of his life. With its array of formats, personal anecdotes, and ample photographs, this text presents readers with a well-rounded slice of botanical community in the story of this Renaissance man. If ever there were an intimate portrait of a man, this is it.

Angela L. Todd
Hunt Institute


[Note: Although this work was published in 1994, we only acquired it recently and wanted to bring it to the attention of our readers. Contact your favorite bookseller or the publisher for more information. The publisher’s address is Villegas Editores, Avenida 82, No. 11-50, Interior 3, Bogota, Columbia. Fax: 57-1-616-0020.]

This interesting and visually exciting two-volume set celebrates Alexander von Humboldt’s travels in Colombia and Venezuela, combining his writings with stunningly beautiful photographs in order to revisit sites from his travels. Also added are reproductions of views and landscapes produced in earlier times — allowing the reader to view these locales from the perspectives of more than one time period — along with photos of the local flora and fauna and drawings and photos of native people. The juxtaposition of images from past and modern times combined with Humboldt’s own words provide the reader with a breathtaking “you are there, then and now” experience that is really rather exhilarating.

Volume 1 concentrates on Venezuela, and volume 2 on Colombia. The routes discussed in each volume are traced on a map following the title page in each volume. The text selections are well-matched with the illustrative material. Inexplicably, there are typographical errors in some of the preliminary essays, but they don’t appear to have proliferated in the main text. This is a delightful publication and worth the attention of anyone with an interest in Humboldt, the locations of his travels, or the history of natural history and exploration.

Charlotte A. Tancin
Hunt Institute