

**Yale University Library
Preservation Department**

**45th Annual Report
July 2015-June 2016**

**Roberta Pilette
January 17, 2016**

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Roberta Pilette, Director of Preservation and Chief Preservation Officer
Murray Harrison, Senior Administrative Assistant

| Preservation Staffing: | July 1, 2015 | June 30, 2016 |
|-------------------------------|---------------------|----------------------|
| Positions budgeted: | | |
| C&T | 11.00 | 11.00 |
| M&P | 10.47 | 11.00 |
| Positions filled: | | |
| C&T | 9.00 | 11.00 |
| M&P | 10.47 | 11.00 |

OVERVIEW OF THE DEPARTMENT

The Yale University Library Preservation Department is responsible for the long-term preservation of all library materials. The Department consists of four units—Preservation Services; Digital Reformatting & Microfilm Services (DRMS); Conservation & Exhibition Services (CES) including Collections Conservation & Housing (CCH), Special Collections Conservation (SCC) and Exhibit Production Support (EPS); and Digital Preservation Services. The Department organizational chart can be found in Appendix I, the annual statistics for the Department can be found in Appendix II.

344 Winchester moving & more construction

The construction of that portion of the department associated with the Beinecke Rare Book & Manuscript (BRBL) Technical Services construction was completed during the first quarter of FY16. The move for Preservation Administration, Preservation Services, and Digital Preservation Services took place in August 2015. Those moves went smoothly and the units settled into the new spaces. Digital Preservation Services moved all of their equipment into their new spaces and spent the year making significant use of the enlarged work areas. Digital Preservation and the Born Digital Working group collaborated on the specifications for the new di Bonaventura Digital Archeology and Preservation laboratory. Once moved into the new space extensive work was required to install equipment in the lab including building new disk imaging machines from scratch for the digital accessioning service and establishing protocols and storage allocations for the various equipment and spaces used by both digital preservation and the digital accessioning service within the lab.

There were some technical issues regarding the floor in the conservation laboratory that prevented the move of CES at the time that Preservation Services, Digital Preservation Services and Preservation Administration moved in August 2015. As reported previously, it took several months for the construction company and University facilities to try and identify a cause and a solution. With repairs made CES was able to move the week of October 12th. The repeated

delays in their move did call for creativity in meeting deadlines that were not flexible. This was done with professionalism and success.

While CES's move was delayed due to construction issues, DRMS was beginning the planning process for their new space at 344 Winchester. DRMS was originally to remain at Sterling Memorial Library (SML). In FY15 it was decided to move YUL Technical Services from SML in order to free up space for the University to develop a Center for Teaching & Learning (CTL). The move to 344 was in a space adjacent to the BRBL Technical Services. This newly allocated space provided enough room to include DRMS as well as YUL Technical Services. This proved to be a project that stretched the full year with the DRMS staff moving into their new spaces in June 2016. With the completion of DRMS move, the entire Preservation Department now occupied custom designed spaces to meet each unit's needs with, in most cases, room to accommodate changes in services to meet the collections' and researchers' future needs.

PROJECTS/ACTIVITIES

[Preservation Newsletter](#)

Two newsletters tracked the various activities of the department. The fall 2015 newsletter covered the implementation of the new digital preservation system, Preservica, noted the completion of the first phase of the Library's audio-visual inventory, and announced the open house of the new facility located at 344 Winchester Avenue, New Haven. Spring 2016 found the department involved in the UNGlobal Colloquium of University Presidents, describing the launch of the two student exhibit programs, announcing the seventh in a series of preservation lectures, *Before & After: Experiences from Newly Built & Renovated Conservation Laboratories*, and a project looking at the effects of RH on paper permanence at the Institute for Preservation of Cultural Heritage (IPCH).

Preservation Lecture

The seventh preservation lecture, *Before & After: Experiences from Newly Built & Renovated Conservation Laboratories*, was a great success. We had a panel made up of four conservators, Beth Doyle, Head of Conservation Services Department, Leona B. Carpenter Senior Conservator, Duke University Libraries; Eliza Gilligan, Book Conservator for University Library Collections, University of Virginia Library ; Jennifer Hain-Teper, Bud Velde Preservation Librarian, Head of Preservation, University of Illinois Libraries; and Yale's own Chief Conservator Christine McCarthy, each of whom had recently undertaken a renovation or new construction of conservation laboratories.

The lecture was in conjunction with an Open House for the new Preservation Department facilities. We do know we had 73 attendees for the lecture, the best turn out to date for a preservation lecture. The Open House had at least that many, though some individuals did not stay for the lecture.

Department Tours

The Department suspended its formal orientation tours for new staff members in spring 2015. These did not resume until fall 2016. That is not to say there were no tours. Once the dust had

barely settled the department and especially the conservation laboratories were popular stops for tours both formally arranged and informal drop-ins. Below is a partial list of twenty such tours and visitors:

- Open house of the new facilities, both BRBL & Preservation Department December 2015
- Library Council Meeting and official opening of the Center for Preservation Conservation on December 11, 2015
- Bay Area Conservation Initiative, Getty funded exploration of how to add science capacity to the conservation community in the Bay area – tour in conjunction with discussion with IPCH Feb 1, 2016. Hosted Aniko Bezur from IPCH along with three conservators: Elise Effmann Clifford of Fine Arts Museums of San Francisco, Susan Roberts-Manganelli from Cantor Center at Stanford and Elizabeth Pena, consultant and former director of the Buffalo State College Art Conservation Department.
- Nooks & Crannies Tour for YUL staff, March 2016
- Tour to the director and board members of the American Antiquarian Society, September 2015
- Tour for Stephen F. Gates '68 of the conservation lab for whom it has been named in October 2015

While not a tour, the conservation lab and the department staff were pictured as part of an article in the *ELI* magazine article on the Center for Library Preservation and Conservation published Winter 2016.

Preservation of Audio Visual (AV) collections

The AV inventory was completed in August 2015. This initial inventory conducted by AudioVisual Preservation Services (AVPS) identified over 47,000 unique and/or rare AV items in the special collections of Divinity Library, Medical Library, Music Library, Oral History of American Music (OHAM), Historic Sound Recordings (HSR) and the Arts Library. A presentation was made on October 20th to YUL by AVPS staff, Josh Ranger and Rebecca Chandler, who conducted the inventory and Roberta Pilette and Martha Horan who coordinated the operation for YUL. The presentation was based on a final report from AVPS submitted October 2015.

Among the next steps were the establishing of priorities and addressing the need to inventory the Manuscript & Archives (MSSA) collections. A tool to help collections to establish the priorities for digitizing was developed. Each collection then proceeded to identify Priority 1,2,3 items or collections of items. Through late fall and early winter each of the collections worked on prioritizing items or collections.

Due to MSSA's collection size and the fact that most items were at LSF it was decided that this would be a separate inventory project. Through the work of Mary Caldera, Head of Arrangement & Description, in MSSA they were able to establish a reasonable estimate of the number of items (about 35,000), formats, and where they were held without doing a full blown inventory. This resulted in a total of over 80,000 special collection items across seven collections and of that over 70,000 in need of digitization. Ultimately, there were about 21,000 items classified as Priority 1, including the MSSA materials.

At the same time, the inhouse video conversion operation was coming to the end of its BRBL video digitization project. With the equipment and staff already in place it seemed reasonable to use this to address the Priority 1 video formats that the operation was capable of digitizing. A proposal was put to Library Executive Committee (LEC) in May 2016 for a six month extension starting in July to begin to address the Priority 1 video materials. The six month extension was approved but delayed as it was decided to move the operation from SML to DRMS at 344 Winchester. The actual digitizing of collections did not start until September 2016.

In August 2016 Roberta Pilette submitted a report to LEC that presented a rough cost and staff estimate to capture and preserve the intellectual content of the AV materials. The purpose was to start the conversation on how YUL will move forward to meet the preservation needs of these materials.

Microfilm Master Negatives

In the summer of 2015 YUL was contacted with regards to the storage of its master microfilm negatives at Iron Mountain. OCLC managed the current contract was for a vault used by a number of institutions to store master negatives. OCLC was looking to divest itself of the responsibility of this and contacted Yale, by far the largest user of the vault, with regards to taking on the contract. Pilette is leading a small task force to decide how to handle this. The task force is made up of Russell Epstein, Daniel Dollar, Brad Warren and Richard Sarcia. Center for Research Libraries (CRL) has expressed interesting in taking on the microfilm collection. The task force is following up on that option as well as exploring leaving the master negatives at Iron Mountain storage.

ConservationSpace

[ConservationSpace](#) is an Andrew W. Mellon Foundation funded project to develop an open-source software application that will address a core need of the conservation community for a shared solution to the problem of documentation management. Christine McCarthy, Chief Conservator, is Yale University's conservator representative. She is also the only book/library conservator amongst the U.S. and international partner institutions. As such she is involved in discussions on design and project planning, keeping the conservators across Yale informed as to progress, and arranging trials and demonstrations of the application. McCarthy worked on Yale's configurations and customizations for the test hosted system and met regularly with the software developer in conjunction with the configurations requirements. In addition McCarthy led work to prepare Yale's part of the Release 3 grant proposal that was submitted to Mellon fall 2016.

EMERGENCY RESPONSES

The Preservation Department is able to respond 24/7 to any Library emergency involving collection materials. Over the past year, we had only one event. The number of events and the staff time devoted to response and recovery has dropped over the fourteen years statistics have been kept on these events. The improved maintenance and renovations of trouble spots has been the key to this drop. See Appendix IV.

In addition, Kennedy who coordinates and updates the Library's emergency plan continues to be involved in COSTEP-CT (Coordinated Statewide Emergency Preparedness – Connecticut). She attends their annual meeting and manages the organization's Facebook page.

CONFERENCES, PRESENTATIONS, COMMITTEES & TRAINING

Yale University Library encourages staff participation in professional activities, both within the University and library profession. Staff are encouraged to enhance their knowledge base by learning a new activity or building on their current skill set.

Meetings/Conferences/Travel

American Library Association Meetings

Annual – Orlando, FL, June 2016

Robert Klingenberger

American Institute for Conservation, Montreal, Quebec, Canada, May 2016

Werner Haun

Tara Kennedy

Christine McCarthy

Roberta Pilette

ICOM Graphic Documents Working Group Interim Meeting, Paris, France, May 2016

Marie France

Care & Conservation of Manuscripts Symposium, Copenhagen, Denmark, April 2016

Paula Zyats

Committees/Task Forces/Working Groups

Department members are active on a wide variety of committees, task forces and working groups at the Library, University and national level.

The following list is a selection of Library committees, working groups & task forces on which Preservation staff have served over the past year:

- Budget Management Forum
- Local 34 Best Practices committee
- SML Exhibits Committee
- Digital Collections Steering Group
 - Library Project Review Committee
- SCOPA
- Sustainability Action Plan Task Force
- YUL Special Collection Reading Room Security Audit

Preservation Department members are also involved in a number of professional organizations. Below is a partial list:

- ConservationSpace, Mellon funded initiative
- American Library Association (ALA), Preservation and Reformatting Section (PARS)
 - Preservation Standards and Practices Committee

- American Institute for Conservation (AIC)
 - AIC-CERT (Conservation Emergency Response Team)
 - Health & Safety Committee
 - Book & Paper Group (BPG) Education & Programming Committee
 - BPG Archives Discussion Group
 - Paper Conservation Catalog WIKI
- Northeast Document Conservation Center (NEDCC), Advisory Committee
- Guild of Book Workers (GBW)
 - GBW Journal, Editorial Board
- COSTEP-CT (Coordinated Statewide Emergency Preparedness – CT)
- National Information Standards Organization (NISO), Content and Collection Management Topic Committee

Presentations, Exhibits, Publications

Staff contribute to the profession through webinars and lectures. Below is a partial list of those activities:

Don't Rock the Cradle, Folger Conference, July 2015

Post print submission by Christine McCarthy & Kerri Sancomb based on their presentation at the conference of the same name.

Mythbusting Mold: Ten Facts You Should Know, AIC News, Health & Safety column, Vol.40, No.5, September 2015

Tara Kennedy

Lighting Round Presentation to YUL of the Preservation Department activities, November 2015

Roberta Pilette, Tara Kennedy, Robert Klingenberger, Euan Cochrane, Christine McCarthy

"Blue" session on cyanotypes and the Blue exhibit with Nancy Kuhl, BRBL for Jessica Helfand's Fall 15 semester's undergraduate class.

Marie-France Lemay

Preserving your Personal Treasures, part of the Preservation Week outreach, Danbury Public Library, April 2016

Christine McCarthy

UNGlobal Summit, April 11-13, 2016

The Role of Universities and our Cultural Heritage: education and training panel, YUAG, Christine McCarthy

Prioritizing Collections for Emergency Response, poster session, AIC annual meeting, Montreal, Quebec, May 2016

Tara Kennedy

Traveling Scriptorium

Hosted the following sessions for:

- Theresa Fairbanks-Harris, YCBA paper conservator, and her class November 2015
- Elena Herzog, School of Art Faculty, and her students March 2016
- Tom Olsen, English professor New Paltz University, and his Yale summer students June 2016

Christine McCarthy and Marie-France Lemay highlighted the kit at as part of the information made available at IPCH open house at West Campus for the attendees of the UNGlobal Summit.

The Traveling Scriptorium continues to expand the types of materials that are covered with the addition of a 'Paper' section.

Voynich

Marie-France Lemay & Paula Zyats co-wrote with Aniko Bezur, Erin Mysak, and Jens Stenger, scientists from IPCH, a chapter on the scientific analysis and materials used in the production of the manuscript. *The Voynich Manuscript* edited by Raymond Clemens & Debora E. Harness, published November 2016.

Presentations by Euan Cochrane, Digital Preservation Manager:

- A paper at the Digital Humanities 2015 conference on quantifying ambiguity, Sydney, Australia, July 2015
- Webinar on emulation and virtualization to National Digital Stewardship Alliance members, November 2015
- A panel about "Archives in the Electronic Age" for the New York City Archivists Roundtable group, October 2015
- On file format risks (virtual) at a Digital Preservation Coalition event
- A DASPOS workshop on scientific software and code preservation.
- A webinar on emulation and virtualization for the National Archives and Records Administration (NARA), January 2016
- At the University of Texas at Austin Digital Preservation Interest Group, February 2016, remotely
- At aBitCurator forum 2016 about using BitCurator with other systems and workflows

Training

All managers encourage staff development. This is done through a variety of sources—the University Learning Center offerings and scholarships or awards granted by professional organizations. Below is a selection of some of the training activities.

University/Library courses & workshops

Flexible Work Arrangements

Managing Discipline in a Unionized Workplace

Powerful Career Growth Conversations: The Secret to Employee Engagement
Great Manager Program
Practical Paleography

Other courses outside of the University

Sustainable Conservation: Cost Effective and Sustainable Packing, Moving, and Storage; Examining the Environmental Impact of Exhibitions and Loans using the Life Cycle Assessment Tool, FAIC Webinar, December 2015
Tara Kennedy & Christine McCarthy

Diagnosing and Addressing Inefficient HVAC Operations webinar conducted by the Image Permanence Institute, September 2015
Tara Kennedy

Across the Spectrum: Color in American Fine & Private Press Books, 1890-2015, 2-day symposium at the Kislak Center, University of Pennsylvania
Paula Zyats

Rare Book School, Charlottesville, VA
Paula Zyats, *The Art & Science of Cartography, 200-1500*, June 2015
Karen Jutzi, *Handwriting Culture of Early English Manuscripts*, June 2016

North Bennett Street School, Workshop, Boston, MA, June 2016
Frances Osugi

PERSONNEL

Promotions in FY16:

Tara Kennedy, Preservation Services Librarian, from Librarian III to Librarian IV
Christine McCarthy, Chief Conservator, from Librarian IV to Librarian V

Changes within the department in FY16:

Ansley Joe, Conservation Assistant moved from CCH to SCC within CES
Kerri Sancomb, position reclassified to Exhibits Program Manager following a M&P job audit, CES

New staff members to the department in FY16:

Frances Osugi, Conservation Assistant, CES February 1, 2016
Sarah Davis, Conservation Assistant, CES March 28, 2016
Morgan McKeegan, Digital Preservation Analyst, Digital Preservation Services, June 6, 2016

Staff members who have left during FY16:

Martha Horan, Preservation Librarian, December 1, 2015; though still liaison from Medical Library

PRESERVATION SERVICES OFFICE

Tara D. Kennedy, Preservation Services Librarian

Staffing as of June 30, 2015:

C&T Staff

| | | |
|--------------|-------------------|---------|
| Ellen Zemina | Binding Assistant | Level B |
| Susan Mar | Binding Assistant | Level B |

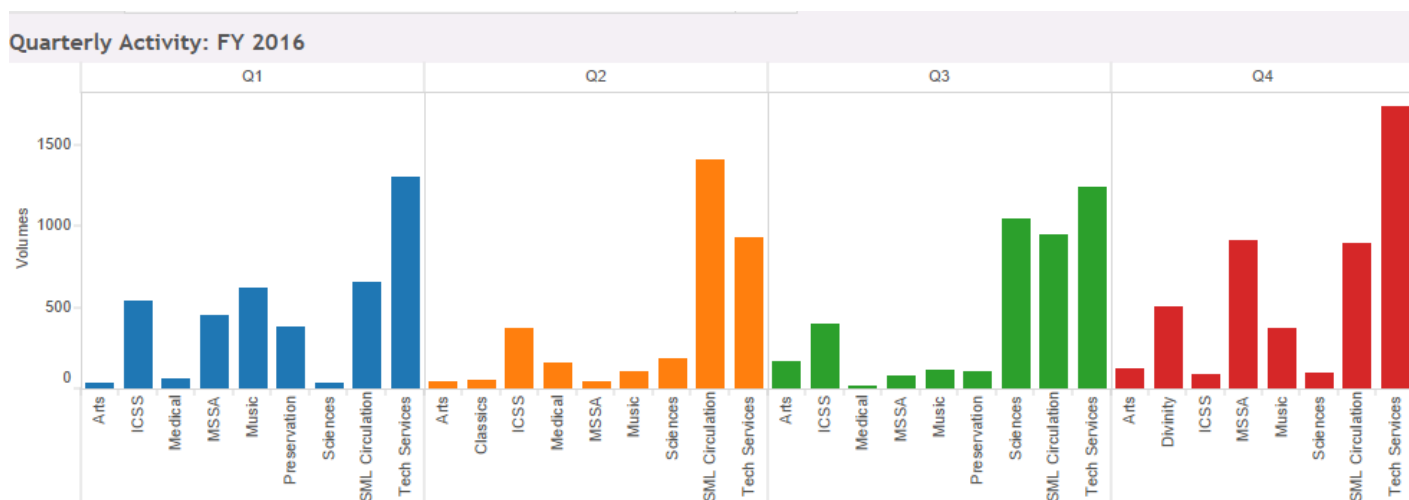
Brief overview of operations

Preservation Services (PS) primary activities consist of preservation review of materials coming from Cataloging & Metadata Services (CMS), circulating and reference collections across the Library system; monograph and serial binding; mass deacidification; and commercial boxing. Other key preservation-related activities include environmental monitoring and reporting; HVAC consulting; emergency preparation and response; collection surveys; and preservation education and outreach.

Services

Preservation Review

Total volumes reviewed by Kennedy is **16,220**. These represent circulating and reference volumes from across the Library system. The table below shows the amount of volumes received each quarter from the originating collection. Technical Services and SML collections are the largest source of volumes, the uptick in Sciences in the third quarter was the result of a project related to the Geology Special Collections to review and house the volumes. The fourth quarter increase in MSSA is connected to preparing their collections to be moved in anticipation of their renovation.



The review process is a physical examination of each volume that determines what is done with the volume—commercial binding, housing of the volume, physical treatment, or consideration for reformatting. The decision dictates which unit of the Preservation Department the volumes go to—binding and commercial boxing stay in Preservation Services, physical treatment or

custom enclosures will be sent to CES, and a volume requiring reformatting is sent to DRMS for further consideration.

Statistics

Below is a chart showing the number of volumes reviewed from each originating collection and the decision made.

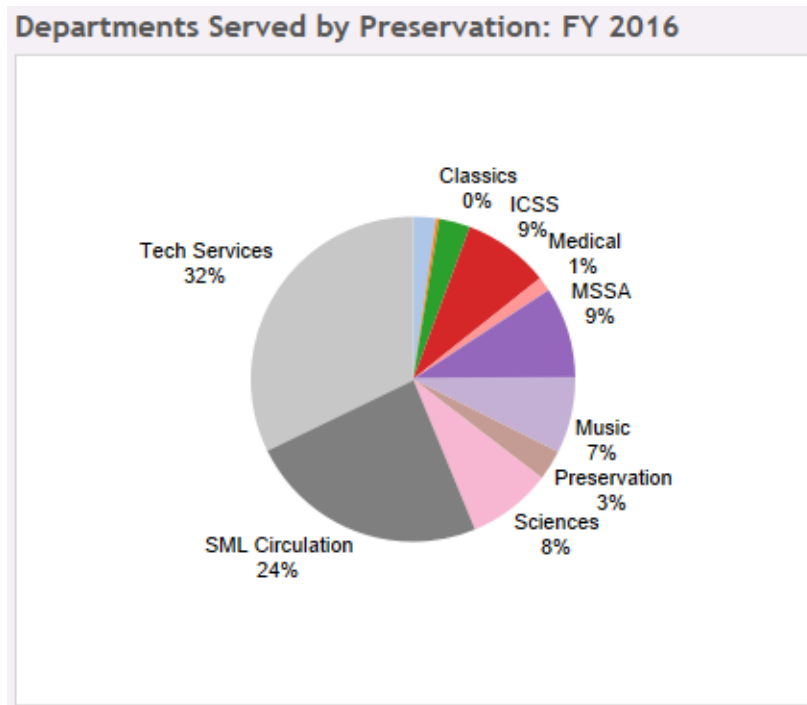
Volumes Processed by Department & Service: FY 2016

| Department | Prep/ Back | W/D | CMS | Pam Bind | Serial Bind | Mono Bind | CCH | Box | Search | Other | Total |
|--------------------|---------------|-----------|------------|-------------|----------------|--------------|--------------|--------------|--------------|------------|---------------|
| Arts | | | | 15 | 36 | 290 | 9 | 11 | 10 | | 371 |
| Classics | | | | | | 16 | | 1 | 33 | | 50 |
| Divinity | | | | | 501 | | | | | | 501 |
| ICSS | 3 | | 1 | 11 | 1,135 | 11 | 162 | 74 | 2 | | 1,399 |
| Medical | | | 1 | 3 | 112 | 80 | 4 | 10 | 24 | | 234 |
| MSSA | 75 | | | 8 | 96 | 555 | 163 | 587 | | | 1,484 |
| Music | | | | 1 | 496 | 696 | 4 | 15 | 3 | | 1,215 |
| Preservation | | | | | | | | 488 | | | 488 |
| Sciences | | | 1 | | 240 | 148 | 115 | 833 | 21 | | 1,358 |
| SML Circulation | 80 | 7 | 397 | 32 | 86 | 1,814 | 362 | 163 | 966 | | 3,907 |
| Tech Services | 286 | 6 | 44 | 156 | 1,811 | 1,014 | 920 | 698 | 119 | 159 | 5,213 |
| Grand Total | 444 | 13 | 444 | 226 | 4,513 | 4,624 | 1,739 | 2,880 | 1,178 | 159 | 16,220 |

Prep/back = returned to shelf/no treatment
W/D = withdraw
CMS = Catalog & Metadata Services
Pam Bind = pamphlet binding
Serial Bind = serial binding

Mono Bind = monograph binding
CCH = Collection Care & Housing
Box = commercial box
Search = sent to DRMS

The pie chart below gives an overview of the percentage of a particular collections' volumes that made up the 16,220 volumes reviewed.



Monograph & Serial Binding, Mass Deacidification, and Commercial Boxing

Once again this was not a typical year for the commercial binding operation. Due to the move to 344 Winchester binding was put on hold from mid-July through September; though at the end of the FY16 9,839 volumes were bound. This represents only a slight decline from FY15's total of 10,126. With the centralizing of the binding operation the separate ABLE (bindery tracking) accounts were reduced from eight to three: a Monographs and two serials accounts—Serials (SML, Bass, Arts, Classics) and Branch Serials (CSSSI, Math, Geology, Divinity, Music, Medical). While this has helped with the efficiency of processing titles for the commercial binder it did take time to accomplish including elimination of duplicate titles and other errors.

In March the Library learned that the current binder, Bridgeport Bindery, had been bought by HF Group effective April 1, 2016. All binding would be sent to the HF Group/Acme bindery. Kennedy was involved in coordinating financial information in order to change the contract and POs to reflect the change. With the change in binder came new binding procedures and computer systems. Kennedy took the opportunity to completely cross-train each Binding Assistant.

Discovery of unbound volumes has been ongoing as collections undergo reorganization or are preparing for facility renovations:

- Slavic serials backlog – result of clearing of shelves
- MSSA thesis – part of preparation for renovations
- Mudd Library, auction catalogs – part of the emptying of that Library and the move of the catalogs to the Arts Library collection. The auction catalogs were commercially boxed.

- CSSSI oversize and folio volumes – part of the re-organization of their space to receive maps

A total of 2,880 custom commercial boxes were purchased for all YUL collections. Of that, 587 were for volumes in the MSSA collection many of those in preparation for the moving of the collection to temporary quarters while the space is renovated.

350 volumes most from newly acquired Near East collection were sent for mass deacidification.

Consultation & Outreach

Consultation and outreach cover a variety of activities as represented below.

- Horror and exploitation VHS tape collection – YUL acquired close to 3,000 tapes with the need to preserve the material aspects; that is, the box art. Kennedy advised on proper housing.
- Worked with a selector, Michael Meng, in advising how a fragile Chinese collection item may be made available for faculty use
- Worked with Molly Dotson at the Arts Library on the drama collection regarding rehousing
- Investigated possible pest infestation
- Coordinated with LCS staff and compiled instructions regarding delivery procedures for collections
 - Related to the delivery procedures; participated in the special collections transport task force along with Christine McCarthy in developing procedures for special collection materials.
- A number of collections needed to be moved for different reasons. Kennedy reviewed and advised on moving and housing collections such as: PRR Annex, Geology Special Collections and MSSA collections.
- Collaborating with Werner Haun from CES developed and presented to Access Service staff how to identify damaged collections to send to preservation.
- Discussed possible environmental projects with Lukasz Bratasz of the IPCH Sustainable Conservation Laboratory.
- Kennedy and Werner Hahn, CES, met with Access Service staff on how to identify materials that should be sent to Preservation.

Environmental Monitoring and Reporting

Monitoring the environment covers a range of activities including monitoring temperature /relative humidity of storage spaces, light levels of exhibit areas, and the impact on collections during any construction. Temperature/relative humidity monitoring is done to ensure that HVAC systems are operating correctly but is also done in areas where the environment is suspected to be less than good for materials or in preparation of a renovation where the environment is not known. Monitoring of light in the instances of exhibit cases is to prevent high light levels from IR to UV that contribute to long-term damage to materials on exhibit. Examples of some of these activities are listed below:

- The BRBL reading room was temporarily moved to SML International Room where controlling the relative humidity was a challenge. Kennedy worked with John Clegg of SML Facilities and Rebecca in bringing it within a safer range.
- Worked with Mike Bell, AUL for Administration, in reviewing what the impact may be on the collection and how to mitigate it during the exterior stonework on SML
- Worked with the Medical Library in troubleshooting HVAC issues and on the upgrading of the exhibit case lighting
- Advised and reviewed with John Clegg and Ruthann McTyre, head of the Music Library, the environmental issues in the Historic Sound Recording collection as well as the possible effects on the collection during the construction of the Center for Teaching & Learning (CTL)
- Worked with University Facilities regarding the recommissioning of the LSF HVAC.

Emergency Planning & Response

Kennedy is responsible for maintaining the emergency plan. Part of that is working with collection managers and selectors to prioritize collections enabling better recovery of key materials in the case of a catastrophic emergency. This year she met with the African selector to prioritize the African collection.

Collection Surveys

Andrew Reading Room – completed the preservation survey of what was identified as the core collection.

Old Yale – created a tool to establish preservation needs as well as information about catalog records. The information will be used by in estimating work needed in the potential relocating of the collection.

American Oriental Society – planned with Christine McCarthy the survey which will provide cost analysis of preserving the collection. To be completed by January 2017.

CONSERVATION & EXHIBITION SERVICES (CES) – *Special Collections Conservation (SCC), Collections Conservation & Housing (CCH) & Exhibit Production Support (EPS)*
Christine McCarthy, Chief Conservator

Staffing as of June 30, 2016:

M&P Staff

| | | |
|----------------------|----------------------------------|-------|
| Paula Zyats | Assistant Chief Conservator | (SCC) |
| Werner Haun | Assistant Chief Conservator | (CCH) |
| Marie-France Lemay | Paper and Photograph Conservator | (SCC) |
| Laura O’Brien-Miller | Conservator Lewis Walpole Lib | (SCC) |
| Kerri Sancomb | Exhibition Program Manager | (EPS) |

C&T Staff

| | | | |
|---------------|------------------------|---------|-------|
| Karen Jutzi | Conservation Assistant | Level E | (SCC) |
| Ansley Joe | Conservation Assistant | Level D | (SCC) |
| Frances Osugi | Conservation Assistant | Level D | (CCH) |
| Sarah Davis | Conservation Assistant | Level D | (CCH) |

Overview

Conservation & Exhibition Services (CES) preserves access to physical collections through single-item and collection-level conservation treatments and the creation of custom housings for books, works on paper, photographs, and other objects from both the Library’s general and special collections. In addition, the unit carries out a program of preventative activities and services to protect collections from the risks associated with loans and in-house exhibition. The work of CES is driven by the use of the collections by individual students, faculty, and researchers; and by the cataloging and processing of newly and previously acquired collections. This work was carried out in three main laboratories in Sterling Memorial Library and by October 2015 in the new facilities located at 344 Winchester Ave. Additional activities took place on-site at the Beinecke Rare Book Library (BRBL), the Lewis Walpole Library (LWL), and the Cushing Medical Library (MED).

Conservation & Exhibition Services work is organized into following areas of program activity:

- Collection Conservation & Housing (CCH)
- Special Collections Conservation (SCC)
- Exhibit Production Support (EPS)
- Loan Support

Statistics for CES’s work may be found in Appendix III. CES’s work is wide ranging. Below are highlights of the unit’s activities.

CES also had two areas of the space ‘named’. The Exhibition & Housing area is now officially the Stephen Parks Exhibition & Housing laboratory thanks to the generous support of an

anonymous donor. Mr. Parks is the retired Curator for the Osborn Collection at BRBL. The conservation laboratory has been named in honor of Stephen F. Gates, class '68 generous donation. Officially the space is now the Stephen F. Gates Conservation Laboratory.

Activities

The move to 344 Winchester in October 2015 signaled a new beginning for the unit as all staff members were now located within the same or in immediately adjacent spaces. This allowed for more efficient use of staff in projects that spanned the full range of services—treatment, custom housing, and exhibition preparation and installation planning. While the construction issues and delayed move to 344 Winchester had a serious impact on the amount of work produced, the staff, in spite of having no access to some equipment from July until the move in October pulled together and continued to meet critical deadlines as well as providing basic services.

Consultation

CES staff work across the Library collections consulting with librarians and collection managers on issues ranging from exhibitions to treatment and housing criteria to material culture queries. Over the last year with BRBL's major renovation underway and MSSA's renovation in the planning stages there have been a number of opportunities to consult. In addition the closing of the Map collection in SML and the moving of maps to BRBL and the Center for Science and Social Science Information (CSSSI) meant there were condition and housing issues to address for a large map collection.

With regards to the maps coming to BRBL McCarthy developed a scope of work along with a professional consulting and services contract that would cover a basic condition survey and then rehousing of all the rolled maps. BRBL also had concerns regarding the exhibiting of the Coronelli globes, maps, and art work in the renovated BRBL Wall Street building for which McCarthy coordinated light exposure studies in the various locations and made recommendations regarding what may be displayed and in what manner.

As part of the Coronelli globes information regarding their exhibition McCarthy coordinated work with the IPCH scientist to carry out micro-fading tests. The working relationship with IPCH scientists has become an important part of establishing treatment protocols, an example of which is the BRBL's Ezra Stiles papers. A question regarding the presence of arsenic in the silked documents has been raised. The use of the portable XRF may be able to answer the question and establish procedures for handling and future treatment of these materials.

Exhibit spaces in Sterling Memorial Library are under renovation or consideration of renovation. Kerri Sancomb assisted the Music Library staff and architects with the planning of the exhibit spaces in the newly renovated Music Library in conjunction with the building of the CTL. McCarthy and Sancomb met with Michael Bell, AUL for Administrative Services, to discuss the possible closure of the Memorabilia Room as an exhibition venue and a possible new exhibit space closer to the nave that would take its place.

As MSSA renovation plans moved forward there were discussions regarding the collections in the reading room. Haun, McCarthy and Kennedy have been working with MSSA staff to plan for the housing needed for the materials prior to the temporary moving of the collections.

Exhibition Production Support (EPS)

Kerri Sancomb continued apace with the planning and installation of exhibits across the four YUL exhibit venues: Haas Family Art Library, SML Memorabilia Room and the corridor, Lewis Walpole Library, as well as the BRBL. While BRBL had no exhibits installed during this year the planning for exhibits to be installed once BRBL reopened continued. For all exhibitions, Sancomb works with exhibit curators who may be collection curators, subject specialists or in the case of student exhibits the student and his/her faculty advisor in the planning. Such an example is her instructing the Medical Library preservation liaison how to cut sink mats and in the proper exhibition techniques. She also works with the conservation staff once the materials for an exhibition has been selected.

The Yale School of Architecture's 100th Anniversary exhibition curated by retiring dean Robert Stern, *Pedagogy and Place: celebrating 100 years of architecture education at Yale*, had over 60 items from the MSSA collection that required prepping and packing to enable the installation of the exhibit due to open December 3, 2016. This was all happening shortly after CES had moved in October. The many large items being prepped for the exhibition made good use of the new facility at 344 in that it provided much needed space allowing for the work to be accomplished much more efficiently.

FY16 resulted in nine exhibitions for which 287 objects were prepared. A list of the exhibitions EPS was responsible for prepping and installing is below:

- *Yale History*, summer 2015, MSSA, Memorabilia Room
- *Out of the Desert*, student exhibition (Courtney Sato), fall 2015, SML Memorabilia Room
- *Song of Songs*, Arts Library, fall 2015
- *Senators, Sinners, & Supermen*, Student Research @ YUL, SML corridor, spring 2016
- *James Gillray's Hogarthian Progresses*, spring 2016, Lewis Walpole Library
- *Bawdy Bodies: Satires of Unruly Women*, fall 2016, Lewis Walpole Library
- *Shepherd Stevens*, Arts Library, spring 2016
- *Senior exhibit project*, Spring 2016
- Two temporary exhibits:
 - *Reed Manuscript*, temporary exhibit, March 2016
 - *Mss book of Yale's first female students' signatures*; accompanied the unveiling of the portrait of Yale's first PhD women (class of 1894) hung in the Sterling nave. April 5, 2016
- and a senior online exhibit using Omeka in spring 2016.

Loan Support

Prior to an item going out on loan conservators review it, completing a condition assessment report for each item and also reviewing the exhibition venue's facilities reports. Upon return an item is again reviewed for condition before being returned to the loaning collection. These are done for all items whether going across campus or across the world. Loans this year have been extensive with 164 items from a variety of collections prepared for loan.

A few of the on campus loans were the:

- Yale University Art Gallery's Thomas Wilfred traveling exhibition
- Peabody Museum's *Treasures of the Peabody's 150 Years*
- Yale School of Architecture's *Pedagogy and Place: Celebrating 100 Years of Architectural Education at Yale*

Some of the loans external to Yale:

- *Red That Colored the World* at the Museum of International Folk Art, Santa Fe, New Mexico and Bowers Museum, Santa Ana, California
- *World of Luxury: Playing Cards 1430-1540* at The Cloisters, New York City
- *Lockwood Kipling* at the Victoria & Albert Museum, London & Bard Graduate Center, NY

Treatment & Housings

While much of what is treated in the Gates Conservation Laboratory is driven by exhibitions, loans, and curatorial needs, there are also housing projects and general collection repairs that are addressed by the staff of conservators and conservation technicians. In FY16 3,769 objects were reviewed and 588 objects were treated by the CES staff.

In terms of general collection work, all the volumes that had, for whatever reason, been in the unit for longer than two years were treated and returned to the collection by September 2015. All remaining general collection materials were inventoried and charged to the appropriate pseudo-patron card thereby assuring accuracy of the unit's 'holdings'.

While treatment of general collections continues, housing and custom housing of materials is ongoing. The Arts Library Special Collections required housing of the Overbook Press woodcuts. These were housed in standard storage boxes that had custom outfitted inserts designed to protect the individual woodblocks while in storage and when being delivered to scholars for study. In conjunction with the Map collection closing and the moving of the maps, planning began on the housing for over 700 rolled maps as well.

BRBL received a significant deposit of a Chaucer manuscript collection from Tshiyuki Takamiya. Each volume in the collection is being examined and important physical features are being noted giving a baseline record of condition which can be used to evaluate any changes that may occur as the volumes are used and studied.

As discussed above items are reviewed prior to exhibition and if it is needed and there is time, items are treated by the conservator prior to exhibition. Below are just two examples of treatment:

- Tarot Cards for the exhibition at The Cloisters, New York, exhibition *World at Play: Luxury Play Cards 1430-1540*.
- Red Moon: large poster (42 x 79 inches approx.) from Music Library collections (in collaboration with WH, SD and FO; before photography done by the BRBL digital studio in the Maps Dept. at SML; in the midst of media testing).

Other items are identified for treatment by curators due to condition, formats that put the item at risk, or anticipated heavy use in classrooms.

- Five newly acquired pocket maps of Colorado, California, and Washington were repaired and encapsulated in polyester film to be stored flat. This will allow researchers to use them more easily and with less chance of damage due to unfolding and folding. BRBL, Western Americana Collections
- Hebrew MSS suppl 281 (Broadside), a Shiviti plaque from Italy; extensive repairs were undertaken to address the damage from severe iron gall ink deterioration. BRBL
- 2016 Folio S39, *Daily list / San Francisco stock and Exchange Board*, and Zc43 880ra, Plate of the town of Miles City in the county of Custer, Territory of Montana, were aqueously treated using a fixative technique that kept moderately water-sensitive inks from bleeding. Lemay and Joe worked with Soyeon Choi from the Yale Center for British Art, who had experience in the fixing technique. BRBL
- MS 410, an indulgence scroll, and Osborn a14, *The kings of England sithen William the Conqueror*, were treated in preparation for a graduate workshop, *Digital Editing and the Medieval Manuscript Roll*, held at the Beinecke Library in March and November in 2016.
- Greenberg Hogarth Album, Lewis Walpole Library, Folio 75 H67 753

DIGITAL REFORMATTING & MICROFILMING SERVICES (DRMS)

Robert Klingenberger, Head

Staffing as of June 30, 2016:

| | | |
|------------------|------------------------|---------|
| Stephanie Sherry | Acquisitions Assistant | Level D |
| Agnes Wnuk | Cataloging Assistant | Level C |
| Edith Fortes | Acquisitions Assistant | Level B |
| Jef Wilson | Technical Assistant | Level B |

Overview

Digital Reformatting & Microfilm Services (DRMS) in the Preservation Department provides a spectrum of services with regards to the preservation of information in volumes and on obsolete media. Through working with a wide variety of vendors DRMS preserves and provides access to the intellectual content of both the written word and audio & visual media.

Activities

The overarching theme of this fiscal year was preparation for the unit's move to a new facility at 344 Winchester Avenue. In preparation for this floor plans were drawn and redrawn, space allocations were stated, questioned, and defended; compromised or realized.

First Quarter (July – September, 2015)

- Data Migration from Excel to ICE
 - To enable a physical inventory of all items currently in DRMS, our retiring spreadsheet workflow tracking system was migrated into the new workflow management database, Item-Condition-Event (ICE). To achieve that, the system of six interconnected spreadsheets needed to be reconciled to itself to eliminate duplicate entries; close out workflows that were finished, but not properly recorded as such; and fill in missing information which would be needed for a smooth data migration.
 - Note: The workflow tool was renamed from Item Condition (&) Evaluation to Item-Condition-Event because the former did not suggest that there were actions taken after the condition was evaluated. An “event” is defined as a series of one or more actions taken on an item during its time in the preservation workflow.
 - After the spreadsheet clean-up was done, our vendor (Qdabra) did a test run of the migration using the Dev-ICE database. Of 2,498 items in various stages of workflow to be migrated, only 30 showed migration failures. Those 30 items were fixed and migration was completed on September 29, 2015.

Second Quarter (October – December, 2015)

- ICE Database Clean-up
 - Leveraging the rules built into the ICE forms, the migrated data was cleaned-up by investigating discrepancies between the number of items listed in the database as awaiting a certain workflow step and the number of items on a

physical shelf. Once the cause of the difference could be determined, batch updates were run on the Dev-ICE database to correct inconsistencies or physical shifting was done in cases where the workflow status in ICE, which is intentionally unforgiving, was recognized as correct.

- Physical Inventory
 - Once the database clean-up was complete, Qdabra merged the two databases which allowed for the physical inventory of all items in DRMS spaces including SML B-40, B-06, and the basement level of the stacks where DRMS items waiting for re-cataloging by the Technical Services Department's Catalog and Metadata Services unit.
 - Items found to not be in the ICE database, which means they had also not been in the spreadsheets, were entered into the ICE tool with "Backlog" as the point of origin. Any existing documentation as to the previous search or decision were retained for reference, but since the information was in some cases several years old, those steps were repeated following current guidelines and best practices.
- Consulted with Brian Meacham from Film Studies regarding access to film projection equipment. As part of AV reformatting, DRMS will seek to collect film and magnetic tape playback equipment with which we can either assist the reformatting process or preview materials so as to document flaws in the original before evaluating the results of a vendor's efforts to digitize. It was agreed that 35mm projection equipment is better left as an area of concern solely for Film Studies and that DRMS would focus equipment collection efforts on film formats of 16mm and smaller as well as magnetic media.
- Coordinating with Martha Horan on behalf of the Cushing/Whitney Medical Library, completed the digitization of thirty-six (36) u-matic tapes from the *Crelin Anatomy Course Collection* of the Yale School of Medicine.
- Digitization of one 151 pamphlets, documents, and books dealing with World War II on behalf of and with support from the Yale Class of 1945W.
 - (digital image files) Victory is Vital! Booklet
- HathiTrust access policy for copyright protected material was more complicated than previously known and was delaying access to the materials for an unknown length of time. This revelation affected two workflows: In the case where Yale would create a catalog link to a digital version of a copyrighted protected work previously digitized by another institution and sent to HathiTrust. And, more costly, is where Yale must digitize the copyright protected work, send the files to HathiTrust, and link to the Yale files once they are made accessible. Requiring adjustments in these workflows.

Third Quarter (January – March, 2016)

- Discussions begin on the best way to respond to two upcoming events:
 - April 2016 closure of Yale IT's Photo & Imaging unit which was used by special collections in the library to digitize materials at a higher quality than could be achieved in their reading rooms

- June 2016 completion of Beinecke video digitization project which would result in end of operations for the three SAMMA Solo video digitization machines
- Note: both of the above resulted in addition of a staff member and associated workflows to the DRMS unit during the first quarter of FY 2017
- Digitization consultations with East Asian Studies program, Babylonian Collection, Law Library

Fourth Quarter (April – June, 2016)

- Digitization of forty-four wire audio reels from the Historic Sound Recordings and Divinity School Library collections.
- Preparations and move from Sterling Memorial Library (SML) to 344 Winchester Avenue (344)
- Coordination of adjustments and upgrades needed to prepare room B183 at 344 for its new role as the location for the YUL Digital Photography Service (replacing Yale Photo & Imaging) and B185 for its new role as AV Digitization rather than AV Preparation and Review.

Summary of Annual Statistics

- Items Searched – 3,832
- Decisions – 1,568
- Prep for Reformatting – 1,136
- Quality Control – 1,276
- Catalog Updates – 7,182
- Digital Surrogates linked – 423

DIGITAL PRESERVATION SERVICES (DPS)

Euan Cochrane, Digital Preservation Manger

Staffing as of June 30, 2016:

Morgan McKeehan Digital Preservation Analyst

Overview

Digital Preservation Services (DPS) provides services and support for preserving content that is already in digital form. This can be content produced through library digitization projects (digitized), content produced by external organizations and received at the library in digital form (received digital), or content that was created digitally (born digital); such as, text documents, databases, audio-visual material or Computer Aided Design (CAD) content.

DPS is currently focused on establishing comprehensive infrastructure to maintain access to digital content for as long as it is needed. While this process is underway DPS is offering consulting services to aid with digital preservation related activities including:

- The acquisition of old digital content (e.g. preservation considerations, disk imaging, content recovery from old digital media)
- Access to old digital content (e.g. help for working with migration and emulation tools or using original hardware to interact with old content)
- The creation of digital content for long-term preservation (e.g. preferred formats)
- Advice and guidance for preserving digital content

Activities

The 2015-16 year was a year of growth for DPS. The first major activity of the year was the signing of a contract with our digital preservation system vendor Preservica and initiation of implantation work. In August, the Preservation Department moved to the new facilities at 344 Winchester Avenue. These facilities included a new Digital Archeology and Preservation Laboratory and a new space for digital preservation staff. The new space was quickly occupied by new staff. Along with the above activities, the projects to preserve the born digital content in the Library's general collections, that is the backing up of data received from vendors whose digital services we subscribe to, continued throughout the year. Work also began on implementation of the Emulation as a Service (EaaS) technology into production infrastructure.

Digital Preservation System Implementation

The implementation of the Preservica Digital Preservation System was a significant achievement of this year. Three instances of Preservica were installed and configured across eleven servers. More than twenty storage shares were created and configured for use within the system. The initial installation of the system occurred over a week-long period which involved an on-site visit from a vendor representative. In addition to the installation, the representative led three days of training sessions for a large group of staff from stakeholders across the Library system and the Yale Center for British Art (YCBA) who will be using Preservica as a Tenant. Throughout the year the workflows we used for ingest into the system has been extensively tested. In addition work has progressed with Preservica to develop an integration

with ArchivesSpace to enable automated creation of finding aid metadata within the ArchivesSpace database for all archival digital objects ingested into Preservica. We have also worked with them to develop a packaging tool for automating ingest of Preservation Digitized Monographs.

Disk Imaging

Over the past year students working for digital preservation imaged over 4000 CD-ROMs and floppy disks from the general collections across the library system. These included a huge variety of content such as research data, conference proceedings, video games, manuals, databases, encyclopedias, digitized archives, programming guides, interactive publications, samples, early ebooks, digital artworks, faculty donations, and more. DPS has worked through much of the content that was clearly marked as digital in the catalogues. The students are nearly finished with all known digital media in the LSF. Amongst the disks from which data could be recovered were over 3.2 million files in hundreds of formats. Hundreds of thousands of the files on those disks were in formats that none of the industry-standard file format identification tools could identify. Once the imaging has been completed for all known disks the log files from this process will be analyzed to identify any correlations between unrecoverable sections/disks and media type, age and storage locations.

As part of processing these disks, a number of new tools have been created including a tool to automatically identify the file system used on floppy disks. This tool was published on the source code sharing website, github, and has been well received by the wider digital preservation/digital forensics community who have already added to the codebase and reused it within their organizations.

Vendor Data

Yale subscribes to many online databases for access to publications on various topics. Many of the vendors of these databases provide a clause in their contracts for the preservation of the data which entails providing an offline copy to the customer for local preservation. YUL has received about thirty-five terabytes of data on over one hundred external hard drives, tape cartridges and other external media. Extensive attempts were made to back up this data to managed storage while still working in SML however issues with network capacity and reliability made for frustratingly little progress. Once arriving at the new facility at 344 Winchester Avenue this work was resumed and thanks to the improved technical infrastructure was rapidly completed. Since then further work has been undertaken to prepare the data for ingest into Preservica so it can be properly managed over time and made accessible (where allowed under our agreements) for programmatic access via the Preservica programming interface.

Emulation as a Service (EaaS) and Software Preservation

Over this year more testing of the EaaS software was undertaken which culminated in the initiation of work to implement the software into a production environment. This software allows for the provision of access to old computing environments via web browser interface, enabling, for example, users to click a link in a catalogue and be brought to a running instance

of Windows 95 or MS-DOS running contemporaneous software to enable them to access archived content using original software in the original environment.

Grants

The EaaS test software has also been instrumental in ensuring success in the award of three grants over the past year. One grant from the Institute of Museum & Library Services (IMLS) for work with the University of Freiburg (the creators of the EaaS software) and Rhizome Digital Art Gallery in New York City.

The second was from CLIR for a Software Curation fellow who will be using the EaaS software. Earlier in the year the DPS applied to the CLIR post-doctoral fellowship program. The program supports a post-doctoral fellow in data curation with a focus on software preservation for the sciences and social sciences. The successful application and selection of a fellow towards the end of FY16 resulted in the fellow starting in FY17. The fellow will move into the newly created Digital Conservator position and will be focusing on software preservation including establishing a set of systems and processes for acquiring, documenting, preserving, emulating and making accessible software that supports the preservation of access to our digital collections.

The third is from the Mellon Foundation for additional work with the University of Freiburg and Rhizome on automating access to emulated environments using structured data.

Born Digital Working Group

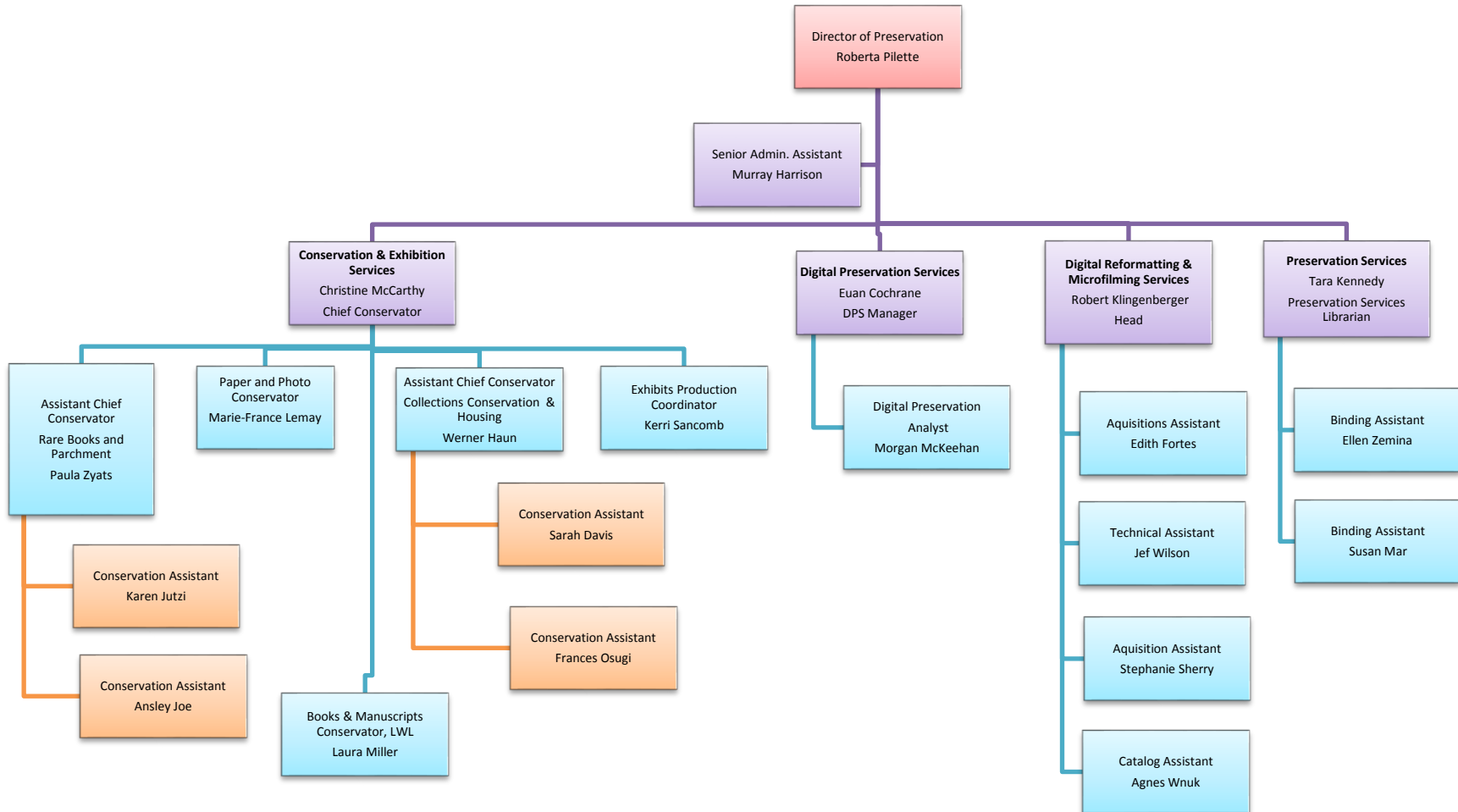
DPS has contributed to the Born Digital Archives Working Group that has been working to make acquiring, processing, preserving and making accessible born digital archives a common, “business as usual” set of activities within the Library System and throughout Yale’s collections. Achievements of the group this year included hosting a number of training course led by external trainers, hiring digital accessioning archivist and establishing a digital accessioning service, and spawning a web archiving working group.

Other Activities

In addition to the numerous presentations mentioned in [Presentations, Exhibits, Publications](#) above, DPS has:

- Developed a Digital Preservation System cost estimate for the CyARK project
- Hosted David Rosenthal while he was researching a report for the Mellon Foundation on Software Preservation.

Appendix I
Program and Staff Organization Chart
 June 30, 2016



Appendix II
Preservation Department Statistics
Fiscal Years 2012-2016

| NEEDS IDENTIFIED | Total # Items from all Library Collections | | | | |
|---|--|---------|---------|---------|--------|
| Reviewed for Preservation Action(s) | FY 2012 | FY 2013 | FY 2014 | FY 2015 | FY2016 |
| <i>Total Items Reviewed:</i> | 8,924 | 25,762 | 28,385 | 35,483 | 25,706 |
| <i>*Percentage Change Previous Yr (+/-)</i> | | 188% | 10% | 25% | -28% |
| <i>% of overall Library Collection</i> | 0.064% | 0.184% | 0.203% | 0.253% | 0.184% |

| NEEDS ADDRESSED | Total # Items from all Library Collections | | | | |
|--|--|---------|---------|---------|---------|
| Preservation Action(s) Completed | FY 2012 | FY 2013 | FY 2014 | FY 2015 | FY 2016 |
| <i>Conserved/Rebound</i> | 890 | 13,934 | 9,557 | 12,910 | 10,777 |
| <i>Housed</i> | 2,350 | 3,851 | 5,716 | 11,930 | 4,913 |
| <i>Digitized</i> | 2,307 | 304 | 1,347 | 1,680 | 5,372 |
| <i>Total Items Work Completed:</i> | 5,547 | 18,089 | 16,620 | 26,107 | 21,062 |
| <i>Percentage Change Previous Yr (+/-)</i> | | 226% | -8% | 43% | -24% |
| <i>% of overall Library Collection:</i> | | 0.129% | 0.119% | 0.186% | 0.150% |
| <i>% of Items identified:</i> | | 70% | 59% | 74% | 82% |

| | Total for all Library Collections | | | | |
|---|-----------------------------------|---------|---------|---------|--------|
| Preservation Exhibition & Loan Support | FY 2012 | FY 2013 | FY 2014 | FY 2015 | FY2016 |
| <i>Exhibitions supported</i> | 40 | 33 | 19 | 11 | 9 |
| <i>Items exhibited</i> | 0 | 1,312 | 1,367 | 901 | 287 |
| <i>Loans supported</i> | 20 | 26 | 22 | 22 | 7 |
| <i>Items loaned</i> | 150 | 83 | 26 | 104 | 164 |
| <i>Percentage Change Previous Yr (+/-)</i> | | 592% | 1.4% | -28% | -55% |

| | Total # for Library, Campus, and General Public | | | | |
|--|---|---------|---------|---------|--------|
| Preservation Outreach & Education | FY 2012 | FY 2013 | FY 2014 | FY 2015 | FY2016 |
| <i>Consultations & Inquiries</i> | 373 | 341 | 237 | 184 | 208 |
| <i>Outreach/Teaching Sessions</i> | 7 | 24 | 9 | 13 | 38 |
| <i>Number of attendees</i> | 47 | 508 | 113 | 168 | 236 |
| <i>Tours</i> | 8 | 11 | 18 | 5 | 20 |
| <i>Number of Visitors</i> | 8 | 35 | 49 | 13 | 24 |

*Percentage change formulas throughout corrected from previous annual reports.

**Appendix III
Conservation & Exhibition Statistics**

Statistics Summary

Conservation & Exhibition Services (CES) preserves access to collections through single-item and collection-level conservation treatments and the creation of custom housings for books, works on paper, photographs, and other objects from both the Library’s general and special collections. In addition, the unit carries out a program preventative activities and services to protect collections from the risks associated with loans and in-house exhibition. The work of CES is driven by the use of the collections by individual students, faculty, and researchers; and by the cataloging and processing of newly and previously acquired collections.

The statistics for conservation and exhibition related activities in FY 2016 are unusually lower than in recent years. Significant workflow and service interruptions were experienced in FY 2016 as a result of:

- The Beinecke Rare Book and Manuscript Library renovations;
- Preparation and packing of the conservation and exhibits workspaces in SML for relocation to 344 Winchester;
- An unanticipated 3.5-month construction delay of our move into the new Gates Conservation Laboratory; and
- Reduced staffing levels for the first 3 quarters of the fiscal year until two conservation technician positions could be refilled.

YUL, ALL COLLECTIONS – CONSERVATION ACTIVITIES

| CONSERVATION ACTIVITIES | TOTAL |
|--|-------|
| Objects Assessed/Reviewed | 3769 |
| Objects Treated | 588 |
| Objects Housed | 1495 |
| Loans for Exhibition | 7 |
| Total Objects Prepared for Loan | 164 |
| Exhibitions Installed | 9 |
| Exhibitions in Planning Stages | 10 |
| Total Objects Prepared for Exhibition | 287 |
| Outsourced Treatment Projects | 1 |

YUL, ALL COLLECTIONS - ARL PRESERVATION STATISTICS

| MATERIALS FORMATS | INHOUSE TREATMENT | INHOUSE HOUSING | OUTSOURCED TREATMENT | OUTSOURCED HOUSING |
|--|-------------------|-----------------|----------------------|--------------------|
| Books/Bound | 441 | 1420 | 0 | 75 |
| Unbound | 119 | 0 | 17 | 0 |
| Photographic | 0 | 6 | 0 | 1 |
| Art Objects | 10 | 2 | 0 | 3 |
| Historical/Ethnographic Objects | 1 | 0 | 0 | 0 |
| Totals: | 571 | 137 | 17 | 67 |

CONSULTATION/INSTRUCTION REQUESTS

| TOPIC/TYPE OF REQUEST | LIBRARY STAFF | FACULTY & STUDENTS | OTHER YALE AFFILIATES | NON-YALE AFFILIATES | TOTAL |
|--|---------------|--------------------|-----------------------|---------------------|-----------|
| Care & Handling | 2 | 0 | 0 | 1 | 2 |
| Careers in Conservation; Internship Requests | 0 | 0 | 0 | 2 | 2 |
| Conservation Treatment/Binding | 4 | 0 | 1 | 1 | 6 |
| Development/Publicity | 7 | 0 | 2 | 0 | 9 |
| Digitization | 1 | 1 | 0 | 1 | 3 |
| Disaster Response | 1 | 0 | 0 | 0 | 1 |
| Documentation (ConsSpace) | 0 | 0 | 1 | 1 | 2 |
| Exhibition/Loan | 6 | 1 | 0 | 2 | 9 |
| Housings | 2 | 0 | 0 | 1 | 3 |
| Laboratory Design | 0 | 0 | 0 | 2 | 2 |
| Laboratory Tour | 7 | 1 | 1 | 3 | 12 |
| New Member, YU Pres-Cons List Serv | 2 | 0 | 5 | 0 | 7 |
| Personal Collections | 1 | 0 | 0 | 1 | 2 |
| Supply Recommendation | 2 | 0 | 1 | 0 | 3 |
| Teaching Session | 1 | 1 | 1 | 2 | 5 |
| Technical Study; Scientific Analysis | 2 | 0 | 0 | 0 | 2 |
| Traveling Scriptorium (sale of) | 0 | 0 | 0 | 1 | 1 |
| Totals: | 37 | 3 | 12 | 18 | 69 |

**Appendix IV
Events Requiring Emergency Response and Recovery
FY 2015-2016**

| Date | Where | Library Materials Affected | Library Staff hours used in response & recovering materials (hours) |
|-------------|--------------------------|-----------------------------------|--|
| 12/29/15 | Beinecke basement area 2 | Manuscripts | 4 |

