EDITORIAL

As can be seen in the masthead, this Newsletter has changed its title with just the second issue. There is now a new "Northern New England" Chapter of the Society for Industrial Archeology representing the states of New Hampshire, Vermont, and Maine. This new Chapter, together with the well-established Southern New England Chapter, will henceforth jointly sponsor the Newsletter.

The Newsletter will continue to appear twice each year, and the audience -- as before -- will be New England. In no sense is this publication designed to compete with the national SIA Newsletter, and we would like to think that by attracting more persons to industrial archeology at the local level we will ultimately be generating new members for the national organization. We do have certain advantages, however, for by being a regional publication we can better serve New England, and the news included here has a relevancy -- and a familiarity -- to many of us that you will never find in a national publication. We also can have greater flexibility in content, can accept longer articles, and can deal with local issues and crises where members can participate in a substantive way.

On a final note, the editor regrets that this issue is late in appearing. This is due to several factors, including the necessity for both Chapters to discuss the format and cost of the Newsletter at their fall meetings. Also, many of the articles did not arrive until November and December, and there are yet other articles I am still waiting for! As procedures become more formalized, the Newsletter should more frequently appear on time.

David Starbuck
The fall meeting of the Northern New England Chapter was held at Shaker Village in Canterbury, New Hampshire on October 25; and the Southern New England Chapter met at Slater Mill Historic Site in Pawtucket, Rhode Island on November 1. Because this Newsletter is late in appearing (see EDITORIAL) reports of the fall meeting will not be carried until the next issue of the Newsletter, in April.

David Starbuck

Gardner Machine Works at Risk:
In 1978 the Gardner Machine Works in Gardner, Massachusetts closed its doors and went out of business, leaving a large workshop, office, and attic archive looking as if the operatives would be coming back to work the next morning. Rows of machines, most installed in the shop during the first quarter of the 20th century, stand in place, belted to overhead shafting and in fully operational condition. Wooden cabinets line the walls, and tools clutter workbench surfaces as if they had just been laid down. In the office a clump of assorted chairs in turn-of-the-century styles, no two alike but all with original detail and in mint condition, stand around on the linoleum floor: a subtle kind of advertisement for the chair-manufacturing machines the Gardner shop made and serviced. In a locker a worn black epaulet hangs over an old-fashioned pair of rubber boots. Upstairs in the attic, in piles and boxes, the firm’s correspondence, ledger books, receipts, trade journals and catalogues, dating back to the 1890s, are an uncurated archive with much potential significance to researchers in the chair-making industry.

When planning began in 1980 for the Urban State Heritage Park in Gardner, local historians brought the Machine Works to the attention of the Commonwealth’s Department of Environmental Management (DEM), but by early fall the building’s contents were slated for public auction. The DEM had just employed Harvard’s Institute for Conservation Archaeology (ICA) to investigate the history of the sites chosen for Gardner’s Heritage Park, and although the Machine Works is not within the park, ICA historian William DeMarco was asked for an assessment of the shop’s significance. With the help of Theodore Z. Penn and other industrial historians, DeMarco convinced the park planners and the ICA’s director, Michael E. Roberts, that the shop and its contents were of primary importance to Gardner and intimately associated with the chair-making industry by which Gardner’s name is known throughout the country. Penn noted that the shop, which designed, produced, and repaired specialized machinery for the furniture industry, has survived complete. Every machine is placed as it was when the shop was active, and the whole represents a way of working that only a few Americans can still remember. Dating from the early part of this century, the Gardner Works is a “third-generation machine shop.” It is recognizably descended from those that served the cotton textile industry at Lowell in the first half of the 19th century (of which no examples survive), and the later 19th century type represented at the Slater Mill Historic Site in Pawtucket, Rhode Island.

Realizing that the Machine Shop is an IA resource worth preserving in situ, the ICA forecast the auction of its equipment by the eleventh-hour deposit of $1000 as an option on the contents of the building. This secured a grace period until February 1, 1980, when an additional $24,000 must be in hand to complete the purchase. The building’s owner is allowing the machinery to stay in place, rent-free, until then.

In the meantime the ICA is working with state planners, the City of Gardner, and representatives of several technology museums, including the Smithsonian Institution, to develop fund-raising strategies to save both the machines and the building and to outline operational and interpretive plans for the shop.

Direct contributions toward the equipment purchase are sought from IA enthusiasts who want to see the Machine Works stay intact; suggestions for further funding sources are welcomed as well. For additional information, contact Michael Roberts or William DeMarco, Institute for Conservation Archaeology, Peabody Museum, Cambridge, MA 02138 (617 495-3540).

Ellen Fletcher Rosebrook

Editors

FALL MEETINGS 1980

Both the Southern and Northern New England Chapters are eager to accept new members! If you would like to join and receive the Newsletter, please fill out the membership application on the back page and send it in.

NEW MEMBERS SOUGHT

The joint Newsletter of the Southern and Northern New England Chapters of the Society for Industrial Archaeology is published twice each year, in April and October, and receipt of the Newsletter is by membership in either of the Chapters.

The design of the Newsletter is the creation of Albert Gregory, Graphic Designer.

This issue of the Newsletter is greatly indebted to Herbert Darbee for his financial assistance.

Editor

David R. Starbuck

Southern Chapter Officers

Michael Folsom, President
Matthew Roth, Program Coordinator
Herbert Darbee, Secretary
William Goodwin, Treasurer

Northern Chapter Officers

David Starbuck, President
John Colony III, Program Coordinator
John Katie, Secretary
Christine Fonda, Treasurer

President

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Matthew Roth

Graphic Designer

Albert Gregory

President

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Treasurer

Christine Fonda

Secretary

Herbert Darbee

Coordinator

Matthew Roth

Graphic Designer

Albert Gregory
SECRETARY'S REPORT, SNEC

The spring meeting of the Southern New England Chapter was held on May 3, 1980 in Mansfield, Connecticut. Arranged by Program Coordinator Matt Roth with Joshua's Tract Conservation and Historic Trust, a gathering of some 45 members and others met at the Mansfield Old Town Hall between 9:00 and 10:00 A.M. for coffee and doughnuts and then proceeded to the Gurleyville Gristmill site on Fenton River. Dr. Annarie Cazel of the Trust and Ted Penn of Old Sturbridge Village then oriented the group on the history of the area and of the stone-built 1830s structure. Inspection followed of the unusually complete equipment surviving inside the mill, recently acquired by the Trust as a museum for public visitation, and then came the project of the day: clearing the mill basement of old timbers and trash and the former wheel pit of rotted planks. Many hands made fast work of this, with salvageable material and a variety of artifacts of undetermined value carefully saved.

A committee of the local church provided a variety and abundance of sandwiches, potato chips, drinks, and dessert for lunch. At 2:15 P.M. President Mike Folsom called a meeting of the Chapter to order on the lawn beside the mill. A vote of thanks to the Trust for hosting the meeting was taken. The President then said that three topics were to be considered: 1) Volume 1, Number 1, April 1980 of the Chapter Newsletter, of which all members had been sent copies; 2) sponsorship of the 1981 annual conference of the Society; and 3) the Chapter's second July tour in Vermont. Under the editorship of David Starbuck, the first issue of the Newsletter had cost ca. $500. There was discussion of securing another 500 copies. The last Chapter meeting had appropriated $100 for this purpose. For future issues it was proposed that there be a $200 contribution from the Chapter. It was suggested that perhaps cooperation can be had from the proposed Northern New England Chapter to share in this expense. Albert Gregory did the design work for this first issue, and David Starbuck incurred considerable expense for supplies, telephone, and travel. A motion was offered to contribute $200 toward future issues, there being $1000 in the Chapter's bank account.

Patrick Malone protested against using up the group's equity in this manner as there would soon be nothing left. Two issues per year are proposed. Ted Penn expressed his liking for the Newsletter but felt that the Chapter should set limits in the matter, perhaps trying it for a year or two and seeing whether it helps to recruit new members. The question was raised as to whether the publication gives information that the national SIA Newsletter does not. It was queried also whether the handsome layout of the current issue is really needed, rather than a shorter mimeographed sheet. Pat Malone agreed that this first number is excellent but seems out of scale with Chapter resources, reasoning that the group should not commit itself to an undertaking that will devour our financial resources by going beyond a realistic estimate of income. An 8-page multi-sheet item on cheaper stock could be printed for much smaller cost. The size might be cut by one-third, and some material of general interest could be contributed to the national Newsletter which is always short of this.

David Starbuck explained that the content of the Chapter publication is quite different from that in the national Newsletter and is intended to be only of local interest. If more funds can be generated, it would be worthwhile to continue and expand the Chapter Newsletter. Pat Malone pointed out that the $1000 in the Chapter account provides a considerable interest income each year and reiterated that it would be a mistake to expend this fund. He proposed that we issue a newsletter if we can accumulate to pay for it without invading our equity. On the basis of the present issue, we might try to sell the Newsletter, gathering subscriptions from around the country since it is an excellent piece of work. Larry Gross proposed paying for this first number, sending out a bid for new memberships with each bid, and waiting until the fall meeting to decide what steps to take next. This was voted. It was suggested that after the returns are received, a membership list be made up and included with the next issue of the Newsletter.

Ted Penn offered a motion that the Chapter treasury be divided, creating a separate fund for the Newsletter. He would be willing to contribute toward such a fund. Mike Folsom expressed a like inclination. Pat Malone was opposed to the suggestion, and it was tabled until the next meeting.

Matt Roth was called on for a report on the 1981 conference centered in Hartford, but he first addressed today's meeting. The Joshua's Tract people had allotted $200 to cover food costs, and the amount collected from those attending had not quite reached this figure. The shortage would be absorbed by the Trust as an expression of appreciation of the Chapter's contribution in cleaning up the mill site. As to the Hartford conference, the headquarters hotel had been selected, the Sonesta, as this offers the most favorable rates and arrangements. Planning for the event is incomplete, and the local group is awaiting a response from the SIA National Board on what has been done and proposed so far. There is a staff of five at work: 1) Matt Roth overseeing the whole; 2) Herb Darbee contacting factories proposed for process tours; 3) Steve Victor handling the paper sessions, at least one for invited papers with a scholarly approach. The open call will continue, and Steve will invite special papers. Dates for the meeting are May 7-10, 1981; 4) Ted Penn will handle...
a session on mappng; and 5) Mar-
lele Nicoll is in charge of fi-
nances and insurance. The Con-
necticut Trust for Historic Pres-
servation will have charge of m-
ailing tasks and small details.
Steve Victor will be invited to
attend the next National Board
meeting on the conference, and
John Bowditch will be approached
on the large number of papers
scheduled for this year's national
conference in Detroit. He might
wish to cut down the number,
saving some for 1981. Pat Malone
recommended a strong series of
papers be solicited reflecting
something about the area being
visited, this precedent having
been set at the Lowell meeting.
For 1981, papers dealing with
Connecticut would demonstrate
that the Chapter has a strong
grasp of its region. Matt Roth
then invited contributions from
members who might address activ-
ities in Connecticut such as
light steel fabrication and sil-
verware manufacture. There is
excellent primary material
available. As to a fall Chapter
meeting in September or October,
any suggestions on where it might
be held and offers to host the
gathering are invited. A motion
was then made to express the
Chapter's appreciation to David
Starbuck for his newsletter, and
this was seconded and voted.
David then noted that it had
been discussed whether a Northern
New England Chapter should be
undertaken and that he had ap-
proached people in New Hampshire,
Vermont, and Maine to see the
level of interest. An organiza-
tional meeting is possible in
June, and the president of the
Concord Gas Corporation has agreed
to host a tour of 1880s gasholder
houses in Concord, New Hampshire.
A mailing will be sent out to see
if there is sufficient interest
in setting up a northern chapter,
and the Southern Chapter was in-
vited to express its ideas. Matt
Roth suggested holding our fall
meeting in the north. Pat Malone
proposed that the effort be made
to start a new chapter, and if it
should not succeed then the title of "Southern New England
Chapter" might be scrapped in
favor of simply a "New England"
chapter.
Mike Folsom noted the dates
July 11, 12, and 13 for the 2nd
Central Vermont Tour, which he
characterized as a Southern New
England event in Northern New
England. The dates coincide with
those of the Industrial Archeol-
ogy Institute at the University
of Vermont. Frances Funk was
thanked for her part in the Chap-
ter's event this day. Ted Penn
queried whether there were any
nominations for the Chapter's
second medal award and invited
the names of any candidates.
Frances Funk expressed her appre-
ciation for Ted's visit to eval-
uate the mill and his follow-up
letter of support which had helped
greatly in securing a federal
grant. A round of applause en-
sued.
Pat Malone, as Chairperson of
the SIA National Nominations
Committee, referred to his April 8
letter giving the proposed slate
of candidates for 1980-1981, in-
cluding John Bowditch for Presi-
dent and Robert Vogel for Vice-
President. Matt Roth has agreed
to run for a directorship. To
the vacancy for Secretary, he
proposed nomination of Mike Fols-
rom and one other person, as yet
unnamed.
A motion to delete the name of
any candidates. The minutes of the fall 1979
meeting at Worcester were accepted
by voice vote, and adjournment
was voted at 3:15 P.M.
Herbert C. Darbee
SECRETARY'S REPORT, NNEC
On July 26, 1980 an organiza-
tional meeting was held in Con-
cord, New Hampshire for a North-
ern New England Chapter of the
Society for Industrial Archeol-
ogy. The business meeting came
to order at 11:00 A.M. at the
New Hampshire Historical Society,
and the participants were greeted
by Curator James Garvin. Chris-
tine Fonda made some brief remarks
and introduced David Starbuck
who chaired the meeting.
David Starbuck provided back-
ground information on the national
organization and its chapters
and indicated that if there is
sufficient interest a Northern
New England Chapter might be
organized. He then explained
the procedures for establishment
of chapters.
A set of proposed by-laws,
based on those for the Roebling
Chapter, were distributed for
review and discussion with the
intention of developing by-laws
for the Northern New England
Chapter. After approval of the
by-laws, election of officers
pro temporae took place. David
Starbuck was nominated and elected
president pro tempore, and Chris-
tine Fonda was elected to serve
as secretary/treasurer pro tem-
porae. These officers will serve
until the Chapter's annual meet-
ing when a full slate of officers
will be elected. The date and
location of the annual meeting
were discussed. It was decided
that the meeting be held on Sat-
urday, October 25, at Shaker
Village in Canterbury, New Hamp-
shire and will include a business
meeting and tour.
A petition to the national
organization for the establish-
ment of a Northern New England
Chapter of the SIA was read and
circulated. Richard Kathmann
suggested that Chapter dues be
set at $5.00 per person. This
was moved, seconded, and the
motion passed.
A discussion of the Southern
New England Chapter Newsletter
followed. It was felt that the
two New England Chapters should
cosponsor the publication.
Sources of funding the Newsletter
will be investigated. Publica-
tion of another issue will be
deferred until after the autumn
Chapter meetings.
The business meeting adjourned
at approximately 12:50 P.M., and
the group then toured Concord's
gasholder houses (see PRESIDENT'S
REPORT, NNEC).
Christine E. Fonda
PRESIDENT'S REPORT, NNEC
The principal activity of the
Southern New England Chapter
since last spring has been or-
organizing for the 1981 National
SIA Meeting in Hartford. NNEC
members Steve Victor, Paul Mc-
Cinley, Herb Darbee, and NNEC
Program Chairman Matt Roth have done most of the work arranging paper sessions and tours, and their progress reports have been received with satisfaction by the National Board.

At last spring's National Meeting Michael Folsom, outgoing SNEC President, was elected Secretary of the SIA National Board. At the same time Matt Roth and Paul McGinley were elected to the National Board on an "anti-prohibition ticket!" Folsom also helped Eric DeLony teach the University of Vermont IA Institute in July. The weekend after the Institute a "moderately rowdy bunch" of SNEC members meandered about the countryside on the 2nd SNEC Summer Vermont IA Tour (see picture). Next summer we hope the NNEC will take the opportunity to host a tour of its own.

Concord Gasholder Tour: The group that met at the New Hampshire Historical Society was treated that afternoon to a guided tour of the buildings owned by the Concord Natural Gas Corp., located on South Main Street in Concord. The tour was led by David Buttrick, an employee of Concord Gas, and the group viewed the 1888 brick gasholder house, a small, 10-sided, wooden oil tank, and a 1921 steel gasholder. The complex in Concord is truly exceptional in that much original equipment is still intact, notably that inside the 1888 gasholder (see picture). This 88-foot-diameter structure still contains its riveted, wrought-iron tank, floating in a foundation filled with water. Gas was created by burning coal (brought in by an adjacent railway line) in a neighboring retort house; the gas was pumped through a pipe leading into the space between the water level and iron tank inside the gasholder; and as the gas headed upward it burned in a retort house; the flow of gas was then regulated by a valve at the top of the tank.

1888 Gasholder House on South Main Street in Concord, New Hampshire. Courtesy of David Starbuck.
gas accumulated, the 80-foot-diameter iron tank rose within the gasholder, the gas effectively sealed in by the water underneath and the tank above.

This was a process repeated at many other gasholder houses in the late nineteenth century, but it is doubtful whether any examples still exist that are as intact as this one. Although they were not visited, Concord has two other gasholders, much smaller and each missing its tank. The first was built in 1880 on the campus of St. Paul's School and is now used as the School's post office; while the second was built on the grounds of the New Hampshire State Hospital in Concord and is not currently in use.

While all of these structures warrant extensive research and recording, there is no question that the intact 1888 gasholder should be nominated to the National Register at the first opportunity and should be drawn to HAER standards as soon as funding can be obtained. Given the functional conversions that have occurred to other gasholders, this degree of integrity may well be unique within the United States.

David Starbuck

CURRENT RESEARCH IN NEW ENGLAND

Phoenixville: In 1980 Old Sturbridge Village conducted the first season of excavation in this early nineteenth century industrial community, following up on an exhaustive multiple resource survey conducted for the Connecticut Historical Commission in 1979. Dr. John Worrell, OSV Staff Archaeologist, directed the project, assisted by Dr. Linda Ammons and other members of the museum staff, a team of field archaeologists and specialists, and Field School students.

Phoenixville was a typical upland New England agricultural neighborhood which only began to utilize the lowlands for water power in a proto-industrial phase of a couple of decades bridging the 18th and 19th centuries. Intensive industrialization came with the exploitation of water resources for textile manufacture in 1813. The Sprague Company and its successor, the Phoenix Company, represent a near paradigm of the technical, economic and social complexes which transformed the New England landscape through the next three decades, until marketing and technological factors rendered such small and remote enterprises unviable in increasing competition.

Excavation during the 1980 season focused on three areas: workers' housing, dams and hydrological systems, and the principal mill yard. Excavation and systematic sampling in the vicinity of two of the tenements built by the company in the 1820s as part of a planned village have revealed information about landscaping, construction, periods and length of use, structural decline, and use of community space, as well as that relating to the personal tastes, diet, material culture and refuse disposal patterns of occupants. Technical hydrological information came from excavation at the site of an 1803 wooden dam and a higher stone arched dam which replaced it a decade later, as well as along the canal for a second water privilege slightly farther down the river. Unexpectedly good preservation below ground allowed detailed construction information to be unearthed and documented at all three dam sites, including some unusual features remaining in situ at each. Evidences of massive topographic alteration in the mill yard near the one factory still standing were discovered, including those relating to internal traffic, supporting functional features and quarrying.

This long-term investigation is intended to continue at the site and in comparative research.

John Worrell

Goshen: John Worrell led a brief field investigation at the Hervey Brooks Pottery site in Goshen as part of continuing research for Old Sturbridge Village. Assisted by Linda Ammons and staff and volunteers of the museum, the excavations focused on the site of the shop which was moved to OSV in 1962. Questions regarding functional areas and changes in Brooks' production throughout his career of at least 63 years were investigated. At the museum, a replica kiln based on information from prior digs at the site has now been fired eight times. Variations in materials and techniques are producing experimental information to compare with the archeological and documentary data.

John Worrell

The Connecticut Steam and Gas Engine Association: A lengthy article in the New York Times (October 5, 1980), clipped out by John Yerkes, describes some of the activities of the Connecticut Steam and Gas Engine Association. Some excerpts are as follows:

"They began gathering a few years ago on a porch here to swap stories, trade dreams and promote the preservation of old steam and gas engines, those chugging, clanging relics of the industrial past.

"Now they number 98 and boast a collection of hundreds of sputtering antique contraptions, most manufactured in the early 1900's, that can husk corn, make flour, pump water, split wood, churn butter, grind meat and mow lawns.

"The Connecticut Steam and Gas Engine Association was founded three years ago by Charles Doty, an engine aficionado. The club's headquarters are in Mr. Doty's home in this tiny town (Warren) west of Litchfield.

"Fueled by coal, wood or gas and weighing from several pounds to several tons, engines owned by the club and its members are exhibited throughout the northeastern United States almost every weekend in summer and fall.

"At its annual Warren Engine Show last June the club displayed 200 machines, including old automobiles, fire apparatus and a
70-year-old, 10-ton steamroller, one of the very few vehicles of its type still operable. "Membership dues are $5 a year and the club meets monthly in Warren. Frederick Dahl of New Preston is the president, and Mr. Doty handles all correspondence and exhibit arrangements."

MASSACHUSETTS

Massachusetts Reconnaissance Survey: The Massachusetts Historical Commission is now entering its second year of an extensive "reconnaissance" survey of the state. This survey, not to be confused with the ongoing statewide inventory conducted by local historical commissions, is designed to provide the MHC staff with an overview of the state's existing historic and prehistoric resources, as well as an historical summary of town and regional development.

The survey is a result of recommendations put forward in a 1979 report, Cultural Resources in Massachusetts: A Model for Management. The report found that a statewide management plan could not consist of the resource inventory alone. What was essential was a method of evaluating the significance of these resources and a means of establishing management priorities. The reconnaissance survey thus formulated was designed to complement, not replace, the existing statewide inventory. From a practical standpoint, such a reconnaissance could: 1) assess the strengths and weaknesses of the existing inventories; 2) evaluate the relative significance of proposed National Register properties; and 3) provide standards by which to readily identify the significance or lack of significance of threatened sites and structures.

The seven-member team assembled by the Commission in October 1979 included prehistoric and historic period components. Three archeologists, David Anthony, Frederick Cary, and Linda Tovle, have begun a comprehensive examination of major prehistoric artifact collections across the state. Data from the survey is being computer-processed to yield geographical, typological, and other information that will provide a valuable tool both for resource management and for further research on native settlement.

The four-member historic period team consists of an historical archeologist (James Bradley, now MHC survey director), a cultural geographer (Arthur Krim), an architectural historian (Sarah Zimmerman), and an industrial historian (Peter Stott). For the purposes of the historic period survey, Massachusetts was divided up into eight regions, basically following physiographic lines. Already completed has been the survey of the high-growth area of eastern Massachusetts between the 495 and 128 beltways. Currently the historic team is working among the Boston-area cities and towns. The group is progressing at the rate of two towns per week, producing separate reports on each community, based usually on four days of library and map work and one day in the field. Fieldwork provides an opportunity, however brief, to get a sense of the completeness of the town's inventory.

From the standpoint of industrial archeology, the reconnaissance survey has proved extremely rewarding and productive. The approach developed for the industrial history portion of the survey places strong emphasis on cartographic evidence between 1794 and 1950, particularly on Sanborn Insurance maps. As a result, it has been possible to assemble fairly detailed charts showing the changing use of most industrial sites and structures over time. The fieldwork is thereby narrowed down to structures known to have been standing at the date of last mapping.

A fair number of hitherto ignored or neglected industrial structures have thus been brought to the attention of the Commission. A number of significant -- and frequently architecturally impressive -- shoe factories have surfaced (in South Weymouth, Holliston, and Stonestram, for example). The team was particularly impressed by the wealth of significant industrial remains in Canton -- among them the 1835 Canton railroad viaduct and a 1920s metropolitan airport, in addition to important factories for the manufacture of copper, iron, cotton, shovels, silk, and stove polish. Other unexpected finds included a small stone textile mill in Foxborough, an early iron works in Newton, an early wood-frame trainshed railroad depot in Lexington, and "La Ceramica," the 1907 rustic factory and showroom of the Guastavino tile works in Woburn (see picture). On the whole probably close to six hundred sites have been examined to date.

But the reconnaissance has also produced less tangible rewards of equal significance. Although the Boston Manufacturing Company in Waltham is frequently cited for its role in improving workers' living conditions, it is seldom appreciated that the company was preceded in this concern by the 1810 Waltham Cotton and Woolen Manufacturing Company, glowingly recounted in an 1815 description of the town. At a regional level, unmistakable patterns of industrial development appear. The straw hat and bonnet industry played a substantial role in the development of Norfolk County in the 19th century, and its advance from craft to factory production paralleled that of the boot and shoe industry. Yet while shoe manufacture flourished in towns all over eastern Massachusetts, straw hat production never really resuscitated the band of southern Middlesex and Norfolk County towns between Framingham, Franklin, and Foxborough with their pronounced Providence orientation. Textile factories in the same Norfolk County towns showed the influence of the Blackstone Valley, though they were as far removed as Canton and Foxborough. Iron foundries, though relatively few in number, were invariably begun by men from Bristol or Plymouth.
La Ceramica in Woburn (1907). Courtesy of Peter Stott.

Recent IA Additions to the National Register: (The site name and date are followed by the name of the appropriate USGS quadrangle and UTM grid reference.)

BOSTON:
Berger Factory (1902) (Boston South, 19.328380, 4688600)
Dorchester-Milton Lower Mills Industrial District (1870s-1930s) (Boston South, 19.329090, 4681740 &c.)

Lancaster:
Atherton Bridge (1870) (Clinton, 19.280215, 4702390)
Ponokin Bridge (1871) (Clinton, 19.279245, 4706480)

Middleborough:
C.P. Washburn Grain Mill (1899-1907) (Bridgewater, 19.340760, 4639520)

Middlefield/Becket/Chesterfield:
Middlefield-Becket Railroad Bridge District (1840-1928) (Becket; Chester 18.660850, 4686460 &c.)

Newton:
Echo Bridge (1876-77) (Newton, 19.316420, 4686900)

Peter Stott

North Uxbridge: John Worrell, Ted Penn, Linda Ammons and a field research team recently conducted an archeological and historical survey of the elaborate early 19th century Crown and Eagle Mills complex and planned village. This was part of an historic preservation feasibility study undertaken for the Massachusetts Department of Environmental Management by Moriece and Gary, Inc. Built in North Uxbridge, beginning in the 1820s, this community and its industrial and domestic features retained remarkable integrity until the mid-1970s when they suffered from vandalism and fire. The ruins themselves possess a great deal of functional information, and the archeological significance has been found to be immense. Preservation of in situ data regarding functional change, ancillary support facilities, hydrological systems, machinery manufacture and repair, and social and economic relationships were found to be intact and retrievable. Plans for park development of the area are currently under review.

Old Sturbridge Village: Experimentation continues in the museum, based on combined data from archeological sites and primary resource documents. Ted Penn, John Worrell, John Englund and other staff members are directing this combined experimentation-interpretation, now focusing on construction trades, milling, crafts and agriculture.

Charlestown: During the winter of 1979-80, monitoring of foundation repairs to the Bunker Hill Monument resulted in the discovery and preservation of substantial stone retaining walls surrounding the Monument's stepped foundation. During the interior foundation cleaning, remains of the base of an early American hoisting apparatus or derrick designed by Almoran Holmes were discovered and preserved. A complete report by Thomas Mahlstedt is available at the Division of Cultural Resources, North Atlantic Region, National Park Service.
Wannalancit mill, and when it will be less economic than sen­timents, another historical note."

NEW HAMPSHIRE

Newmarket: Two years of plan­ning, public discussion and survey efforts have culminated in the nomination of an indus­trial and commercial historic district in Newmarket, N.H. to the National Register of Historic Places. Newmarket's surviving nineteenth century cultural res­sources reflect the growth of the Newmarket Manufacturing Com­pany established in 1822. For just over a century this cotton textile manufacturing firm, capi­talized by Salem, Massachusetts stockholders, dominated the growth of the small mill town. Located at the mouth of the Lamprey River, Newmarket retained its three early granite mills (1822, 1825, and 1827), although they were re­modeled in the 1920s in an effort to improve a limited power source. Civil War expansion and subsequent growth in the 1880s and '90's erected a wall of stone and later brick mills along the Main Street. This growth was paralleled by vernacular commercial building from the 1820s to the 1920s, new industrial housing (1820s board­ing houses and 1880s family ten­ments for French-Canadian work­ers), as well as churches and public institutions.

The architectural and histor­i cal survey was directed by Dr. Richard Candee for the Thoreson Groups, Planning Consultants to the Newmarket Service Club. "Newmarket Revisited: Looking at the Era of Industrial Growth, 1820-1920" was published as part of a NH Council on the Humanities public program focusing on the town's historical resources. A planning report, "A New Life for Downtown Newmarket," stim­ulated a home improvements pro­gram within the study area un­der a Community Development block grant. A Victorian high school has also been rehabili­tated and expanded for housing. An 1880s Public Library bequeathed by former mill agent John Web­ster of Salem has applied for ECRS support to begin architec­tural conservation.

The granite mills, which John Coolidge called "the most beau­tiful of all textile factories of that period," lost their later slate roofs in last winter's hurri­cane (1979). They are operated by Essex International, while the brick mills have been con­verted to the manufacture of shoes and other products. Con­tinued industrial use of the mill structures and the revitalization of commercial and residential buildings will be encouraged by the historic district nomination. The unique combination of wood, stone and brick that character­izes Newmarket's industrially­related construction sets it apart from other Waltham-Lowell mill communities of the 19th century.

Richard M. Candee

Harrisville: The New Hampshire Highway Department is currently considering the creation of a by-pass route for N.H. Route 101 that, according to one pro­posal, could direct traffic around the town of Dublin and through the town of Harrisville. Harrisville is, of course, re­nowned as a strikingly intact example of a 19th-century mill community, and its representa­tiveness of this earlier era is so great that it has been design­ated a National Historic Land­mark. While the proposed high­way relocation would not fall within the historic district, it nevertheless could have a negative visual and audible im­pact upon the district. This issue has already sparked much controversy and will be dealt with at length in the next SNHC/NNEC Newsletter.

David Starbuck

Arch Bridge: The 650-foot Arch Bridge between Bellows Falls, Vt. and North Walpole, N.H. (see SNHC Newsletter, Vol. 1, No. 1, pages 3-4) appears to be moving closer to demolition and replace­ment. The 1904 bridge spanning the Connecticut River was the longest wood-decked bridge in the country when it was built, but now it is undergoing repeated attacks from highway planners and local interest groups. If local newspapers are to be be­lieved, then the bridge's de­struction is imminent.

David Starbuck
Canterbury: The third season (1980) of field work has now been completed at Shaker Village in Canterbury, N.H., under the joint sponsorship of the University of New Hampshire and Shaker Village, Inc. The project, directed by David Starbuck (UNH) and funded by a series of grants from the New Hampshire State Historic Preservation Office, has separate archeological, architectural, and historical components; but each year major emphasis has been placed upon recording the extensive system of Shaker mills and millponds. In the summer of 1980 mill excavations and large-scale mapping of dams, wheel pits, mill foundations, and overflows were under the direction of Ellen Savulis (U. of Massachusetts-Amherst); and small-scale mapping of the entire mill system was under the direction of Peer Kraft-Lund, a professional surveyor from Barnstead, N.H.

The Northern New England Chapter held its fall meeting here on October 25, 1980, and this tour will be described in the next SNEC/NNEC Newsletter.

David Starbuck

RHODE ISLAND

Slater Mill Historic Site:

On September 4, 1823, Kirk Boott ate his breakfast and then went down to the new mill of the Merrimack Manufacturing Company. As the chief executive of the first textile corporation in what would become Lowell, MA, he wanted to view the water wheel that John Dummer had just completed. Boott wrote in his diary that he found "the great wheel moving round his course, majestically and with comparative silence." His engineer, Paul Moody, said it was the "best wheel in the world," and his financial partner, Nathan Appleton, "became quite enthusiastic."

That scene from the past was replayed with only slight variations in October 1980 when the reconstructed wheel in the Wilkinson Mill (Slater Mill Historic Site, Pawtucket, R.I.) turned for the first time from the weight of water in its buckets. The museum director, Dr. Patrick Malone, was very pleased to see the beautiful wood and iron wheel rotate with only the limited flow from a small electric pump. Water in the wheel pit is raised six feet by the pump and runs through a temporary sluice onto the wheel. When exterior raceways are completed, the Blackstone River will once again drive the wheel and generate enough mechanical power to operate the mill's recreated machine shop.

The Water Power Project at the Slater Mill Historic Site began in the early 1970s with excavation of the Wilkinson Mill's basement and adjacent raceways. Paul Rivard, museum director at that time, enlisted the aid of Albert Bartovics for the archeological investigations. Mr. Bartovics uncovered a virtually intact wheel pit, complete with wooden breast, flooring, and flashboards. Cast iron shafting, a base bearing block, and several important parts of the power transmission framing provided further clues about the power system; but the wheel itself was gone.

A continuing program of documentary research, supplemented by examination of surviving nineteenth-century water wheels, led to important conclusions about the power system in the Wilkinson Mill and about the technology of water power in America. The archeological and documentary evidence showed that the original 1810 pit had been enlarged after 1825 for a breast wheel twelve feet in diameter and just over twelve feet wide. The wheel was sold in 1829, after the financial collapse of the Wilkinson family.

Charles Parrott and Bruce Cavin, of John Milner, Associates, worked with Dr. Malone to design a power system for the Wilkinson Mill which would: 1) incorporate all the archeological and documentary evidence; 2) conform to the available technology of the 1820s; and 3) actually work. With only a few compromises (such as the substitution of steel for...
with a visit to the Holden firm, manufacturers of Vermont of Barre. It began appropriately Vermont. An accurate count was kept arriving during a good part of the day. Walt Pulawski's carpenters also worked of M.F. Construction Company. This control mechanism, based on an early Zachariah Allen plan, will allow the power system to respond automatically to changing demands in the machine shop.

**Paramount Industries**

Paramount Industries provided parts for the wheel that were assembled in the pit by Joseph Pulawski and Son, Contractors. Walt Pulawski's carpenters also reconstructed the yellow pine breast, flooring, and flashboards. The masonry restoration was the work of M.F. Construction Company. Still to come is a fly-ball governor now being made for the museum by John Bowditch. This control mechanism, based on an early Zachariah Allen plan, will allow the power system to respond automatically to changing demands in the machine shop.

**VERMONT**

Vermont Summer IA Tour: For the second summer Marcia and Mike Folsom, SNEC President, were most generous hosts on the weekend of July 11-13, 1980 to a sizeable representation of the Chapter at the Folsom's summer place in the Bethel-Gilead area of central Vermont. An accurate count was difficult since members and guests kept arriving during a good part of Saturday, but they and the inhabitants of the row of tents and campers across the road were welcomed and provided for in exceptional style.

The theme of the first day's tour was the Vermont granite industry, centered on the city of Barre. It began appropriately with a visit to the Trow and Holden firm, manufacturers of tools for working the stone, where a well-informed member of the company led the group through the various sections and seemed never at a loss to answer all queries. There was an inspection of Thwing Mill not far from the center of town, a 19th century brick gristmill being converted to office space and other adaptive use, followed by a brief tour of the extensive granite sheds where the great blocks direct from the quarry stand in piles ready for working.

A revelation to all was an hour or more at Mount Hope Cemetery where the skill of the largely immigrant stonemasons and sculptors is everywhere evident in intricate headstones and elaborate memorials fashioned from this extremely hard material. Next was a visit to the source of it all, the Rock of Ages quarry south of Barre, where the group was again favored with a well-qualified guide and was informed that even though the wide and deep workings here represented a century of quarrying, only a small fraction of the available stone had been extracted to date. The day's touring concluded with a back-country visit to Mr. Douglas Lunn's large shed occupied mostly by the one-cylinder gas engines that he collects and restores, one of them a huge machine generating 35 horsepower. Mr. Lunn was preparing to exhibit again at an annual gathering of like-minded hobbyists. The group returned to a fine cook-out staged by the Folsoms.

Sunday's tour began at the village of Tunbridge, site of a fascinating concentration of a mill, a brick blacksmith shop that is now a residence, and a covered bridge spanning the First Branch of the White River. The mill, part brick and part clapboard, houses a water turbine-powered sawmill, gristmill, and woodworking shop, idle for the past forty years but never stripped of its equipment. Its new owner is young and determined to restore the whole. Sunday afternoon found the group at the long-abandoned Ely copper mine for a time a leading producer of the metal. Here, after 1853, a large smelter and its supporting community grew up, now represented by foundations and brick bases for machinery among the sterile soil and brush. Most remarkable is a stone flue built for hundreds of feet up the hillside to carry away the smelter fumes. It is large enough for a person to walk through crouching and is lined and covered with flat stones of extraordinary size. This was the route for many of the members who climbed the hillside to the mine opening, leading to workings said to be several thousands of feet deep.

For a varied program of exceptional interest and an outing of true pleasure, those who could attend are much indebted to the Folsoms.

Herbert C. Darbee

Randolph: This view of the former Sargent, Osgood & Roundy Foundry, Randolph, Vt., was carved in wood by Brian Tyrol and cast into the back of the Vigilant wood stove by Vermont Castings, which now occupies the site of the former foundry.

Sargent, Osgood & Roundy produced plows, corn planters, and other small agricultural equipment until the early 1950s.

Michael Folsom

The Troy Furnace Site:

Editor's Note: A detailed article written by Victor Rolando on the endangered Troy Furnace appears in Vol. 9, No. 5&6, p. 6 (Sept. & Nov. 1980) of the national SIA Newsletter, and readers are strongly urged to read it. In order not to be repetitious, a different
Remains of the Troy Furnace on the Missisquoi River in Vermont. Courtesy of Peter Thomas and Victor Rolando.

The plans of a consortium of small Vermont electric companies to harness water power on the Missisquoi River in the northern part of the state has allowed archaeologists from the University of Vermont contract archaeology program to begin the investigation of a mid-nineteenth century iron foundry complex that once included a foundry, forge, and an assortment of associated outbuildings. Hydro proposals, such as the Missisquoi project, require approval by the Federal Energy Regulatory Commission. The application entails an assessment of impacts to archaeological resources, and thus the opportunity has been afforded to UVM to study the site.

The site located on the banks of the Missisquoi in Troy, Vermont was first located by Victor Rolando in conjunction with his master's thesis "Ironmaking in Vermont 1775-1890." Further historical research was prompted by the hydro project's feasibility study. Several field checks occurred with the research.

The foundry operation, which utilized extensive local iron deposits, was built in 1837 by the Boston and Troy Corporation. The corporation constructed an iron foundry, sawmill, and boarding house at two abandoned farm sites approximately three miles north of the village of Troy Center. This was the first attempt to establish an industry unrelated to subsistence agriculture in the town. It required a full-time manufacturing work force for the summer season. Capital came from outside the area, in this case Boston. Stove parts were the major production item. These were sent over poor roads to Troy, New York where the stoves were assembled and distributed nationally. Boundary markers still standing on the U.S.-Canada border were manufactured in Troy. Ore was also processed for local use.

Despite the investment, greater than any Troy had previously known, the operation failed in 1841. Rolando speculates the failure was due to the great percentage of titanium in the ore, the distance to market, the short blast season, and the want of experienced oremen in Troy. An attempt was made to revive the furnace in 1844, but by 1846 it closed permanently. By that time, the alteration of the tariff on iron and the opening of mid-western markets also contributed to the foundry's abandonment. A farm occupied a part of the site for the remainder of the nineteenth century, but since then there has been little intrusion on the site.

Field checks of the site during the summer of 1980 confirm what Rolando describes in his thesis. Most prominent of the surface features is the foundry stack which rises over nine meters in places. Several foundations, depressions, slag piles, structural walls, and debris piles (one of which includes a large potash kettle) were noted. The features are shown on the accompanying figure, which is based on Rolando's sketch made during his 1979 visit to the site. The features are associated with the former forge, staging area, and outbuildings. Not shown on the map are two foundations located 240 feet south of the foundry stack and associated with the later nineteenth century farm.

The Troy site is important in

Sketch of the Troy Furnace Site. Courtesy of Gina Campoli and Victor Rolando.
The Franklin Reed Company in Canton, Massachusetts, one of the many sites that must be included in the Boston Inventory. Courtesy of Helena E. Wright.

The feasibility of the Troy hydro project has not been finally decided. If the project should proceed, a National Register nomination for the site will be prepared. This will require further historical research into primary sources, more thorough mapping of the site, and subsurface testing. Then an insightful view of a northern outpost of the iron industry will be gained.

**HELP WANTED**

Survey of Mills in Hebron, Connecticut: A survey of the extant and extinct mills of Hebron, Connecticut is being conducted under the auspices of the Connecticut Coordinating Committee for the Promotion of History with a grant from the Connecticut Humanities Council. The Hebron Historical Society will utilize this documented research as a basis for preservation planning. Information on any or all mill activity in Hebron, Connecticut will be gratefully received. Please contact Cece Kirkorian, Dept. of Anthropology, Box U-176, University of Ct., Storrs, Ct. 06268.

SIA National Newsletter lists the Estey Organ Company factory complex in Brattleboro, Vt. under "IA in the National Register" and shows a picture of the slate-sheathed buildings.

That picture brought to mind a conversation I had with Fred Hebden in the early 1950's when he was their storekeeper, and I called upon him as a salesman. The conversation related to the manufacture of their organ pipes, and he indicated they had the capability to produce the different thicknesses of brass required in the different sizes of organ pipes.

Wishing to keep him talking and elicit more information, I commented that I had not realized they had rolling mills and did their own rolling. His response amazed me and may be of some IA interest to others regarding the technique he described. He explained they had a furnace and ladle from which they poured molten brass onto a heavy canvas. The amount of brass poured on the canvas and the amount of manipulation of the canvas determined the thickness of the brass sheet so produced. He gathered the technique was akin to pouring sand on a sheet of paper and oscillating the paper to disperse the sand about the paper to a uniform depth.

Naturally I asked to see the pouring operation, but this was denied because it was a trade secret, and nobody was permitted in that particular building except authorized persons. This brass sheet-making was a craft skill, Mr. Hebden advised, which was passed from father to son and carefully controlled by the company.

I would like to hear from anyone who has corroborative background information or additional information relative to the company and their pouring sheet brass technique. Please contact Charles L. Hoffman, Box 11, Weatogue, Ct. 06089 (203 658-0903).

**Boston Area Inventory: (Also see "Massachusetts Reconnaissance Survey" by Peter Stott.) Several SNEC members met on Saturday, Nov. 29, 1980 at the Charles River Historic Industries museum building, the former boiler house of the Boston Manufacturing Co., in Waltham, MA, to discuss preparation of an inventory of historic industrial sites in the Greater Boston area. Present were Sheila Charles, Michael Folsom, Steven Lubar, Geoffrey Moran, Suzanne Spencer-Wood, Peter Stott, Bill Stokinger, Betsy and Jonathan Woodman, their two guests, and Helena Wright. Peter Stott, presently employed by the Massachusetts Historical Commission (MHC) on a reconnaissance surveys of the area, described his work thus far and made suggestions about assistance which SNEC members or others could provide to further the completion of such an inventory.

The state survey has established 8 study area divisions for Massachusetts. To date, the easternmost areas are being surveyed. The Boston area has been broadly defined as that district within the outline of Route 128. The next adjacent district consists of the towns between Routes 128 and 495 but excludes Essex County. The surveys for these two areas will be completed by the spring of 1981.

In surveying these divisions for the preparation of town-by-town reports, Peter Stott identified many sites of industrial/engineering importance, and he has compiled a significant amount of data for inclusion on HAER inventory cards. Up to this point, HAER has supplied Peter with inventory card stock and film, but the agency is not supporting a formal inventory or publication, nor are there any plans for such. Peter is working on the HAER cards on his own time, and he could use some help.

The next step is to complete the description and history section on the HAER cards for these sites. Peter has folders of material for site reference arranged by town to make the job easier for volunteers. Steven Lubar at Charles River Historic Industries will be coordinating assignment of towns.
to those who can offer assistance. Please call Steve at 617-893-5410.* If SNEC members help create the inventory, we can then progress toward its publication in time to serve as a basis for the guide we will need if we are to sponsor the SIA Annual Meeting in Boston in 1983.

*In addition to towns or groups of towns, volunteers may select to work on subject classifications such as stationary steam engines or bridges in a particular area.

Helena E. Wright

Mills on the Cocheco River in New Hampshire: Catherine Goodwin is in the process of researching mills and related industrial sites along the Cocheco River in Dover and Rollinsford, N.H. Does anyone know of research done in this area, especially on the 1800-1825 period? Please contact Catherine L. Goodwin, 10 Longview Drive, Chelmsford, MA 01824.

MEETINGS AND ANNOUNCEMENTS

1979 Conference of the Association for Industrial Archaeology at Ironbridge, England: SNEC-SIA member John Yerkes attended the 1979 Conference of the Association for Industrial Archaeology and notes "I recommend a trip to Britain to anyone interested in IA. They must have more sites there per square mile than anywhere else. If any of our members are planning a trip to Britain, I would be happy to be of assistance with introductions or arrangements." Please contact John Yerkes, P.O. Box 502, Bloomfield, Ct. 06002

SNEC Spring Meeting: April 11, 1981. The Chapter will tour Holyoke, Massachusetts.

NNEC Spring Meeting: May 16, 1981. The Chapter will tour Harrisville, New Hampshire.

SIA National Meeting: May 7-10, 1981. The 10th Annual Meeting of the Society for Industrial Archaeology will be centered in Hartford, Connecticut. (See SECRETARY’S REPORT, SNEC.) More details will follow in the next issue of this Newsletter.

RECENT PUBLICATIONS


MEMBERSHIP APPLICATION

To apply for annual membership in either the Southern or Northern New England Chapter of the Society for Industrial Archeology please fill out the following form. Membership in either Chapter automatically includes a subscription to the Newsletter.

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Make checks payable to:
Southern New England Chapter, Society for Industrial Archeology and mail to: William Goodwin, Treasurer, SNEC-SIA, 8 Wolcott Terrace, Winchester, MA 01890

OR

Northern New England Chapter, Society for Industrial Archeology and mail to: Christine Fonda, Treasurer, NNEC-SIA, NH Historic Preservation Office, P.O. Box 856, Concord, N.H. 03301


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