

# Collection disaster

## Mold in the stacks

by Doris R. Brown

**D**emolding is not a term that figured in the vocabulary of DePaul University Libraries prior to 2000; indeed it is a term that does not even appear in dictionaries, but it has become a familiar word at DePaul as the battle against the pernicious substance of mold has become a virtual war.

In October 2000, when Chicago's DePaul University announced its intent to merge with Barat College in February 2001, a plan to incorporate Barat into the existing library operations was put into motion. DePaul has a centralized library administration, with a library presence on all seven campuses and with library integration in the university's international programs. This centralized approach consolidates the functional areas organizationally and spreads responsibility for functions, which are repeated at each campus.

The expected smooth incorporation of Barat into DePaul's library services was shattered, however, during the first visit (October 2000) to Barat's Cooney Library, which was built in 1997. The mold smell was pungent when the front door opened, and upon visiting the stacks, mold spores could be seen and smelled in multiple areas. In the closed and dark Special Collections room, the mold was hanging in green sheets on the volumes. DePaul's library staff was not on the Barat due diligence team, so the extent of prior library examination at Barat is unknown.

DePaul's *Library Emergency Response Manual* identifies mold as problematic after water dam-

age, but there was no known water damage at Barat. However, the scale of the mold infestation required a prompt response to review the collection, discard volumes not worth saving, and start mold removal from the volumes to be kept. DePaul's quick plan had to be postponed, however, since the DePaul-Barat merger would not be official until February 2001, imposing a delay of five months before implementing cleanup. As a stopgap, DePaul urged Barat's library staff to halt all interlibrary lending to avoid spreading the mold to other collections.

### Reviewing the collection

In March 2001, DePaul immediately began to review a very problematic collection that had been neglected because of Barat's financial problems. DePaul collection development staff began weeding moldy materials, looking for outdated items, duplicate titles already in DePaul's Chicago campus libraries, or volumes too mold-infested to warrant the cost of cleaning. The Special Collections area was especially problematic because of heavy mold and because a perception of "rarity" meant a political and emotional drama in discarding books.

To offset the perception that rare books were being discarded, titles were checked in OCLC to determine availability, and only those widely held were discarded, thereby eliminating the allegation that DePaul jettisoned "rare and valuable" materials. Any volume with historical or emotional ties to Barat (e.g., biographies of St. Madeleine Sophie

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Barat and St. Rose Duchesne, founders of the Society of Sacred Heart nuns which owned Barat College) were kept to be demolded. All discarded books were boxed to avoid anyone taking a moldy book from a dumpster and spreading the infestation.

DePaul's Facility Operations also contracted with ENVIRON International Corporation<sup>1</sup> to analyze the mold to protect library staff and users from possible mold contamination—a major concern given highly publicized mold stories.<sup>2</sup>

ENVIRON's report was received with relief, since the sampling detected was not the toxic mold that creates sick buildings, but *Aspergillus* spores. Analysis of the indoor air samples indicated a high occurrence of *Penicillium* and *Cladosporium* species, but both these were also present in the outdoor air.

ENVIRON reported that all air sample results were below 2,000 particles/m<sup>3</sup> total and 650 particles/m<sup>3</sup> individual (levels from recommended indoor guidelines for nonviable particles or fungal spores). These guidelines came from the Indoor Air Quality Association and the analyzing laboratory, MBI, since in the United States no federal agency has the authority to regulate bioaerosols or biological surface contamination. Since there are no regulatory standards for fungal bioaerosols, indoor fungi is compared to outdoor samples to determine concentration of specific fungi.

Even though the collection was small (approximately 72,500 volumes), it was a daunting task to review every volume, not just for mold damage but also to determine whether age and condition warranted the cost for demolding. This close analysis was essential since Barat's precarious financial condition had allowed purchase of few new titles, and DePaul's staff determined that the best way to advance Barat was to recatalog everything worth retaining for integration into DePaul's ILLINET Online (IO) database. Both Barat and DePaul had membership in the Illinois Library Computer Systems Organization (ILCSO), the statewide resource-sharing program for 45 academic libraries.

The Illinois State Library granted DePaul \$4,000 for "Ask a Pro" and \$50,000 in LSTA funds for the project, "Rescuing DePaul's Barat Campus Library and Its Collections," supporting DePaul's desire to save Barat's collections for an Illinois resource-sharing program.

Barat is located in northeastern metropolitan Chicago, which has few academic libraries, so DePaul's goal for a strong Barat library was deemed worthy by the State Library. "Ask a Pro" funds provided expert advice about cleaning the building, and the \$50,000 grant partially supported having

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the books demolded by Munters,<sup>3</sup> a company that specializes in moisture control, whether water or humidity damage, and also has a method to treat mold-damaged paper.

### **Action plan**

*Step 1: Collection analysis* DePaul's library staff analyzed Barat's collection to determine its value for DePaul's curriculum, reviewing each book as described above. DePaul bibliographers worked with Barat teaching faculty to identify collection needs, and DePaul began to purchase new materials in FY02. DePaul's extensive electronic resource collections were turned on at Barat when the merger agreement was legalized on July 1, 2001.

*Step 2: Mold review and treatment of books.* Retained books were sent to Munters for demolding. Munters inventoried books to be cleaned and identified any with a more serious infestation requiring special attention. Upon completion of the inventory, the books were moved to a stabilization chamber (38 degrees Fahrenheit) to prevent further mold growth while the books awaited processing. After stabilization, the books were desiccant air dried to remove excess moisture. During the cleaning process, Munters used antimicrobial cleaners, applying Microban to remove the mold and sanitize the document. Once cleaned and sanitized, the books were shipped to DePaul's Lincoln Park Campus to be recataloged.

*Step 3: Building and furniture treatment.* Every living thing has potential mold, and once the mold has become an infestation, it has to be removed to prevent spreading. At Barat, the library building had to be treated to control the mold and prevent it from growing again. Stack units were washed, the furniture and carpet were vacuumed and washed, and the air ducts were cleaned. For carpeting and upholstery, DePaul used a special mold killing disinfectant solution. For hard surfaces, such as shelving, a solution containing bleach (at nonhazardous concentrations) was used as a wipe-down agent.

DePaul identified a human factor contributing to the mold problem, as Barat's physical plant staff did not understand the working of reheat coils that temper the air flowing through ventilation ducts.

DePaul is replacing the overall campus boilers in Barat's main campus building to ensure the building reheats are operated effectively and efficiently, thus keeping the temperature and humidity under control. Elevated levels of mold have not been detected in any other Barat buildings, making it unlikely that material transfers from another building started or contributed to Cooney Library problems. Since Barat is located on the shores of Lake Michigan, stand-alone dehumidifiers were installed to give temporary additional moisture control.

*Step 4: OCLC/ILCSO database cleanup.* Barat entered ILCSO in 1990, as part of membership expansion for the LIBRAS schools.<sup>1</sup> When Barat joined ILCSO, the college's financial problems were forcing staff cuts in converting library holdings to machine-readable form, resulting in a "dirty database." Barat's IO records had volumes in the database but not on the shelves, and database call numbers were different from labels on the books. Items were left in OCLC after being removed from IO and vice-versa, so neither system had a completely correct Barat catalog.

After books were reviewed for retention and demolded as described above, DePaul staff cataloged the books in OCLC for incorporation into DePaul's database. As this step was undertaken, all of Barat's holdings were deleted from OCLC and IO, guaranteeing that users of DePaul's Barat Campus would have correct title and volume information.

### Problems with the plan

While our plan of action helped ensure future access to the Barat collection, it did lead to a few problems:

- Collections were inaccessible while at Munters and while awaiting recataloging and reclassification. Other DePaul copies could be borrowed, but student and faculty access was delayed.
- Every step took longer than anticipated, whether collection review or demolding or recataloging/reclassification. The recataloging/reclassification project had to be jockeyed into the schedule for IO's conversion to the Voyager system.
- Barat's collection age and condition were worse than originally apparent, so DePaul has to commit more annual funding to get the collections up to date.
  - Costs rose with every step, resulting in more outsourcing costs (e.g., Munters, OCLC).
  - Training for mask usage began after staff had begun to review the books. Cloth gloves did not

keep the dirt and mold from hands, but rubber gloves were uncomfortable for some staff. Staff with any known medical problems were either not put on the project or were removed when a condition became known; affected staff were asked to complete a Human Resources report for possible workmen's compensation coverage.

### Conclusion

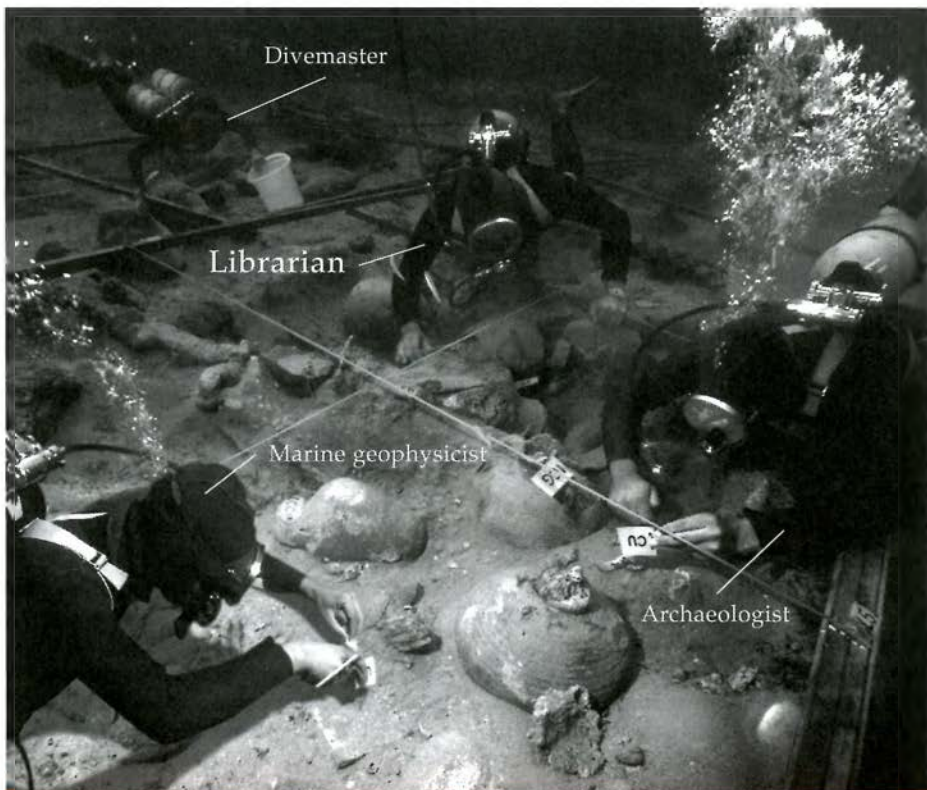
DePaul's prompt action and the Illinois State Library grant funding allowed a unique opportunity for saving a library collection and for making access to that collection accurate and factual. The entire project preserved a valuable collection and provides a pattern for rescuing what otherwise would have been discarded.

Perhaps DePaul should have noticed the mold problem during the premerger due diligence, but maybe the mold was not in the Barat library at that time. Perhaps no one on the DePaul team paid attention to the 1997 library building, given the neglected state of the older buildings on Barat's campus. Perhaps no one noticed the mold smell because they had never experienced it before. Perhaps if there had been a librarian on the due diligence team, the mold and humidity problems might have been noted months earlier.

Advice to other librarians regarding controlling mold? Check any donations carefully for mildew and mold and discard them, or if the collection value warrants the cleanup costs, have them demolded before bringing them into the acquisition process. Mold transfer from an outside source is not universally accepted by conservation librarians, but there is general caution about the need to review donations for mold infestation. Contact the local facilities operations people to be educated on how the temperature and humidity is controlled in the library building. If the air feels humid, whether hot or cold (mold grows in all temperatures), have the moisture content measured, check the stacks, and follow your nose!

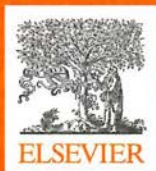
### Notes

1. ENVIRON is a technical and scientific consulting firm providing strategic risk management services in public health and environmental areas (<http://www.environcorp.com>).
2. "Haunted by Mold," *New York Times*, 12 August 2001.
3. Visit Munters at <http://www.munters.com>.
4. LIBRAS is a consortium of 17 Chicago-area small, private college and university libraries. ■



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