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LIST OF PARTICIPANTS

Leora Siegel, Chicago Botanic Garden Leigh Moran Armstrong, Armstrong-Johnston Mindy Spitz Johnston, Armstrong-Johnston

ABSTRACT AND STATEMENTS OF INNOVATION AND HUMANITIES SIGNIFICANCE

Abstract

The rare book and journal collection at the Chicago Botanic Garden Lenhardt Library yields a comprehensive perspective on five centuries of research in botany, botanical art, horticulture, and landscape design—from Theophrastus' editio princeps of 1483 to Charles Darwin's experiments with plants published in the 19th century. The proposed one-year project will research and evaluate best practices for disseminating recently digitized book and journal selections to a worldwide audience via a digital exhibition platform. The Garden will contract with Armstrong-Johnston, an image research and archival services firm based in Chicago, to consult on this work and present results in a findings report and template for online exhibition development. Grant outcomes will be disseminated to the Council on Botanical and Horticultural Libraries, European Botanical and Horticultural Libraries, Reaching Across Illinois Libraries System, and Biodiversity Heritage Library to provide a framework for adapting exhibitions of rare and significant humanities publications to the digital space.

Statement of Innovation

In a July 2014 issue of the *New Yorker*, Adam Gopnik writes that one of the key roles of museums is to "display an unusual object and explain its original meaning." The proposed project takes that conviction, shared by the Chicago Botanic Garden, to the digital realm. Through this project, the Garden will create a replicable prototype for an educational, easily navigable digital exhibition format that will provide publicly available, full-text access to a thoughtfully curated collection.

Statement of Humanities Significance

Rescued from the Massachusetts Horticultural Society in 2002, the Garden's rare book collection presents an outstanding portrait of the evolution of botany—uncovering relationships between science and art, botany and medicine, and humans and nature. The project will investigate ways to present this collection from publishing's earliest times through today's emerging medium of choice—digital media. Findings will result in a best practices framework for libraries and cultural institutions.

NARRATIVE

Enhancing the humanities through innovation. Since 2005, the Chicago Botanic Garden has received four NEH grants to catalog, conserve, and create online access to a rich collection of botanical volumes with exceptional value to the humanities—nearly 4,000 rare books, journals, and manuscripts rescued from the Massachusetts Horticultural Society, some dating to the 15th and 16th centuries. With its most recent award, a 2011 Humanities Collections and Reference Resources grant, the Garden is creating digital access to 45 of the rarest and most fragile botanical volumes and sharing theses treasures with the public through online and inhouse exhibits, research, and educational programming, and through online catalogs and digital repositories. The Northeast Document Conservation Center in Andover, Massachusetts recently completed conservation and digitization on 45 of these volumes. Catalog records are available through the Lenhardt Library's Web site and Online Computer Library Center (OCLC), and images are being contributed to the Illinois Digital Archives (http://www.idaillinois.org/) and are linked to the bibliographic record in the online catalog.

As a living museum, the Chicago Botanic Garden strives to translate its unique collection of rare botanical volumes into publicly accessible educational programming. Since 2006, the Garden's Lenhardt Library has hosted 28 ten-week exhibitions. These annual rare book exhibitions are presented in three oversized vitrines in the Library and often complement larger exhibitions in the gallery spaces immediately outside the Library. Free gallery talks and rare book viewings at the Library provide interpretation of the rich historical, botanical, artistic, sociological, and anthropological connections found in the rare book collection. Since data collection began in 2010, 155 groups, representing 2,326 individuals, have viewed 1,542 rare books within the Rare Book Room, and annual library attendance has grown significantly from 14,489 to 22,417. This one-year project will seize on the popularity of the Library's rare book exhibitions, and the Garden's earlier NEH-funded digitization and conservation work, to improve public programming through the research and planning of an innovative digital exhibition. The project will explore technological approaches for making a thematic selection of rare botanical volumes available to a worldwide audience, while preserving the integrity of primary source objects and allowing full-text public access.

The Garden will consult with the image research and archival services firm Armstrong-Johnston to perform this work. In collaboration with Leora Siegel, director of the Library, the firm will analyze and evaluate six digital exhibition models, namely those found at the Stanford University Libraries, Digital Public Library, British Library, Dumbarton Oaks, Biodiversity Heritage Library, and Smithsonian Library. Two important research questions, one specific to the Garden's botanical mission and the second of broad significance to the humanities, will guide the project.

- What are the specific steps for the Library to feature a digital exhibition accessible, engaging, and educational to an audience interested in women's relationship to botanical art?
- How can small libraries of cultural institutions with rare and unusual holdings present digital
 exhibitions in an educational, easily navigable format that will increase accessibility to these
 publications among a worldwide audience?

The project's methodology recognizes that libraries serving different constituencies and focused on the literature of dissimilar disciplines may present unique and valuable solutions to the technical and curatorial challenges of translating an onsite exhibition to the digital space. Moreover, the Center for Digital Research in the Humanities (CDRH) recommends that digital research projects be based on international standards, as they stand a greater chance of interoperating with similar sites, and are more likely to migrate successfully into new computing environments as file formats and standards change. Examples of the technical standards the project will examine through this project include the use of Extensible Markup Language (XML) for encoding content; the Text Encoding Initiative (TEI) as an application of XML for encoding textual content; adoption of non-proprietary data file formats; XQuery-based searches of XML content; the use of open-source database and web publishing frameworks; database searching; dynamic user-directed displays; audio and video representation; metadata schema for recording and maintaining files; and web design, navigation, and testing models.

Environmental scan. Recognizing the public education and humanities scholarship potential of rare volumes, libraries, botanical repositories, and universities across the U.S. and internationally are beginning to make such collections publicly accessible through on-line hosting of curated exhibitions. For example, the Digital Public Library of America presents thematically organized galleries of photographs, maps, advertisements, and other ephemera to educate users about significant chapters in U.S. history such as the gold rush and Great Depression. Stanford University Libraries' notable collections series excels in its use of multi-media interfaces to convey knowledge about race, gender, philosophy, and national identity in an engaging, interactive way. For the sheer quantity of its 30,000 selections, and for their novelty—such as music manuscripts written by Bach, Mozart, and Beethoven themselves—the British Library's online gallery offers a compelling framework in which to explore rare works.

Each of the evaluated exhibition models has advantages and drawbacks when applied to the content and scope of the Garden's collection, its intended audience, and the Library's goals: to keep rare volumes in tact as whole books, provide free full-text public access, offer engaging interpretation, and allow users to turn pages, access holdings information, share content on social media sites, and follow links to additional author and subject information. For example, Stanford University Libraries and the Digital Public Library of America effectively use digital asset management systems (Fedora and Omeka respectively) to integrate large photograph and video files into the virtual arena, yet neither places emphasis on rare print volumes. The British Library uses "Turning the Pages" software to approximate the experience of flipping through a print book. However navigation to the exhibition is confusing due to an overabundance of links. The Smithsonian Libraries provides full-text links to a remarkable collection of digital exhibitions, yet the Web architecture is poorly organized and visually lacking. Finally, the Biodiversity Library Exhibition's rare volumes are of considerable significance to botanical scholars and researchers in the aggregate, yet their value to the public is limited; the site is more a research compendium, less a sharply focused museum exhibition.

Through the project, the Garden will research and evaluate technical and design elements of these exhibitions to find solutions to the specific challenges the Library—and, by extension, other special collections, museum, botanic garden, arboreta, and academic libraries—confront in creating thematic digital exhibitions to engage and educate worldwide audiences. Consistent with NEH's goal to promote open access to exemplary digital humanities scholarship, the Garden's digital exhibition will allow for open public access to unabridged rare volumes.

History and duration of the project. The history of the project dates to the Garden's four-year NEH-funded grant project, "Conserving and Creating Digital Access to Rare Botanical Volumes Dating from the 16th to the 20th Century," begun in 2011 and designed to digitally preserve and conserve 45 rare botanical volumes formerly held by the Massachusetts Horticultural Society (MHS). Previously housed in a rare book room in the basement of MHS, the collection was subject to a 1996 flood and kept in unfavorable conditions due to insufficient staff and funding at MHS. Purchase of the collection represented both a singular opportunity for the Garden and an obligation to preserve the cultural history and literature of its discipline. A total of 14 digitized works have been uploaded to IDA to date, and the completed volumes can be viewed on the Library page: http://www.idaillinois.org/cdm/landingpage/collection/ncbglib01.

Staff have selected the 2013 exhibition, "The Feminine Perspective: Women, Artists and Illustrators," as the framework from which to create an online template for digital conversion. The exhibition was held in the Library August 23 to November 10, 2013, in conjunction with the 100th anniversary of women's suffrage in Illinois. The exhibition included hand-drawn plates, water-color sketches, copper engravings, and text panels of some of the first women to achieve prominence in the field of botanical illustration. A free talk by Ms. Siegel examined the work of Lady Harriet Ann Thiselton-Dyer, who took over as illustrator for *Curtis's Botanical Magazine* in 1878. Also featured were an earlier British artist, Henrieta Maria Moriarty; Frenchwoman Henriette Antoinette Vincent, who was connected to the royal court of Napoleon; and Americans Ellen Robbins and Helen Sharp. The onsite exhibition included nine rare volumes (five monographs & four journals) and eight text panels among the title sign, interpretive signs, and citations. An online exhibition

platform will allow the 21-volume, 1288-page collection to be exhibited in full and informed by historically significant essays from the Stories of the Rare Book series, written by Edward J. Valauskas.

The grant phase of the project will span May 1, 2015 to April 29, 2016. Following the grant term, the Garden will seek additional funding to develop and launch the "Feminine Perspective: Woman Artists & Illustrators" online. The project will be expanded, in phases, to feature online versions of the Garden's four annual rare book exhibitions. The Garden has a strong track record of securing funding from NEH and individual and private donors. Following the grant, the project director will pursue a Level II Digital Humanities Start-Up Grant to begin implementation. Funding will also be sought from a Library Services and Technology Act (LSTA) grant provided by the Institute of Museum and Library Services (IMLS).

Work plan. Leora Siegel will serve as project director. She will consult by phone and e-mail with Armstrong-Johnston twice monthly and oversee project activities. Project activities will be divided into five key deliverables, including a report and exhibition template that will serve as the basis for project evaluation.

- 1. **Survey Chicago Botanic Garden stakeholders,** including the Garden's IT and Web Development departments and Library staff. This survey will provide information regarding server capacity and limitations, preferred software and platforms; the depth and breadth of content description and discovery; and aesthetic criteria for a public interface.
- 2. **Survey of primary sources** identified by the Library for inclusion in its on-line exhibitions. This survey will provide necessary information regarding the volume of materials being considered for exhibition, inform software selection, and identify potential need for supplemental digitization.
- 3. Survey available content management systems (CMS) used for on-line library exhibitions, including Fedora, Omeka, Joomla, Drupal, and Wordpress. This step will include an assessment of online exhibitions hosted by six libraries, allowing for comparisons of available software. The survey will function to assess ease-of-use of open-source CMS platforms; ease-of-use of CMS platforms by Library staff during development; aesthetic options available "out of the box," such as layout and navigation; mechanisms for tracking site visitors; and navigational tools and metadata creation.
- 4. **Prepare a report containing findings and recommendations,** including justification for the selection of a single CMS suitable to the needs of the Library, as well as a comparison of technical capabilities with the needs of Garden stakeholders. The report will also compare navigational and aesthetic options against the criteria established by Garden stakeholders.
- 5. **Development of a template for exhibition development,** using digitized selections of the Library's rare book collection for content. This template will consist of a wireframe and sitemap, describing layout and navigation, and an interactive prototype.

Staff

<u>Leora Siegel</u>, director of the Lenhardt Library, will oversee the project at 12% salaried time. <u>Armstrong-Johnston</u>, a partnership between Leigh Moran Armstrong and Mindy Spitzer Johnston, will serve as project manager and be responsible for producing the five deliverable products. The firm will perform 200 hours of work to complete the three surveys, report, and digital template. A full description of staff qualifications is found under "Biographies."

Final product and dissemination. Grant outcomes will be disseminated to librarians, curators, and scholars through articles distributed to several online library consortiums, including the Council on Botanical and Horticultural Libraries (CBHL), European Botanical and Horticultural Libraries (EBHL), Reaching Across Illinois Libraries System (RAILS), and Biodiversity Heritage Library (BHL). Results will also appear on the Garden's online platforms, which clocked more than 76,000,000 website hits and 56,000 blog visits in the past year. The exhibition template and findings report will be useful to libraries and cultural institutions as a best practices framework for adapting exhibitions of rare and significant humanities publications to the digital space, where thoughtful, aesthetically pleasing curation may make these works accessible and enlightening to scholars and the broader public.



Budget Form

OMB No 3136-0134 Expires 7/31/2015

Applicant Institution: *Name*Project Director: *Name*

click for Budget Instructions Project Grant Period: 05/01/2015 through 05/29/2016

	click for badget instruction	<u></u>	T	·	·	,a. 03,01,	2013 till bugir o	3/23/2010
	Computational							
	Details/Notes	(notes)	Year 1	(notes)	Year 2	(notes)	Year 3	Project Total
			05/01/2015-					
			04/29/2016					
1. Salaries & Wages								
	Annual Salary: \$64,365							
Project Director (Leora Siegel)		12%	\$7,724	%		%		\$7,724
		%		%		%		\$0
		%		%		%		\$0
		%		%		%		\$0
		%		%		%		\$0
		%		%		%		\$0
2. Fringe Benefits								
Project Director	28%		\$2,163					\$2,163
								\$0
3. Consultant Fees								
Armstrong-Johnston, image	100 hrs x \$50/hr (online							
research & archival services	exhibition prototype)							
	100 hrs x \$50/hr (three							
	surveys & report)							640.000
	Jan veys & report)							\$10,000

4. Travel					
Project Director	One-day trip to				
	Washington, D.C. for NEH				
	planning meeting				
	(Chicago to D.C. Air \$300;				
	per diem: \$135 x 1 day)				
					\$435
					\$0
5. Supplies & Materials					
					\$0
6. Services					
					\$0
7. Other Costs					
7. Other Costs					\$0
					Ş0
8. Total Direct Costs	Per Year	\$9,886	\$0	\$0	\$20,321
9. Total Indirect Costs					
a. rate:42.96%					
b. base: total direct costs, less					
capital					
c. U.S. Department of the					
Interior					
d. Date of Agreement:					
01/27/2014	Per Year	\$0	\$0	\$0	\$8,730

10. Total Project Costs	(Direct and Indirect costs for entire project)				
11. Project Funding	a. Requested from NEH	Outright:	\$29,052		
		Federal Matching Funds:	\$0		
		TOTAL REQUESTED FROM NEH:	\$29,052		
	b. Cost Sharing	Applicant's Contributions:	\$0		
		Third-Party Contributions:	\$0		
		Project Income:	\$0		
		Other Federal Agencies:	\$0		
		TOTAL COST SHARING:	\$0		
12. Total Project Funding			\$29,052		

Total Project Costs must be equal to Total Project Funding ---> (\$29,052 = \$29,052 ?)

Third-Party Contributions must be greater than or equal to Requested Federal Matching Funds ----> ($$0 \ge 0 ?)



United States Department of the Interior

NATIONAL BUSINESS CENTER
Indirect Cost Services
2180 Harvard Street, Suite 430
Sacramento, CA 95815



January 27, 2014

Mr. Thomas J. Nissly, Executive Vice President and Chief Financial Officer Chicago Horticultural Society 1000 Lake Cook Road Glencoe, IL 60022

Dear Mr. Nissly:

Enclosed is the signed original negotiated indirect cost rate agreement that was processed by our office. If you have any questions concerning this agreement, please refer to the signature page for the name and contact number of the negotiator.

As a recipient of federal funds, you are required to submit Indirect Cost Proposals on an annually basis. Proposals are due within 6 months after the close of your fiscal year end and are processed on a first-in, first-out basis.

Common fiscal year end dates and proposal due dates are listed below:

Fiscal Year End Date	Proposal Due Date		
September 30 th	March 31 st		
December 31 st	June 30 th		
June 30 th	December 31 st		

Please visit our Web site at http://www.doi.gov/ibc/services/Indirect_Cost_Services/index.cfm for guidance and updates on submitting future indirect cost proposals. The website includes helpful tools such as a completeness checklist, indirect cost and lobbying certificates, sample proposals, excel worksheet templates, and links to other Web sites.

Sincerely,

Deborah A. Moberly

Office Chief

Enclosure

Ref: J:\Other (Non-Profit, Guam, VI, Puerto Rico)\Nonprofit\Chicago Horticultural Society (Chhsh681)\FYs 12F 14P\Issue Ltr.doc



Nonprofit Organization Indirect Cost Negotiation Agreement

EIN: 36-2225482

Organization:

Date: January 27, 2014

Chicago Horticultural Society 1000 Lake Cook Road Glencoe, IL 60022 Report No(s).: 14-A-0367(12F)

14-A-0368 (14P)

Filing Ref.:

Last Negotiation Agreement dated May 13, 2013

The indirect cost rates contained herein are for use on grants, contracts, and other agreements with the Federal Government to which 2 CFR 230 (OMB Circular A-122) apply, subject to the limitations contained in Section II.A. of this agreement. The rates are negotiated by the U.S. Department of the Interior, Interior Business Center, and the subject organization in accordance with the authority contained in 2 CFR 230.

Section I: Rates

		Effecti	ve_Period			Applicable	
Туре		From	То	Rate*	Locations	То	
Final		01/01/12	12/31/12	42.58%	All	All Programs	
Provisional		01/01/14	12/31/14	42.96%	All	All Programs	

*Base: Total direct costs, less capital expenditures and the portion of subgrants or subcontracts in excess of the first \$25,000.

Treatment of fringe benefits: Fringe benefits applicable to direct salaries and wages are treated as direct costs; fringe benefits applicable to indirect salaries and wages are treated as indirect costs.

Treatment of paid absences: Vacation, holiday, sick leave, and other paid absences are included in salaries and wages and are claimed on grants, contracts, and other agreements as part of the normal cost for the salaries and wages. Separate claims for the costs of these paid absences are not made.

Section II: General

Page 1 of 3

A. Limitations: Use of the rate(s) contained in this agreement is subject to any applicable statutory limitations. Acceptance of the rate(s) agreed to herein is predicated upon these conditions: (1) no costs other than those incurred by the subject organization were included in its indirect cost rate proposal, (2) all such costs are the legal obligations of the grantee/contractor, (3) similar types of costs have been accorded consistent treatment, and (4) the same costs that have been treated as indirect costs have not been claimed as direct costs (for example, supplies can be charged directly to a program or activity as long as these costs are not part of the supply costs included in the indirect cost pool for central administration).

- B. Audit: All costs (direct and indirect, federal and non-federal) are subject to audit. Adjustments to amounts resulting from audit of the cost allocation plan or indirect cost rate proposal upon which the negotiation of this agreement was based will be compensated for in a subsequent negotiation.
- C. Changes: The rate(s) contained in this agreement are based on the organizational structure and the accounting system in effect at the time the proposal was submitted. Changes in organizational structure, or changes in the method of accounting for costs which affect the amount of reimbursement resulting from use of the rate(s) in this agreement, require the prior approval of the responsible negotiation agency. Failure to obtain such approval may result in subsequent audit disallowance.

D. Rate Type:

- 1. Fixed Carryforward Rate: The fixed carryforward rate is based on an estimate of the costs that will be incurred during the period for which the rate applies. When the actual costs for such periods have been determined, an adjustment will be made to the rate for future periods, if necessary, to compensate for the difference between the costs used to establish the fixed rate and the actual costs.
- 2. Provisional/Final Rate: Within 6 months after year end, the final rate must be submitted based on actual costs. Billings and charges to contracts and grants must be adjusted if the final rate varies from the provisional rate. If the final rate is greater than the provisional rate and there are no funds available to cover the additional indirect costs, the organization may not recover all indirect costs. Conversely, if the final rate is less than the provisional rate, the organization will be required to pay back the difference to the funding agency.
- 3. Predetermined Rate: The predetermined rate contained in this agreement is based on estimated costs which will be incurred during the period for which the rate applies and is normally not subject to subsequent carry-forward adjustments. However, if material changes occur in the grantee/contractor's cost structure, adjustments to the rate may be necessary to compensate for the effects of such changes.
- E. Agency Notification: Copies of this document may be provided to other federal offices as a means of notifying them of the agreement contained herein.
- F. Record Keeping: Organizations must maintain accounting records that demonstrate that each type of cost has been treated consistently either as a direct cost or an indirect cost. Records pertaining to the costs of program administration, such as salaries, travel, and related costs, should be kept on an annual basis.
- G. Reimbursement Ceilings: Grantee/contractor program agreements providing for ceilings on indirect cost rate(s) or reimbursement amounts are subject to the ceilings stipulated in the contract or grant agreements. If the ceiling rate is higher than the negotiated rate in Section I of this agreement, the negotiated rate will be used to determine the maximum allowable indirect cost.

- H. Use of Other Rate(s): If any federal programs are reimbursing indirect costs to this grantee/contractor by a measure other than the approved rate(s) in this agreement, the grantee/contractor should credit such costs to the affected programs, and the approved rate(s) should be used to identify the maximum amount of indirect cost allocable to these programs.
- I. Central Service Costs: Where central service costs are estimated for the calculation of indirect cost rate(s), adjustments will be made to reflect the difference between provisional and final amounts.

J. Other:

- 1. The purpose of an indirect cost rate is to facilitate the allocation and billing of indirect costs. Approval of the indirect cost rate does not mean that an organization can recover more than the actual costs of a particular program or activity.
- 2. Programs received or initiated by the organization subsequent to the negotiation of this agreement are subject to the approved indirect cost rate(s) if the programs receive administrative support from the indirect cost pool. It should be noted that this could result in an adjustment to a future rate.
- 3. This negotiation agreement is entered into under the terms of an Interagency Agreement between the U.S. Department of the Interior and the cognizant agency. No presumption of federal cognizance over audits or indirect cost negotiations arises as a result of this Agreement.
- 4. New indirect cost proposals are necessary to obtain approved indirect cost rate(s) for future fiscal or calendar years. The proposals are due in our office 6 months prior to the beginning of the year to which the proposed rate(s) will apply.

Section III: Acceptance

By the Nonprofit Organization:

Listed below are the signat	ures of acceptance	for this	agreement:
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Chicago Horticultural Society
Grantee/Contractor

Thomas J. Nissly
Name (Type or Print)

Executive Vice President + CFO

January 21, 2014

By the Cognizant Federal Government Agency:

U.S. Department of the Interior Cognizant Agency

Signature

Deborah A. Moberly

Name

Office Chief

Office of Indirect Cost Services

Title

U.S. Department of the Interior

Interior Business Center

Agency

Date

Negotiated by Mark W. Stout Telephone (916) 566-7270

BIOGRAPHIES

Leora Siegel has served as director of the Chicago Botanic Garden's Lenhardt Library since 2007. Ms. Siegel is very familiar with the Library's collection, its use, and the digital archival and exhibition of rare volumes. As director, she is responsible for the collection development of all library resources in all formats, the management of 10 full-time staff and 130 volunteers in the Library and Plant Information departments, and the administration of the library's operating and capital budgets. She has served as project director for grants awarded by the National Endowment for the Humanities and Library Services and Technology Act, and she currently serves on the Executive Board of the Illinois Library Association and Evanston Public Library Board of Trustees. Prior to becoming director, Ms. Siegel served as the Library's technical services librarian, reference librarian, and manager. She holds a Master of Science in Library and Information Science from the University of Illinois at Urbana-Champaign, and a Master of Science from the School's Department of Natural Resources & Environmental Sciences.

Armstrong-Johnston is an image research and archival services firm based in Chicago, Illinois. The firm specializes in project management and curation of digital exhibitions and online collections, as well as image and historical research for publications, documentaries, exhibitions, and new media. Their previous clients include the Smithsonian Institution, National Museum of African American History and Culture, Chicago History Museum, and Museum of Science and Industry. Leigh Moran Armstrong and Mindy Spitzer Johnston forged their professional partnership in 2010. They have a combined 25 years of experience working with archival collections, as well as a shared love of history, visual culture, and a commitment to making archival resources available to the wider public. Each brings a unique and complimentary set of skills and experience.

Mindy Spitzer Johnston has spent much of her professional career at the Chicago History Museum and the Harvard Law School Library. From 1999-2006, Johnston held a variety of positions at CHM including project editor of the Haymarket Affair Digital Collection, project archivist for the American Experience documentary Chicago: The City of the Century, and assistant curator for the Museum's permanent exhibition Chicago: Crossroads of America. Johnston became the Law School's Curator of Digital and Visual resources in 2006. There she managed digital projects and curated the Library's collection of painted portraits, prints and photographs, and objects. From 2009-2010, she worked with the Library as a Digital Projects Consultant. Johnston has extensive experience in selecting, cataloguing, and interpreting two- and three-dimensional artifacts and approaches archival and digital project work from the perspective of a researcher, historian, and curator.

Leigh Moran Armstrong began her career in visual material archives at the Chicago History Museum, where she worked as an Imaging Specialist and as the Collection manager for the museum's extensive prints and photographs collection from 1999-2007. At CHM, Armstrong appraised and acquired historically significant collections, negotiated terms of use with donors, directed volunteer and grant-funded staff on processing projects, curated exhibitions, and worked collaboratively on publications. Before launching Armstrong-Johnston in 2010, she worked on a freelance basis processing private photographic archives and conducting historic picture research on behalf of publishers, designers, and production companies. She is certified by the Academy of Certified Archivist.

DATA MANAGEMENT PLAN

Expected data

Through this project, the Chicago Botanic Garden will produce five principal documents: a stakeholder survey, a primary source survey, a content management survey, a findings report, and a digital exhibitions template. Additional materials include the exhibition's title signs, interpretive signs, citations, and essays from the "Stories from the Rare Book Collection." All of these documents and their associated metadata will require limited storage capacity of less than 10GB. The documents will be saved as one or more of the following file formats: Microsoft Word, Microsoft Excel, Adobe InDesign, and Adobe PDF. The archival services consultant Armstrong Johnston will maintain a detailed time log explaining the procedures and analyses involved in data and metadata generation.

The Northeast Document Conservation Center in Andover, Massachusetts recently completed scanning and digitization of the 21 volumes and 1288 pages of "The Feminine Perspective" exhibition. Catalog records are currently available through the library's Web site and Online Computer Library Center (OCLC). Individually scanned and photographed pages are stored to the I-drive of the Chicago Botanic Garden's network as TIFF and JPEG file formats and backed up on a cloud-based server. Images and text pages are retained in the Illinois Digital Archives (IDA) (http://www.idaillinois.org/), a repository for the digital collections of the Illinois State Library and other libraries and cultural institutions in the State of Illinois.

Period of data retention

Leora Siegel, project director, will have overall responsibility for data management over the course of the research project and will monitor compliance with the plan. From May 1 to June 31, 2015, working drafts of the three surveys, findings report, and sample exhibition templates will be hosted on a password-protected page of Armstrong-Johnston's website. During this time, Siegel will have access to the documents for viewing and downloading. Armstrong-Johnston will supply the research data from this project to the Chicago Botanic Garden by July 1, 2014, so that any issues surrounding the usability of the data can be resolved. The Lenhardt Library will archive the full data set and its documentation for the long-term, supporting the data through changing technologies, new media, and data formats. Should Leora Siegel leave the Garden, responsibility for data management will be transferred to Greg Mueller, chief scientist and Negaunee Foundation Vice President of Science at the Garden, until a succeeding Library Director assumes responsibility.

Data formats and dissemination

The research data from this project will be submitted for inclusion within the Illinois Digital Archives (IDA) (described above), and the Biodiversity Heritage Library (BHL). BHL founding member libraries are based at universities, botanical gardens, and natural history museums, and include renowned institutions such as the Missouri Botanical Garden, Smithsonian Institution, Harvard University, and the Royal Botanic Gardens Kew. These libraries contribute digital scans of books and journals in their collections. The data management plan proposed leverages capabilities of trained archival staff at IDA and BHL to ensure the public, as well as the botanical, humanities, natural science, and library science research communities, have long-term access to the data.

Intellectual Property Rights – The Chicago Botanic Garden holds the copyright for nearly all files included in the digital exhibition. Where the Garden does not hold copyright, it has permission to reuse the content for non-commercial purposes as an affiliate of BHL. By depositing with IDA and BHL, investigators do not transfer copyright but instead grant permission for IDA and BHL to redisseminate the data and to transform the data as necessary to protect confidentiality, improve usefulness, and facilitate preservation. The Garden will hold the copyright for all new research data generated through the project.

Metadata – The Chicago Botanic Garden will create substantive metadata in compliance with the most relevant standard for digital humanities research projects —NISO (National Information Standards

Organization) recommended practice for building good digital collections. These guidelines are set forth in the 3rd edition of *A Framework of Guidance for Building Good Digital Collections*. Presently, catalog records for all scanned exhibition images are maintained on library's Web site and Online Computer Library Center (OCLC) in accordance with MARC 21, a long-established standard for exchanging bibliographic records. Developed by the Library of Congress, the MARC XML metadata schema provides for tagging of content, which facilitates preservation and enables flexibility in display. A study-level metadata record will be created for all new research data. A standard data citation with a digital object identifier (DOI) will be provided to facilitate attribution. The DOI provides permanent identification for the data and ensures that they will always be found at the URL specified.

Ethics and Privacy – Informed consent: For this project, informed consent statements, if applicable, will not include language that would prohibit this data from being shared with the research community. Disclosure risk management: The internal stakeholder survey and findings report will remove any direct identifiers in the data before deposit with IDA and BHL. Once deposited, the data will undergo procedures to protect the confidentiality of individuals whose personal information may be part of the archived data. These include: (1) rigorous review to assess disclosure risk, (2) modifying data if necessary to protect confidentiality, (3) limiting access to datasets in which risk of disclosure remains high, and (4) consultation with Armstrong-Johnston to manage disclosure risk. The data will be processed and managed in a secure environment using virtual desktop technology.

Data storage and preservation of access

Archiving and Preservation

All image and text files will be retained on the I-drive of the Chicago Botanic Garden's network and backed up on a cloud-based server. Following the grant, the creation of the digital exhibition, hosted on an off-site server, will ensure preservation of access to images and text pages. Original copies of the rare volumes to be included in the digital exhibition are retained in a humidity- and temperature-controlled room of the Lenhardt Library. The Garden will ensure that the research data are migrated to new formats, platforms, and storage media as required by good practice in the digital preservation community. Good practice for digital preservation requires that an organization address succession planning for digital assets. The Garden has a commitment to designate a successor in the unlikely event that such a need arises.

Storage and backup

Research has shown that multiple locally and geographically distributed copies of digital files are required to keep information safe. Accordingly, the Garden will place a master copy of each digital file (i.e., research data files, documentation, and other related files) in the digital archives of IDA and BHL, with additional copies stored on the I-drive of Garden's network and with Armstrong-Johnston.

LETTERS OF SUPPORT AND COMMITMENT



22 August 2014

Leora Siegel Director, Lenhardt Library Chicago Botanic Garden 1000 Lake Cook Road Glencoe, IL 60022

Dear Ms. Siegel:

I was pleased to learn of the Chicago Botanic Garden intention to submit a proposal to the National Endowment for the Humanities for a Digital Humanities Start-Up grant. Please accept my enthusiastic support for this initiative to research and develop online exhibition prototype to display the Lenhardt Library's rare book collection.

As we discussed, my work as Program Director of the Biodiversity Heritage Library (BHL) involves collaboration with an international consortium of libraries in the digitization of biodiversity literature. The BHL helps ensure that literature of our biodiversity heritage is made available to a global audience through open access principles.

I was pleased that the Lenhardt Library chose to become a BHL Affiliate in May, 2014. Your enthusiasm for participation in BHL is a model for other BHL affiliates. We look forward to your plans to contribute to the consortium early horticultural literature unique to the collection. Your proposed project to investigate ways to make these rare botanical volumes more accessible through online exhibitions is a logical next step in literature preservation and interpretation. It warrants the close attention of other natural history and botanical libraries, museums, botanic gardens, and arboreta.

I look forward to tracking your progress with this work and to your sharing project results. Please let me know if BHL can assist in other ways with dissemination. If you have any questions, contact me at 202.633.1705 or via email at: KalfatovicM@si.edu.

Respectfully,

Martin R. Kalfatovic

Mar Kulfal

Program Director, Biodiversity Heritage Library | Associate Director, Smithsonian Libraries Smithsonian Institution Washington, DC

University Library

Digital CollectionsNorthwestern University Library
1970 Campus Drive
Evanston, Illinois 60208-2323



September 4, 2014

Leora Siegel Director, Lenhardt Library Chicago Botanic Garden 1000 Lake Cook Road Glencoe, IL 60022

Dear Ms. Siegel:

I am writing to express my wholehearted support for the Chicago Botanic Garden's proposal to the National Endowment of the Humanities. This project will inform my work involving digital humanities collections as Head of Digital Collections and Scholarly Communication Services at Northwestern University.

I offer my endorsement both as a librarian and a scholar. In presentations at meetings of the American Library Association and the Coalition for Networked Information, I have spoken extensively about digital content issues facing academic libraries and ways in which web-based workflow software may be used to digitize and disseminate books. Digital exhibition represents a new frontier in how libraries may collect and interpret valuable literature to the public.

When I learned of this project, and its intention to serve as a best practices framework for libraries seeking to exhibit rare and significant collections online, I was immediately supportive. My institution has recently identified the intersection between digital collections management and online exhibitions as an area requiring closer study. We do not yet have a satisfactory solution for producing such exhibits, but will wish to implement a solution within the next 12-36 months. The work of the Chicago Botanic Garden's project will be tremendously helpful to Northwestern University Libraries.

The scholarly value of a collection that includes texts on such subjects as flora at the time of European settlement, the history of agriculture in America, and prominent female botanical artists of the Victorian era makes the proposed project particularly significant to the humanities.

Ensuring that rare and significant works are openly accessible and curated in a meaningful way is integral to increasing their value to students, scholars, and the broader public. Therefore, I fully support the Garden's efforts to share its rare collections via digital exhibition. If you have any questions, please contact me at (847) 467-1473.

Sincerely,

M. Claire Stewart

Head, Digital Collections

Director, Center for Scholarly Communication and Digital Curation

Northwestern University Library



August 4, 2014

Leora Siegel Director, Lenhardt Library Chicago **Botanic Garden** 1000 Lake Cook Road Glencoe, IL 60022

Dear Ms. Siegel,

Thank you for your interest in retaining Armstrong---Johnston for the Lenhardt Library's Digital Exhibitions Project. We understand that you are currently preparing an application for the National Endowment for the Humanities' Digital Start Up Grant.

I am writing to let you know that we are fully committed to seeing your project through and have set aside the months of May and June, 2015 to complete all work, should you be awarded grant--funds. We anticipate a weekly commitment of no less than 25 hours.

In order to complete work as described in our project proposal, we will require regularly scheduled weekly meetings with you, Project Director, in order to insure that we meet your goals and expectations for this work.

Once again, I thank you for your interest in our company – we are delighted to have the opportunity to work with you again.

Sincerely,

Leigh Armstrong

Leigh Armstrong

APPENDICES

Appendix A: Photographs from "The Feminine Perspective: Women, Artists, and Illustrators"

Case 1 photograph, featuring the following book:

Moriarty, Henrietta Maria. Fifty Plates of Green-House Plants, Drawn and Coloured from Nature: With Concise Descriptions and Rules for Their Culture: Intended Also for the Improvement of Young Ladies in the Art of Drawing. London: Printed for the author by T. Bensley, 1807.

The complete work can be viewed on the Lenhardt Library's collection in the Illinois Digital Archives (IDA) at: http://www.idaillinois.org/cdm/compoundobject/collection/ncbglib01/id/4354/rec/1.



Case 2 photograph, featuring four plates by botanical illustrator Harriet Thiselton-Dyer published in four issues of *Curtis's Botanical Magazine*

The complete work is found in the full-text in the Biodiversity Heritage Library. The Chicago Botanic Garden's Lenhardt Library has recently been accepted as an affiliate member of the digital resources of botanical literature.

Vol. 104, 1878; Plate 632, *Xiphion planifolium* http://www.biodiversitylibrary.org/item/14232#page/49/mode/1up

Vol. 105, 1879; Plate 6414, *Euchlaena luxurians* http://www.biodiversitylibrary.org/item/14233#page/36/mode/1up

Vol. 104, 1880; Plate 6507, *Bucklandia populnea* http://www.biodiversitylibrary.org/item/14234#page/120/,pde/1up

Vol. 132, 1906; Plate 8088, *Bulbophyllum ericssona* http://www.biodiversitylibrary.org/item/14223#page/115/mode/1up



Case 3 photograph, featuring four rare volumes:

Robbins, Ellen, and Gertrude M. Graves. *Autumnal leaves*. S.l: s.n, 1868. http://www.idaillinois.org/cdm/compoundobject/collection/ncbglib01/id/3364/rec/1

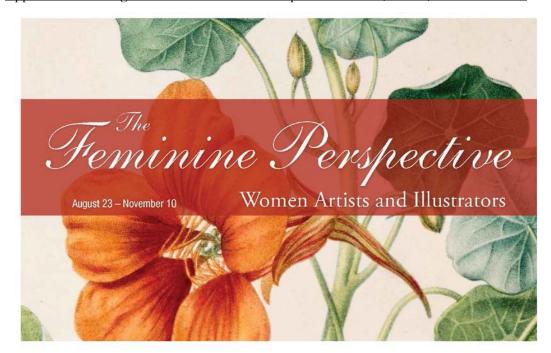
Sharp, Helen. Water-Color Sketches of Plants of North America and Europe S.l.: s.n., 1888 – 1910

Two volumes Sharp created. All 18 are available in IDA Album 5: Purple Amaranth, September 23, 1898
http://www.idaillinois.org/cdm/compoundobject/collection/ncbglib01/id/4631/rec/12
Album 15: Cardinal-Flower, August 4, 1900
http://www.idaillinois.org/cdm/compoundobject/collection/ncbglib01/id/5202/rec/8

Vincent, Henriette Antoinette. Études de fleurs et de fruits: peints d'après nature. Paris: Chez Bance aîné, Md. d'Etampes, 1820 http://www.idaillinois.org/cdm/compoundobject/collection/ncbglib01/id/4290/rec/1

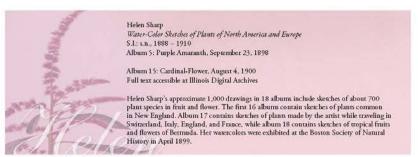


Appendix B: Text Signs from "The Feminine Perspective: Women, Artists, and Illustrators"





Case 3 sign 1



Case 3 sign 2

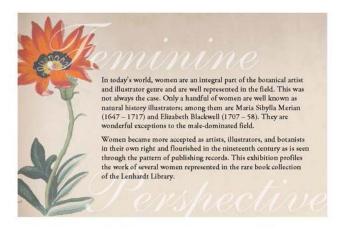
Lady Harriet Ann Thiselton-Dyer (1854 – 1945) was born into an influential botanical family whose encouragement led her to become a renowned botanical illustrator. Her grandfather, Sir William Hooker, turned Kew Gardens into a national garden. Her father, Sir Joseph Dalton Hooker, was the second director of the Royal Botanic Gardens at Kew. In 1877, she married William Turner Thiselton-Dyer, who later became the third director of Kew. Harriet and William had two children.

In 1878, Harriet Ann Thiselton-Dyer became the botanical illustrator for Curtis's Botanical Magazine published at Kew Gardens while her father was the editor. The purpose of the magazine, continuously published from 1787 with varying titles, was to showcase the plant collections of the gardens at Kew collected locally and on international plant explorations through botanical illustrations and descriptions.

The circumstances of her taking over this renowned and difficult position involved some drama. Walter Hood Fitch had been the botanical artist for Curtis's Botanical Magazine until his sudden resignation due to a disagreement about payment for completed drawings with Sir Joseph Hooker. The magazine was put in a difficult situation and faced possible delays in publication. Harriet was convinced by her father to take over from Fitch and to become the botanical illustrator for Curtis's Botanical Magazine. Fitch had previously mentored her in the craft. She became the primary botanical illustrator for the magazine in 1878, and through pregnancy and child-rearing, continued illustrating occasionally until 1906. The excellence of her work for the magazine set the stage for future women botanical illustrators at the magazine.

Lady Harriet Thiselton-Dyer was a skillful artist, as reflected in her beautifully detailed botanical representations of plant specimens. Her scientific renditions of these specimens captured the essence of the plant that was essential for botanists. As there was no color photography in the late nineteenth century, the scientific illustration of the flowering specimen was the best method of depiction. During her career, she illustrated approximately ninety drawings, with many of the originals still preserved at Kew Gardens.

Case 2 sign 1



Case 1 sign 1

Henricite Antoinette Vincent (1786 – 1830)

Enudes de Fleurs et de Fruits
Paris: Chez Bance ainé, Md. d'Etampes, ca. 1820
Full text accessible at Illinois Digital Archives

Henricite Antoinette Vincent was connected to the royal court of Napoleon. Enamored of roses, Empress Josephine commissioned artist Pictre Joseph Redouté to paint her extraordinary collection. Vincent was a sindent of Redouté and in 1820, she published a book of itealistic firitix and vegetables – scientifically perfect representations that included defects, bruites, and insects. Her work was schibted at the Paris Salon between 1814 and 1824.

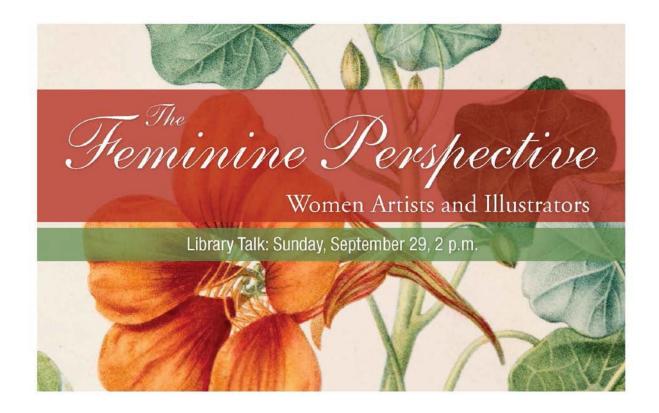
Case 3 sign 3



Case 1 sign 2

Curtis's Behanical Magazine
London: Reeve Brothen,
Vol. 104, 1878, Plaze 65 52: Xiphion planifolium
Vol. 105, 1879; Plaze 6414: Euchharus Incurtam
Vol. 105, 1880; Plaze 5075; Bucklanda populna
Vol. 132, 1906; Plaze 8088: Bulloophyllum ericsioni
Look for "HTD" ('Harriet Thielton-Dyer) on the lower left corner of the illustration

Case 2 sign 2



Appendix C: Stories from the Rare Book Collection by Ed Valauskas, Curator of Rare Books

Henriette Vincent, star pupil of Redoute | Chicago Botanic Garden

Page 1 of 2



Henriette Vincent, star pupil of Redoute

January 2013



There is a special rarity in the rare book collection of the Lenhardt Library, a work so unusual that you might have to travel to the Bibliothèque nationale in Paris to see another copy, because of its unique illustrations.

Its 48 plates are so beautiful that it meant that many copies were guillotined by print dealers to sell, one by one, this book's heart. Entitled Études de fleurs et de fruits: Peints d'après nature, this incredibly scarce work was created around 1820, the graphic effort of a Madame Vincent, who tellingly noted that her magnum opus is "dédié aux jeunes demoiselles."

Madame Henriette Vincent (1786-1830) was one of the most outstanding students of the one of the most famous French artists of the nineteenth century, Pierre-Joseph Redouté (1759-1840). She excelled at creating paintings like Redouté, with fine detail and naturalistic touches. The coloring of her stipple engravings is superlative, rivaling her teacher. Madame Vincent represents the apex of women as artists in the first half of the nineteenth century. Her ability was her own, but her opportunities were created by other women, working in the eighteenth century, to make art by women more acceptable.

Drawing flowers was seemingly always an activity acceptable to girls and young ladies. To move from art as a hobby to a profession was difficult, although there was precedent in Europe. In medieval western Europe, women were often found as illuminators and colorists of manuscripts. Indeed, there is evidence from guild records that in some cases women represented up to a quarter of all members in those guilds specializing in manuscript work.

Still life painting provided ample opportunities for women to demonstrate their skills, especially in seventeenth century Netherlands. There were unique individuals, such as Maria Sibylla Merian (1647-1717), who demonstrated her special observational skills and artistic talent, culminating in her *Metamorphosis Insectorum Surinamensium*, published in 1705. Merian's abilities were recognized by many, not the least Peter the Great (1672-1725), who acquired some of her painting in Amsterdam after her death.

Henriette Vincent's opportunities were created by well connected former students of Redouté, Marie Antoinette (1755-1793) and Empress Joséphine de Beauharnais (1763-1814), Napoléon Bonaparte's first wife. These powerful women, with their personal interests in botany, horticulture, and art, made it fashionable and proper for girls and women to pursue scientific curiosity in natural history as well as artistic ventures. But to make it possible for Madame Vincent to repeatedly exhibit in the Paris Salon in 1814, 1819, 1822, and 1824 was largely due to the efforts in the late eighteeenth century of Adélaide Labille-Guiard (1749-1804), a talented French painter, member of the Académie de Saint-Luc at the age of 20 as well one of the few women elected a member of the Académie Royale de Peinture et de Sculpture.

Labille-Guiard's training is unknown since male masters were not encouraged to take on female students. Her considerable skills certainly received some special guidance, with her pastels and oil paintings earning considerable praise. Like Redouté, Labille-Guiard avoided condemnation by the Revolution, campaigning for the rights of women and wisely painting portraits of members of the Assemblée nationale, such as Maximilien de Robespierre (1758-1794). Labille-Guiard's political acumen and artistic talent were a powerful combination, and set the stage for women to have a more recognized role in the French artistic world. Prominent individuals such as Redouté could have glamorous students such Empress Joséphine but also talented individuals such as Henriette Vincent.

Redouté, like Labille-Guiard, was politically savvy in his own way, surviving the Revolution, playing a prominent part as an artist and instructor among the wealthy and powerful. At the age of 23, he had left his home in Belgium to join his older brother in Paris. Within a few short years, his talent was recognized by botanist Charles Louis L'Hériter de Brutelle (1746-1800). Thanks to L'Héritier, Redouté found his way to Versailles and make her an impression on Marie Antoinette, leading to an official appointment in the Court. His connections and talent later brought him to Empress Joséphine, acting as her artistic advisor. Joséphine gave Redouté many

http://www.chicagobotanic.org/library/stories/vincent

8/4/2014

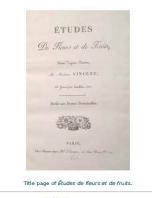
Henriette Vincent, star pupil of Redoute | Chicago Botanic Garden

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opportunities, especially to educate talented women as painters and illustrators.

Examining the plates in *Études de fleurs et de fruits*, we might see on the surface stunning representations of flowers, fruit, and insects. With a magnifying lens, we can examine details in stipple engravings and a delicacy of colors and shading. To me, however, I see these images as a window to another time, to a world dedicated to describing the natural world with new eyes and tools. *Études de fleurs et de fruits* takes us to a lost and distant world of Adélaide Labille-Gulard and Henriette Vincent, women with vision for all time.

Edward J. Valauskas, Curator of Rare Books January 2013



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