



# SOCIETY FOR INDUSTRIAL ARCHEOLOGY

## NEWSLETTER

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## QUEEN CITY IA 2012 ANNUAL CONFERENCE REVIEW

About 125 SIA members and guests gathered in Cincinnati, May 31-June 3, for the 41st Annual Conference. This was the Society's second visit to Cincinnati; the 7th Annual Conference was held jointly in Louisville, Ky., and Cincinnati in 1978. Participants in this year's conference included a contingent from the Association for Industrial Archaeology, the SIA's British counterpart. They had built a ten-day Study Tour of IA sites in Indiana, Ohio, and Michigan around the SIA's annual event. Several SIA members donated their time and knowledge to developing the AIA's itinerary and were traveling with the group. It was quite a pleasure to have the AIA members at our conference, and we hope that there will be future opportunities for joint events on both sides of the Atlantic.

Steamboats helped Cincinnati to become the chief port on the Ohio River in the second quarter of the 19th cen-

tury. During the 1820s, it earned the nickname "The Queen City" or the "Queen of the West," a moniker that the city's merchants felt befit their economic ambitions and their vision for the class of city Cincinnati was to become. True to predictions, Cincinnati grew into the most populous city in the Midwest prior to the Civil War. It also became known as "Porkopolis," a far less regal recognition of its fame as a center of salt pork packing. Transportation and urban infrastructure were recurring themes of the conference, and one of the process tours even visited a sausage factory, a vestige of the region's once mighty meatpacking sector.

The conference schedule followed the pattern of past conferences with pre-tours and workshop on Thursday, historic site and process tours on Friday, paper sessions and Annual Business Meeting on Saturday (see articles elsewhere in this issue), and post-conference tours on Sunday. The "Cincinnati Landmarks" paper session was recorded by

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Patrick Harschberger

Casting bronze bells at the Verdin Co.

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## QUEEN CITY (continued from page 1)

UrbanCincy and is available as a podcast ([www.urbancincy.com/category/podcast/](http://www.urbancincy.com/category/podcast/)). Three presentations are available: Jake Mecklenborg on Cincinnati's abandoned subway, Clifford Zink on John Roebling's Covington-Cincinnati Bridge, and Art Hupp on adaptive re-use of the Union Terminal.

The conference hotel was the Hilton Cincinnati Netherlands Plaza, one of the flagship hotels of the Hilton chain. The hotel is located in the **Carew Tower**, a 49-story skyscraper built in 1930 and named after Joseph T. Carew, the owner of a department store. The building's exterior and interior feature luxurious Art Deco details, and a highlight of any visit is a trip to the observation deck for a view of the Ohio River waterfront. Throughout the conference, there were several opportunities to take a guided tour of the tower, including the hotel's industrial-size kitchen and laundry. The hotel's Salon was also the location of the Thursday evening reception, which featured an interesting presentation

The *SIA Newsletter* is published quarterly by the Society for Industrial Archeology. It is sent to SIA members, who also receive the Society's journal, *IA*, published biannually. The SIA through its publications, conferences, tours, and projects encourages the study, interpretation, and preservation of historically significant industrial sites, structures, artifacts, and technology. By providing a forum for the discussion and exchange of information, the Society advances an awareness and appreciation of the value of preserving our industrial heritage. Annual membership: individual \$50; couple \$55; full-time student \$20; institutional \$50; contributing \$100; sustaining \$150; corporate \$500. For members outside of North America, add \$10 surface-mailing fee. Send check or money order payable in U.S. funds to the Society for Industrial Archeology to SIA-HQ, Dept. of Social Sciences, Michigan Technological University, 1400 Townsend Drive, Houghton, MI 49931-1295; (906) 487-1889; e-mail: [SIA@mtu.edu](mailto:SIA@mtu.edu); Website: [www.sia-web.org](http://www.sia-web.org).

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The *SIA Newsletter* welcomes material and correspondence from members, especially in the form of copy already digested and written! The usefulness and timeliness of the newsletter depends on you, the reader, as an important source of information and opinion.

**TO CONTACT THE EDITOR:** Patrick Harshbarger, Editor, *SIA Newsletter*, 305 Rodman Road, Wilmington, DE 19809; (302) 764-7464; e-mail: [pshianews@aol.com](mailto:pshianews@aol.com).

on the history of Cincinnati by local historian and journalist Dan Hurley.

Thursday's schedule featured a full-day GIS workshop held at the University of Cincinnati to make use of its computer lab. The workshop, organized by SIA Continuing Education Committee Chair Amanda Gronhvd, provided participants with an introduction to GIS software and its usefulness as a tool for mapping and interpreting IA sites.

The first of Thursday's optional pre-tours was a visit to the **Procter & Gamble Museum and Archives**, a private collection at the company's headquarters. William Procter and James Gamble were soap and candle makers who emigrated to the U.S. from England and Ireland respectively, eventually settling in Cincinnati in the 1830s, no doubt attracted by the ready availability of animal fats. In 1880s, P&G began to market a new product, an inexpensive soap that floated in water (Ivory). In the 20th century, P&G became an international conglomerate developing and acquiring dozens of other products. The museum celebrates the company's history and features many examples of its packaging and advertising.

An alternative for Thursday was a full-day pre-tour to the Dayton area with stops at **Carillon Historical Park** and the **National Museum of the U.S. Air Force**, which some may remember from SIA's 1996 Fall Tour (Central Ohio). Carillon Park is a 65-acre recreated "historic village" composed mostly of relocated historic buildings and structures, including an important example of David Morrison's patented iron-truss bridge. The park's signature exhibit is the 1905 Wright Flyer III, which made for a good transition to the Air Force Museum at Wright-Patterson Air Force Base. The museum has a world-class collection of military aircraft, organized into exhibits to provide a chronological history of technological development and use in military conflict from WWI to the present. Larry Carr and John Reap (both SIA) made a special stop at the MH-53M Pave Low special-operations, heavy-lift helicopter from the 1960s. Larry had been a designer for Sikorsky Helicopters and was in charge

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Mark Watson

*The Carew Tower offered an expansive view of the waterfront, including the Roebling Bridge (right).*

## Robert W. Passfield—2012 Vogel Prize Recipient



Patrick Harshberger

Robert W. Passfield, 2012 Vogel Prize Recipient.

The 2012 Robert M. Vogel prize is awarded to Robert W. Passfield for his article “St. Andrew’s Caméré Curtain Bridge Dam, Lockport, Manitoba,” which appeared in *IA, The Journal of the Society for Industrial Archeology*, Vol. 33, No. 2, 2007. This paper combines engineering analysis, landscape archeology, and social

history. The unprecedented size of the dam, incorporation of a submerged overflow dam and the use of electrically powered equipment all contribute to making this an innovative structure. The environmental setting and economic factors in Canada underlying the large-scale application of technology developed in France are described. Excellent historical engineering drawings support a clear explanation of the technical developments and modifications in design of movable dams. Detailed drawings and photographic images document the St. Andrew’s project and provide a thorough description of the structure and its operation. The narration and figures show modifications undertaken during the life of the dam and the continuing significance of the project to the area and Canada. Robert’s paper combines physical and documentary evidence to convey high level IA. Robert is a public historian and Senior Historian Emeritus, Parks Canada Agency.

*Each year the SIA recognizes outstanding scholarship in the field of industrial archeology with the Robert M. Vogel Prize. Named for SIA founding and distinguished member Robert Vogel, the award honors the author of the best article to appear in the journal IA within the past three years. The prize consists of a cash award and a wooden foundry pattern bearing a plaque engraved with the recipient’s name. Articles selected must have a clearly stated thesis and well-constructed narrative. Analysis of material culture and high-quality illustration that support the thesis and conclusion are also important measures of scholarship worthy of the prize. Selection is made by the Vogel Prize Committee consisting of five members appointed by the president, who serve five-year terms. ■*

of the wind-tunnel testing of the fuselage of the aircraft. He pointed out modifications to the rear-loading ramp door that he initiated to decrease turbulence and improve stability and controllability.

On Friday, five tours followed itineraries to explore various facets and geographic areas of Cincinnati’s industrial heritage. Following are summary reports provided by participants who volunteered to take notes and provide write-ups.

The *Downtown Cincinnati Tour* visited the **Chris Erhart Foundry and Machine Co.**, established 1854, one of the few remaining active industries near the Ohio River waterfront, specializing today in jobbing and semi-production runs of gray and ductile iron. This was followed by a guided tour of the **John A. Roebling Suspension Bridge** spanning the river between Cincinnati and Covington. Personnel from the Kentucky Transportation Cabinet guided the tour, which included a view inside the towers. Construction on the Roebling Bridge began in 1856 and took ten years to complete due to suspension of work during the Civil War. Originally known as the Covington-Cincinnati Bridge, the bridge is a rare example of one that has since been named after its

engineer. Roebling was, of course, one of the world’s great suspension bridge designers.

Next on the Downtown Tour was the **Mill Creek Barrier Dam & Pumping Station**, a U.S. Army Corps of Engineers project constructed from 1941 to 1948 to prevent Ohio River floods from backing up Mill Creek Valley and disrupting rail lines and industries located in that area. Following lunch at the Rookwood Restaurant, located in a former pottery, the Downtown Tour enjoyed the architecture of the **Over-the-Rhine Brewery District**, a historic neighborhood developed by German immigrants, many of whom arrived in Cincinnati following the failed German Revolution of 1848. Located along the Miami & Erie Canal, the area became known not only for its breweries but also for lumberyards, pork packers, and tanneries. Today, the architecturally decorative breweries are a highlight of the district. There are approximately 47 surviving buildings from 14 different breweries.

The Downtown Tour’s final stop was **Union Terminal**, built in 1933 to centralize the freight and passenger operations of seven major railroads: the Big Four (aka Cleveland,

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Mark Watson

Inside Tower A at Union Terminal.

Cincinnati, Chicago & St. Louis Ry.), Pennsylvania, Chesapeake & Ohio, Norfolk & Western, Southern, Louisville & Nashville, and the Baltimore & Ohio Railroads. The terminal really was where the North's and the South's rail systems met, and it remains to this day a major railroad hub. The railyard was on full display from **Tower A**, which was the terminal's main control tower and is now the museum of the Cincinnati Railroad Club. Though the terminal still serves as Amtrak's station, most of the space has been turned over to museums including the **Cincinnati History Museum**, which hosted Saturday night's conference banquet.

The *Upriver Cincinnati Tour* began with a visit to the **Cincinnati Water Works Richard Miller Treatment Plant and Pumping Station**. The Old River Station is the oldest component of the facility, and from the IA perspective without doubt its most spectacular. Built from 1898 to 1906, the Old River Station is a circular-in-plan, Richardsonian-style masonry building housing what are generally regarded as the tallest steam pumping engines in existence. At 104-ft. tall from base to head, the 1,000 h.p., 1,400-ton, vertical triple-expansion engines were designed by John H. Lewis and the R.D. Wood Co. of Philadelphia and manufactured by the Camden (N.J.) Iron Works. With a stroke of 96 inches, the three engines each power a 26-ton plunger that moves four tons of water for each revolution of the 24-ft. diameter flywheel. The engines were retired in 1963 but are being well cared for by a group of volunteers and waterworks employees. The tour also included the plant's Filter Building, where rapid-sand filters process the water pumped directly from the Ohio River. The building, like so much of Cincinnati's mid-20th-century architecture, is Art Deco in style. The main lobby has been converted into an exhibit telling the history of Cincinnati's public water supply, including 19th-century problems with sanitation, disease, and flooding that led to the establishment of this facility.

Near the waterworks is **Lunken Airport**, featuring a terminal that is another of the city's Art Deco gems. The ter-



Patrick Harshbarger

*Upriver Tour* participants had the opportunity to look inside the valve chamber of a pump at the Old River Station. The pumps are located about 100 ft. below ground level. Access was down by elevator, then up about 12 feet by ladder.

terminal building dates to 1936-37, and its lobby contains gorgeous murals depicting "man's liberation from the hand of gravity through the wonder of aviation." Karen McDonald, the terminal's manager, led us through the terminal and to several early 20th century hangars that co-exist with more modern facilities servicing corporate jets and general aviation.

Following lunch, catered by the terminal's restaurant, the *Upriver Cincinnati Tour's* next stop was the **Verdin Company**, a renowned maker of bells and clocks. Verdin was established in 1842, when two French immigrant brothers, Francois and Michel Verdin, came to Cincinnati from Alsace where they had learned iron-forging and clock tower-making skills. Their first installation was a clock in Cincinnati's Old St. Mary's Church. Amazingly, the company is still family-owned and managed, and we were greeted by Tim Verdin, a sixth-generation descendant of the founders. Verdin boasts of having installed over 50,000 tower clocks in churches, universities, businesses, and municipalities since its founding. The company still casts bronze bells, and Tim Verdin

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# Minutes of the 41st Annual Business Meeting

## June 2, 2012

**Call to Order.** President Jay McCauley called the Annual Business Meeting to order at 12:10 p.m. in the Hilton Cincinnati Netherland Plaza Hotel at 35 W. Fifth St. in Cincinnati, Ohio.

**President's Report.** President McCauley began by asking for a moment of silence in memory of board member Carol Litchfield and other SIA members who had passed away during the year.

He reported that in March 2012, the J. M. Kaplan Fund awarded \$10,000 in matching funds for SIA's Industrial Heritage Preservation Grant Program. President McCauley recognized Carol Litchfield's role in establishing procedures for reviewing applications and tracking their progress, which led to the success of the J. M. Kaplan Fund application.

President McCauley thanked the conference organizing committee, led by Events Coordinator Ron Petrie. He noted last night's Second Annual Film Festival, especially the Procter & Gamble orientation film, and pointed to today's paper sessions as evidence of SIA's diversity.

He reported that the state of the Society is good; it is on sound financial footing and the membership decline is stabilizing. He is most concerned about students and young professionals, and asked everyone to encourage these people to join.

SIA has restarted continuing education efforts to reach out to young professionals, and President McCauley hopes that SIA will be able to continue these programs.

Publications are also strong with the *SIAN* continuing to be an excellent vehicle for reporting on current events. This year SIA introduced the option for members to receive the newsletter electronically before (or instead of) receiving the print version in the mail. He noted that Fred Quivik would speak about the journal later in the meeting.

President McCauley felt that all SIA members in these challenging times are feeling the impact of cuts to state historic preservation initiatives. Donor fatigue affects every non-profit, he said, and SIA needs to support local organizations in advocating for preservation in creative ways. He reported that SIA has started a formal relationship with the Society of Architectural Historians, sharing calendars and offering discounts. He wants to continue seeking collaboration with organizations whose missions are aligned with SIA's.

SIA must engage friends and allies, President McCauley noted, using every available technology. SIA has been successful with its Facebook presence and its discussion group on LinkedIn. There are lots of pictures up on photo-sharing sites, including recent ones from the Malta study tour. He hopes that members will share their photos from the conference and even scan in and share old collections of slides. SIA needs to increase these efforts while maintaining its core publications. President McCauley closed by repeating his challenge from the previous year: before the end of June, each member should do one thing to help SIA achieve its

goals. He asked members to write down their goals, or better yet, share them with SIA online.

**Secretary's Report.** Secretary Justin Spivey stated that minutes of the previous year's Annual Business Meeting were published in *SIAN* Vol. 40, No. 3 (Summer 2011). He asked for amendments or corrections; none were forthcoming. President McCauley called for a motion to approve the 2011 Annual Business Meeting minutes as published. David Hayes so moved, Richard K. Anderson, Jr., seconded the motion, and it passed unanimously.

**Treasurer's Report.** Treasurer Nanci K. Batchelor read her report: "The Society maintains its books and records on a cash basis, and maintains a calendar year for tax and reporting purposes. SIA is classified as tax-exempt under the IRS Code 501(c)(3) as an educational organization and we file a Form 990 tax return yearly. The following report is for the year that ended Dec. 31, 2011.

"We began 2011 with a total fund balance of \$231,391. Cash receipts for the year totaled \$88,873. The majority of our annual income comes from the various membership dues categories. In 2011 the total dues received were \$69,930. The remaining balance comprises interest income, contributions in both general and restricted funds of \$5,405, publication sales and excess proceeds from tours and conferences.

"Total expenses for the year were \$87,867. The production costs of our publications, the newsletter and the journal, combined for a total of \$29,457. Labor costs were \$42,046; postage was \$2,605; insurance, prizes, awards, and scholarships were \$2,066; preservation grants program was \$5,000. Office overhead and a few misc. items made up the rest.

"The Society closed 2011 with excess revenues over expenses of \$1,006. The total fund balance was \$234,011, of which \$39,503 is in restricted funds.

"Through March 2012, the Society has had a total of \$27,745 in cash receipts and has spent \$30,203. With the anticipated additional journal printing in 2012, we expect our expenses to exceed our income this year.

"If anyone has any questions regarding the Society's financial data, please feel free to see me after the luncheon."

**Headquarters Report.** Executive Secretary Patrick Martin regretted that he could not defer to Don Durfee, who usually delivers the headquarters report, because Don could not travel to the event. He reported that SIA's relationship with Michigan Technological University (MTU) remains good, as the university has restrained the urge to raise costs for its services. Fees for credit-card transactions remain low, even as the university is dealing with increased fees. SIA's influence with The International Committee for the Conservation of the Industrial Heritage (TICCIH) is strong, and through it, there is the opportunity to have an impact on the International Council on Monuments and Sites (ICOMOS). While this relationship hasn't played out

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# Jane Mork Gibson

## 2012 SIA General Tools Award Recipient

This year's recipient of the General Tools Award for Distinguished Service to Industrial Archeology has made significant contributions to the documentation, preservation, and interpretation of the industrial resources of a major American city. She also illustrates the circuitous paths from which many of our members emerge to make their mark in the field of industrial archeology.

Jane Mork Gibson's long career as a historian of Philadelphia industry and technology did not begin with the standard progression through post-secondary education. Her father, an architect who worked for John Eberson, a noted designer of atmospheric movie theaters, moved the family around until settling in Boston. After high school, Jane earned a two-year business degree from Boston University and worked as a secretary at the Harvard Business School before marrying and having five children. Only later did she pursue her interest in history and the humanities.

Settled in Philadelphia and with her children mostly grown, Jane resumed her undergraduate studies at the University of Pennsylvania. It was the early 1970s, and she was in the right place at the right time to study the material culture of technology under Thomas Hughes and David Orr. She completed her B.A. in 1976, joined the SIA in 1977, and the following year undertook a history of Philadelphia's Fairmount Water Works for the Historic American Engineering Record. After earning an M.A. in American civilization from Penn, Jane authored a catalog for an exhibit on the Fairmount Water Works at the Philadelphia Museum of Art. Her research, together with the attention the exhibit received, materially contributed to the stabilization and restoration of those great water works, which might otherwise have succumbed to neglect.

A 20-year career as a consulting historian led Jane Mork Gibson to research the history of Delaware River shipbuilding for an exhibit at the Franklin Institute; conduct wide-ranging studies on Philadelphia industries; contribute to several interactive museum exhibits, including one at the Independence Maritime Museum; and assess the feasibility of creating an industrial museum at the John Grass Wood Turning Company, a remarkable survival of mechanized industry founded in 1863. Some of you may recall her contributions to the publication *Workshop of the World*, a major survey of Philadelphia's industrial resources produced in conjunction with the 1990 SIA Annual Conference.

Outside Philadelphia, Jane worked with the architect John Bowie on the Hackensack Water Company in New Milford, New Jersey, and the Demuth Snuff Mill in Lancaster, Pennsylvania. Her research on the Kinne Water Wheel Collection at the Jefferson County Historical Society in Watertown, New York, materially contributed to its designation, in 1999, as a National Mechanical Engineering Landmark.

Throughout her career, however, the Fairmount Water Works remained closest to her heart, inspiring her sustained

efforts to publicize, preserve, and interpret this National Historic Landmark. As a consultant to the Philadelphia Water Department beginning in 1985, she was involved in the creation of an interpretative center at the water works, which served as the site of a memorable evening reception during the 2007 SIA Annual Conference. Now 89 and living in Williamstown, Mass., Jane is working



Ann Cullen

**Jane Mork Gibson, 2012 General Tools Award Recipient.**

on a book about the Fairmount Water Works.

Jane's service to the SIA has been exemplary. She was a founding member and served for five years as president (1985-1990) of the Oliver Evans Chapter. She served as general chair of the 1990 SIA Annual Conference and as a director of the national SIA from 1990 to 1993. She served on the steering committee for the 2007 SIA Annual Conference, organized and conducted a tour at that conference, and updated two chapters in the revised survey *Workshop of the World*.

For her sustained and diligent efforts to preserve Philadelphia's industrial heritage, as well as for her long-time service to the Society, the 2012 General Tools Award Committee is pleased to present this year's General Tools Award to Jane Mork Gibson.

*The General Tools Award was established in 1992 through the generosity of Gerald Weinstein [SIA], chairman of the board of General Tools & Instruments Co. LLC and the Abraham and Lillian Rosenberg Foundation. The Rosenbergs founded General Hardware, the predecessor to General Tools. The award consists of an engraved sculpture ("The Plumb Bob") and a cash prize. The recipient of the award is determined by the members of the General Tools Award Committee, which consists of three members appointed by the President of the SIA. They serve three-year overlapping terms.*

*The General Tools Award is the highest honor that the SIA can bestow. The award recognizes individuals who have given sustained, distinguished service to the cause of industrial archeology. Criteria for selection are as follows: (1) The recipient must have given noteworthy, beyond-the-call-of-duty service, over an extended period, to the cause of industrial archeology. (2) The type of service for which the recipient is recognized is unspecified, but must be for other than academic publication. (3) It is desirable but not required that the recipient be, or previously have been, a member of the SIA. (4) The award may be made only to living individuals. ■*



in the nomination of any North American industrial sites to the World Heritage list, efforts are being made. If you are interested, please contact Patrick Martin or visit the TICCIH website at [ticcih.org](http://ticcih.org).

**IA Journal.** Editor Fred Quivik reported that earlier this year, SIA members received a lavish double issue on the theme of IA in Art, edited by Betsy Fahlman. He expected another double issue on the West Point Foundry, guest edited by Steven Walton, who will be joining the MTU faculty this year, but that issue is still in final proof. The next issue will be ready for copy editing in two weeks, and articles are coming together for another issue on the heels of that one. The latter will be another theme issue, guest edited by Brian Shovers of the Klepetko Chapter and the Montana Historical Society, on IA in Montana. Mr. Quivik challenged other chapters to put together issues on IA in their local area. Carl Zimring, who recently moved to the Pratt Institute, will be editing another theme issue on industrial waste.

Fred recognized Carol Poh as the new book review editor. Carol asked anyone who knew people in publishing or knew of forthcoming books of interest to bring them to her attention. She wants to increase the visibility of IA in the publishing world.

**SIA Newsletter.** Editor Patrick Harshbarger reported that the newsletter remains a robust publication, relying almost entirely on a steady stream of content produced by members. The *SIAN* represents annually several hundred hours of volunteered time that members donate by way of their writing and photography. *SIAN* is particularly indebted to two dozen or so core contributors who regularly assist with tour coverage, copy editing, and feature columns like *Publications of Interest* and *IA on the Web*. We also receive significant support from Michigan Tech in the design, production, and mailing of the newsletter.

At this time, *SIAN* is poised in balance with the Society's various digital media initiatives, including the eNews, which allows for timely communications on important SIA business, since the newsletter does require several additional weeks from printer to mail box. About 130 of our members have opted for digital-only versions of the newsletter, available now as a downloadable PDF, but the overwhelming majority of our members continue to indicate they want the printed version, a testimony to the consistent quality of its content.

The newsletter is currently produced at a cost of about \$10 per year per member, thus representing about 20 percent of the value of an individual membership in the SIA. About two-thirds of the total cost of the *SIAN* is represented by printing and mailing and about one-third in fixed costs of editing and design. We will continue to monitor costs, but there is absolutely no plan at this time for the *SIAN* to go paperless.

**Student Scholarships.** Committee chair Patrick Harshbarger spoke briefly to the importance of the scholarship program, noting that in the past 15 years, the SIA has awarded approximately 45 scholarships. With this financial assistance, students from more than a dozen universities

and colleges have learned about the SIA, its mission and its programs, and perhaps most importantly interacted with us at our annual conferences. At least eight former scholarship recipients have gone on to become members of the SIA Board and an even greater number have given papers, helped organize conferences, and served on various committees. By this measure, the program is fulfilling one of its main purposes, which is to recognize students who may in the future make substantive contributions to the Society. Scholarships are funded through a dedicated account. This fund relies on annual contributions for replenishment, and Patrick encouraged members to consider making a donation at the time of the annual dues notice.

Patrick announced that the 2012 SIA Student Scholarship recipients are Mark Dice of Michigan Tech, Jennifer Mortensen of the University of Washington, and David Parker of Mercyhurst College (see photograph printed elsewhere in this issue).

**Continuing Education Committee.** Chair Amanda Gronhovd reported that a workshop on geographic information systems (GIS) was held Thursday, May 31, and went very well according to those who attended. She felt that the instructors did a good job of tailoring content to a very diverse group of attendees. She is looking for ideas for next year's conference. Amanda also mentioned that the committee is looking for new members; if anyone is interested in helping, please contact her.

**Finance Committee.** Chair Kevin Pegram reported that SIA now has the ability to receive donations of securities but has not used it yet, mainly because he has not composed a letter of instruction. He expects to write it in June and make a contribution himself; he asked other members to join him.

**Historic Preservation Advocacy Committee.** On behalf of committee chair Rick Greenwood, President McCauley reported that it has been a fairly quiet year in terms of threats to historic sites, possibly due to a slump in development activity. Proposed changes to the dam at Lowell, Mass., were discussed in a full presentation session at the conference. SIA is working through the torturous process of submitting comments to the Federal Energy Regulatory Commission.

**Industrial Heritage Preservation Grants Committee.** Committee member Bill Vermes reported the receipt of six very competitive applications for the 2012-13 grants cycle. Thanks to Carol Litchfield's diligent work in streamlining the application process, and to the J. M. Kaplan Fund's recognition in the form of matching grants, SIA is able to fund three projects this year. The Copake Furnace project, submitted by Friends of Taconic Lake State Park, will help construct a cover over this unique example of IA. A second project, entitled "Wash, Rinse, and Restore," will help the Patriots Point Naval & Maritime Museum restore an industrial-scale laundry facility on the *USS Yorktown*. Their project will include lead and asbestos abatement so that the facility can be reopened to public tours. The third recipient

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is the Ohio Historic Bridge Association for an on-site workshop utilizing an 1876 pin-connected truss to demonstrate the feasibility of rehabilitating historic metal-truss bridges. Bill thanked the J. M. Kaplan Fund for matching funds and called for applause to recognize the award recipients. President McCauley thanked Bill Vermes and Maryellen Russo for their service.

**Membership Committee.** Chair Justin M. Spivey thanked fellow committee members Don Durfee, Lynn Rakos, and Tim Tumberg. He reported that SIA has 1,413 members not including those sharing joint memberships; this number has decreased 1.6 percent from last year. There has been a long-term decline of 28 percent from the peak membership of 1,960 in 2003, which is not good news, but should be an inspiration and a goal to replace those members through recruiting. He reminded those who saw him at the opening reception that he was wearing a t-shirt that said, "I (heart) IA." He encouraged everyone who feels the same way to talk to friends, students, and colleagues and, if necessary, nag them until they join. He noted that more people know about SIA thanks to the successful social media efforts of President McCauley and others, but if SIA cannot connect with those people offline, SIA needs to drive that online traffic to the website, and from the website to the membership rolls. Justin asked anyone interested in helping with that effort, or with other ideas for recruiting, to contact him or one of his fellow committee members.

**Technology Committee.** President McCauley noted that experiments with technology help us reach out, but sometimes fail; he cited the Silicon Valley model of throwing spaghetti at the wall and seeing what sticks. There are about 450 members in the SIA group on LinkedIn, with lively discussions every two to three weeks. He reported on efforts to be more consistent in all of SIA's media activities, with the same logo appearing throughout the website, print publications, and social media. SIA eNews began as an experiment, and now reaches half again as many people as we have members, offering potentially fertile ground for new members. SIA eNews is also used to distribute the electronic copy of SIAN. President McCauley encouraged members with other ideas to contact him.

**Vogel Prize.** Bob Casey reported that this year's winner of the Vogel Prize has won twice, the first time in 1987 when it was called the Norton Prize, and again this year. Mr. Casey recognized Robert Passfield for his article, "St. Andrew's Caméré Curtain Bridge Dam, Lockport, Manitoba," and read the citation (printed elsewhere in this issue). He presented the physical award of a foundry pattern and "the slightly less physical award" of a check.

**General Tools Award.** President McCauley reported that the General Tools Award was established in 1992 and first presented in 1993. Before announcing this year's award, he recognized the 20-year background of this award, including the past recipients, some of whom were in the audience. He asked for applause to recognize this distinguished group, and noted that there was one other person he'd like to recognize

for the creation and support of the General Tools Award and other things SIA. President McCauley recognized Gerry Weinstein, whose corporation is celebrating its 90th anniversary and whose sponsorship of the award is in its 20th year. He recalled that the award would not exist if it hadn't been for a conversation on the way back from the steam thresher festival in Rollag, N.D. President McCauley presented a working oiler on a plaque inscribed to Gerry Weinstein, for supporting the General Tools Award, from 1992 to 2012. Gerry thanked everyone who had helped with the award and promised to inaugurate the oiler in his Engineerium.

Carol Poh presented this year's award on behalf of committee chair Michael S. Raber. She noted that the call for nominations came out a little late this year, and did not have the usual number of nominations, so the committee will publish it earlier next year and encourage everyone to nominate. Carol read the citation (printed elsewhere in this issue) recognizing Jane Mork Gibson, who could not attend. Patrick Harshbarger, a fellow member of the Oliver Evans chapter so close to her heart, read prepared remarks and accepted the award on her behalf. He concluded with Jane's words to him before he departed for the conference, "HAVE FUN!"

**Local Chapters.** President McCauley recognized local chapters and their members through the traditional standing roll call, and recognized the members of the United Kingdom-based Association for Industrial Archaeology (AIA-UK) also in attendance.

**Nominations Committee.** Chair Rachael Greenlee reported receiving 312 ballots. She thanked fellow committee members Kevin Pegram, Mary Habstritt, and Tim Mancl, as well as Patrick Martin, Patrick Harshbarger, Justin Spivey, and other "honorary Nominations Committee members" who helped. She announced the results of the election, with Peter Stott re-elected as TICCIIH Representative, Susan Appel elected to the Nominations Committee, new directors Gianfranco Archimede and Erin Timms, new Vice President Amanda Gronhovd, and new President Duncan Hay.

As his last official act, President McCauley handed the hammer to Duncan Hay. President Hay thanked his predecessor for his service over the past four years and noted that one thing not advertised about the SIA presidency is that it's a six-year hitch: two years as Vice President, two as President, and two as Past President. He thanked the two directors rotating off the board, Bill Vermes and the late Carol Litchfield. He thanked Mary Habstritt, "who will be going back to that rusty boat of hers," i.e., the steamship *Lilac*.

President Hay reported hearing inspiring remarks from many SIA members, and encouraged more to join. During one of the conference tours, the head of the Cincinnati Water Works asked to join; fortunately someone had a brochure. While recognizing social media efforts as important, he noted that many SIA members are encouraged to join by word of mouth. He asked everyone to keep reaching out to new members, who bring dues, but also energy and partici-

(continued on page 10)



## QUEEN CITY *(continued from page 4)*

had saved a couple of castings to late Friday afternoon so we could watch the process. It was also clear, however, that Verdin has adapted to the times, and we were shown some of the digital recording equipment used to reproduce the sound of cast bronze bells. Following this fascinating process tour, the last stop of the day was **Zakira's Garage**, a vintage automobile restoration service specializing in racecars. After a brief introduction, the tour group was given free rein to examine the dozens of cars in various states of restoration.

The *Paper Trail Tour* headed north through the Great Miami River Valley, home to major paper and aviation-related industries. The first destination was Middletown, home to historic aircraft manufacturer Aeronca and Wausau Paper. **Aeronca**, short for Aeronautical Corp. of America, was founded in 1928 to supply individual monoplanes for the commuter market in lieu of cars. The factory stood at Cincinnati's Lunken Airport (see above) until 1940, when, in the wake of the 1937 flood, the factory was disassembled piece by piece and moved to Middletown. Although the company's distinctive "flying bathtubs" went out of production in 1951 and have become collector's items, the company survived by entering the subcontractor market (with Boeing initially and then with other aircraft manufacturers). Now a subsidiary of Magellan Aerospace, it supplies component parts for Boeing, General Electric Aviation, Raytheon, and Airbus. Jet engine tail pipes are a specialty, making

Aeronca, according to our host Keith Wyman, the "Midas Muffler of aviation." During the tour, we watched a riveting machine that drills, countersinks, and installs rivets; computer-controlled water jets cutting metal parts from plates up to 4-inches thick; and the hand crimping and mechanical welding of titanium honeycomb components. Devices for the cold forming of sheet metal by hydraulic dies were described but not observed in operation.

Next we visited **Wausau Paper**, a manufacturer of towel and tissue paper. The company has produced paper on its site since 1852, but the current plant dates to the early 1980s. A "green-certified" operation, it turns out 325 tons daily of commercial-grade, non-residential hand towels and bathroom tissue from recycled wastepaper. Much of the plant's most complicated work involves the removal of adhesives from the waste fiber. Production engineers insist they are making "a silk purse from a pig's ears." A major problem for Wausau is removing the high amount of trash thrown into public recycling containers. The initial step involves grinding the wastepaper and creating a slurry. Then a flotation system removes impurities and a series of progressively finer screens removes foreign objects ranging from rocks, to plastic, to adhesive tapes and latex. Bales of pulp ready for the paper lines are created faster than they can be converted into paper products and are stored in an open-air, outdoor lot. Paper is created on a line traveling at 70 mph and seems to magically appear as the pulpwood is injected onto forming fabrics and then quickly dried in a so-called "yankee." Pairs of tissue rolls are wound onto a single drum to create two-ply tissue.

Lunch was served in historic downtown Lebanon, the county seat of Warren County, at the famous 1815 Golden Lamb Inn, said to be Ohio's oldest continuously operating business. While we waited for our lunch to be served, local historian John Zimkus regaled us with stories about the dozen U.S. presidents—all with beards—and other famous visitors, such as Charles Dickens, who have visited, eaten, or slept at the inn. Following lunch, we had the option of touring the nearby **Warren County Historical Society** museum,

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Mark Watson

SIA members take in the display inside the terminal at Lunken Airport.



Mark Watson

SIA members examine a rare Mercer (Trenton, N.J.) vintage racecar under restoration at Zakira's Garage.

## 2012 SIA Student Scholarship Recipients

Each year the SIA awards travel scholarships to help students offset expenses associated with attending our conferences. The scholarships are open to full-time students or to emerging professionals with less than three years of experience. Applicants must demonstrate an interest in and commitment to the field of industrial archeology.

Scholarships are funded through a dedicated account. This year, through the generosity of the membership, the SIA was able to offer three \$500 scholarships, which were awarded at the Annual Business Meeting in Cincinnati on June 2. This year's recipients are Mark Dice, Jennifer Mortensen, and David Parker.

Mark Dice is in the M.S. Program at Michigan Technological University in Houghton. He gave a paper at this year's conference on the use of LiDAR for recording industrial heritage.

Jennifer Mortensen is pursuing an M.S. in Architectural History and Theory at the University of Washington in Seattle. She became acquainted with the SIA at last year's conference when she assisted with organizing the *Powering the Northwest* tour. She is writing her thesis on early 20th century industrial architecture.

David Parker is in the Master's Program in Anthropology at Mercyhurst College in Erie, Pa. He was introduced to IA as an undergraduate at Youngstown State University by the late John White (SIA). He assisted John with

excavations at the Cherry Valley Coke Ovens, and he has worked on a number of other iron-related sites in northeast Ohio and western Pennsylvania.



Patrick Hansbarger

2012 SIA Student Scholarship Recipients (left to right), Jennifer Mortensen, David Parker, and Mark Dice.

### MINUTES (continued from page 8)

pation to our activities. SIA has a relevance to other organizations including AIA-UK, TICCIH, and thanks to the efforts of Mary Habstritt and Jay McCauley, larger organizations such as the National Trust for Historic Preservation, whose conference last year featured a track on preserving industrial sites.

**Tours and Conferences.** Events Coordinator Ron Petrie added to President McCauley's welcome of eleven AIA-UK members who joined the SIA conference as part of an extended tour of Indiana and Ohio. He would like to reciprocate with SIA members joining an AIA-UK event, and encouraged interested members to contact him. He recognized the staff of the beautiful historic hotel, who exceeded our expectations and provided tours of their facility.

Simon Litten delivered remarks on the Fall Tour, scheduled for October 18-21, 2012. He had pitched the idea of touring the upper Mohawk River valley around Utica a couple years ago, and Ron Petrie, whose family has been in the area since 1712, enthusiastically embraced the idea. The upper Mohawk River valley is a significant area, particularly for American Revolutionary War enthusiasts, with many artifacts remaining from that era. Another large artifact is the Erie Canal. The area was home to pioneering industries

following the introduction of anthracite in 1830s, and also important for cheese and milk production. There is a lot to see, a lot to learn, and he hopes that many will come.

Ron Petrie noted that brochures for the 2013 Annual Conference in Minneapolis-St. Paul were on the tables and invited Amanda Gronhvd to the podium. She explained that the event would be held the first weekend after Memorial Day in the Twin Cities and include great tours of the St. Croix River valley, milling along the Mississippi, and underground history such as brewery and mushroom caves.

President Hay invited anyone with great stuff in his or her hometown to come forward with ideas for future events. SIA ideally starts planning events two years in advance because it takes that long to put an event together.

**New Business.** President Hay called for new business; none was forthcoming.

**Adjournment.** President Hay called for a motion to adjourn. Jay McCauley so moved, Ron Petrie seconded the motion, and the Annual Business Meeting was adjourned by acclaim at 1:27 p.m.

Respectfully submitted,  
Justin M. Spivey, Secretary

## QUEEN CITY *(continued from page 9)*

whose collection of Shaker material is widely recognized, or going on a walking tour of Lebanon led by John Zimkus. Those on the walking tour saw a restored 1920s filling station, a railroad siding with passenger cars from the Lebanon Mason Monroe Railroad excursion line, the Elbinger shoe factory that operated from 1911 to 1955 and has been converted to an antiques mall, and an 1879 firehouse named—because it was in the far east end of the city—the Orient. Reboarding the bus, the group headed back towards Cincinnati to College Hill to visit **Laurel Hill**, the 1907 home of Peter Thomson, founder of the Champion Coated Paper Co. in Hamilton. Now owned by Larry and Judy Moyer, who live in the 20,000-square-foot, 36-room Beaux-Arts mansion and rent it out for weddings and banquets, it was designed by architect James Gamble Rogers. The house was plumbed for hot water radiant heat and wired for electricity from the beginning and, consisting of brick, concrete, steel, limestone, and granite, was considered fireproof. Judy Moyer, our tour guide, proved extremely knowledgeable on the home's architecture and historic mechanical systems as well as the Thomson family and corporate history.

*The Northern Kentucky Tour.* After starting the day, Cincinnati-style, with a hearty breakfast of goetta and eggs, we were off to ... a goetta factory! **Glier's Goetta** in Covington, just across the Ohio River from the Queen City, has been making goetta (pronounced "get-uh"), a traditional German sausage made of beef, pork, steel-cut oats, onions, and spices, since 1946. President Dan Glier, who followed his father, Robert, into the business and still uses the original family recipe, escorted us through the cold and slippery but spotless plant, which occupies part of the old Bavarian Brewery, leading us past the two-man vacuum packaging line and into the kitchen, where burly cooks preside over 300-gal. steam jacketed kettles. Ninety percent of Glier's market for goetta (they also make bratwurst) lies within a 25-mi. radius. At the conclusion of the tour, we were invited to sample grilled goetta on sandwich buns. Delicious!

At the **TMK-IPSCO pipe mill** in nearby Newport, the site

of iron or steel operations of one kind or another since the mid-1880s, we traded our hairnets for hard hats, safety glasses, and earplugs. Using electric-resistance welding, the present company makes pipe for the gas and oil industry. Manager Jim Truscott showed us through the 8-in. mill, where we watched steel plate make its way successively through shaping, welding, annealing, and chamfering operations.

After enjoying chicken schnitzel and steins of beer at the Hofbräuhaus in Newport, we browsed through the local history collection of the **Behringer-Crawford Museum** in Covington before heading to the **Railway Museum of Greater Cincinnati**, which occupies a former railroad junction in Latonia, now a neighborhood of Covington. Tim Hyde, our knowledgeable bus guide and a trustee of the museum, showed off some of the highlights of the collection, including a 1950 EMD freight locomotive, a 1939 Pullman sleeper, a World War II-era Pullman troop sleeper, and a private car built in 1906 for an executive of the Cincinnati Southern Ry. Much of the rolling stock is undergoing restoration.

*The Countryside Tour.* Knowledgeable tour guides Dave Neuhardt and Ron Schmidt provided background history and pointed out several former industrial sites along our hour-long trip out to the countryside to view the industries once served by the Little Miami River and Little Miami Railroad (LMRR). Our first stop was **Xenia Foundry & Machine**. Founded in 1920 by Ward Huston and a partner, the company was attracted to the area by local boosters who offered real estate in exchange for stock in the business. We were greeted warmly by Bob Huston, grandson of the founder, who provided an excellent overview of the foundry process as well as highlights of the company history. The Little Miami River Valley proved to be a good location as southern Ohio had iron ore and a local supply of sand with high clay content for molds; Ohio is still a leader in the foundry business with about 250 foundries out of 1,300 nationwide. Xenia Foundry is a small job shop that specializes in gray and ductile iron castings. Their biggest customer is the natural gas industry for which they make compressor parts for gas distribution;

*(continued on page 12)*



David Simmons

*Paper Trail Tour group poses on the steps of Laurel Court.*



David Simmons

*The Filling Station and Railroad Siding in Lebanon, Ohio, were part of the walking tour on the Paper Trail Tour.*



other products include parts for elevators and for glass manufacturing. Patterns are still usually wood, although the company recently moved to chemically bonded sand (bonded with a phenolic ester and catalyst) for most molds as this takes less gating than traditional green sand (bonded with Bentonite clay and water) and so reduces cost. At the end of the presentation, Huston challenged us to guess the weight of a 12-in.-by-12-in. block of cast iron and Bill Lannin won a screwdriver when he correctly guessed 450 lbs. Although a pour had been planned for our visit, business had slacked off and the foundry had finished the last pour of the day at 6 a.m. We walked through the foundry, past the freshly filled molds still emanating heat, to watch a demonstration of sand being packed in a drag and a cope.

Next we hiked through the **Clifton Gorge State Nature Preserve**, which contains remnants of a number of water-powered mills, including those of the Patterson Woolen Mill. While there, we also viewed two lovely stone arch bridges built in the mid-19th century by a private turnpike company. Lunch was provided in the dining room of the **Historic Clifton Mill**. This gristmill was established in 1802 and is now operated as a tourist destination with a gift shop featuring its

own brand of flour. Milling stopped about 12 years ago and is now outsourced to protect the mill's historic fabric. During our tour some of the belt-driven conveyors were turned on to give some sense of its past life. Driving on, we had the opportunity to take photos of the 1821 **Grinnell Mill**, a gristmill that recently opened as a bed-and-breakfast. We passed limestone kilns that served quarries near the town of Yellow Springs. Antioch College there has a large presence in the area; its theater department occupies a former foundry building used by General Motors during World War II.

Our next stop was to view remnants of the **Miami Powder Co.** works on land now farmed by Scott Hammond and his family. A gunpowder mill was founded on the site after the LMRR came through in 1846. Originally the mill was powered by water but eventually it was converted to electrical motors, placed outside the buildings to reduce the chance of explosions. Still, the nature of the work meant that explosions were common, and a large one in 1925 finally closed the plant. After viewing buildings near the former rail line, we prepared to ride a farm wagon across the river to see what was left of the water-powered portion of the works. With the wagon hitched to the farm's tractor, we began boarding, only to have half the group fall off the wagon. Literally. The floorboards gave way, and the bench on one side started heading for the ground. No one was hurt as we all scrambled to grab the hands of those hurtling backward. Needless to say, we did not make it over the river.

Our last stop was at the abandoned **King's Powder Mill** and **Peters Cartridge Co.** Since our tour guides were not able to negotiate access to this Superfund site, we could only view it from the bike path that today runs along the former LMRR right-of-way. J.W. King, who had also been an owner of the Miami Powder Co., began the new company by buying 832,000 lbs. of surplus musket and cannon powder after the Civil War and re-manufacturing it for sporting use, undercutting competitors' prices. Like the many mills of the Little Miami region, King's was originally powered by water but soon installed steam engines to handle the expanding business. A daughter of King married Gershom Moore Peters, a minister and inventor who designed a mechanized shotgun shell loading process. Shells had been loaded by hand until Peters patented his rotary shell-loading machinery in 1887.

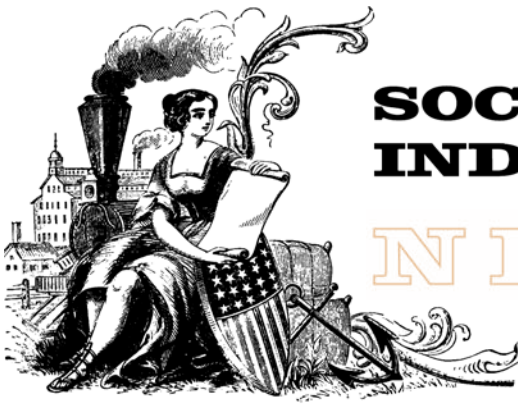
*Sunday Post-Tours.* A Historic Bridge Tour and a Cemetery Tour were the featured options for those conference participants desiring to spend an extra day in the Queen City. The bridge tour, led by Patrick Harshbarger and Bill Vermes, managed to visit ten bridges in little less than seven hours. The bridges were selected to represent Ohio's diverse bridge-building heritage and included good examples of covered timber truss, iron bowstring truss, steel truss, and reinforced-concrete arch types. The tour included several nationally significant bridges, notably two important examples of early reinforced-concrete construction: the **Cliff Drive Bridge**, a Melan-type arch built in 1895, and the **Benson Street Bridge**, a tied through arch built in 1909. Both are among the nation's earli-



Steve Walton

*Railway Museum of Cincinnati.*

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# SOCIETY FOR INDUSTRIAL ARCHEOLOGY

## NEWSLETTER

### PUBLICATIONS OF INTEREST

Vol. 41, No. 3

Summer 2012

COMPILED BY

Mary Habstritt, New York, N.Y., Justin Spivey, Hightstown, N.J., and Patrick Harshbarger, SIAN editor, Wilmington, Del.

#### GENERAL INTEREST

- ◆ Barbara Appelbaum. **Conservation Treatment Methodology**. Barbara Appelbaum Books, 2011. 470 pp. \$29.95. A guide to decision-making for conservation treatment of artwork and artifacts, presented in non-technical language.
- ◆ Joe Flanagan. **River Renaissance, Brooklyn's Industrial Waterfront Reborn as State-of-the-Art Park**. CG (Winter 2011), pp. 10-23. Planners, architects, and others involved in the design of the controversial Brooklyn Bridge Park discuss the outcome, which includes playgrounds, performance space, and water-access points. An important part of the intent was preservation of the waterfront's industrial past, but the effort is described as "more reference and allusion" than "what is normally understood as preservation."
- ◆ John Gertner. **True Innovation**. *NY Times* (Feb. 25, 2012). Compares the culture of Bell Labs and its long record of research achievement (transistor, silicon solar-cell, fiber-optic cable systems, communications satellites, etc.) with the current culture of innovation promoted by Facebook and like-minded digital firms of Silicon Valley and other places. Bell Labs took a "long view," moving deliberately toward its goals, making it the greatest research organization in the world, whereas the modern digital corporate culture values speed over deliberate science and often promotes small technological steps as great leaps.
- ◆ Andre Guillaume. **Enclosing Nature in the City: Supplying Light and Water to Paris, 1770-1840**. CH, Vol. 26 (2011), pp. 79-94. The value and practicality of supplying public utilities was not at all obvious to city administrators.

#### MINES & MINING

- ◆ Richard I. Gibson. **Lost Butte, Montana**. History Pr., 2012. 144 pp. \$19.99. Traces the mining city's history through its architectural heritage.
- ◆ Terry Reynolds [SIA] and Virginia Dawson. **Iron Will: Cleveland-Cliffs and the Mining of Iron Ore, 1847-2006**. Wayne State Univ. Pr., 2011. 351 pp. \$44.95. Commissioned by the company, now called Cliffs Natural Resources, chronicles one of the earliest iron mining firms in Upper Michigan that is also the last one standing and the country's leading producer of iron ore pellets.
- ◆ Morgan Simmons. **Much to Celebrate: Guided Hikes Offered at Laurel-Snow Scenic Tract near Dayton**. *Knoxville (Tenn.) News* (May 1, 2012). Describes history and recreational opportunities in 2,259-acre Tennessee State Natural Area at the former Dayton Coal & Iron Co. site on the eastern slope of the Cumberland Plateau. The area features the IA of 400 coke ovens, two blast furnaces, seven coalmines, and 17 miles of railroad.

#### WOOD & PAPER

- ◆ Clive Edwards. "Improving" the Decoration of Furniture: Imitation and Mechanization in the Marquetry Process in Britain and America, 1850-1900. *T&C*, Vol. 53, No. 2 (Spring 2012), pp. 401-34. Patents and machines promising furniture makers speedier and more reliable methods of improving what were essentially handcraft processes.
- ◆ John Goff. **Maine's Largest Tide Mill Complex: Winnegance**. *Tide Mill Times* (Apr. 2012); [www.tidemillinstitute.org](http://www.tidemillinstitute.org). Brief article remembers the Great Dam and the series of tide-powered sawmills in Bath's south end.

#### AVIATION & AERONAUTICS

- ◆ Martin van Creveld. **The Age of Airpower**. Public Affairs, 2011. 498 pp. \$35 hardcover. \$18 paper. Readable survey covers the use of military airpower from balloons for observation to the recent one-sided conflicts where airpower has been used against nations and groups that have little or no airpower of their own. The author's unconventional thesis is that military airpower reached its high-water mark during WWII and has been in decline as a dominant factor ever since. Rev.: *T&C* (Apr. 2012), pp. 497-98.
- ◆ Thomas D. Crouch. **Westward Ho! The First Flight from California to Hawaii**. *Timeline* (Apr./June 2012), pp. 42-53. The role of aviators and engineers at the U.S. Army's McCook Field, near Dayton, Ohio, in the development of planes capable of long nonstop flights and the technologies that made flying such planes possible, from parachutes to flying suits. Only a month after Lindbergh's famous flight across the Atlantic, aviators from McCook flew from California to Hawaii.
- ◆ Michael Lynn. **The Sublime Invention: Ballooning in Europe, 1783-1820**. Pickering & Chatto, 2010. 240 pp. \$99. An "enjoyable and general overview" covering topics including military uses, deaths and disasters, entertainment, and material culture. Rev.: *T&C* (Apr. 2012), pp. 487-88.
- ◆ Daniel L. Rust. **Flying Across America: The Airline Passenger Experience**. Univ. of Okla. Pr., 2009. 260 pp. \$45. A history of airline travel from the passengers' point of view, covering such topics as advertising, in-flight food and beverage service, timetables and schedules, ticketing, and dealing with airplane noise. Rev.: *T&C* (Apr. 2012), pp. 498-500.
- ◆ Ama Shira Teitel. **Riding Rockets: Neil Armstrong and the X-15**. *Timeline*, Vol. 29, No. 3 (July-Sept. 2012), pp. 2-15. The first installment in a two-part series on Armstrong's career with NASA prior to Apollo 11 and his moonwalk. The X-15 was a rocket-powered airplane meant for both atmospheric and space exploration.

## RAILROADS

- ◆ Richard C. Barrett. **Boston's Depots and Terminals, A History of Downtown Boston's Railroad Stations.** 1996, reprint ed. 2012. \$20 ppd. Avail. (while supplies last): Cape Cod Chapter NRHS, Box 1912, W. Barnstable, MA 02668. Attn: Book Order.
- ◆ Larry Fisher. **Regulating Railroad Watches for On-Time Performance.** *NRHS Bulletin* (Spring 2012), pp. 38-39. Excerpts from a 2005 interview with Gerhard Salomon, an Allentown, Pa. jeweler, born in Germany in 1925, who was responsible for inspecting and regulating watches for employees of the Reading RR.
- ◆ Robert Gressette. **A History of the Ocmulgee & Flint Railroad.** RB Publishing Co., 2002. 64 pp., maps. \$11. Avail: Blue & Gray Museum, 116 N. Johnston St, Fitzgerald, GA 31750. The O&F was started by coastal Georgia plantation owner Thomas Spalding, and, after much delay, construction recommenced in 1841 directed by Gen. Abbot Hall Brisbane, a South Carolina graduate of West Point and Seminole War veteran. Brisbane planned to colonize towns laid out along the line with Irish workers fleeing famine, and the Catholic Church, which supported the plan, invested in the railroad. Work ended abruptly in Sept. 1843 when the Irish laborers revolted against non-payment and took the construction managers, and their slaves, hostage. An armed force of Georgia planters laid siege to the workers at the midpoint camp of Loyola. Work was not resumed, and Brisbane resigned. About one half of the volume is dedicated to maps and text showing the physical remains of the failed project. This slender volume is a remarkable piece of original research into an obscure corner of transport history in the South.
- ◆ Jeffrey A. Harwell. **Whatever Happened to the Hartford & Slocomb?** *NRHS Bulletin* (Spring 2012), pp. 30-37. Struggles of a Georgia short-line that prospered, in part through grants and tax credits in the 1980s. Now, virtually no sign of the railroad remains.
- ◆ Jon R. Huibregtse. **American Railroad Labor and the Genesis of the New Deal, 1919-1935.** Univ. Pr. of Fla., 2010. 208 pp. \$69.95. Political history of the railroad

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*With Thanks.*

- brotherhoods, particularly locomotive engineers and firemen, and their politicization during the fight for federal control of the railroads during WWI, how they supported New Deal Democrats and won support for the Railroad Retirement acts of 1934 and 1935. Rev.: *NRHS Bulletin* (Winter 2012), p. 43.
- ◆ Steve Jessup. **Kansas City Union Station, The Premier Rail Experience for Nearly 100 Years.** *NRHS Bulletin* (Spring 2012), pp. 4-29. Construction, operations, famous locomotives, and restoration; lavishly illustrated with color photographs.
- ◆ Ted Kornweibel. **NRHS Grant Aids Restoration of Historic Jim Crow Car.** *NRHS News* (June 2012), pp. 4, 17. The car, built in 1886 for the Pennsylvania RR, is the oldest surviving passenger car designed with separate facilities for blacks and whites (8 seats for blacks, 22 seats for whites; with a separate water cooler and toilet for whites only). Restoration is ongoing at the Pacific Southwest Ry. Museum, San Diego, Calif.
- ◆ David Marcham. **The Ups & Downs of a Rural Line: Elmira, Cortland & Northern RR.** The History Center (Ithaca, N.Y.), 2009. 152 pp. \$19.95. Description and history of 140-mile line meandering from Elmira to Camden, N.Y. Established in 1884 and incorporated into the Lehigh Valley RR in 1896. Rev.: *NRHS Bulletin* (Winter 2012), p. 43.
- ◆ **NRHS News** (Apr. 2012) includes: *Historic Locomotive 'Rescued' from Park and Restored* (returning a former Santa Fe, Baldwin 4-8-4 Northern to operating condition in Albuquerque, N.M.); *NRHS Grant Helped with Preservation of Western Pacific Records* (records housed at the Western Pacific RR Museum, Portola, Calif.); *Historic 72-Ton Engine Moved to Ohio for Restoration* (1902 Pittsburgh Iron Works locomotive); *Lone Surviving Steam Inspection Locomotive Being Restored* (the "Black Diamond" of the Philadelphia & Reading RR, built in 1889 by Baldwin, now at the St. Louis Museum of Transportation).
- ◆ Barry Newman. **New York's Last Cross-Harbor Railway Chugs On as Alternative to Trucks.** *WSJ* (May 21, 2012). Feature article on New York New Jersey Rail, which used to be called Cross Harbor RR. With nine employees, it continues to operate a car float between Jersey City (the old PRR Greenville pier) and Brooklyn, hauling boxcars to Brooklyn and sludge out.
- ◆ **Railway Museum Quarterly/Trainline**, No. 7 (Winter 2012) includes Aaron Isaacs, *Tough Times for State Museums* (analysis of the impact of budget cuts) and *ARM and TRAIN Meet in Chattanooga* (descriptions and photos of activities at the joint conference hosted by the Tennessee Valley RR Museum).
- ◆ Ken Rattenee. **Southern Pacific's SDP45s, The Last Passenger Locomotives.** *NRHS Bulletin* (Winter 2012), pp. 28-45. History and operation of 20-cylinder diesel-electric locomotives introduced in 1966.
- ◆ James J. Reisdorff. **The Man Who Wrecked 146 Locomotives.** South Platte Pr., 2009. 48 pp. \$19.95. "Head-On Joe" Connolly (1859-1948) made his living by staging live locomotive wrecks, a little-known but popular form of entertainment. Rev.: *NRHS Bulletin* (Winter 2012), p. 41.
- ◆ Craig Sanders. **Canton Area Railroads.** Arcadia, 2009. 128 pp. \$21.99. Historic images of railroads that served the Ohio city. Chapters cover electric railways, Pennsylvania RR, Conrail, B&O, Wheeling & Lake Erie, and Ohio Central. Rev.: *NRHS Bulletin* (Winter 2012), p. 42.
- ◆ **Tavares & Gulf RR.** DVD. 63 min. \$25 ppd. Avail: Central Florida Chapter NRHS, Box 770567, Winter Garden, FL 34777-0567. Often referred to as the "Tug & Grunt," the T&G consisted of a meandering 32-mile mainline between Tavares and Ocoee, carrying a large trade in perishable fruits and



vegetables. The T&G also reportedly had the dubious honor of holding the U.S. record for jumping the track in a single round trip (9 times!). DVD features history of the T&G, interviews with former employees, and vintage footage.

- ◆ **Timber Transfer**, Vol. 25, No. 4 (Spring 2011) includes Dave Dietz, *Robertsdale: Now . . . and Then* (photo essay of the East Broad Top RR's Robertsdale station) and Dave Richards, *Bringing the Shops Back to Life: EBT Lineshaft Restoration* (details, including drawings and photographs, of reabbtting bearings, cleaning and resetting shafts, etc.).

## WATER TRANSPORT

- ◆ Harry Dickinson. **Wisdom and War: The Royal Naval College Greenwich, 1873-1998**. Ashgate, 2012. 324 pp. £70. Opened in 1873, in buildings constructed by Charles II to house retired sailors, the Royal Naval College provided the technical instruction that equipped a corps of naval architects to build some of the most advanced warships in the world and in later years trained the Royal Navy's nuclear engineers.
- ◆ Wayne Ford. **Sailor Advocates to Save Ice Breaker**. *Athens (Ga.) Banner-Herald* (June 26, 2012). Local resident and former sailor Bill Jackson is involved in a campaign to save *The Glacier*, an icebreaker built for the U.S. Navy in the 1950s and now docked in Brownsville, Tex., awaiting the scrapyard. It was the world's most powerful icebreaker when built and was used for 31 years at the McMurdo Station in Antarctica.
- ◆ Robert J. Kapsch (SIA) and Yvonne E. Long. **James Brindley, American Canal Engineer**. *IJEHT*, Vol. 81, No. 1 (Jan. 2011), pp. 22-59. Brindley, nephew of the Duke of Bridgewater, emigrated to America in 1774 after working on his uncle's canals in England. He worked on most American canals constructed in the late 18th century including the Susquehanna, Conewago, Potomac, Santee, and James River. Rev.: *CH*, Vol. 26 (2011), p. 98.
- ◆ Don Leggett and Richard Dunn, eds. **Re-inventing the Ship: Science, Technology and the Maritime World, 1800-1918**. Ashgate, 2012. 240 pp. £65. Multi-disciplinary essays explore the processes used by British naval architects, dockyard workers, naval officers, and commercial ship owners to repeatedly "re-invent" modern shipbuilding practices.
- ◆ Stacy Plaisance. **200-year-old Shipwreck Found in Gulf of Mexico**. *Birmingham News* (May 18, 2012). An amazingly intact shipwreck has been located by oil drillers about 200 miles off the coast of Louisiana at a depth of 4,000 feet. The ship settled upright and although the timbers have deteriorated the copper hull sheathing remains in place. The interior of the hull includes cargo (mainly gin bottles), muskets, cannons and the galley stove. The ship's identity has yet to be verified.

## MISC. INDUSTRIES

- ◆ Bruce D. Epperson. **Peddling Bicycles to America: The Rise of an Industry**. McFarland, 2010. 294 pp. \$45. The focus is Albert A. Pope, who attempted to dominate the industry through patent wars that began in 1878. Covers legal, political, marketing, and technological challenges to producing and selling bicycles in the last quarter of the 19th c. Rev.: *T&C* (Apr. 2012), pp. 505-07.
- ◆ Andrea Sachs. **Where a Memory Is Just a Scent Away**. *The Washington Post Sunday* (Jan. 1, 2012). Background of the candle industry in western Massachusetts, with a focus on the family behind Yankee Candle in South Deerfield and Kringle Candle in Bernardston.
- ◆ Wesley Young. **NC Man Among Last to Make Tobacco Baskets**.

*Charlotte Observer* (Apr. 8, 2012). Bud Miller, who is 80, still makes a small number of baskets out of handmade oak splits, using a special machine to weave them into a plaited framework, followed by soaking them in boiling water, and then placing the pliable wood in a machine to bend down the sides. Yadkin County, N.C. once had six factories that made tobacco baskets, large round, flat-bottomed baskets in which bundles or "hands" of tobacco were arranged and sorted according to grade for sale in warehouses. The industry thrived from the 1880s until the 1960s when the tobacco companies suddenly decided they no longer wanted farmers to bundle and grade their cured tobacco.

## IRON & STEEL

- ◆ James R. Bennett (SIA). **The Tannehill Ironworks**. Images of America, Arcadia, 2011. 128 pp., illus. \$22. Numerous historical photos of one of the first blast furnaces in the Birmingham (Ala.) district during the Civil War. Avail: [www.tannehill.org](http://www.tannehill.org).
- ◆ Simpson Bollard. **The Art of Casting in Iron**. 1893, reprint ed. 2011. Astragal Pr., 2011. 400 pp. \$12.95. Classic text on the art of making casts, pattern making and sectional molding.
- ◆ Mark M. Brown (SIA). **Production Space: John Fritz, Alexander Lyman Holley, and the American Bessemer Building**. *Journal of the Society of Architectural Historians*, Vol. 63, No. 2 (June 2009), pp. 178-199. Fritz's 1873 Bessemer plant at Bethlehem and Holley's 1876 Bessemer building for the Vulcan Iron Works near St. Louis highlight the contrasting spatial visions of two engineers. Fritz arranged the machinery in a rolling mill—a heavy industry building type. Holley transformed the foundry into a three-dimensional interlocking of architecture, space, and machine. (NB—a correction was published in subsequent issue.)

## AGRICULTURE & FOOD PROCESSING

- ◆ Richard Jones, ed. **Manure Matters: Historical, Archaeological and Ethnographic Perspectives**. Ashgate, 2012. 262 pp. £65. Essays explore the importance of maintaining soil fertility and evidence of how various pre-industrial, mostly European, societies collected, stored, and made use of manure.
- ◆ Martin L. Schneider. **Gilded Sugar**. *NY Archives* (Spring 2012), pp. 24-27. A brief overview of the Havemeyer & Elder sugar refinery in Brooklyn, later known as Domino Sugar, and the Sugar Trust masterminded by Havemeyer.
- ◆ A.G. Sulzberger. **Amid Rural Decay, Trees Take Root in Silos**. *NY Times* (Apr. 29, 2012). Takes note of a pattern across the Midwest of farmers fostering trees within the shells of abandoned silos. The saplings, protected from the wind and snow, grow quickly with leafy canopies eventually appearing above the silos.

## OIL & PETROCHEMICALS

- ◆ Steve Coll. **Private Empire: ExxonMobil and American Power**. Penguin, 2012. 685 pp. \$36. Portrait of ExxonMobil as a corporation so large and powerful that it has its own foreign policy and its own army. Rev.: *NY Times Book Review* (June 10, 2012), p. 20.
- ◆ Joris Mercelis. **Leo Baekeland's Transatlantic Struggle for Bakelite: Patenting Inside and Outside of America**. *T&C*, Vol. 53, No. 2 (Spring 2012), pp. 366-400. Bakelite, a phenolic plastic resin, and the varying experiences of its inventor in using the American and European patent systems to reduce competition.
- ◆ **Oil in American History** is a Special Issue of the *Journal of American History* (June 2012). Essays explore facets of drilling

and production technology and the impact of oil on the economy, society, politics, culture, and environment from the middle decades of the 19th century to the present. Available on-line with a map of oil-producing districts, a podcast with the editors, a gallery of historic images, and a list of bibliographic resources. Avail: <http://journalofamericanhistory.org/projects/oil/contents/index.html>.

## BRIDGES

- ◆ **Covered Bridge Topics**, Vol. 70, No. 1 includes: *Missouri's Covered Bridges* (photo essay); *New Brunswick's "Bridges to Nowhere"* (bridges in remote locations); *Early Howe Truss Railroad Bridge Still Stands in Germany* (built in 1847-51, over the River Iller at Kempten, Bavaria). Vol. 70, No. 2 (Spring 2012) includes *The Question of Housing: Washington County, Pa.* (photo essay on changing boarding patterns); Robin A. Mitchell, *On the Recent Repairs at Wright Bridge* (highly critical essay of recent alterations to the railroad bridge over the Sugar River near Newport, N.H.). Vol. 70, No. 3 (Summer 2012) includes *Flattops* (a pictorial essay of covered bridges with flat roofs, mostly located in the South where snow was not a concern); *A Tour of Lehigh County, Pennsylvania* (photographs); and *The Expanded Queenpost Truss* (approaches to expanding the basic truss pattern for longer spans).
- ◆ Nathan Holth. **Chicago's Bridges**. Shire America, 2012. 64 pp. \$9.95. Traces the evolution of the city's bridges, from the origins of the movable bridges crossing the Chicago River to the architecturally refined bridges of the 20th century.
- ◆ Bill Newcott. **Travel Life Spans, Six Dramatic Bridges You Can Visit, Walk Across—And Never Forget**. *AARP The Magazine* (Apr./May 2012), p. 36. Brief article features Bear Mountain Bridge (N.Y.), Royal Gorge Bridge (Colo.), Perrine Bridge (Ida.), Wheeling Suspension Bridge (W.Va.), Old Seven Mile Bridge (Fla.), and Capilano Suspension Bridge (B.C.). Perhaps an indication of how far historic bridges have penetrated popular culture.

## POWER GENERATION

- ◆ Allen W. Hatheway [SIA]. **Remediation of Former Manufactured Gas Plants and Other Coal-Tar Sites**. CRC Pr., 2011. 1398 pp. \$199.95. Although this book is geared toward environmental professionals who want to design and implement gasworks remediation strategies, it includes a plethora of photographs and historic drawings, as well as a glossary that is encyclopedic in scope.
- ◆ Dennis Hill. **Tough Cleanup Challenges in Oak Ridge**, and Michele Laraia. **The Beauty of Decommissioning**. *Nuclear Decommissioning Report*, Issue 4, Vol. 2 (May 2012). The cover story for the first anniversary issue the trade journal *NDR* is about the demolition and disposal of the K-25 and K-27 gaseous diffusion plants at Oak Ridge, built in 1943-44 for the Manhattan Project. The U-shaped K-25 was the largest building in the world at the time. Of IA interest is the agreement to preserve a portion of the north end of the building, along with two other "signature sites," the Oak Ridge National Laboratory and the Y-12 building. The contractor believes that K-25 is too deteriorated for preservation, but the issue is unresolved. In the second article, the author considers a Welsh power reactor, which was actually designed by its architect, Sir Basil Spence, to make a "beautiful ruin." Also considered is the 60m-dia. sphere of a Scottish experimental reactor that is now a local landmark, weighing the risk of permanent radioactive contamination

and the cost of maintenance in the question of preservation vs. removal. [www.ndreport.com](http://www.ndreport.com).

- ◆ John H. White, Jr. **Steaming Up Ohio Farms: The Newark Machine Works**. *Timeline* (Apr./June 2012), pp. 38-41. Brief history and analysis of an amazingly detailed ca. 1857 photograph of the small-town works that produced portable and stationary steam engines. Workers stand in various poses of activity outside a forge, foundry, and machine shop with examples of the company's products.
- ◆ **Windmillers' Gazette**, Vol. 31, No. 1 (Winter 2012) includes T. Lindsay Baker, *A Closer Look at the Currie Windmills* (products of the Currie Windmill & Pump Co. of Solomon City, Kan., known as the 'poor man's' windmills) and *Uncomfortable at Best: Windmill Work in Winter* (dealing with frozen pipes and mechanisms). Vol. 31, No. 2 (Spring 2012) includes *Windmill Museums as Destinations for Heritage Tourists* (an inventory and review of museums worldwide with windmill collections). Vol. 31, No. 3 (Summer 2012) includes T. Lindsay Baker, *A Close Look at the Challenge Double Header Windmill* (an exceptional wind machine employing two large diameter wooden wheels to drive machinery and two smaller wooden wheels mounted to either side to direct the mill into the wind) and *Restoration of the Double Header Windmill at Salinas, California*. Quarterly, \$20/yr. Avail: Box 507, Rio Vista, TX 76093.

## BUILDINGS & STRUCTURES

- ◆ Inge Bertels. **Building Contractors in Late-19th-Century Belgium: From Craftsmen to Contractors**. *CH*, Vol. 26 (2011), pp. 1-18. Transformation that occurred in Belgium, and other countries too, from the small craft-based contractors to the large general contractors that characterized the 20th century.
- ◆ David Dungworth. **The Value of Historic Window Glass**. *The Historic Environment*, Vol. 2, No. 1 (June 2011), pp. 21-48. Analysis of over five centuries of English window glass provides information that can be used to identify the period of manufacture. Rev.: *CH*, Vol. 26 (2011), p. 96.

## ABBREVIATIONS:

APT	= Association for Preservation Technology International
CBT	= <i>Covered Bridge Topics</i> , published by the National Society for the Preservation of Covered Bridges
CG	= <i>Common Ground</i> , published by the National Park Service, <a href="http://commonground.cr.nps.gov/index.cfm">http://commonground.cr.nps.gov/index.cfm</a> .
CH	= <i>Construction History</i> , Journal of the Construction History Society
NRHS	= National Ry. Historical Society
T&C	= <i>Technology &amp; Culture</i> , published by the Society for the History of Technology
<i>Timeline</i>	= published by the Ohio Historical Society, \$40/yr. Info: (614) 297-2315
WSJ	= <i>Wall Street Journal</i>

**Publications of Interest** is compiled from books and articles brought to our attention by you, the reader. SIA members are encouraged to send citations of new and recent books and articles, especially those in their own areas of interest and those obscure titles that may not be known to other SIA members. *Publications of Interest*, c/o SIA Newsletter, 305 Rodman Road, Wilmington, DE 19809; [phsianews@aol.com](mailto:phsianews@aol.com).

# SIA's Malta Study Tour, Apr. 2012

## From Salt to 100-Ton Guns

The first possibility of a Study Tour to Malta began with informal discussions in late 2010 with a proposal by Mary Durfee of Michigan Tech, who was on sabbatical in Malta and is also the wife of SIA Office Manager Don Durfee. Fast forward to Sunday, April 22, 2012 as 40 SIA members and friends boarded a bus for a tour of the island of Malta!

Malta is tiny, 14-km wide and 27-km long, but it occupies a strategic position in the central Mediterranean that has been recognized for thousands of years. Our first day's overview tour encompassed ancient Malta; Malta under Roman, then Arabic control; Malta as the seat of power for the Knights of St. John from 1530 until Napoleon took over in 1798; Malta as a key strategic asset of the British Empire from the end of the Napoleonic era through the Cold War; and modern Malta as a mixed economy with a strong tourist industry. Our guide for the entire week, Manella Bose, provided a rich commentary.

Malta and the smaller island of Gozo have a population of about 400,000. There are few natural resources, save abundant limestone. There are no permanent rivers, but some seasonal streams during the winter rains. Manella gave an introduction to the complex linguistic heritage of Maltese, a Semitic language based on ancient Arabic, but written in Latin characters (plus a couple of additions), and incorporating features from all the cultures that have touched Malta. Bewilderingly lovely to listen to! Most of the place names in use today are from when the island was under Arabic control. We ended the day with tea at the **Palazzo Parisio**, a lovely palace with a spectacular garden. A special treat was a chance to examine the first electrical generator on Malta, installed in 1898 to service the palace.

Monday was spent in the capital city of Valletta, founded by the Knights of St. John (also known as the Knights of Malta), after a 1693 earthquake damaged Mdina, the ancient capital. The Knights were the dominant force on the island from the early 16th century to the end of the 18th, and a military order that had, effectively, the status of a nation. Their members were often the second or third sons of noble families throughout Western Europe, so they were "well connected." The funds from the Order's extensive land holdings were used to create massive fortifications, primarily for defense against their historic enemy, the Ottoman Turks, who laid siege to Malta in 1565-6 only to be repulsed.

Our visit to Valetta started at the **Upper Barrakka Gardens**, with a view of the Grand Harbour, Malta's historic main port. These lovely private gardens were established in 1661 for the Italian Knights. We then went to the **National Archeology Museum** to view the Neolithic and Bronze Age collections. Of particular note were the discoveries from Hagar Qim (pronounced "argar eem"), which we visited on Tuesday. Our tour continued to the magnificent **St. John's Co-Cathedral**. The exterior is fairly plain, but inside is a lavish display of carved stone covered in gold leaf, and the ornate tombs of generations of Knights, adorned with Latin inscriptions to service and dedication, and the images of skeletons (not very industrial, but magnificent and inspirational!). Monday ended with presentations at the University of Malta by Dominic Fenech and Robert Ghirlando, our local hosts, who set the stage for the rest of the Study Tour. Following the presentation, the Rector of the University, Juanito Camilleri, welcomed us with a reprise of food and drink.

Tuesday began with a unique industrial site, the **underground tanks at Has Septan**. Imagine a Cold War program to ensure that NATO's Mediterranean naval forces would have fuel, no matter what, then dig out a massive complex

*(continued on page 18)*



Dennis Furbush, all photos

*The Palazzo Parisio, built in 1733 for Portuguese Grand Master Manoel de Vilhena, was one of the first properties in Malta to have electric lights and telephones. The generating system, installed in 1898, featured this little gas-powered engine provided by Crossley Brothers of Manchester, England.*



*The temple of Hagar Qim (c. 3600–3200 B.C.) stands on a hilltop overlooking the sea. A massive tent protects the archeological site.*



of tanks, 34 ft. in diameter, 720-ft. long, and more than 100 ft. below the surface, connected by deeply buried pipelines to the two major harbors in Malta. Fortunately, the Cold War never became hot, and today these tanks are used by Enemalta, Malta's state-owned energy company. In chatting with Enemalta's staff engineers, we found we were the first tourist group ever to visit the tanks.

Next we stopped at the village of **Hagar Qim** and a small archeological museum featuring a remarkable Neolithic stone temple, which must have required tremendous labor to construct. Tuesday ended with a delightful visit to **Heritage Malta's** training program in artifact restoration, housed in a restored British naval hospital. In collaboration with the University of Malta, students earn a four-year degree with a curriculum strong in hands-on work. We saw students working on paintings, books, and objects of stone, glass, and metal. I was mystified by a broken light bulb until a student told me it was a difficult exercise; the glass is thin and restoring it would teach him valuable skills.

Wednesday began with a cruise about the **Grand Harbour**, the largest natural harbor in the Mediterranean. We docked at Birgu, and then proceeded for a special visit to the home and offices of the Knights of St. John. This site is rarely open to tours, so we were honored to be admitted, and to enjoy the amazing views. The northeast side of the harbor is a series of deep inlets, so after lunch we made our way to the next inlet and the former **Dockyard Boiler Shop**, a cavernous building once used for the repair of the British navy's boilers. The shop is now being used to house a collection of large objects for a future **National Industrial Heritage Museum**. Two radial aircraft engines, salvaged from the sea and encrusted in calcium/salt deposits, were exemplary of the great deal of work that will be needed to prepare the objects for exhibition, but we all agreed that the boiler shop will make a very appropriate venue. We had a compressed visit to the **National Maritime Museum**, which traces Malta's maritime history from the 16th century when



*The Dockyard Boiler Shop is a steel-frame structure built by the British to replace an earlier stone shop destroyed during WWII. It now houses old buses and an assortment of machinery, most of it from the dockyards. Some day, some of these artifacts may find their way to display in a proposed industrial heritage museum.*

the fleet of the Knights of St. John was a major force in the Mediterranean, to 1979 when the British Navy left Malta.

Thursday's touring began with the **Pembroke Reverse Osmosis (RO) Plant**. RO of seawater supplies about 60% of Malta's potable water, the rest being groundwater or collected rainwater. About 54,000 cubic meters (14.3 million gallons) of seawater per day comes to the plant from wells at the edge of the sea. The primary filtration occurs in the porous rocks that the water must pass through even before it reaches the plant. At the RO Plant, pumps raise the pressure to 69 bar (about 1000 psi), and feed it into hundreds of seven-stage RO cartridges around 40 ft. long. The pressure drives fresh water through semipermeable membranes into a central collection tube, while increasingly salty residual water remains outside the tube. The residual water is still



*The workshops at the Vincenzo Bugeja Conservatory are complete to their original 1907 layout. The conservatory trained boys in the industrial arts.*



*The cylindrical horizontal steel tanks at Has Saptan are connected to a series of underground tunnels housing the pipes connecting the tanks to Malta's ports.*



*The Xemxija underground flour mill is one of eight such deeply buried mills built in the 1950s as part of improving Malta's ability to survive a war.*

under high pressure, about 62 bar, and there is an energy recovery system using Pelton wheels (impulse water turbines) to recover this energy. The water makes its way to a central reservoir where it is blended with groundwater and finally treated with chlorine prior to distribution. Pembroke is one of three similar plants on the island; some hotels and businesses, such as Farsons (below), have private RO plants.

Continuing the water theme, we visited an inactive groundwater pumping station at Wied il-Ghasel (translated as Honey Valley; Malta honey has been prized since Roman times). The pump, built in 1937, was powered by a four-cylinder horizontally opposed diesel engine driving a generator. There are plans to restore the engine, but work has not yet started. Along the way to a former technical school for boys at the Vincenzo Bugeja Conservatory, which included a line-shaft-driven machine shop and wood shop dating to 1907, we made a brief stop at the Parabolic Wall, an ingenious sound amplifying and listening system that was designed to give early warning (6 min.) of incom-

ing air attacks. Built in 1935, the wall was superseded a few years later by the development of radar.

Much of Malta's built environment is constructed from limestone, dating back for hundreds, if not thousands, of years. **Limestone Heritage**, housed in a former quarry, is a small museum and a series of outdoor displays tracing the history of limestone production. Modern quarrying techniques have left a lovely abstract pattern of slits in the walls. Our very busy day ended at the ancient capital city of **Mdina**, an extremely impressive, high-walled bastion with only two gates. It sits on a hill and is extremely impressive, even if quite small, with narrow streets weaving through this preserved medieval delight. From the bastion walls, one can see much of Malta in all four directions.

It wouldn't be an SIA Tour without a brewery! On Friday we visited **Farsons**, Malta's largest beverage producer. Established in 1928 as a brewery, Farsons has come to dominate the beverage industry in Malta through a series of mergers, acquisitions, and collaborative agreements to package other company's products. They have also branched out as an importer and distributor of wine and spirits. In addition to brewing a variety of beers, they make Kinnie, an orange and herb flavored soft drink, and bottle San Michel water. Farsons is transitioning to new facilities with significantly increased capacity, and will be freeing up its 1950 Art Deco-style facilities to adaptive reuse.

Another Cold War relic, the **Xemxija** ("shemshiha") **Underground Flour Mill** was built at about the same time as the fuel storage facilities mentioned earlier. This blast-resistant facility consists of a two-cylinder diesel engine and five mill stands. Malta had almost run out of food at the end of WWII, so Cold War planners created a series of underground bunkers for food storage and production. A group of dedicated volunteers rediscovered this mill (it was widely thought to be an uninteresting bomb shelter), and through tremendous effort they have restored the engine to operation. It was impressive to see the line shafts turning (the mill stands appear to be too rusted to actually mill grain). This

*(continued on page 20)*



*SIA's Malta Study Tour participants prepare to go underground at the Has Saptan underground fuel depot.*



*The Marsa Power Station was built in the 1950s with aid from the Marshall Plan.*





Volunteers recently restored to operating condition the engine at the 1935 Wied il-Ghasel pumping station.



The copper brew kettles at Farsons Brewery.

was a secret site so its exhaust was vented out a long vertical shaft leading to the top of a hill.

After stopping by a small agro-tourism project selling tasty strawberries and other fruits and vegetables, we ended up at an active restoration project, the **Ximenes Redoubt**, a 16th-century fortification built to protect the **Salina Salt Pans**. Albert Stebbings, a Maltese restoration contractor, is leading this year-long project involving about eight workers. The redoubt will be a visitor center when completed. It was very interesting to hear that government regulations prohibit the use of electric tools, and even prohibit the use of wire brushes to clean stones.

Our final day of touring on Saturday began at the **Marsa "B" Power Station** ("A" was an underground station on the same site, opened in 1953 and closed in 1994). Malta didn't convert from an older single-phase 100 Hz grid to the European standard three-phase, 50 Hz power grid until 1954-58. The station has eight steam turbine generators and one gas turbine, installed at various times between 1966 and 1990, as Malta's energy needs grew. The plant is powered by oil, although it was originally coal and much of the coal-handling equipment is still in place. Marsa "B" is being phased out because it does not meet current EU pollution standards and is not as efficient as more modern plants. A new station at Delimara came on line in 1990. An underwater power cable connecting Malta to the European grid via Sicily is scheduled to come on line in 2013 and a second cable is scheduled for 2015.

We had lunch in the fishing village of **M'Xlokk** ("em-shlok") filled with traditionally painted small fishing boats (each village has its own bright color scheme). The village is near the Free Port at M'Xlokk, a major container port and transshipment point for destinations all over the Mediterranean.

The last stop was **Ft. Rinella**, one of two primary batteries that once defended the Grand Harbour (the other one

has been demolished). Our visit began with a demonstration firing of a moderate-sized muzzle-loading howitzer, with the interpretation emphasizing the importance of drill and practice to fire the weapon safely and rapidly. After a brief video, we were introduced to the monster **Armstrong 100-Ton Gun** and the elaborate system that loaded it. In 1874, the Italian Navy embarked on an ambitious program to build two massively armored battleships. This was directly threatening to Malta, so the British were alarmed, even more so by the fact that these ships were to be equipped with four rifled, muzzle-loading cannons with 45-cm bores that would allow the Italians to bombard and destroy the fortifications at Malta while staying well beyond the range of the land-based artillery. To counter the Italian battleships, the British ordered the 100-Ton Gun from the Armstrong Ltd. works in Newcastle, England. To load this massive weapon, a steam/hydraulic ram forced the 450 lbs. of gunpowder and the 1,000 lb. projectile into the barrel, which was rotated and depressed into a loading position. The gun could be fired every four to six minutes, but needed re-rifling only after a hundred or so shots. It had a range of about 6,600 yds. and was very accurate. The British decided to arm both Malta and Gibraltar with two each of the weapons. As it turned out, the guns were never fired in anger, and two were damaged beyond repair in test firings. Furthermore, these massive weapons were soon made obsolete by advancing technology.

The Study Tour's final farewell was a traditional Maltese dinner featuring rabbit, fish, and other dishes. This was definitely a unique tour. The SIA would like to thank the co-leaders of the tour, Mary Durfee and Roberto Ghirlando, and all of the warm, friendly people of Malta who showed great hospitality and patience in answering our numerous questions. *Grazzi hafna!*

Jay McCauley



## HISTORIC BRIDGE NEWS

**New Resource for Teaching about Covered Bridges.** As part of the National Historic Covered Bridge Preservation Program, the Federal Highway Administration has partnered with the National Park Service and the U.S. Forest Service Forest Products Laboratory to prepare an *Educational Guide on the History of Covered Bridges*. The guide and companion CD with interactive elements is designed for students in math, science, and American history courses. The package contains information written and formatted in sections for grades K-5, 6-8, and 9-12. It includes a compilation of drawings and descriptive data about various truss types, year built, design loads, traffic, wood species used, and builders. It is hoped that this guide will stimulate students' interest and understanding of the basic "nuts and bolts" engineering aspects of covered bridges, as well as illuminate the place of covered bridges in transportation history and in the development of U.S. bridge design technology. The discussion of current bridge restoration projects around the country helps students comprehend the basic philosophy and techniques of covered bridge restoration and preservation. Course material can be downloaded from the website of the National Center for Wood Transportation Structures: [www.woodcenter.org/covered\\_bridges\\_education](http://www.woodcenter.org/covered_bridges_education).

An unusual rehabilitation technique is being used to preserve the **Richmond Village Bridge**, a Parker through-truss built in 1929 over the Winooski River in Vermont. One of the 230-ft.-long bridge's major deficiencies was its narrow, 20-ft. width. Engineering analysis determined that it was technically feasible to cut the bridge in two lengthwise, push the sides apart and insert new floorbeams and deck to carry traffic. When complete, the bridge will be about 30 feet wide. The engineers believe this may be the longest and heaviest bridge ever to have been widened using this technique.—*Burlington Free Press* (June 11, 2012)

The **Calhoun County Historic Bridge Park** (*SIAN*, Summer 2006) near Battle Creek, Mich. has re-opened after being closed for nearly two years due to contamination from the Enbridge Oil Spill that leaked nearly a million gallons of oil sands crude into the Kalamazoo River. Enbridge Energy paid for the park's cleanup and enhancements including a new playground, restroom, picnic pavilion, and canoe launch. The park functions as an open-air museum for five historic metal-truss bridges that were saved from demolition and restored as pedestrian crossings within the park's trail system. ■

## NOTES & QUERIES

**AdTech Ceramics** (tour site—2008 Fall Tour, Chattanooga) is asking for assistance putting together a company history for a Wikipedia page. AdTech produces insulators and ceramic platforms for the electronics industry. Moritz Thurnauer founded the company in 1902 as the Sunshine Lava Co., and located operations in Chattanooga to take advantage of nearby talc deposits used in the manufacture of acetylene (carbide) lamp burner tips. If you have historic info on the company or would like to assist with the research, please contact Matt McKee, Sales Engineer, AdTech Ceramics; [Matt.McKee@adtechceramics.com](mailto:Matt.McKee@adtechceramics.com); (423) 755-5423.

The **Zippo Manufacturing Co.** (Bradford, Pa.) produced its 500 millionth lighter at a ceremony on June 5, 2012. The company's 620 workers lined up to form a human "conveyor line" to deliver the case and the lighter's innards to company President Greg Booth, who snapped the two parts together. George Duke, grandson of company founder George Blaisdell, ceremonially lit the device. Blaisdell began manufacturing the iconic lighter in 1932.—*AP Wire* (June 6, 2012)

**When Is a Bear a Salamander?** The last issue of *SIAN* (Spring 2012) featured an article on the Oswego (Ore.) Iron Heritage Trail that mentioned the remains of an "iron-filled brick crucible." Stuart B. Smith (SIA), ex-Director of the Ironbridge Gorge Museum (U.K.), correctly points out that "This brick

'bowl' is in fact a furnace 'bear' which is the remains of the internal brickwork of the furnace lining mixed with slag and some iron. These bears formed a particular problem for iron works that were being dismantled or furnaces that were being relined, and it was normally the policy to drag them some distance from the furnace, and if possible bury them underground. It is not uncommon to locate furnace bears when excavating old iron working sites." This brings up an interesting question of terminology because in the United States a 'bear' is more commonly known as a 'salamander,' and in some places it is known as a 'horse.' A cursory web search by the *SIAN* editor discovered that archeologist James H. Brothers presented on the subject at the Ironmasters Conference in 2004. He was of the opinion that salamander, bear, and horse were "historically acceptable [and synonymous] terms" but that salamander was the better for modern-day historians and archeologists because it was "unlikely that an amphibian will be mentioned in an account book, but also because the mythological salamander is a creature of fire." Perhaps another way to look at it would be to research the etymology and consider whether there are associations with various iron-making regions or traditions. Please contact the editor if you have thoughts on the subject: [phsianews@aol.com](mailto:phsianews@aol.com).

Are you traveling to Europe and looking for IA sites to visit? An excellent source of information is the **European Route**

(continued on page 27)

## WORKSHOPS & CONFERENCES

The **Association for Industrial Archaeology (U.K.)** will hold its 2013 Annual Conference, Aug. 9-15, in Dundee, Scotland with side excursions to Tayside and Deeside. This is the third time that the AIA has held its annual conference in Scotland, the last being in Edinburgh in 2002. The conference headquarters will be Dundee University adjacent to the City Centre and Cultural Quarter. Just to the north is industrial Blackness Conservation Area, where the oldest extant mill started spinning flax in 1799, and feedwater from the Scouringburn drove many steam-powered mills (20 still standing). Dundee is known for “jute, jam, and journalism,” but also for its port, its bridges, and its heavy and light engineering. The week-long conference will tentatively feature on Friday, Aug. 9 a half-day seminar on iron, followed by afternoon tours of Dundee IA. Saturday, Aug. 10 will be devoted to paper sessions, and Sunday, Aug. 11 to the Rolt Memorial Lecture by Dr. Miles Ogelthorpe followed by afternoon coach tours. Four days of tours will be offered from Monday, Aug. 12 to Thursday, Aug. 15 with itineraries in Erich and Deeside, Highland Perthshire, Forest of Birse, Aberdeen, Angus Coast, and North East Fife. Paper proposals on industrial archaeology of Scotland and elsewhere are welcome, contact [mark.watson@scotland.gsia.gov.uk](mailto:mark.watson@scotland.gsia.gov.uk). General conference info: <http://industrial-archaeology.org>.

The **Business History Conference (BHC)** is soliciting papers on the theme of *The Cultures and Institutions of Business* for its annual meeting to be held in Columbus, Ohio, March 21-23, 2013. Papers may engage in ways in which cultural beliefs and values shape business practices in different geographical, historical, and social settings.

Individual paper proposals should include a one-page abstract and one-page *c.v.* Panel proposals should include a cover letter stating the rationale for the panel and one-page paper proposals and *c.v.*'s for each of the presenters. Deadline: Oct. 1, 2012. Info: [BHC2013@Hagley.org](mailto:BHC2013@Hagley.org).

**Big Stuff** is a triennial international meeting focused on the challenges and triumphs of conserving our large technology heritage. The meeting has been hosted in Canberra, Bochum, and Duxford; and in 2013 will be held in Ottawa. The conference features three days of talks, workshops, and discussions about the preservation of sites, oversized objects, machinery, and working technology in the context of their significance and interpretation. The meeting aims to bring together conservation professionals, curators, and those working in or interested in the heritage field to share experiences and ideas, and encourage a consistent approach to preserving technological heritage. The theme of the 2013 conference is “Saving Big Stuff in Tight Economic Times.” Authors interested in presenting a paper may submit an abstract (400-600 wds.) by Mar. 31, 2013. Poster abstracts should be submitted by June 30, 2013 to: [BigStuff2013@technomuses.ca](mailto:BigStuff2013@technomuses.ca). For more info: [www.sciencetech.technomuses.ca/english/whatson/big\\_stuff\\_conference.cfm](http://www.sciencetech.technomuses.ca/english/whatson/big_stuff_conference.cfm).

The **Nineteenth Century Studies Association** will hold its 34th Annual Conference in Fresno, Calif., Mar. 7-9, 2013 on the theme of *Loco/Motion*. Papers will explore the 19th-century fascination with travel and transportation technology, including balloons, ships, undergrounds, funiculars, and railroads. Info: [www.nineteenthcenturystudiesassociation.org](http://www.nineteenthcenturystudiesassociation.org). ■

## FAIRCHILD NOTEBOOKS DONATED

On June 29, 2012, the **Computer History Museum** in Mountain View, Calif. (venue—2008 SIA Annual Conference, San Jose) announced that TI (formerly, Texas Instruments) had completed the donation of over 1,000 engineering notebooks from the earliest days of Fairchild Semiconductor. TI had obtained them with its acquisition of National Semiconductor in 2011, and, in turn, National Semiconductor had obtained them with its acquisition of Fairchild Semiconductor. Parts of Fairchild Semiconductor were spun off; it still exists as a specialty semiconductor firm.

These engineering notebooks are very important because they are the foundation of patents and claims of priority. They are detailed, specific, and paint a picture over time of concepts, implementation ideas, experimental results, setbacks, victories, and disasters. What these notebooks show is the development from vague concept to commercial realization of the nascent semiconductor industry.

In the late 1950s, researchers in several places were attempting to create more compact and efficient transis-

tor-based electronics. In Sept. 1958, Jack Kilby of Texas Instruments demonstrated the first integrated circuit. The circuit would turn out to be impractical for volume manufacturing. In July 1959, Robert Noyce, a co-founder of Fairchild Semiconductor, filed a patent application based on the invention of the planar transistor by another Fairchild co-founder, Jean Hoerni. This patent would form the basis of the modern integrated circuit (IC) industry. Using Noyce's ideas, large numbers of devices could be created using wafers of silicon. Somewhere in this historic treasure trove are the actual pages written by Noyce that support the patent application. The work of Kilby and Noyce was simultaneous, and unknown to the other; so today most histories credit both Kilby and Noyce jointly for developing the IC.

Noyce and others had been recruited by William Shockley, one of the Nobel Prize-winning inventors of the transistor, to come to California and help form Shockley Semiconductor. Disagreements and Shockley's management style led Noyce, Jean Hoerni, and six other

## IA ON THE WEB

**6th Avenue El** (<http://warofyesterday.blogspot.com/2010/12/riding-el-4-155th-st.html>). Photos from a private collection document this New York City el in 1938-39, shortly before it was closed and scrapped. Includes many track views, stations, and details (stairways, railings, bridges, etc.).

**Brooklyn Bridge Park** ([www.brooklynbridgepark.org/the-park](http://www.brooklynbridgepark.org/the-park)). History and planning of the 85-acre "post-industrial" waterfront site stretching 1.3 miles along the East River. Includes Piers 1-6, Fulton Ferry, Empire Stores, and the Tobacco Warehouse.

**Delco Farm Lighting Installation & Service, 1918** ([www.youtube.com](http://www.youtube.com), search on Delco Farm Lighting for 3-part video). William Lowman, a Delco dealer, produced this remarkable silent film in 1918 to illustrate and market the benefits of electric generators and batteries in rural Nebraska.

**Great Northern and Northern Pacific RR Archives** ([www.mnhs.org/library/findaids/index-WhatsNew.htm](http://www.mnhs.org/library/findaids/index-WhatsNew.htm)). The Minnesota Historical Society has completed an on-line inventory of more than 16,000 boxes of company records. Finding aids allow for more convenient browsing, faster searching, and the discovery of related materials.

**Iowa DOT Historic Archives** (<http://historicalphotos.iowadot.gov/descriptions.aspx>). Devoted mostly to highway conditions and construction, there are also images of railroads, airports, and river navigation. More than 13,000 historic images, many dating to the 1910s and 1920s.

**Hendey Lathe** ([www.lathes.co.uk/hendeyfactory/](http://www.lathes.co.uk/hendeyfactory/)). A superb visual record of a major American machine-tool manufacturer at full cry in the midst of WWII. Hendey was based in Torrington, Conn. Includes company history, catalogues, etc.

**Industrial Heritage Education** (<http://tehmina.goskar.com/2012/05/01/industrial-heritage-education-at-risk/>). Blog and commentary on the state of industrial heritage education in the U.K., paints a bittersweet picture of growing public interest in IA but diminishing recognition for it within higher education and research institutions. Some parallels might be drawn in the U.S.

**Nation's Business** ([www.hagley.org/library](http://www.hagley.org/library), click on Digitized Collections) was the monthly magazine of the Chamber of Commerce of the U.S. from 1912 to 1999. Over 85,000 pages and 900 issues are now digitized. The magazine covered major events that shaped American politics and business, including economic policy, workplace technology, marketing, and labor relations.

**Virginia Industry Letterheads** ([www.virginiamemory.com/blogs/out\\_of\\_the\\_box/2012/07/](http://www.virginiamemory.com/blogs/out_of_the_box/2012/07/), click on A Few of Our Favorite Things, Part 3). A selection of stationery from the Archives of the Library of Virginia depicts factories and mills, ca. 1860-1920.

*"IA on the Web" is compiled from sites brought to the editor's attention by members, who are encouraged to submit their IA Web finds: [phsianews@aol.com](mailto:phsianews@aol.com). ■*

colleagues to form Fairchild Semiconductor. The new company was funded by East Coast industrialist Seymour Fairchild on the advice of Arthur Rock, who went on to become a highly successful venture capitalist. Shockley referred to the Fairchild Semiconductor founders as "the traitorous eight," which they found amusing.

Progress in the infant IC industry was rapid, and in 1965 another Fairchild co-founder, Gordon Moore, observed that the number of transistors that could be economically fabricated in an IC seemed to be doubling roughly every year or so. This has become known as "Moore's Law," though the original note in *Electronic News* was far more modest. Through incredibly hard and creative work by thousands of talented engineers and scientists, and massive capital investment, the industry has been able to maintain this exponential growth in complexity since its inception, leading to processors with more than 800 million transistors in common personal computers today.

Noyce and Moore went on to found Intel. Other

"Fairchildren" were founders or key contributors to a large number of other firms in the semiconductor industry.

The donation includes notebooks from Robert Noyce, Gordon Moore (who was present at the donation announcement), Jean Hoerni, Jay Last, and other pioneers at Fairchild Semiconductor. The importance of these archival materials to the Computer History Museum cannot be overstated. Plans are to make the notebooks available to researchers as soon as possible, and ultimately to make them available in digital format; details are still being worked out.

As an organization dedicated to the preservation of our industrial heritage, the SIA is delighted to see these documents preserved. They tell an important chapter in the birth of an industry that now touches every one of us nearly constantly. (Full disclosure: I'm a Senior Docent at the Museum, and I hope to join the curatorial team working on these notebooks.)

Jay McCauley, SIA Past President



## SITES & STRUCTURES

The **East Broad Top RR** (Orbisonia, Pa.) suspended steam-powered excursions for the 2012 season, once again raising questions about the narrow-gauge railroad's future (*SIAN*, Spring 1996). The announcement was made in April by the EBTRR & Coal Co. and the railroad's owner, Joseph Kovalchick, following failure to reach agreement on renewing the lease of the EBTRR Preservation Association, the not-for-profit that has operated the railroad in the past, with an option to buy. The owner's statement included the ominous observation that "At this time there are no certainties beyond 2012. We can't say this is the end of the line, nor can we say that this is just temporary." In a separate statement to *Trains* magazine, Kovalechick indicated that it was no longer possible for his family to subsidize operations as it has for the past 51 years. The Friends of the EBTRR in their June 2012 newsletter announced that they would continue to be a voice for supporters of the railroad. The friends group organizes volunteers for various preservation and restoration projects, and keeps the museum open on the first and third weekends of each month, May to October. The friends have sponsored a full schedule of summer work, including projects to clean-up and repair various buildings. Info: [www.febrt.org](http://www.febrt.org).

*NB—The suspension of steam operations at EBTRR has not impacted the Rockhill Trolley Museum. The museum will continue to operate on weekends ([www.rockhilltrolley.org](http://www.rockhilltrolley.org)).*

The Metropolitan Transit Authority of New York (MTA) and Metro-North RR have announced plans for celebrating the 100th anniversary of **Grand Central Terminal**. The year-long celebration kicks off on Feb. 1, 2013 with a formal re-dedication ceremony and the opening of an exhibit in the terminal's Vanderbilt Hall. Other activities are to include publications, educational initiatives, exhibitions, a parade of historic trains, and collaborative events with heritage and arts organizations.—*MTA Press Release (Feb. 2, 2012)*



*Main Concourse, Grand Central Terminal, ca. 1913.*

The National Trust for Historic Preservation's annual list of **America's 11 Most Endangered Places** for 2012 included two sites of IA interest. The **Bridges of Yosemite Valley** are threatened by a proposed National Park Service management plan for the Merced River, which flows through the heart of Yosemite National Park. The plan would remove three historic rustic-style bridges despite their significance to the park's landscape. **Terminal Island** in Los Angeles was a major shipbuilding center, the place where America's tuna canning industry came of age, the site of the forced removal of nearly 3,000 Japanese-American residents in 1942, and is now a popular setting for movie and television productions. The site is threatened by neglect due to long-term vacancy of the historic buildings and a proposed plan that limits re-use, and in some cases, calls for demolition.—*National Trust Press Release (June 9, 2012)*

The **Bevin Brothers Mfg. Co. Bell Factory** (tour site—SIA Annual Conference, Hartford, Conn., 1981) was destroyed by fire on May 26, 2012. Bevin made sleigh bells that came in 20 sizes, as well as a variety of hand, house, cow, sheep, door, and ship's bells. The original section of the six-story Bevin factory in East Hampton dated to 1832 and was considered one of the oldest continuously operating industrial sites in Connecticut.—*Hartford Courant (May 27, 2012)*

The Preservation League of New York State has named Manhattan's **IRT Powerhouse** at Eleventh Ave. and 59th St. to its "Seven to Save" list of endangered historic places for 2012-13. The powerhouse was constructed in 1902-04 to generate power for the city's first subway. Architect Stanford White of the firm McKim, Mead and White volunteered his services to assist with the exterior design. The resulting Beaux-Arts edifice ranks among the city's notable civic structures of the early 20th century. When opened, the IRT's central power station was the largest steam-driven powerhouse in the world. It contained the largest reciprocating steam engine generators ever installed and the largest ever built in this country (parts of the generators are now in the permanent collection of the Smithsonian). The rapidly changing waterfront neighborhood surrounding the powerhouse has created challenges and opportunities for its preservation, as investors eye the location for its redevelopment potential. Both the NYC Landmarks Preservation Commission and the Preservation League have taken positions offering unqualified support for the building's adaptive re-use, focusing more on the exterior architectural expression than the interior expressions of its original industrial function. The Roebling Chapter SIA has supported landmarking for the IRT Powerhouse but has advocated for continuing to use the powerhouse to generate steam, which is what Con Ed does there now and which it has no intention of abandoning. Making steam for district heating and cooling means the IRT Powerhouse is, in a sense, still a powerhouse, rather than something else that was once a powerhouse. ■

## IA EXHIBITS

**The Old Depot Museum**, Vicksburg, Miss., held its grand opening on July 15. The museum is located in the 1907 depot of the Yazoo & Mississippi Valley Ry. Its exhibits feature models of 250 ships and boats, 175 cars dating to the early 1900s, plus model trains, and oil paintings of Civil War ships and river battles. A sidewalk connects the museum to the neighboring *MV Mississippi IV*, the centerpiece of the U.S. Army Corps of Engineers' new Lower Mississippi River Museum & Riverfront Interpretive Center. Exhibits at the center include a functioning water table modeling the Mississippi. Info: [www.theolddepot.net](http://www.theolddepot.net).—*Jackson (Miss.) Clarion Ledger (June 13, 2012)*

**TechWorks!**, a new museum of technology and industry, is in the planning stages in Binghamton, N.Y. The museum will be located in the former General Ice Cream Co. creamery, dating to the early 20th century. The site is a nexus of transportation with a railroad crossing the property, the Chenango River to the west, and Water Street to the east. Within view is the Marconi Tower, used in 1913 to send the first radio call to a moving train, proving that radio transmissions could be sent to a moving object. Just a short drive away is the company town of Endicott, which is named after Henry B. Endicott, the founder of the eponymous shoe company. Endicott was born of shoes, but it is perhaps best known as the "Birthplace of IBM." The Computing Tabulating Recording Co., the precursor to IBM, was founded in Endicott in 1911 based on the punch card tabulating technology developed by Herman Hollerith. A TechWorks! concept plan is currently being worked on by the Bucher/Borges Group (BBG), a consulting firm based in Easton, Md. The museum will emphasize green design and include engaging exhibits on the innovative processes of science, technology, engineering, and entrepreneurship.



*The General Ice Cream Co. creamery is slated to become the TechWorks! Museum in Binghamton, N.Y.*

**Trenton Makes Pottery: The Stoneware of James Rhodes, 1774-1784** will be on exhibit at Ellarslie Mansion, the Trenton (N.J.) City Museum, through Jan. 13, 2013. Rhodes is one of the few known American stoneware potters of the colonial period. His existence and distinctive wares came to light over the past decade following the archeological discovery of two kiln sites within the City of Trenton and some painstaking historical research into colonial documents. The exhibit explains the discovery of the kilns but focuses mainly on displaying the extraordinary variety of grey salt-glazed stoneware products reassembled from the fragments recovered from the archeological sites. Rhodes employed some signature decorative motifs that distinguish his products from those of other potters—floral designs and rough geometric patterns, executed in naturalistic style in painted blue cobalt—but perhaps his most engaging trait was the quirky application of molded faces on the shoulders of some jugs and pitchers. Info: Trenton Museum Society, (609) 989-1191; [tms@ellarslie.org](mailto:tms@ellarslie.org). ■

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## QUEEN CITY (continued from page 12)

est surviving examples of their design. The Bridge Tour culminated with a walking tour of the Roebling Bridge (see above).

The Cemetery Tour headed to the north side of town to **Spring Grove Cemetery**, a final resting place since 1846. Prominent people buried here include Messrs. Procter and Gamble, political boss George B. Cox, and well-known industrialists like Charles Fleischmann (of yeast fame) and Powell Crosley, Jr., of automotive and radio fame, whose name graced the Cincinnati Reds' longtime home stadium. The cemetery boasts a chapel that is a popular venue for weddings (in fact, the cemetery currently has many more weddings than funerals). Among the attractive monuments and mausoleums are several examples of "German tree stumps," a distinctive monument style in the form of an elaborately formed tree trunk. This type of memorial is generally asso-

ciated with a specific family, and is heavy with symbolism. Cut-off branches along the trunk represent lives cut short, while a finger pointing upwards reminds a viewer that the person has gone to heaven. Individual family members may be depicted as altar boys, lambs, or young animals. All in all, Spring Grove is a beautiful and restful place in which to spend one's eternity.

*Acknowledgements.* The SIA thanks all of the members and volunteers who helped organize and run the 41st Annual Conference under the leadership of SIA Events Coordinator Ron Petrie. We particular thank the many sites that opened their doors to the SIA.

*Mary Habstritt, Patrick Harshbarger, Carol Poh, Joe Seely, and David Simmons*

## Letter to the Editor:

On “IA in Art: Panoramic Industrial Photographs” by Matt Kierstead (*SIAN*, Winter 2012):

I was reminded of the time our local Portland (Conn.) Historical Society advertised an upcoming meeting that would feature color movies of the ca.1937/8 construction of the Arrigoni Bridge that vaults across the Connecticut River to Middletown. The promotional blurb informed that the images were taken by an engineer for the purpose of documenting the construction details of joints, rivets, etc.

I attended the meeting hopeful, in the sentiments expressed [by Matt Kierstead] in the above referenced



Peter Kushkowsky

article, that historical glimpses might be had of “surrounding environmental and social conditions.” As is the unfortunate situation in many river cities and towns, Middletown’s riverfront was torn out in the 1950s and 60s to make way for State Route 9, a four-lane divided-highway swath that obliterated riverfront history. I was hopeful that we might see panoramic sweeps of the long-gone riverfront docks and buildings below. *This was not to be!*

True to his engineer’s calling (and more perhaps in keeping with his boss’s expectations) the photographer dutifully photographed close-up details of joints, rivets, etc. Not once did he raise the camera for the sweeping views of a bygone era that we all anticipated.

Incidentally, the Arrigoni Bridge was dedicated in Aug. 1938, one month before The Great New England Hurricane of Sept. 21. As a precautionary measure the bridge was closed during the big blow. (The bridge is presently undergoing complete replacement of the decks supported by the arches. Traffic is coping marvelously with the lane closures necessary to do the work. The November 2012 rehab completion date is on schedule.)

Peter Kushkowsky

*The Arrigoni Bridge carries State Routes 17 and 66 over the Connecticut River between Middletown and Portland, Conn. The bridge is named after Charles Arrigoni, a state legislator who promoted the project.*

## Two Bombers

Two bomber aircraft built by U.S. firms prior to the Dec. 7, 1941 attack on Pearl Harbor are still operational. The reason they were not scrapped in the decade after WWII, when most aircraft with a few hundred or more flight hours were, is that industrial firms desired them for corporate use.

An early production **North American B-25 Mitchell** built in Feb. 1941 was removed from service with a bomber squadron in 1943. It is likely that it had been determined to be obsolete for further combat because of improvements in the B-25 model’s design. The aircraft was converted into the transport aircraft of the Commanding General of the U.S. Army Air Force, General Henry ‘Hap’ Arnold. It continued as a military VIP transport until 1946. In 1947 it was sold to an aircraft dealer who then sold it in 1948 to Banker’s Life and Casualty Co., an insurance firm. In 1951 the B-25 was again sold, this time to the Hughes Tool Corp., which eventually transferred it to the Hughes Aircraft Co. in 1962. Today, it is operated as the “Miss Hap” by the

American Airpower Museum in Farmingdale, N.Y. Info: [www.americanairpowermuseum.com](http://www.americanairpowermuseum.com).

The United Kingdom ordered a version of the **Consolidated B-24 Liberator** with some different equipment than the versions constructed for U.S. armed forces. It was called the LB-30. One of these was damaged in a landing accident at a U.S. airfield while its crew was in training. Consolidated rebuilt the aircraft into a transport and cargo hauler for company use. In Nov. 1948, the converted LB-30 was sold to Continental Can Co., which installed a more luxurious interior for use by executives. Continental sold the aircraft to Pemex, the Mexico-based petroleum firm, in 1959. Pemex used it as an executive transport and cargo aircraft until it was sold to the Commemorative Air Force in 1968. Today, the aircraft is operated as the “Diamond Lil” by the Addison, Tex. wing of the Commemorative Air Force. Info: [www.cafb29b24.org](http://www.cafb29b24.org).

—Tyler Turpin



## MEMBER NEWS

It is with great sadness that the SIA reports the death of **Patricia Condell**, a long-standing member. Patty passed away on June 13 in a house fire where she was living on the island of Jamaica. Patty grew up in Wenonah, N.J., and later lived in Wantage, N.J., until relocating to Jamaica in 2011. An archeologist and architectural historian by training, she worked for over 30 years on prehistoric and historic sites in New Jersey, Delaware, New York, and surrounding states. Patty was an active Roebling Chapter member, participating in the organization of numerous chapter events. In 1986, she began working for Historic Conservation & Interpretation where she met industrial archeologist Edward S. Rutsch (SIA). Later they became a couple and were together until Ed's death in 2003.—*Bill Sandy/Roebling Chapter eNewsletter (July 1, 2012)*

NB—Patty assisted in establishing the *Ed Rutsch Memorial Fund* at Michigan Tech to support on-going archeological research at the *West Point Foundry in Cold Spring, N.Y.*, a site that was dear to Ed's heart. Info on the fund and making a gift may be found at [www.siahq.org/news/edrutsch/edrutsch.html](http://www.siahq.org/news/edrutsch/edrutsch.html). ■



Patty Condell

Bill Sandy

## CHAPTER NEWS

**Northern New England** held its spring meeting and tour in Claremont, N.H. on May 19. Featured sites were the Monadnock Mills and Sullivan Machine Co.

**Oliver Evans** (Philadelphia) gathered at the Fairmount Water Works Interpretive Center on May 7 for a presentation on David Rittenhouse's 18th-century observations of the transit of Venus. The Annual Picnic was held on June 11, also at the Water Works, followed by a presentation by Patrick Harshbarger (SIA) on the 150th Anniversary of the Phoenix Column. On June 14, the chapter met at the Phoenixville County Club for a talk on the McAvoy Brick Works.

**Roebling** (N.Y.-N.J.) met in the magnificent waiting room of the Lackawanna Ferry Terminal in Hoboken, N.J. on June 24. Following a guided tour, members walked through the campus of the Stevens Institute of Technology, then to an exhibit on the Holland and Lincoln Tunnels at the Hoboken Historical Museum. On July 20, the chapter visited the John Garner Marine Construction Shipyard in the Tottenville section of Staten Island, N.Y. The shipyard, located on about five acres on the Arthur Kill, does general inspections and repairs, including some work on historic vessels.

**Southern New England** met at the Old Colony Historical Society in Taunton, Mass. on Mar. 31 for a talk and tour focused on the local silver industry. The event coincided with the last day of a special exhibit at the OCHS entitled *Lester Vaughan & Taunton's Metal Artisans*, featuring an extensive collection of pewter wares, equipment, and other

items from a noted Taunton whitesmith, as well as the numerous other Britannia, silver, and copper companies that once operated in Taunton—the “Silver City.”

**Support Your Local Chapter.** For info on a chapter near you or to start one, contact Ingrid Wuebber, SIA Director, Local Chapter Chair (Ingrid\_Wuebber@urscorp.com) or check out the local chapters section of the SIA website ([www.sia-web.org](http://www.sia-web.org)). ■

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## NOTES & QUERIES (continued from page 21)

**of Industrial Heritage (ERIH):** [www.erih.net/welcome.html](http://www.erih.net/welcome.html). ERIH is a network of organizations that seeks to make IA sites more visible and increase the number of visitors to them. The ERIH website lists key sites in many countries, and also presents regional and themed routes (sites in a geographic area and sites related to particular industries). Pick any country and you can find leading industrial heritage sites (the “anchor points”) and information about these places. You can also plan a route, say, if you want to visit historic mining sites in Poland. When the site has its own website, ERIH's website will link to it, so you can easily get opening hours and visitor information. ERIH's ultimate objectives “are to protect Europe's industrial heritage sites and use their preservation as a motor for the development of regions that are often suffering from economic decline.” The ERIH website is a very informative and handy resource for planning IA excursions in Europe.—*Sara Wermiel* ■

# **SOCIETY FOR INDUSTRIAL ARCHEOLOGY**

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## CALENDAR

### 2012

**Oct. 18-21: SIA FALL TOUR, UTICA, N.Y.** Tours of industrial sites in the Mohawk Valley and the Adirondacks. Info: [www.sia-web.org](http://www.sia-web.org).

**Oct. 31-Nov. 3: National Trust for Historic Preservation Annual Conference, Spokane, Wash.** Info: [www.preservationnation.org](http://www.preservationnation.org).

**Nov. 2-3: Construction History Society of America Meeting, MIT, Cambridge, Mass.** Papers on American construction, 1850-1950, and on Guastavino Co. tile arches. Info: [www.constructionhistorysociety.org](http://www.constructionhistorysociety.org).

**Nov. 4-11: The XV Congress of The International Committee for the Conservation of the Industrial Heritage (TICCIH), Taiwan.** Info: [www.mnactec.cat/ticcih](http://www.mnactec.cat/ticcih).

**Nov. 5-11: Assn. of Railway Museums (ARM) and Tourist Railway Assn. Fall Conference, Montreal, Que.** Hosted by Exporail, The Canadian Ry. Museum. Info: [www.railwaymuseums.org](http://www.railwaymuseums.org).

**Nov. 9-10: Tide Mill Institute Conference, Bath, Maine.** Tours and paper session. Info: [www.tidemillinstitute.org](http://www.tidemillinstitute.org).

**Nov. 11: 31st ANNUAL ROEBLING CHAPTER SIA GREAT FALLS SYMPOSIUM ON INDUSTRIAL ARCHEOLOGY OF THE NY METRO REGION, PATERSON, N.J.** Info: <http://roebblingsia.org>.

### 2013

**Jan. 9-12: Society for Historical Archaeology Annual Conference, Leicester, England.** Info: [www.sha.org](http://www.sha.org).

**Mar. 7-9: Nineteenth Century Studies Assn. Annual Conference, Fresno, Calif.** Theme: "Loco/Motion" on the history of transportation and travel. Info: [www.nineteenthcenturystudiesassociation.org](http://www.nineteenthcenturystudiesassociation.org).

**Mar. 21-23: Business History Conference Annual Meeting, Columbus, Ohio.** See call for papers in this issue. Info: [www.thebhc.org](http://www.thebhc.org).

**Apr. 10-14: Society of Architectural Historians Annual Conference, Buffalo, N.Y.** Info: [www.sah.org](http://www.sah.org).

**Apr. 17-20: National Council on Public History, Ottawa, Ont.** Info: [www.ncph.org](http://www.ncph.org).

**May 30-June 2: SIA ANNUAL CONFERENCE, THE TWIN CITIES: ST. PAUL & MINNEAPOLIS, MINN.** Info: [www.sia-web.org](http://www.sia-web.org).

**June 5-8: Second National Covered Bridge Conference, Dayton, Ohio.** Info: [www.woodcenter.org](http://www.woodcenter.org).

**June 6-9: Mining History Assn. Annual Conference, Galena, Ill.** Tours of the historic zinc and lead mining district. Info: [www.mininghistoryassociation.org](http://www.mininghistoryassociation.org).

**June 6-9: Railway & Locomotive Historical Society Annual Meeting, Madison, Wis.** Info: [www.rlhs.org](http://www.rlhs.org).

**Aug. 9-15: Assn. for Industrial Archaeology Annual Meeting, Dundee, Scotland.** See article in this issue. Info: <http://industrial-archaeology.org>.

**Aug. 21-24: Chemistry in Material Culture, 9th Int'l Conference in the History of Chemistry, Uppsala, Sweden.** Paper proposals requested. Deadline: Mar. 31, 2012. Info: [www.9ichc.se](http://www.9ichc.se).

**Sept. 14-22: National Railway Historical Society, Annual Convention, Fairbanks and Anchorage, Alaska.** Charter trains and tours. Info: [www.nrhs.com/events](http://www.nrhs.com/events).

**Sept. 25-27: Big Stuff, Triennial Conference, Ottawa, Ont.** Sponsored by the Canada Science & Technology Museum. See article in this issue. Theme: "Saving Big Stuff in Tight Economic Times." Info: [www.sciencetech.technomuses.ca](http://www.sciencetech.technomuses.ca). ■