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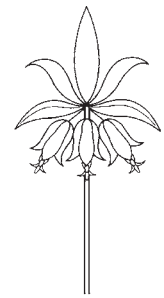
A Journal of Botanical History



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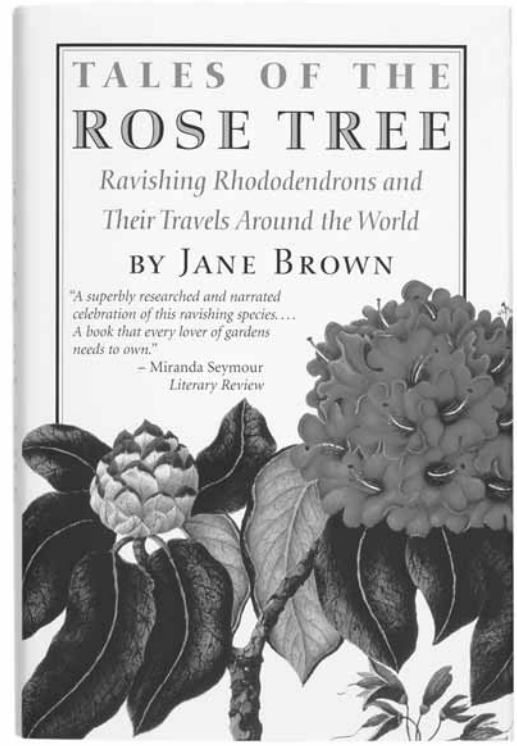
Book Reviews and Announcements

Brown, Jane. *Tales of the Rose Tree: Ravishing Rhododendrons and Their Travels Around the World.* Boston: David R. Godine, 2006. xi, 308 pp., 24 pp. of color plates; ports., maps, plans. $35.00. ISBN 1-56792-312-7.

The month of May brings with it a multitude of extravagant blooms, and some of the most spectacular are those of the rhododendron. British garden writer Jane Brown, a self described *rhododendronophile*, takes us on a global journey through the history of this fascinating genus. Her extensive research is presented in an informal and entertaining style and is filled with tales of well- and little-known plant explorers, taxonomists, horticulturists, landscape designers and garden enthusiasts who were passionate about this plant. Although for less than 300 years a part of European garden history, the native rhododendron has survived for 50 million years in its native habitats. In recent years pollen has even been found in Austria and Ireland leading botanists to "confirm that rhododendrons were native to most of central and western Europe during interglacial periods, but only re-colonized in pockets." Adored by some and reviled by others, the rhododendron has an intriguing history. Brown describes the centuries of its collection from natural habitats in the Himalayas, Japan, North America and the tropics; their transplantation into European gardens; their hybridization to improve their hardiness, variety of color, and scent; and their eventual development as a common garden plant in many parts of the world.



Asian species and their descendants make up most of our garden rhododendrons, and half of the more than 1,000 known species are from China. Although the plant was not discovered by Europeans until the 17th century, references to it have appeared in ancient Chinese herbals and the literature and garden history of the Ming Dynasty (1368–1644). In 1736 the American naturalist John Bartram (1699–1777) found *Rhododendron maximum* in mountains near the Schuylkill River. He sent seeds and cuttings of this and many other plants to the London merchant Peter Collinson (1694–1768), who sold them to nurserymen and to dukes and lords for their pleasure gardens. Bartram's son William (1739–1823) described in his *Travels thru Carolina, Georgia and Florida* (1791) Indian guides taking him through dense *slicks* or *hells* of rhododendrons in the Appalachian uplands. Sadly many of these virgin forests were decimated from lumbering in the years following the Civil War, contributing to the loss of many native species. Rhododendrons in India were commonly used for temple decoration and medicinal purposes. They were collected for the Calcutta Botanic Garden headed by William Roxburgh (1751–1815), the Scottish economic botanist and authority on northern Indian plants, and seeds of many Himalayan species were sent to Edinburgh. Joseph Hooker (1817–1911) explored and collected seeds and seedlings in China and the Himalayas, publishing *Rhododendron of Sikkim-Himalya* in 1849 with spectacular illustrations by Walter Hood Fitch. Seeds of 43 different Himalayan species were sent to the Royal Botanic Gardens, Kew, for propagation and distribution to supporters of the museum throughout Europe, America, New Zealand and Australia. In correspondence with Charles Darwin, Joseph Hooker considered Sikkim an "ecological grail ... that held the key to the flora of the world." Harvard professor and botanist Asa Gray (1810–1888), who had received seeds from Hooker, was the first to make the connection between the similarities of the flora of eastern Asia and eastern North America. Harvard's Arnold Arboretum Director Charles Sprague Sargent (1841–1927) was instrumental in forging the garden's mission to reunite the plants of America with their eastern counterparts

from Japan and China, including many rhododendrons, creating a collection that contributed to the success of this genus in the 20th century.

Wealthy men with their private garden estates in the British Isles were a major influence in the cultivation of the rhododendron, founding the Rhododendron Society in 1916 and recording and circulating information about the progress of this genus in their gardens. Eventually including professional members from Kew, Glasnevin and Edinburgh Botanics, the society also financed the Scottish plant explorer George Forrest's (1873–1932) third of seven expeditions to China (over which time he brought back 309 species of rhododendron). In 1927 it became the Rhododendron Association with a mission to "encourage, improve and extend the study and cultivation of rhododendrons by means of publications, [and] the holding of shows," and certainly to attract a broader range of members. Garden designers such as William Robinson, Gertrude Jeckyll, and Frederick Law Olmstead saw the value of using rhododendrons in public and private spaces. Gardening also became popular with the rising middle class, and hybrids were available in nurseries in many parts of England and America. By the 1930s Britain had become the rhododendron capital of the world, exporting many hybrids to America. Today the Royal Horticultural Society produces the Rhododendron Handbook and a register to record hybrids and their pedigrees. The American Rhododendron Society was formed in Seattle in 1944, but interest waned when plants were not available from overseas during World War II. Re-founded in the 1960s, the society now has 70 chapters and continues with its strong belief in hybridizing (the United States and New Zealand are currently in the forefront of creating new hybrids).

In 1814 Edinburgh Botanics recorded the first hybrid created by crossing the Turkish *R. ponticum* and the North American *R. periclymenoides*. *R. ponticum* has been used for over a third of hybrids. Though threatened in its native habitat, it has grown aggressively in England. In recent years it has become "demonized" by the public and ecologists in that country, but even so private and public gardens featuring the various species still abound. The author makes the point that whether from North America, Turkey or China this genus has survived for millennia and has adapted to all sorts of conditions, so when these different species have been brought together by hybridization we should not be surprised when they become such tough survivors. The author reminds us that the genus is in need of conservation in many of its native habitats. Expanding deforestation in China has led conservationists to record existing native species and to ban the collection of their plants and seeds.

There also is a small section of the book describing the tropical *vireyas,* which includes about 320 species. First collected in the Malay Peninsula in the 1840s, they are now popularly grown in small gardens in America and Australia. For *rhododendronophiles* the author has included a map of rhododendron gardens in Cornwall that are open to the public, and a list of notable gardens throughout the United States. It is only possible to briefly touch on a small selection of the many dynamic personalities mentioned in this book who facilitated the popularity of the rhododendron. *Tales of the Rose Tree* not only gives one a new respect and understanding of the genus but also inspires one to investigate in more detail the individuals and their roles in botanical and garden history.

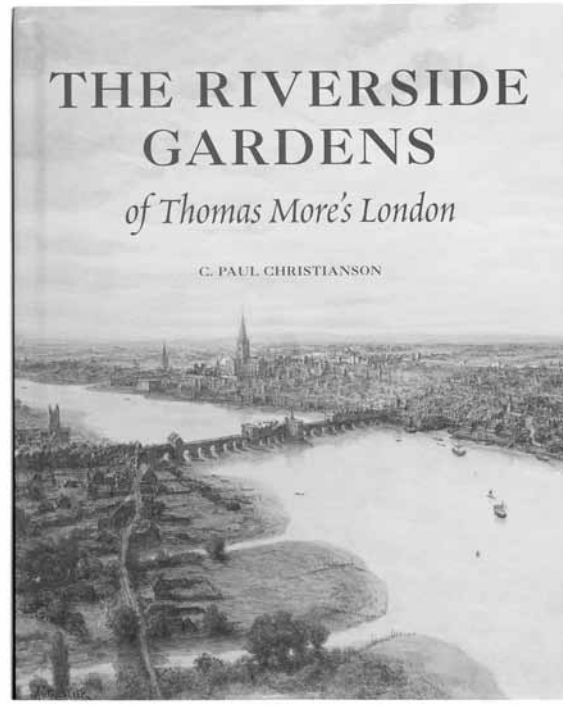
—Lugene Bruno, Assistant Curator of Art

Christianson, C. Paul. *The Riverside Gardens of Thomas More's London*. New Haven and London: Published for The Paul Mellon Centre for Studies in British Art by Yale University Press, 2005. vii, [1], 232 p., illus., ports., plans, maps. $45.00. ISBN 0-300-10905-9 (hard cover).

In *The Riverside Gardens of Thomas More's London*, C. Paul Christianson historically recreates and analyzes eight gardens that once flourished along the south bank of the Thames in early Tudor London, selected because of their associations with Thomas More (1478–1535), English lawyer, author, statesman, and Catholic martyr. Christianson asks "whether garden history of More's era can in its own right serve other sorts of enquiry, shedding additional light on the transitional world of England, in particular of London, during the late fifteenth and early sixteenth centuries?" In pursuing answers, he examines these chosen gardens in the context of political and social realities of More's lifetime. The cultural changes taking place in the Tudor era extended to a transition in horticulture and gardens, moving them from medieval toward modern. Christianson's studies encompass the history of the eight gardens and their owners' garden interests, the economic opportunities available to their gardeners, the community of garden workers, tools and how they were used to implement new garden ideas, the evolution of garden design, and personal and social strategies for the use of these uniquely sited garden spaces. He also examines More's life and outlook as it was influenced by gardens as settings for aesthetic pleasure, for inventive and witty social discourse with visitors, for personal retreat, and as vehicles for competition among the wealthy and the powerful.

The eight gardens are an interesting mix of types. The first garden examined is that of London Bridge House in Southwark, which is unusually well documented because of the decision of the clerks in 1461 to include in the running accounts the names of all those working in the garden, a practice that would continue until the early years of Queen Elizabeth I's reign. Christianson next looks at the several gardens within the precincts of the Tower of London, with its garden spaces reserved for royal use from at least 1262 to 1660.

Winchester Palace included the garden of the Bishop of Winchester, whose immense wealth lay in landholdings scattered across his diocese. The first records of the original Winchester manor date from the 1140s, the property originally extending over 70 acres. By the late 13th century, the bishops' riverside palace had changed from a mansion with farmyard to a palatial residence and administrative center, which it would remain for the next 350–400 years. The orchard and pleasure garden were by the 15th century increasingly the site of social events.



Yale University Press

Further up the Thames in Westminster were York Place and Whitehall Palace. The gardens date from 1514 when Thomas Wolsey was made Archbishop of York, and over the next 15 years he enlarged the property to what became perhaps the finest town house in the London area, with garden spaces being continuously developed. Later Henry VIII acquired the property and turned it into Whitehall Palace where he would undertake one of his grandest building schemes, including richly designed gardens and orchards.

Lambeth Palace was identified with the long line of Canterbury archbishops for more than 900 years. It was a manor house and ecclesiastical residence comparable to Winchester Palace, at one point having a household staff of 200. In comparison, More's Chelsea Manor included gardens that rivaled the others in terms of size and design, but that could be considered a special case, the personal achievement of a private, highly privileged London citizen, and as such became famous.

Another example showing how far back in history some of these properties were documented and continuously held can be seen in Fulham Palace, the palace of the Bishop of London. When the land for the manor of Winchester was purchased in the 1140s, Fulham had already served as a residence for the head of the Church in London for more than 400 years. The last garden to be discussed is that at Hampton Court, possibly the most important garden venture in early Tudor history. Hampton began as a small, moated manor house and was transformed by Cardinal Thomas Wolsey into "the grandest new palace of the day," the gardens later remade for Henry VIII's large-scale garden projects.

The second half of the book explores a number of garden history themes in depth. In "The London Gardeners," Christianson writes about what can be learned about these gardeners from surviving documentation that ranges from fragmentary to relatively extensive. Many of the gardeners who created and maintained these "places of immense privilege, whether royal, ecclesiastic, civic or private" are listed by Christianson in the appendices. In "Tools of the Gardeners' Trade," he notes appreciatively how examining surviving tools can help to "overcome the barriers of time." A well-known 1598 drawing by Hans Bol and engraved by A. Collaert is reproduced in the book, showing a walled garden being tended by gardeners and enjoyed by the owners who walk among the raised beds. Referring to that drawing as well as to the gardens under discussion, Christianson raises three questions: (1) how was a space like this created and what tools were needed for the initial groundwork; (2) what equipment was used in tending such a garden in order to keep its appearance intact; and (3) how were garden objects such as pots used both to decorate and also to keep plants at their peak during the growing season. He used surviving riverside garden records, surviving late-medieval tools, and published and unpublished contemporary images to try to answer these questions.

In "Garden Design and Innovation," he asks about the sources of ideas for developing house and grounds, citing not only other peoples' properties but also garden staff expertise as major sources. This chapter includes interesting technical discussions of means used at the time for laying out formal beds with right-angled corners and straight boundaries, and for marking out knot-garden designs. In "Garden Pride and Pleasure," the functions of the eight gardens are discussed. Christianson writes of these gardens as places for human dialogue, political discussion, and the play of ideas in an ongoing contest; as places of entertainment, places for private meetings, and grounds in which to walk and reflect.

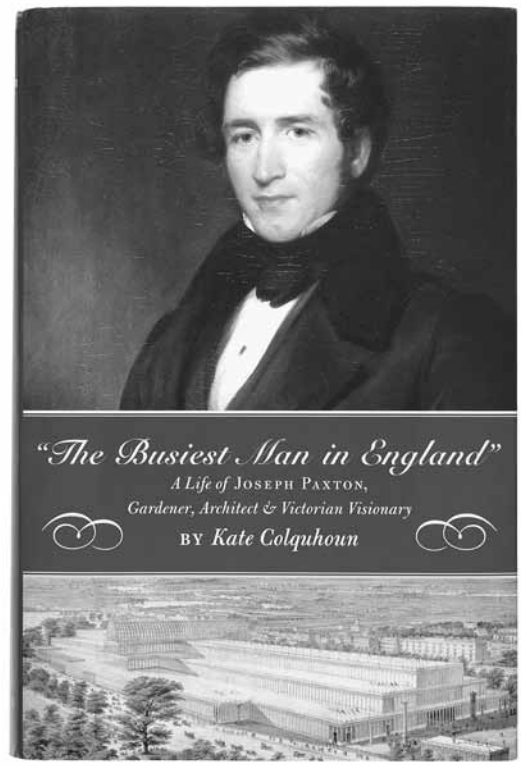
The text ends with an epilogue on the uses of garden history, and reflections on Thomas More and what can be said about him from the study of his garden. Christianson notes how More as a private citizen was able to compete among the powerful of Church and State and in a society marked by such established privilege. Eventually More became separated from his fellow garden owners when he resigned his office as Chancellor in 1532 and closed his house and garden. At the end of his life, More's garden became a place of withdrawal and later a "personal Gethsemane and *memento mori*."

The Riverside Gardens of Thomas More's London is a nicely researched and written study of garden history and what can be learned from it, using gardens in More's environs as case studies. The book is well illustrated with maps, paintings, drawings, archival manuscripts, garden plans, and reconstruction drawings, and includes a dozen botanical images by George Olson, who also drew some of the garden maps. Supporting material includes notes, appendices listing gardeners with their dates and job titles, a list of the botanical illustrations and an index.

—Charlotte Tancin, Librarian

Colquhoun, Kate. *"The Busiest Man in England:" A Life of Joseph Paxton, Gardener, Architect & Victorian Visionary."* First U.S. edition. Boston: David R. Godine, 2006, 2003. xvi, 303 pp., [16] pp. of color plates; illus., ports., map, plans. $35.00. ISBN 1-56792-301-1 (hard cover).

> "Given that our discipline has moved away from treating science as a sequential accumulation of accomplishments and attributions of priority, associated with individual names, we may well ask why historians of science should be focusing on the lives of individual scientists. It is not hard to imagine biographies of great scientists feeding back into the progressivist grand narratives of old. . . . But thinking about the place of biography in the discipline should lead us to think about the relation between the lives of individuals and historical arguments about culture, politics, intellectual movements, and so on. . . . If a biography is also to be a work of history of science, it must analyze ideas, intellectual sources, training, controversies, calculations, experiments, and so on and put these elements into the life" (Mary Terrall, "Biography as Cultural History of Science," *Isis,* 2006, 97(2): 307, 309).



Colquhoun's biography of Joseph Paxton (1803–1865) accomplishes what Terrall lists as the jobs of biography; it is also an interesting and at times pulse-quickening

read. This academic biography places Paxton in contexts of big histories — economic, political, industrial and educational trajectories, and the growth of the mounting public parks movement, for instance. But at the same time, Colquhoun includes Paxton's personal details and the park details as seen by a garden historian throughout the text.

Colquhoun moves easily between Paxton and a larger history of horticulture, tracing a revolution led by the Horticultural Society in London, in which both plants and publications increased rapidly, along with increases in domestic gardeners and the commercializing of professional nurseries. Horticulture was "flourishing as middle classes expanded." The Horticultural Society involved itself in hothouse design, and 1822 saw its first experimental garden. In 1821 the sixth Duke of Devonshire leased much of his land at Chiswick House to the Horticultural Society. In 1823 Paxton became a garden laborer for the Horticultural Society by falsifying his age and, surrounded by rare and curious specimens, used their library for "a rigorous regime of self-education." By 1826 Paxton had been "offered the position of superintendent of the gardens at Chatsworth … head gardener at one of the grandest estates in England and for one of the richest aristocrats in the land, the 6th Duke of Devonshire." At Chatsworth, he met Sarah Bown (1800–1871), the housekeeper's niece; they were married in 1827 and moved to a cottage at the edge of Chatsworth's 12-acre kitchen garden. Constant letters between Paxton and his wife provide a wealth of personal and professional details. Paxton's attention turned to the kitchen garden and to glasshouses, where he preferred wooden structures over iron and experimented with design and structure. Around 1824 the introduction of aspidistra from China, fuchsia from Mexico and verbena, petunia, and salvia from South America increased interest in exotics and led to the need for better greenhouses and stoves, and glasshouse design figured in much horticultural discourse at the time.

The history of horticulture overlaps with that of publication, and Colquhoun attends Paxton's publication efforts, contextualizing them in a larger history of horticultural publication. Colquhoun writes that "plantsmen … were already well served by the early *Botanical Magazine* and its rival, the *Botanical Register.* The Horticultural Society issued its *Transactions* and nurseries their catalogues. … All these contained color plates of foreign varieties, but they were expensive, and hardly suited to the 'practical' gardener." In 1831 Paxton launched a new gardening publication — *Horticultural Register and General Magazine*, jointly edited with Joseph Harrison (d. 1858?). Publishing the *Horticultural Register* "brought Paxton head to head with [John] Loudon (1783–1843), who realized that his publication [*Gardener's Magazine*] was, for the first time, facing serious competition. … The next issue of *Gardener's Magazine* carried a stinging criticism of Chatsworth. …" Paxton, in turn, "questioned Loudon's taste and took issue with him for failing to even enter the house, from where the gardens should be viewed. He [answered one of Loudon's criticisms by pointing] out that, while at least two of the glasshouses in the kitchen garden were heated by hot water, the method was generally uneconomical in the severe winters of Derbyshire, where fires warmed more consistently and needed less attention." Though matters did get heated, "on the whole the magazines continued in successful parallel and later the two men would come to a rapprochement." In 1834 Paxton relinquished editorship of *Horticultural Register,* which continued publication until the end of 1836, and launched *Magazine of Botany and Register of Flowering Plants*, with four colored engravings of the most prized new plants, as a cheaper alternative to *Botanical Register* and "promised to break away from the elitism of most journals by using the most plain and intelligible language possible." The magazine ran until 1849. Paxton wrote a pocket dictionary of plants and in 1840 began *Gardener's Chronicle* with John Lindley (1799–1865), the first weekly horticultural journal. Their first edition came out in January 1841. In 1846 Paxton even became involved in plans for a national, daily liberal paper out of London.

Paxton remained a hands-on plantsman in addition to publisher. In 1835 he built the Duke an arboretum, which formed the largest collection of herbaceous plants in Europe planted according to their scientific orders, and began to study orchids, brokering the sale of John Huntley's orchid collection to the Duke, with whom Paxton developed an unusually close relationship. When the Duke sent John Gibson (1815–1875) to Calcutta in 1836, Paxton designed a great glasshouse to hold all the treasures Gibson would send back. Gibson sent boatloads of rhododendrons, primula, and orchids — including the much-coveted *Amherstia*, which when it arrived, Paxton wrote to Sarah, the Duke "desired me to sit down and lavish my love on the tree."

In 1838 the Duke sent two men from Chatsworth on a Hudson's Bay Company journey overland to northwestern America. The Duke meanwhile planned a model village on his Edensor estate. Paxton traveled with the Duke to Italy in November of that year, on to Greece in March, further to Constantinople, then left the party to sail home via Africa, Gibraltar, Lisbon, and Paris in April, then on to London in May. Sarah was resigned, if not unhappy. As Colquhoun succinctly writes, "The Duke would always win the war for Paxton's attention." Upon his return, Paxton got word that the Chatsworth gardeners in America had died on their journey. Upon full realization of the Duke's (inherited) debts, Paxton helped him decide to sell land at Londesborough and Baldersby to clear them. Paxton was busy, and "All

the while, the Duke, still unwell, dragged at Paxton's coattails. He fussed so insistently that Paxton only ever managed to achieve half of what he wanted to complete. Irritating it may have been, but this was the man to whom he owed everything. He could be refused nothing."

Over the next few years, Paxton designed Prince's Park, was commissioned to design Birkenhead (opened 1847), took on additional duties as an estate agent at the Duke's Bolton Abbey, and was commissioned to build Coventry Cemetery and also an estate house and gardens for a Quaker friend. Paxton was increasingly involved in the railway business. In 1848 the railway bubble burst, but a rail line to Chatsworth arranged by Paxton meant that the public began to flock to Chatsworth. A large water lily blossomed in the Duke's largest greenhouse, attracting even more visitors, and Paxton even placed his daughter Annie on one of the water lily's large leaves to show its strength.

In 1850 plans were laid for the Great Exhibition and the fifteen thousand exhibits from England and around the world that would testify to man's ingenuity. Paxton was invited, late in the game, to draw plans for a building to house the exhibition and won. To win support for his design he published it, illustrated, in the newspaper—*after* getting a patent on its ridged roof (inspired by the water lily leaf) that would cover 21 acres. His Crystal Palace design was officially accepted with just 22 weeks to complete it. The exhibition was opened 1 May by Queen Victoria, walking amongst her subjects for the first time, to great success. More commissions came after the success of the Crystal Palace, after which Paxton was knighted by the Queen. The Royal Commissioners Committee decided not to keep the Crystal Palace in Hyde Park. It was secretly sold off for £70,000 to the Crystal Palace Company to be moved to Norwood. Paxton remained involved and even leased Rockhill estate at the Crystal Palace's new location—and away from Sarah. In 1853 twelve men were killed working on the new Crystal Palace. Consequently, Crystal Palace Company switched engineers mid-build. Colquhoun rightly points out that the Crystal Palace signified a "revolution in leisure"—outside of the pub or church.

Sarah's life became emptier as Paxton's became fuller—he mostly lived at his Rockhill estate, one daughter died, two other daughters were married off. Paxton was sent for by the Duke, who had invited himself to stay at Rockhill, ten times a day. In January 1858 the Duke died just as *his* changes to Rockhill were being finished. His will revealed a sorry state of economic affairs, and Paxton retired before the seventh Duke could let him go. Sarah had done payroll and generally run Paxton's business at Chatsworth in his absence all these years but was happy to have some leisure. Paxton went into the business of portable glasshouses, or "Hothouses for the Million," worked in Parliament on public sewage problems, and criticized Kew for becoming a flower garden rather than a horticultural institution. Paxton died 8 June 1865 of heart and liver failure. The Crystal Palace burned to the ground in November 1936 and remains undeveloped.

The text is supplemented by an appendix, Paxton's legacies, notes, a note on currency, acknowledgments, select bibliography, picture credits, and index. I recommend this book for Victorianists and horticulturalists alike. Readers will experience an adrenaline increase during Colquhoun's accounts of the weather's sometimes devastating effects on Paxton's glasshouses and of the details on Paxton's bid for Parliament.

—Angela L. Todd, Archivist

Meier, Ursula H. *Hawai'i's Pioneer Botanist Dr. William Hillebrand: His Life & Letters.* Honolulu: Bishop Museum Press, 2005. x, 133 pp., illus., ports. $14.95. ISBN 1-58178-047-8 (hard cover).

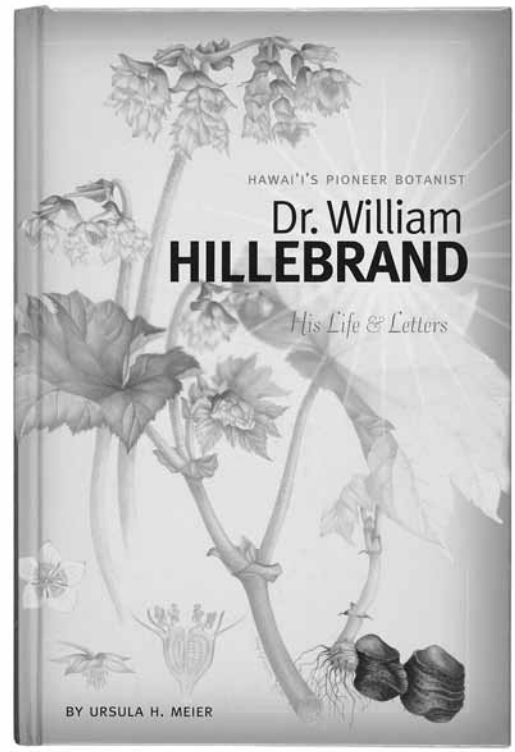
> Among the few worldly goods the emigrants carried onboard was the Portuguese guitar, *braguinha*. Soon it would receive the Hawaiian name *ukulele* and become forever synonymous with Hawaiian music worldwide.

A botanist, beekeeper, doctor, and leprosy and contagion expert, William Hillebrand (1821–1886) also helped Hawaii's government deal with its labor shortage during the increase in its sugar industry by arranging for emigration of the unemployed during his 1865 travels, insisting on extra provisions and limited crowding for emigrants' ships. Hillebrand's status as a Renaissance man and his peripatetic lifestyle lend themselves to the heavily anecdotal cultural history format of this biography. As William was his first surviving child, Hillebrand's father vowed his son would be a physician in the German state of Prussia. And indeed, Hillebrand signed on as ship's doctor in exchange for free passage to Australia from Hamburg in 1848. After six months in Australia, Hillebrand sailed to Manila, Philippines. After six months there, he sailed to San Francisco, where it

took four weeks of waiting to get a boat to the Sandwich Islands, Hawaii—his pulmonary illness worsening all the while. He consulted with an American doctor in Hawaii, who offered convalescence at his home. Hillebrand was diligently cared for by the doctor's wife and his daughter, Anna Post Newcomb, whom he married in 1852. Their first son, William Francis, was born in 1853.

Hillebrand promoted the ideas of a local Hawaiian botanical garden, of lining Honolulu's main streets with shade trees, and of organized seed exchange, even convincing Queen Emma to carry plants for him on her travels. Hillebrand was as much a community activist as a botanist or physician, and his causes reveal the intersections of his multiple interests. His 1856 "Labor and population" speech at the sixth meeting of the Royal Hawaii Agricultural Society noted the decline of the native population because of disease and advocated giving natives land to homestead and to increase their family ties. Hillebrand founded Honolulu's first charity hospital for natives, where natives were cared for by their own relatives for the hospital's first 26 years. He also successfully advocated for compulsory quarantine of incoming ships until they were checked by a doctor.

In 1865 Hillebrand traveled to China, Singapore, Java, Ceylon, Madras, Calcutta, Mauritius, Philippines, and Japan to report on Oriental leprosy, to bring back plants and animals, and to send agricultural laborers back to Hawaii. He traveled with his wife and son, who took care of the animals collected. Hillebrand's poor health cut the trip short, and he returned to Hawaii after just two years' journey. The family stopped in Java on their way home, loaded up with camphor, cinnamon, jackfruit, litchi, eugenias, banyans, eight filled Wardian cases, shoots of the red cinchona plant, and a pair of deer. Upon their return Anna's constant seasickness was rediagnosed as morning sickness, and a second son, Henry, was born in 1865. John Lydgate, a friend of William Francis', loved botanizing with Hillebrand while "Willie" never warmed to it. The Hillebrands maintained an active, educated social life on the islands, but Anna never really recovered from Harry's birth and developed a suspicious cough. In 1871 they prepared to go back to Prussia via San Francisco, with a stopover to visit Asa Gray at Harvard, where they stayed for one year, ending in 1872. Moving to Prussia was a hard transition for Anna, who now was expected to socialize with more traditional German hausfraus. Hillebrand's tuberculosis flared up, and they moved to the island of Madeira off the coast of Morocco, where he again shipped some of the legions of unemployed workers to Hawaii. In 1880

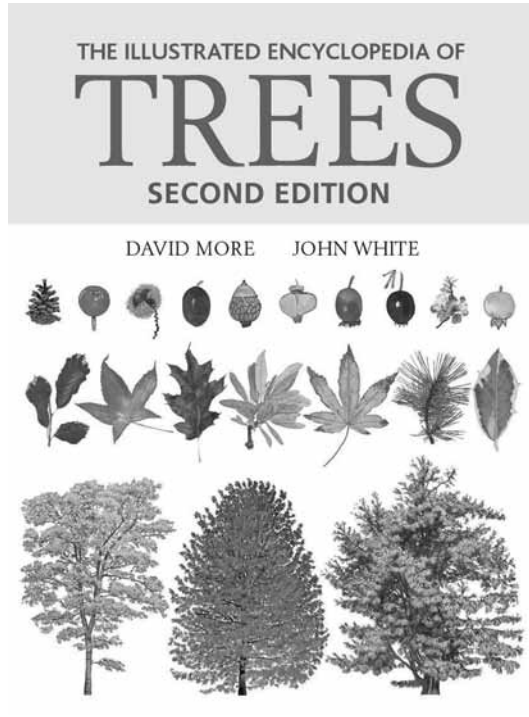


they moved to Tenerife. After 18 months they moved to Switzerland for Anna's health where they remained from 1881 to 1884. In 1885 they moved back to Heidelberg, and in the late fall of 1885 Anna and Harry moved to the United States to be with William Francis, a government geologist. The family patriarch planned to join them by summer's end of 1886 after completing his *Flora of the Hawaiian Islands* (1888), but he died in Heidelberg in July.

The book includes photos of not only principals but also laborers. The timeline at the front gives a concise look at the Hillebrands' complicated international travels. It is so enjoyable that it's easy to overlook the printing glitch on pages 18–19 and the rare lapse into such cute syntax as the "seeds of his lifelong passion for botany began to germinate." And for readers interested in the close details of plant discovery and exchange, the biography is followed by transcriptions of Hillebrand's letters to Kew Gardens, 1857–1881.

—Angela L. Todd, Archivist

More, David and John White. *The Illustrated Encyclopedia of Trees*. Second edition. Portland, Oregon: Timber Press, 2005. 832 pp., color illus. $79.95. ISBN 0-88192-751-1 (hardcover).



This encyclopedia is clearly not a tree flora or a monograph, but something else, something special. Within the 832 pages, some 1,890 species and cultivars are meticulously painted in nearly 4,800 inset illustrations on a white background. Tree silhouettes, leaves, bark, flowers, fruits, cones and twigs are provided for those taxa growing in the woods, gardens and arboreta (public and private) of the British Isles and Ireland and, additionally, France, Germany and the Low Countries. Central to this work is that it began as the personal project of a single artist, David More, who painted all of the illustrations over a decade. The illustrations show asymmetries and imperfections, such as insect-damaged leaves, which only reinforces the fact that real specimens were directly observed. It is delightful to see various people and animals added for scale, painted along with the tree silhouettes. Frequently included are germinating seedlings, which greatly expand the overall life history information provided. Near the book's end are five pages of deciduous twig illustrations showing buds, leaf and bud scars, and other such details. Easily these pages could form the basis of a mini-course on winter botany. All images are so accurate and detailed that one needs to constantly remind one's self that these are not color photographs.

The majority of the illustrated trees have been introduced to Great Britain and Ireland since the 17th century and represent elements from throughout the cool, temperate, northern hemisphere. For example, there are some 30 magnolias presented in the book, though none are native to the focal area. Scores of maples and cherries are presented, but few are native. Perhaps the greatest diversity of temperate trees anywhere exists within this introduction zone. It is instructive to view this mild climate zone as part of some grand transplant experiment. How well do species from eastern and western North America as well as Eurasia grow "side by side" in the British Isles and Ireland?

The accompanying text, written by John White, is straightforward, parallel and readable with a minimum of technical terms. There is a supporting glossary included, along with indexes of scientific and English names. Each taxon description has a consistently formatted, coded line for size, hardiness, nativity, date of introduction, and value or use. Only two minor flaws stand out. At 832 pages, perhaps the volume should have been divided into two; only time and rebinding will tell how well it holds up to use. Also, while scientific names are given, they lack authors to make them definitive. It is stated and understood from the foreword that the illustrations were done first, over a decade, and then the text was developed to accompany it. So accurate illustrations came first and then names were applied. The illustrations are so diagnostic that recognition is usually not a major problem, but still it would have been a good idea to include the authors of the scientific names.

As the woody floras of the northern hemisphere become more integrated and homogenized though human activity, this work will be valuable for their interpretation, understanding and enjoyment. *The Illustrated Encyclopedia of Trees* will be a standby for arborists and gardeners in the northern hemisphere as well as foresters and global ecologists. It is a must-have for tree lovers.

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

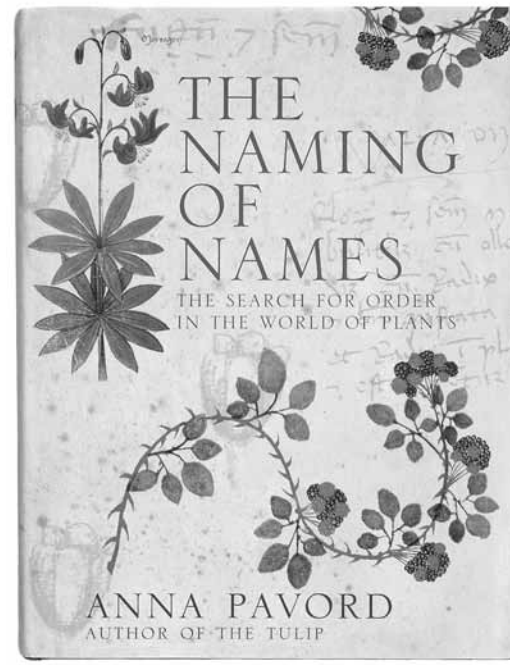
Pavord, Anna. *The Naming of Names: The Search for Order in the World of Plants*. First U.S. edition. New York: Bloomsbury, 2005. [iii], 471 p., illus. (chiefly color), ports., plans. $45.00. ISBN 1-59691-071-2 (hard cover).

In her newest book, *The Naming of Names*, Anna Pavord traces the quest for botanical knowledge over 2,000 years. The Greek philosopher Theophrastus (ca.372–287 B.C.) is the key figure who sets this particular story in motion with two basic questions that he poses about the natural world in his *Historia Plantarum* and *De Causis Plantarum*, questions that Pavord paraphrases as "What have we got [in the natural world]?" and "How can we best differentiate among all of these things?" She tracks those questions forward through history as they are carried onward by a spirit of inquiry that survives conquering armies and the burning of libraries, as accumulated knowledge is disseminated and the quest for deeper understanding of the natural world dims out in one culture and sparks to life in another.

Plant knowledge could be said to have followed two general paths: one concerned with the study of medicinal and other uses, and the other with determining the extent and underlying order of the natural world. The early parts of the story laid out by Pavord give us the ancient Mediterranean world, Theophrastus and Pliny the Elder (A.D. 23–79), Galen Claudius (A.D. 130–ca.200) and Pedanios Dioscorides of Anazarbos (1st century A.D.), the Peripatetic School, the Alexandrian library, and the emergence of Arab pre-eminence in the study of the natural world. Greek writings are eventually translated into Arabic, and then they are later re-translated from Arabic into Latin (as well as from Greek into Latin) and re-introduced to the West in the early European Renaissance.

Moving from the Middle Ages into the Renaissance, the knowledge quest evolves from recovery of ancient learning to scientific discovery, geographical exploration, and independent and analytical thought. For quite some time the study of plants is caught up in herbals and medicinal learning. However, as more and more plants find their way to Europe from other parts of the globe through voyages of exploration and trade, there is a corresponding increase in the pressure to sort, name, describe and organize them into a rational scientific system.

The development of scientific knowledge proceeds in fragmented and convoluted ways, later becoming more integrated through the connections produced by networks of shared interest and scholarly communication. Artists in the Renaissance found a new way of seeing the natural world that finds expression in plant portraits drawn from life. This new vision affected the way knowledge was presented and studied.



Pavord neatly summarizes trends of thought and communication in the first half of the 16th century. For example, she notes four important sets of plant images that illuminated written discourse on plants. Hans Weiditz' (before 1500–ca.1536) illustrations for Otto Brunfels (1488–1534) were the first important set of plant portraits published in Europe; Albrecht Meyer made a set of drawings for Leonhart Fuchs' (1501–1566) *De Historia Stirpium*; Giorgio Liberale and Wolfgang Meyerpeck produced densely and decoratively drawn images for Pier Andrea Mattioli (1501–1577); and a collection of nearly 1,500 images was amassed by Conrad Gesner, but he died without publishing them. Plant books, many of them scholarly and many illustrated with these sets of wood-block prints as well as others, were produced by well-known publishers, such as Christophe Plantin (ca.1520–1589), who printed books in Antwerp by Charles de l'Écluse (1526–1609), Rembert Dodoens (1517–1585), Matthias de l'Obel (1538–1616) and others.

Other developments also had an influence. The first botanical gardens were made in Italy, and ideas spread out from Italian universities to the rest of Europe, such as adding to the curriculum the study of using plants as medicine, and making a hortus siccus as a new way to study plants. The early establishment of Italian botanical

gardens was followed later in the 16th century by gardens in other European centers such as Leipzig, Leiden, Basel, Heidelberg, and Montpellier. Such gardens helped to create "a taste for the rare and the strange," exposing more and more people to a large and growing variety of exotic plants.

Religious intolerance was an underlying force that shook things up over and over again throughout Europe, forcing Protestants to leave their homes for other, more accepting cities or countries, exposing them to different places, different flora, different landscapes, and different people. An extraordinary web of contacts was spun among scholars in Italy, France, Switzerland, Germany and the Netherlands, all of whom shared a passion for *res herbaria*. Later this web also extended to Britain and then the New World, among other places.

Up to and throughout the Renaissance and then beyond, the work of numerous botanical thinkers is examined and interrelated, including those famous and those less well known. One of the strengths of Pavord's book is the way that emphasis on individuals is balanced by emphasis on scientific and cultural developments, political and religious influences, and literary and intellectual trends. The herbal writers and early taxonomists and systematists are considered in the context of realities that helped to shape their thinking and their writing.

As Pavord began her story with Theophrastus and his pair of questions, she ends it with John Ray (1627–1705) and his six rules for classification, which in Pavord's view provided a framework for future inquiry and a means of answering Theophrastus' second question. Ray had an intuitive understanding of plants and believed that any method for studying them had to come from the plants themselves and not be imposed on them. He looked for innate similarities, distinct differences, and the most important characters of the plants that he studied. He was the first to use the word "botany," to provide a satisfactory name for the whole enterprise of plant study that had attracted so many great minds over so many centuries. Of this newly named ancient science, Pavord writes, "… armed with this name, it crossed into a different world. It left the philosophers behind and instead engaged wholeheartedly with a new breed, the scientists of the Enlightenment."

This complex and engrossing history as retold by Pavord is beautifully produced and illustrated and densely but engagingly written, yielding a book in which it is easy to immerse oneself. The text is supplemented by a 12-page chronology, a "cast list" with short biographical notes, notes on the text, a bibliography, acknowledgments, a list of illustrations and an index.

—Charlotte Tancin, Librarian