The Council on Botanical and Horticultural Libraries

NEWSLETTER

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Conservation and Preservation: Modern Slides of the Non-glass and Mostly Color Kind

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How old might they be?

These slides, also known as transparencies, hale back to 1936. Kodachrome film was introduced in 1935, but the slide film version came out a year later followed by a new product in 1938. Agfacolor Neu, more recently known as just Agfacolor, came out in 1936 as well and Kodak Ektachrome came out in 1946. And the list goes on evolving until we start to largely prefer color prints and later go digital. Another brand name that you will see a lot of is Fujichrome, which held up well with respect to projection use. Others include Polaroid Professional Chrome, GAF, Agfachrome, Konica Chrome, Scotch Chrome and more. [5,6]

What are they made of?

The slides consist of a base of acetate or polyester film, three gelatin layers of color—yellow, magenta, and cyan, and a plastic or cardboard mount. [6]

How standard are the components?

Not! Dyes are composed of carbon, hydrogen, oxygen, and nitrogen, but the nature of their molecular bonds—whether single or double—varies greatly. The number of the benzene rings too, for example, expands the range of potential chemical reactions. As the dyes age, the bonds between the atoms break down diminishing the level of contrast at diverse rates, so that the balance of color in the image shifts and deteriorates. If you have some free time, reading up on the dye coupler process to begin with is really interesting—it's the story of how the black and white image is lost and the color one wins out. Slide mounts were generally made of cardboard, plastic, and glass; these seem to have been pretty standard. [5,1]

How stable are the images?

Well that depends, some film has better "dark fading" stability and some film endures

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It takes a coordinated team of horticulture professionals and students to install Orchids Extravaganza at Longwood Gardens. When this display is completed there will be three large orchid baskets of *Cymbidium* Edith McDade 'New Horizon' suspended from the ceiling above two matching urn displays, underplanted with over 300 assorted *Paphiopedilum* orchids. Photograph by Bob Doerr, Longwood Gardens volunteer.

From the President

Musings on Orchids, Planning, the Future of CBHL

David J. Sleasman
Library and Information Services Coordinator
Longwood Gardens Library

Hello all!

In my own role at work, I have been in a planning mode. Thinking about the future in the short, medium, and long term for our division. What is our work? How can we improve our service to support the mission of our organization? Might that path require a change of behavior? What resources may be needed? Do we have to abandon something to create this improved future? How do we need to shift our collection to meet new or nascent needs? If any of you have been pondering similar thoughts (or have answers) please let me know. I would love to hear your ideas on any of these topics.

In the Conservatory, the situation is completely different. Currently here at Longwood Gardens is the annual Orchid Extravaganza. Each winter Longwood transports our guests into our warm and colorful Conservatory setting featuring thousands of vibrant orchid blooms. More than 4,600 orchids are creatively displayed throughout the Conservatory, complementing our own orchid collection. Some of you may know that our orchid collection has a long history here at Longwood. The orchid collection began with our founders, Pierre and Alice du Pont, in the 1920s. That makes this display season a celebration of both our collective horticultural prowess and our founders' passion.

Beyond the beauty and connection to our institutional history, I am always amazed how all these hundreds and hundreds of orchids--both grown in our greenhouses and bought especially for this show--all bloom in unison. The coordinated effort to orchestrate all the different cultural requirements sort of makes my head a bit dizzy. The answer is in the collective effort of growers, gardeners, designers, and suppliers all working on this intricate coordination of plant and human culture. The team must be in continuous contact throughout the year to be assured of success now. Lessons learned from the past (and present) impact the future. Planning (and learning) never really stops.

Like the team of plant professionals working on our orchid display, the CBHL members and board must all be mindful about the health of our organization. CBHL should be thoughtful in our choices while providing nourishment for future blooms. In my column in the last issue I described some of the challenges the CBHL board has been examining since last we met in New York City. CBHL needs to guard our legacy by making some choices regarding our finances.

As an organization we need to be more careful to balance our expenses and revenue to avoid a continuous, uncontrolled draw down in cash reserves. As a rule, the organization should have enough cash reserves to weather unexpected events. We are very quickly approaching a point of concern. If the trend continues the organization soon will not have enough reserves to cover unexpected expenses. I don't mean to sound dramatic, but we should not delay further. The board would like to act now. We need the help of everyone in CBHL.

CBHL has not raised our dues (our only reliable, major source of revenue) since 2001! Our dues have remained extremely low which is excellent for members' personal budgets. However, the hidden trap is that we need to pay for goods and services at 2019 (and forward) prices. The dues remained so low for so long that buying power is reduced. As a result, if CBHL were to raise dues to completely cover the entire annual shortfall then the dues would need to double for every membership category. To the CBHL board that option is unacceptable. The CBHL board feels strongly that dues should remain affordable. Therefore, raising dues can be only part of the solution along with reducing annual expenses. By enacting both options—as well as implementing procedures for better planning—the board is seeking to insure that CBHL will continue well into the future.

In the coming weeks, the board is going to ask for your support in these initiatives. We will put forth for a vote that we consider a plan to increase dues. The board has discussed and debated since last fall about how best to balance these changes. We have been trying to be very careful to propose a thoughtful solution with the least amount of disruption. Without raising income through dues, CBHL will need to make deeper cuts into expenses to achieve the same end. The board wanted to avoid that fate as much as we want to avoid the ongoing depletion of cash reserves to a crisis point OR very sharply raising dues in a short period of time.

We hope you all will support our plan and procedural changes, adapt to the necessary expense reduction, and vote to approve the dues increases.

A double–sided living orchid curtain located between the upper and lower Terrace garden of the Longwood Conservatory contains more than 200 mixed color *Vanda* orchids. *Vanda* orchids do not grow in soil, but in the tree canopy. As epiphytes they thrive with their roots in the open air. Photograph by Cathy Matos, Longwood Gardens volunteer.

(Continued from page 1)
significant projection time better than others. These characteristics played a role in the selection of film in the pre-digital era. "Dark fading" refers to likely rates of change in film in the absence of light; temperature, humidity, air contaminants, and processing all contribute to the chemical reaction. But dark fading also continues in the presence of light--at the same time as the image is in the process of its ongoing "light fading" reaction. As a result of these processes, areas of the image wash out, develop a color shift, or appear stained.

Later Kodachrome films, post 1974, had the best "dark fading" stability but the worst light fading stability, so it was not the best choice for images intended for frequent or long term projection such as one might especially have in an academic environment. Fujichrome was the better option. It's not clear how much even a lot of professional photographers took stability into account over the years, but, of course, film and knowledge continued to improve. I wonder too how well projection time tracked in relationship to slides. [5,1]

How stable are the mounts?

The cardboard mounts in particular appear to be long lasting and not harmful to the images; this may also be true of the plastic mounts. Relative to the plastic, less data was available at the time of the Wilhelm's book on *Permanence and Care of Color Photographs,* which was my source. [5]

How long does it take before slides begin to deteriorate?

That depends on the choice or brand of film and when the

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product was made. There are charts noting the period films were in use, loss of dye stability by passage of time, color imbalance by passage of time, yellow stain development by passage of time, etc. After 580 days, for example, the least stable dyes in Kodachrome produced post 1974 would have experienced a 20% loss. [5]

What is the history of slide storage in general?

A lot of slide material has likely been and is still being lost. At best, if slide collections were kept in dark storage in reasonable and decent human environments with air conditioning, much might yet be salvaged. But at 75 degrees F with a relative humidity of 50%, after 25 years significant changes will have already occurred. A few major publishers like National Geographic and some museums began to move collections to cold vaults in the 1990s. The rules for federal archives and museums requiring cold storage for film and color photographic materials were not established until 2005; that's not all that long ago. See 36 CFR 1228.232 (b.) Subpart K, Sept 2005. A lot of us are basically in the same boat in terms of our slide collections. [5,2]

How much does cold storage help?

Cold slows down the process of chemical reactions. Decreasing humidity is helpful but reducing temperature is even more important for slowing the rate of deterioration and increasing the longevity of slide media. At 55 degrees F with a relative humidity of 30%, the years to significant change or impact would be 190; at 10 degrees F with a relative humidity of 30%-50%, the years to significant change or impact surpass 3,200. But, of course, most collections have been stored in less than ideal conditions, so damage, to some extent, has already been done. However, as deteriorated as slides in our institutional and personal collections have become, they may very well be viable sources of information. [2]

What is the required temperature range for cold storage?

The temperature range is from 0 degrees F to 55 degrees F. Do not freeze or store your lantern or glass plate negatives in cold storage; the same rules do not apply!

How can small institutions create access to cold storage?

Most of us probably do not have the funds or space to install a large cold storage vault, but various kinds of household freezers can be adapted for this purpose. We could look further into this in a future column, but the National Park Service has produced two *Conserve O Grams* on the freezers and packaging for freezers—August 2009 14/11 and April 2009 14/12. Small archival chambers are also available. [3,4]

How does cold storage relate to how we use our collections?

Make "use copies" or scans of frequently used material slated for cold storage. In order to use material held in cold storage, the material has to acclimatize. Vapor-proof packaging accounts for the needs of acclimatization, but use of other types of bagging or even coolers, if handled properly, is possible. What goes into cold storage should also be highly organized, so that you need only pull out and acclimatize the box that you need. I think the concept of selectivity is important here; whatever freezer or chamber--or multiples thereof--is selected, cubic space will no doubt be limited. Slide boxes and carousel boxes are not archival, so we often rehouse slides in archival boxes or sleeves. However, cold storage slows down the deterioration of non-archival containers, so it's possible to use vapor packaging and not rehouse items.

What are some other tips on rehousing slides?

Sleeve and other like materials for storing slides should have a Photograph Activity Test label; in addition, use acid-free containers wherever possible.

Sources

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Digitization is a preservation and access process in and of itself, and that brings us to another question--do we need to keep all the slides or does selectivity come into play?

Charlotte A. Tancin

Do we keep all of the slides?

Naturally, whether or not to keep these depends on a number of factors. I am framing the following comments in terms of "keeping the slide collection," but because of the physical nature of slides and their eventual deterioration, you should also read this in terms of "keeping the image collection."

Is the slide collection within your collecting scope and does it support your mission or perhaps reflect an earlier, historical mission?

Consider how it connects to what your library/institution does now. Maybe this collection doesn't really fit your current scope but it has archival value. Or, perhaps this collection may have outlived its usefulness for your institution. Related to this question of relevance are four more questions: who made the slides; why were they made; what kind of documentation do you have about them; and whether and how is (or was) the slide collection used?

Your slide collection's origins, documentation, uses:

Your slide collection might have been made mostly or entirely by one person or under one person's supervision. Is that person a factor in your decision about whether to keep and/or digitize the slides? If this was someone important in your institution's history or in the field or specialization that the slides reflect, that could be a reason to keep them, or perhaps to relocate them to another institution with more of a connection to the person, field or specialization.

The purpose for which the slides were made is another factor to consider.

Maybe the slides document your institution's history, so they are images made by various people over time and kept together to tell a story. Maybe they were made by one of your horticulturists or botanists in connection with a particular project, or with their work over some period of years, showing plants, or microscopic views of plants. Maybe they show views of your botanical garden. Maybe they were taken by someone on your staff during a research trip to another part of the world, documenting their trip and perhaps the gardens or the flora that they saw, or people they met.

Any of these might (or might not) provide a rationale for keeping the collection. Were the slides made with outside support, and if so, does that mean that you have a responsibility to keep and maintain the collection now?

Or maybe one of your gardeners loved roses and began photographing the roses in your garden, eventually accumulating a few hundred slides that they then gave to your institution. Well, think about how those slides are useful now. Are the plants identified either on tags visible in the photos or else in accompanying documentation, perhaps in numbered entries linked to numbers on the slides? If so, that's already a bonus, either for your institution or perhaps for another institution, plant scientist or rose lover who might like to have this collection if you don't keep it (see also the section on re-use, repurposing and disposition, below). If on the other hand you have several hundred rose slides with no identifications, the usefulness of that collection, regardless of who made it and why, depreciates considerably. It's not necessarily a total loss, though. They might still be great images for someone on your staff to use in signage, PR and advertising, and on Facebook and Instagram. Imagine a gorgeous collage of roses. Whether you are keeping or getting rid of slides, repurposing is something to consider for at least some of them, and maybe in creative ways having nothing to do with the original purpose of the slides.

I mentioned the question of documentation. Obviously it's nice to know what these are images of, and how you came to have them. Why are you keeping these things? If there is documentation that was created to accompany the collection, that could help to answer that question. Documentation could include any or all of these data: who made the images, for what purpose, when, and under what authorization or with what support, plus other notes. Numbered slides keyed to a list of numbered captions would be ideal. This could be (depending on age) in the form of handwritten cards or lists, a typed list, a database. Sometimes documentation can be recreated or created years after the fact, in some circumstances, and with a disclaimer. If the slides show historic buildings, they might be identifiable from other published or unpublished photos. If they show views from a staff member's travels, they might be able to be keyed to entries in their travel journals or field notebooks. Maybe they are part of a scientist's research project or a book they have written and at least some of them can be identified based on the project notes, published work, or related documentation. A disclaimer saying that no documentation was found but that these captions/notes were created retrospectively based on educated guesses lets you make the collection possibly more useful, and you can always add that you're trying to learn more about the collection and that comments and suggestions are welcome. If you do this, add something like "[See disclaimer]" to each caption.

The question of how the slide collection is used or has been used is something to consider and is related to having documentation. Perhaps it was used heavily for teaching in the past and now is unused. Or maybe you're using these slides now but they are poorly organized, and the slides being used are not always put back in a way that allows them to be easily retrieved again. Might they be useful for ongoing research, or for talks and presentations, or for archival purposes? If not, consider why you are keeping them. I mention this because slides deteriorate appreciably over time and more quickly than some other kinds of collection items, and so if you have any thought that you don't need them anymore and you would like to offer them to someone else, sooner is better than later, because time waits for no slide.

Three further questions that are more straightforward to grapple with also arise when assessing a slide collection: what condition are the slides in, how are they stored, and how big is the collection. Kathy's comments in this article address these questions.

What about re-use and repurposing of slide images, and disposition of slides?

So your slides were made for a particular purpose, but now you want to re-use and perhaps publish or post online at least some of those images for either a related purpose or for something else entirely. Can you do that? Does your institution own the rights to those photos? Well, one question to ask is, were they made as work for hire? That is, were the photographs made for the institution by institutional staff or by someone contracted with to make them? If so, the answer is yes. Or, might they have been made by someone else and later given to the institution, with the donor also assigning/transferring rights to the institution? If so, yes. Other scenarios are less clear-cut. It is important to ascertain what the intellectual property status is for your slides before you make decisions about their re-use, repurposing, or disposition. Does someone else hold the copyright for your slide images? There are some web links in the Sources at the end of this article that could be helpful in determining this.

In addition to traditional copyright issues, we must also consider online uses. Pixsy, a company that provides "an online platform for creatives and image owners to discover where and how their images are being used online," makes the point that if you post images on social media sites, you might be giving over some license to those sites to use your images without realizing it, even though such use by the social media platform could result in a copyright infringement. And of course once you post things online, anyone can easily save copies of them and any related information would likely not transfer with the image. Pinterest contains very little in the way of contextual documentation from people posting cool images. Even if your slide images have not been formally copyrighted, the existing documentation that you have about the collection could be helpful in establishing that an infringement was made, should that be necessary. You can also digitally watermark images if you feel strongly about people taking them.

And what about the slides themselves? If after careful consideration you decide that you really don't need this slide collection anymore, what do you do with it? Options include finding another home for the collection, selling it, or throwing it out. A related question: are you digitizing the slides and thus keeping those images, or do you not need those images anymore? I.e., is this collection worth a digitization project?

If you are keeping digital copies, it seems to me that you would only also offer the actual slides to someone else (a) if you are accompanying the offer with the understanding that you have copied the images and are retaining the rights to them (if that's the case), in which case the new owner's uses would include a credit line for your institution, or (b) if you are transferring the rights to the new owner with the understanding that you would re-use your copies with a credit line for the new owners of the images.

Whether you are keeping digital copies or not, you might think about finding another home for the slide collection at another institution, or perhaps selling it. If you do that, though, consider whether there is an issue to address regarding chain of possession for the collection, relating to how/by whom/for what purpose the slides were made. We normally do not deaccession archival or historical items and sell them or give them away to interested individuals (as opposed to institutions). What about slide collections from that perspective? It depends on what the collection contains and how/by whom/for what purpose it was made. VRA (Visual Resources Association) has prepared helpful guidelines for evaluating slide collections (see bibliography). And sometimes the best choice may be just to say goodbye to the slide collection and dispose of it.

Kathy Crosby :

Some of the collections I'm thinking about these days include the Garden's around-the-world travel program; the later work of Louis Buhle on the garden; large collections of images of gardens or plants by staff, garden writers, and garden and plant photographers; local vegetation over a period of the last forty years by a professor of botany that the home university itself did not want; and the more recent work reflective of the garden over the last forty years.

The Garden's around-the-world travel program alone looks to amount to 30,000 slides; I think we probably have more than 300,000 modern slides on cardboard mounts. My preference at this time is for an initial run of selective digitization of several collections, but I'll keep you posted. Adding to Chuck's comments on copyright and use, it's important to know that unless you have permission from the people shown in the slides, you may not be able to use them in a public and/or for-profit way. That does not mean they are without importance in terms of site information and history. Facing this backlog though has significantly narrowed what kinds of collections I would consider accessioning in the future.

Charlotte A. Tancin, about whether to digitize:

There will be more on this topic in a future article, but here's a thought: if you want to keep the images contained in your slides viable beyond the lifespan of the slides themselves, without good cold storage and a reasonable past storage situation (which buys you time), digitization should be done soon. Why? Because they will never get BETTER, and over time they will deteriorate – it's just a

question of how quickly or slowly. Sometimes you can recover a bit of image quality through Photoshop, but often that's not so possible. So, think about this: today your slide collection is in the best condition it will ever be in from here on. Storage might be improved, but that won't improve the quality of the images, it will only slow down their deterioration. That means that digitizing sooner is better than digitizing later, because whenever you do it you'll capture the best possible copies of the images before [further] deterioration occurs.

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Adam Rodiquez

MAY 14-17, 2019

Why Should You Attend?

The Council on Botanical and Horticultural Libraries (CBHL) Annual Meeting returns after 29 years to Desert Botanical Garden in Phoenix, Arizona, and the stunning Sonoran Desert. This year's theme, **Adapt and Flourish in a Changing Climate**, provides a dynamic forum for information professionals from across the country and world to share best practices and tools for collections care. They will also discover fresh ways to engage users and explore strategies for flourishing in an ever-changing digital landscape. Two dynamic speakers, David Yetman and Mary Ellen Bates, will share their perspectives on the meeting's theme of adapting and flourishing.

For meeting program and highlights, see the 2019 Meeting LibGuide**.** < *https://cbhl.libguides.com/2019AnnualMeeting* >

Registration

Take advantage of Early Bird prices and register by Friday, March 15. To register: < *https://tickets.dbg.org/webstore/shop/viewItems.aspx?cg=ST&c=CBHL* >

Accommodations

This year's conference hotel is the exceptional Tempe Mission Palms, located within walking distance of a variety of restaurants, shops, and Tempe Town Lake. **Book by April 8 for the special conference rate** (includes complimentary airport shuttle and continental breakfast). To make your reservation: *< https://gc.synxis.com/rez.aspx?Hotel=12318&Chain=15564&arrive=5/14/2019&depart=5/18/2019&adult=1&child=0&group=2UG6BT >*

Sponsorship Opportunities

Become a meeting sponsor to reach this concentrated group of professionals and decision-makers, create new relationships and strengthen existing partnerships. For sponsorship information: *< https://www.dbg.org/wp-content/uploads/2019/02/DBG_CBHL_SponsorshipPacket.pdf >*

Plate 17. *Merisma foetidum* specimen labeled as "spec. parv." [meager specimen]. Schweinitz, Lewis David von. *Icones fungorum Niskiensium*. ca. 1798-1802. Contributed to BHL from Botany Libraries, Farlow Reference Library of Cryptogamic Botany, Harvard University. < https://www.biodiversitylibrary.org/page/54197329 >.

Conspectus fungorum in Lusatiae Superioris agro Niskiensi crescentium, e methodo Persooniana (1805). Figures based on drawings by Schweinitz. *Icones fungorum Niskiensium* served as a sketchbook to inform this work. Contributed to BHL by the LuEsther T. Mertz Library of The New York Botanical Garden. < https://www.biodiversitylibrary.org/page/2892673 >

Biodiversity Heritage Library Updates and Collection Highlights

by Grace Costantino
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Program Highlights

To stay up to date with all the latest news from BHL, join our mailing list http://library.si.edu/bhl-newsletter-signup and follow @BioDivLibrary on social media.

BHL Welcomes the Auckland Museum as a New Affiliate

The Auckland War Memorial Museum Tāmaki Paenga Hira has joined BHL as the consortium's newest Affiliate and first partner in Aotearoa, New Zealand. Tracing its roots back to 1852, Auckland Museum was one of New Zealand's first museums. It is home to one of New Zealand's finest heritage research libraries, whose natural history collection strengths include botany and academic and general-interest works related to the natural sciences.

Version 3 of the BHL API Now Available

Version 3 of the BHL API has been launched. The API can be used to programmatically request and extract data from BHL. The development of a new API version was spurred by the recent introduction of full-text search to the BHL website. In addition to the inclusion of full-text search, the entire API has been examined and updated. Learn more: < https://s.si.edu/BHLAPI3 >

Collection Highlight

Unearthing Scientific History through Art: New Insights from the Archives of Lewis David von Schweinitz, the "Father of North American Mycology"

In the archives of the Farlow Reference Library of Cryptogamic Botany at Harvard University, there is a curious volume of 249 original watercolors of fungus species bearing the title *Icones fungorum Niskiensium*.

Devoid of any creator identification, the provenance and historical significance of the volume seems shrouded in mystery. A cursory examination of the work reveals a collection of charming, but often incomplete, figures and a myriad of annotations in pencil and ink, some struck through, others revealing uncertainty over species identifications or recording observations on specimen quality or coloration.

In short, there is little to suggest that this sketchbook is

Plate 178. *Fungorum Nieskiensium Icones*. ca. 1802-1805. v. 3. Contributed to BHL from the Academy of Natural Sciences of Drexel University, Library & Archives. < https://www.biodiversitylibrary.org/page/55609025 >.

actually an important document in the history of mycological research.

The truth, however, is that this volume is the work of the "Father of North American mycology", Lewis David von Schweinitz (1780-1834). It served him as a sketchbook that was used to inform his monumental *Conspectus fungorum in Lusatiae Superioris agro Niskiensi crescentium, e methodo Persooniana* (1805), co-authored with Johannes Baptista von Albertini (1769-1831).

Documenting over 1,000 species, including 100 published as new-to-science, the *Conspectus* is still referenced to this day as a classic mycological text and ecological record. It is illustrated with twelve hand-colored plates based on drawings by Schweinitz, each featuring six to ten figures of new species described. Whenever possible, Schweinitz based his drawings on fresh specimens, but when this was not an option, he referred to fungarium specimens or to a collection of earlier watercolors he'd created of representative specimens.

Icones fungorum Niskiensium (a.k.a. *The Harvard Icones*) is one of seven original watercolor volumes by Schweinitz dispersed throughout several American institutions and related to the production of the *Conspectus*. Created ca. 1798-1802, the *Harvard Icones* is the earliest of these volumes. A five-volume set created ca. 1802-1805 and bearing the title *Fungorum Nieskiensium Icones* is distributed between the Archives of the Academy of Natural Sciences of Drexel University, Philadelphia (volumes 1-3 and 5) and the Rare Book Collection, Wilson Library, University of North Carolina, Chapel Hill (volume 4). Nearly every specimen featured in the *Conspectus* has a corresponding illustration in this five-volume set. Finally, a volume consisting of copies of figures from that five-volume set, bearing the title *Icones Fungorum* and created ca. 1818-1826, is held by the Herbarium Library, University of Michigan, Ann Arbor, MI.

The Harvard Icones has been digitized in the Biodiversity Heritage Library thanks to the Botany Libraries, Farlow Reference Library of Cryptogamic Botany, Harvard University < https://www.biodiversitylibrary.org/item/234262 >. The five-volume set is available in BHL thanks to the Library & Archives of the Academy of Natural Sciences of Drexel University and the Wilson Library of the University of North Carolina at Chapel Hill < https://s.si.edu/BHLSchweinitz >. The *Conspectus* has been digitized in BHL by the LuEsther T. Mertz Library of The New York Botanical Garden < https://www.biodiversitylibrary.org/item/21717 >.

The history of these watercolor volumes and their relationship to the *Conspectus* was recently examined in-depth within the article "New Light on the Mycological Work of Lewis David von Schweinitz" (2018), by Jason M. Karakehian, William R. Burk, and Donald H. Pfister, published in *IMA Fungus*: 9(1). The article presents research made possible in part thanks to the digital copies available in BHL.

As a sketchbook, the *Harvard Icones* provides a unique window into the development of Schweinitz's research on the fungal species presented in the *Conspectus*. The findings presented by Karakehian et al. underscore the importance of this volume to that process and the progression of mycology in the early 19th century.

"Our research is important because the volumes of watercolor illustrations produced by Schweinitz have been little known to mycologists who worked with fungi described by Albertini and Schweinitz," explains Karakehian. "These high-quality illustrations can help to inform our concepts of some of these species, as often times early nineteenth century verbal descriptions can be short and somewhat vague."

Karakehian and his colleagues were instrumental in advocating for Schweinitz's archival materials to be made

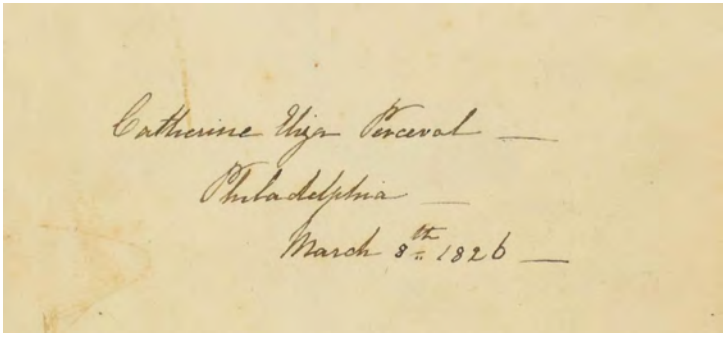
Plate 49. *Merulius crispus* labeled as "*inexplicat[us]*", reflecting doubt as to whether the specimen was a fungus. Similarly, label of "*Substantia aquatica*" [watery substance]. Schweinitz, Lewis David von. *Icones fungorum Niskiensium*. ca. 1798-1802. Contributed to BHL from Botany Libraries, Farlow Reference Library of Cryptogamic Botany, Harvard University. < https://www.biodiversitylibrary.org/page/54197393 >

available online through BHL. This not only facilitates future research on these works, but also allows more people to explore and enjoy these archives and the history they represent.

"For us, BHL is the gold standard, and for our papers on Schweinitz's watercolor illustrations, it was important to request that the archives holding these volumes digitize them and have them available in BHL to the public," asserts Karakehian. "We were absolutely confident that the product would be usable and high-quality. It is a true gift that they are now freely available to users."

Given the unique and rare nature of the *Harvard Icones*, the book was scanned at Harvard using an Internet Archive TableTop Scanner that is shared between the Harvard Botany Libraries and the Ernst Mayr Library of the Museum of Comparative Zoology. This mini-version of an Internet Archive scribe allows Harvard librarians to scan rare or fragile materials without the wear and tear of off-site transportation. Once scanned, the Internet Archive processed the images and the final product was made accessible in the Internet Archive and BHL.

An exploration of the digital copy of the *Harvard Icones* allows anyone to examine clues to the rather convoluted provenance of this important archival volume. One such clue can



Inscription from fly-leaf of "Catherine Eliza Perceval.". Schweinitz, Lewis David von. *Icones fungorum Niskiensium*. ca. 1798-1802. Contributed to BHL from Botany Libraries, Farlow Reference Library of Cryptogamic Botany, Harvard University. < https://www.biodiversitylibrary.org/page/54197295 >.]

be found in the single fly-leaf bound within the volume and featuring the hand-written inscription on the recto: "Catherine Eliza Perceval — Philadelphia — March 8th 1826 —".

Born in Quebec in 1811, Catherine Perceval was the daughter of Anne Mary Perceval and Michael Henry Perceval. Anne had an interest in botany fueled by her association with other local female botanists, Christian Ramsay, the Countess of Dalhousie, and Harriet Campbell Sheppard. The group actively botanized together and Anne is listed as a collector in several important botanical works of the era, including Hooker's *Flora boreali-americana* ([1829]-1840) and Torrey and Gray's *A Flora of North America* (1838-43).

The *Harvard Icones* passed into the Perceval family's possession during a meeting in 1826 between Anne and William Darlington, a correspondent of Anne's, at their mutual friend J. Daniel Steinhauer's residence in Philadelphia. Schweinitz described Steinhauer as an "excellent friend…[and]…botanist." As detailed in the *IMA Fungus* article, Schweinitz and Daniel Steinhauer were likely introduced by Daniel's brother, Henry Steinhauer, who was also a friend of Schweinitz's from his time in Germany.

Henry had attempted to have copies made of the figures in Schweinitz's five-volume watercolor set and towards this end, Schweinitz had given Henry his "*Icones Fungorum Niesk'm*" shortly prior to January 1818. The watercolor volume held in the Michigan Herbarium Library is the result of these endeavors. Karakehian et al. postulate that as part of this exchange the *Harvard Icones* may have ended up in Henry's possession and passed to Daniel Steinhauer upon Henry's death, after which it was passed along to Anne or directly to her daughter, Catherine (whose name is found in the *Icones* inscription).

The volume later passed from Catherine to her son Francis Denys and eventually ended up in the possession of antiquarian book dealers and scholars William and Marianne Salloch, after whose death it was sold to a Bungay book dealer at a Christie's auction in 1991, advertised as "Original American Watercolors" by Catherine Eliza Perceval.

Microbiologist and mycophile Elio Schaechter eventually purchased the volume from the book dealer and showed it to Donald Pfister at the Farlow Herbarium, whose research ultimately allowed him to attribute the work to Schweinitz. He also generated a manuscript index to the illustrations, which has also been digitized in BHL along with the *Harvard Icones* itself.

In the early 2000s, David Hewitt of the Farlow Herbarium was the first to propose that the *Harvard Icones* served Schweinitz as a sketchbook after comparing it to the four volumes of watercolors held at the Academy of Natural Sciences. Karakehian et al. support this conclusion, presenting further evidence within their *IMA Fungus* article including the incomplete quality of the sketches, the lack of any systematic arrangement of the specimens on the plates, and the annotations

Plate 20. "Clavaria monstrosa" label indicating an anomalous specimen. Question marks indicating uncertainty over "*Mycena leptocephalus*" identification. Schweinitz, Lewis David von. *Icones fungorum Niskiensium*. (ca.) 1798-1802. Contributed to BHL from Botany Libraries, Farlow Reference Library of Cryptogamic Botany, Harvard University. < https://www.biodiversitylibrary.org/page/54197335 >.

reflecting edits or uncertainty about species identifications, none of which are present in the five-volume set or the *Conspectus*.

The Biodiversity Heritage Library played a crucial role in the research conducted by Karakehian and his colleagues, which involved indexing the more than 1,000 species treated in the *Conspectus* and cross-referencing them to the species figured in Schweinitz's watercolor volumes in order to examine the relationship between the works and understand how the archival materials informed Schweinitz's research.

"I don't think that we could have done this work without regular access to BHL," affirms Karakehian. "BHL is invaluable to us for the wide selection of classic mycological literature that we needed to reference in our research."

For Karakehian, BHL's impact is about more than just providing online access to materials. It's the quality of the available materials that really distinguishes BHL from other online repositories.

"BHL volumes are high-quality digitizations and I am never frustrated by missing pages, cut-off words, or poor-quality digitizations of delicate line drawings in figures," lauds Karakehian. "I often think of BHL in contrast to Google's digitization project that is easily searchable, but the digitizations are of such poor quality that one often needs to track down the original volume somehow to understand the print or the figure that you need."

The *Harvard Icones* and its related works also provide a prime example of how unprecedented research is made possible thanks to digitization initiatives like the Biodiversity Heritage Library, which allow easy reference to and comparison between volumes held in multiple institutions around the world. Thanks to the contributions from so many libraries to digitize Schweinitz's archival materials and publications, BHL was able to play a vital role in allowing Karakehian and his colleagues to provide new insight into the contributions of such an important figure in the history of mycology.

"Our work broadens our knowledge of the scientist and artist that Schweinitz was," affirms Karakehian. "He was an accomplished and prolific mycological illustrator with a keen sense of depicting his subjects in ways that would convey the maximum of biologic information as well as capturing their natural beauty."

That "natural beauty" is now freely available for everyone to enjoy through the Biodiversity Heritage Library.

Article by Grace Costantino (Outreach and Communication Manager, Biodiversity Heritage Library). Special thanks to Jason M. Karakehian (Master's degree candidate at the Harvard Extension School), Judith A. Warnement (Librarian of Harvard University Botany Libraries), and Diane Rielinger (Digital Projects Librarian, Harvard University Herbaria & Libraries) for their contributions to this article.

References

Karakehian J.M., Burk W.R., Pfister D.H. "New Light on the Mycological Work of Lewis David von Schweinitz" (2018) *IMA Fungus*: 9(1).

Calendar of upcoming events

Compiled by Rita Hassert, Library Collections Manager
The Morton Arboretum, Lisle, IL

March 26-28, 2019. Arlington, VA. Computers in Libraries 2019. < *http://computersinlibraries.infotoday.com/2019/default.aspx* >

March 26-29, 2019. Los Angeles. Visual Resources Association's 35th Annual Conference.
< *http://vraweb.org* >

April 2-6, 2019. Boston. Museums and the Web 2019. < *https://mw19.mwconf.org* >

April 7-13, 2019 – National Library Week. < *http://www.ala.org/nlw* >

April 29-May 5, 2019 – 100th Anniversary of Children's Book Week. < *http://everychildareader.net/cbw* >

May 14-18, 2019. Phoenix. CBHL 51st Annual Meeting. < *http://www.cbhl.net* >

May 19-22, 2019. New Orleans. American Alliance of Museums 2019 Annual Meeting & MuseumExpo.
< *http://www.aam-us.org/events/annual-meeting* >

June 14-18, 2019. Cleveland. SLA 2019 Annual Conference. < *http://www.sla.org* >

June 17-21, 2019. Washington, DC. APGA 2019 Conference. < *http://www.publicgardens.org* >

June 20-25, 2019. Washington, DC. ALA Annual Meeting. < *http://www.ala.org* >

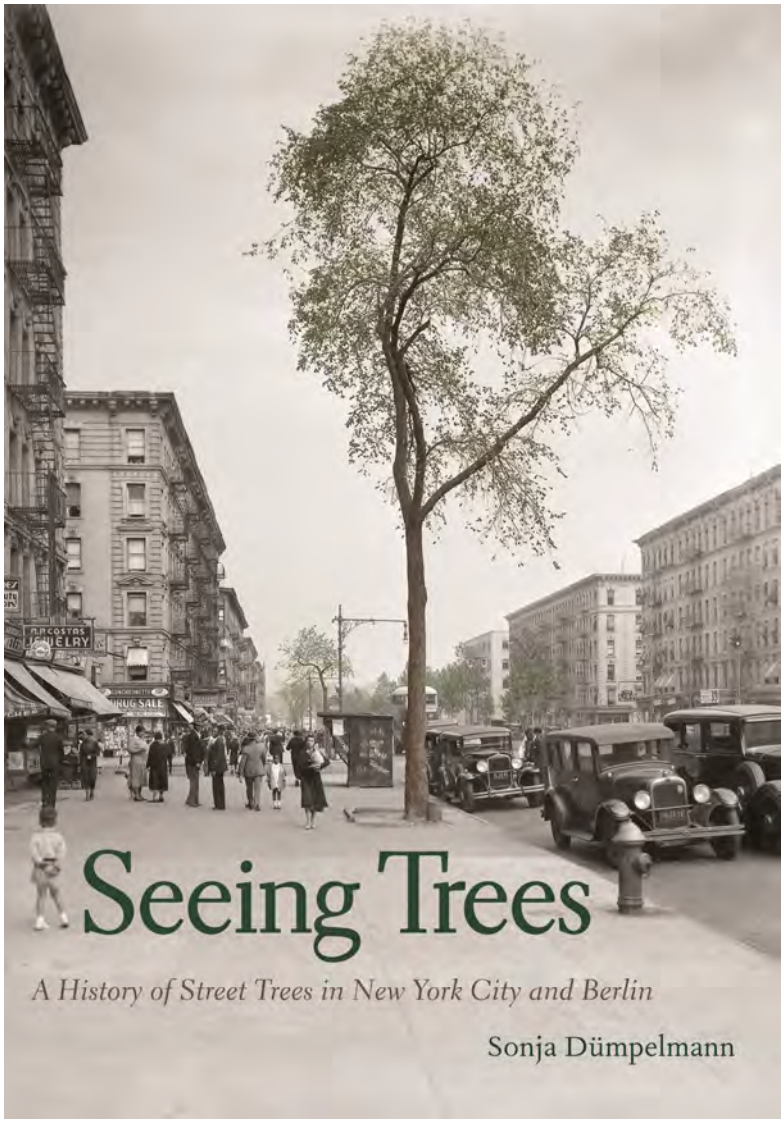
June 29-July 6, 2019. Brisbane, Australia. GNSI Conference. < *https://gnsi.org* >

July 27-31, 2019. Tucson. Botany 2019. < *http://botany.org* >

Check out the CBHL Conference Collaboration Grant Program on page 17!

Book Reviews

Patricia Jonas, Book Review Editor



Seeing Trees: A History of Street Trees in New York City and Berlin by Sonja Dümpelmann. New Haven: Yale University Press, 2019. 336 pages, 20 color, 120 b/w illustrations. Hardcover, $50.00. ISBN: 978-0-300-22578-5

It is probably no coincidence in our fragmented society that we seek inspiration in the ways trees connect (*The Hidden Life of Trees*) and live in the world (*The Songs of Trees*). We look to forests to center us; to improve our mood and lower our stress (*Forest Bathing, Shinrin Yoku*, etc.); to heal us (*The Nature Fix*). Over centuries, publishers have given us countless books about trees: history and appreciation of iconic trees; care and management of trees in forests, woodlots, orchards, and gardens; and field guides to trees everywhere. Too many titles to cite. Then there are trees in novels and that fateful tree of knowledge. Even our smallest libraries probably have hundreds of books on trees. But in this vast literature, historical analysis of street trees is in short supply, although the subject has stacks of manuals on selection, care and management.

So, I welcomed the prospect of a scholar with Sonja Dümpelmann's eclectic research interests and prestigious academic affiliations (Associate Professor of Landscape Architecture at the Harvard Graduate School of Design and Senior Fellow at Dumbarton Oaks) taking it on. Her interests have resulted in books as astonishingly different as *Flights of Imagination: Aviation, Landscape, Design* (University of Virginia Press, 2014) and *Maria Teresa Parpagliolo Shephard (1903-1974)* written and published in German (VDG, Verlag und Datenbank für Geisteswissenschaften, 2004). This Italian landscape designer was unknown to me, so I looked her up in *The Oxford Companion to the Garden* and it turns out that Dümpelmann contributed the entry. She is also editor with Dorothee Brantz of *Greening the City: Urban Landscapes in the Twentieth Century* (University of Virginia Press, 2011), with John Beardsley of *Women, Modernity, and Landscape Architecture* (Routledge, 2015), and more.

As I anticipated, *Seeing Trees* is a wide-ranging social, political, cultural, and design history. It is presented in two discrete parts: Part One, New York City, and Part Two, Berlin. Dümpelmann views trees on city streets as occupying "contested terrain, and some of the biggest urban conflicts have therefore revolved around them." She writes that "looking at street trees enables us to see both the forest and the trees" and that the stories of these two cities are similar because "many conflicts have been persistent and recurrent in one or another form throughout the twentieth century and into the twenty-first."

Part One is filled with stories about events that may be new to readers. There are familiar names, like Jacob Riis, Robert Moses, Jane Jacobs, and a New York who's who of philanthropists, merchant aristocracy, politicians, and artists—all of whom weighed in on the benefits of street trees from the Progressive Era onward. There are also those figures best known in other contexts like George -Eugène Haussmann in relation to the City Beautiful movement and Gifford Pinchot who appears as a first member of the Tree Planting Association of New York City rather than as chief of the U.S. Forest Service. And there is Frederick Winslow Taylor who is best known in the field of management, but is at the core of chapter one "Tree Doctor vs. Tree Butcher: Standardized Trees and the Taylorization of New York City." Dümpelmann traces the impact of Taylor's principles of scientific management on the training of arborists and on the selection, culture, and breeding of ideal street trees, which became "one of the building materials of the Taylorized American city." She introduces her term "botanical xenophobia" with the example of the fortunes of the ailanthus—from Andrew Jackson Downing's "blessing as an ideal street tree," to its condemnation as a "filthy and worthless foreigner", and to its removal from the Department of Parks list of desirable species. Nativism is one of those persistent conflicts and she returns to it in Part Two.

The chapter "Tree Ladies" takes up the robust participation of women, particularly from the city's upper class, in the Tree Planting Association of New York City and in other advocacy groups. Although others have also written about women's landscape architecture practice (I'm thinking of Thaïsa Way), little has been said about women in tree work. The author shows that women

were nearly excluded from forestry and from work as climbers and pruners. She even names the very few women who were regular participants at the National Shade Tree Conferences between 1937 and 1947—there were only six, including plant pathologist Cynthia Westcott. The author describes an archetypal showdown between tree planting advocates (including such formidable women as Iphigene Ochs Sulzberger, matriarch of The New York Times publishing family, president of the Park Association, and early patron of the Central Park Conservancy) and Philip LeBoutillier, president of Best & Company, who stubbornly held to his opinion that trees did not belong in the city, especially not in front of his flagship store on Fifth Avenue at 51st Street.

People across the country applauded Rockefeller Center's widely reported 1939 planting on Fifth Avenue of eight fifty-foot-tall English elms. While other property owners and the public were inspired to plant more street trees, LeBoutillier steamed and aired his arguments in the press. (Imagine taking on a Sulzberger in New York's newspapers). "It would ultimately play out in Le Boutillier's favor," the author writes, "confirming that the site was ill adapted for the tree species chosen." After the original elms were replaced in 1948 by American elms, which also failed, they were replaced again in 1951 by much more well-adapted honey locusts that still stand today. This chapter ends with this observation: "While street tree planting was a way for women to promote an environmental as well as a social ethic, since the Progressive Era it has also been a mechanism and emancipatory political act. . .This became particularly relevant again during the civil rights movement and second-wave feminism." Dümpelmann takes a close look at this in the chapter "Planting Civil Rights."

Hattie Carthan was a different kind of formidable "tree lady." In 1964, to improve what had once been a safe, tree-lined block, she and seven neighbors formed a block association and held "a fund raising event that brought in enough money to buy four trees" and enough publicity to make her a hero among activists. She became chairwoman of Bedford-Stuyvesant Beautification Committee, which grew to one hundred block associations that organized planting of over 1,500 trees by 1970. She brought nature education to Brooklyn youth with a grant that helped her and members of the Bedford-Stuyvesant Beautification Committee form the Neighborhood Tree Corps, which was open to kids between nine and sixteen who were taught how to care for the community's street trees. She is also known for fighting to protect an historic Southern magnolia (designated an official city landmark in 1970) that became the Magnolia Tree Earth Center (now the Hattie Carthan Garden). Carthan died in 1984, but there are not many who are more widely known and justifiably celebrated among Brooklyn activists and in New York City's greening community. "Regardless of whether tree-planting initiatives were begun as grassroots actions by those immediately affected, as in the case of Hattie Carthan in 1960s Bedford-Stuyvesant; as a presidential initiative in these same years, as in the case of Lady Bird Johnson's tree planting campaign in Washington, D.C.; or by public health and social reform, as in the case of the Tenement Shade Tree Committee in the early twentieth century," Dümpelmann concludes, "the activities ultimately came to be based on a hybrid of bottom-up and top-down, private and public initiatives that could support each other."

Part Two covers far less familiar material. There are notables like Peter Joseph Lenné and Camillo Sitte, but they predate most of those written about in this part; and that seems to underscore how little studied this period and place are—at least in English and at least by me—and how very useful Dümpelmann's research is. There are many figures who are only occasionally if ever encountered in English language literature. Dieter Hennebo, for example, is sometimes cited by other landscape historians, but beyond a few articles in English, little has been translated from the German, including *Anleitungen zur Grundlagenforschung in Grünplanung und Gartenkunst*, "perhaps the first book ever written," according to Dümpelmann, "in any language on research methods in landscape architecture." The author also refers to Hennebo's dissertation (advised by Georg Pniower, a landscape architect and professor at Humboldt University), which is a study of the capacity of urban vegetation and trees to bind dust—dust being a "big problem in the city given the amount of rubble and ruins." Immediate post-war conditions get a close look in the section "Rubble Greening" and in the chapter "Burning Trees" (literally, burning wood from street trees for warmth in winter) where some particularly effective period photographs are reproduced. Oh, and in addition to rubble, dust, gas leaks and de-icing salts, Dümpelmann writes about a threat to street trees everywhere that has proved more difficult to resolve: dogs.

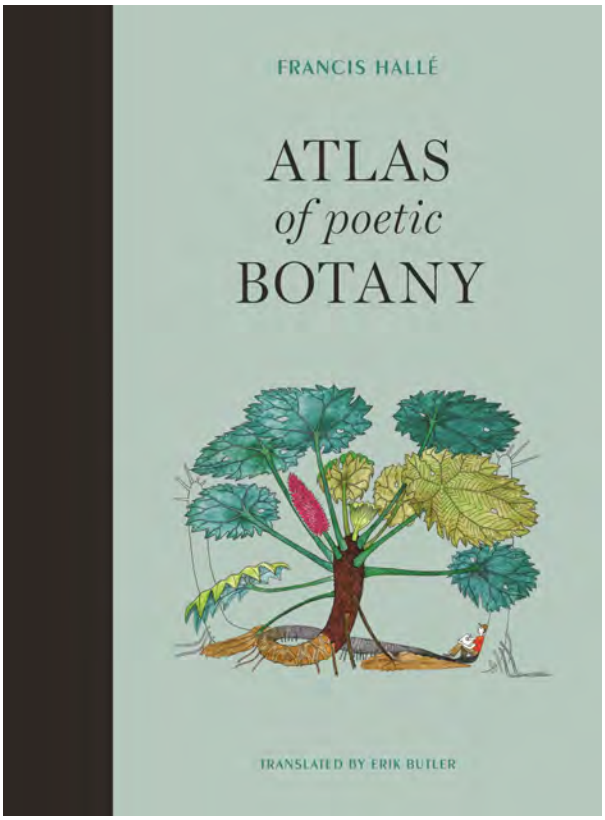
Most of the post-war German planners, architects and designers—like Pniower, Reinhold Lingner, and Walter Funcke—were new to me. Internet searches turned up little in English. One result referred to *The Oxford Companion to the Garden* for an entry on Pniower, but it failed me on most others. Although mentioned in the general entry for Germany, there are no individual profiles for Hennebo, Funcke or Lingner, who appears to have been at least as important as Pniower. Lingner "advocated for a productive city landscape;" Pniower "argued for a design based on Johann Heinrich von Thünen's circular city diagram." (And Ebenezer Howard's later garden city?) Dümpelmann chronicles in "Greening Trees: Replanting East and West Berlin" how species thrived or failed; how tree planting concepts, theories and plans were advanced for the revival of the divided city (or how division was disregarded in a West German initiated international competition that called for design proposals for an area that included a large part of East Berlin). This chapter is filled with plans and tables that unfortunately are reproduced at a scale that makes them nearly unreadable even with a magnifying glass. (Both Part One and Part Two plans reproduced in the sixteen page color insert are also frustratingly difficult to read.)

The chapter on street tree art—"Shades of Red: Art, Action, and Aerial Photography for a Green Berlin"— is a measure of how wide Dümpelmann's gaze ranges. She considers, among other German activists, Ben Wargin, "a West Berlin gallerist, sculptor, and environmental activist" who organized thirty tree-related happenings along a bus route; and Manfred Butzmann who created an award winning poster that showed "the voids left behind by vandalized, damaged, and felled trees" in East Berlin tree pits. There are works like Robert Smithson's Dead Tree, Christo and Jean Claude's Wrapped Trees, and Joseph Beuys's 7000 Oaks (a tree planting project with international spin-offs, including one in New York sponsored by Dia Foundation < *https://www.diaart.org/visit/visit/joseph-beuys-7000-oaks* >. Dümpelmann considers the reception and aftermath of this art and the impact of growing environmental awareness in both the East and West in the decades immediately preceding the fall of the wall. She contrasts bottom-up citizen initiatives in West Berlin to top-down, often coercive initiatives in the East. (One of the book's recurring themes is the power of combined bottom-up and top-down and public-private partnerships.)

In her introduction and epilogue, Dümpelmann summarizes what she identifies as similarities and parallels between the histories of street trees in New York and Berlin, but what I take away are the distinctions. Even the most barren and contested streets in the most infamous neighborhoods of Progressive Era and post-war New York seem not to have been as bleak as Berlin's post-apocalyptic streets with its endless rubble hills and its geography of hardening borders. Greening that wasteland whose streets were divided by ideologies and by an increasingly solid wall was a far cry from street tree activism in New York City. In this telling, New York's street tree stories are mostly upbeat; Berlin's are ones of loss. In contrast, I thought of Kenneth Helphand's *Defiant Gardens*: *Making Gardens in Wartime* (Trinity University Press, 2006) which was as much about life and hope as loss. Helphand provided a blurb for this book, and singled out her "linguistic ability" and "use of archival resources." Indeed, her careful reading of period newspapers, journals, and brochures and tenacious research that uncovered original documents and plans in archives and city offices (particularly in Germany) make *Seeing Trees* an invaluable contribution to our understanding of the multifaceted role of trees in cities. I only wished that Dümpelmann had panned out more often from the trees to the forest. Because the author has looked at her subject from so many perspectives, this book will interest professionals in many disciplines—like arboriculture, urban planning, public health, community organizing, and art—as well as being essential reading for landscape and environmental historians.

Maura Flannery, Professor of Biology, retired
St. John's University, New York
A version of this review appeared in *Herbarium World*, a blog written by Maura Flannery

Atlas of Poetic Botany by Francis Hallé in collaboration with Éliane Patriarca. Translated by Erik Butler. Cambridge, MA: MIT Press, 2018. 128 pages, 42 color illustrations. Hardcover, $24.95. ISBN: 9780262039123



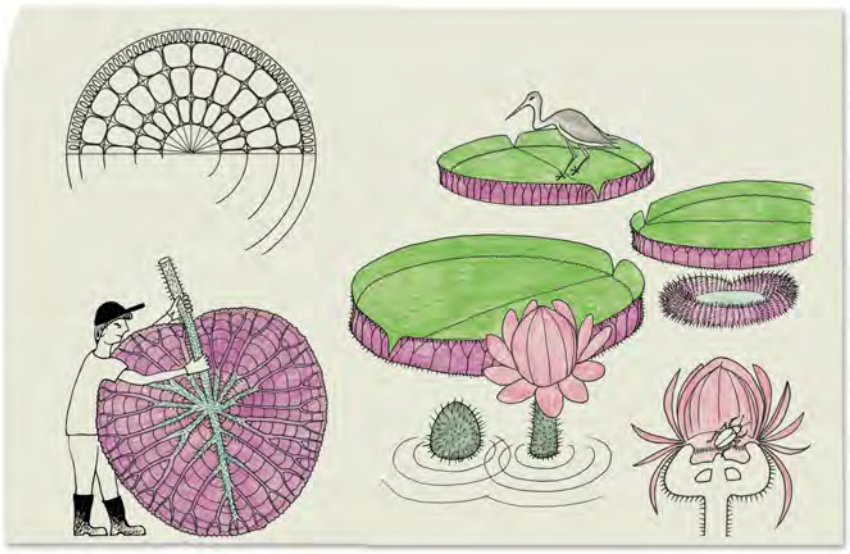
I picked up this book because of the title, thinking it might be somewhat like Molly Mahood's excellent *The Poet as Botanist* (Cambridge University Press, 2008). But in *Atlas of Poetic Botany* Francis Hallé is not writing about poetry; he is using "poetic" metaphorically in discussing plants that have lyrical, even somewhat magical properties. Hallé, professor emeritus of botany at the University of Montpellier in France, is noted for his research on tropical plants, particularly trees. He is coauthor of *Tropical Trees and Forests: An Architectural Analysis* (Springer-Verlag,1978) in which he envisioned studies in the forest canopy. His first idea was to use a dirigible to move through the upper reaches of trees, but winds made this impractical. Then he worked with a group of engineers and botanists to create a raft suspended from a dirigible. Others produced alternative designs with systems of pulleys and cranes. These technologies made it possible for biologists to finally spend more time in the upper reaches of tall tropical trees, studying the animals and plants living there and the intricate relationships among them. Hallé explained his work and its importance in a documentary on conserving tropical rainforests, *Once Upon a Forest*. This was made in collaboration with the filmmaker Luc Jacquet who also created the documentary, *March of the Penguins.*

Hallé is now 80 years old and is still passionate about tropical plants, as the *Atlas* reveals. This is a book aimed at the general reader, and its illustrations, drawn by the author, are as fascinating as the text. In his introduction he makes a strong case for the continuing need for botanists to draw, despite easy access to photography that can record a plant's form and color immediately. For Hallé, the advantage of drawing is what others would see as a disadvantage—it takes time: "To seize an ephemeral moment, as photography does, is to content oneself with limited information. The extended time required for drawing, on the other hand, amounts to a dialogue with the plant." That's a lovely phrase, "a dialogue with the plant," and isn't that what botanical research is about? Hallé also points out that this process involves the relationship not only between plant and observer, but between the observer's hand and brain. He then adds that botanical drawings give rise to emotions, luring the observer into further investigation of the subject.

A first glance at Hallé's drawings might be disappointing to those accustomed to standard botanical illustrations. His could be considered naïve but that's their charm: they are meant to teach, to be understandable to non-botanists. Hallé's chief tool is a pencil and not a very sharp one at that. Once he has the basic drawing down, he goes over the pencil lines with pen and ink, sometimes adding color. He might introduce a figure into the drawing, a human or an animal, to give a sense of scale. He does follow a few botanical illustration conventions such as adding enlargements of flowers or other pertinent structures. Some drawings are very diagrammatic, but almost all have a sense of whimsy, a poetry to them. At times Hallé plays with scale as in the cover illustration where he emphasizes the gigantic size of *Gunnera peltata* by adding a small artist drawing the plant, one who is in reality squirrel-

sized in relation to the leaves. For the giant waterlily *Victoria amazonica* he does a good job of representing its size and also its architecture.

Throughout the book Hallé's passion for tropical botany is evident. He is fascinated not just by trees, but by all the life connected to them. He is intrigued by plants that have developed what might be considered odd adaptations to survive in unusual environments. He notes that the flowers of the Amazonian tree *Duguetia calycina* are not to be found in its canopy. Instead, its lower branches hang down to the ground, grow underground to some distance from the trunk, and then produce flowers with a pleasant fragrance. They are probably pollinated by flying insects, but little is known about the tree or its relationships. Hallé adds that a totally different species from another family and growing in Cameroon, *Caloncoba flagelliflora*, has a similar habit, producing tiny white flowers on the forest floor. One of my favorites is a parasitic laurel, *Cassytha filiformis*. A tropical vine, it looks like a typical laurel when young, but once it finds a plant to crawl on, most of its chlorophyll disappears, and it fades to a yellow color after it punctures the host's bark to extract nutrients. This vine can engulf a tree to the point that, as Hallé writes, huge mango trees in Thailand were "covered by a *Cassytha*; they looked like they were wearing giant yellow wigs."



"THE GIANT LILY THAT INSPIRED THE ARCHITECT"
Victoria amazonica (Poeppig) Sowerby NYMPHAEACEAE

I hope I've given some sense of how poetic, in a visual as well as verbal sense, this book is. It introduced me to an author and to plants that are equally intriguing. And it reminded me once again of how important art is to botanical science. This is a book that would appeal to a variety of audiences, from students looking for odd plants to gardeners and other plant enthusiasts. Most botanists would also learn something here and at the very least be entranced by the format.

CBHL Conference Collaboration Grant Program

During the 2010 mid-winter CBHL Board Meeting, the Board established a grant program to encourage CBHL members' 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 Gardens Association, Special Libraries Association, Internet Librarian, or similar organizations.

The grantee would receive the funds before the meeting (up to $500) with the agreement the participant 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, Esther Jackson, ejackson@nybg.org, LuEsther T. Mertz Library, The New York Botanical Garden, 2900 Southern Boulevard, Bronx, NY 10458-5126

On the Web: Desert Gardens

By Stanley Johnston
Mentor, Ohio

Desert Botanical Garden. Photograph by Karli Foss

While it is currently early January and we are just about to get our first heavy snowfall in northern Ohio due to the weather patterns of an El Niño winter, publication schedules are such that we need to be looking forward to late Spring and our next annual meeting at the **Desert Botanical Garden** < *https://www.dbg.org/* > in Phoenix, AZ. While Beth Brand will provide information on the meeting and its' activities, we can look at their website for a preview of the venue. The current exhibits, unfortunately, will be gone by the time CBHL arrives for its May 14-17 meeting, but are of interest. The first is the **Electric Desert** < *https://www.dbg.org/exhibits/electric-desert/2019-01-15/* >, a sound and light tour of the garden produced by **Klip Collective** < *https://www.klip.tv/projects/* >, an experiential video shop based in Philadelphia which also did an earlier exhibit at Longwood Gardens. The second is **New Bloom: Industrial Nature by Michelle Stitzlein** < *https://www.dbg.org/exhibits/new-bloom/* >, featuring industrial waste transformed into designs resembling gardens of flowers or coral. A native of Ohio, more information on the artist and her works can be found at **Michelle Stitzlein** < *http://www.artgrange.com/* >.

Although not a part of the Desert Botanical Garden website, **Geodesign in a Desert Garden** < *https://www.esri.com/about/newsroom/arcwatch/geodesign-in-a-desert-garden/* > describes how Veronica Nixon uses various related computer products to monitor, plan, and build features at the Desert Botanical Garden.

Huntington Botanical Gardens Desert Garden. Photograph by Akos Kokai < *https://creativecommons.org/licenses/by/2.0/deed.en* >

Looking at other so-called desert gardens, my own favorite has always been the **Desert Garden at The Huntington** < *https://www.huntington.org/desert-garden* >, the massive collection of succulents in San Marino, CA, that I used to spend my mandatory lunch breaks wandering through while examining their Richard Pynson imprints for research for my graduate degrees in English. Others may be familiar with the **Desert Garden** < *https://www.balboapark.org/gardens/desert* > in Balboa Park in San Diego, CA. Much farther afield there is even a **Desert Garden** < *https://www.memphisbotanicgarden.com/desert-garden* > at the Memphis Botanical Garden in Tennessee and I can even remember a few cacti which grew outdoors at The Holden Arboretum here in northern Ohio. Most of the desert gardens tend to be in the west. Those in Arizona include **Carefree Desert Gardens** < *http://www.carefree.org/202/Carefree-*

Flowering agave at the Arizona-Sonora Desert Museum. Photograph by Puchku. < https://creativecommons.org/licenses/by-sa/3.0/deed.en >

Desert-Gardens > in Carefree; **Desert Garden Park** < https://www.scottsdaleranch.org/desert-garden-park/ > in Scottsdale; and that at the **Arizona-Sonora Desert Museum** < https://www.desertmuseum.org/visit/exhibits_desertgarden.php > in Phoenix. **Desert USA** < https://www.desertusa.com/ >, a massive site dealing with all aspects of United States deserts has an interesting article: **Massive Plant Collection Finds a New Home** < https://www.desertusa.com/desert-arizona/plant-collection.html > by Tom Domek detailing how the 5,000 to 6,000 desert plants of the Wallace Desert Gardens were moved and relocated from Phoenix to the **Boyce Thompson Arboretum** < http://www.btarboretum.org/ >, seventy-five miles away, near Superior, when the collection's endowment dried up.

Boyce Thompson Arboretum, Superior, Arizona. Photograph by DavidPinter. < https://creativecommons.org/licenses/by/3.0/deed.en >

Other desert gardens noted include **Red Hills Desert Garden** < https://redhillsdesertgarden.com/ > in St. George, UT, and a number of Texas **Desert Gardens** < https://tpwmagazine.com/archive/2018/may/wanderlist_cacti/ > in an article by Eva Frederic.

Turning to news stories on the web, the New York Times wrote an impressive obituary for **Jessica Tcherepnine** < https://www.nytimes.com/2019/01/11/obituaries/jessica-tcherepnine-dead.html >, the British-born botanical watercolorist who died at her home in Manhattan, featuring some of her paintings. **Japanese Experiment That Took Half A Century Ended In Tree Crop Circles** < https://www.boredpanda.com/tree-crop-circles-half-century-miyazaki-japan/?utm_source=google&utm_medium=organic&utm_campaign=organic > discusses an experiment to determine the effect of spacing in promoting tree growth and the crop circle like appearance it created. **Cloned Ancient Redwood Trees Could Be The Key to Fighting Climate Change** < https://nypost.com/2019/01/10/cloned-ancient-redwood-trees-could-be-the-key-to-fighting-climate-change/ > discusses the efforts of the Archangel Tree Archive to combat climate change and carbon dioxide buildup by planting "super groves" of cloned redwoods.

The 1935 (Old) Cactus Garden at Balboa Park, San Diego, California. Photograph by Captain-tucker . < https://creativecommons.org/licenses/by-sa/3.0/deed.en >

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