ON TIME
The Quest for Precision
Exhibition Opening September 27, 2012
Global Resources Partnership

On July 1, 2012 the Linda Hall Library initiated a partnership to increase the availability and use of its famed research collection, and I am delighted to share this exciting news with you.

The Linda Hall Library (LHL) and the Center for Research Libraries (CRL), a consortium of over 250 academic libraries, have joined forces to preserve and develop research collections in science, technology, and engineering (STE). The partnership builds upon the rich holdings of print STE serials assembled by LHL and CRL over 60 years. Together, these two collections constitute a premier library of global science. CRL and LHL will combine human, technical, and financial resources to develop these collections, promote their visibility and use, and preserve them for future generations of scholars and researchers.

The combined CRL and LHL print serial publications will be available electronically to CRL-members in the United States, Canada, and Hong Kong through digitization and traditional document delivery. The Linda Hall Library will be the locus for maintaining, developing, and providing access to the collections.

The collections covered by the partnership include current and back issues of over 50,000 titles. These include print serials from major scientific publishers; historical serials published by the Russian Academy of Sciences and other European, Asian, and U.S. learned societies; foreign serials in physics, chemistry, and engineering; engineering specifications, reports, standards; U.S. and foreign government agency publications, and other retrospective serials held by both partners.

The partnership stems from the traditional symbiotic relationship between academic and independent research libraries. LHL’s longstanding commitment to building its print collections assures that important scientific literature will survive and remain available for research and scholarship. I am proud that the Library has accepted this challenge to strengthen STE resources and their use at a time when education in the sciences, engineering, and technology has never been more important.

Sincerely,
Lisa Browar
President

Excerpts from an Interview with Dava Sobel

Dava Sobel’s Longitude went through 29 hardcover printings before being re-issued in October 2005 in a special 10th anniversary edition with a Foreword by astronaut Neil Armstrong. Soon after its original publication in 1995, the book was translated into two dozen foreign languages and became a national and international bestseller.

Sobel will speak at the Linda Hall Library on October 11 at 7:00 p.m. as part of a lecture series complementing the exhibition, On Time: The Quest for Precision. In early July, she spoke with Bruce Bradley, Librarian for the History of Science and On Time exhibition curator, about her book, Longitude.

A transcript of the complete interview is available at time.lindahall.org. A book signing courtesy of Rainy Day Books will follow the lecture on October 11.

Bruce Bradley: Did you ever imagine that Longitude would be so popular when you started working on it?

Dava Sobel: Oh, not at all. I had so much trouble getting anyone to agree to let me write a magazine piece about it. I had met Will Andrewes [of Harvard] at least a year before the Longitude Symposium [at Harvard in 1993], in Chicago at a meeting of the Astrolabe Society at the Adler Planetarium...Then I went to interview him and he told me about the Longitude Symposium coming up. At that time I was a full-time magazine freelancer, and I queried all the magazines I was writing for, starting with Harvard Magazine, and everybody turned me down on the grounds that it sounded boring, weird, and esoteric... Then, literally, two or three days before the start of the symposium the editor at Harvard Magazine called me back. I was a contributing editor there and they still had turned me down, but they were impressed because they had noticed 500 people had shown up on campus to attend the Longitude Symposium.


DS: Yes, and George Gibson [publisher of Walker Books] was wonderful...And the whole time I was writing the book, which wasn’t that long because one of his directives was to make it a short book, people would ask me, “What are you writing about?” I would say, “I’m writing a book about how the problem of finding a position at sea was
solved.” And people just didn’t know what to say—a complete conversation stopper.

BB: Where did you do your research?

DS: The fact that I had been to the symposium was a tremendous help because the symposium had outlined the entire research program. Usually that’s the hardest part of any book project. But here I felt it had been handed to me...The library I found the most useful was the Library of the National Association of Watch and Clock Collectors, which is in Columbia, Pennsylvania.

BB: You tell it as a human interest story about John Harrison. Who was he?

DS: There’s so little known of a really personal nature about him. That was a hindrance. He did write down a lot of his thinking, but it’s very hard to follow his own writings.

BB: At the very end of your book, you mentioned going to Greenwich. Can you still remember what it was about the sight of Harrison’s clocks that could move you to tears?

DS: It was my attachment to the story. I think when you get interested in something and learn a lot about it from a distance, and then get to see it, you’re primed to have the most emotional experience possible.

“I think when you get interested in something and learn a lot about it...you’re primed to have the most emotional experience possible.”

Dava Sobel

BB: There were four clocks that Harrison made for the trials at sea, is that correct?

DS: Well, there’s a fifth one that never went anywhere. The first one was actually tried at sea, the second was not, and the third was not.

BB: These clocks are known by abbreviations. H-1 was the first clock.

DS: That was Gould’s contribution. Rupert Gould was the person who came upon the clocks in the state of terrible disarray and got permission to restore them all to working order, something that took him 13 years.

BB: H-1 was built by Harrison for the longitude trials. The reward promised to someone who could come up with an accurate method for determining longitude at sea was a lot of money.

DS: Oh, a fortune, £20,000. There were categories—if you could come within a third of a degree you got £20,000; if you came within a half degree accuracy I think it was £15,000, and 1 degree it was £10,000.

BB: In order to win, they had to have a trial at sea.

DS: Law required that you travel from England to the West Indies and back.

BB: Harrison’s H-1 actually went to sea and worked, but he immediately started working on a second clock. He wasn’t satisfied with it?

DS: Right. He was the ultimate perfectionist. That’s something that’s known about him.

BB: H-2 never got off the shore, did it?

DS: No, same thing. He completed it and he presented it to the board, but he said that he was not satisfied, and that he would come up with a different idea. He completely changed the design between H-2 and H-3...It really took a terribly long time, and then while he was working on H-3, he had the insight that helped him miniaturize.

BB: What was so radically different about H-4?

DS: It was small. It was only five inches in diameter. Like an oversized pocket watch. The others took up a lot of room. They weighed 75-80 lbs., and they had to be protected...Another thing he had done with the big clocks was to make them free of oil. The oil was a major problem in keeping the rate steady as the clock went from a cold climate to a warm climate. But H-4 required oil, and even so it was accurate enough.

BB: We look forward to hearing more of this story when you visit the Library in October. Thank you for giving us these insights today.
Fall Programs

Thursday, September 27, 6:00 p.m.
Exhibition Opening
On Time: The Quest for Precision

Is time a fundamental dimension of the Universe? Can it be measured in any absolute sense? Is time merely a human invention that allows us to compare events in sequential order? “We may be uncertain about how to define the concept of time,” explains exhibition curator Bruce Bradley. “But at least one thing is certain. We sure know how to measure it.”

For centuries, the sundials and water clocks used to measure the sun’s changing position were distinctly non-mechanical. The first mechanical clocks appeared in the 13th century and were crude and imprecise instruments that nevertheless introduced a mechanical means of generating and counting a repeating beat, marking a revolution in timekeeping.

On Time: The Quest for Precision opens Thursday, September 27, at 6:00 p.m., followed by a lecture at 7:00 p.m. by Christopher Ekstrom, Chief of Advanced Clock Development at the U.S. Naval Observatory. Exhibition galleries are open Monday through Friday from 9:00 a.m. to 5:00 p.m., and the second Saturdays of each month from 10:00 a.m. to 2:00 p.m. Admission and parking are free.

This exhibition is made possible through generous support from Dr. James and Mrs. Francie Flynn, the Burns & McDonnell Foundation, the J.B. Reynolds Foundation, and the Linda Hall Library Annual Fund.

On Time: The Quest for Precision
A Linda Hall Library Lecture Series

Thursday, September 27, 7:00 p.m.
Christopher Ekstrom, Chief of Advanced Clock Development, U.S. Naval Observatory

Clocks are an essential part of everyday life as well as important tools for a wide range of scientific applications. Join Christopher Ekstrom for an insider’s look at timekeeping and timescales, and the way in which countries agree on the time. He will also share details of new laser-cooled atomic fountain clocks at the U.S. Naval Observatory, the agency that serves as the official source of time for the Department of Defense, the GPS constellation of satellites, and as a standard of time for the U.S.

This lecture is made possible through generous support from Mrs. Linda Nottberg and the Linda Hall Library Annual Fund.

Thursday, October 11, 7:00 p.m.
The Quest for Longitude
Dava Sobel, Award-winning science author

Although the idea of using a clock to determine a ship’s position was suggested as early as the 1500s, more than 200 years passed before John Harrison, a self-educated clockmaker from England, achieved what the entire
scientific establishment of Europe had failed to provide—a solution to the longitude problem. Dava Sobel will tell the life-and-death story behind the gridwork of lines that appear on every world map and globe and how clockmaking became an integral part of navigation long before GPS.

This lecture is made possible through generous support from Bob and Sally West, Polsinelli Shughart PC, the Atterbury Family Foundation, and the Linda Hall Library Annual Fund.

Monday, October 22, 7:00 p.m.
Myth, Math, and the Measure of Maya Time
William Saturno, Assistant Professor of Archaeology, Boston University

In the May 11, 2012, issue of Science, archaeologist William Saturno announced his discovery of 9th century murals excavated in Guatemala. The murals contain deep-time astronomical calendars that extend thousands of years into the future, shattering pop culture end-of-the-world theories based on the belief that Maya calendars will end on December 21, 2012. Join Dr. Saturno as he explores Maya timekeeping and worldview and how his new discovery has changed the perception of ancient Mesoamerican science.

This lecture is made possible through generous support from Sandi and Jay Rozen; the Carter Community Memorial Trust, UMB Trustee; and the Linda Hall Library Annual Fund.

Matinee Movie Series
Please join us in the Library's Auditorium for free screenings of these fascinating films.

September 8, 2012, 11:00 a.m. - Becoming Human: Unearthing Our Earliest Ancestors
September 25, 2012, 2:00 p.m. - Transcontinental Railroad
October 13, 2012, 11:00 a.m. - Lost at Sea: The Search for Longitude
October 30, 2012, 2:00 p.m. - Into the Universe with Stephen Hawking
November 10, 2012, 11:00 a.m. - Cracking the Maya Code
November 27, 2012, 2:00 p.m. - Life in a Day

This lecture is made possible through a generous grant from the BNSF Foundation.

In Memoriam: Elizabeth Grace Rich (1956—2012)
The Linda Hall Library mourns the passing of Elizabeth Grace Rich who died on July 23, 2012, after a long illness. Elizabeth began her career at LHL in 1977 as a Page, later serving as an Assistant in the Loans Department, and most recently as a Document Services Assistant. The Library extends its deepest condolences to Elizabeth's family.
According to Evalyn Clough, two major ideas shaped her upbringing: “Never be a burden upon your society, and try to be a help to it.” A friend to the Linda Hall Library for over 20 years, Evalyn put those ideas into practice in 1991 by establishing the Mary Evalyn Clough Endowment to be used in support of the Library’s renowned collection of science journals and serial publications.

A woman with a good sense of humor and a keen intellect, Evalyn Clough graduated from Southeast High School in Kansas City, Missouri, during the late 1940s. Planning to study the violin, she began her training at the University of Kansas, eventually following her instructor to UCLA where she completed her Bachelor of Arts degree. Though Evalyn continued to play in community and university orchestras throughout her life, she realized the difficulties of earning a living as a professional musician and returned to Kansas City in 1953 to contemplate her future.

Evalyn worked in the technical services department of the Kansas City Public Library for a year and subsequently decided to pursue a master’s degree in library studies. In 1954, she enrolled in a graduate program at Columbia University’s famed School of Library Service. While completing her degree Evalyn worked part-time in Columbia University’s medical library and at the New York Academy of Medicine Library. With degree in hand, Evalyn began her career as a science librarian at Republic Aviation on Long Island. She chuckles, “Getting this job was rather ironic as I had taken only two courses in science during my entire course of study!”

Evalyn was proud to use the excellent resources of a cultural institution in her hometown, and her students and colleagues were surprised to learn that such a place existed in the middle of the country. Evalyn’s career as a science librarian took her to Pittsburgh, Pennsylvania, where she first worked for a company that manufactured various forms of glass, and eventually joined the faculty of the University of Pittsburgh’s School of Library and Information Science. While teaching “The Literature of Science and Technology,” Evalyn reached out to the Linda Hall Library and became acquainted with History of Science Librarian Bruce Bradley whom she deems, “a wonderful resource.” Evalyn was proud to use the excellent resources of a cultural institution in her hometown, and her students and colleagues were surprised to learn that such a place existed in the middle of the country. After nine years of university teaching and administration, Evalyn returned to Kansas City in 1984 to help care for her mother.

Evalyn and a science librarian friend often remarked that the Linda Hall Library would be the perfect place to work. Although neither of them ever worked here Evalyn became a regular attendee at Library events and followed the institution’s activities. An article in an early 1990s issue of the Library’s newsletter prompted Evalyn to establish a named endowment, and her continuing belief in the Library’s mission motivates her to add to the fund each year.

A few years ago, Evalyn lifted the restriction limiting the use of her endowment for the serials collection and instructed the Library’s administrators to apply the endowment’s income to any projects that would further the Library’s mission. Her generosity has not only supported serials preservation, but has also provided matching funds for a grant, and underwritten an exhibition and a lecture series.

Although she rarely comes to the Library these days, Evalyn remains one of its biggest fans and most generous donors. “A lucky person who found out what she really liked to do and then got to do it for 30 years,” she says of herself. Linda Hall Library’s patrons and staff are very fortunate to call Evalyn Clough a friend.
In May, the Linda Hall Library welcomed the first scholar to be awarded a fellowship under its revised residential fellowship program. Dr. Francesco Luzzini, a Research Fellow at the University of East Piedmont in Northern Italy, spent three months at the Library working on his research project, “Faith and Facts, Experience and Expedience: A Comparison of Protestant and Italian Catholic Perspectives in 17th and 18th Century Theories of the Earth.”

Interviewed during his first month in residence Dr. Luzzini expressed his pleasure at being selected for the fellowship. “The opportunity this fellowship presents is a fantastic thing for me and I consider it a privilege to be here,” he said. “The History of Science Collection offers a nearly complete catalogue of 17th and 18th century treatises devoted to such themes as diluvialism, the age of the Earth, and the origin of fossils.”

Dr. Luzzini noted that his experience at the Linda Hall Library stands in stark contrast to his research experiences in Italy and in other European countries where libraries often restrict access to materials. “Here, I have complete and continuous access to the sources I need for my research,” he said, “and great assistance from the History of Science staff. It’s been a revelation.”

Dr. Luzzini expects his research at the Linda Hall Library will enable him to complete and publish at least two articles and assist him in finishing a book about Antonio Vallisnieri’s (1661-1730) work in the field of earth sciences.

On July 18, Dr. Luzzini presented a public lecture in the Library’s Auditorium. “It was a wonderful venue to talk about my research,” he said. “I enjoyed meeting with area scholars and the many people in the community who have an interest in my research.” Dr. Luzzini’s lecture can be viewed online at www.lindahall.org/events/webcasts.shtml.

In early August, the Library welcomed Harvard history of science professor Adelheid Voskuhl on a one-month fellowship, and Jongmin Lee, a Ph.D. candidate at Virginia Tech, for a nine-month fellowship. Later in the year, Jerusha Westbury, a Ph.D. candidate at New York University, and Felipe Cruz, a Ph.D. candidate at University of Texas, Austin, will begin their fellowships.

Library Tours

Free tours of the Library are available Monday through Friday at 10:00 a.m. and 2:00 p.m. Advance registration is not required. Please check in at the reference desk. Contact Eric Ward at (816) 926-8753 for more information.

Adult and school groups wishing to schedule an in-depth tour of the Rare Book Room should contact Bruce Bradley at (816) 926-8737; groups wishing to schedule bibliographic instruction with a reference librarian should contact Mary Moeller at (816) 926-8720.

The Library provides guided tours of the Arboretum every Wednesday at 10:45 a.m. or by appointment. Please contact Scott Reiter at (816) 926-8747 for more information or to schedule an appointment.

Connect with Linda Hall Library online with Vimeo, Tumblr, Flickr, Facebook, and Twitter.
Linda Hall's Tall Case Clock

When Linda Hall died in 1938, her will specifically stated that “the James Cowan Grandfather’s Clock” in her house remain in the library building that was to replace the house.

Herbert and Linda Hall purchased the clock in 1912 from a dealer in Edinburgh, Scotland, thinking they were buying an 18th century clock by the famous Scottish clockmaker, James Cowan. Although the Cowan name is on the clock’s dial, the rest of the movement is constructed in the style of a clock dating from the mid-19th century.

During the clock’s 1993 restoration, the name James Kenmuir was found die-stamped on the movement’s front plate. Kenmuir was a mid-19th century clockmaker from Lisburn, Ireland, whose name was not visible until the dial plate was removed.

Craftsmen have a long history of copying the finer pieces of earlier workers, capitalizing on the styling and quality of known masters. The markings on the dial and movement of Linda Hall’s clock point to such a reproduction.

As it accurately chimes the quarter hours in the Main Reading Room, the clock reminds us of its rich history, of the generosity of the anonymous donor who made the clock’s repair and restoration possible, and of Linda Hall’s lasting legacy.