



Rare Book School: is it something for you?

Stephen Sinon
Head of Information Services & Archives
New York Botanical Garden
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This past summer, I had the good fortune to attend a course at **Rare Book School**, located on the campus of the **University of Virginia** in Charlottesville. I know of several other CBHLers who have attended courses at the school and I was eager to do so myself. While the price of attending is not cheap it should be noted that there are few other programs in the world which offer the scope and depth of courses taught by so many instructors who are outstanding in their specialties. The school itself is equipped with an amazing array of rare materials used for teaching, ranging from lavish bindings, publisher's proofs, variant editions, print series, broadsides, to printed ephemera, all of which are complemented by the array of treasures found within the University of Virginia's own rare book and special collections holdings.

The school originally began at **Columbia University** in 1983, founded by the legendary **Terry Belanger**, and moved to its current digs in 1992 after the closure of Columbia's library school. Most classes are limited to twelve or fewer students and meet Monday through Friday from 8:30 AM to 5:00 PM during the summer intersession period. This allows the school to offer affordable housing on campus in dorms. I elected to stay in one of the rooms which open onto the famous Lawn. These were designed by **Thomas Jefferson** as part of his "academical village" and along with the former **Library Rotunda** are listed on the **UNESCO World Heritage List**, the only university in the Western hemisphere to be so honored.

Living in a historic structure sounds exciting but in reality the summer weather in Virginia can be uncomfortably warm for those who are not used to it. These historic structures did not come equipped with air conditioning. They did, however, have floor to ceiling shuttered doors and ceiling fans as well as wood-burning fireplaces, which must be delightful during the colder months. Housing in these rooms is only allotted to senior year

students during the academic year. The Lawn outside was the scene of several late night socials and the nearby area included a number of gardens also designed by Jefferson as part of his plan, which were open to all.

Getting to Charlottesville was easy using **Amtrak**, which is a seven-hour trip from New York City and takes you within several blocks of the university campus. There are a number of affordable restaurants in the area, as well as used and antiquarian bookshops which were open late one night to accommodate students. The town maintains a free shuttle trolley which connects the campus with the downtown area where many more restaurants and shops can be found in a vibrant area featuring music and special events throughout the year. Charlottesville has always had a reputation as a center of the book trade in Virginia due in no small part to the proximity of Jefferson's **Monticello** located only a few miles from town. If you have not visited in some time they have recently opened up spaces which were previously off limits to visitors and there is a wonderful visitor center with many interesting exhibits as well as the historic gardens themselves.

The class I selected was entitled **Printed Books to 1800: description and analysis** and was taught by **David Whitesell**, Curator of the Special Collections Library at the University of Virginia. He was very well prepared to teach the course and handed around many specimens for examination as we discussed everything from papermaking to provenance concerning the book in the hand press period (1450-1820). Other courses being taught that week included papermaking, paleography, and typography. One day we got to use an eighteenth-century hand press to print our own almanac and then went to set several lines of type in a composition stick. One night was a film festival and another a lecture and reception. Copious breakfasts catering to various dietary needs were enjoyed each morning before class as you got to meet not only with classmates but also students and instructors from many disciplines.

My class of twelve students consisted of three foreign researchers, several catalogers, graduate students and librarians from around the country. One course featured a full day visit to the **Library of Congress Special Collections Division** and students were asked beforehand if there was anything special they were interested in seeing. Classes were intense, packing in a lot of material in a short time but they were ultimately rewarding and often harkened back to concepts I recall from my own days in library school.

From the President

**Kathy A. Crosby, Head Librarian
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I've been thinking a lot about place lately. In part, I've been musing about this theme because we had, in small group session during an Education Department meeting, a long discussion about place being the root of a person's unique experience here at **Brooklyn Botanic Garden**. When the group came back together, three groups out of the five had had discussions about "place" based on visitors' own telling of their story to us. The more frequent visitors at Brooklyn Botanic Garden often think of the garden as their garden. Even people who have not been to the garden in a long time recall thinking about the garden as their garden.

And some who live in the area think of the garden as their backyard; in the **Children's Garden**, participants even have ownership of a plot. I am sure this is true for your garden, arboretum, or campus. I've been considering how the setting aside of land for public use, pleasure, sanctuary, or inspiration becomes such a private experience as I think, too, about the upcoming centennial of the **National Park Service**.

As I think more about this, I realize I know a lot about other **CBHL** members and other friends' connections to place—**Susan Eubank, Chuck Tancin, John Reed, Nadine Phillips, Bill Musser, and Celine Arseneault** amongst the **CBHL** group—because of their **Facebook** photographs. Because of Susan, I have a sense of what drew her to moments in the garden—the shapes, the colors, the light. Maybe I can even sense something about the air. Her image of the landscape waiting for rain is heavy on my mind given the intensity of fire this summer and how close that has come to her and other friends this summer—five miles away smoke is foreboding. Chuck Tancin's gallery of **Freeland Pennsylvania** on her website and on Facebook has often settled me in the past landscapes of where I grew up. And I can hear and see the joy of music in Decorah because of Bill Musser. Nadine's images have found me in the mystery, and eeriness, of nature and Celine's in the pleasures that come from domesticity while establishing a new home within nature. And then there's John Reed reminding us of what it takes to survive the winter at his place in Iron River, Michigan. And yes, the cords of wood are reassuring.

Place is also at the heart of so many **CBHL** collections—whether a florilegium of a particular garden, the records of our institutions, regional gardening or ID guides, or our image collections, to say the least. All the annual meeting hosts endeavor to share as much about the place they call home as possible—no one wants us to miss a thing about what defines their place for them. Consider the unbelievable itineraries of the last years. (The next itinerary is in the making by **Cleveland Botanic Garden**; the Board helping here and there with the planning.)

In a few weeks, an author writing on **Harriet Low** is planning to visit the garden and the small fountain given to the garden in her honor. She is planning to arrive late in the day, so I'm not sure how much she will take in from the site. Sunset is estimated at 6:00 PM for that day, and I'm envisioning a kind of Tiffany scheme of light for her. She asked me about what these kinds of gifts, testaments, and memorials mean to a Public Garden, and I'm still working on my reply. She is also interested in US traditions and thoughts with regard to memorials. I'd love to hear your thoughts on this topic.

And finally, I'm thinking about **Susan Fraser** and **Vanessa Sellers** weaving together a history of a place and its collections and how that place and collection reflect a world of art and science. I've envied the contemplation of this work, but in a way, we are greatly fortunate to experience this thought process every day of our working lives in our respective organizations.

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Botanical tomes made an appearance in my class several times as fine printing and illustration examples. For anybody interested in attending courses at RBS, you should know that they do offer classes around the country throughout the year as well as lectures and study days. This year courses are being held at Boston, New York, and Bloomington, Indiana. There is a **California Rare Book School** located at **UCLA** which was founded in 2005 but has no affiliation with RBS in Charlottesville. Similar programs are run in Colorado, Texas, and Illinois.

Overall, I can't wait to go back for round two. Living on campus bought back a flood of memories and is just the thing to make one feel youthful. Yes, those were golden days for us all but then they end and the reality of employment kicks in and so it is that we reflect on where we have been and where we are going all the while thankful for having CBHL and its network of wonderful colleagues working to promote our own profession and raise awareness of the botany, horticulture and landscape resources we know and work with. But my summer education tale does not end here. No sooner had I returned from the University of Virginia but the very next month I was off to study at **Christ Church Oxford!** Send me an email < ssinon@nybg.org > and let me know if you are interested in hearing about that experience.

Members' News East

**Compiled by Shelly Kilroy, Librarian
Peter M. Wege Library
Frederik Meijer Gardens
Grand Rapids, MI**

**Gary Esmonde, Librarian
Cleveland Botanical Garden
Cleveland, OH**

Fall Updates at Holden Arboretum and Cleveland Botanical Garden

Starting September 15th this fall, **Holden Arboretum** is giving the general public access to two new structures, a canopy walk (the first of its kind in Northeast Ohio) and an observation tower, that let people explore the arboretum from a whole new perspective. Members of the arboretum and its sister institution, Cleveland Botanical Garden, are getting early access this week. The two structures are intended to engage people with the forest in a new way and help them better understand the importance of forest conservation.

Hang on tight as you negotiate the **Judith and Maynard H. Murch IV Canopy Walk** and its four suspension bridges, which will find you bobbing far above the forest floor. A boardwalk forms the first part of the 500-foot walk and leads to the first of four observation platforms high up in the tree canopy. The boardwalk and first platform are accessible to people with



disabilities, so everyone can experience the forest from a bird's-eye view. From there, the more intrepid visitors can venture onto the suspension bridges, separated by three more platforms. The bridges take you far above the arboretum's **Woodland Trail and Pierson Creek** — at the highest point, 65 feet above the ground. The bridges hang from braided steel cables, so they bounce as people cross them — sometimes gently, sometimes with a little more spring. The bridges are enclosed by wire mesh sides and have wood handrails to clutch, so there's no need to worry about bouncing off into the abyss. But being able to look straight down through openings in the bridges' fiberglass floor to the ground below can be either a fright or a thrill, depending on how well you tolerate heights.

The Kalberer Family Emergent Tower is 120 feet tall, about the height of a 12-story building. It's a heart-pounding, 202-step climb to the top high above treetops, but the reward is a sweeping view of the arboretum's 3,600 acres and the landscape beyond — all the way to **Lake Erie**, if the sky is clear. Generous platforms are situated at various levels to provide different views of the surrounding forest, along with a welcome rest. Signs help visitors appreciate what they're seeing by teaching them about the trees and the creatures that live in them.

The structure mimics the shape of a mature tree, with buttresses at the base to approximate the root flare. The tower broadens again at its uppermost part to accommodate a large platform at top. From that viewpoint, visitors will look out over mostly red oak, white oak and shagbark hickory trees, with some other species mixed in.

--Excerpts from **Mary Beth Breckenridge**, *Akron Beacon-Journal*, September 11, 2015.

Cleveland Botanical Garden just ended its summer event, **Branch Out**, which featured a series of imaginative, themed treehouses. Over 70,000 visitors came during the three-month event, prompting the Garden to already to decide to bring back an altered and revised treehouse theme next year. Fall events returning will be **Gourmets in the Garden** and **Hoppy Hour at the Garden**, two very successful food and beer tasting Wednesday night favorites.

The two libraries are serving the public faithfully as strategic planning is currently underway, with decisions that no doubt will reflect directly on their future. An interim librarian, **Catherine Wells**, has been managing the **Holden Library**. I have been very busy going through historical archive materials, making progress with reciprocal borrowing with **Cleveland Public Library**, and laying the groundwork for the upcoming **2016 CBHL conference** to be held here next May 22-28.

**Maureen Horn, Librarian
Massachusetts Horticultural Society
Wellesley, MA**

**Massachusetts Horticultural Society shares its
collection of Botanical Prints through the
Digital Commonwealth**

Katherine Macdonald, President of the **Massachusetts Horticultural Society** announced that after a three-month project, in collaboration with the **Boston Public Library** and **Digital Commonwealth**, over 1,500 images from its botanical collection dating from 1620 through 1969 are shared for the public to enjoy.

Tom Blake, Digital Projects Manager, Boston Public Library, commented that “Digital Commonwealth enables Massachusetts cultural institutions to develop a virtual presence, enhancing education and research by creating a community of support, offering professional advice, and facilitating collaboration. The Digital Commonwealth portal facilitates worldwide access to the cultural heritage of Massachusetts. Our repository provides an affordable option to organizations that are unable to host one locally.”

The Horticultural Library at Massachusetts Horticultural Society was the first in the United States. It was established soon after the Society was founded in 1829 to share horticulture knowledge and beauty through its prints, books, extensive collection of seed catalogs, and other rare materials. Its horticultural holdings provide invaluable resources to our members, scholars, historians, and general public.

Noticing that interest in botanical prints had grown during the intervening 140 years, the Society mounted its first major exhibit in 1968. It continued in 1969, when a group of lily prints was shown to the **North American Lily Society** at its annual meeting.

Digitization and online access to special collections is an important strategy for any cultural heritage organization as it allows us to reach our users beyond our buildings and business hours. Today, with the help of Digital Commonwealth, Mass Hort’s Library will meet the 21st-century digital needs of students, researchers, authors and the public.

Massachusetts Horticultural Society’s botanical prints are available online at the Digital Commonwealth repository at < <https://www.digitalcommonwealth.org/collections/commonwealth:k930hm897> >. These images are available for the purposes of viewing and studying and not for commercial use.

Massachusetts Horticultural Society’s Library collection includes over 20,000 volumes at our library in the Education Center of our Elm Bank horticulture center and gardens. Additionally, at a separate archival storage facility, the Society maintains 5,000 rare books, manuscripts, prints, seed catalogs, glass slides, and early transactions of horticultural institutions.

Many of the books transferred to the **Chicago Botanical Garden’s Lenhardt Library Rare Book Collection** in the early 2000’s by Mass Hort are now available online through the Illinois Digital Archives at < <http://www.idaillinois.org/cdm/landingpage/collection/ncbglib01> >; search on “Massachusetts

Horticultural Society.”

Digital Commonwealth is a non-profit collaborative organization that provides resources and services to support the creation, management, and dissemination of cultural heritage materials held by Massachusetts libraries, museums, historical societies, and archives. Digital Commonwealth currently has over 130 member institutions from across the state.

The Massachusetts Horticultural Society

Library at 900 Washington Street, Wellesley, MA,

is supported by members and donors. Please help us maintain our collection with a tax deductible donation or by calling **Elaine Lawrence**, Director of Development at (617) 933-4945.



Melopepo verrucosus, Magdalena Bouchard, from Hortus Romanus, 1772-1793.

**Rosemarie Papayanopoulos, Librarian &
Vincent A. Simeone, Director
Planting Fields Arboretum State Historic Park
Oyster Bay, NY**

Creating a Sensory Garden: Nurturing Plants and People

Planting Fields Arboretum in Oyster Bay, NY has a rich history for fine architecture, comprehensive horticultural collections, and a knack for bringing nature closer to the visiting public. This 409-acre public garden and state historic park located on the north shore of Long Island was part of the Gold Coast era, a time when wealthy landowners carved out these grandiose estates during the turn of the 20th century. Prominent architects and landscape designers including **Lowell and Sargent** and the **Olmsted Brothers** created much of the majesty and grace that still exists today at Planting Fields.

But in addition to acknowledging its past, Planting Fields continues to look towards the future as well. After all, **Mr. [William Robertson] Coe**, who donated the property to the State of New York in 1955, was quite a visionary himself. One of the ongoing priorities of the arboretum is to provide an accessible and educational site for all of the visiting public to enjoy. That is why the arboretum’s newest project, to build a brand new sensory garden, has become the top priority over the past few years. This innovative garden will offer something for everyone and stimulate all of the senses including sight, touch, smell, hearing, and taste.

Design

The sensory garden was in the planning and design phase for a few years before architectural and landscape plans were finalized and ready to be implemented in 2013. The garden was designed and planned by several local landscape architects, architects, and engineers in both the private and public sector. The plans and specifications for the garden met or exceeded ADA standards. Raised brick planters were built to a height that was accommodating to visitors in wheelchairs as well as gardeners, who did not have to bend or reach to work on the planting beds. Trellis work was designed to accommodate hanging baskets and vines to grow vertically, which are easy to see and maintain by gardeners. Shallow beds with plenty of leg room were created to accommodate sitting and wheelchairs. The pathways were designed using a combination of brick pavers and blue stone to provide a firm, level surface with traction for walkers and wheelchairs. The strong changes in texture from one surface to another allow patrons who are visually impaired to detect pathway boundaries. One area of the garden is designed in a spiral pattern as an outdoor classroom with a seat wall and a rubberized walking surface to accommodate school groups of all ages eager to learn about nature. Wind chimes and a fountain are incorporated into the design to offer soothing sounds and movement in the garden.

Plants to stimulate the senses

A variety of both native and non-native plants including perennials, annuals, herbs, grasses, flowering shrubs, and trees were incorporated into the design to offer multiple seasons of interest, function, and durability while providing color, scent, and soft textures and while attracting birds and pollinators for visitors to observe.

- **Sight:** The plant palette was created using bright colors, noticeable textures, and plants with varying heights for visitors with partial vision impairment.

- **Smell:** Fragrant plants such as honeysuckle, clethra, and herbs are strategically placed to offer visitors a variety of scents.

- **Touch:** Plants such as ornamental grasses and lambs ear are present to offer soft textures, while rosemary, thyme, pineapple sage, and mint provide savory and sweet fragrances. There are many species of native grasses represented here, offering soft textures and unique hues in summer and autumn that are unique to this area of the arboretum.

- **Hearing:** In addition to wind chimes and running water, grasses rustling in the wind and the seedpods of *wisteria* rattling in the summer breeze are present to pique the interest of a passing visitor. Some of these plants, especially the soft grasses, are placed close to the edge of paths so people will brush up against them, making their own noise.

- **Taste:** is a bit more challenging to present since the sensory garden is more of a display garden than an edible garden. However, plants such as serviceberry, blueberry, strawberry, and vegetables are offered as good examples of plants to stimulate the taste buds.



*The Planting Fields sensory garden, opening day.
Photograph by Bill Barash.*

About the Garden

The sensory garden is a collaborative effort between **The New York State Office of Parks, Recreation and Historic Preservation**, **The Planting Fields Foundation**, and several key supporters from the local community. Members of a regional engineering team along with arboretum and foundation staff and foundation board members have worked tirelessly to bring this project to fruition. The garden features over 200 taxa (thousands of individual plants) of hardy and tender plants including trees, shrubs, evergreens, groundcovers, vines, flowering herbaceous plants, and herbs. The garden is estimated at 3,500 square feet and is considered one of the largest and most comprehensive in the State of New York when it opened to the public in the summer of 2015.

Equally exciting is a recent grant awarded by the **New York State Environmental Facilities Corporation (EFC)** to redesign and completely renovate the main visitor's parking lot. This new design will feature accessible walkways, permeable pavers, LED lighting, a rain garden, a water retention basin and native plantings. This will allow arboretum patrons easier access to the facilities through improved traffic and pedestrian flow and parking. It will also include a comprehensive way-finding signage plan made from recycled materials and an interpretive signage plan to educate the public on eco-friendly initiatives that have been implemented within the framework of these projects.

The sensory garden project started with an idea and one man's vision and has been realized with the cooperation and hard work of many individuals. This collaborative effort is a prime example of what can be accomplished when professionals come together for a common goal. Planting Fields continues to move forward with innovative ideas and inspiring goals in an effort to create an aesthetically pleasing, accessible and enjoyable destination for all New Yorkers and out-of-town visitors. The continued success of the private/public partnership fostered between state government and a private, non-profit organization allows the arboretum to meet these ambitious goals that will benefit future generations.



Crow's ash, Flindersia australis, c.1802 by Ferdinand Bauer.

**Andrea Hart, Special Collections Manager
Natural History Museum, London**

**Upcoming exhibit at the
Natural History Museum, London
November 7, 2015 – March 2017**

Following on from the successful Women Artists temporary exhibition in the **Images of Nature Gallery** at the Museum, this November sees the installation of our new exhibit on the **Bauer Brothers**. Featuring the botanical and zoological artworks of the Austrian born brothers **Franz** and **Ferdinand Bauer**, over the next sixteen months more one hundred beautiful and scientifically accurate watercolours from the Museum Library's collection will be displayed, many of which have never been on public view before. A new book by Paul M. Cooper in the

Images of Nature series, featuring many previously unseen illustrations from the collections, was published in October 2015. (US release February 2017) < <http://www.nhm.ac.uk/our-science/departments-and-staff/library-and-archives/collections/bauer-brothers.html> >

Members' News West

**Compiled by Beth Brand, Librarian
Schilling Library
Desert Botanical Garden
Phoenix, AZ**

**Brian R. Thompson
Manager and Curator of
Horticultural Literature
Elisabeth C. Miller Library
University of Washington Botanic Gardens
Seattle, WA**

On October 14th the **Elisabeth C. Miller Library** celebrated its 30th anniversary by inviting members of the horticultural community, including the **Northwest Horticultural Society**, for an open house with a rare book display, children's programs, and "Did You Know?" signs scattered around the library highlighting our history, services, and collections.

Laura Blumhagen, a long-time hourly employee who

CALENDAR OF UPCOMING EVENTS

compiled by Rita M. Hassert, Library Collections Manager
Sterling Morton Library, The Morton Arboretum

January 8-12, 2016.

Boston. ALA Midwinter Meeting.

< <http://www.ala.org> >

April 6-9, 2016.

Los Angeles. Museums and the Web 2016.

< <http://mw2016.museumsandtheweb.com> >

April 10-16, 2016.

National Library Week.

< <http://www.ala.org/nlw> >

April 24-27, 2016.

Gainesville. USAIN 15th Biennial Conference.

< <http://cms.uflib.edu/usain2016> >

May 23-28, 2016.

Cleveland. CBHL 48th Annual Meeting.

< <http://www.cbhl.net> >

June 6-10, 2016.

Miami. APGA 2016 Conference.

< <http://www.publicgardens.org> >

June 12-14, 2016.

Philadelphia. SLA 2016 Annual Conference.

< <http://www.sla.org> >

June 23-28, 2016.

Orlando. ALA Annual Meeting.

< <http://www.ala.org> >

manages our **Children's Collection**, has become a “permanent” (in the eyes of the University) employee at 50% time. Already a CBHL member, you may have met her during the 2010 annual meeting in Seattle.

Moving up from being a volunteer to an hourly employee is **Jessica Anderson**, a recent graduate of the **University of Washington i-School (Library and Information Science)** and the **Master Gardener's Program**. She will be joining CBHL with the upcoming renewal. It's great to have all of this new energy!

Book Reviews

Patricia Jonas, Book Review Editor New York, NY

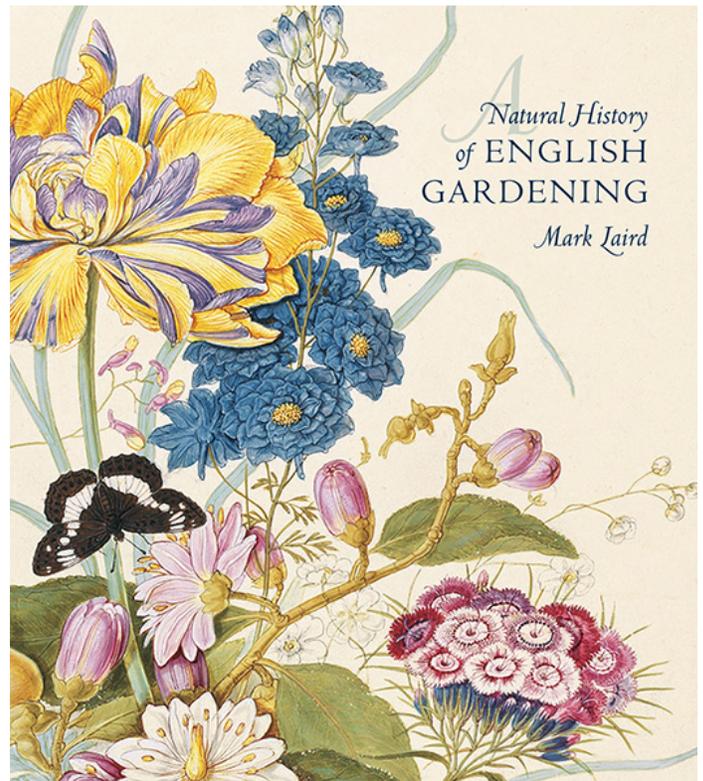
A Natural History of English Gardening 1650–1800 by Mark Laird. Yale University Press, 2015. 440 pages, 300 color and 100 b/w illustrations. Hardcover. \$75.00. ISBN: 9780300196368.

Planting in a Post-Wild World: Designing Plant Communities for Resilient Landscapes by Thomas Rainer and Claudia West. Timber Press, 2015. 272 pages, 313 color photos, 18 illustrations. Hardcover. \$39.95. ISBN: 9781604695533.

Cultivating Chaos: How to Enrich Landscapes with Self-Seeding Plants by Jonas Reif, Christian Kress, and photographs by Jürgen Becker. Timber Press, 2015. 192 pages, 200 color photos. Hardcover. \$40.00. ISBN: 9781604696523.

Mark Laird's *The Flowering of the Landscape Garden: English Pleasure Grounds, 1720-1800* was published in 1999 to great critical acclaim. In it the author brilliantly and convincingly challenged **Horace Walpole's** widely accepted historical narrative about the English landscape garden. In Georgian pleasure grounds where we had long imagined only perfect green lawns, serpentine lakes and picturesquely sited English groves, Laird demonstrated that there had been an abundance of color and scent in ‘theatrical’ shrubberies and exuberant flower gardens. Even Walpole—the theorist of “modern taste in gardening”—bowed to Walpole the passionate gardener and collector at his own estate, **Strawberry Hill**.

Having advanced critical thinking on a subject previously settled and having written a bestseller for the then relatively new series, **Penn Studies in Landscape Architecture**, Laird followed with “studies taken up as a response on different occasions, to different enquiries: conferences, talks and symposia” and in 2009 with **Mrs. Delany and Her Circle**, the exhibition he co-curated and book he co-edited (also **Yale University Press**). All of what Laird calls “discrete studies” evolved into *A Natural History of English Gardening*—a sprawling, 440-page omnium-gatherum (as he describes the duchess of Beaufort's collections) and another significant intellectual and



cultural history.

Laird quotes Dr. Delany describing his wife's intense work habits as “an industry between the coolings of her tea,” and that could aptly describe Laird's staggering productivity. Since 1999, his “discrete studies” have been published as essays for the **Dumbarton Oaks Colloquium on the History of Landscape Architecture** (in *Technology and the Garden and Bourgeois and Aristocratic Cultural Encounters in Garden Art, 1550-1850*, both being particularly relevant to the current book); in two **CBHL Literature Award**-winning books (*André Le Nôtre in Perspective* and *Flora Illustrata*); and in other important books—four pages of them are listed in his Curriculum Vitae—including *The Art of Natural History: Illustrated Treatises and Botanical Paintings 1400–1850* and the recently published *The Curious Mister Catesby*.

One of the threads that weaves these “discrete studies” together is weather. Or more broadly, climate.

Karel Čapek observed that gardeners “recognize one another at first sight” and “in the first phrases which they utter they exchange views on the weather.” So, I went to Laird's astonishing CV expecting to find a gardener. I suspected he had held a gardener's position long before he became historic planting consultant to **Painshill Park Trust** in 1984, and forty years ago, fresh from Oxford, Laird began his career as assistant gardener to **St. James's Park**. At least since then, he has taken weather and climate as subjects, but never more centrally than in this natural history “that extends into the clouds, down into the soil,” as Laird poetically writes “and some way beyond the ha-ha and pale of the park.”

Laird begins and ends this book by quoting the great

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CBHL Conference Collaboration Grant Program



The Council on Botanical
and Horticultural Libraries

Revised, April 2015

During the 2010 mid-winter CBHL Board Meeting, the Board established a grant program to encourage your participation in other like-minded organizations' conferences. Currently there is already a wonderful reciprocal relationship with the European Botanical and Horticultural Libraries Group (EBHL). To expand collaboration, this "CBHL Conference Collaboration Grant" will pay up to \$500 towards conference fees (not including accommodations, travel expenses, or meals) for a CBHL member to go to the conferences of Garden Writers Association, American Public Garden Association, Special Libraries Association, Internet Librarian, or similar organization. The grantee would receive the funds before the meeting (up to \$500) with the agreement he/she would present a report to CBHL (either through the CBHL Newsletter or as a presentation at the Annual Meeting). The report should include useful aspects of the conference that will help other CBHL members. The report is intended as continuing education for the CBHL members. The grantee is also intended to serve as a CBHL ambassador to the conference and is required to register as the CBHL representative. To receive the grant, the prospective grantee needs to submit a letter addressed to the CBHL Secretary and include:

- Name of conference
- Date of conference
- Amount of grant request
- URL to the conference website
- Reason for choosing the conference, including the benefit to CBHL
- The date when you will submit your report about the conference to either the CBHL Newsletter or as a talk at the CBHL Annual Meeting.

Please give the Board one month prior to the registration deadline for the conference to make a decision about the grant. Funding will be awarded based on the amount of funds made available by the Board during that particular fiscal year.

Submission address and/or email:

CBHL Secretary, Stacy Stoldt, [sstoldt@chicagobotanic.org](mailto:ssoldt@chicagobotanic.org) or
Lenhardt Library, Chicago Botanic Garden, 1000 Lake Cook Road, Glencoe, IL 60022

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naturalist **Gilbert White**, who serves throughout as counterpoint, bellwether and guide—a **Virgil** to Laird’s **Dante**. He relies on White’s phenology to corroborate others’ anecdotal and less scientific observations of flowering. It is with White’s account of the “cheerfull shrill cry” of crickets that Laird introduces the subject of sound in the landscape, which he says is “something rarely registered in the literature of garden history.” Laird ends with White’s Journal entry speculating that local boys had destroyed the field crickets in their burrows. “The year 1791 would have a silent summer,” Laird writes, and in the last of thirty-seven pages of expansive footnotes he points out that White’s species of cricket (*Gryllus campestris*) once common is now critically endangered. Calendar entries on weather, plants and animals—meticulous and increasingly rigorously observed—reflect White’s deepening understanding of the interconnectedness of species and phenomena. That fits neatly with Laird’s vision that “offers an environmental view of English gardening in which biodiversity plays a crucial role, caught within human ‘theatres’ of physic, display and hunting.”

Laird asks: “What was the nature of those networks that connect all the activities defined by **John Evelyn** as ‘hortulan’—activities happening in city clubs and on country estates, in greenhouses during a deep freeze or a great storm, in cabinets and grottoes, on vellum, canvas or in hortus siccus, and happening on a given day (that day, as White puts it)?”

Laird’s first chapter, following a lengthy twenty-five page introduction, focuses on **John Evelyn** (1620-1706). It begins in 1658 with the portentous stranding of a whale just outside the garden walls of **Sayes Court**, the Elysium Evelyn was making on the banks of the Thames. (Evelyn’s primitive sketch of the doomed animal is the first of twelve of his diary pages and drawings reproduced in this chapter.) That event came in early June in the wake of an “extraordinary storme of haile & raine, cold season as winter.” Evelyn believed in the garden’s redemptive power, but it was no picnic gardening at the end of the Little Ice Age. The Thames froze regularly, but never for longer than in the cataclysmic winter of 1683-84, which is described by Evelyn in his diary (“a severe Judgement upon the Land”) and illustrated by **Abraham Hondius**’s painting, “The Frost Fair of 1684.”

In this chapter and throughout the book, there is a revelatory juxtaposition of beautifully reproduced illustrations that explore garden culture. The visual material includes rarely, if ever, reproduced art, like **G. D. Ehret**’s drawings and sketches in the collection of the **Natural History Museum** (chapters three and four) and **Everhard Kick**’s *Badminton florilegium* which has been privately held by the **Dukes and Duchesses of Beaufort** since its creation in 1703-5 (chapter two). Evelyn’s diary entries, garden plans, drawings of tools and implements, and his innovative greenhouse plans are reproduced on the same pages as folios from **Alexander Marshall**’s luminous florilegium. Several of these exquisite paintings are a visual corollary to Evelyn’s dilemmas with insects and birds in the garden: the caterpillar as “cursed Devourer,” but the butterfly as one of “the flying flowers” and birds as “winged Choris-



Moses Harris, *The Aurelian; or Natural History of English Insects* (London, 1766), pl. xx, hand-colored engraving. Houghton Library, Harvard University (f*59-1499).

ters,” but also destroyers of fruit and crops. Inevitable, age-old battles with weather, insects, birds, and other animal marauders in the garden.

Chapter two introduces the second unifying thread in Laird’s rococo tapestry: “the nature and amplitude of female accomplishments in home and garden . . . Botany, botanical illustration and horticulture fell squarely within the lure of accomplishment.” This chapter is centered on the remarkable **Mary Somerset**, duchess of Beaufort (1630-1715), who like Evelyn, Laird writes, “gardened in the shadow of storms and sadness.” Although they were contemporaries, the duchess’s prodigious ‘hortulan’ accomplishments seem to have made little impression on Evelyn, but other prominent male contemporaries acknowledged the importance of her work: she was the only woman listed by **Peter Collinson** in “the Most Celebrated Botanists Living in my Time Since 1709 to 1768.” She was widely acknowledged as an integral figure in the international network of plant exchange: **James Petiver** praised the “Perfection” of cultivation she achieved in her “Matchless Stoves”, which upped the game on Evelyn’s hothouse innovations and permitted the duchess to grow the exotics that came to Badminton from all over the colonial world in response to her wish lists of seeds and plants.

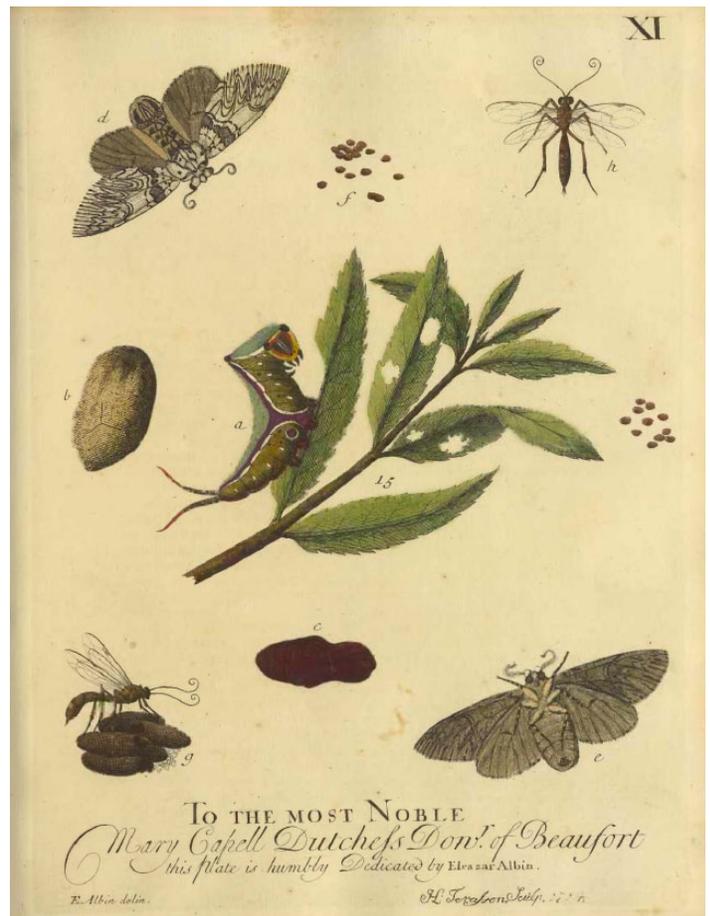
Her high social status, wealth, and court connections gave the duchess opportunity to draw on favors from such botanical luminaries as **Hans Sloane** and **William Sherard**—both

of whom assisted with her twelve-volume *hortus siccus*—but the significance of this great herbarium was lost when it was incorporated in the **Sloane Herbarium** after her death. It wasn't until the mid-20th century that it finally became clear that the duchess had successfully cultivated at Badminton and added to her *hortus siccus* a great number of species then new to science. The erasure of women like Mary Somerset from the history of science is one of the questions Laird pursues.

The duchess's work never appeared in print and her papers were destroyed or dispersed after her death, but the “first album of the *Badminton florilegium* is without question the most evocative relic of the duchess's gardening.” It was the work of **Everhard Kick (Kickius)** who had earlier been employed by Sloane to make drawings for *Natural History of Jamaica* and whose “artistic flair thus emerged most forcefully with the new imperatives of the duchess's expressive florilegium.” Laird speculates that Kick's baroque tripartite miniature landscapes may have been inspired by a copy of **Besler's** *Hortus Eystettensis* in the duchess's library. Although the duchess has been inadequately studied, almost nothing is known about Kickius. **Henrietta McBurney** has identified two of his drawings that had been in **Mark Catesby's** personal collection (see “Mark Catesby's preparatory drawings for *The natural history of Carolina, Florida and the Bahama Islands*” in *The Curious Mister Catesby*) and it is tantalizing to imagine that there may still be undiscovered work in other collections and archives.

Also calling for further investigation are the connections Laird makes between three “butterfly women”: the duchess of Beaufort, **Eleanor Granville**, and **Maria Sibylla Merian** whose “divergent pursuits can be seen to converge around **James Petiver**, the greatest ‘networker’ of this time.” The duchess left no dry collection of *Lepidoptera* comparable to her *hortus siccus*, but she commissioned **Eleazar Albin** to paint butterflies for her (as she had hired Kickius to paint plants), and encouraged him to work on his book *A Natural History of English Insects*. She also helped him to find subscribers and Laird notes he had a “high engagement of women sponsors.” An astonishing thirty-seven percent were women, both aristocrats and ladies of polite society. Subscription publishing—considered more fully in chapter three with coffee house culture, collecting, and Mark Catesby—is one of the many intriguing side doors that Laird opens in the course of his book's long narrative arc. Each of the book's seven sections is preceded by one of Laird's familiar watercolor reconstructions dedicated to colleagues and collaborators—his encouragers—which seems a nod to dedicatory plates like those in Albin's *A Natural History of English Insects* and **Moses Harris's** *The Aurelian*, among whose encouragers were the duchess of Beaufort and the duchess of Richmond, respectively.

Having written so much about chapters one and two, I have to assure readers that every chapter has its unique revelations and delights. For instance, chapter four—“**Cornucopia: Georg Dionysius Ehret, Thomas Robins the Elder and the Paragon of Meadow and Grove**”—looks at the work of these artists from the perspective of seasonality or, well, weather. Laird considers the fine botanical painting

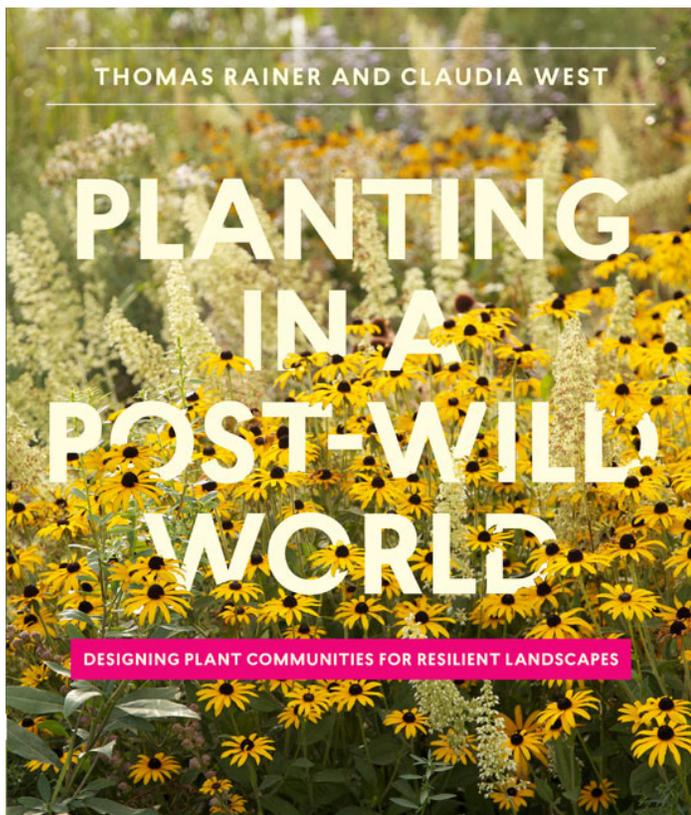


Eleazar Albin, *A Natural History of English Insects* (London, 1720) pl. xi, dedicated to ‘Mary Capell Dutchess Dowager of Beaufort’, hand-colored engraving. < <http://www.biodiversitylibrary.org/item/188129> >.

Contributed by U.S. Department of Agriculture, National Agricultural Library.

of Robins, who is known, if at all, as a topographical painter of English country estates. Ehret is best known for his paintings of exotic plants, but Laird examines how the duchess of Portland's “private patronage sustained Ehret's love of natives, and how that support may have extended to Thomas Robins the Elder.” Chapter six, devoted to **Mary Delany** and the duchess of Portland, and chapter two are the longest, which is fitting since Laird decries the “gender imbalance that is still present in the literature of garden history.” He points to some of the many women who collected, cultivated, studied and classified natural objects. Laird presents evidence that some of them seem not to have been universally undervalued by their male peers, but as Enlightenment natural philosophy became modern science and splintered into distinct disciplines, women's contributions to science were erased and the new science of botany was “defeminized.”

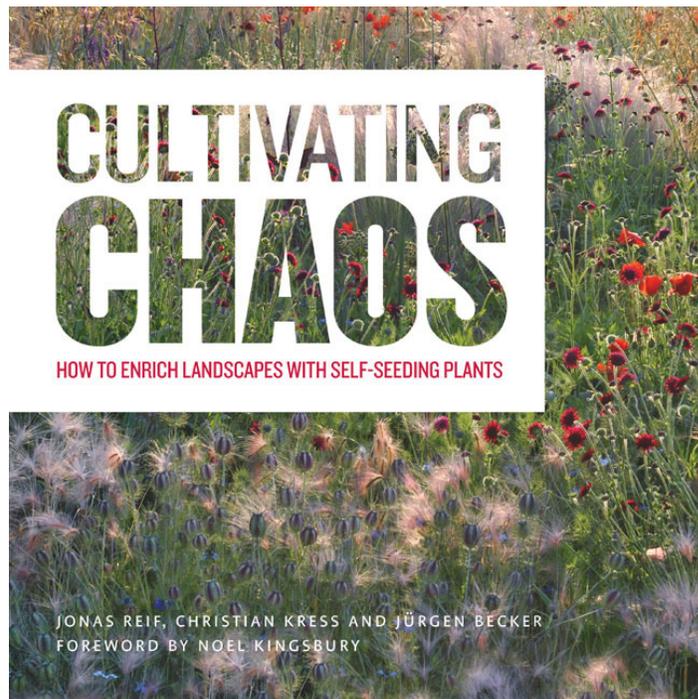
I spotted a few trivial slip-ups on botanical nomenclature, but comparatively few especially in a book so dense with seventeenth and eighteenth century plant names and their currently accepted names. That speaks to the care Laird has taken and the help offered by **Stephen Harris**, **Charlie Jarvis**, and the late **James Reveal** on “taxonomic and illustrative matters.” Who better?



Perhaps it's just a personal preference, but I found most of the extended captions a distracting reiteration of the main text. It is almost as if the author (or perhaps publisher) is trying to offer readers-in-a-hurry a quick way to get the gist by looking at the pictures and reading the captions. Or maybe this is wall text for some future exhibition?

Laird has plumbed both public and private libraries and archives for the period's diaries, letters, ephemera, sketchbooks, paintings, drawings, estate accounts, herbarium specimens, maps, plans, and books. He has pulled these threads together into a vivid portrait of a rich and complex age that begins in Enlightenment natural philosophy, portents and divine judgements and ends in Romantic science, electricity experiments, and a balloon flight over White's Selborne. "I hope I have succeeded," Laird worries, "in bringing a degree of unity without creating an unwieldy whole. At a certain point, dangers arise in trying to connect too many disparate matters." The connections are sometimes loose ("this book inclines to the fragmentary"), but he has pieced together many "disparate matters" as they unfolded over this long, tumultuous 150-year period. Laird's prodigious intelligence, the unexpected prospects on the familiar, the thrill of new insights, and the exceptional beauty of the object that Yale has produced make this an essential acquisition. Simple it's not, so if readers get lost, there are Laird's threads to lead them out of the labyrinth.

While Yale has been regularly producing mind-bogglingly sumptuous books in CBHL subject areas, **Timber Press** seems to be reducing its number of traditional jacketed hardcovers and is producing sensible workhorses in the paper-over-board format (my friend **John Eklund**'s professed favorite



format even though he is a sales representative for Yale). Since these are meant to be sturdy enough to drag into the garden, they are durable enough for library use without additional protection—a good thing for library budgets.

Cultivating Chaos and *Planting in a Post-Wild World*—two of Timber's recent jacketless hardcovers—approach the design of naturalistic landscapes from different angles: the former is focused on self-seeding plants and the latter on plant communities as design models. Of course, neither approach is truly new (what is?), but the authors have refreshed the concepts and both books have something of value to offer readers. What surprised me is that *Cultivating Chaos* is not a manifesto, but more of a how-to for home gardeners; and that *Planting in a Post-Wild World* is not the "universal how-to guide" **Doug Tallamy** applauds in his front cover blurb, but more a manifesto for garden designers and landscape architects. In fact, words in the title itself are a tip off: planting and designing rather than gardening.

Presenting their first of five "essential" principles, Rainer and West write: "Moving from the idea of a traditional planting to a designed plant community starts with letting go of the idea of plants as objects to be placed, like pieces of furniture." The authors of *Cultivating Chaos* write in their lead-in titled "**Letting Go**": "Traditional gardening is a means by which we attempt to control plants and get them to do what we want." So, letting go is key to both books, but not as easy as *Cultivating Chaos* would make it seem.

In their bullet-pointed list of "advantages of gardening with self-seeders," Reid and Kress make some exaggerated claims like: "As there is no garden plan to realize and no precious plants to lose, there's practically no way to fail" and "It is suitable for beginners too. There is little to learn beforehand and what you do need to know you will find in this book." I would be very cautious recommending *Cultivating Chaos* to

beginners for several reasons. First, maintenance of self-seeded landscapes from year-to-year requires vigilance, a lot of work and sufficient familiarity with the plants to distinguish wanted from unwanted seedlings. How many new gardeners have shown up in your libraries wondering why their plans for flowery meadow gardens have been thwarted by weeds? And second—speaking of weeds—their encyclopedia of plants is filled with not just potentially invasive, but state-designated noxious and banned or quarantined weeds. *Onopordum acanthium* for your garden anyone? As the authors admit, “the trick is to keep just a few plants at the desired location.” Indeed.

One of my favorite gardening books is a relatively recent (1989) precursor of *Cultivating Chaos*, **Mirabel Osler’s** *A Gentle Plea for Chaos*. I do admit that I shook my head repeatedly when I first read it, but I loved the idea of allowing shagginess in the garden: “So what about a little insouciance about the place? Random seeding can sometimes be a godsend . . . Arbitrary seeding is something to be desired, almost to be cultivated. Can’t there be one part kept aside where wilderness can become a gardener’s eldorado, where like dandelions gone to seed we can lose our heads and allow wild angelica to gain a foothold?” Great. Unless a plant has gained too much of a foothold and that’s the point: when a plant is recommended for its beautiful flower or structural interest or ease of cultivation, most gardeners, certainly beginning gardeners, do not check to determine if their state or region has designated the plant invasive or noxious. Or anticipate how much time will be spent preventing those plants from trampling out others.

Both books wade in to the emotional, contested terrain of native plants. Reif and Kress caution against “dogmatically restricting yourself to native plant species,” and Rainer and West write: “Designed plant communities place the emphasis on a plant’s ecological performance, not its country of origin. We are interested in practical solutions, not ideological dogma.” All of the authors seem eager to establish that they are not ideologues, anti-immigrant nativists, or worse—a denunciation often leveled at natural garden and native plant advocates (see *Nature and Ideology: Natural Garden Design in the Twentieth Century*, Dumbarton Oaks, 1997, edited by **Joachim Wolschke-Bulmahn**). There are few North American natives among the recommended plants in *Cultivating Chaos*, but the authors are German, the book was first published in Germany, and most of the plants are native to Europe.

Rainer and West design mostly with North American native plants but they fear that “in the process of creating a haven for native plants, the spirit of the original landscape is lost. The problem is literalism; merely importing the right plants is not enough. We must re-create the patterns and framework that gives those plantings context.” They look to naturally occurring plant communities for inspiration and identify three landscape archetypes to inform the design process: grasslands, woodland and shrublands, and forests. They add edge communities, not as a type, but for their prevalence in disturbed urban and suburban spaces. “It is this confluence of real landscapes overlaid with our emotional experiences, that should inspire our own planting designs, helping us translate plant combinations into emotional

experiences, not just ornamental arrangements.”

Of course, there are hundreds of beautiful photographs in these books that showcase natural landscapes and naturalistic gardens at their glorious peak moments. There is one in *Cultivating Chaos* of borders of blue cornflowers and red poppies separated by a mowed lawn—a dramatic scene made more theatrical by a shaft of sunlight slicing through it. To achieve that fleeting moment annually would require no small amount of skill and expert management. In the caption to another enticing tableau, Reif and Kress point out that the planting no longer exists and that “setbacks provide space for new plant combinations, an important concept when gardening with self-seeding plants.”

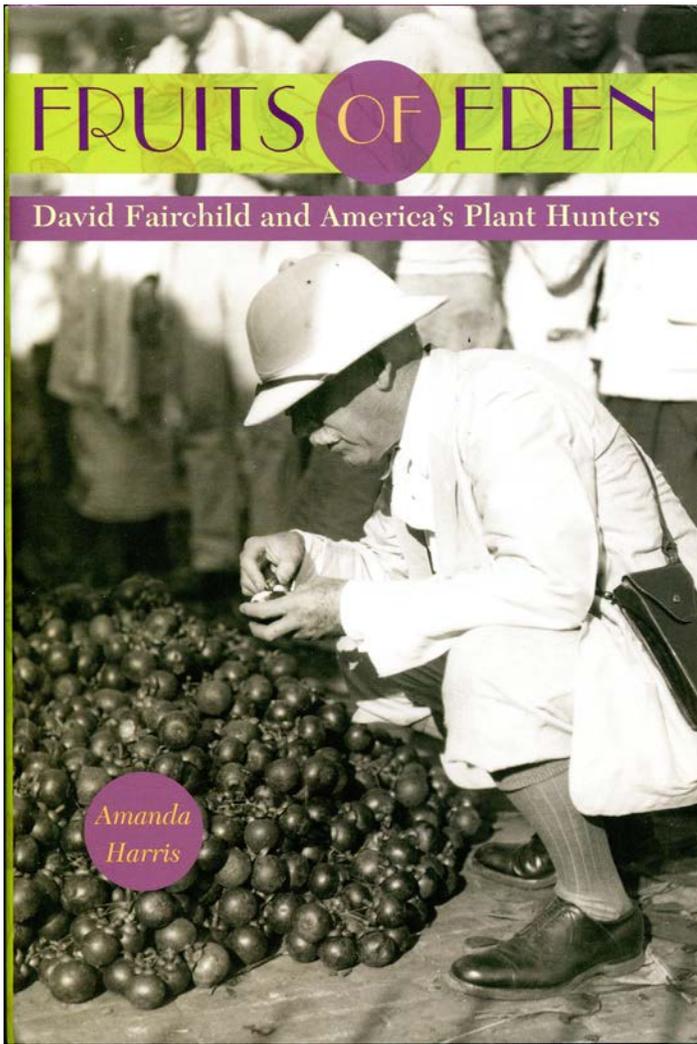
Each book profiles three gardens and their gardeners and both include **Derek Jarman’s** deeply affecting **Dungeness Garden**. Rainer and West put these profiles in their concluding chapter, devoting just several pages to each. Reif and Kress place each of their deeper sixteen-page profiles at the end of three main sections: “**How do You Garden with Self-Seeding Plants?**” is followed by “**Dungeness—Nature’s Tapestry**”; “**Let the Planting Begin**” by “**Het Vlackeland—Fast-Blooming Dynamic Splendour**”; and “**Strategies for Design and Maintenance**” by “**Waltham Place—Naturalism in a Formal Setting**.” Each profile seems to be held out as realization of the preceding section’s lessons. So, for example, the lessons “every picture needs a frame” and “the only constant is change” play out in **Henk Gerritsen’s** redesign of the traditional Oppenheimer garden **Waltham Place** where “self-seeding plants play a special role and their contrast with the existing infrastructure of walls, hedges, groves and paths is what brings the whole garden to life.”

Putting the lessons of either book into practice at home requires vision and commitment and is not for the anxious beginner.

Charlotte Tancin, Librarian, Hunt Institute for Botanical Documentation, Carnegie Mellon University, Pittsburgh, PA

Fruits of Eden: David Fairchild and America’s Plant Hunters by Amanda Harris. Gainesville: University Press of Florida, 2015. 303 p., ill., ports. ISBN 978-0-8130-6061-3. Hardcover. \$24.95.

David Fairchild grew up on a Kansas farm, with a Quaker mother and Puritan father, working hard in good weather and dreaming by the fireplace as stories of exotic places were read to him and his siblings. At age 15 he enrolled in **Kansas College** to study horticulture and botany. There he met **Walter Tennyson Swingle**, another botany student, who would be a lifelong friend, colleague, collaborator, and supporter. He also met **Charles Lester Marlatt**, a young entomology instructor, a friend who would play a role in later years in obstructing Fairchild’s work. From these beginnings **Amanda Harris** writes



the interesting and engaging tale of David Fairchild, Walter Swingle, the founding of the **USDA's Section of Foreign Seed and Plant Introduction**, a group of plant hunters, and the role that they played in transforming and increasing the foods available to Americans.

Fairchild and Swingle both went to work for the U.S. Department of Agriculture soon after graduating. Walter Swingle came up with the idea of organizing an office of plant introduction. He and Fairchild developed the plan: to have trained botanists collect new foods and useful plants, and to bring them back to test them in experimental gardens to see which would be growable and useful here. This plan from a couple of junior botanists was approved by **U.S. Secretary of Agriculture James Wilson**, who hired Fairchild to run the program and renamed the department the Section of Foreign Seed and Plant Introduction, marking the first time a modern government employed its own team of plant explorers.

Harkening back to the exotic tales he heard as a boy, Fairchild developed an early taste for travel and exploration, and thanks to wealthy patron **Barbour Lathrop**, a taste for all the foods that the world had to offer. Lathrop, a wealthy but lonely globetrotter, put to Fairchild a proposal: "Let's introduce these strange, foreign plants to America and see which

ones take root, produce fruit, and make money for farmers and merchants." (p. 35) At the time, the typical farmer grew only about twenty kinds of food plants, and Americans ate only a few kinds of foods.

Thus began an exciting period for Fairchild as he traveled the world, sampling foods, exploring for food plants, and collecting seeds and plants to bring or send back to Washington. He had adventures and successes, and eventually met two more well-to-do men who would become friends and patrons: **Gilbert Grosvenor** of the **National Geographic Society** and **Alexander Graham Bell**. Fairchild would marry Bell's daughter, Marian. Grosvenor provided an early platform for Fairchild to share stories of plant exploration with the Society's readership, to build support for his program.

Fairchild hired a number of plant explorers, all of whom provided successful introductions. **Mark Carleton** found durum wheat, **Frank Meyers** introduced a soybean variety that would become economically important for the United States, as well as the Meyer's lemon, Walter Swingle made dates and figs more viable for Americans to grow, and **Wilson Popenoe** established avocados as a major American food plant. **Joseph Rock** also explored for the program. The stories of the adventurous explorations of these men are told in the course of the larger story of Fairchild and the Section of Foreign Seed and Plant Introduction. Successes were counterbalanced by failures and much creative problem solving, sheer determination, and hard work.

In the early 20th century, the drama around how America viewed foreigners and immigrants also played into this story, as xenophobia increased and foreign plants began to be seen with suspicion, as introducers of pests and disease threatening American plants. **Charles Marlatt**, Fairchild's friend from Kansas College, played a key role in creating the quarantine laws that would kill much plant introduction for a time.

In 1922, Fairchild went to Florida for the winter, and his involvement in the office that he founded began to weaken. He was 55 and exhausted from fighting the government bureaucracy. He didn't quit his job, but he did leave Washington, and eventually his job was given to another. Miraculously, having left Washington, his health returned and so did his enthusiasm, and he embarked on a new stage of his career, helping to set up a new research station in Panama, and then taking Marian to travel the world to look for new plants, often with wealthy sponsorship. Between trips he worked with others to save the Everglades. Eventually he stopped travelling and began to write and to give talks, reliving his adventures. On his final trip he collected palm seeds in the Moluccas for the newly established **Fairchild Tropical Botanic Garden**.

This is a fascinating story and well worth adding to libraries and personal reading lists. Chapter notes, a 19-page bibliography, and an index complete the volume. The tale of how limited our national diet used to be and how much it was changed through the work of these people should be read by everyone who eats food in America. We owe them an incalculable debt of gratitude.

On the Web

A Trillion Trees

Stanley Johnston, Mentor, OH

This issue's column takes its title from the results of **Mapping Tree Density at a Global Scale** < <http://www.nature.com/nature/journal/v525/n7568/full/nature14967.html> > a massive 2015 study conducted by 39 researchers at 24 institutions whose abstract from *Nature* appears on this page (the full text is available by rental, purchase, or subscription). Basically, their first spatially continuous map of forest tree density on a global scale has shown there to be 3.04 trillion trees, an order of magnitude higher than previous estimates. It also concludes that the effects of climate and human habitation (including tree cutting), according to their calculations, result in over 15 billion trees being cut down each year and the loss of 56 percent of the number of trees on earth since the beginning of human civilization. The results of this study will certainly add to the speculation on the effects of global warming on plants and civilization briefly summarized in **Wikipedia's** "Effects of Climate Change on Plant Biodiversity" < http://en.wikipedia.org/wiki/Effect_of_climate_change_on_plant_biodiversity >. The factors involved in climate change and their effect on plants are also briefly discussed in **Botanic Gardens Conservation International's** "How Does Climate Change Affect Plants?" < http://www.bgci.org/climate/climate_change_effects >. Back in 2002, **John Grace, Frank Berninger, and Lazlo Nagy** published a paper on "Impacts of Climate Change on the Tree Line"

< <http://aob.oxfordjournals.org/content/90/4/537.full> > in *Annals of Botany*. "Global Warming: Plants Absorbing More CO2 Than We Thought" < <http://www.natureworldnews.com/articles/9576/20141014/global-warming-plants-absorbing-more-co2-than-we-thought.htm> > comments on the 2014 paper "On the Impact of Mesophyll Diffusion On Estimated CO2 Fertilization" < <http://www.pnas.org/content/111/44/15774.abstract> >, suggesting at first that the finding might set back the effects of global warming, but then backtracking. Finally, "Sorry 'Skeptics,' Global Warming May Not Be So Great for Plant Life After All" < <http://www.washingtonpost.com/news/energy-environment/wp/2015/06/10/sorry-skeptics-global-warming-may-not-be-so-great-for-plant-life-after-all> > cites a 2014 paper, "Suitable Days for Plant Growth Disappear under Projected Climate Change: Potential Human and Biotic Vulnerability" < <http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.1002167> >, to emphasize that growth in CO2 and temperature will actually decrease the number of growing days by 11 percent in 2100 for most of the world if the current pattern continues unchecked.

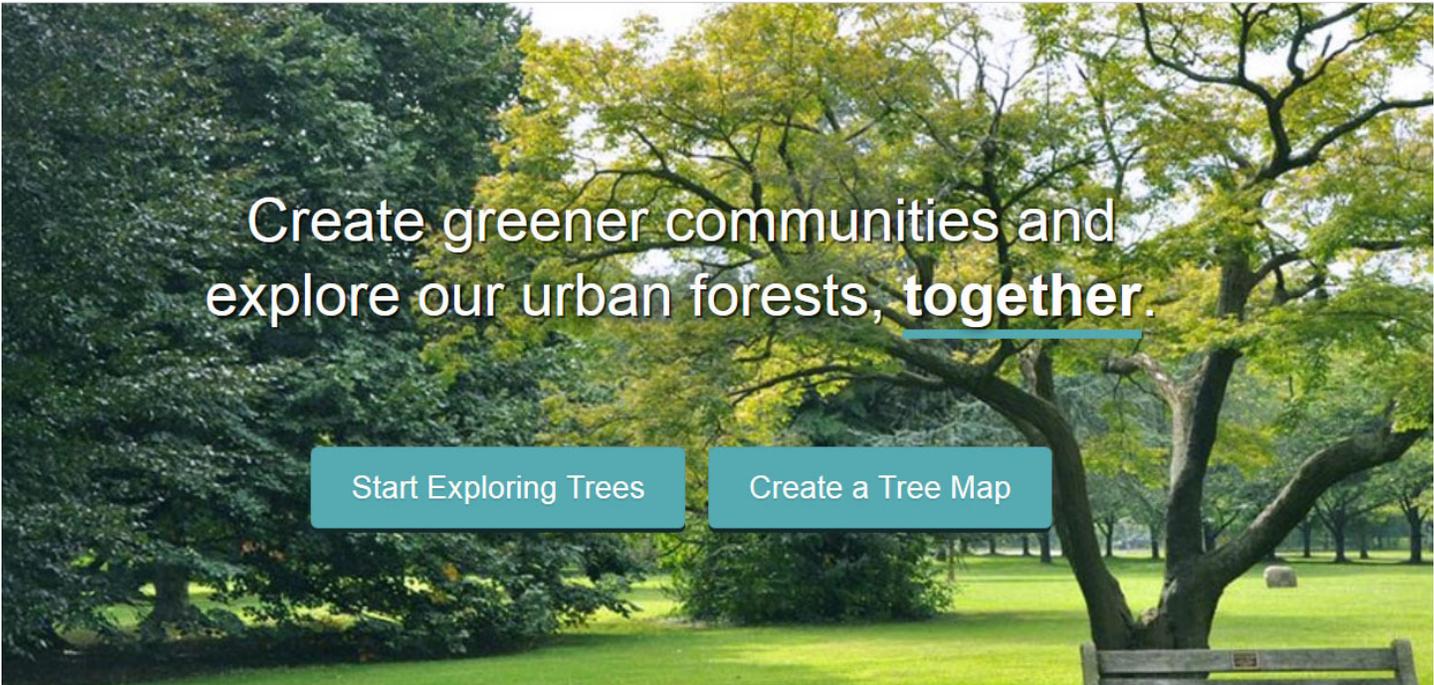
To return to tree mapping, a recent post by **Janet Evans** mentioned in passing the work that has been done in developing a tree map of Philadelphia. The results can be seen at **Phillytreemap** < <http://www.opentreemap.org/phillytreemap/map> >, currently covering 57,707 trees and searchable by species (common or scientific name) and address, or by clicking on a location on the map. The page also details the projected tree benefits for energy conserved, storm water filtered, air quality improved, carbon dioxide removed, and carbon dioxide stored to date, with the monetary value of those functions using the **i-Tree Streets** software developed by the **USDA**



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Starlight Avatar™ by Bioglow < <http://bioglowtech.com> >

Forest Service. The Philadelphia map was developed using **Opentreemap** < <http://www.opentreemap.org> > and is available for mapping for a monthly fee, varying by number of trees covered, and in upcoming pricing by the features used. The site also has a world map showing where it is currently being used in the United States, Canada, and Great Britain. **i-Tree** < <http://www.itreetools.org> > is a software suite in the public domain originally developed by USDA Forestry Service in 2006 comprising six programs to help assess tree populations and their effects on the environment and/or community, which are too detailed to be briefly covered here.

Other research dealing with trees includes that discussed in “These Trees Can Survive a Forest Fire” < <http://www.mnn.com/earth-matters/wilderness-resources/stories/these-trees-can-survive-forest-fire> >. The site suggests that Mediterranean cypress could be planted as firebreaks because of their impervious nature to flammability due to their ability to accumulate high levels of water content, while noting the possible dangers of introducing a non-native species.

Somewhat more far-fetched are dreams of saving energy resources by producing bioluminescent trees, as suggested by “Updates on Bio-luminescent Trees and Glowing Plants Show Not Streets, but Cities Lit Up at Night” < <http://www.inquisitr.com/1548035/bioluminescent-trees-glowing-plants-update-city-night-lights> >, influenced by the glowing plants of the movie “**Avatar**,” which will be artificially recreated in the attraction being built in **Disney World**. The examples cited here, however, involve the world’s first non-fungal luminescent plant, also discussed in “A Glowing Trend” < <http://radar.oreilly.com/2014/10/a-glowing-trend.html> >, involving glowing species of nicotiana, the first produced in 1986 by introducing a luciferase-producing firefly gene into the plants. More recently other inventions have occurred, including **Bioglow**’s “Starlight Avatar is the World’s First Light-Producing Plant” < <http://inhabitat.com/bioglows-starlight-avatar-is-the-worlds-first-light-producing-plant> >, a *Nicotiana glauca* with the light-emitting pathway from marine bacteria introduced to its chloroplast genome, and the patent for “Autoluminescent Plants Including the Bacterial Lux Operon and Methods of Making Same, US 20130074221 A1” < <http://www.google.com/patents/US20130074221> >. Nothing on the order of real light-emitting



General Sherman Tree, in Sequoia National Park: Largest living organism in the world, 2008. Photograph by Jim Bahn. Wikimedia Creative Commons (CC-BY) license.

trees seems to have turned up so far.

Some additional sites dealing with trees include: “State Trees and State Flowers” < <http://www.usna.usda.gov/Gardens/collections/statetreeflower.html> >, the handy chart created by **The United States National Arboretum**, which also gives the date of the legislation establishing them; **Wikipedia**’s “List of National Trees” < http://en.wikipedia.org/wiki/List_of_national_trees >; and the “List of National Flowers by Country” < <http://www.theflowerexpert.com/content/aboutflowers/national-flowers> >.

Edible bark is the subject of “Tree Bark Eating for Beginners” < <http://mentalfloss.com/article/22597/tree-bark-eating-beginners> >, “Edible Tree Bark: The Ultimate Survivor Food” < <http://www.offthegridnews.com/extreme-survival/edible-tree-bark-the-ultimate-survival-food> >, and “Bark Bread” < http://en.wikipedia.org/wiki/Bark_bread >. While root beer, carbonated and non-carbonated, alcoholic and non-alcoholic, is discussed in its various aspects at “Root Beer” < http://en.wikipedia.org/wiki/Root_beer >, **Root Beer World** < <http://www.root-beer.org> >, and “Boozy Root Beer is about to Be Huge” < <http://www.bloomberg.com/news/articles/2015-07-21/boozy-root-beer-is-about-to-be-huge> >.

We conclude with “The Great Old Ones: In Celebration of Our Tree Elders” < <http://www.atlasobscura.com/articles/the-great-old-ones-in-celebration-of-our-tree-elders> >, **Chris White**’s 2015 illustrated article on some of the world’s oldest and largest trees.



CBHL Newsletter, c/o Stacy Stoldt, Secretary
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