SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

Volume 38 Summer 2009 Number 3

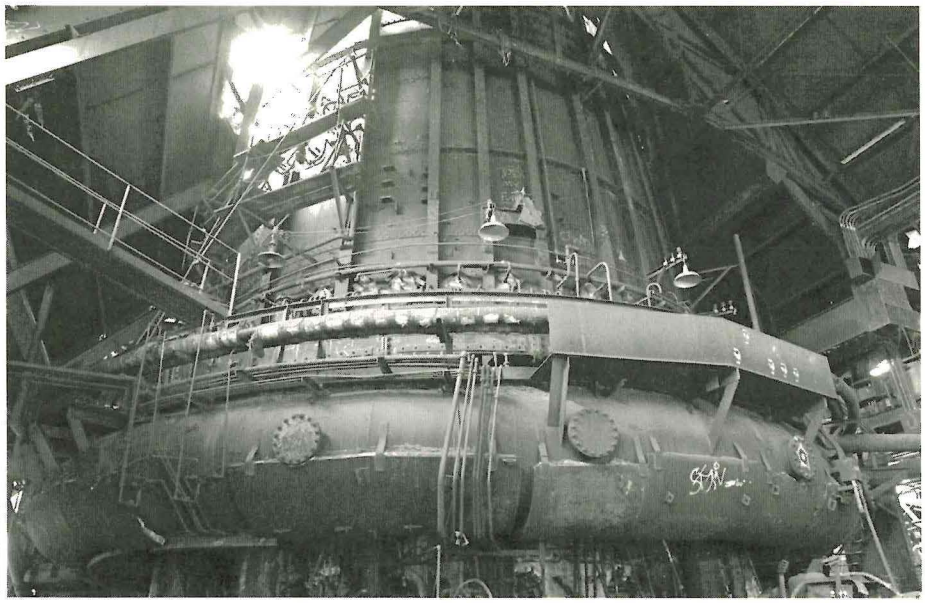
Our Rivers' Heritage—Review of the 2009 SIA Annual Conference, Pittsburgh

Nearly 200 SIA members gathered in Pittsburgh for the 38th Annual Conference, May 28-31. This was the SIA's third visit to Pittsburgh, making it the only city to host more than two conferences. The 4th Annual Conference (1974) and the 22nd Annual Conference (1993) were also held in the Steel City. This provided some of our long-time members the opportunity to reflect on the de-industrialization of a region that once held the greatest concentration of blast furnaces, steel mills, and coal mines in the nation. Manufacturing still takes place here, but at nowhere near the scale or scope that was evident during earlier SIA conferences. Numerous were the brownfields redeveloped for residences, commercial buildings, or parkland. The 2009 conference planning committee organized some traditional process tours, but the conference theme was "Our Rivers' Heritage," reflecting Pittsburgh's embrace of efforts to commemorate the historic industrial corridors stretching along the Allegheny, Monongahela, and Ohio rivers. Participants visited museums, historic sites, and infrastructure associated with Pittsburgh's industrial heritage. The sampling of sites focused primarily on the fields of iron and steel, rail and river transportation, coal and coke, and oil.

The format of the Annual Conference followed SIA traditions with Thursday early bird tours and opening reception; Friday process and historic sites tours, and evening show-and-tell; Saturday paper sessions, annual business meeting (see article in this issue), and banquet; and Sunday tours. Tours and activities were accompanied by an excellent guidebook edited by Barb Grundy and with an introduction to Pittsburgh's industrial history by Ronald Carlisle.

Thursday offered a choice of three early-bird tours. The first, "A Three For," was organized by Janis Dofner of the Rivers of Steel National Heritage Area, an organization

(continued on page 2)



Michael Hoyt

A view from the casting floor at Carrie Furnaces.

In This Issue:

- Fall Tour Update
- Carol Poh, General Tools Award Recipient
- Marco Meniketti, Vogel Prize Winner
- SIA '09 Annual Business Meeting
- Wanted: IA Editor
- Kaman Helicopter
- Redding Shaft Iron Mine

Published by the Society for Industrial Archeology
Department of Social Sciences, Michigan Technological University, Houghton, Michigan 49931-1295

Our Rivers' Heritage (continued from page 1)

that is leading the effort to raise awareness of Pittsburgh's industrial heritage. The national heritage area is an umbrella, both thematic and organizational, for tying together diverse sites for tourism and educational purposes. The "three for" were Ellwood Quality Steel, the Harlansburg Station Museum of Transportation, and the Little Beaver Historic Society. **Ellwood Quality Steel** is a family company founded in 1910 by brothers David and Jonathan Evans, and still operated by fifth-generation family member David Evans Barensfield. On display was the company's ladle furnace, installed in 2007, increasing the company's annual production to 150,000 ingot tons. **Harlansburg Station Museum** in New Castle houses the private collection of Donald Barnes, a retired pilot who about 30 years ago began collecting transportation artifacts. About 16 years ago, he acquired four passenger rail cars, prompting the decision to build a replica train station to house his collection, which now includes two Greyhound buses, old gas pumps, a Model T, and a variety of memorabilia and antiques. At the **Little Beaver Historical Society** in Darlington, the star of the show was a Keystone Excavator, a vintage steam shovel. The society also preserves the Greersburg railroad station.

The "River of Coal" tour, led by George R. Carter, traveled a circuit of some 150 miles south of Pittsburgh into the Monongahela River coal region. At **Channel Craft**, participants examined the manufacture of toys, mostly made from wood, and many, like boomerangs, based on traditional design. The factory, which includes machines for the shaping and sanding of wood, painting, and screen printing, is located in a warehouse formerly used by the U.S. Army Corps of Engineers for maintenance of its fleet of boats that tended the Monongahela River Navigation locks and dams. In Brownsville, the tour stopped to pay homage to the **Dunlap's Creek Bridge**, built in 1836-39 as part of the development of the National Road. It is the nation's first cast-iron arch bridge, composed of tubular ribs, based on a design by Capt. Richard Delafield of the U.S. Army Corp of Engineers. The **W. A. Young & Sons Foundry and Machine Shop** served the needs of local coal mines and industries from 1899 to 1969. It is a remarkable time capsule with more than 40 belt-driven machine tools, a pattern shop, and cupola furnace. The **Hatsfield's Ferry Power Station**, operated by Allegheny Energy, offered a tour of its coal-fired generating units and coal-handling facility built in 1969-71. Each of the three units has a capacity of 570 MW. The plant has been recently upgraded with environmental controls, including a scrubber system.

The third of the Thursday early bird tours was "Homestead and Beyond." First of the stops was **Galvtech** where plant personnel offered a detailed tour of the galvanizing line, where sheet metal is continuously hot-dipped in molten zinc. Galvtech is considered a bright star in Pittsburgh's on-going efforts to maintain its manufacturing base through diverse, high-quality niche businesses. The buildings in which Galvtech are housed were built in 1942 to manufacture artillery shells for the war effort. The Army donated the buildings to the local redevelopment authority in 1993 and Galvtech leased the site in 1996. **Carrie Furnaces Nos. 6 and 7**, built in 1907, are the last two standing blast furnaces at a site that began development as

(continued on page 3)



Michael Hoyt

A ladle car on display in Braddock.

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*; Website: *www.sia-web.org*.

Mailing date for Vol. 38, 3 (Summer 2009), September 2009. ISSN 0160-1067. If you have not received an issue, apply to SIA-HQ (address above) for a replacement copy.

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: *phsianews@aol.com*.

Fall Tour Update
Mid-Hudson Valley, Oct. 8-11

Thanks go to the many members who told us that it was important to hold the annual Fall Tour on the traditional long weekend schedule in order for them to attend. Because of you, the 2009 Fall Tour centered on Rosendale, N.Y.'s cement industry was moved from a mid-week schedule to Thursday through Sunday, October 8 to 11.

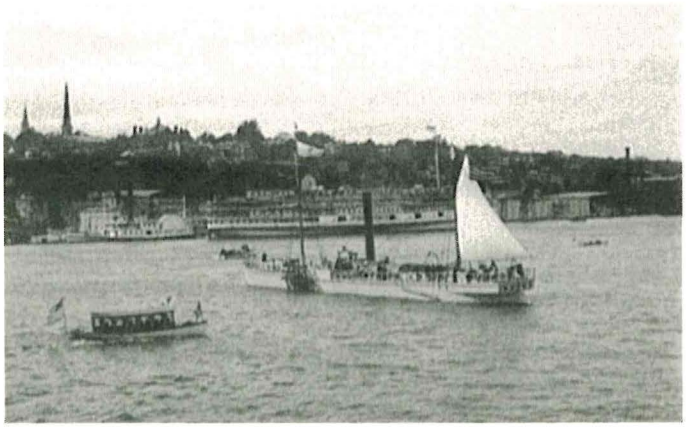
In order to make this happen, the hotel was changed to the Holiday Inn in nearby Kingston, as the original hotel could not make rooms available during any fall weekend.

In spite of these late changes, a great IA tour is in store. From the opening reception at the Steel House Restaurant, a building on its third incarnation after serving the Cornell Steamboat Co. and as a steel fabrication shop, to the closing banquet at Tuthilltown Spirits, housed in a former granary and currently the only distillery in New York state, attendees will be soaking up the heritage of the great water highway of the east by touring industrial sites of the Mid-Hudson Valley.

There will be a chance to visit a working shipyard on Kingston's Rondout Creek, a felt factory in Newburgh, a barbed-wire manufacturer in Bloomington, and a foundry in Beacon. See former waterpower sites, cement mines, and rail viaducts. Ride a historic tugboat to a lighthouse or take a PT boat to one of the great Hudson Valley estates of old.

When you're through, take some time on your own to visit Dia:Beacon, a former Nabisco package printing plant that is now a renowned art museum, or Rockland State Park, near Nyack, to hike remnants of the ice harvesting and quarrying industries, or any of the myriad sites that could not be included in a tour lasting but one weekend.

All members will have by now received the brochure describing the Fall Tour in detail. For updates and to register, visit *www.siahq.org*.



Library of Congress

Newburgh on the Hudson River, with a replica of Fulton's steamboat,* Clermont, *circa 1909.

Our Rivers' Heritage *(continued from page 2)*

an ironworks in 1884 and was acquired by Andrew Carnegie in 1898 to supply his Homestead Works. The last modernization of the furnaces was in 1936-37. The Rivers of Steel National Heritage Area is actively and optimistically pursuing preservation of the furnaces, a massive and daunting undertaking. At **Wabtec**, participants toured the 1890 factory built by the Westinghouse Air Brake Co. to manufacture George Westinghouse's famed safety air-brake systems for railroads. The company still builds and refurbishes the compressors, brakes, and other components, building on Westinghouse's original concept. A treat was a demonstration of the test lab's 200-car testing machine, a full-scale replica of all of the air-brake components in a 200-car freight train.

Thursday evening's reception was held on the top floor of the **Senator John Heinz History Center** in downtown Pittsburgh. The center is housed in the former Chautauqua Lake Ice House, which attendees of the 1993 Annual Conference remembered as the site of that conference's banquet. The interior of the building has been completely transformed into a state-of-the-art exhibit center with an impressive collection of artifacts telling the history of Pittsburgh and the everyday life of Pittsburghers. Historians Ted Mueller and Joel Tarr presented a fascinating slide-

(continued on page 4)



Elizabeth Norris

The tour guide at the Channel Craft toy factory holds a boomerang, the company's first product. Channel Craft specializes in "authentic" toys manufactured in the U.S.

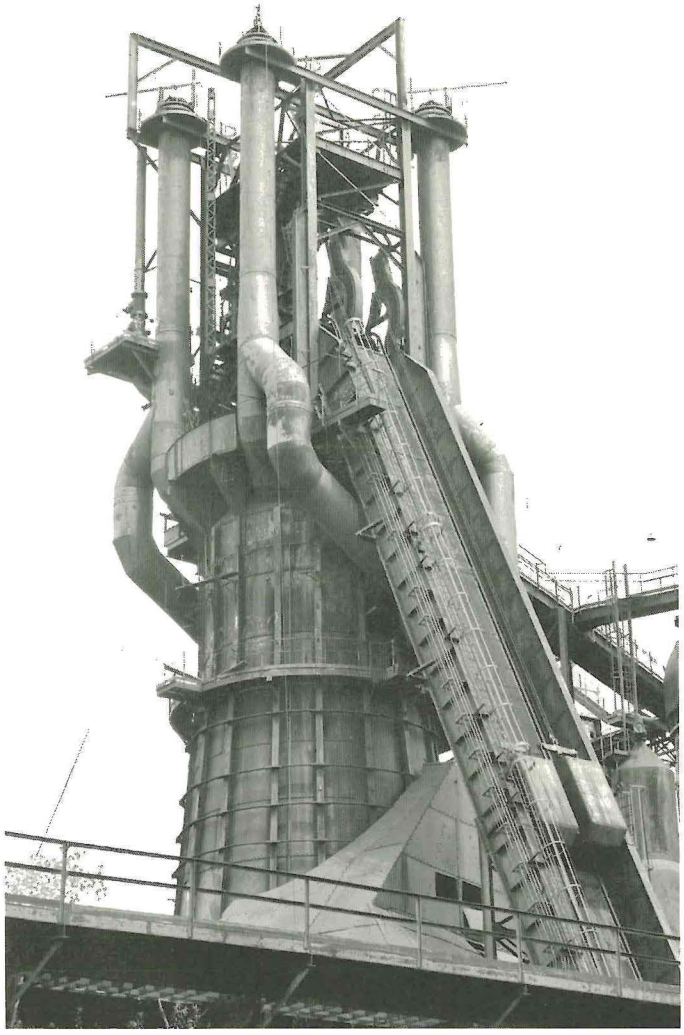
OUR RIVERS' HERITAGE (continued from page 3)

illustrated lecture on the theme of the shaping of Pittsburgh's rivers as engineered waterways to serve commerce and industry, and then current attempts to reclaim the rivers for human recreation. SIA President Mary Habstritt also read a proclamation from Pennsylvania Governor Edward G. Rendell welcoming the SIA to Pittsburgh and recognizing the state's rich industrial heritage.

Friday's five tour choices branched out across the region and followed Pittsburgh's rivers to sites of IA interest. The first of the tours, Drake Well & Oil Heritage Tour, ventured the farthest from downtown heading northeast along the Allegheny River into the oil fields around Titusville and the Allegheny National Forest. The oil fields, which boomed in the second half of the 19th century, now produce a fraction of their original output, but industry is considering re-opening many of the mineral rights to reach deeply buried natural gas deposits. Guides for the tour were Lois and Neal McElwee of the Oil Region Alliance, a group that coordinates efforts to preserve and promote oil heritage sites from wells to pipe lines, ghost towns, and oil works. Although the Drake Well was drilled in 1859 and is celebrating the 150th anniversary of oil production in the U.S. this year, **McClintock No. 1 Oil Well**, which was drilled in August 1861 to a depth of 620 ft. using a wooden spring pole, holds the title of oldest continuously operating oil well in the world. Commercial operation of the well continued until 1999 when the output was deemed too small by Quaker State to be economically viable. The Pennsylvania Historical & Museum Commission (PHMC) took over ownership and now uses the well to fill small bottles of oil for sale in its gift shop at **Drake Well Museum**. Tour participants had the opportunity to operate a replica of a spring-pole drill at the museum, as well as browse the large collection of indoor and outdoor exhibits. At the **Coal Oil Johnny House**, exhibits tell the story of John Washington Steele, an oil baron whose 19th-century rags-to-riches and back-again tale represents the history of the many ghost towns, like **Petroleum Center**, that dot the Allegheny National Forest.

The Beaver Valley Tour, which headed northwest of Pittsburgh along the Ohio River, had a last-minute change

(continued on page 5)



Michael Hoyt

Carrie Furnaces.



Michael Hoyt

Stained glass in the United Steelworkers Building.

Carol Poh

2009 General Tools Award Recipient

At the SIA's Annual Business Meeting in Pittsburgh, Charles K. Hyde, chair of the General Tools Award Committee, presented this year's award to Carol Poh.

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 of New York City, and the Abraham and Lillian Rosenberg Foundation. The Rosenbergs founded General Hardware, the predecessor to General Tools & Instruments, in 1922. 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.

This year's recipient has worked in the field of industrial archeology since the early 1970s, primarily as a historical consultant. Her work has been voluminous and wide-ranging, including more than twenty IA documentation projects done to HABS/HAER standards, nearly two dozen nominations of individual properties and historic districts to the National Register of Historic Places, and more than a score of surveys and inventories of historic properties. Most of her work has involved historic industrial resources in Cleveland, elsewhere in Ohio, and in the Great Lakes region.

Carol Poh has been an enthusiastic and unabashed advocate for the preservation of historic resources. She led the vigorous fight to save Cleveland's Hulett Automatic Ore Unloaders, which the Cleveland Port Authority ultimately demolished in 2000. When it comes to historic preservation, nobody would call Carol a "wallflower." Although academic publications are not a major consideration for the General Tools Award, Carol Poh has authored or co-authored dozens of books and articles on the history of Cleveland industry and other Cleveland institutions. Most notably, she also compiled ASME's History and Heritage Committee's *Landmarks in Mechanical Engineering* in 1997.

Finally, Carol Poh's service to the SIA has been quite remarkable. A member since the early 1970s, Carol edited the *SIAN* 1980-1983, and then served as an advisor to the newsletter for another decade. She has served as a director, as president in 2000-2002, and on committees too numerous to list. Carol Poh was also the chief organizer of the SIA's 15th Annual Conference in Cleveland (1986). ■



Patrick Harshbarger

2009 General Tools Award recipient Carol Poh (center) with General Tools Chairman Gerry Weinstein (left) and General Tools Award Committee Chairman Charles K. Hyde (right).

Our Rivers' Heritage (continued from page 4)

of itinerary when two of the scheduled process tours—USG Aliquippa (gypsum wallboard) and IPSCO Koppel Tubular (seamless tube mill)—cancelled because the works were shut down due to the economic recession. The **Allegheny County Sanitary Authority (ALCOSAN)** graciously agreed to fill the slot on short notice, offering a tour of its wastewater treatment center on the Ohio River. This is a massive operation with wastewater conveyed by the interceptors collected in a 120 ft.-deep wet well and pumped into the treatment process at a rate of 128,000 gallons per minute. There are six main sewage pumps with a total pumping capacity of 435 million gallons per day. At **Old Economy Village**, tour participants learned about the Harmony Society, a communal religious group that established the village in 1824 and became known for their manufacturing, agricultural, and investing achievements. A tour of the village's buildings included the blacksmith shop, cotton mill, wine cellar, and the house of founder George Rapp. The quaint village belies the economic influence of the Harmonists, who used their substantial savings to construct the Pittsburgh & Lake Erie RR, as well as invest in the industrial development of the region during the late 19th century. A special treat on this tour was a traditional German-American meal served in the meeting hall of St.

(continued on page 6)

2009 Vogel Prize Recipient—Marco Meniketti

At the 2009 Annual Business Meeting in Pittsburgh, *IA* journal Editor Pat Martin presented the Vogel Prize to Marco Meniketti on behalf of the Vogel Prize Committee chaired by Greg Galer.

Each year our society recognizes outstanding scholarship within the field of industrial archeology with its Robert M. Vogel Prize. Named for founding and distinguished member Robert Vogel, the award honors the author of the best article to appear in the society's journal, *IA*, within the past three years. The prize consists of a cash award and a wooden foundry pattern and plaque engraved with the recipient's name. Articles selected must have a clearly stated thesis and a well-constructed narrative. Analysis of material culture and high quality illustrations 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 of the SIA, who serve five-year terms.

The 2009 Vogel Prize goes to Marco Meniketti for his article *Sugar Mills, Technology, and Environmental Change: A Case Study of Colonial Agro-Industrial Development in the Caribbean* (Vol. 32, No. 1). This year's recipient constructs a comprehensive analysis of an industry by analyzing historical records, geography, environmental issues, and the physical remains of an industry outside the continental U.S. His article is generously illustrated with historic materials, maps, photographs of archeological sites and artifacts *in situ*, as well as carefully constructed plans of archeological excavations and the materials discovered there. He also includes graphic and statistical analyses of ceramics recovered from these archeological sites to further his argument.

Marco examines sugar plantation development on the Eastern Caribbean island of Nevis. By wider scale survey and more detailed archeological excavation of specific sites the author seeks to examine lesser-studied aspects of settlement patterns and environmental transformations associated with the rise, decline, and technological evolution of the sugar-making process in colonial settlements. The details he finds on the ground in conjunction with archival records provide new insight not only on this specific industry and this physical environment, but also on larger issues of soil deterioration, growing concentration of land holdings in fewer families, and an increasing demand for capital in order to utilize newer technologies. Furthermore, these changes reflect the growing industrial revolution in Europe visible even on this seemingly remote colonial outpost. These changes are reflected in the landscape modifications such as terracing, retaining walls, and a large network of cobblestone service roads that linked sugar estates.

Marco sets out his argument clearly, builds his case with the evidence he skillfully collected and displays, and demonstrates that the development of this industry was better organized and more systematic than previously believed. The committee considered the fact that spending time in Nevis might be reward enough, but is still pleased (albeit perhaps a bit jealous) to present this year's Vogel Prize to Marco Meniketti. ■

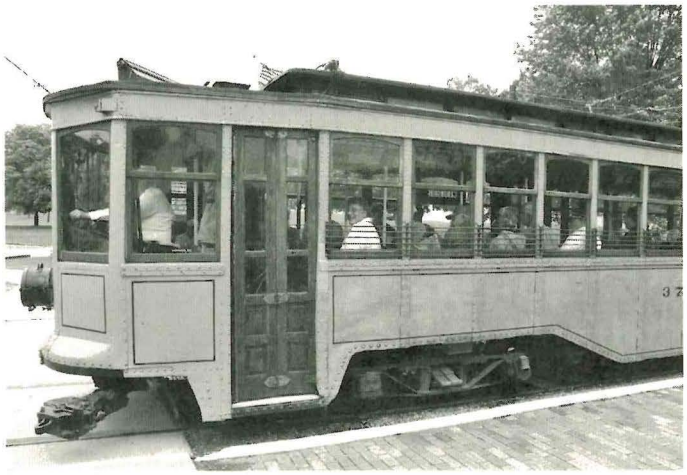
Our Rivers' Heritage *(continued from page 5)*

John's Lutheran Church. The final stop on this tour was **American Bridge Manufacturing** (ABM) in Coraopolis. ABM is the direct descendent of the American Bridge Corporation, the arm of U.S. Steel that was once the largest steel fabricating company in the world. In size, ABM is but a shadow of its former self, as attested to by the acres of abandoned plant in the former company town of Ambridge. The 32-acre facility in Coraopolis carries on the tradition, however, fabricating large girders and trusses using hand and automated welding processes.

The Light Rail, Trolleys, People Movers, and Inclines Tour showcased 150 years of public transit in Pittsburgh from the traces of a horse-car line to modern light rail. Participants took public transit to the greatest extent possible led by David Wohlwill of the Port Authority of Allegheny County, which took over operation of Pittsburgh's public transit systems in 1964. A featured stop was the **Pennsylvania Trolley Museum** in Washington. The museum traces its origins to the Pittsburgh Electric Railway Club, which formed in 1954 to purchase a 2,000-ft. section of the Washington Streetcar Line. Since then the collection has grown to over 50 pieces of rolling stock displayed in three buildings. Tour participants rode the trolleys as well as the B73, a 1930 diesel locomotive that once served the ARMCO steel plant in Butler. The **Bombardier Transportation Plant** provided a tour of its facility for manufacturing people-mover systems, mainly for use in airports. The plant, which was purchased by Bombardier in 2001, was originally established by Westinghouse Electric in 1971 to develop the innovative system of automated, multi-car, rubber-tired trains operating on concrete guideways, now known as people movers. As a final treat, participants on this tour rode and toured the **1870 Monongahela and 1877 Duquesne inclines**, the only two remaining of 17 inclines that once carried people and goods up and down the hills surrounding downtown Pittsburgh.

The Monongahela River Navigation Tour, led by Conrad Weiser and Gerry Kuncio, was a combination boat and bus trip from Pittsburgh to Charleroi—42 miles on the lower Monongahela River. The tour offered an up-close glimpse at

(continued on page 7)



Michael Hoyt

Riding the rails at the Pennsylvania Trolley Museum.



Elizabeth Norris.

Thursday's Coal Tour group poses at the coal transfer station where coal is brought by train to be transferred to barges.

the history and slack-water operation of the U.S. Army Corps of Engineers **Monongahela Locks and Dams 2, 3 and 4**. Lock and Dam No. 3 at Elizabeth, completed in 1907, ranks as the oldest operating structure on the river, while the new Braddock Dam was just completed in 2004. These, however, are but the descendents of slack-water operations that began in 1844 with the completion of Locks and Dams 1-4 by a private, state-chartered venture that predates the federal locks. The federal government acquired the system in 1897 and has continually improved it. The tour also offered marvelous opportunities to view the historic bridges crossing the river and the industrial facilities lining the Mon's banks.

The Neville Island Tour explored the industrial landscape of this Ohio River island that over the years has been the site of coke ovens, oil terminals, a cement plant, a foundry, shipyards, and numerous other industries. The tour was led by Jim Barrick, Neville Township Engineer. **Cemex** is an idled cement plant that ceased operations in the 1990s. Tour participants explored the 500-ft.-long kiln that was once the largest in the world, as well as the silos and facilities for loading and unloading barges. At **Neville Metals**, plant personnel offered a tour of the materials salvaging and recycling operations inside former Shenango Foundry buildings. Neville features a state-of-the-art machine that can shred a flattened automobile in about six seconds. Other stops on the island included **Triad Metal Fabricating**, a steel fabricator in the former works of the Pittsburgh-Des Moines Steel Co., and the former **Dravo Shipyard** (tour site—1993 Annual Conference), which closed in the 1990s. Dravo manufactured barges, and during WWII made LSTs. Capping the tour was the **Island Sports Center**, which is built atop an industrial waste dump that was a Superfund site. The center has an ice-skating rink and recreational fields associated with Robert Morris University. It is considered a model example of post-remediation development.

Saturday's paper sessions covered a range of IA topics from documentation to reflections on the interpretation of IA subjects to the general public. A number of presenters gave papers of local interest, including bridges, steel mills

(continued on page 9)



Justin Spivey

SIA's intrepid bicyclists pass in front of the Heinz Factory complex.



Perry Green

SIA members enjoy a ride on the switching engine at the Pennsylvania Trolley Museum.

Minutes of the 2009 SIA Annual Business Meeting
May 30, 2009

President Mary Habstritt called the meeting to order at 1:16 p.m. in the Urban Room of the Omni William Penn Hotel, 530 William Penn Place, Pittsburgh, Pa.

The meeting began with a small ceremony celebrating the life and contributions of David Shayt, who served on the SIA board, and designed and developed conference give-aways, including mugs and the Sloss Furnaces cast-iron paperweight pigs. He made a number of presentations during conferences, covering subjects such as oyster-shell shirt buttons and the Zildjian cymbal company. Robert Vogel and Bob Stewart came forward to sound a Zildjian cymbal in David's memory. They suspended the cymbal and struck it once, followed by a moment of silence on behalf of David and all other SIA members who passed away during the past year.

President's Report. President Habstritt began her remarks with the words of another president: "In a recent interview, President Barack Obama compared manufacturing jobs to those at WalMart and said, '... I do think that there's a culture of making things in a factory that appeals to people and that I understand. Whenever I'd walk into a factory during the campaign and would see these big turbines—things that, you know, you'd say, well, this is *neat stuff*—in a way you wouldn't when you walk into a retail store.' The 'neat stuff' of manufacturing and engineering is what we are all about. Like President Obama, I've given much of my time during my first year to appointing the right people for the right jobs. These people are my people, but most of all they are your people, carrying out the work of our Society. You'll be hearing from many of them today. In many ways, they have raised awareness of the importance of our industrial heritage as reflected in its remnants. Some of that is behind the scenes, like helping the board of directors use its time more efficiently via new technology, because then we can use our time better for research and advocacy, and examining our finances in a critical way so that we can provide grants and scholarships. More visibly, this work ranges from supporting sites on this year's 11 Most Endangered List of the National Trust for Historic Preservation, to adding press releases on historic preservation to our website, to producing our journal and newsletter, and to planning tours and conferences—not to mention getting some excellent coverage on this conference in local papers, two of which covered our conference with nearly full-page stories." President Habstritt thanked the planning committee and sponsors of this year's annual conference, listing each by name (see conference review article in this issue).

Secretary's Report. Secretary Richard Anderson reported that the minutes of the 2008 Annual Business Meeting were published in the *SIAN*. He asked the assembly for any additions or modifications; there being none the minutes were approved by motion and passed unanimously.

Treasurer's Report. Treasurer Nanci Batchelor presented the following: "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 yearly we file a Form 990 tax return. The following report is for the year that ended Dec. 31, 2008. We began 2008 with a total fund balance of $214,742. Cash receipts for the year totaled $106,816. As usual, the majority of our annual income comes from the various membership dues categories. In 2008 the total dues received were $79,280. The remaining balance is comprised of interest income ($3,608), contributions in both general and restricted funds ($8,789), publication sales and excess proceeds from tours and conferences. Total expenses for the year were $110,900. The production costs of our publications, the newsletter and the journal, combined for a total of $42,327. The balance of $68,573 was spent on labor ($41,643), postage ($3,259), insurance and legal fees ($1,297), prizes, awards and scholarships ($1,800), the preservation grants program ($7,185), office overhead and a few miscellaneous items. The SIA closed 2008 with expenses exceeding revenues by $4,084 and a total fund balance of $215,701 of which $34,619 is in restricted funds. To date in 2009, the SIA has had a total of $28,938 in cash receipts and has expended $30,877."

Headquarters Report. President Habstritt recognized administrative assistant Don Durfee for his contributions to SIA's smooth operations. Executive Secretary and *IA* Editor Pat Martin reported that headquarters is running smoothly thanks to Don. Pat is struggling to catch up the journal and urged the membership to poll professors, friends, and colleagues to submit articles. He added that SIA will start an agreement with the online journal server J-STOR to put our entire journal run online soon.

SIA Newsletter. Editor Patrick Harshbarger noted that if members open the *SIAN* to the middle, they will see a box with a long list of names of people who contribute to the *SIAN's* success. He asked for a round of applause for those who have helped. He asked the membership to continue sending in articles, clippings, photos, and other material for publication. Patrick also mentioned the occasional publication he has shepherded, now available as a free download from the SIA's website. It is an abstract of American truss bridge patents.

Student Scholarships. Chair Patrick Harshbarger thanked all who have donated to the scholarship fund, helping to support students to come to annual meetings. This year, scholarships were awarded to Gregory Anderson (Brown University, working on the anthracite industry in Pennsylvania) and Frederick Sutherland (University of Massachusetts Boston, working toward a PhD at MTU; his master's thesis is on the Hopag Iron Works, N.Y.).

Continuing Education Committee. Chair Perry Green reported that the committee is working on a plan that has been under development for several years. After surveying the membership, it became clear that a course on digital and film photography was of great interest. The committee has

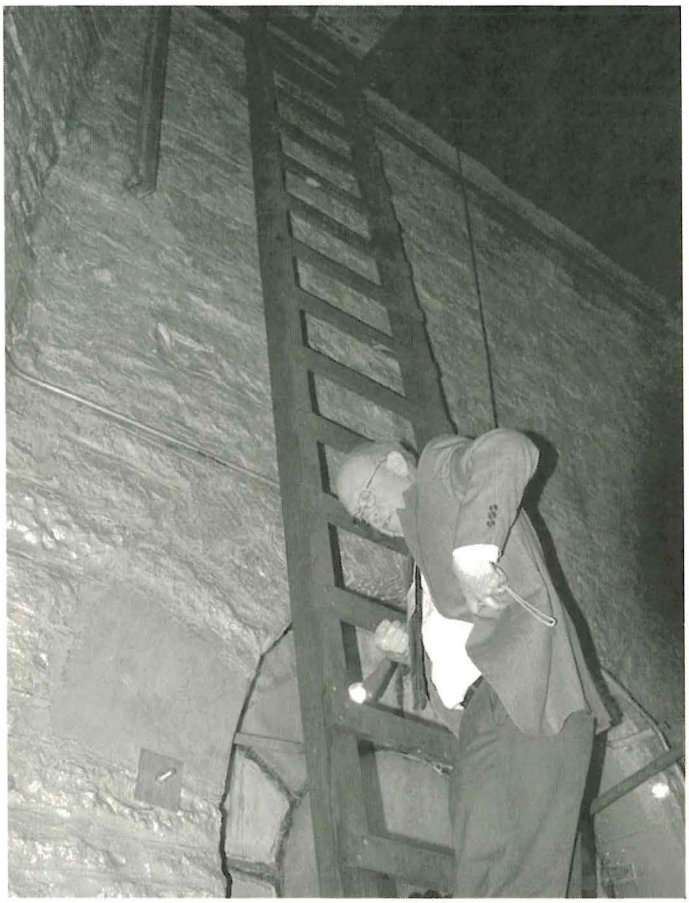
(continued on page 10)

 (continued from page 7)

and foundries, railroads, and industrial landscapes. That evening's banquet was a sumptuous buffet held in the 4th-floor executive and main dining rooms of the **George Westinghouse Castle** in Wilmerding. The Gothic-style building, which retains many of its original furnishings, was built in 1890 as a fellowship hall for employees with library and recreational facilities including a swimming pool and bowling alley. From 1927 to 1984 it was the general administrative offices of the Westinghouse Air Brake Co. The castle is now preserved by Wilmerding Renewed, Inc., our banquet host.

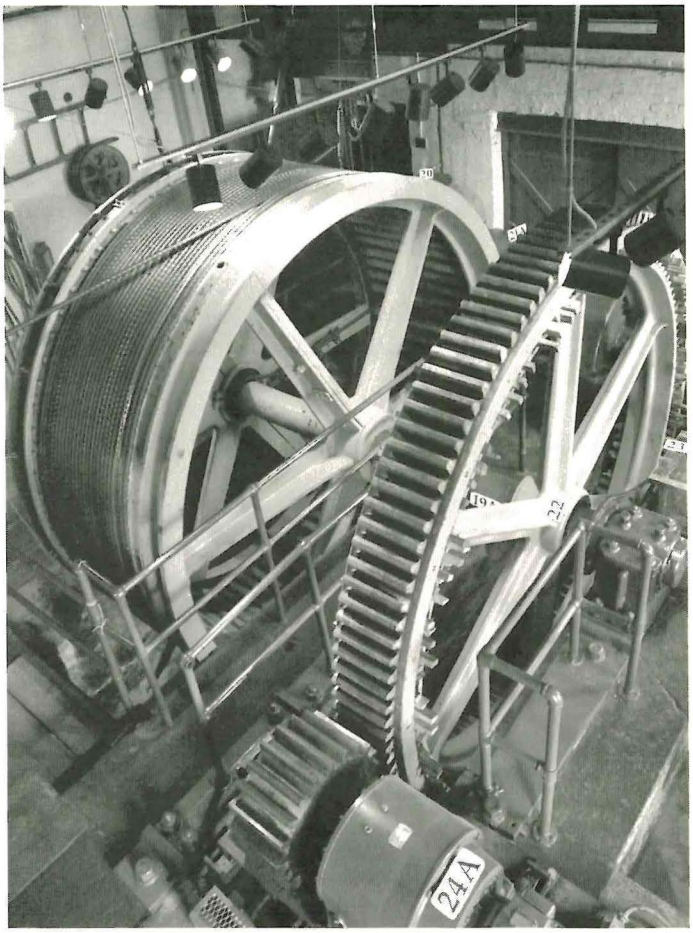
Sunday's tours included an architectural walking tour of downtown Pittsburgh, led by local architects. Another tour option was a tour of bridges by bicycle, making extensive use of the trails that have been developed along the rivers. This tour, led by David Wright of the Allegheny Department of Public Works, attracted a surprisingly large number of participants, but only a few were up to the full six-hour ride up and down all three rivers. The last of Sunday's tours visited Homestead to learn about efforts to commemorate one of America's most infamous episodes of labor unrest—the Battle of Homestead. Andrew Carnegie's **Homestead Works** are now demolished with the exception of the pump house and water tower, the only structures that remain from 1892. An exhibit on the battle is now housed on the third floor of the **Bost Building**, which served as the headquarters for the Amalgamated Association of Iron & Steel Workers.

The SIA thanks the many volunteers who contributed to a successful annual conference. Members of the planning committee were Bode Morin (SIA Events Coordinator), Jim Barrick, Carol Carter, George A. Carter, Jeffrey De Ninno, Janis Dofner, Alan Fowler, Barbara J. Gundy, Gerald M. Kuncio, Lee Maddex, Christopher H. Marston, Conrad Weiser, David E. Wohlwill, and Dave Wright. Ronald C. Carlisle was author of the guidebook introduction, and Lee Maddex organized the paper sessions. Special thanks go to tour sponsors and organizers including Skelly and Loy, Inc.; the U.S. Army Corps of Engineers' Ohio Area Manager, Christopher Johnson; Lockmasters Don Zeiler, Russ Moore, Rick Greenwood, and their staff; U.S. Army Corps of Engineers' Mon Area Manager, Gary Householder; Lockmasters James McKelvey, Charles Weight, John Booker, and their staff; Bob Luffy, CEO, American Bridge Company; Barb Zolli, Director, Drake Well Museum; Pennsylvania Historical and Museum Commission, Sue Beates, Curator/Historian and their staff; Oil Region Alliance; Channel Craft; Allegheny Energy, Inc.; Cumberland Coal Resources, LLC; Mark Finlay (proof editor for guidebook); and Cameron Hartnell (guidebook map). ■



Steven A. Walton

Gerry Weinstein climbs to inspect the belfry of the Westinghouse Castle clock tower.



Michael Hoyt

The winding drum at the Duquesne Incline.

decided to wait for some clarification from the National Park Service on updated digital documentation standards before offering the course. He hopes those who are professional or semi-professional photographers in the membership will be willing to work with the committee or make a presentation for this course.

Finance Committee. The Finance Committee is a new committee this year. Chair Vance Packard reported that the SIA is in fairly good financial condition, but once the economy starts moving again expenses will increase. The SIA may have to look at raising dues or finding some other way to increase income, unless we can increase our membership significantly.

Historic Preservation Advocacy Committee. Chair Rick Greenwood could not be present, so committee member Wes Thompson made the committee's presentation. It is a new committee that came about last year after discussions in San Jose. It has been able to advocate for preservation in several cases, including writing on behalf of the Ames Shovel Shop to assist with its listing on America's Most Endangered sites. It has also sought to help preserve some large water tanks in the Iron Range in Minnesota. The committee is exploring ways to encourage other organizations, like the National Trust, to create tours that include industrial-history sites. It is also looking at developing a brochure for general audiences on why and how to advocate for industrial preservation.

Grants Committee. Outgoing Chair Dennis Furbush reported that the committee received eight grant applications, and last night it recommended four grants, which the board approved. The recipients are: Kim A. McBride, Airdrie Project, $2,000; Stephen G. McShane, re-house Inland Steel 8x10 photographs, $1,000; Arthur B. Cohn, documentation of submerged shipwreck *Phoenix*, $1,000; and Joseph E. B. Elliott, publish a book on Bethlehem Steel, $1,000. Dennis directed the membership's attention to a display in the paper sessions area featuring documentation work by Eric McFerrin of the Tennessee Coal & Iron mines in Birmingham, funded by an SIA grant awarded last year. He then thanked Nancy Goodwin and Diana Bouchard for their help on the committee. President Habstritt thanked Dennis for his service.

Membership Committee. President Habstritt called attention to the SIA baseball cap she had put on and said "if you want a hat like this you have to join the society at the sustaining level." She described and displayed the new membership card that can be presented to friends and acquaintances and thanked Jim Bouchard for his service as chair of the Membership Committee. She reported on an experiment the board made in the past year to bring lapsed members back into the fold by asking board members to call those who had not renewed. Once lapsed members received a phone call, nearly half of them renewed their member-

(continued on page 15)

WANTED: Editor for *IA*

The SIA is currently accepting applications from candidates for *IA* editor. The current editor, Pat Martin, who has ably served for 14 years, is now devoting more and more time to departmental responsibilities as well as international activities in the field of industrial archeology and wishes to turn the job of editor over to another scholar.

IA is the major publication of the Society for Industrial Archeology, a peer-reviewed journal that publishes original scholarship on topics germane to the study, preservation, and interpretation of industrial heritage and industrialization as a social process. IA tends to focus more on the physical remains of industrialization, such as sites, artifacts, processes, and landscapes rather than on documentary evidence, reflecting the distinctive perspective of industrial archaeology as a field of interest. We generally publish two numbers of each annual volume, for a total of between 120 and 240 pages per year. In collaboration with the Book Review Editor, the Editor oversees the general operation of the journal, including soliciting manuscripts, reviewing submissions, choosing/soliciting reviewers, and collating reviewers' suggestions for consideration by authors. The Editor makes the final judgment, accepting or rejecting articles based on reviews, and works with authors to bring them to print. The Editor works with a Copy Editor (a contractor) to make final adjustments and works with a typesetter (currently based at Michigan Tech University) to prepare each issue in an appropriate electronic format for submission to a printer (currently Sheridan Press). The Editor reviews galleys with the Copy Editor, making final changes before printing. The Editor works with SIA Headquarters to generate an appropriate mailing list for each issue, the list submitted to the printer for mailing.

Institutional Support: It is critical that whoever assumes the position has appropriate institutional support. Currently, at Michigan Technological University (where *IA* is now based), this has included a cash subsidy for office and travel expenses, as well as released time from other academic duties to devote to the business of the SIA and its journal. This permits the Editor to concentrate on the necessary activities required by the journal, and to ensure its continued success.

DEADLINE FOR APPLICATIONS: Nov. 30, 2009

Submit a letter of interest and resume via e-mail to: Betsy Fahlman, Chair, *IA* Search Committee *Fahlman@asu.edu*.

SOCIETY FOR INDUSTRIAL ARCHEOLOGY
NEWSLETTER

PUBLICATIONS OF INTEREST

Vol. 38, No. 3 Summer 2009

COMPILED BY
Mary Habstritt, New York, NY., Justin Spivey, Oakland, Calif., and Patrick Harshbarger, SIAN *editor.*

GENERAL INTEREST

- **Engineering Studies** is a new interdisciplinary journal devoted to the scholarly study of engineers and engineering. Its aim is to advance research in historical, social, cultural, political, philosophical, rhetorical, and organizational studies, and to build and serve a diverse scholarly network of researchers interested in the subject. The journal is soliciting articles as well as subscriptions. Info: *www.tandf.co.uk/journals/engineeringstudies*.
- Joe Flanagan. **Painted with Light: A Salute to Photographer Jack Boucher**. CG (Spring 2009), pp. 12-25. A retrospective of over 50 years of Boucher's HABS/HAER photography.
- Ann Norton Greene. **Horses at Work: Harnessing Power in Industrial America.** Harvard Univ. Pr., 2008. 322 pp., illus., $29.95. Examines the horse as prime mover and its integral role in industrialization. Between 1840 and 1910, as America became more and more reliant on steam engines, the horse and mule population grew twice as fast as the human population. Rev.: *NY Times Book Review* (Nov. 28, 2008).
- Richard Perry. **Made In N.Y.C.** *NY Times*, online edition. In an ongoing series of photos posted online (*http://cityroom.blogs.nytimes.com/category/lens/*), photographer Richard Perry covers active industries within New York City limits.
- Sam Roberts. **A Historian Is on a Quest to Locate Lost Events**. *NY Times* (June 30, 2009), p. A15. Historian Andrew Carroll's Here is Where project (*www.hereiswhere.org*) seeks to identify and mark locations where forgotten historical events took place, for example, the first cellular telephone call on New York's Sixth Avenue in 1973.
- Steven Strogatz. **Guest Column: Math and the City,** *NY Times* (May 19, 2009), online edition. Harvard linguist George Zipf's 1949 inverse-power law mathematically links the rank and population of a country's cities. Other academic disciplines have found strikingly similar relationships between urban infrastructure and population as well as between animals' metabolic needs and body weight.
- **TICCIH Bulletin**, No. 44 (Spring 2009) includes Jan af Geijerstam, *The Need for TICCIH to Act in Asia* (challenge of preservation in nations with rapid growth and limited resources) and Christopher Andreae [SIA], *Toronto Union Station Rehabilitation*. Also a series of articles on the theme of "bridges of iron" including two cast-iron arch bridges in Spain; Chile's Malleco viaduct; the Ojuela suspension bridge in Mexico; and the Linlathen East Bridge near Dundee, Scotland. Available with membership in TICCIH, *www.mnacatec/ticcih*.
- Mara E. Vatz. **Long Live the Vacuum Tube!** *I&T* (Spring 2009), pp. 12-14. A high school math and science teacher muses on what's wrong with modern engineering textbooks that don't introduce students to historically significant inventions. She suggests that consumer electronics have taken control of education.
- Gavin Weightman. **The Industrial Revolutionaries: The Making of the Modern World 1776-1914.** Grove Pr., 2009. 422 pp., illus., $27.50. Surveys the global spread of industrialism through the ingenious men and women who married technological innovation with capitalist profit or nationalist agenda, often improving or implementing someone else's idea. Rev.: *NY Times Book Review*, June 28, 2009, p. 22.

LUMBER & PAPER

- Ken Cupery. **When Paper Boats Were King** also **Paper Railroad Wheels**. *I&T* (Spring 2009), pp. 46-54. Elisha & George Waters of Troy, N.Y. used paper in ways that anticipated composites and fiberglass. By the 1870s, E. Waters & Sons was the largest boat factory in the U.S. R. N. Allen, also of Troy, produced a paper railroad wheel used by the Pullman Company for a quieter, smoother ride.
- Evan Osnos. **Wastepaper Queen,** *The New Yorker*, Vol. 85, No. 7 (Mar. 30, 2009), pp. 46-55. The scale of recycled cardboard production described in this article would surprise many Americans, as would the rate of growth (and decline) of Nine Dragons Paper, the company owned by Cheung Yan, "China's Horatio Alger hero" and the first woman to become China's richest person. Robert Gair and his Brooklyn box factories [SIA annual conference tour, 2002] are also mentioned in the article.
- Pamela J. Podger. **Former Company Town Faces Uncertain Future**. *NY Times* (June 19, 2008). The closing of the Bonner, Mont., lumber mill (est. 1886) has the former workers and residents of the company town considering its future.

AGRICULTURE & FOOD PROCESSING

- Greg Grandin. **Fordlandia: The Rise and Fall of Henry Ford's Forgotten Jungle City.** Metropolitan Books, 2009. 432 pp., photos, $27.50. To prevent a European monopoly from controlling the latex needed for tires, gaskets, hoses, etc. for his automobiles, Ford purchased 2.5 million-acres in Brazil for a rubber plantation. Tropical diseases and insects plagued both the rubber trees and the American workers while the Brazilian workers rebelled against Ford's paternalism and imposition of an American way of life. The project lasted less than 20 years.
- Jennifer 8. Lee. **A Legacy of Hot Dog Onion Sauce**. *NY Times* (City Room blog, Jan. 12, 2009). Obituary of Alan S. Geisler,

MIT-trained food technologist who developed and marketed the red onion sauce recipe that still dominates New York City hot dog cart condiments. [Yes, the author's middle initial is the numeral eight.]

- Michelle Roberts. **Texas Brewer, Once Near Defeat, Shines Again.** *Atlanta Journal-Constitution* (July 4, 2009). Shiner Brewery of Shiner, Tex., celebrates its centennial. History of small-town brewery that was so ramshackle and remote that it was overlooked during the post-Prohibition consolidation of the industry.
- Wilson J. Warren. **Tied to the Great Packing Machine: The Midwest and Meatpacking.** Univ. of Iowa Pr., 2007. 317 pp., $39.95. Examines the past 150 years of the meatpacking industry's effects on the Midwest's economy, culture, and environment. Looks at both urban—Chicago and Kansas City stockyards—and rural—packing cities of Austin and Albert Lea in Minn.—settings to place it in the larger agro-industrial landscape.

Water Control & Reclamation

- **Charles City Fish Hatchery Endures.** *Richmond (Va.) Times Dispatch* (June 22, 2009). Discusses the 1930s-built Harrison Lake Fish Hatchery of the U.S. Fish & Wildlife Service. The canal that supplies the hatchery was originally dug in the 1790s by slaves to supply water to the Berkley Plantation.
- Gail Shaffer. **Bringing Water to the City: New York's Upstate Water Supply.** *Stamford Review* (Winter 2009), pp. 19-25. Brief history of the New York City water supply system and deferred maintenance thereof, along with suggestions for funding future maintenance.

Bridges

- Aileen Cho. **Fast-Track Effort Gives Life to Old Hudson River Structure.** *McGraw Hill Construction ENR* (June 10, 2009). Describes the inspection and re-decking of the Poughkeepsie-Highland Bridge (*SIAN, Spring 2009*), the landmark 1886 cantilever truss over the Hudson River, which is being re-opened as a pedestrian bridge.
- Joseph D. Conwill. **Long Truss Bridge Framing.** *CBT* (Spring 2009), pp. 4-7. Stephen H. Long's patented truss of 1830 used traditional joinery in new ways to produce a bridge that would deflect only minimally under load.

CONTRIBUTORS TO THIS ISSUE

Richard K. Anderson, Jr., Sumter, SC; Susan Appel, Champaign, IL; Arlene Collins, Houghton, MI; Reese Davis, West Chester, PA; Don Durfee, Houghton, MI; David Emmerich, Smith Grove, KY; Perry Green, Myrtle Beach, SC; Mary Habstritt, New York, NY; Neill Herring, Jesup, GA; Carol Lockman, Wilmington, DE; Patrick Martin, Houghton, MI; Eric McFerrin, Birmingham, AL; Vern Mesler, Lansing, MI; Stephen Muller, Troy, NY; Art Peterson, Greenville, NC; Elizabeth Norris, Cold Spring, NY; Dave Poirier, Hartford, CT; Rick Rowlands, Youngstown, OH; Joe Seely, Chicago, IL; Justin Spivey, Oakland, CA; Robert Stewart, West Suffield, CT; Mej Stokes, Columbus, OH; Lloyd Tepper, Villanova, PA; Tyler Turpin, Richmond, VA; Robert M. Vogel, Washington, DC; Steven A. Walton, University Park, PA; Suzanne Wray, New York, NY; Helena Wright, Washington, DC.

With Thanks.

- John Daly and Matthew Kierstead [both SIA]. **Groton Bridge (Thames River Movable Bridge, Amtrak Structure No. MB 124.09), Groton and New London, Connecticut.** *SIA New England Chapters Newsletter*, Vol. 30, 1 (2009), pp. 11-18. History and description of 1919 Strauss, heel-trunnion, bascule bridge.
- Tim and Anne Locke. **Bridges of the World: An Illustrated History.** AA Publishing, 2008. 256 pp., illus. Fabulous photographs, illustrated history of bridge building, and sections describing bridges in Europe, Africa, Asia, Australia, and North, South, and Central America. Rev.: *TICCIH Bulletin* 43 (2009), p. 5.
- Terry E. Miller. **The Second International Conference on Chinese Lounge Bridges.** *CBT* (Spring 2009), pp. 12-15. Covered bridges in the remote mountain counties of southeastern China going back hundreds of years.
- Stacey Shackford. **Dryden May Save 121-Year-Old Bridge.** *Ithaca Journal* (Feb. 24, 2009). New York town hopes to preserve a 120-ft.-long, Pratt pony truss, built in 1887 by the Groton Bridge Co.
- Brian Johnson. **Historic Minneapolis Bridges Up for Repair.** *Finance & Commerce* (Mar. 20, 2009). Describes efforts to rehabilitate three reinforced-concrete bridges built in 1911-12 as grade separations by the city and the Milwaukee Road. Quotes Bob Frame [SIA].
- Warren H. White. **Covered Bridges in the New England States.** McFarland & Co., 2008. Encyclopedia of all the covered bridges in the region, organized by state, then county. Includes type of truss, builder, length, height, brief history, and directions to find the bridge. Rev.: *NSPCB Newsletter* (Winter 2009), p. 6.

Buildings & Structures

- Robert Autobee. **Vroom at the Top: The Short Life and Long Legacy of Denver's Big Top Stores.** *SCA Journal*, Vol. 27, 1 (Spring 2009), pp. 6-13. History and architecture of the 1950s Auto-Mart and Big Top convenience stores with a distinctive upswept circus-tent roof line.
- Robert Behre. **C of C Archaeology Students, Instructors Find Redan.** *Charleston (S.C.) Post and Courier* (June 17, 2009). Excavation of redan, or defensive point of Charleston's brick city wall, which dates to 1722.
- William R. Brashear. **Albert Kahn and His Family in Peace and War.** Bentley Historical Library, 2008. Biography of the architect who made a large mark on the industrial architecture of Michigan. Previously unpublished information on his personal life and family. Avail: *www.thebookbeat.com* or *www.nicolasbooks.com*.
- Greg Brick. **Subterranean Twin Cities.** Univ. of Minn. Pr., 2009. 256 pp. $18.95. Geology and history of natural caves and man-made tunnels in Minneapolis/St. Paul. Includes history of abandoned sand mines, mill tunnels, sewers, utilities, and caves used for brewing, cheese ripening, and mushroom farms. Based on the author's explorations.
- Iain Bruce. **The Balloon Frame, George Snow, Augustine Taylor, and All That.** *Buildings & Landscapes: Journal of the Vernacular Architecture Forum*, Vol. 16, 1 (Spring 2009), pp. 1-8. Comparative analysis of building frame types in Scotland and America.
- Shaila Dewan. **Seeking a Tribute to the Ordinary Water Tower.** *Hernando (Miss.) Journal* (Feb. 6, 2009). Town of Hernando is seeking state historic landmark status for its steel water tower. Summarizes efforts around the U.S. to preserve water towers, including 46 listed on the National Register.

- Joanna Dowling. **Blanketing the Home: The Use of Thermal Insulation in American Housing, 1920-1945**. *APT Bulletin*, Vol. 40, 1 (2009), pp. 33-39. Rapid growth of thermal-insulation industry is traced through advertisements and articles in consumer, trade, and technical publications. Includes table of manufacturers and technical summaries of loose-fill and blanket or batt insulation; rigid and semi-rigid board materials; and reflective-surface insulation.
- Mary Ellen Hayward. **Baltimore's Alley Houses: Homes for Working People Since the 1780's**. Johns Hopkins Univ. Pr., 2008. $45. How poor people utilized the spaces in the small houses and what the neighborhood meant to them. Rev.: *VAN* (Winter 2008), p. 18.
- Meghan Hogan. **The Future of Modern: Federal Architecture in an Era of Change**. CG (Spring 2009), pp. 26-37. More than 550 federal buildings were constructed from 1950 to 1980. The General Service Administration (GSA), charged with maintaining the buildings, is coming to terms with the historic architectural significance of the buildings and ways to preserve them.
- Yonette Joseph. **The Tunnel Rats of Atlantic Avenue**. *NY Times* (Feb. 15, 2009). Story of the local man who rediscovered Brooklyn's 1850s Atlantic Avenue RR tunnel, which was abandoned shortly after it opened. He has arranged with local authorities to offer tours through a particular manhole.
- Scott Lucas. **Theme Park**. Univ. of Chicago Pr., 2008. Six chapters examine the physical development and cultural meaning of theme parks from several countries from the 19th c. to the present. Rev.: *VAN* (Winter 2008), p. 18.
- Lisa J. Mroszczyk and Virginia B. Price. **Disappearing Act: The Barns of Mid-Maryland**. *VAN* 118 (Winter 2008), pp. 1-9. Results of a survey of barns in Frederick, Washington, and Carroll counties.
- **SCA Journal**, Vol. 27, 1 (Spring 2009) includes several articles devoted to quirky roadside markers, signs, and advertising: Diane DeBlois, *Monuments to Legendary Horses* (from statues to gravestones); Debra Jan Seltzer, *The Eternal Drip: Neon Plumbing Signs* (stylized giant neon faucets and pipe wrenches); and Peter Glaser, *Out-of-This-World Of-This World* (buildings in the shape of flying saucers).
- **Stonemasons**. DVD, Lewiston (Mont.) Historic Preservation Office, ca. 2009. Stonemasons who emigrated to this central Montana city from Bribirci, Croatia. $17.95. ppd. Avail. Montana Historical Society; *mhsmuseumstore@mt.gov*; 1-800-243-9900.
- **Structural Investigation of Historic Buildings: A Case Study Guide to Preservation Technology for Buildings, Bridges, Towers, and Mills**. John Wiley & Sons, 2009. Billed as a practical guide for consulting structural engineers and others dealing with historic structures. Includes case studies of a variety of houses and buildings, as well as chapters on covered bridges.
- Mark E. Wolfe. **Geology in the Public Square: Ohio Statehouses from 1800 to Today**. *Ohio Geology* No. 2 (2008). The construction and various locations of Ohio's statehouses, with an emphasis on stonework.

Power Generation

- Gale Baldwin. **River Street Power Plant to Be Dismantled**. *SavannahNow.com* (June 15, 2009). Georgia Power is removing non-historic structures and equipment from the decommissioned 100-megawatt coal-fired electric plant in Savannah. Alternative uses will be sought for the original 1912 powerhouse and additions made in 1949 and 1952.
- Christopher Gillis. **Windpower**. Schiffer Publishing, 2008. (Avail: 4880 Lower Valley Rd., Atglen, PA 19310; *www.schifferbooks.com*). 144 pp., illus. $24.95. General overview of windpower history throughout the world with an emphasis on modern wind generation of electricity. Rev.: *Windmillers' Gazette*, Vol. 28, 2 (2009), p. 7.
- **Kinloch Castle Revival**. *Architectural Digest Magazine* (Oct. 2008), pp. 88-96. History of 1890s estate on a Scottish island. Estate had its own hydroelectric plant and was the hunting lodge of the Bullough family, textile-equipment manufacturers.
- Robert C. Stewart [SIA]. **Nuclear Power Research and Development in Connecticut: Combustion Engineering's Kreisinger Development Laboratory in Windsor, Connecticut**. *SIA New England Chapters Newsletter*, Vol. 30, 1 (2009), pp. 6-10. Description of labs and fabrication shops that produced concepts and prototype components and systems for nuclear and fossil-fuel steam plants.
- **Windmillers' Gazette** is a quarterly journal for the preservation of America's wind power history and heritage. Vol. 28, 1 (Winter 2009): T. Lindsay Baker, *Concrete Tanks and Troughs for Use in Windmill Water Systems* and *Open-geared Steel Windmills Made by the Dempster Mill Manufacturing Company*. Vol. 28, 2 (Spring 2009): T. Lindsay Baker, *Windmills and Railroad Water Systems* and *Aeromotor Loop-step Tower Ladders* (1897-patented step was a distinctive feature on steel windmill towers made by the Aeromotor Co. of Chicago.) Avail: Box 507, Rio Vista, TX 76093. $20/yr.; *www.windmillersgazette.com*.

Aeronautics & Aerospace

- Roger D. Launius and Andrew K. Johnston. **Smithsonian Atlas of Space Exploration**. Harper Collins, 2009. $34.99. A lavishly illustrated history from Ptolemy and Copernicus to today's Mars mission. Earliest conceptions of the solar system, first liquid-fueled rocket in 1926, the Cold War launch of Sputnik, ballistic missiles, robot explorers, and the exploration of outer planets and interplanetary space.
- Phil Scott. **Wright Brothers at Court Today**. *I&T* (Spring 2009), pp. 16-19. A group of New York lawyers retries the 1909 Wright-Curtis patent case, in which the Wright Brothers declared that Glenn Curtis had infringed on their patent. The original case was not settled due to the intervention of WWI during which the airplane manufacturers pooled their patents. The mock trial apparently ended in a hung jury.
- Jim Tharpe. **At 86, Delta's ex-CEO Still Leaving His Mark**. *Atlanta Journal-Constitution* (June 14, 2009). David C. Garrett, Jr. joined Delta airlines as a reservations agent in 1946. He climbed the ranks to become CEO in 1987. History of company that began as a crop-dusting service in 1929 is recalled. Delta recently named a Boeing 777-200LR after Garrett.

Arms & Munitions

- James R. Chiles. **From Bazookas to RPGs**. *I&T* (Spring 2009), pp. 38-45. The history of, and science behind, shaped charges from WWII to present.
- Carolyn Jones. **Jacques Littlefield, Tank Collector, Dies.** *San Francisco Chronicle* (Jan. 13, 2009). Obituary of "an unassuming multimillionaire who amassed the country's largest private collection of tanks and other military armored vehicles."

Iron & Steel

- Stephen H. Muller [SIA] and Jennifer A. Taylor. **Troy, New York, and the Building of the USS *Monitor***. Hudson Mohawk

Industrial Gateway, 2009. 35 pp., illus. $6.95. Avail: *www.hudsonmohawkgateway.org*. A concise history of the Union Civil War ironclad with a special emphasis on the critical role that Troy industrialists and iron mills played in the development and construction of the landmark warship.

- Rahkia Nance. **Birmingham, Alabama's Tannehill State Park May Host Memorial to Unheralded Labor, Lives of Slaves**. *Birmingham News* (July 6, 2009). Archeology at the Tannehill Iron Works slave quarters has inspired interest in a memorial to the 600 slaves that worked there from 1858 to 1865. Quotes Jack Bergstresser [SIA].
- Janet A. Null. **Abandoned in the Wilderness: Survival and Rescue at the Adirondack Iron Works**. *APT Bulletin*, Vol. 40, 1 (2009), pp. 49-55. Historical development and decline of 19th-c. iron furnace with analysis of the comparative rates of deterioration of the blast furnace and the resident manager's house (both dating to the mid-1830s).
- Joe Napsha. **Steel's Big Meltdown**. *Pittsburgh Tribune-Review* (May 31, 2009), p. E1. Describes 50-percent decline in production at "The Techs," a trio of Pittsburgh-area galvanizing plants owned by Steel Dynamics, Inc. One of the three plants, GalvTech, was a tour destination at the 2009 SIA annual conference.

Misc. Industries

- Gail Damerow and Alina Rice. **Draft Horses and Mules: Harnessing Equine Power for Farm and Show**. Astragal, 2008. 262 pp. $24.95. How to choose a team, feed and house them, maintain their health, and establish good working relationship with the animals.
- Carol A. Grissom. **Zinc Sculpture in America, 1850-1950**. Univ. of Del. Pr., 2009. 712 pp., illus. $65. During the late-19th century, the availability and properties of zinc allowed replication of life-size sculpture at modest cost, and the metal began to be used for serial statues displayed throughout the nation, especially as cemetery monuments. (Many can be seen today.) The first comprehensive review of this artistic and technological phenomenon addressing aspects of art history, local history, technology, and art conservation.
- Carolyn Jones. **Tombstone Business Is Anything but Cold,** *San Francisco Chronicle* (June 24, 2009), p. A-1. Natalie Boro and other Russian-American immigrants purchased and reopened L. Bocci & Sons of Colma, one of the Bay Area's oldest gravestone makers. The business continues a 1,000-year tradition of stone carving by the Bocci family in the Italian Alps, which Gaetano and Leopoldo Bocci brought to the U.S. in the 1890s.
- Alexander Rose. **The Safety Pin**. *I&T* (Spring 2009), pp. 8-10. Walter Hunt patented the first safety pin out of a single piece of wire in 1849.
- Robert Stewart [SIA]. **Drums for Green Day, Or the Civil War**. *NewsPlink.com* (June 16, 2009). Avail: *www.newsplink.com/2009/06/16/drums-for-green-day/*. Background history and photo essay on the Noble & Cooley drum factory (tour site—1998 SIA Fall Tour, Central Connecticut Valley).
- Tyler Turpin [SIA]. **Duck and Shorebird Decoys**. *The Thrasher* (July/Aug. 2009). Background on the manufacture of decoys, including mass production as part of development of industry to support demand for fresh meat in urban areas in the mid-19th.-c. Avail: *www.richmondaudubon.org/thrasherman.html*. Also background on the Wildfowler Decoy Co., *www.decoymag.com/features/tidbits/wildfowler1.htm*.

Railroads

- **The Bulletin** of the Railroad Station Historical Society, Vol. 42, 1 (Jan.-Feb. 2009) includes Art and Lynette Peterson, *Chicago's Landmark Bridges: The Milwaukee Road's Swing Bridge Z-6* (an unusual bobtail swing-span bridge of 1897); Thornton Waite, *Frederick Junius Sterner, Architect* (designer of the D&RGW Colorado Springs Depot and the C&O Greenbrier Springs Hotel); Mike Avitt, *Western Iowa Depots*; and Charles Bogart, *The Missouri Pacific Depot at Camden, AR* and *New York, Texas & Mexico Railroad Depot at Edna, TX*. Available with membership, $12/yr. Info: *www.rrshs.org*.
- Brian A. Donelson. **The Coming of the Train: The Hoosac Tunnel & Wilmington and Deerfield River Railroads and the Industries They Served**. Vol. I, 1870-1910. NJD Publishing, 2008. 384 pp., illus. $49.95. Avail: (914) 967-7541. 24-mile short line railroad that ran between Hoosac Tunnel, Mass., and Wilmington, Vt. Extensive coverage of the village and communities along the route and how the railroad impacted them. Rev.: *SIA New England Chapters Newsletter*, Vol. 30, 1 (2009), pp. 27-8.
- Don L. Hofsommer. **"Temples of Mammon and Hives of Industry": Railroads and the Minneapolis Milling District**. *Minnesota History*, Vol. 61, No. 6 (Summer 2009), pp. 248-259. Development of rail service to the lumber and flour mills of St. Anthony Falls on the Mississippi.
- Aaron Isaacs. **Rail Preservation in Georgia**. *Railway Museum Quarterly*, No. 51 (Spring 2009), pp. 4-9. Summary of recent activities at the Southeastern Ry. Museum (Duluth), Southern Museum of Civil War and Locomotive History (Kennesaw), and the Savannah Roundhouse Museum.
- Justin Miller. **Mich. Central Station's Fate Uncertain as New Int'l Rail Tunnel Proposal Stews**. *Michigan Messenger* (May 20, 2009), online edition. The Detroit City Council voted in April 2009 to demolish the abandoned Michigan Central Station and backcharge current owner Matty Moroun, who is proposing to redevelop it as federal office space instead. A concurrent double-stack freight rail tunnel proposal by Canadian Pacific would free up the existing Detroit-Windsor rail tunnel for possible passenger service into the station. The latter project is currently undergoing environmental impact review in both countries.
- Carlos A. Schwantes and James P. Ronda. **The West the Railroads Made.** Univ. of Washington Pr., 2008. 229 pp., illus., $39.95. Analysis of the unrivaled and myriad ways that the railroads transformed the American West up to the present day. Profusely illustrated with ephemera from collections of St. Louis Mercantile Library's Barriger National Railroad Library and the Washington State Historical Society. Rev.: *Minnesota History*, Vol. 61, No. 6 (Summer 2009), pp. 284-5.
- **Railroad History** No. 200 (Spring-Summer 2009) is a celebration of the journal's 200th issue with a look back at the Railway & Locomotive Historical Society's history, and some other famous two hundreds:

  William D. Middleton. **Reaching 200: High-Speed Trains at 200 km/h and 200 mph**. pp. 36-47. Analyzes the technological developments that enabled trains to achieve these milestone speeds, the safety measures implemented during high-speed trial runs, and the future of high-speed rail travel.

(continued on page 21)

Historic Bridge Preservation Workshop

Historic Iron and Steel Bridges and Other Metal Structures, Mar. 8-10, 2010. Lansing Community College (LCC), Lansing, Mich., has applied for and received from the National Center for Preservation Technology and Training (NCPTT) a grant to offer a three-day workshop, informational web-based videos, and curriculum development for ongoing training courses. The workshop will introduce interested personnel (state historic preservation office employees, state transportation department employees, engineering students, historic bridge preservationists, and others) to the restoration of historic metals using electric arc-welding processes, heat straightening, and hot-riveting process for replacing deteriorated rivets and replicating riveted connections. The project also includes the creation of training materials (videos and a "short course") based on the workshop. Registration will be available for the first day of lectures or for the complete three-day workshop. The workshop will be led by Vern Mesler [SIA].

Historic wrought-iron and steel truss bridges that were fabricated between 1850 and 1950 are rapidly being replaced today with new concrete or steel bridges. There is a national need for expertise in preserving the original material of historic metal truss bridges and historic metal structures using both modern technology such as electric arc welding and also historic technology such as hot riveting. The Secretary of the Interior's Standards for Rehabilitation state that "deteriorated architectural features shall be repaired rather than replaced, wherever possible." Often when a historic metal truss bridge is rehabilitated historic metal is replaced with new steel because of the lack of knowledge in the restoration of historic metals. The workshop and the ongoing training courses at LCC are designed to begin to address this shortage of training and information critical for the restoration of historic metal structures. Scholarships are available for engineering students to attend the workshop. Info: *www.lcc.edu/tet/welding/ NCPPT%20Grant.aspx*.

MINUTES *(continued from page 10)*

ships. Mike Hamilton compiled the results of the initiative.

Technology Committee. Chair Jay McCauley said "I tell people I'm interested in finding new stuff to promote interest in old stuff." He announced that the SIA has a new online news service, free to those who subscribe through SIA's website. We have also done some experiments with social networking: we have a presence on Linked-In, a site for professionals. Jay has also opened a Twitter site. "We are throwing things at the wall to see what sticks. We have no idea what may work, but the methods don't cost us anything. Young people communicate in these new ways, and we need to use these means to attract new members. The board has discussed photo sharing via the website and is looking for a reasonable method to do it. We are also looking into location-based services—web services that are sensitive to actual geographic location as you travel."

Awards. Pat Martin presented the Vogel Prize to Marco Meniketti. Charles K. Hyde presented the General Tools Award to Carol Poh (see articles in this issue). Gerry Weinstein had a special announcement for previous General Tools Award winners. There have been reports of the failure of the suspension mechanism for the plumb bob, and if you have any problems or fear you might, contact Gerry for help.

Local Chapter Committee. Chair Tim Mancl called on members of local chapters to stand for recognition. He announced that very soon chapters will receive a letter from President Habstritt about initiatives the chapters may find useful. Having an up-to-date contact list is important to the committee chair. Please check your contact information on the SIA's website. Tim requested that local chapters send him copies of their bylaws and annual reports if they have not yet.

Nominations Committee. Chair Christopher Marston recognized committee members Erin Timms, Bob Stewart, and Cydney Millstein, and former chair Justin Spivey who helped count ballots. He thanked all the nominees who ran this year and encouraged those in the meeting to consider running for office or nominating others. He announced that next year we will have openings for president, vice president, secretary, and treasurer. The elections were very close this year. Elected directors were Carol Litchfield and Bill Vermes. Elected to the nominations committee was Rachel Greenlea. Elected TICCIH Representative was Peter Stott. President Habstritt thanked those directors going off the board, Dennis Furbush and Mark Finlay.

Tours & Conferences Committee. President Habstritt donned her Stetson hardhat to introduce next year's conference location in Colorado Springs on the first weekend in June 2010. Events Coordinator Bode Morin described the tour, which will include the military's Cheyenne Mountain facility. He thanked the Pittsburgh planning committee and volunteers, especially the authors of the guidebook and those who coordinated and ran tours. We are also planning for a 2011 annual meeting in Seattle. The 2011 fall tour will be in Vermont. We are looking for a 2012 fall tour in Arizona with an annual meeting probably in Kansas City, Mo. Dennis Howe spoke about the 2009 Fall Tour, which will be to the mid-Hudson River Valley, N.Y.

New Business. Member George R. Carter, Jr. said it was

(continued on page 22)

Innovations in Helicopter Technology
Kaman Aerospace

For its entire history, the Naval Weapons Industrial Reserve Plant (NWIRP) in Bloomfield, Conn., has been occupied by the Kaman Aerospace Corp.—the 1945 brainchild of inventor and entrepreneur Charles Kaman and the home of much of his ground-breaking helicopter research. In the 1950s, the company constructed helicopters for the U.S. military and developed innovative technologies involving synthetic blades, remote piloting (drones), and the use of gas turbines to power helicopters. NWIRP Bloomfield was recommended as eligible for the National Register of Historic Places in 2000 by Fitzgerald & Halliday, Inc., and in 2008, Hardlines Design Co. (HDC) and Historical Technologies began a documentation project for the NWIRP, funded by Naval Air Systems Command under contract with Naval Facilities Engineering Command, Mid-Atlantic.

NWIRP Bloomfield is located about five miles northwest of Hartford. It was planned and constructed between 1951 and 1954 as a "GOCO," a "government-owned, contractor-operated" facility, which was a mutually beneficial arrangement between the U.S. Navy and the companies that supplied them with aircraft, vehicles, and other equipment. The GOCOs allowed the government to shoulder the expense of the rapid expansion that the supply companies underwent during times of war, thereby allowing the companies to escalate production quickly and without the accompanying financial burden. NWIRP Bloomfield served as a GOCO for Kaman Aircraft (now Kaman Aerospace) during the Korean War (1950-53), when the company was developing and building helicopters for the Navy and Marine Corps.

Charles Kaman, like many inventors, had a variety of talents and interests. He is best known, however, for his achievements in helicopter design, where he patented several significant inventions that helped transform the industry. In the early and mid-1940s, helicopters suffered from vibration problems that limited their use, and Kaman took it upon himself to address this issue while he was working for United Aircraft's Hamilton Standard division. He created a system that used a series of movable flaps called "servo flaps," which resided on the helicopter's main rotor but moved independently of the rotor blades. With this system, the pilot could maneuver the helicopter by moving just the flaps and not the rotor blades, a significant refinement that reduced the helicopter's vibration and gave the pilot better control.

Of course, every good entrepreneurial story starts out in a garage, and Kaman is true to form—he tested his first servo-flap system on a test stand that he ingeniously built in his mother's garage out of parts of a wrecked 1933 Pontiac, a bathroom scale, and the rear end of a Dodge pickup truck. In 1945, he presented his results to the engineering manager at Hamilton Standard; unfortunately, corporate hierarchy and politics prevented the embrace of his invention. Disappointed but in no way deterred, Kaman quit his job and launched Kaman Aircraft, with little more than $2,000, some basic laboratory equipment, and his home-built test stand. By spring of 1946, Kaman had managed to secure $100,000 in financial backing from a New England investor group called New Enterprises, and Kaman Aircraft was on its way out of the garage.

Not surprisingly, Kaman's corporation struggled at first, but a turning point occurred in 1950 when he was awarded a U.S. Navy contract to develop an observation helicopter (the HOK/HUK), of which the government would buy four. Around that same time, Kaman also secured a Navy contract for a closed-cabin trainer helicopter, known as the HTK-1. Meanwhile, the Korean War was beginning, and the Navy's need for helicopters increased dramatically, launching Kaman Aircraft on a course that would culminate in an important role as a major helicopter manufacturer.

Kaman's association with the NWIRP Bloomfield site began with the Korean War. At the time, Kaman was leas-



Courtesy of Kaman Corp.

NWIRP Bloomfield Aerial Photo, ca. 1953. The Administration Building, Building 1B, is visible in the foreground, while the Factory, Building 2B, sits immediately behind it.



Courtesy of Kaman Corp.

Interior of Factory, Building 2B, at NWIRP Bloomfield, 1955. The photo shows the HOK helicopter production line.

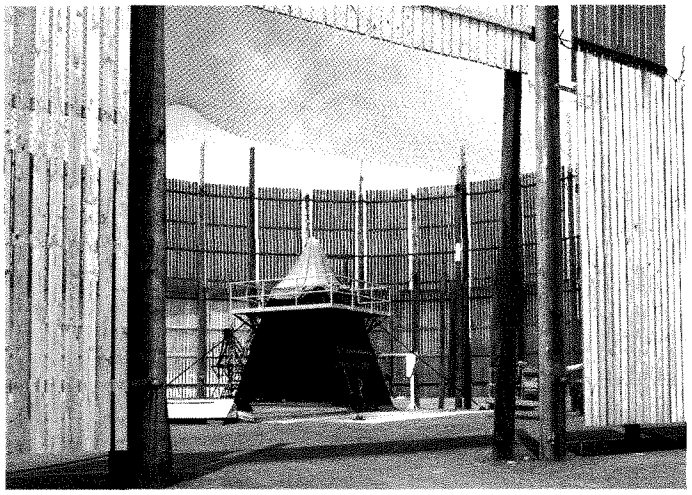
ing space at a National Guard facility when he got word in 1951 that the space would no longer be available. The young company was having difficulty generating money for a new factory, and the Navy stepped in with a GOCO arrangement; Navy officials saw what Kaman could contribute to U.S. military helicopter technology and had great interest in seeing the company thrive. The Navy obtained congressional funding to build a Navy-owned industrial plant that Kaman could use, and purchased 84.5 acres of land in Bloomfield.

The original layout of NWIRP Bloomfield was drafted by the New York City architectural firm Thompson & Barnum. The plans included a factory, corporate headquarters, a grass landing strip, and support facilities. By 1953, the plans were modified to include research and development facilities, most notably a rotor test-stand complex and a flight-test hangar, and later that year, Kaman Aircraft moved in.

Significant helicopter research took place at NWIRP during the 1950s. In 1952, Kaman Aircraft began developing and refining the world's first remote-controlled (drone) helicopter, the HTK-1K, nicknamed the "Yellow Peril" because of its yellow airframe. Although the initial flight of the Kaman drone occurred in May 1953 (before Kaman Aircraft moved to NWIRP Bloomfield), further groundbreaking research on drones took place at NWIRP during the rest of the decade, including a joint Navy-Army contract in 1955 to develop three drone helicopters, using the HTK training helicopter as the platform. Kaman Aircraft later developed a more complex drone helicopter anti-submarine warfare system in the 1960s, and although it was never deployed, that technology contributed to today's remotely piloted vehicles, which have been highly successful in a variety of military applications.

The HOK/HUK that Kaman developed from its first Navy contract in 1950 was based on a technology that Kaman patented using "synchropter blades" (two intermeshing main rotors) and no tail rotor, a design that provided exceptional stability and control. The Navy placed additional orders for the helicopter in the mid-1950s, and Kaman manufactured significant quantities of them to be used by the Marine Corps as an observation helicopter (the HOK) and by the Navy as a utility helicopter (the HUK). Further helicopter research conducted at NWIRP Bloomfield in the mid-1950s produced even lower vibration and better pilot control. Some of the design refinements of the early to mid-1950s led to Kaman's 1957 development of the H-43 Air Force crash rescue helicopter; the H-43 was able to reach accident sites quickly and carry heavy fire-fighting equipment. Other important developments at NWIRP Bloomfield included testing for gas-turbine-powered helicopters, which resulted in the 1958 manufacture of the turbine-powered H-43B Huskie. The Huskie set world records for altitude and climbing speed, and served reliably as an Air Force base crash rescue helicopter and for combat rescue duty in Vietnam.

Some of Kaman's 1950s innovations in helicopter and guidance technology were applied to the UH-2 Seasprite (now known as the SH-2), a highly successful Navy shipboard helicopter. The UH-2/SH-2s did not have the intermeshed synchropter blade design, though; they were instead powered by a single main rotor, with a small tail rotor for stability. The Seasprite also had a sealed hull, enabling it to float. It was designed for general utility use on U.S. Navy ships, but later versions of the helicopter were armed with anti-submarine and anti-aircraft weapons. The initial test flight of the Seasprite took place on July 2, 1959, at NWIRP Bloomfield.



Robert Stewart

Rotor Test Stand, Building 12B, NWIRP Bloomfield, May 2008.

Today, Kaman Aerospace uses NWIRP for administrative offices, testing, research, and rehabilitating and rebuilding helicopters, rotors, and other helicopter components. The flight-test hangar, a rotor test whirl rig, and wind tunnel are still used for their original purposes. The site remains distinguished by its associations with the manufacture of Kaman helicopters during the 1950s, and by the important helicopter technology research conducted there, most notably the innovations in drones, synthetic blades, and turbine power.

Recently, the Navy determined it was in its best interests to discontinue ownership of NWIRP Bloomfield, and Kaman expressed interest in acquiring the property. In August 2008, after significant preparation work, planning, and environmental studies, the Navy transferred the NWIRP Bloomfield property to Kaman Aerospace. In exchange for ownership, Kaman Aerospace agreed to undertake an environmental cleanup of the site. Documentation on the history of NWIRP Bloomfield is being completed in mitigation for the Navy's transfer of the property to Kaman. This documentation includes architectural records and photographs that are permanently archived at the Connecticut Commission on Culture & Tourism, as well as a report on the technological and military history of events that took place there entitled *Aerospace Technology at Naval Weapons Industrial Reserve Plant, Bloomfield, Connecticut.* Printed and digital copies are available. Requests for copies should be sent via e-mail to David A. Poirier; *Dave.Poirier@ct.gov.*

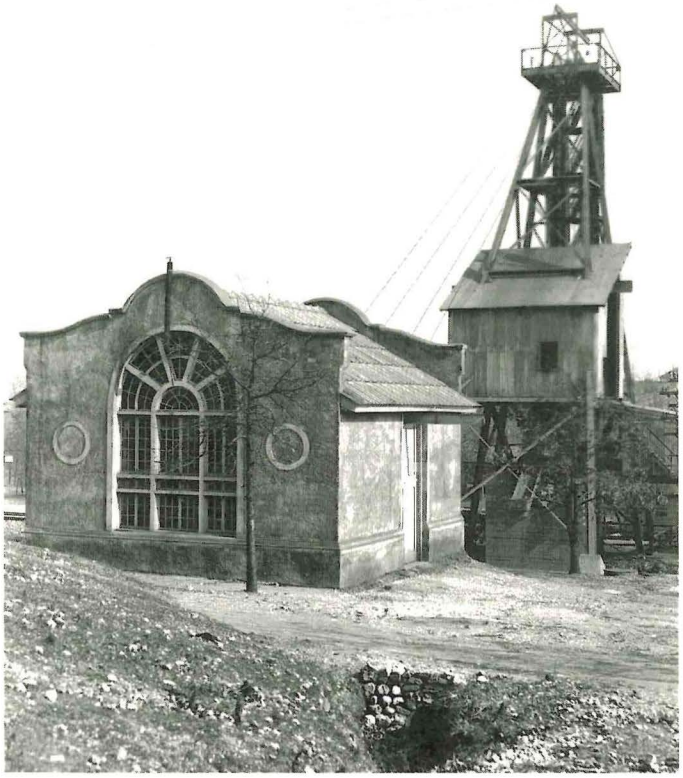
Hardlines Design Co.

Red Mountain Park's Historic Redding Shaft

This is the story of a little-known Red Mountain mine that was operated by the Woodward Iron Company from 1917 to 1927. The Redding Shaft is among several Red Mountain Park sites that were recently photo-documented with financial support from a 2008 SIA Industrial Heritage Preservation Grant. What sets the Redding Shaft apart historically is that it is one of only two vertical-shaft iron-ore mines in the Birmingham (Ala.) District (tour site—1999 SIA Fall Tour), and the only such mine actually located on Red Mountain. Other area underground mines typically consisted of early drifts and surface workings along the ore outcropping, and later slopes sunk along the dip of the ore seam that entered at the outcropping and ended deep under Shades Valley. The Redding Shaft hoist house is of particular interest because of its Mission-style architecture. These factors, and the fact that it is the lone Woodward Iron historical site within park property boundaries, make it a worthy attraction to the new Red Mountain Park.

Woodward Iron had its "ducks in a row" from day one, unlike some of Birmingham's other iron and steel players. In 1869 industrialist Stimpson Woodward visited Red Mountain and left after purchasing 550 acres of ore and coal land. As he was conservative in nature, no decision was made to begin Birmingham iron-making operations until after the construction of the town's first blast furnace, Alice, in late 1880. Unfortunately, those operations would have to be undertaken by Stimpson Woodward's sons as he died about seven months before Woodward Iron was formed. The new company constructed a furnace facility near the Hueytown area southwest of Birmingham and mined ore, coal, and limestone at its nearby properties. These raw materials were transported from the various mines to the furnace complex over the company's industrial railroad. This control of raw materials, their transport, and a conservative management style ultimately made Woodward Iron a very successful business venture.

The story of Woodward's Redding Shaft begins in 1917 and is part of the complex story of competition within the iron-producing region. That year Tennessee Coal & Iron (TCI), a Woodward competitor, purchased the rail network on the north side of Red Mountain from the Louisville & Nashville RR (L&N). This deal effectively cut Woodward's rail connection to its Songo 1 slope mine. Woodward's solution to the challenge was the Redding Shaft, located 1,000 ft. south of the Songo 1 entry, and its shaft dropped right into the existing mine workings. This location took advan-



University of Alabama

Woodward Iron Co., Redding Shaft Mine Hoist House, 1917-1927.



University of Alabama

Woodward Iron Co., Redding Shaft Mine Headframe, 1917-1927.

tage of existing railroad connections on Red Mountain's southeastern slope, allowing ore to be transported to the Woodward furnaces over the L&N South Branch and Woodward company trackage.

The Redding Shaft operated just ten years, from 1917 until 1927. Though historical documentation is sparse, field and photographic evidence indicate that the operation utilized electric hoisting from its beginning in 1917. One reference in the *Engineering & Mining Journal* (1919) refers to "electrically operated elevators and other time saving devices" being used to "eliminate expensive haulage." In *Iron-Ore Mining Practice in the Birmingham District* (1926), Dr. W.R. Crane gave additional information about the Redding shaft (he also called it Songo). The shaft cross section is 10 ft.-4 in. by 7 ft. and it is "about" 384 ft. in depth.

During the late teens, shaft mines were being discussed in some trade journals as a technical solution to Birmingham's slope mines that had been extensively worked. The typical operation required ever longer slopes to reach beyond worked out areas, and the costs and technical complications were rising as a result. The Redding Shaft predates Woodward Iron's other shaft-type red-ore mine, Pyne, by a year. The 1918 Pyne Mine went on to become a very successful operation, though its opening was delayed until 1942 when high ore demand during WWII required it. Pyne is a sister mine to Redding (but on a much larger scale) and was Birmingham's last operational ore mine. It closed in 1970.

Unlike Pyne Mine, the Redding Shaft was constructed mainly of necessity due to the loss of rail service in 1917, not to overcome the deficiencies of slope mining. That being the case, the operation of the Redding Shaft mine presented some interesting technical challenges. Due to its location near the ore outcrop, the shaft accessed ore that was on about a 15-degree dip. Birmingham's other shaft mines are much deeper and are in areas far enough from the ore outcropping that the ore seam has flattened considerably. The Redding Shaft required ore to be hoisted up-slope to the bottom of the shaft, dumped into the "pocket" via a rotary dump, and then hoisted vertically to the surface.

In the end, only Woodward Iron and Republic Steel (Gulf States) utilized shaft mining for red ore in the Birmingham District. Republic Steel's Shannon mine was not a true vertical shaft, but a steep incline/skip car-type operation located near Woodward's Pyne Mine in Shades Valley south of Red Mountain. Other major Birmingham iron and steel producers, Sloss and TCI (U.S. Steel), never did embrace the idea of shaft mining. U.S. Steel continued slope ore mining until the early 1960s.

Red Mountain Park is a new 1,100-acre urban park located on former red-ore mining properties. While the park is still in the planning stages, historical preservation of mining heritage will be a top priority. The park is home to 100 years of mining history beginning with Birmingham's oldest commercial ore mine, Eureka 1 (1863).

Planned features of the park include the "Round the Mountain" loop trail, an eight-mile, paved trail (ADA accessible) utilizing parts of the historic L&N South Branch, dating to 1884, and former TC&I railroad beds along the northwest slope of Red Mountain. A scenic overlook at Graces Gap, from which Birmingham's first load of iron was made into blooms in the 1840s, will offer a beautiful view of the city. Also being considered is the reopening of the Wenonah 10 Mine as an underground museum and the reconstruction of the Wenonah 10 tipple for use as a scenic overlook. Mountain bike and hiking challenge trails will eventually complete the planned 18-mile trail network. Pavilions, a visitor's center, possibly a man-made lake, and other recreational amenities will round out the park's attractions. Much of the planned Phase 1 development will take place around and highlight the historic mines of Redding, Alabama. For more information, *www.redmountainpark.org* or *emcferrin@redmountainpark.org*.

Eric McFerrin



Eric McFerrin

The Redding Shaft Mine Hoist House, 2009.

The **Tod Engine Foundation** (tour site—2006 Fall Tour, Youngstown, Ohio) has been issued a building permit for the construction of a 44 x 60 ft. engine house for their 1914 William Tod Co. 34 x 68 x 60-in. cross-compound rolling-mill steam engine. The house will be of prefabricated steel construction, its design patterned after the soaking-pits building at the former Youngstown Sheet & Tube Brier Hill Works. Rick Rowlands [SIA], Executive Director of the foundation, has initiated a project to construct a working scaled-down version of a hand sheet mill in his garage. A 250-mm Danieli bar mill stand and pinions are being used for the basis of the mill. The mill stand will be driven by an Ames Iron Works single-cylinder steam engine via manila rope transmission. Once all of the engineering and machining hurdles are overcome, the engine and mill will be dismantled and moved into the Tod engine house, where the mill will be used for demonstrations of hand-rolling of steel sheet. The Tod Engine Foundation claims that not only will this mill be the only operable steam-driven rolling mill in the U.S., it will also be the only rope-driven mill and only operable hand sheet mill. Info: *www.todengine.org.—Rick Rowlands*

In May, the **East Broad Top Railroad Preservation Association**, a not-for-profit organization, was established to purchase the EBT (*SIAN, Spring 1996*) from the Kovalchick family, which has owned the historic landmark narrow-gauge railroad for well over 40 years. Under terms of a lease-purchase agreement, the Preservation Association will have three years to raise the funds to complete the purchase of the railroad. The association has assumed responsibility for management of the railroad and its operations. The EBT, located in Huntingdon County, Pa., is widely regarded as one of the most significant and complete steam railroads in the nation. This transition in ownership is considered a major step in its long-term preservation and efforts to stimulate more visitors and enhance public support.—*Friends of the EBT Newsletter (May 2009)*

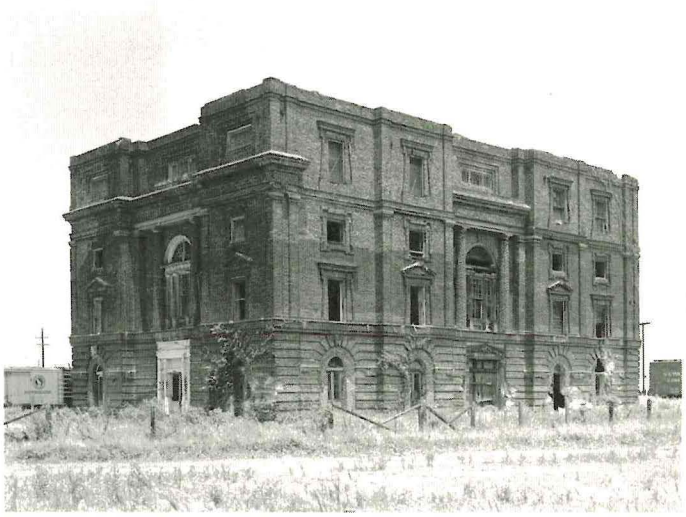
Bennett Rice Mill, now located in the middle of the State Port Authority terminal in Charleston, S.C., is under threat from lack of maintenance, according to local preservationists. The mill was built in 1844 by Thomas Bennett as a grand piece of industrial architecture to process the lucrative rice crop. It stayed open until a 1911 hurricane wiped out most of the region's remaining rice fields. When it was threatened with demolition in the 1950s, local preservation advocates persuaded the port authority to save the building as a ruin, reinforcing the façade with steel beams. Now the ruin is slowly collapsing and in need of attention. The port says that it is open to cooperating with preservationists, but preservation of the ruin is not part of its mission.—*Post & Courier (July 13, 2009)*

Utah Pottery Project. Earlier this summer Professor Tim Scarlett of Michigan Tech's IA Program led an archeological field school of the mid-19th-c. Davenport Pottery in Parowan, Utah. The students spent six weeks excavating the site. Field work culminated with a presentation to local residents on the results of the work and the history of the pottery established by Thomas and Sarah Davenport, English potters who settled in Parowan. Info: *www.utahpotteryproject.blogspot.com.—TheSpectrum.com (June 20, 2009)*

The Virginia Department of Historic Resources has added two IA-related sites to the Virginia Landmarks Register. The **Crab Run Lane Truss Bridge** near McDowell in Highland County was erected in 1896. Its members are composed of railroad rails, and its design is based on the 1890 patent of Daniel Lane (www.dhr.virginia.gov/registers/Counties/Highland/045-0032_CrabRunLaneBridge_2009_NR_Draft.pdf). The **Atlantic Coast Line Railroad Commercial and Industrial Historic District** in Petersburg preserves the history of the city's tobacco industry from 1879 through the early 1960s. The district is the former site of the Brown & Williamson Tobacco Co.'s cigarette factory.—Tyler Turpin [SIA]

Hatton Ferry, on the James River near Scottsville, Va., is the nation's last-known hand-poled ferry. It has been in operation for over 130 years, but budget cuts are now threatening its survival. On July 1, the Virginia Department of Transportation, which took over the ferry in 1941, ceased funding its operation. The Albermarle County Board of Supervisors came to the rescue by appropriating $9,000 to keep the ferry going for the next three months with the hope that a not-for-profit preservation group or donations can keep the ferry running after that. The ferry operates on weekends, holidays, and special occasions from April to October. The ride is free. To learn more or make a donation: *www.hattonferry.org.*

(continued on page 21)



Library of Congress, HABS Collection

Bennett Rice Mill, as it appeared in 1958.

PUBLICATIONS OF INTEREST (continued from page 14)

David A. Pfeiffer. **Lincoln for the Defense: Railroads, Steamboats, and the Rock Island Bridge.** pp. 48-55. On the 200th anniversary of Abraham Lincoln's birth, describes his role in defending the Rock Island Bridge Co. before the U.S. Supreme Court. Lincoln prevailed in a decision that settled the then-controversial issue of whether railroads could bridge navigable waterways and paved the way toward his presidency.

Kevin J. Holland. **Amtrak's F40PH: From Dark Clouds, a Silver Lining.** pp. 56-65. Manufactured by GE's Electro-Motive Division and assigned road numbers starting with 200, the reliable F40PH series of diesel locomotives is credited with rescuing Amtrak from its turbulent early years.

Dan Cupper. **Roll Call of 200s.** pp. 66-84. A roster of 303 locomotives assigned road number 200 represents a cross-section of North American railroading. Also explains why dozens of railroads never had a single locomotive numbered 200.

SITE & STRUCTURES (continued from page 20)

In May, Las Vegas Sands Corp. opened its new casino at the former **Bethlehem Steel** works in Bethlehem, Pa. (tour site—2002 SIA Fall Tour; *SIAN, Winter 2005*). The long-awaited and controversial opening of the casino is now fueling the redevelopment of the 124-acre site with proposed housing, retail shops, and events venues. Although much of the works is slated for remediation and demolition, the casino has promised to respect Bethlehem's history and preserve some buildings and design new buildings that are compatible. In June, the **National Museum of Industrial History**, partnering with the Smithsonian Institution, began renovation of Bethlehem Steel's 1913 Electric Shop for its exhibit hall. The plant's oldest building, the Stock House, will be converted to a visitors' center next year. The fate of other buildings, including the iconic blast furnaces, remains speculative.

Views of the **Brooklyn Bridge** from the historic waterfront neighborhood of Dumbo (an acronym for Down Under the Manhattan Bridge Overpass) (tour site—2003 Annual Conference, Brooklyn) may soon be blocked by a 17-story building. In June, the developer received city council approval to advance with the controversial project, which is scheduled to be completed in 2012. Opposition to the project has attracted national attention, including objections from two well-known chroniclers of the bridge—historian David McCullough and filmmaker Ken Burns. The project has been described as an "insult" to the landmark bridge designed by John A. and Washington Roebling and completed in 1883. The SIA has expressed its opposition. The Dumbo Neighborhood Alliance is looking at various legal options for challenging the project, but the approval of city council was a major blow to their efforts.—*Preservation Magazine Online (June 12, 2009)* ■

WATER TRANSPORT

- William Kates. **St. Lawrence Seaway, Engineering Marvel, Turns 50**. *Atlanta Journal-Constitution* (July 10, 2009). Since it opened in 1959, more than $375 billion worth of cargo has passed through the seaway. A summary of its history and uncertain future as both the U.S. and Canada struggle to finance the seaway's continued operation and maintenance.
- William E. Lass. **Navigating the Missouri: Steamboating on Nature's Highway.** Arthur H. Clark (Norman, Ok.), 2008. 464 pp., $45. Covers many aspects of social, political, and economic history in its sweep of 125 years of steamboating on the most important river corridor west of the Mississippi.
- Philip MacDougall. **Chatham Dockyard, 1815-1865**. Ashgate, 2009. 428 pp. Metal-working skills replaced wood-working skills as the dockyard harnessed steam and made the transition from constructing ships of timber to those of iron. The Chatham Dockyard, one of seven Royal Navy dockyards, built the *Achilles*, the first iron ship to be constructed at a royal dockyard.
- Claire Puccia Parham. **The St. Lawrence Seaway & Power Project: An Oral History of the Greatest Construction Show on Earth.** Syracuse Univ. Pr., 2009. 328 pp., illus., $34.95. To recognize the fiftieth anniversary of the largest waterway and hydro dam project ever jointly built by two nations, this history shares firsthand accounts of engineers, laborers, and carpenters from among the project's 22,000 workers. The culmination of a century-long dream to link the Great Lakes interior industrial hubs to the Atlantic Ocean, the billion-dollar, 265-mi.-long seaway was also a feat of engineering, requiring the construction of seven locks, widening various canals, taming rapids, and erecting the 3,216-foot long, 195.5-foot high Robert Moses—Robert H. Saunders Power Dam.

ABBREVIATIONS:

APT	= Assn. for Preservation Technology
CBT	= *Covered Bridge Topics*, published by the NSPCB
CG	= *Common Ground*, published by the National Park Service
I&T	= *American Heritage's Invention & Technology*
NSPCB	= National Society for the Preservation of Covered Bridges
SCA	= Society for Commercial Archeology
TICCIH	= The International Committee for the Conservation of the Industrial Heritage
VAN	= *Vernacular Architecture Newsletter*, published by the Vernacular Architecture Forum

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.

CONFERENCES & WORKSHOPS

Industrial Strength: Conserving Canada's Industrial Heritage, Oct. 21-24, Hamilton, Ont. SIA members are invited to participate in this national conference. The three-day program includes speakers from across Canada; tours of industrial heritage sites in Hamilton, Niagara, and Toronto; and events to be held at the Hamilton Museum of Steam & Technology and the Imperial Cotton Centre. Info: *www.industrialstrengthconference.ca.*

Call for Papers. *Crisis and Consequence Conference, Hagley Library, Wilmington, Del., Nov. 10, 2010.* Economic crises have been the midwife to dramatic social change throughout American history. The Hagley Library invites proposals for imaginative essays that explore the long-term consequences of panics, depressions, financial contractions, and other episodes in which the American economy dramatically declined. Papers should suggest significant relationship between such episodes and societal change, including (but not limited to) migration, religion, consumption patterns, technological change, and business practices. Welcome are proposals based on new research, as well as unpublished synthetic essays drawing on extensive secondary literature. Papers drawing attention to little-known or little-appreciated impacts of crises would be especially compelling. Proposals of approximately 500 words summarizing the paper's argument and sources accompanied by the author's c.v. of no more than two pages are due by Mar. 1, 2010. Travel funds will be available for those presenting papers. Info: Carol Lockman, (302) 658-2400, *clockman@hagley.org.* ■

IA ON THE WEB

11 Beautiful Train Stations (*www.infrastructurist.com/2009/06/22/11-beautiful-train-stations-that-fell-to-the-wrecking-ball/*). Beginning with New York's Penn Station, short histories and photographs of big-city terminal stations that were torn down. Includes photos of what replaced the stations—saddening to contemplate.

Bridge Music (*www.josephbertolozzi.com*). Composer Joseph Bertolozzi has written a series of compositions he calls "bridge music." The music is composed of sounds made by striking the Mid-Hudson Bridge in Poughkeepsie, N.Y. It can be played through a series of speakers on the bridge. A CD is available.

Crossness Pumping Engine (*www.crossness.org.uk*). The Crossness Pumping Station was built by Sir Joseph Bazalgette as part of Victorian London's main sewerage system. It was officially opened by the Prince of Wales in April 1865. Photos, history, and renovation of spectacular Victorian decorative iron work and massive rotative beam engines.

Forgotten Buffalo, N.Y. (*www.forgottenbuffalo.com*). Includes many sites of IA interest, some of which will be familiar to attendees of the 1992 Annual Conference.

Lowry Avenue Bridge (*www.lowryavenuebridge.com*). Five-span, through-truss highway bridge built in 1958 on piers from a 1905 bridge in Minneapolis over the Mississippi River. Extensive history and background. The bridge was imploded in June to make way for an impressive new single-span through-arch bridge.

Mesker Bros. Ornaments (*www.bwpreservation.com/index.php?/projects/mesker-bros-ornaments*). Custom cast replicas of Mesker Brothers Iron Works column ornaments, originally produced between 1887 and 1910 (as seen at 2006 SIA Annual Conference—St. Louis). BW Preservation specializes in preservation of Midwestern cast-iron building fronts.

Mississippi River IA (*www.nps.gov/miss/index.htm*). Minnesota's Mississippi River National Recreation Area highlights IA along the river, including the former Harvest States grain elevator, headhouse, and sackhouse (silos gone) in St. Paul.

Nuts & Bolts (*www.nutsandboltsfoundation.org*). The Nuts, Bolts & Thingamajigs Foundation, founded by actor John Ratzenberger (of Cheers fame), seeks to increase future manufacturing employment by nurturing the tinkering spirit, especially in children, and promoting the respectability of working with one's hands.

Virginius Island (*www.nps.gov/history/hps/hil/currents/virginius/index.htm*). On-line video and booklet tells the industrial history and archeology of the mills on the island at Harpers Ferry, W.Va.

"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. ■

MINUTES *(continued from page 15)*

amazing how many people here in Pittsburgh had never heard of SIA, yet they were remarkably receptive and helpful to the organizing committee. He recommended providing a free one-year membership to each of the host companies as a thank-you for their enthusiasm in opening their businesses to SIA tours. The suggestion was well received by the membership, and the president said she would refer it to the board of directors for consideration.

By motion, duly seconded, the meeting adjourned by acclamation at 2.18 p.m.

Respectfully submitted,
Richard K. Anderson, Jr.
Secretary

IA EXHIBITS

Machines of Memory: Cameras from the Technology Collection is a new exhibit at the George Eastman House, International Museum of Photography and Film, in Rochester, N.Y. The exhibit features a selection of cameras that changed the world, including the first Kodak, the first folding pocket camera, the first auto-exposure camera, and the Brownie. Other items on display include a lunar orbiter, a Technicolor movie camera, and "detective" cameras from the 1880s. Info: *www.eastmanhouse.org*.

Black Smoke over the Hudson runs through Oct. 24 at the Café Bocca in Poughkeepsie, N.Y. The exhibit features a series of images taken by local photographer John Fasulo on the day that the Poughkeepsie-Highland RR Bridge over the Hudson River caught fire on May 8, 1974. The magnificent 1888 cantilever truss bridge is now about to re-open as a pedestrian walkway (*SIAN*, Spring 2009). Other photos portray the impact the fire had on the region's railroad infrastructure. Stop in for a beverage on your way to or from the SIA Fall Tour! Café Bocca is located at 14 Mt. Carmel Place in Poughkeepsie.

The **B&O RR Museum** (tour site—1995 Annual Conference, Baltimore) is offering an excursion ride to the newly constructed Whistle Stop Gateway at the Mt. Clare Museum House, where passengers can debark to tour the colonial house of Charles Carroll. The preserved historic house on Baltimore's West Side was constructed in 1760 and is considered one of Maryland's finest examples of a Georgian country estate. In 1828, James Maccubbin Carroll, heir and nephew of Charles, offered the B&O RR a parcel of his property to establish right-of-way and a depot, considered the first common-carrier railroad right-of-way in the Western Hemisphere. Trains depart at 11:30 am on Saturdays.

The **Canal Center** in Delphi, Ind., welcomed a new exhibit in June: a 54-ft.-long replica canal boat, named the *Delphi*, that can carry 42 passengers and crew on a re-watered section of the Wabash & Erie Canal. ■

NOTES & QUERIES

The **North American Archaeologist**, a quarterly scholarly journal, is looking for manuscripts of original research articles on prehistoric and historic archeology of the U.S., Canada, and northern Mexico. Topically, it spans the entire range of cultural evolution in America from Paleo-Indian studies to industrial archeology. Theoretical and methodological articles, provided their database is North America, are also accepted, and research based on cultural resource management, as well as work by state and local societies, is solicited with more traditional academic-museum projects. For information and instructions on submissions: *http://baywood.com*, click on the journals section. ■

CHAPTER NEWS

Northern New England traveled to Bartlett, N.H., and the Kearsage Peg Mill for its Spring Tour. Kearsage is the last operating shoe-peg mill in the Western Hemisphere. Founded shortly after the Civil War, the mill has over the years also manufactured other wood products such as toothpicks, bobbins, tongue depressors, etc. The mill operates today with much of the equipment that was installed after a fire in 1910. Chapter members then traveled to nearby Livermore to explore the archeology of a logging town abandoned in the 1920s.

Oliver Evans (Greater Philadelphia) toured the Cramp Shipbuilding Machine & Turret Shop in June. The Cramp shop is the last surviving building of the shipyard that operated from 1830 to 1927, and again from 1941 to 1946. Members then were treated to a process tour at Disston Precision, located at the former Henry Disston & Sons Keystone Saw, Tool, Steel & File Works. Master smith Mark Ward illustrated the grinding and machining of precision steel plates.

Roebling (Greater NY-NJ) joined the Hoboken Historical Museum in June to co-sponsor a lecture by Tom Flagg [SIA] on the topic *New York: The Port of Many Ports: Hoboken's Piece of the Pie*. In July, members gathered for a tour of D. Maldari & Sons, a Brooklyn manufacturer of pasta extrusion dies since 1893. These specialized dies enable pasta (at pasta and food plants) to be squeezed through tiny spaces to create numerous pasta shapes. Also in July, Hunter Research invited members to tour the Petty's Run archeological excavation in Trenton, N.J. Remains of an 18th-c. furnace and steel-plating mill, and a 19th-c. paper mill have been uncovered.

Southern New England. Bruce Clouette and David A. Poirier have assumed co-webmaster duties for the chapter's updated website (*www.snecsia.org*). Check the site for news of events, chapter activities, IA resources in southern New England, and downloadable versions of past newsletters.

Support Your Local Chapter. *For info on a chapter near you or to start one, contact Tim Mancl, SIA Director, Local Chapter Chair* (tjmancl@gmail.com) *or check out the local chapters section of the SIA Web site* (www.sia-web.org). ■

MEMBER NEWS

The SIA notes with sadness the passing of **Isabel Emerich** (1913-2009). Isabel and her husband Charlie Emerich, who passed away in 1997 (*SIAN, Spring 1997*), were for many years active members of the SIA and Roebling Chapter. Isabel and Charlie initiated what is now a Roebling Chapter tradition—the annual corn roast—at their farm in Randolph, N.J. The farm with its gardens, fields, and historic buildings was always open to a wide circle of SIA members. The Emerich family wrote the SIA to express how much their parents enjoyed the SIA and the many friends they made. ■

SOCIETY FOR INDUSTRIAL ARCHEOLOGY
Department of Social Sciences
Michigan Technological University
1400 Townsend Drive
Houghton MI 49931-1295

Change Service Requested

Non-Profit Organization
U.S. POSTAGE
PAID
Permit No. 11
Houghton, MI 49931

CALENDAR

2009

Oct. 8-10: SIA FALL TOUR, ROSENDALE, NY. Please note new date. See article in this issue. Info: *www.sia-web.org.*

Oct. 10-11: 27th Annual Friends of the East Broad Top RR Reunion, Robertsdale, PA. Info: *www.febt.org.*

Oct. 15-18: Society for American City and Regional Planning History Annual Conference, Oakland, CA. Architecture, planning, and landscape design. Info: *www.dep.ufl.edu/sacrph.*

Oct. 15-19: Society for the History of Technology Annual Conference, Pittsburgh, PA. Info: *www.historyoftechnology.org.*

Oct. 21-24: Industrial Strength: Conserving Canada's Industrial Heritage, Hamilton, ON. See note in this issue. Sponsored by Parks Canada. *www.industrialstrengthconference.ca.*

Oct. 29-31: Pioneer America Society Annual Meeting, Pipestem, WV. Paper sessions and coal-industry tours. Info: *www.pioneeramerica.org.*

Nov. 2-6: Assn. for Preservation Technology Annual Conference, Los Angeles, CA. Info: *www.apti.org.*

Nov. 5-8: Energy & Innovation: Int'l Conference on the History of Transport, Traffic and Mobility, Lucerne, Switzerland. Sponsored by the Swiss Museum of Transport. Info: *www.t2m.org.*

Nov. 7: 29th Annual Drew Symposium on Industrial Archeology in the New York-New Jersey Area, Drew University, Madison, NJ. Info: *tflagg@sunyopt.edu.*

2010

***Jan. 6-9*: Society for Historical Archaeology Annual Conference, Amelia Island, FL.** Paper sessions and tours on the theme "Integrating Terrestrial and Underwater Archaeology." Info: *www.sha.org/about/conference/2010.cfm.*

***Mar. 8-10*: Historic Bridge Preservation Workshop: Historic Iron and Steel Bridges and Other Metal Structures.** See article in this issue. Info: *www.historicbridgerestoration.com.*

***Mar. 25-27*: Business History Conference Annual Meeting, Athens, GA.** Info: *clockman@hagley.org.*

***Apr. 21-25*: Society for Architectural Historians Annual Conference, Chicago, IL.** Info: *www.sah.org.*

***May 19-22*: Vernacular Architecture Forum Annual Meeting, Washington, DC.** Info: *www.vafweb.org.*

***June 3-6*: SIA ANNUAL CONFERENCE, COLORADO SPRINGS, CO.**

***Sept. 9-12*: Seventh Biennial Conference on Historic Roads, Washington, DC.** Info: *www.historicroads.org.*

***Nov. 10*: Crisis and Consequence Conference, Hagley Museum & Library, Wilmington, DE.** See article in this issue. The historical impact of financial crises on American society, business, and technology. Info: *clockman@hagley.org.* ■