

SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

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MINES, MILLS & SMELTERS

SIA's 1997 ANNUAL CONFERENCE

The SIA's 26th Annual Conference drew more than 260 participants to learn about the industrial archeology of Michigan's Upper Peninsula and to explore landscapes shaped by copper and iron mining. The conference, held from May 29 to June 1 in Houghton, was hosted by the faculty and students of Michigan Technological University's Graduate Program in Industrial History and Archeology. Site visits, process tours, paper sessions, and social events were all tuned to the theme of mines, mills, and smelters.

Whether driving more than 500 miles by way of Detroit or Chicago, or flying by commuter plane over endless forests to Houghton County's airport, SIAers knew they had reached what was a remote mining frontier over a century ago, and a place that even today can be a challenging environment, especially when

SIA members in hard hats and denim jackets climb aboard for a tractor ride inside the Quincy Mine.



Jet Lowe photo

winter storms blow off of Lake Superior. Even before touring began, the view from the top floor of the conference hotel on the Portage Lake provided an enticing panorama of the Portage Lake Lift Bridge, the Quincy Mining Company's smelters, and the shafthouse of the Quincy Mine, high on the Mineral Range above the lake, where copper-bearing lodes outcrop along the central spine of the Keweenaw Peninsula.

Iron, not copper, however, was the theme of Thursday's full-day early-bird tour. The group traveled 90 miles southeast of Houghton to the **Marquette Iron Range**, discovered in 1844. The opening of the ship canal at Sault Ste. Marie in 1855 made the region more accessible, and rapid expansion began in the 1860s. The **Michigan Iron Industry Museum** in Negaunee provided an introduction to iron mining technology and life in the mining communities. Curator Thomas Friggens welcomed the SIA and gave a brief overview of the museum's development near the site of the **Carp River Forge**, where iron was first produced in the region in 1848. Tim Tumberg, who recently completed archeological field work at the forge site, led a walking tour explaining how technological and economic problems eventually led to the failure of the forge and the decision by most mine owners to ship the ore to blast furnaces in Pennsylvania and the Midwest.

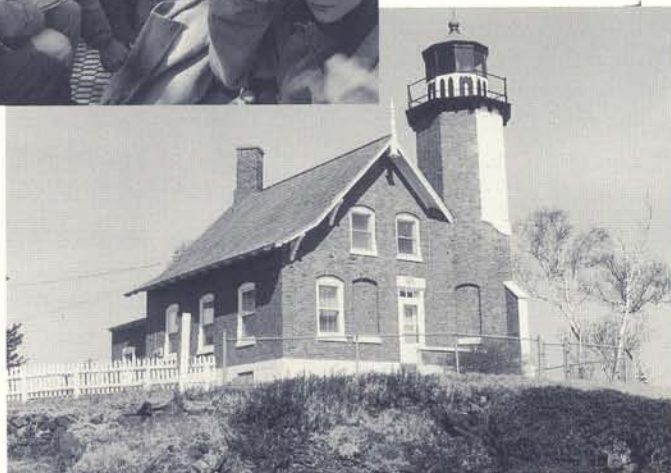


Jet Lowe photo

Thursday afternoon, tour participants explored Marquette's waterfront and watched iron-ore loading docks in operation. Lunch was enjoyed in the shadow of the Egyptian Revival-style concrete headhouses (1919) of the **Cleveland-Cliffs Shaft Mine** in Ishpeming. By special arrangement,

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A solitary stamp mill with Corliss-valve steam cylinder towers above the ruins of the Ahmeek Mill (1910) on Lake Linden. The Keweenaw's stamp mills have a poor survival rate. Nothing approaching an intact mill site exists.



Patrick Harshbarger photo

The Eagle Harbor Lighthouse (1851) is operated as a museum by local volunteers.

MINES, MILLS & SMELTERS

SIA'S 1997 ANNUAL CONFERENCE

(continued from page 1)

one busload toured the **Tilden Taconite Mine and Mill**, one of Michigan's two operating iron mines. Opened in 1973, the open-pit mine with its huge loaders and off-road dump trucks yields deposits of magnetite and hematite while the adjacent mill concentrates and pelletizes it for shipment.

For those who could not attend the full-day early bird tour, a half-day tour of wood products facilities near Houghton was offered. The tour stopped at two operating facilities: **Northern Hardwoods Division of Mead Corp.** and **Horner Flooring Co.**, a manufacturer of parquet floors for basketball courts and gymnasiums. Thursday evening's opening reception at the conference hotel featured a slide-show orientation by Larry Lankton, a member of the Michigan Tech faculty and author of the conference guidebook *Keweenaw Copper*.

Copper was the theme of Friday's tours. At Painesdale, south of Houghton, the group visited a mining town complete with company houses, stores, churches, and schools. Community volunteers working to save the **Champion #4 Shafthouse (1902)** greeted the group, speaking eloquently of the structure as a memorial to the men who lived and died blasting, tramming, hoisting, and crushing the copper rock that once fed the local



Tour organizer Terry Reynolds explains the history of the Redridge Steel Dam (1901).

Patrick Harshbarger photo



Jet Looze photo

ABOVE: The **Champion #4 Shafthouse (1902)** in Painesdale is the focus of a community preservation project.

RIGHT: At the **Tilden Mine**, SIAers pured on the rim of the open-pit mine and collected iron-ore specimens while listening to a presentation from the mine's geologist.

The Cleveland-Cliffs Shaft Mine in Ishpeming is unique for its Egyptian Revival-style shaft houses of concrete (1919). The iron mine had the longest record of production of any in the Lake Superior region, opening in 1848 and closing in 1967, with a total estimated lifetime production of over 28 million tons of high-grade ore.



Jet Looze photo.

economy. The copper mines closed in the 1960s.

The tour continued to Redridge with the buses following the old grade of the Copper Range RR that once delivered the copper ore from the mine to the mills on Lake Superior. At the ruins of the **Baltic Mill (ca. 1890)** huge stamp mills once broke and abraded the copper ore; afterward, hydraulic separators, jigs, wash tables, and slime buddles separated the copper from the "poor rock." The **Redridge Steel Dam (1901)**, which once supplied water to the mills, was constructed by the Wisconsin Bridge & Iron Company and was only the second steel dam erected in the United States. Now that the reservoir has been drained, the previous timber crib dam, constructed in 1894, can also be seen after years of submersion.

After a windshield tour of the Quincy Mine smelters and a view of the massive tailing piles that line Portage Lake, the **Houghton County Historical Society** opened its displays, providing a glimpse of life in the historic mining towns. The highlight of the afternoon was the **Quincy Mine**, operated by the Quincy Mining Company from 1846 to 1945 and now a National Historic Landmark. In order to gain entry to the mine, conference participants boarded a newly installed cog railway car. The car travels 600' down the side of the mountain, where visitors unload and then don jackets and hard hats for a tractor-pulled wagon ride that finishes the journey into the mine by way of a horizontal adit. The rail and



Avon Eisenpress photo

wagon ride is exciting but still a far cry from the 9,000 ft.-long drop that miners once took from the No. 2 Shaft-Rock House. By 1918 the No. 2 shaft had followed the Pewabic Copper Load so deep below the surface that Quincy Mining purchased the world's largest steam-powered hoisting engine to raise ore and lower equipment and miners. The carefully restored Nordberg hoist remains in place as one of the world's most spectacular industrial monuments. Friday's activities ended with the traditional show-and-tell session at the conference hotel.

On Saturday, the conference reconvened on the Michigan Tech campus for paper sessions and the annual business meeting. The focus of this year's paper sessions was mining, with papers not only on Michigan mines but also those in Pennsylvania, Alabama, Nevada, Montana, and Minnesota. Presenters also offered up the usual smorgasbord of paper topics, including bridges, metalworking, iron, wood products, waterpower, and industrial landscapes. The business meeting was held over a buffet lunch at a university dining hall. After a full day of papers, the day ended with dinner at the conference hotel. The world's only Finnish reggae band provided music and dancing.

Sunday's post-conference tour continued the theme of copper with stops at the mines and mining communities on the north end of the Keweenaw Peninsula copper range. In Calumet, the group walked the site of the **Calumet & Hecla** mine shops and offices. The Calumet mines were the peninsula's richest, operating from the early 1870s to the 1960s. An impressive collection of brick and stone mine buildings survives in Calumet with an intact commercial district and ethnic neighborhoods founded by Finns, Italians, and eastern Europeans.

Traveling north of Calumet, the tour buses passed many of the earliest mine sites, where mass copper in fissure veins was found by prospectors in the 1840s and 1850s. The group walked down to and across the first level of the **Delaware Mine**, 100' below ground. The mine operated between the 1840s and the end of the 19th century but failed to produce a profit because of copper veins that promised more than they delivered. The mine has been open to the public for tours since 1977. Inside the mine, tour guides offered explanations of mining technology in clear view of the stopes and hanging walls carved by miners over a century ago.

The towns of Eagle River, Eagle Harbor, and Copper Harbor on Lake Superior's shore once served as commercial villages to the mines but now rely on tourism for their economies. The group toured the **Eagle Harbor Lighthouse (1851)** and the **Copper Harbor Lighthouse (1849)**, among ten lighthouses established by the federal government in the 19th century to guide ships supplying the mines and shipping out the ore. At **Fort Wilkins**, the group viewed a restored fort established in 1844 as a garrison to keep the peace in the copper country. Abandoned by the late 1860s, the fort became a state park in 1923.

As the conference concluded, SIAers had experienced the best physical remains of an industrial landscape shaped by over 150 years of mineral extraction. We had gained insights into the technology of ore extraction and processing, and how working communities grew and declined alongside mines, mills, and smelters. Thanks go to conference chief organizer Pat Martin, the faculty of Michigan Tech including Terry Reynolds, Larry Lankton, Bruce Seely, David Landon, and Kim Hoagland, and all of the graduate students of the Industrial History and Archeology program for an excellent and memorable conference.

J.P.H.



Patrick Harsbarger photos

SIA members cozy up to Marquette's only active iron ore-loading dock for a close up view. The dock was constructed by the Lake Superior & Ishpeming Railway in 1912.



SIAers pose atop a stone PT boat that was built as a folly by unemployed miners during the Great Depression. Old rock drills stand in for the guns.

Yoopers and Trolls

Many SIA members experienced the regional culture and cuisine of Michigan's Upper Peninsula during the annual conference. Local residents call themselves Yoopers from the initials UP (Upper Peninsula). Those of us from south of the Straits of Mackinac are "trolls," as in living below the bridge that connects the UP with the rest of Michigan. During the conference, many SIA trolls went to the Friday-night fish fry, visited the local drinking establishments, chomped on Scandinavian cuisine, savored Mackinac Island fudge ice cream, and cheered quietly against the local favorites in the Stanley Cup hockey playoffs. On his way to the conference, George Bulow [SIA] of New York became something of a local celebrity at the Annual Pasty Bake at Paul Bunyan Pasties in St. Ignace. Pasties (rhymes with nasties – which they're not) are a meat and vegetable filled pastry traditionally eaten for lunch in the mine by Cornish miners. Bulow arrived at the bake-off only to find himself encouraged to join in a pasty eating contest. Slices were cut from a 250 lb. pasty (the world's largest) and fed to the contestants. Bulow was seized upon by a local newspaper reporter who featured him in an article *New Yorker Discovers Pasty... but Can't Get It Down Fast Enough*. Bulow stated for the record, "The guys sitting next to me were pros. They were shoveling it in by the handfuls. My wife told me I wasn't in the spirit of it. I was eating with a fork." ■

1997 SIA General Tools Award Presented to Margot Gayle

The Society for Industrial Archeology General Tools Award for Distinguished Service to Industrial Archeology was established in 1992 through the generosity of SIA member Gerald Weinstein, chairman of the board of the Abraham and Lillian Rosenberg Foundation. The award recognizes individuals who have given sustained, distinguished service to the cause of industrial archeology. Nominations for the award may be made by any member in good standing. Criteria for selection are as follows: The recipient must have given noteworthy service, over an extended period of time, to the cause of industrial archeology. The type of service is unspecified, but must be for other than academic publication. It is desirable, though not required, that the recipient be a member of the SIA. And, finally, the award may be made only to living individuals.

The following citation was read by General Tools Award Committee Chairwoman Carol Poh Miller at the SIA's Annual Business Meeting, Houghton, MI. The award consists of this citation, a commissioned sculpture (the famous Plumb Bob), and an honorarium of \$1,000.

For three decades, Margot Gayle has been a commanding figure in the historic preservation movement. As the founder and longtime president of the Friends of Cast-Iron Architecture, a national organization dedicated to the identification and preservation of architectural and decorative ironwork, Margot has played a pivotal role in bringing to public attention important aspects of the material that is, literally and symbolically, the foundation of the Industrial Revolution.

Convening a meeting of interested individuals in the parlor of her Greenwich Village apartment, Margot founded the Friends of Cast-Iron Architecture in 1970. The immediate object of her attention was SoHo, an as-yet-undiscovered neighborhood in lower Manhattan rich with magnificent iron-fronted buildings of the late-nineteenth century. In May 1972, in the midst of her campaign to win local landmark designation for SoHo, Margot led a walking tour of the district as part of the first annual conference of the newly organized Society for Industrial Archeology. For many, it was a challenge to keep up with the vivacious woman with the auburn curls, who walked backwards and defied traffic as she expounded on the glories of cast-iron architecture.



Jill Gill photo

Margot Gayle, 1997 SIA General Tools Award Recipient.

Margot reprised that tour in 1985 as part of the SIA annual conference in Newark, New Jersey.

In proselytizing on behalf of cast-iron architecture, Margot passed out small magnets, urging recipients to “test for iron” in their own cities; her nominator for this award, David Shayt, noted that this small touch – the issue of hand magnets – typified Margot’s special ability to make the cause of historic preservation both fun and interesting.

As lecturer, advocate, and author, Margot Gayle has carried the message of appreciation for cast iron far beyond her own beloved city of New York, where she has resided since 1944. She is the author of numerous books and publications on cast-iron architecture, and is currently collaborating with her daughter, Carol Gayle, on a book about James Bogardus, the pioneer of cast-iron architecture in America, to be published by W. W. Norton next year.

Many of us, however, know Margot best as an advocate, energetic and indomitable, whose enthusiasm for a cause is contagious. Her ability to rally support and inspire others has been fundamental to the salvation of innumerable cast-iron building facades, street clocks, sculptures, bridges, and even whole neighborhoods. I particularly recall, at numerous annual business meetings, Margot’s earnest appeals to the SIA to endorse resolutions she had prepared on behalf of one preservation campaign or another. For many of us, Margot was a model of activism, prepared to use any means from letter-writing campaigns to petitions that she hand-delivered to the Mayor of New York to defend her cause.

I am happy to report that, at age 89, she’s still at it. Currently, Margot is working to secure landmark designation for a small collection of cast-iron buildings in NoHo, an area to the north of SoHo. And only last month, the New York Times reported on a successful citizens’ campaign in Greenwich Village to re-activate the Jefferson Market Courthouse bell, cast in 1863 but silent for more than a century; the newspaper credited Margot as “the venerable activist” whose vision inspired that project.

Unfortunately, owing to health and age, Margot Gayle could not be with us today. Nevertheless, she was very excited to hear the news of this award and sends her appreciation. So, on behalf of the award committee, including Jane Carolan and Emory Kemp, it gives me great pleasure to present the 1997 SIA General Tools Award to the woman upon whom Robert Vogel once bestowed the apt title of “Mrs. Cast Iron”: Margot Gayle. ■



SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWSLETTER

PUBLICATIONS OF INTEREST

A Supplement to Vol. 26, No. 3

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COMPILED BY

Mary Habstritt, New York, NY; Patrick Harshbarger, SIAN editor.

GENERAL STUDIES

- James C. Cooper and Karl Borden. **The Interpretation of Wages and Prices in Public Historical Displays.** *PH* 19,2 (Spring 1997), pp. 9-29. Offers basic information for anyone involved in preparing museum labels or historic markers that will present historic wage or price comparisons. Discusses the misuse of economic data by museum curators and offers ways of making historic prices and wages understandable to popular audiences. Helps answer such questions as "Just how expensive was a \$1,000 bridge in 1890?"
- Leonard C. Bruno. **The Tradition of Technology: Landmarks of Western Technology in the Collections of the Library of Congress.** Library of Congress, 1995. 356 pp., ill., biblio., ind. cloth \$29. Surveys technology in the Western world, from classical antiquity to the present, through the collections of the library. Rev: *T&C* 38,3 (July 1997), p. 755.
- Hugh Gorman. **Manufacturing Brownfields: The Case of Neville Island, PA.** *T&C* 38,3 (July 1997), pp. 539-574. Traces the rise and decline of industrial Neville Island in the Ohio River, northwest of Pittsburgh. Once home of steel, chemicals, and shipbuilding, the island now is the site of brownfields, old industrial land that has become an environmental concern due to leftover hazardous wastes.
- C. M. Harris., ed. **Papers of William Thornton, Vol. 1, 1781-1802.** Univ. Pr. of Virginia (Charlottesville), 1995. 614 pp., ill., cloth \$60. Thornton, an inventor and architect, was a major investor in steamboats, including John Fitch's early efforts. He is perhaps most noteworthy as winner of the 1792 competition to design the US Capitol Building. Rev: *T&C* 38,3 (July 1997), p. 760.
- John H. Jameson, Jr., ed. **Presenting Archaeology to the Public: Digging for Truths.** Altamira Pr. (2455 Teller Rd., Thousand Oaks, CA 91320; 805-499-0721), 1997. 288 pp., \$24.95 paper, \$49.00 hardback. Highlights successful case studies where archeologists have provided the public the opportunity and necessary tools for learning about archeology, such as Little Big Horn, Sabino Canyon, Monticello, and Poplar Forest. Topics discussed include site tours, museum displays, active excavations, and volunteer programs.
- Julie Johnson-McGrath. **Who Built the Built Environment? Artifacts, Politics, and Urban Technology.** *T&C* 38,3 (July 1997), pp. 690-696. Review of recent scholarship on the sub-

ject of urban technology including sewer systems, railroads, streetcars, gas, and electricity.

- W. David Kingery, ed. **Learning From Things: Method and Theory of Material Culture Studies.** Smithsonian Inst. Pr. (Washington, DC), 1996. 332 pp., photos, tables, cloth \$39. Proceedings of a conference held at the Smithsonian that set out to explore the method and theory of learning from objects. The conference focused on the history of technology and has several thoughtful essays on why traditional academic disciplines have difficulty fitting the study of material culture into the curriculum. Rev: *PH* (Spring 1997), p. 109.
- Paul A. Shackel. **Culture and Change and the New Technology: An Archaeology of the Early American Industrial Area.** Plenum Pub. (233 Spring St., New York, NY 10013; 1-800-221-9369), 1996. 240 pp., ill., \$37.50. An archeological case study of Harpers Ferry focusing on the impact of the Industrial Revolution on craftsmen and laborers. Industry displaced craft; craftsmen revolted; and entrepreneurs developed new industrial surveillance technologies to control workers.
- Joel A. Tarr. **The Search for the Ultimate Sink: Urban Pollution in Historical Perspective.** Univ. of Akron (Ohio) Pr., 1996. Surveys what technology has done to, and for, the environment of the American city since 1850.

RAILROADS

- Thomas L. Baker. **The Chicago Great Western and the John A. Cole Milling Company: Stickney's Railway Problem.** *RH* (No. 176, Spring 1997), pp. 55-80. Case study of a Rochester, MN, milling company that battled the railroad over the location of a siding. Makes a broader point about the hypocrisy of A. B. Stickney, the CGW's founder, who espoused ideas of offering low-cost rail service to farmers and small towns, yet was capable of acting with the indifference of a typical railroad financier.
- Edward H. Cass. **Hidden Treasures: The Story of the Ohio River & Western Railway.** Timber Times Pub. (Box 219, Hillsboro, OR 97123; 1-800-821-8652), 1997. 256 pp., photos, maps, hardcover. History of a narrow-gauge railroad in southeastern Ohio.
- A. Joseph Follmar and Chicago & North Western Historical Society. **Locomotive Facilities, C&NW and CSTM&O Engine Terminals.** 1996. 246 pp., photos, ill., softbound. Avail. from John Howell, 2443 Aspen Dr., Woodstock, IL

60098. \$34 ppd. A comprehensive view of the C&NW's engine houses, turntables, ash pits, sand towers, and other servicing facilities. Rev: VR (Summer 1997), p. 106.
- Herbert H. Harwood, Jr. **Preservation Topics: Are Railroad Museums Forgetting the Basics?** RH (No. 176, Spring 1997), pp. 103-107. Museums that focus on technical specialties may be failing to communicate railroad basics to a younger generation unfamiliar with railroading as an everyday part of their lives.
 - Robert Hedin. **The Great Machines: Poems and Songs of the American Railroad.** Univ. of Iowa Pr. (119 W. Park Rd., Iowa City, IA 52242), 1996. 251 pp. \$17.50. Rev: RH (Spring 1997), p. 130.
 - John W. and Suzanne C. Hudson. **Scenes Along the Rails. Volume 1: The Anthracite Region of Pennsylvania, Part 1.** Depot Square Publishing (6683 Loveland-Miamisville Road, Loveland, OH 45140), 1996. 108 pp., ill., \$28.75 ppd. Postcard views from northeastern Pennsylvania (ca. 1900-1925) with historical information about the railroads and villages. Rev: VR (Summer 1997), p. 102.
 - John T. Labbe and Vernon Goe. **Railroads in the Woods.** Oso Publishing Co. (Box 5127, Oso, WA 98223, 1-800-337-3547), 1995. 258 pp., hardbound, \$43.45 ppd. Revision and re-release of a classic book originally published in 1961. Still considered one of the best pictorials of West Coast logging railroads. Rev: VR (Summer 1997), p. 103.
 - Carroll L. Meeks. **The Railroad Station: An Architectural History.** Dover Publications (31 East 2nd St., Mineola, NY 11501), 1995. 202 pp. \$15.95 ppd. Reprint of the 1956 classic. Rev: RH (Spring 1997), p. 116.
 - William D. Middleton. **Manhattan Gateway: New York's Pennsylvania Station.** Kalmbach Publishing Co. (Box 1612, Waukesha, WI 53187), 1996. 159 pp., \$47.95 ppd. Descriptive history and photographic record of PRR's extension into Manhattan with a specific emphasis on the history and development of Penn Station from 1910 to the present day. Rev: RH (Spring 1997), p. 117.
 - William D. Middleton. **Samuel Insull's Chicago Interurbans.** Focus on the history of the South Shore Line and Chicago, Aurora & Elgin; Paul Hammond. **Duneland Survivors.** Chicago, South Shore & South Bend interurbans are scheduled to be displayed in late 1998 as part of the Interurban Railway Heritage Center in Michigan City, IN. The center will be housed in the former brass foundry of the Haskell & Barker Car and Manufacturing Co. VR (No. 8, Summer 1997), pp. 64-73.
 - Robert E. Mohowski. **The New York, Ontario, and Western Railway and the Dairy Industry in Central New York State: Milk Cans, Mixed Trains and Motor Cars.** Garrigues House (Box 400, Laurys Station, PA 18059), 1996. 356 pp., \$62.50. A history of dairy transport that, according to reviewers, should appeal to a larger audience than O&W enthusiasts. Rev: RH (Spring 1997), p. 123.
 - Kurt C. Schlichting. **The Visible Hand: The Technological Revolution at Grand Central Terminal in New York.** RH (No. 176, Spring 1997), pp. 39-47. Why Grand Central Terminal, built in 1903, was an engineering success.
 - Claire Strom. **The Great Northern Railway and Dryland Farming in Montana.** RH (No. 176, Spring 1997), pp. 80-103. In 1905, the GN became actively involved promoting the cultivation of semi-arid lands by the use of water-conserving tillage methods and drought-resistant plants.
 - James A. Toman and Blain S. Hays. **Horse Trails to Regional Rails: The Story of Public Transit in Greater Cleveland.** Kent St. Univ. Pr. (Kent, OH 44242), 1996. 352 pp. \$49. A comprehensive history from the mid-19th century to the present. Rev: RH (Spring 1997), p. 134.
 - James E. Valle. **Railroads in the Crucible of War.** VR (No. 8, Summer 1997), pp. 30-43, 76-79. New ideas tried, old techniques revived, expedients adopted out of sheer desperation by the RR industry during World War II. A broad overview with numerous historic photos.
 - M. I. and M. M. Voronin. **Paul Melnikov and the Creation of the Railway System in Russia, 1804-1880.** Translated from 1977 Russian edition by John C. Decker. Languages of Montour Pr. (Danville, PA), 1995. 130 pp., maps, index. \$28 paper. Rev: IA 22,2 (1996), p. 65.
 - Edward G. Weinstein. **André Chapelon and French Locomotives in the 20th Century.** RH (No. 176, Spring 1997), pp. 6-38. A critical review of the career and locomotive designs of the French engineer.
- ### WATER TRANSPORT AND RECLAMATION
- Hallie Bond. **Boats and Boating in the Adirondacks.** Adirondack Museum and Syracuse Univ. Pr., 1995. 334 pp., ill., cloth \$49.95. The evolution and use of small craft in the Adirondacks from the early 19th century to the present. Information-packed and nicely illustrated. Includes a catalogue of the Adirondack Museum's outstanding small boat collection. Rev: MHR (Spring 1997), p. 76.
 - Thomas J. Oertling. **Ship's Bilge Pumps: A History of Their Development.** Studies in Nautical Archeology. Texas A&M Pr. (College Station, TX, 1-800-826-8911). 128 pp., photos, \$17.95 paper. Starting with the 16th century, describes the design and manufacture of pump tubes, from the wooden ones made by hand to the machine-crafted styles that revolutionized ship construction. Lawrence V. Mott. **The Development of the Rudder.** 244 pp., photos, \$19.95 paper. Beginning with the Roman period, the first full historical treatment of the rudder's evolution.
 - The **Portsmouth Marine Society** (Box 147, Portsmouth, NH 03802) publishes a series of books on the maritime history of the Piscataqua River Basin. Recent publications of interest include: Ray Brighton. **Clippers of the Port of Portsmouth and the Men Who Built Them.** 175 pp. ill., \$24.95 cloth. History of the shipyards and 28 clipper ships built 1840-60; Richard M. Candee. **Atlantic Heights: A World War I Shipbuilders' Community.** 180 pp., ill., \$19.95 cloth. The rise and fall of the Atlantic Corporation shipyard and an early planned industrial community designed by architect Walter Kilham; Ray Brighton, **Port of Portsmouth Ships and the Cotton Trade, 1783-1829.** 240 pp., ill., \$24.95 cloth. Mostly biographies of 203 three-masted ships operating the triangle trade from Portsmouth Harbor; Robert A. Whitehouse & Cathleen C. Beaudoin. **Port of Dover: Two Centuries of Shipping on the Cochecho.** 232 pp., ill., \$24.95 cloth. History of the inland seaport that served the industrial city of Dover, NH, until floods filled in the river in 1896; Woodward D. Openo, **Tugboats on the Piscataqua: A Brief History of Towing on One of America's Toughest Rivers.** 168 pp., \$25 cloth. The development of tugboats from the 1870s to the

Notes from the President

A couple of years ago, as we began to anticipate the 25th annual meeting of the SIA, some members of the board thought it might be a good idea to organize an event at which we could reflect upon where the field of industrial archeology in North America presently is heading and where it ought to be going. Our 25th annual meeting has come and gone, but the idea of assessing directions for our field is still alive. The board hopes to hold such an event in the not too distant future. We have concluded that the issues to be discussed are of sufficient significance that it would be best to organize a stand-alone symposium or retreat, rather than to try to squeeze it into one of our regular annual events.

As most SIA members know, the field of Industrial Archeology had its origins in Great Britain. In the late 1960s, a small group of Americans were inspired by their British colleagues and took steps to establish the field in the United States. One of the fruits of their efforts was our Society. In 1972, a year after the SIA was founded, the Society began publishing its newsletter and held its first annual conference, both of which remain as pillars of the Society's activities. In 1977, the Society held a symposium at Martha's Vineyard, where a group of practitioners gathered to hear and discuss papers analyzing what the field of IA and its methods ought to be. Ten of the papers were published in 1978 under the title *Industrial Archeology and the Human Sciences*.

Since that time, the field has expanded and matured. The Historic American Engineering Record (HAER) of the National Park Service has developed an extensive set of standards for recording historic engineering and industrial structures and sites. Considerable recording is undertaken in the United States as a result of compliance regulations growing out of the National Historic Preservation Act of 1966. The National Park Service has added several units to its system which have as their central theme an industrial past. Numerous other state and local parks and museums have evolved around industrial sites and structures. Virtually

every state in the nation has conducted a comprehensive survey of its historic bridges, and individual bridges are often the subject of intense local preservation battles once reserved for the homes of famous individuals. Two universities now offer graduate programs in industrial archeology and numerous others offer courses. Recent trends in academia, such as the emergence of environmental history and of race, class, and gender studies, are shaping the ways professionals and the public alike view the industrial past. Superfund and other hazardous-materials remediation programs are obliterating important physical traces of our industrial heritage in the name of environmental restoration. New techniques are available for conducting artifactual analysis. Mass culture has appropriated industrial images and the massive sprawl of urbanization has overrun industrial sites and landscapes in ways unimagined twenty years ago.

Cognizant of these new opportunities, threats, and contexts, then, it seems time to reflect upon directions our field has taken and ought to take. We hope to engage founders of the Society to muse on how the development of the field has matched their dreams for it. We hope to invite practitioners from abroad to describe the field in their homelands and to critique our practice in North America. And perhaps representatives of emerging fields of scholarly inquiry can challenge us to look upon artifacts of our industrial past in new and useful ways. If the symposium is a success, published proceedings would be a valuable resource and guide to teachers, curators, field practitioners, planners, and policy-makers who are working to further the field of Industrial Archeology and who are contributing to the public's understanding of who we are as an industrial people.

If you would like to suggest an issue which deserves our serious attention as we attempt to guide future directions for our field, please drop me a line.

Fred Quivik, President, SIA
P. O. Box 277, Froid, MT 59226

present, the captains of the Piscataqua tugs, and an event-by-event description of how the tugs and their crews bring a ship into the harbor.

POWER GENERATION

- T. Lindsay Baker. **The Dandy Windmill.** *Windmillers' Gazette* (Summer 1997), pp. 2-13. History of the steel windmill that is probably the most frequently observed survivor of the open-gear steel windmills of the late-19th century. Includes photos and illustrations from trade catalogues. *Windmillers' Gazette*, a journal of wind power history, is published quarterly. Avail: Box 507, Rio Vista, TX 76093. \$15/yr.
- Eugene Levy. **The Aesthetics of Power: High-Voltage Transmission Systems and the American Landscape.** *T&C* 38,3 (July 1997), pp. 575-607. The electric power industry's efforts to make high-voltage transmission structures aesthetically acceptable in the 1960s.
- James C. Williams. **Energy and the Making of Modern California.** Univ. of Akron Pr. (Ohio), 1997. 432 pp., ill., maps. Environmental conditions that directed energy systems toward increasing complexity and motivated the desire to

recreate Eastern-style industrialization from 1848 to the early 20th century. Rev: *T&C* 38,3 (July 1997), p. 797.

STRUCTURES AND BUILDING TECHNOLOGY

- William E. Farrell. **Digging By "Stame": A History of the First Steam Shovels.** Historical Construction Equipment Assoc. (Box 328, Grand Rapids, OH 43522), 44 pp., ill., \$13.50 softcover. Edited reprint from the 1936 *Excavating Engineer Magazine* featuring the illustrated history of early steam shovels from 1836 to 1905.

ABBREVIATIONS:

IA =	IA: <i>The Journal of the Society for Industrial Archeology</i>
I&T =	<i>American Heritage of Invention & Technology</i>
MHR =	<i>Material History Review</i>
PH =	<i>Public Historian</i>
RH =	<i>Railroad History</i>
T&C =	<i>Technology and Culture</i>
VR =	<i>Vintage Rails</i>

Minutes of the 26TH Annual Business Meeting

Houghton, MI – May 31, 1997

President Fred Quivik called the annual business meeting to order at 12:30 pm in the dining room of McNair Hall of Michigan Technological University.

Secretary's Report: Secretary Richard Anderson announced that the minutes of the last meeting had been published in the *SIAN* (Summer 1996), and asked if there were any additions or amendments from the floor. There being none, a motion was made to accept the minutes and the motion passed unanimously.

Treasurer's Report: Treasurer Nanci Batchelor began her report by giving an overview of the society's 1996 finances. The SIA began 1996 with \$68,864. Receipts were \$69,982, broken down into membership dues of \$62,367, and publications sales of \$7,615. Expenses of \$60,097 were broken down into publications expenses of \$40,858, additional printing costs of \$7,435, and postage, insurance, awards, and other expenses of \$11,804. As of the minute, the SIA has funds on hand of \$86,117, plus \$7,800 in restricted funds.

Annual Conference: President Quivik recognized Pat Martin and his staff who helped organize the 1997 Annual Conference. The membership responded with appreciative applause. Quivik noted that Martin has been designated the SIA's Executive Secretary because of the work he performs at SIA Headquarters at Michigan Tech.

China's Industrial Heritage

SIA Study Tour, April 22-May 6, 1998

China is an important emerging industrial nation involved in the construction and operation of some of the most massive, advanced industrial projects known to man. Rapid modernization stands alongside 19th-century industrial processes, many no longer used in the West. The two-week tour features special, behind-the-scenes site inspections and process tours including the Yangtze River Bridge, the Grand Canal, the Baoshan Steel Factory, the Harbin Steam Locomotive Marshaling Yard and Depot, the Gezhou and Three Gorges Dam, and coal and copper mines. Longtime SIA member Walter Sheppe will accompany the group, along with a professional Academic Travel Abroad tour manager. There will be a Chinese guide for the entire trip to handle logistics.

Reservation forms and registration materials were sent to SIA members in July. All participants must be members of the SIA. Space is filling quickly, so applications should be returned as soon as possible. Info: Academic Travel Abroad, 1000 16th St. NW, Suite 350, Washington, DC 20036; 1-800-556-7896. ■

Quivik informed the assembly that Bill Smith, an active SIA member from Massachusetts, had passed away recently. A moment of silence was observed in Smith's memory.

Local Chapters: Quivik asked members from each local chapter to stand for recognition. He announced that two new chapters have been chartered during the past six months: the Samuel Knight Chapter in California, and the Conde B. McCullough Chapter in Oregon.

Publications: Editors Pat Martin of *IA* and Patrick Harshbarger of *SIAN* were recognized for their efforts. Both publications are on schedule.

Tours and Conferences: President Quivik announced the upcoming Fall Tour to Louisiana, highlighting its visits to wood products and cotton industries. Quivik then introduced Bill McNiece, head organizer of the 1998 Annual Conference to be held in Indianapolis, June 4-7. McNiece pointed out that, unlike Michigan's Upper Peninsula, Indianapolis has interstates and active industries. He gave a brief overview of the many process tours planned for next year's conference and recognized members of the conference committee.

Quivik noted that this fall's Scotland Study Tour is full. A Study Tour of China is planned for Spring 1998. Walter Sheppe, the SIA's representative on the China tour, was asked to stand and be recognized.

Awards: Carter Litchfield, chair of the Norton Prize Committee, reviewed the criteria for the award and announced this year's winner, Robert Gordon, for his article *Material Evidence of Iron Making Techniques*. Gordon stepped forward to receive his prize to the applause of the assembly for his excellent scholarship.

Carol Poh Miller announced the recipient of the 1997 SIA General Tools Award for lifetime service to the field of industrial archeology. After much consideration, the committee bestowed the award on Margot Gayle, founder of the Friends of Cast Iron Architecture in 1970. Although she could not be present at the meeting, she was very appreciative of the society's recognition when informed of it by phone.

Student Scholarships: Mary McCahon noted that a scholarship fund exists as a means of encouraging students and young professionals to attend the annual conference and participate in the SIA's activities. She invited this year's three recipients to stand and be recognized: David Brewer (Univ. of Alabama, Birmingham), Scott Baxter (Univ. of Nevada), and Larry Burr (Univ. of Alberta, Saskatchewan).

Elections: President Quivik thanked board members whose terms were expiring at this meeting: Julie Harris and Christopher Marston. Mary McCahon, chair of the Nominations Committee, announced the 1997 election results. Secretary Richard Anderson and Treasurer Nanci Batchelor were re-elected to three-year terms. John Light and John Stacier were elected to the Board of Directors. Bob Casey was elected to serve on the Nominations Committee.

Respectfully submitted,
Richard K. Anderson, Jr.
Secretary

Call for Nominations

For those willing to commit time and their skills to direct the SIA, there are four openings to be filled in 1998: the Vice President, two Directors, and one member of the Nominations Committee. Please note, all candidates must give their consent to be considered for nomination and must be members in good standing.

Vice President (2 year term) serves as a member of the Board of Directors, chairs board meetings and carries out other presidential functions in the President's absence. Traditionally, the Vice President is elected President at the end of his or her term as Vice President, since this provides continuity of leadership.

Directors (3 year term), two of seven directors on the Board of Directors which meets quarterly, including during the Annual Conference. Directors govern official business of the SIA and chair subcommittees convened for ongoing functions like publications, tours and conferences, local chapters, and special events.

Nominations Committee (3 year term) serves as one of three elected members who oversee the annual nominations and elections. The newly elected member chairs the committee during the final year of his/her term.

Nominations from the membership are requested by the Nominations Committee, which will then offer a slate of candidates to the membership. The committee welcomes your suggestions, including offering yourself as a candidate.

Please submit nominations by November 15, 1997 by mail to: Charles K. Hyde,
419 Royal Ave., Royal Oak, MI 48073.

Include the name, address and telephone numbers of the person nominated, and the position. Be certain that the person has given his/her consent to be nominated.

Once the slate is selected the Nominations Committee or SIA Headquarters will request a biographical statement (not to exceed 150 words) and a photograph from each nominee.

Editor's Note: The Board of Directors requested that this year's call for nominations appear in the newsletter to save the society the considerable cost of a separate mailing. The by-laws state that the Nominations Committee shall request suggested nominations by the members by means of a printed announcement at least thirty (30) days prior to selection by the Nominations Committee, Section 2.05 (a). This is that printed announcement. The publication of the Call for Nominations in the newsletter is a return to past practice when the newsletter appeared on a more regular schedule.

CONTRIBUTORS TO THIS ISSUE

Richard K. Anderson, Jr., Sumter, SC; Aron Eisenpress, New York, NY; Charles K. Hyde, Detroit, MI; Carter Litchfield, Arlington, VA; Jet Lowe, Houghton, MI; Pat Martin, Houghton, MI; Mary McCahon, Burlington, NJ; Carol Poh Miller, Cleveland, OH; Sandy Noyes, Chatham, NY; Fred Quivik, Froid, MT; Robert Vogel, Washington, DC.

Graphic design services kindly are donated by Joe Macasek of MacGraphics, Morristown, NJ.

With thanks

SIA Officers and Directors, 1997-98

Fredric L. Quivik, President (1996-1998)
Sandra L. Norman, Vice President (1996-1998)
Richard K. Anderson, Jr., Secretary (1997-2000)
Nanci K. Batchelor, Treasurer (1997-2000)
Duncan E. Hay, Past President
Jack R. Bergstresser, Director (1996-1999)
Abba Lichtenstein, Director (1995-1998)
John D. Light, Director (1997-2000)
Vance Packard, Director (1995-1998)
David A. Simmons, Director (1996-1999)
John M. Stacier, Director (1997-2000)
Anne E. Steele, Director (1996-1999)
Pat Martin, Executive Secretary and Editor IA
Patrick Harshbarger, Editor SIAN

Nominations Committee

Charles K. Hyde, Chair (1995-1998)
Patrick M. Malone (1996-1999)
Robert Casey (1997-2000)
Duncan E. Hay, ex officio (1996-1998)

Endangered Bridges. The National Trust for Historic Preservation included two bridges on its list of America's 11 Most Endangered Historic Places for 1997. The **Bridge of Lions (1927)** over the Matanzas River in St. Augustine, FL, is a bascule bridge noted for its tiled-roof towers and marble lions providing a picturesque entry to one of North America's oldest cities. Recently, increased traffic loads and a rash of barge accidents have led to calls for a new, wider bridge – one that would be out of scale and character with its surroundings and would funnel additional traffic into the city's already congested historic district. The **Stillwater Bridge (NR, 1931)** over the St. Croix River in Stillwater, MN, is a vertical-lift highway bridge caught in the middle of a controversial decision by the National Park Service (NPS). After supporting Minnesota and Wisconsin departments of transportation plans to preserve the bridge in place and build a bypass, federal officials vetoed the specific project late in 1996 under threat of court action on an environmental suit that stated that the new bridge would have an adverse impact on the St. Croix River Scenic Riverway. Now federal officials state the vertical-lift bridge must be demolished before a new bridge is constructed. Several additional law suits have now been filed against the NPS to force them to reverse their decision.

A **Westinghouse DC Mill Motor, Type MC (ca. 1929)** is offered for donation by the St. Louis County Historical Society, Duluth, MN. The motor was used to lift the movable span of the Duluth Lift Bridge that carries Lake Avenue over the Duluth Ship Canal. The bridge was built in 1905, designed by engineer C. A. P. Turner. The structure originally was an aerial ferry or "transporter" bridge (the only one in the Western Hemisphere) that had a suspended car that carried automobiles and passengers. In 1929-30, the height of the towers was extended and the lift span constructed. The motor is believed to date from the 1929-30 changes to the bridge. The motor is not excessively large but space limitations force the historical society to find it a new home. The motor was manufactured by Westinghouse's East Pittsburgh Works and is series wound, 250 v, 95 hp, 318 amps. Info: Chad Perkins, SLCHS, 506 W. Michigan St., Duluth, MN 55802-1505; (218) 733-7583; fax 733-7585; e-mail: slchs@cp.duluth.mn.us.

NJ Railroad and Transportation Heritage Center. Plans are under way to find a location for the proposed state heritage center. Philipsburg, Port Morris, and Plainfield have been proposed as possible sites and an independent consultant is preparing a study comparing the relative advantages and disadvantages of

each. In April, Philipsburg citizens and local railfans showed their support with a tour of surviving sites and structures. Philipsburg and its sister community of Easton, PA, on the opposite bank of the Delaware River, once hosted commerce on two rivers, three canals, five railroads, and five streetcar and interurban railways.

IA in Philately. For SIAers wishing so to adorn their mail, Canada Post and the US Postal Service (USPS) both have recently issued stamps featuring bridges. In May, Canada Post commemorated the construction of the new Confederation Bridge linking Prince Edward Island to Mainland Canada with a three-part 45-cent stamp featuring a panoramic view of what has been described as the world's longest continuous span marine bridge. In June, the USPS issued two stamped postal cards of the Golden Gate Bridge, one a 50-cent card of the bridge at sunset, the other a 20-cent card of the bridge at sunrise. The USPS has also recently released a series of 32-cent stamps of classic American aircraft, and a triangular-shaped 32-cent stamp with stage coach or clipper ship.

Poughkeepsie-Highland Railroad Bridge. The SIAN has from time-to-time reported on the efforts to preserve the 6,767'-long, multispan, steel cantilever deck truss railroad bridge (1886) over the Hudson River. Nearly a decade ago it looked like the historic structure was headed for demolition after Conrail abandoned the line, but a dedicated group of volunteers intervened creating a not-for-profit Poughkeepsie-Highland Railroad Bridge Co. to purchase and maintain the bridge. Over the last few years, the group has overcome numerous financial and legal hurdles to realize its dream of preserving the bridge as a public walkway high over the Hudson River. Although the bridge is no longer under imminent threat, preservation remains an expensive and herculean task. Recently, the group planned to reopen the bridge to pedestrians and hold a celebration, but the festival was called off at the last minute when a New York court upheld an injunction giving the Town of Lloyd jurisdiction over a portion of the bridge. Until liability and zoning issues can be worked out with the municipality, the bridge will remain closed. Info: Walkway over the Hudson, Poughkeepsie-Highland Railroad Bridge Co., 65 Gifford Ave., Poughkeepsie, NY 12601.

Pennsylvania Historical and Museum Commission Scholars in Residence Program invites applications for its 1998-99 program year. The program provides support for full-time research and study at any PHMC facility, including the state archives, the state museum, and 26 historical sites and museums (many of them related to industrial history). Residencies are available for four to twelve consecutive weeks between May 1, 1998, and April 30, 1999, at the rate of \$1,200 per month. The program is open to all who are conducting research on Pennsylvania history, including academic scholars, public-sector professionals, independent scholars, graduate students, writers, filmmakers, and others. Deadline is Jan. 16, 1998. Info: Division of History, PHMC, Box 1026, Harrisburg, PA 17108; (717) 787-3034.

Copper Country Research Travel Award. Michigan Technological University Archives and Copper Country Historical Collections is offering a research award for the 1997-1998 acade-

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 annually. SIA promotes the identification, interpretation, preservation, and re-use of historic industrial and engineering sites, structures, and equipment. Annual membership: individual \$35; couple \$40; full-time student \$20; institutional \$40; contributing \$60; sustaining \$125; corporate \$250. 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.

Mailing dates for Vol. 26 (1997): No. 3, October 1997. If you have not received an issue, apply to SIA-HQ (address above) for a replacement copy.

TO CONTACT THE EDITOR: Patrick Harshbarger, Editor, SIA Newsletter, Box 45, Toughkenamon PA 19374-0045; (610) 268-3899; fax (215) 752-1539; e-mail phsianews@aol.com.

mic year. The grant is for up to \$500 and provides support for travel, food and lodging to carry out research using the MTU Archives. Topical research areas include: Michigan's western Upper Peninsula; industrial history, particularly copper mining and its ancillary industries; social history, including workforce issues, immigration and ethnicity; and community development

IA EXHIBITS

The Skyscraper Museum. New York City's first museum devoted to skyscrapers opened in May with an exhibition entitled *Downtown New York: The Architecture of Business/The Business of Buildings*. The inaugural show, which ran through August, took visitors through the past century of Lower Manhattan's architectural, social, and economic history with maps, models, drawings, photographs, postcards, and other items. Visitors entered the exhibit through an old cage elevator into a slide show of downtown skyscrapers. The exhibition was mounted in a vacant banking hall in the 1926 skyscraper at 44 Wall St. The founder and director of the Skyscraper Museum is Carol Willis. An architectural and urban historian, she is the author of the award-winning book *Form Follows Finance: Skyscrapers and Skylines in New York and Chicago* (Princeton Architectural Press, 1995). The museum

along the Keweenaw Peninsula; transportation; and the environment. Review of applications will begin on December 1. Info: University Archivist, MTU Archives and Copper Country Historical Collections, J. Robert Van Pelt Library, 1400 Townsend Dr., Houghton, MI 49931; (906) 487-2505; fax 487-2357; e-mail: copper@mtu.edu. ■

plans a fall series of lectures and walking tours by leading historians and architects. Members of the museum are entitled to free lectures, tours, and special events. Info: Carol Willis, Director, The Skyscraper Museum, 44 Wall St., New York, NY 10005; (212) 968-1961; fax 677-7325.

Images du Patrimoine Industriel des Etats-Unis. In June, the Musée de l'Homme et de l'Industrie, Château de la Verrerie, Le Creusot, France, opened an exhibit of industrial archeological photography of the United States. The exhibit includes the work of four SIA members: Jet Lowe, Gerry Weinstein, Joe Elliot, and Sandy Noyes. The show was organized by TICCIH President Louis Bergeron and the museum staff at Le Creusot. Many photographs were drawn from the collections of HAER and the Hagley Museum. Several SIA members attended the opening reception. At the end of September the show travels to the con-course of the Musée des Arts et Métiers, Paris. ■

1997 Student Scholarship Recipients

This year three graduate students from the United States and Canada received stipends to attend the annual conference. They were selected from a pool of eight applicants. Each of this year's recipients presented at Saturday's paper sessions.

R. Scott Baxter has become an active member of the society since attending his first SIA conference at Baltimore in 1995. He is continuing his graduate work in anthropology specializing in industrial archeology at the University of Nevada Reno, studying under Donald Hardesty. He presented on the archeology of an isolated silver mine in the Sierra Nevada.

David W. Brewer, a graduate student in history at the University of Alabama at Birmingham, came to the field through course work with SIA director Jack Bergstresser. He presented on the topic of Alabama's role as a leading producer of brown iron ore.

Larry Buhr is pursuing a graduate degree in industrial archeology at the University of Saskatchewan under Margaret Kennedy. He attended the MTU Industrial Archeology Field School in 1995. He presented on the adaptive reuse of the A. L. Cole power plant at Saskatoon, explaining why adaptive reuse failed there while succeeding elsewhere in western Canada.

The most important aspect of the scholarships is the opportunity for the recipients to meet people active in industrial archeology and to learn about the diverse approaches to the discipline while attending the annual conference. The money for the stipends comes from donations and the general fund. It is hoped that the success of the 1997 effort will encourage many more

donations, applicants, and awards for 1998. The stipends have broadened the participation of newcomers to the field, and the society can build on this success with the continued help of those who think that involving students and young professionals is important. Those interested in participating with the student scholarship effort should contact the committee at the newsletter address. The announcement of scholarship applications for the 1998 annual conference in Indianapolis will be in the winter issue of the SIAN.

M.E.M.



SIA's 1997 Student Scholarship Recipients: (L to R) Larry Buhr, R. Scott Baxter, and David M. Brewer.

Mary McCahon photo

Gordon Wins 1997 Norton Prize

The 1997 Norton Prize for Outstanding Scholarship in Industrial Archeology was awarded to Robert B. Gordon of Yale University at the SIA annual business meeting. Gordon's award-winning paper titled "Material Evidence of Ironmaking Techniques" appeared in volume 21 (1995) of the society's journal *IA*. A check for \$150 accompanied the award.

Gordon's paper described the chemical and physical analysis of furnace wastes found at five early Connecticut ironmaking sites. Similar analyses were run on various early American iron artifacts of known provenance and known method of manufacture. By comparing the analyses of his field samples with those from the known samples, Gordon deduced the ironmaking processes used and the artisan's skills working with those processes at each of the five sites investigated.

The Norton Prize was endowed in 1981 by the Norton Company of Worcester, Massachusetts, a leading manufacturer of industrial abrasives. It is awarded annually to the most outstanding paper to appear in *IA* during the previous three years. Papers are judged for their meaningful analysis of material culture, their clarity of written presentation, and their use of high-quality illustrations. ■



Robert Gordon (L) receives the Norton Prize from this year's committee chair Carter Litchfield (R).

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Michigan Technological University
Houghton MI 49931-1295

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CALENDAR

1997

November 1: 4th Michigan Railroad History Conference, Adrian, MI. Info: Robert W. Cosgrove, MRHC Chairman, 1424 Iroquois Ave., Detroit, MI 48214-2716; (313) 499-3466.

1998

January 7-11: Society for Historical Archaeology, Conference on Historical Archaeology and Underwater Archaeology, Atlanta, GA. Info: Garrow & Assoc.; (770) 270-1192, fax 270-1392; e-mail: garrow@mindspring.com

April 22-May 6: SIA Study Tour of China. Info: Walter Sheppe, 281 Stonearch Dr., Akron, OH 44307; (330) 762-0623; fax 972-8445, or Academic Travel Abroad; (800) 556-7986.

June 4-7: SIA Annual Conference, Indianapolis, IN. Info: William L. McNiece, 5250 N. Pennsylvania St., Indianapolis, IN 46220-3057; (317) 274-8222; e-mail: wmcniece@iupui.edu.

August 18-22: 25th Symposium of the International Committee for the History of Technology, Lisbon, Portugal. Info: Dr. Maria Paula Diogo, Seccao Autonoma de Ciencias Sociais Aplicadas/SHFC, Faculdade de Ciencias e Tecnologia/UNL, Quinta de Torre, 2825, Monte de Caparcia, Portugal. Fax: (3511) 295 4461; e-mail: sec-csa@mail.fct.unl.pt.

September 30-October 4: SIA Fall Tour of Connecticut Valley. Early bird tour on Sept. 30 and a Do-it-yourself tour on Oct. 4. Info: Bob Stewart, 1230 Copper Hill Rd., West Suffield, CT 06093; (860) 668-2928; fax 668-9988; e-mail: 73071.3441@compuserve.com.

October 30: New Technologies and Art in the Twentieth Century Conference, Hagley Museum and Library, Wilmington, DE. Historic perspectives on artistic uses of new materials and machines. Info: HML, Center for the History of Business, Technology and Society, Box 3630, Wilmington, DE 19807; Fax: (302) 658 2400. ■

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