

Society for Industrial Archeology · New England Chapters

VOLUME (1)

NUMBER 2 1992

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Call for Papers

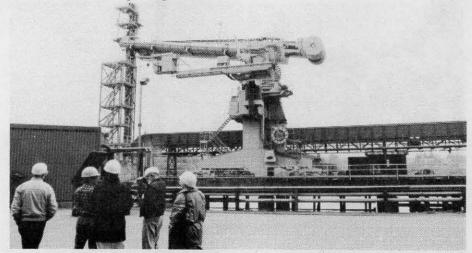
The Annual Conference on New England Industrial Archeology, jointly sponsored by the Northern and Southern New England Chapters, will be held at the newly opened Boott Cotton Mills Museum at the Lowell National Historical Park, Lowell, Massachusetts, on Saturday, February 6, 1993.

Papers by professional and avocational industrial archeologists on a full range of IA topics are invited. Topics with a New England focus are preferred. Typically, papers would relate to research and field investigations of industrial sites, structures, processes, and equipment and their historic context. Reports on efforts at conservation, re-use, public education or advocacy relating to industrial archeology are also welcomed. Groups of presenters

may propose thematic paper or panel sessions. Video presentations and poster displays will also be considered.

The site for this conference is the Boott Cotton Mills Museum which is the first major National Park Service Museum concerning industrial history. The museum occupies the first two floors of the Boott Cotton Mill No. 6 (1873), and is part of a multi-million dollar restoration of the Boot Mills complex, originally constructed in 1836.

Those interested in presenting should submit a title and proposed abstract (one or two pages) to: Michael Steinitz, Paper Chair, 167 Willow Avenue, Somerville, MA 02144; FAX 617 727-5128; phone 617 727-8470 (weekdays), 617 628-2786 (home); e-mail steinitz@silver.lcs.mit.edu. Proposals should be submitted by December 31, 1992.



The Siwertell Swedish-built coal unloader is viewed by NNEC members during the

tour of the Public Service Co. of New Hampshire Schiller Station in Portsmouth.

President's Report, NNEC

I think that the Chapter has an exciting year ahead. In the spring we will meet in Newport, New Hampshire, where our host will be the Newport Historical Society, and tour the waterpowered industries along the Sugar River.

Our Chapter will host the national Fall tour which will be held on the first weekend in October 1993. The tour will be centered in Concord. New Hampshire, and tour sites in Concord, in southwestern New Hampshire along the Contoocook River, and in western New Hampshire along the Sugar River. Would encourage all of our Chapter members who are not members of the national Society for Industrial Archeology to consider joining. National dues are \$35 a year and include subscriptions to the journal, IA and the SIA Newsletter. Write to: Society for Industrial Archeology, c/o NMAH -5014/stop 629, Smithsonian Institution. Washington, DC 20560.

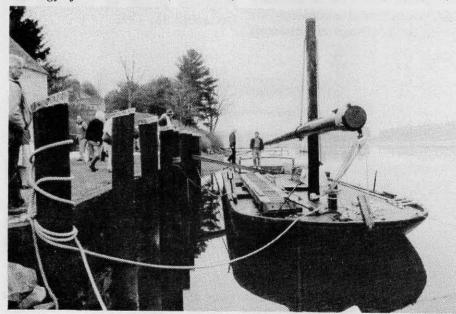
Our fall 1993 meeting will be held in Middlebury, Vermont, where Victor Rolando will lead a tour featuring both iron working and water-powered mill sites. Vic's book, 200 years of Soot and Sweat, The History and Archeology of Vermont's Iron, Charcoal, and Lime Industries, has been published. the blast furnaces at both Forest Dale and Pittsford, where the Chapter conducted recent recording projects, are featured in the book. (Please see the "New Publications" in this Newsletter for an order form.)

At our recent meeting in Concord, officers were elected for the coming year, and our new Secretary is Krista Jackson. All of the other officers remain as before.

Work continues on the Canterbury Shaker Village 1905 Pump Mill. This mill which used a water-powered pump to pump water from a millpond to the village itself, was the site of a recording project last Memorial Day Weekend and, most recently, on Columbus Day. This project, led by David Starbuck and Dennis Howe, is ongoing, and I expect that the chapter will continue to be involved as Canterbury Shaker Village develops its program to interpret the Shaker industrial heritage.

It is with great sadness that I have to inform the Chapter of the recent death of Toni Howe. All who knew her will remember her warmth, her intelligence, her ready wit, and her keen sense of humor. We will not soon see her like again.

Walter Ryan Claremont, NH



President's Report, SNEC

A three-day conference in June of this year at the Lowell National Historic Park had as its theme the discussion of strategies to develop a National Historic Landmark theme study on American labor history, as called for by an act of congress. The enabling act calls for the identification of key sites in labor history, "including the history of workers and their work, of organizing unions and strikes, of the impacts of industrial and technological change, and of the contributions of American labor to American history." The focus of the study will be the role of the American worker in the nation's history. The labor historians, state and local preservationists, and National Park Service (NPS) representatives at the conference recognized the potential role of industrial archeology as a contributing perspective to the development of this theme. Interested parties are encouraged to contact the National Park Service with site recommendations. The NPS will be contracting out work on the theme study through a cooperative agreement. For further information, contact Harry Butowsky, NPS, History Division, P.O. Box 37127, Washington, DC 20013-7127; Tel. 202 343-8155.

An important collection of IA sites in Stoneham, Massachusetts, has recently been listed on the National Register of Historic Places. The Spot Pond Archaeological District is owned by the Metropolitan District Commission as part of the Middlesex Falls Reservation, a 2000-plus acre woodland and watershed area that has been public parkland since 1894. The district includes mill ponds, dams, raceways and associated archeological

The Captain Edward Adams, a gundalow reproduction at the Old York Historical Society dock, York, Maine, was inspected by IA enthusiasts during the NNEC spring tour.

evolved here over more than a century. Activity in the area, known as Haywardville, peaked in the third quarter of the 19th century with the location here of Converse Rubber Shoe Manufacturing, and subsequent expansion of the rubber industry here by Nathaniel Hayward. The district along Spot Pond Brook represents a rarity in eastern Massachusetts: a large complex site which has remained undeveloped over the past hundred years, and therefore has the potential to vield important information on 18th and 19th century water-powered milling and manufacturing.

The fate of another Metropolitan District Commission IA resource has been shakier. Although the last Newsletter reported positively on efforts to preserve the Tugboat Luna, a National Historic Landmark, the Luna is currently sitting partially submerged off the Chelsea shore as the result of a bizarre midnight attempt to haul her out of the Charles River basin and into a shipyard. While the Luna Preservation Society has continued in its efforts to save the tug, scuttling has seemed imminent. However, the Metropolitan District Commission (MDC) has recently publically committed to delivering the Luna to a location where emergancy stabilization can take place. Concerned SIA members should write to the MDC Commissioner, M. Livas Bhatti, Metropolitan District Commission, 20 Somerset Street, Boston, MA 02108 to make him aware of public desires to see this gravely threatened historic ship saved.

Progress continues on resolving the fate of another Boston IA landmark, the Sherzer Rolling Lift Bridge (c. 1898-1901) over Fort Point Channel. This skewed, three-leaf bridge is scheduled to be replaced during construction of the Third Harbor Tunnel. HAER documentation of this much

beloved structure is proceeding, and advertisements for proposals to relocate the bridge have elicited a number of preliminary responses. A local advocacy group, the Rolling Bridge Initiative has called for *in situ* or in context preservation. Stay tuned...

In recognition of the recent publication of Vic Rolondo's book on Vermont IA, 200 Years of Soot and Sweat, I would like to mention two charcoal kilns in Massachusetts which have recently received recognition as important IA sites. The Bassett Charcoal Kiln, Hawley, Massachusetts, was recently listed on the National Register of Historic Places as part of the East Hawley Center Historic District. This 25-foot diameter stone kiln is owned by the Massachusetts Department of environmental Management as part of the Kenneth M. Dubuque Forest. The kiln remains the focus of local and state concerns over stabilization and preservation. A second, and perhaps less well-known Franklin County kiln was recently identified as part of county wide survey of rural historic landscape resources. The Howard Family Charcoal Kiln in Leverett is a 36-foot diameter brick structure built in 1935. and last operated in 1980.

Another set of recently documented IA resources in the western part of

Massachusetts are three concrete and wood coal elevators located in Williamstown on the B & M main line along the Hoosac River. Build between 1914 and 1931, these are an impressive group of structures. there is local interest in preserving these, and any members who could provide information on the history of coal elevators in this region, or of other examples might contact me at the Massachusetts Historical Commission. Two of the Williamstown elevators were built by the Gifford-Wood Company of Hudson, NY. One of the elevators served Williams college.

In September, SNEC members were led on an informative Saturday morning tour of the Climatic Chambers facility of the U.S. Army Natick Research, Developement Engineering Center, led by Lynn Finneran, Facilities Manager and Bob Petric, Plant Engineer. While the Tropic Chamber and Sir Hubert Wilkins Arctic Chamber have been used to test a variety of materials, the distinguishing characteristics of this facility continues to be its ability to test human responses to a variety of climatic conditions. During the Gulf War, for example, the facility was used to answer quickly questions on human reactions to very specific high



Concrete and wood coal elevators (c. 1914 and 1931) in Williamstown, Massachusetts.



The brick 36-foot diameter Howard Family charcoal kiln (c. 1935) in Leverett, Massachusetts.

temperature circumstances. In their tour through the testing chambers, wind tunnels and cooling compressor areas Chapter members came to appreciate, if not experience, the range of temperature and humidity to which volunteers have been subjected at the Research Laboratory. (See the report on HEAR documentation by Virginia Adams in the Spring 1992 Newsletter.)

Hardy SNECers and friends enjoyed a delightful 22-mile round-trip Halloween bike run on the Minute Man Bike Path, a just opened rails-to-trails project on the former Massachusetts entral (1881), Lexington and West Cambridge (1846), and Middlesex Central (1871) lines. The scenic route from Davis Square, Somerville, to Bedford passes many IA sites of interest, including the Arlington Gas Light Company (1914), the Brattle Court Pumping Station (1907), and the Old Schwamb Mill (1860). Tour highlights included the Lexinton Station (1847) and the Bedford Station (c. 1890) with its intact signals. Expert commentery was provided throughout by tour-leader Peter Stott. Vintage railroad photographs of the route and a B & M passenger timetable were brought along by Dave Engman, who was joined by Chapter memebers Marty McDonough and Sam King in informing unenlightened tour members on the finer points

of railroad IA.

The Southern New England Chapter's Fall Meeting will be held Saturday December 5th at the Springfield Armory National Historic Site. This significant site in American industrial and military history was the subject of an extensive 1989 study by Chapter members Michael Raber, Pat Malone, Robert Gordon and Carolyn Cooper, some of which appeared in article form in IA. We will be hosted by National Park Service site historian Larry Lowenthal, and will tour the Armory Square complex as well as the separate Water Shops area. A brief video presentation will start off the tour, and participants may also visit the Armory Museum. A luncheon, business meeting, and annual election will be part of the day's activities. In the afternoon, members may also wish to visit Springfield's Indian Motorcycle Museum. for further information, contact Pat FitzMaurice, Program Chair, 617 643-0554 or Michael Steinitz 617 727-8470 (w) or 617 628-2786 (h). I look forward to seeing you at the sixth annual Winter conference at Boott Mill in Lowell in February!

> Michael Steinitz Somerville, MA

Editorial

As this Newsletter suggests, there is a great deal of industrial research going on in New England right now, and we are fortunate to have contributions from so many of our members. Please keep your articles coming!

In case you have not heard the news, the Northern New England Chapter will be hosting the 1993 National SIA Fall Tour. If you would like to assist with arrangements, be sure to contact Dennis Howe, who is chairing the Tour. This should be a great IA event!

David Starbuck

CALL FOR PAPERS

The 22nd Annual SIA Conference is being held in Pittsburgh June 3-6, 1993. Papers are now being reviewed for presentation. Anyone interested in presenting a paper should send a one page abstract for review before December 1st in care of Billy Joe Peyton at the following address. Authors will be informed by February 1st, 1993, of acceptance.

Institute for the History of Technology & Industrial Archaeology Bicentennial House Morgantown, WV 26505

Article

State Funded Transportation Improvement Projects: State of Connecticut

As part of complying with Section 106 of the National Historic Preservation Act, a memorandum of agreement (MOA) must be undertaken between the State Historic Preservation Office (SHPO)/Connecticut Historical Commission, the Federal Highway Administration and the Advisory Council on Historic Preservation when Federal funds are used for a transportation improvement project which will adversely impact historic property. Frequently, that property will be a historic bridge, although it is possible that a transportation improvement project might impact other types of properties as well. The MOA usually requires that the property will be documented to standards set forth by the Historic Amercian Buildings Survey / Historic American Engineering Record (HABS/HAER), an agency of the National Park Service (NPS).

Often, the State of Connecticut uses state funds for a transportation improvement project. If the project adversely impacts a historic property, the State is not bound to Federal regulations and is not obligated to undertake mitigating measures in accordance with NPS standards.

The Connecticut Department of Transportation, however, in a continuing effort to document our State's historic heritage, including its architectural and engineering history, undertakes its own recordation program when a historic property is adversely impacted as a part of a transportation

Bridge number 1401, Route 160 over Roaring Brook in Glastonbury, Connecticut. This photograph is an example of the type of photodocumentation the Connecticut Department of Transportation undertakes under its mitigation program for state funded projects.

project using state funds. In cooperation and coordination with the Connecticut Historical Commission (SHPO). the Connecticut Department of Transportation has undertaken the responsibility of historically documenting these properties. The Department notifies the Connecticut Historical Commission (SHPO) of all proposed projects. If it is determined by the Commission that the project will have an adverse effect on a historic property, the Department photographs the bridge to the same photographic specifications set forth by the Historic American Engineering Record. The only difference is the use of 35 millimeter film as opposed to the large format required by HABS/HAER. In a similar manner as photos prepared for HABS/HAER, these photos and negatives are placed in chemically stable archival envelopes. The Department prepares a cover page noting the location of the property, Universal Transverse Mercator (UTM) coordinates and a brief description of the property which includes its historic value. Also included in the document is a location map and a photograph index key. The document is prepared on chemically stable archival paper and sent to the Connecticut Historical Commission where, after acceptance, it is

sent to the Special Collections Department in the Homer Babbidge Library at the University of Connecticut for permanent archiving.

The following is a list of properties that were historically documented for permanent archiving under this program.

Bridge #714 Marvin Ridge Road over the Merritt Parkway, New Canaan, CT

Bridge #1401 Route 160 over Roaring Brook, Glastonbury, CT

Tobacco Barns - Rainbow Road, Windsor, CT

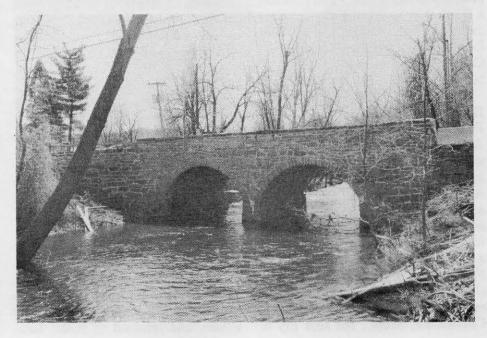
Bridge #3877 Blatchley Avenue, New Haven, CT

Bridge #2773 Route 183 over Center Brook, Colebrook, CT

295 Hopmeadow Street, Simsbury, CT

The Connecticut Department of Transportation takes pride in the outstanding working relationship it has developed with the Connecticut SHPO and hopes that this may set an example in interagency cooperation.

Keith T. Hall Transportation Planner Connecticut Department of Transportation



Article

Migrating Miners

Miners are migrants. Mines open; mines close. Miners disperse to farflung places.

Consider the Ely (later Copperfield) copper mine in Vershire, Orange County, Vermont, which opened in 1853, reached a maximum of 700-800 workers, then closed abruptly in 1883 after financial troubles that terminated in a labor riot in July of that year when the work force had dwindled to about 350. Despite several attempts to revive the mine, the village with more than 50 dwellings, a large store, two churches and the ore processing and smelting plants disappeared within another 25 years.

The big exodus of 1883 was only the final, major dispersal. Thomas Pollard, the first superintendent of the mine in 1854, was typical of the many comings and goings. He worked from 1854 until 1864, was fired or quit depending on conflicting testimony, roamed the northeastern United States as a mining consultant, returned to Elv in 1865, worked until 1869, then worked in the New Jersey iron district and at various places as a consultant while pursuing a law suit in Vermont and cultivating the farm he had bought in 1865 near Dover, N.J. He even came back to Ely-Copperfield as superintendent in 1889, but soon quit because of poor health.

The careers of Cornishmen Francis Boddy and John Coad were typical. Francis married John's sister Elizabeth Ann in 1859 in Cornwall. They came to the United States in 1867. John Coad married Francis Boddy's sister, Eliza Ann, in New Jersey in 1868. John had a brother Tom, and the two also worked around, probably in New Jersey and in the Ely mine in Vermont. John was a long-time resident of the Ely-West Fairlee area, and when the Ely mine closed he worked in Barre, Vt., on the railroad in Williamstown, Vt., and in Charlemont, Mass., but kept Ely or

West Fairlee as a base. Tom went to Colorado where he spent most of his life. In 1879, when he was still at Ely, he was injured by a delayed blast when he went back to check an unfired hole, an accident that occurred fairly often to miners using black powder.

The Boddys and the Coads "followed each other around" from mining district to mining district until they settled in the Seattle, Wash., area where Francis Boddy and sons established a sawmill and greenhouse in Medina, and John Coad and his sons worked for them. John Coad seams to have started his trek west from Vermont in 1901 when he headed for Butte, Mont., with his son Frank. Tom Coad and William Boddy went to Medina when they retired.

Many Ely miners went "west," which meant that they ended up in Montana, Michigan, Colorado, California, Nevada, South Dakota, New Mexico, Minnesota and other states. They also dispersed into nearby states: New York, Massachusetts, Connecticut, New Jersey and Illinois. Others migrated to nearby communities in Vermont: Barre, Olcott (later Wilder), Proctor, Springfield, Bellows Falls, East Granville, Winooski, and in New Hampshire: Groton, Lyman, Lebanon, Claremont, Warren and Rumney. A few, who called Ely home, went long distances for varying lengths of time and came back home for short

Montana was a place that drew miners, and Butte, a great battleground of the era, was a destination for Ely alumni. Philip Waters migrated with other members of his family and died there, but was buried in West Fairlee, Vt. Robert Wilcox, who at different times was in Canada, and shifted from Groton, N.H., to Pike hill in Corinth, Vt., to the Elizabeth Mine in South Strafford, Vt., also tried Butte while making trips back to home base in West Fairlee. Johnny Robbins of West Fairlee tried Butte, stayed four years on one trip, came back to visit for the winter, and returned to Butte. John

Montgomery, who worked in Groton, N.H., and the booming village of Olcott in the town of Hartford, Vt., also tried Montana. And so did Kate Murphy. Although the story may be apocryphal, one newspaper report said she had given up housekeeping and gone to Montana with William Teague.

For some like Samuel Wilcox it was Central City, Colorado, a boomtown that attracted many Cornish miners. Samuel, whose name was originally Woolcock, had been a ringleader in the Ely "war" of 1883. He died in 1885 in Central City of "congestion of the brain," leaving a wife and three children in West Fairlee, Vt.

Patrick Healy was an old hand at Ely. He also went to Colorado, but his home remained Ely. He would stay for years, make a flying visit home and go back for more. He also put in time at Pike Hill when it reopened at the turn of the century. He was known as a "driver," a hard man to work for, from the early days at Ely. He is buried in the Catholic cemetery in White River Jct., Vt., twenty-five miles south of the extinct village of Ely.

Cornelius Foley and his family went to the Black Hills of South Dakota while keeping a base in Ely, where a little daughter is buried in the Catholic cemetery. Foley also went out and came back, spending as long as a year at home. Finally, the whole family went to Lead, South Dakota, where Mrs. Foley died of cancer.

Joseph W. Long, younger brother of William H. Long who designed and superintended the original Ely smelting plant, was a rover. He made trips to California and Nevada where, in 1880, he died, reportedly poisoned by food prepared by a Chinese cook. He wrote a book, *American Wild-Fowl Shooting*, published in 1874.

When a group of adventurous West Fairlee boys decided to push off for Colorado in 1880, the neighbors got up a farewell party in Whitney Hall with West's band providing music until 2 a.m. Dennis Hayes, son of Mathew Hayes, and old timer at Ely, was kill-

ed in Michigan, becoming the seventh Ely boy to die in the Michigan mines in two years. Lewelyn Fisher, who died in Montana, was taken back to West Fairlee for his final resting place. Thomas Pascoe went to Mexico with his daughter Jemima and her husband Thomas Dunstone. Jemima died there in 1892.

There were reports from time to time of an Ely boy who had made good in another profession. Benjamin P. Nicholls was born in Cornwall, came to the United States at the age of ten with his parents, worked at the Ely mine from the age of 15 to 21, and learned the printing trade at the *United Opinion* in Bradford, Vt. After more experience in New Hampshire and Vermont he established his own printing business with his brother in Chelsea, Mass.

Miners took other skills with them as they migrated. R. M. Nettle, who went to Michigan in 1879, was an accomplished "ornamental" penman. William James, a member of the Ely Cornet Band, was also a trombonist, pianist and organist who utilized his talent in Proctor, Vt. George Astbury was an oldtime fiddler at kitchen junkets. John Coad was a clog dancer, ready to perform at the drop of a hat.

As the Ely mine was collapsing in 1883, the water power at Olcott on the Connecticut River in Hartford, Vt., was being harnessed to a paper mill by Charles T. Wilder, a Boston tycoon after whom the village was later named. Down came the workers from Elv: Carl Yanson who worked as a diver on the dam at Olcott; the Pauls, who were black-smiths and machinists; Richard Bidder, a mason; Thomas Garrity, an Irishman, who had spent ten years at Ely in his younger days; Edgar Turner, who had worked at Copperas Hill in South Strafford; and others as Olcott boomed through the eighties and nineties.

But, when the Ely-Copperfield mine was briefly reopened between 1889 and 1893, the attraction was irresistable. Back came George Astbury, who had worked in Barre and Olcott; Jerry McCarthy, an old hand, to resume his job as boss of the dressing house; John Stackpole from South Dakota; William Eva from Olcott; and William Judd, Henry Astbury, Henry Hodge, Samuel Paul, John Cook, John Coad, and William Paul. Fred Polsue, who had moved to Claremont, N.H., took his old place in the engine room at the furnace in 1899 when George Westinghouse was pouring money into his experimental smelting plant. Fred had come to Ely in 1854 with the earliest, and his spirit had never left.

There was something about the drab little mining village of Ely-Copperfield that exerted a magnetic attraction. Oldtimers who had been compelled to go elsewhere at earlier closings, like migrating birds, returned to their old home at every revival.

Collamer M. Abbott White River Junction, Vt.

NNEC 1992 Fall Meeting Report

The NNEC-SIA held its annual Meeting at the New Hampshire Historical Society's Stone Warehouse building on September 26, 1992, President Walter Ryan officiating. The Secretary being absent, there was no Secretary's report, and Woodard Openo was asked to take the minutes of the meeting.

The spring 1993 meeting and tour is to be held in Newport, New Hampshire, probably in May. Participants will see a defunct sawmill, its turbine in place, and will have a tour of industries along the Sugar River, the railroad station and other local sites.

The Nothern New England Chapter is to host the National SIA Fall Tour on October 1, 2 and 3, 1993. Dennis Howe has volunteered to chair the tour. He will schedule a meeting of commit-



The NNEC enjoyed a process tour of the Page Belting Company of Concord, New Hampshire, in October. The building with the tower was constructed in 1893 for the

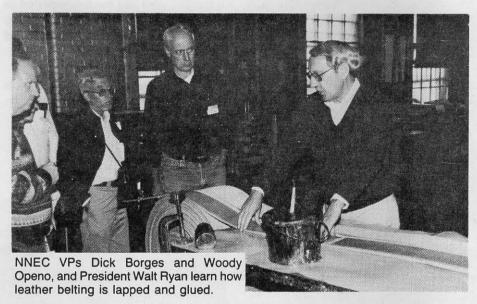
Belt Shop and continues to be used to manufacture leather power transmission belting.

tee members on a Saturday or Sunday as soon as feasible. He said that local Contoocook River area people, especially, are needed to assist with the development of an industrial history of the area, as well as to help coordinate with local advocacy groups. There has been much enthusiasm to show off the region's industrial heritage, and the tour will help to focus on its economic assets. The financial arrangements have not been worked out, but the Chapter is not expected to fund the tour since it will be self-supporting. Seed money may be provided by the national SIA. There will be two full-day bus tours, first following the Contoocook River through Hillsborough, Bennington, Harrisville, Peterborough, etc.; the second following the Sugar River from Newport to Claremont, and then along the Connecticut River to Windsor, Vermont. Several options for the third day include a tour of Canterbury Shaker Village industrial sites led by David Starbuck, a tour of the Belknap Mill in Laconia, and other sites of interest. Arrangement with the bus company and headquarters hotel have been made. Contacts with mills and other stops along the tour route will be forthcoming.

Treasurer's Report (Vic Rolando): As of September 26, 1992 the balance in the Chapter's treasury is \$1881.21, an increase of about \$60.00 since the last report. We have 116 members, including 18 complimentary members.

Report on the Shaker Village Pump mill site recording (David Starbuck): The project was carried out on Memorial Day weekend 1992, continuing a tradition begun several years ago of carrying out site clearing and exploratory excavation on that weekend (notably ironworks sites at Forest Dale, near Brandon, VT, and Pittsford, Vermont). Since the final day of the Memorial day weekend was a rain-out, there will be a one-day continuation of the project on Columbus Day. David also appealed for Newsletter copy and reported that the NNEC is now contributing more copy.





Vic Rolando's book, 200 Years of Soot and Sweat (softbound, Mountain Publications, \$32.95) on iron making, charcoal making and lime burning was announced. The Forest Dale furnace is featured on the cover. Acting secretary's comment: A cursory glance through the book suggests that this will become a model for serious IA studies — we should be proud of Vic's accomplishments.

The election of officers was held. A motion was made by Duncan Wilkie to nominated all of the present officers for a new term. The motion was amended by Woodard Openo to nominate Krista

Jackson to replace the long-absent secretary. The amended motion was passed.

The tour was jointly sponsored by the Chapter and Heritage Concord, Inc., a local advocacy group. Representatives of each group (Dennis Howe for the NNEC and Ann Crew for Heritage Concord) presented each organization's adgenda and accomplishments. A process tour of the Page Belting Company was attended by both groups.

Woodard D. Openo Acting Secretary



A view of Cross Street (date unknown). The bridge in the foreground spans the Sugar River, and the bridge in the background spans the canal. The Concord and Claremont Railroad runs between the canal and the river, crossing the street between the bridges.

The Mystery of Canal Street

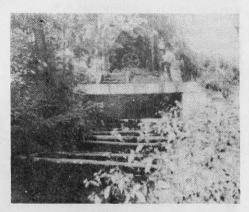
At the beginning of the 19th century canals and locks were constructed around falls and rapids on the Merrimack and Connecticut Rivers to make them navigable for freight boats. Towns developed at these points, and most would eventually have a Canal Street. But how does it happen that the hill town of Newport, New Hampshire, on the small east branch of the Sugar River, has a Canal Street? There is certainly no evidence of one today.

But people who have lived in Newport for a least thirty years remember an open canal flowing in front of a huge shoe factory that closed in 1961. Hundreds of them worked there, but they have no idea how long the canal had existed. Only the curiosity of an industrial archeologist can unravel the origin and history of this canal. The 1879 history of Newport, the U. S. Industrial Census of 1850, 1860, 1870 and 1880, and three old business directories solve the mystery and relate an interesting story.

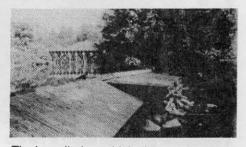
In 1813 James Walcott, an entrepreneur from Rhode Island, arrived in Newport and convinced another developer, William Cheney, that this country was outgrowing the producation of cottage industry and one-man artisan shops. Industry mechanize, and only water power could turn the many necessary wheels. So they purchased 40 acres of land bordering the river from three related Kelseys. From an up-and-down sawmill dam on the upper end of this tract, they dug an innovative canal for several hundred yards paralleling the river. With the huge reservoir of Sunapee Lake six miles to the east there would always be water in dry times. Spring fresets with damaging ice would be diverted away from the canal. The new Tyler tub wheels, invented in Claremont, N.H., would use low head canal water, eliminating the tall, overshop variety troubled by icing in winter.

As an inducement to others to buy canal-side mill sites, Walcott and Cheney built a cotton yarn factory, removing from the home another process in the making of cloth. Elsewhere on the Sugar River system fulling existed since 1779 and carding since 1800. Weaving would remain in the home for another 19 years with the housewife paid 3½ cents per yard.

In the next 85 years—until 1898—the Walcott-Cheney Canal would attract a wide assortment of industries at four different sites. A tannery and currier operated from 1819 to 1888, processing 6,000 hides and using 300 cords of



The gate to the canal at the north end of the diversion dam as it appeared in 1937. The concrete work was added many years after the original gate was constructed in 1813



The log crib dam which diverted river water into the canal c. 1937. This was probably not the first dam to be constructed in this location.



This building housed the Child-Chamberland Shoe Co. (1898-1902), the McElwain Shoe Co. (1902-1921), The International Shoe Co. (1921-1955) and the Lagands & Son Shoe Co. (1956-1967).



A hydropower generation station at the end of the canal installed by McElwain Shoe Co. constitutes the only evidence of 154 years of industrial activity.

hemlock bark in a big year. There would be more carding and fulling mills. A linseed oil mill pressed local flax seed and sold the oil to the tanneries. There would be silk and a worsted varn mill. Mills to make stockings, toys and wooden ware. In 1832 all the textile processes were integrated into a single mill with several operators making flannels, tweeds, cassimeres and satinets. No railroad would reach Newport until 1871. Cotton probably came up the Connecticut River from sea ports and by ox cart from West Claremont. The same transportation carried the finished products to urban markets.

From 1898 to 1961 the shoe industry would take over the entire canal, constantly expanding to use the space of three former mill sites. They would have their own rail siding for delivery of coal to fire steam boilers for heat and processing. The use of electricity would expand to eliminate all direct water power. At first big motors would drive overhead shafting, with belting powering the machines. Eventually, each machine would have an individual dual motor.

In the course of 148 years 18 different product lines were manufactured by 29 different operators along the Walcott-Cheney Canal. Thousands of pay checks raised families and paid taxes, having a major impact on Newport's economy. Today only a small, brick hydro generation building stands as mute testimony to the former industrial activities. Only scraps of printed matter exist to shed faint light on this history. There are no remains of a diversion dam on the river, the canal has been filled and buildings torn down. Only at two or three corners do signs read "CANAL STREET". Factory whistles no longer summon or release workers. If a few trees were planted, the ghosts of our Native American predecessors would think nothing had changed, except there being no salmon in the river.

> Richard D. Parker Mt. Sunapee, NH

Building Portsmouth

The Neighborhoods & Architecture of New Hampshire's Oldest City

By Richard M. Candee

Survivor of three centuries of urban change, Portsmouth emerges as one of the architectural surprises of New England. Portsmouth's unique visual character is in part created by a variety of technologies — from plankframed 17th century structures to the factory-made modular homes of today. It is home to elaborate colonial and federal style mansions, smaller dwellings of mariners and craftsmen, handsome Victorian suburbs, and a wide range of housing types built for successive generations of industrial workers.

Joined by many scholars and contributors, architectural historian Richard Candee explores its evolution from coastal settlement to city of more than a dozen distinct neigborhoods. Illustrated with contemporary and historic photographs, prints, maps and drawings, *Building Portsmouth* offers a rare glimpse into the city's past through the history of its buildings and the people who created them. All are part of the story of *Building Portsmouth*.

BOOK ORDER FORM

Please send me _____ copy(s) of BUILDING PORTSMOUTH for \$14.95 each plus \$2.00 per book for postage and handling. Enclosed is my check made out to Portsmouth Advocates.

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Return to Portsmouth Advocates, PO Box 4066, Portsmouth NH 03802

200 Years of Soot and Sweat

The History and Archeology of Vermont's Iron, Charcoal, and Lime Industries

By Victor R. Rolando

The result of fifteen years of archival and intensive field work, 200 Years of Soot and Sweat will dispel forever the traditional myth of early Vermonters totally engrossed in making maple sugar and milking cows. Something else — something very industrial, as witnessed by the numbers of industrial ruins that have been found and studied — was going on in the Green Mountain State.

This is the first comprehensive book to be published about the industrial archeology of Vermont. In addition to describing 319 ruins and remains of an earlier industrial era, the book includes chapters on the 19th-century techniques of iron-smelting, charcoal making, and lime burning. It is recommended reading for professional archeologists and historians, as well as those with casual interest in archeology, history, or geology of Vermont.

BOOK ORDER FORM

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IA Christmas Ornament Available

The Greater Middletown, Connecticut, Preservation Trust has announced a series of Christmas ornaments decorated with illustrations of landmarks. The first ornament in the series, a view of the Arrigoni Bridge, is offered as a special, 500-piece limited edition. It commemorates the Twentieth Anniversary of the Greater Middletown Preservation Trust, and is available only through the Trust.

The ornament is approximately 3 inches in diameter, and is finely etched with a 14-karat-gold finish. Next year and in years following a new ornament featuring a different Middletown area building will be offered. Proceeds from the sale of ornaments will benefit the ongoing programs of the Trust.

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Current Research in New England

Maine

Topsham Plans to Save Mill

Topsham, Maine, would have a very different look without the Great Bowdoin Mill buildings greeting motorists crossing the Frank J. Wood Bridge from Brunswick.

Town Planner Frank Fiore doesn't want that vision to become a reality, even though he and other town officials have difficulty thinking of positive things to say about the old, vacant yellow structures wedged between the Androscoggin River and Route 201 — possibly the most visible buildings in Topsham.

So while the owner of the complex, John G. Morse, Jr. of Faith, hasn't filed the demolition application he took out earlier this year, the fact that he is considering flattening the buildings is cause for concern.

In October, Fiore expects to apply for a federal block grant through the state Department of Economics and Community Development and the U.S. Department of Housing and Urban Development. The money would be used to turn the mill buildings into something more useful than a vacant historical landmark. Housing for the elderly is one of the uses under consideration.

In addition to their historical value, the Great Bowdoin Mill buildings offer something else to Topsham, although town officials would rather not brag about it. The town collects about \$55,000 in property taxes on the mill because its buildings have a combined property assessment of more than \$2.5 million. Morse says he has tried, without success, to sell the property for as little as \$200,000 during the thick of the recession.

The town will propose developing a portion of the complex, preserving part of it, and "selective demolition" of some buildings, Fiore said. In order to qualify for a block grant, the town must show it is developing its infrastructure, or its network of roads, bridges, and economic foundations, while upgrading a blighted area. "It's an important historical landmark," Fiore said. "We'd like to save those buildings."

Reprinted in part from The Time Record, Brunswick, ME Sept. 15, 1992

Connecticut

Royal Typewrite Factory Burns

The vacant Royal Typewriter Company factory in Hartford, the largest surviving reminder of the city's former eminence as a manufacturing center, was heavily damaged by a spectacular 3-alarm fire on Sunday, July 12th. The 600,000 square foot complex, about three-fifths of which was gutted in the fire and is to be razed, was constructed in stages between 1907 and 1947 and is listed on the National Register of Historic Places.

Architecturally distinguished by its five identical wings, which featured crenellated parapets and square corner towers, the building was, for more than half a century, the principal manufacturing facility for one of the world's leading typewriter companies. By the time production was shifted overseas in 1972, the plant had turned out an estimated five million typewriters. The building had been empty since 1980.

Efforts to rehabilitate the building for residential mixed-use had been unsuccessful. It is hoped that new efforts to reuse the remaining two-fifths of the building will be undertaken to save this endangered resource.

Reprinted from Connecticut Preservation News, Vol. XV, No. 4

Gejdenson Introduces National Heritage Corridor Legislation

U.S. Representative Sam Gejdenson (2nd District) introduced legislation in Washington in June to develop the Quinebaug and Shetucket Rivers Valley National Heritage Corridor, a unique cultural, historical and recreational resource in Connecticut.

"No other area, particularly in the eastern United states, offers the combination of historic mill structures, Native American and pre-colonial archaeological sites, undeveloped recreational opportunities and historically important resources, as the Corridor," Geidenson said.

The Corridor, if established, will provide a management framework to assist the state, regional and local governments and the public in preserving and protecting the area reaching from the Massachusetts and Rhode Island bordors to Norwich.

The Quinebaug and Shetucket River Valley is one of the last unspoiled and undeveloped areas in the northeastern United States. Within the area can be found the Prudence Crandall house, the birthplace of Revolutionary War hero Nathan Hale, the site of the first silk mill in America, the site of one of the largest eighteenth-century cotton mills, the first paper mill in the colonies, and the birthplaces of Samuel Huntington and William Williams, both signers of the Declaration of Independence.

Legislation would also establish the Quinebaug and Shetucket Rivers Valley National Heritage Corridor Commission to develop and implement an integrated resource management plan of the region.

In introducing the legislation, Gejdenson pointed out that the state of Connecticut lags far behind other northeastern states in the amount of land set aside for public recreation, and now ranks dead last among the fifty states in the amount of federally protected park and open space lands within

its borders. The amount of state-owned forest land in Connecticut has declined by fifty percent since 1950. Until Weir Farm was established as a National Historic Site, Connecticut had no national parks, and Weir farm added only two acres of land managed by the National Park Service.

The Heritage Corridor includes the town of: Ashford, Brooklyn, Canterbury, Chaplin, Coventry, Eastford, Franklin, Griswold, Hampton, Killingly, Lebanon, Lisbon, Mansfield, Norwich, Plainfield, Pomfret, Preston, Putnam, Scotland, Sprague, Sterling, Thompson, Voluntown, Windham, and Woodstock.

Reprinted from Connecticut Preservation News, Vol. XV, No. 4

Vermont

Barton, Vermont, Horse Shed

To lower fossil fuel consumption, get a horse! It was the preferred transportation of much of the 19th century. Today cars park in front of the horse shed of the Barton, Vermont, United church, but the old horse shed is going to be restored. The Crystal Lake Falls Historical Association received grants from the Windham Foundation in Grafton, Vermont, and the Vermont Division for Historic Preservation to restore the 1870s building, put up about the same time as the church was built. Existing horse sheds are scarce in Vermont.

Originally there were two horse sheds, one longer than the existing one. The missing shed, farther away from the road, faced the one that is there now. The existing horse shed was probably damaged in the 1927 flood and appears to have been shortened after that. The other horse shed seems to have been removed in the 1930s.

The horse shed has 4 bays with brass rings on the walls for tying up horses

and their carriages. Cross beams separate the stalls. A couple of the cross beams were really munched down by bored horses during lengthy sermons.

Just across the Crystal Lake outlet stream is Tom Reddington's blacksmith shop (most recently, David Thompson's "Turn of the Century Century" carpenter shop). Tom Reddington, who came from England in 1907, shoed horses for a while, and then started shoeing carriage wheels (they often had metal rims). Then, as transportation changed, the blacksmithwheel shoeing shop became an auto garage, and Tom Reddinton, keeping up with the times, pumped gas and gave out road maps. Tom's various tools can be seen in Barton at the Crystal lake Falls Historical Association Museum.

Auto touring cabins, from before the age of motels, sit behind the nearby WilloughVale Inn overlooking Lake Willoughby. Together, the horse shed, blacksmith shop-turned-garage, and auto touring cabins flesh out the picture of the shifts in transportation from the 19th through the 20th centuries.

Robin Tenny Barton, VT

Massachusetts

Old Surbridge Village: The James Johnson Sawmill Site

Old Sturbridge Village has conducted an extensive archeological and historical analysis of 38 sawmill sites located in the upper Quinebaug River watershed in the central Massachusetts towns of Sturbridge and Southbridge. Funded in part by the National Endowment for the Humanities, the project is a component of a long-term multidisciplinary study of the "Tradition and Transformation" of rural New England. Martha Lance headed the Quinebaug mills investigation, with C.

J. Pelletier as surveyor and Greg Hill as field archeologist and computer analyst. John Worrell directed the overall project.

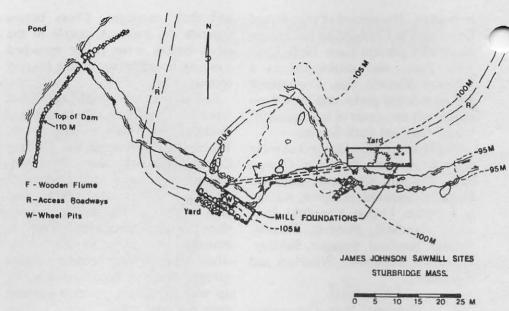
The transformation of the timber economy, a process in which woods became goods, is one consequence of industrialization and an essential element in the economic and environmental change that pervaded the 19th century New England countryside. Another natural resource, waterpower, similarly became commodity to be bought, sold and controlled as industrialization and commercialization altered everyday life in rural neighborhoods, town centers, and industrial villages. The ability to control water, improve technology, acquire woodlots or timber, and hire labor determined who would profit most in the burgeoning lumber and fuelwood trade. Expanded market opportunities encouraged sawmill owners to move mill structures and equipment to new locations, and to create and enlarge elaborate hydrological systems including dams capable of holding many acre-feet of water in extensive mill ponds.

During the past year the focus of this study has been on the holdings of James Johnson who had two mill sites and related features in a large, remote timber stand presently owned by Old Sturbridge Village, Although Johnson was one of the wealthiest landowners in Sturbridge in the early decades of the 19th century and had a large residence near the center, these mills and nearby small residence do not appear in tax lists, censuses or other public documents. Furthermore, the elevated rough topography, small hydrological potential, and the distance from public roads and center of development made the presence of sawmills there most puzzling. Deeds revealed little specific information about the sites' successive owners, developers, or the phases of use and occupation, making archeological investigation all the more valuable. The story that has unfolded typifies the local transition from agrarian to commercial

wood-related industry, as vast acres that were virtually worthless to 18th century cultivators became sufficiently valuable to warrant difficult and ingenious exploitive strategies during the early 19th century.

The 1992 excavations by the OSV Field School and staff focused on the upper two adjacent sawmill sites and on the site of a small residence nearby. It was determined that the mills were in use sequentially. Although there was little difference in the size of the two sawing floors, the situation and power system of the earlier (upper) mill and its simpler power system took far less effort and engineering to set in motion. The extreme heat alteration surrounding the site showed the mill to have burned early in the 19th century. Its successor was situated less than 100' downstream, but below a fall which allowed nearly 30' of headsufficient to power a large overshot wheel. That siting demanded more sophisticated technology and a great amount of site preparation for access and yard space, but it allowed timber to be sawn with as little as 25% of the water flow required by the earlier mill. The small upland brook is seasonal and has little flow, and water conservation and efficiency were crucial for the larger ambitions of Johnson. The irregular terrain denied the development of a large millpond, but a series of seven or more small ponds was created and linked together to provide the needed storage capacity. This combined to allow Johnson to exploit hundreds of acres of remote timberlot at the height of the demand created by three developing textile villages in the vicinity.

Excavation at the dwelling site revealed three phases of occupation. The first appears to have been a simple, temporary residence, perhaps the movable cabin of timber choppers and sawyers similar to one documented in the papers of a neighboring timbering family. The second and third stages of residence at this site were increasingly permanent and included a cellar and



massive hearth, indicating year-round residence. Only the final stage provided clear evidence of female presence in the household, however. Material evidence indicates that the site was abandoned by the end of the 1830s, apparently at the time that Johnson constructed a sawmill on a larger stream nearer to roads and development, and probably also coinciding with the exhaustion of timber on this remote complex of land.

John Worrell and Martha Lance Old Sturbridge Village

Small Things Considered:

Guidelines for Field Recording in Archaeological Excavation

By John warrell, David Simmons, Martha Lance, and Will Gates

Newly published by Old Sturbridge Village, this 66-page archeological field manual contains blank recording forms with the invitation for you to duplicate them for your own use. Available for \$10.00, plus postage and handling, from the Old Sturbridge Village New England Bookstore, 1 Old Sturbridge Village Road, Sturbridge, MA 01566.

Old Sturbridge Village Field Schools

Old Strubridge Village (OSV) has conducted its Field School in Historical Archaeology annually since 1977, and in 1989 its first Field School in Architectural History was offered. These two programs help fulfill the educational mission of the museum, and they also form the core of its material culture research, as the above and below ground cultural history is studied in tandem. The home and shop sites of farmer-blacksmith Emerson Bixby and his family in Barre Four Corners, Massachusetts, were studied in this way, leading to an entire new living history exhibit in the museum. More recently the home sites and neighborhoods of woodworker James Clark in West Brookfield and of the Pliny Freeman farm family have been similarly studied. These two field schools are now being offered on alternate years, with the OSV Field School in Architectural History to be conducted from June 14 to July 30, 1993, and the Archaeology Field School again in 1994.

The research focus of next summer's seven week program will be the historical and architectural context of the Salem Towne House, a large

Federal-Period dwelling that was moved to Old Sturbridge Village from Charlton, Massachusetts. Participants will research similar structures and their builders and occupants, while documenting and recording several related buildings in the vicinity. The course will expose participants to principles and methods of evaluation, physical and historical documentation, and the interpretation of historic structures through combined instruction, field trips, and hands-on experience. Leading scholars in the field of vernacular architecture will lecture and conduct workshops on new research and analytical methods. Course credit for the program will be available.

For further information, please contact Myron O. Stachiw, Field School Director, Old Sturbridge Village, 1 Old Sturbridge Village Road, Sturbridge, MA 01566; Tel. 508 347-3362.



Richard Borges, NNEC Vice President and Director of the Old York Historical Society, explains the proposed rehabilitation of the trolley station near York Beach, Maine.

NEW MEMBERS SOUGHT

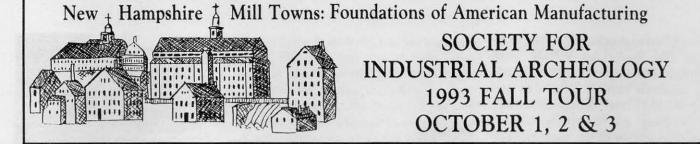
Both the Southern & Northern New England Chapters are eagerly seeking

NEW MEMBERS

MEMBERSHIP APPLICATION

To apply for 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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The Northern New England Chapter will sponsor the 1993 Society for Industrial Archeology Fall Tour. The plan which has been proposed to the National Board will focus on small New Hampshire mill towns which are seen as living symbols of the burst of American industrial development which occurred in the early 19th century.

Many of these towns have grown around a core of mill buildings, some of which are now dilapidated in disuse, some rehabilitated to new use suited to today's economy, and a few continue to house manufacturers. These mill buildings are historic, and the towns which support them are indeed "foundations of American manufacturing."

Headquartered in Concord (in a hotel appropriately located at Bow Mills), the tour will be held on Friday, Saturday, and Sunday, October 1-3, 1993. Registration will be held on Thursday evening, September 30, with a welcoming ceremony possibly at the State House. On Friday, the tour will follow the Contoocook River. While no itinerary has been set, it has been proposed that process and walking tours be experienced in West Hopkinton, Hillsborough, Bennington, and Historic Harrisville for lunch. In the afternoon the tour will continue through Peterborough, Jaffery, and possibly Nashua.

Saturday would see the tour continue along the Sugar River, but first, participants will visit Concord sites such as the Page Belting Company (established 1868), the 1888 Gasholder (the symbol of the NNEC), and the 1895 Sewalls Falls hydropower facility. Later, the tour will include a woolen mill, early railroad structures and lunch

in Newport. The afternoon will focus on the Connecticut River Valley, the birthplace of the American arms and machine tool industries. We will, of course, visit the Cornish-Windsor bridge.

The 1993 SIA Fall Tour will conclude on Sunday with an optional guided visit to the remains of the extensive waterpowered mill system of Canterbury Shaker Village.

Suggestions, proposals for process tours, and volunteers for committee work are needed! Here is a chance to show off some of Northern New England's rich industrial heritage. This is a region where many technologies and industries were born and nurtured to become major components of American culture. It is yet another aspect of our region which we are proud to exhibit. Much help is needed to make the 1993 tour a success. Please contact:

Dennis Howe, Chair SIA 1993 Fall Tour 22 Union Street Concord, New Hampshire 03301 Phone: (603) 225-6649 (office) (603) 224-7563 (home)

FAX: (603) 226-2548

The Society for Industrial Archeology promotes the study of material culture of American and Canadian industrial pasts and encourages field investigation, research, recording and exchange of information on all aspects of our industrial heritage. The Northern New England Chapter is one of many orgainzed to implement SIA aims on a regional basis. The success of SIA activities is largely due to voluntary assistance of individuals and institutions.