



VERMONT ARCHAEOLOGICAL SOCIETY NEWSLETTER

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ESAF Conference a Success

*John Crock, Director,
University of Vermont
Consulting Archaeology Program*

From November 8-11th the VAS hosted the 74th Annual Meeting of the Eastern States Archaeological Federation (ESAF) at the DoubleTree Hotel in South Burlington. The conference marked the first time that Vermont had hosted this regional meeting. ESAF is made up of sixteen state archaeological society members, including the VAS, covering a broad region from New Brunswick in the north, to Virginia in the south, to Ohio in the west. Some 200 people registered for the four-day meeting, hailing from as far away as Florida and California.

The meeting kicked off on Thursday the 8th, with a guided tour of the Lake Champlain Maritime Museum (LCMM). The VAS sends their thanks to the LCMM for opening up their facility for the tour, especially to Adam Kane for his help and guidance. The group then toured the Shelburne Museum which, like the LCMM, also opened up especially for the ESAF tour. Many thanks go to Claire Robinson-White for organizing things at the Shelburne Museum. Thanks go to past VAS President Francis "Jess" Robinson and to Rob Ingraham as well, for leading the van loads of participants safely and on schedule. Thursday's events were capped by a reception in the Marble Court at the Fleming Museum where registrants toured galleries including the James B. Petersen Memorial Gallery of Native American Cultures.

The scheduled program of 65 presentations began on Friday the 9th and continued until noon on Sunday. From 8:00 a.m. to 5:00 p.m. on Friday and Saturday and from 8:00 a.m. to 12:00 noon on Sunday morning, participants enjoyed a packed program of 20-minute presentations. The talks ranged in subject from Paleoindians to living Indians, from the origin of stone cairns to the application of nuclear science to archaeology. Two in-progress films were also shown over the course of the weekend's overflowing program.

Saturday evening's banquet in the DoubleTree ballroom included an entertaining slide lecture on the Indians of Deer Isle, Maine, by Bill Haviland. It was great to have Bill back in Vermont and learn what he has

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"Welcome and Opening Remarks" at ESAF Conference

*by VAS President Sarah van Rychevorsel
Friday, November 9, 2007*

"I thought saying a few words this morning as a representative of the Vermont Archaeological Society would be easy. And of course I'm sure I could get away with simply thanking all of you for coming and saying what a great honor it is to be hosting the ESAF conference. But I felt it my duty to think of the best way to represent the VAS, which is a society made up of both professionals and avocationalists, without breaking the illusion of solidarity. However, I think I need to split us apart for a minute.

"You damn professionals! I am amazed over and over and over again as I have watched so many of you work so hard. Often for little recognition in the greater society and for so little money. I envy your passion toward something that means so much to me. And I thank you for your "gate keeping" and dedication.

"On the other hand, I have often heard non-professionals say they feel intimidated by the professional archaeological community. I'm a little frightened to actually be saying that here. But I bring it up because as there is more and more pressure to build over our archaeological sites, less funding for long term excavations and study and what I would call a new chapter in recent history, archaeologists are seen more and more often as the bad guys. We absolutely need solidarity.

"So avocationalists, try to understand what unbelievable pressure most professionals are under to even get jobs, keep positions, find funding, . . . this list goes on and on. Stop being intimidated. Ask the stupid question you don't understand, look to see where best you can help, and step in.

"And professionals, answer the stupid question that may seem obvious to you. And please, don't overlook the potential source of talent and time that avocational archaeologists can offer. Ask for the help.

"I sometimes think the feeling of intimidation comes from information being held back inadvertently, probably due to overloaded work situations and lack of resources.

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Address general inquiries concerning the Society to the Secretary.

**2007 Annual Business Meeting
and Board Elections**

**Brigitte Helzer elected VAS President
for 2007-2008**

The 2007 Annual Business Meeting of the VAS was called to order at 5 PM on Saturday, November 10, 2007 in the Hospitality Room of the DoubleTree Motel, South Burlington, immediately after the final paper presentation at the ESAF Conference, called to order by President Sarah van Ryckevorsel.

First order of business was election of Board members for the 2007-2010 term. Nominated were incumbents Cara Lia Sargent and Shirley Paustian. Also nominated were Brigitte Helzer and Jerrie Vane to replace incumbents Victor R. Rolando and Sarah van Ryckevorsel, who decided not to be candidates for another term. Members present voted unanimously for all candidates. Jesse Robinson stepped down from his 2006-2009 seat but was not immediately replaced (an

open seat for now).

Second order of business was Treasurer's Report, read by VAS Treasurer Charlie Knight. Charlie's report, which covered the period from January 2007 up to the beginning of the ESAF Conference, indicated the VAS solvent and in good fiscal condition. The VAS has 175 members in good standing. Charlie also reported 192 registrants and 128 banquet tickets were sold for the ESAF Conference. The meeting then adjourned.

The new Board met a few minutes later with the following Board Members in attendance: Charlie Knight, Cara Lia Sargent, Geana Little, Allen Hathaway, Brigitte Helzer, Jerrie Vane, and Ray Rodriguez (plus immediate Past-President Sarah van Ryckevorsel). The following officers were elected for 2007-2008: Brigitte Helzer, President; Ray Rodriguez, Secretary; and Charlie Knight, Treasurer. A Vice-President will be elected at the next Board meeting in December. The following topics were discussed with no action: Participation expectation to remain on the Board; web site management; on-line access to newsletters, journals, minutes, treasurer's report, and other public documents; whether a laptop computer should be purchased for dedicated VAS uses; the need to archive records; and recognizing the service of previous Board members. The Board meeting adjourned at 6:15 PM.

Editor's note: Christina R. Switzer resigned her seat in her 2005-2008 term on November 30 due to personal scheduling conflicts that made it difficult for her to attend board meetings.

The VAS usually has vacancies that need to be filled. Any member in good standing who would like to take a more active role in the Society, please contact any board member (see list at left). The Board meets almost every month, at times and places decided by the Board, usually in the Burlington area, but sometimes elsewhere in the state for the convenience of some of the board members.

ESAF (continued from page 1)

been up to since retiring from UVM eight years ago.

Following the completion of the ESAF program on Sunday, Giovanna Peebles, the Division for Historic Preservation, and the Vermont Agency of Transportation hosted a reception at the Vermont Archaeology Heritage Center facility in South Burlington. This event, the tours, the reception at the Fleming, and the overall Vermont hospitality on display throughout the meeting made it a special, memorable weekend. Special thanks to Brigitte Helzer, Charlie Knight, Geana Little, Shirley Paustian, Jess Robinson, Vic Rolando, and Jerrie Vane for help organizing the meeting, and to other VAS officers and members who volunteered their time at the registration desk and in the book room.

Pictures from the ESAF Conference



Reception at Fleming Museum.



"Did you pre-register?"



One of the Saturday evening Banquet tables.



All smiles at the head table.



Sunday reception at Vermont Archeology Heritage Ctr.



And the winning number is . . .

**Introduction to Jerrie Vane,
Vermont Archaeology Month Coordinator**

In June of 2007 I took the position of Program Coordinator for Vermont Archaeology Month (VAM). This part-time position had recently been vacated by Cara Lia Sargent, who was pressed by family obligations to seek full time work. Her experience and education were ideally suited for the needs of the VAS. She now holds a seat on the VAS Board where her ideas and energy are invaluable and I continue to rely on her as a resource.

I recently completed a graduate degree in history at the University of Vermont. My area of concentration was Russian history and specifically, the legacy of the Mongol occupation of Russia in the 12th through the 15th centuries. During my studies, I was particularly taken with a school of historical thought that focused on the paramount importance of geography on the human record. Looking at Russian history through a geographical lens provided an entirely new perspective for me. However, all forms of history fascinate me and I have done volunteer work at many Vermont historical establishments. The job of Program Coordinator for the VAS is my first in the field of history – strange to say I had never really considered archaeology as something in which I could put my love of history to work. But as I now begin to realize, it is opening yet another new perspective from which to view the world.

By now I may have either spoken with many of you on the phone, or exchanged emails with you, or seen you at a Vermont Archaeology Month event. I look forward to seeing or working with you again in 2008.

Vermont Archaeology Month Wrap Up
Jerrie Vane
Vermont Archaeology Month Coordinator

As the new program coordinator for Vermont Archaeology Month (VAM), I wanted to attend as many VAM events as I could. This seemed the best way to familiarize myself with the people involved and to see what was what. After every event, without fail, I went away impressed with the knowledge of the presenters and with a fascination for things I learned. I have to admit, I had no idea what an atlatl was, or flint knapping for that matter. But after seeing an atlatl whiz through the air and hit its target, and watching several master flint knappers at work, I appreciated Native American history in a new way. I could say the same about the lecture given by Adam Kane at the Lake Champlain Maritime Museum about the ships that have been located at the bottom of Lake Champlain. In fact, I could list each event and say something similar about the things I

learned or began to realize. But let me talk a little more about Vermont Archaeology Month in general.

VAM was honored to include in its program, events representing archaeologists from the UVM Consulting Archaeology Program, the University of Maine at Farmington (UMF), and the University of Massachusetts (UMass) at Amherst. UVM Professor Andre Senecal gave an experiential lecture, about the French Pointe-a-la-Chevelure settlement - complete with music to set the scene and replicated jewelry from the period. UMass Professor Mitch Mulholland gave a fascinating lecture revealing a Native American hunting camp once located on what is now the VELCO substation site in Vergennes. Further, industrial archaeologist Victor Rolando presented five separate events, ones in which the attendees left with new images and appreciation of what a thriving mill town or kiln site might have been like in its heyday. Jessica Desany, graduate student with UVM CAP, presented research on Ft. Ste. Anne.

According to Kristin Peterson-Ishaq, her presentation "attracted a mix of professional and amateur archaeologists, Center members and members of the wider UVM community, including students." Similarly, Corey McQuinn, project manager from the Hartgen Archaeological Associates presented recent findings of Native American Tools and English ceramics on the banks of the Hoosic River. His presentation was written up in the Bennington Banner. David Skinas, archaeologist with the U.S. Department of Agriculture, sent a note to his colleagues that said it all:

"Thank you all so much for coming out yesterday and participating in the conservation field days event. With the addition of UMF this year, what a great group of archeologists to come together for this annual event during archeology month. I am moved by your continued dedication to the Addison county kids over the years, rain or shine, which has got to be making a difference to them. The organizer remarked about how many enthusiastic instructors we had. You make me proud. Thank you!"

All VAM events could be described similarly: valuable, entertaining, and ultimately educational.

Next year, I hope to be able to include an even wider variety of events and to present them in some of the Lake Champlain Quadricentennial venues in anticipation of its celebration in 2009. If anyone reading this has an idea for an event or would like to talk about hosting one, please feel free to contact me at vjerrie@hotmail.com or 802-425-4086.

**Results of Twelfth Annual
Northeastern Open Atlatl Championship**
Allison Gee, Chimney Point Site Interpreter

The Chimney Point State Historic Site in Addison is pleased to announce the results of the Twelfth Annual Northeastern Open Atlatl Championship held on Saturday, September 15, 2007. The Vermont Archaeological Society cosponsors the event, which is one of many events featured as part of September's Vermont Archaeology Month. Paired with the event was the Second Chimney Point Flint Knap-in, ably organized by Charlie Knight, with ongoing flint-knapping workshops by master flint knapper Tim Dillard.

Sixty competitors from all parts of New England and New York, ranging in age from six years through retirement, braved the wet and rainy morning weather to test their atlatl skills in accuracy and distance. As the morning ISAC (International Standard Accuracy Competition) wrapped up, so did the gloomy weather. The sun began to shine as did the diverse individuals and groups of atlatlists during the Open Competitions. Participants included families with young children, families in retirement with adult children, anthropology clubs from both Franklin Pierce University in N.H. and University of Vermont, and 20 high school anthropology students using their newly learned knowledge and handmade atlatl. For the past twelve years Rutland High School (RHS) anthropology teacher, John Peterson, has incorporated our event into a class project and brought his students to compete. Nine years ago I was one of these students, making my own Inuit-style atlatl and using it to compete. Although the RHS competitors may not have been top scorers, they certainly had great

enthusiasm and spirit to add to the competition.

Anna Milovich of Suffern, NY, the returning girl's gold medalist, was crowned Grand Champion for the second year in a row after an exciting shoot out with the top woman, man, boy, and girl. Gold medal winner in the men's division was Erik Smith of Mansfield, CT. Last year Erik won the bronze medal. Silver medalist, and local favorite, was Greg Maurer of Vergennes, VT. The bronze medal went to another local favorite, John Morris of Grand Isle, VT. Both Greg and John have had high enough ISAC scores to be ranked at the world level last year.

Women's division gold medal winner was Marya Carmolli of South Burlington, VT. Marya had been woman's champion several years ago. Silver went to Celine Rainville, an anthropology student from Franklin Pierce with Vermont roots in Highgate Center. The bronze medal was awarded to Linda Nolf, of Westbrook, CT. Linda also did well competing in both Saturday and Sunday's ISACs.

Girl's returning silver medallist was Elena Edwards of Suffern, NY. She and Anna have been competing with and against one another for the past few years.

Sam Weaver of North Ferrisburgh, VT, won the boy's gold medal, despite half his tough competition coming in the same car with him. Silver medalist and Weaver family passenger, was Ian Brennan also of North Ferrisburgh, VT. The bronze medal was awarded to Austin Kemp of Richmond, VT. Austin was also at Chimney Point the previous day to participate in a workshop taught by beloved Bob Berg.

Austin as well as nine others spent Friday afternoon learning to make their own atlatl and darts, and discussing with Bob just about everything one could about



Top winners (l-r): Anna Milovich, Girl's Gold and Grand Champion; Sam Weaver, Boy's Gold; Marya Carmolli, Women's Gold; and Erik Smith, Men's Gold (Vermont Division for Historic Preservation photo).



Linda Nolf, on the ISAC range along the eastern shores of Lake Champlain (Vermont Division for Historic Preservation photo).

atlats. Among the participants we were quite lucky to have two educators, now ready translate their new knowledge and skills into their own classroom. Also we had an area journalist experiencing and writing about the atlats in a sports column for his town's weekly newspaper. Other atlats-makers were a father-and-son duo, using the workshop as educational opportunity outside of the classroom, and a high school senior who will be incorporating his interest in physics and atlats into a Graduation Challenge project in which he will share his knowledge with local middle school students during a day spent in a nearby outdoor classroom. What incredible ways people are using their interest in atlats to create incredible hands on, authentic learning experiences for students!

The Chimney Point State Historic Site is located in Addison, on Lake Champlain at the intersection of VT Routes 127 and 17. For more information, visit www.HistoricVermont.org or call (802) 759-2412.

Kids and Research at the "Old Job" in the Green Mountain National Forest, Vermont

Sheila Charles

Archaeological Research Consultant

David Lacy

Green Mtn National Forest Archaeologist

Relics & Ruins is a 2-week summer archaeological field program designed for kids entering the 5th through 9th grades. As we mentioned during our presentation at the New Hampshire Archaeological Society spring meeting, over the course of 11 summer field seasons we have integrated art, history, environmental science, and archaeology into a fun, outdoor learning experience on the Green Mountain National Forest in Vermont. In 2005



Sheila Charles (r.) showing two young archaeologists "how to do it" at the site of the Old Job schoolhouse.

and 2007 our focus was on the so-called "Old Job" village c.1865-1930 in Mount Tabor, Vermont, formally known as Griffith in deference to the larger-than-life land baron and Vermont's first millionaire, Silas L. Griffith (1837-1903), who developed and owned the village, among many other acres and assets. The village site features the remains of mills, charcoal kilns, houses, a boarding house, a one-room school, and more. We emphasize a place-based, hands-on approach; an awareness of multiple ways of re-creating the past; and the notion that past land-use histories can inform us about the changing environment as well as the people who lived there.

While the interrelated environmental science and art element of the field school concentrated on habitat research and identification of the various fish and amphibians in the streams running through the village, this year's archaeological field investigation concentrated on the site of the one room schoolhouse, which in its latter years was used as a hunting camp. While no foundation is apparent on the knoll of the hill where the schoolhouse was situated, the hill terrace would have easily accommodated a one-room schoolhouse, which typically measured approximately 18 to 20 feet by 24 feet. It was no surprise the schoolhouse did not contain a cellar hole, and in fact, 19th-century institutional guidelines warranted corner footstones to encourage ventilation and deter wood floor deterioration.

Although we presumed the schoolhouse site would not contain a dense artifact horizon, we were surprised to encounter a widespread scatter of period artifacts reflecting activities of the former students and teachers, including a bell clapper, slate pencils, slate board fragments, conical blown in mold glass ink bottle fragments, and numerous "lead" pencil parts – resulting in pencil research!

History of the "Lead" Pencil

The "lead" pencil (which contains no lead) was invented in 1564 when a huge graphite (black carbon) mine was discovered in Borrowdale, Cumbria, England. The writing apparatuses, formed by inserting graphite rods into carved and hollowed out wood sticks, were called lead pencils, as the newly-discovered graphite looked like and was called black lead or "plumbago," from the Latin word for lead ore. The word pencil comes from the Latin word "penicillus," which means "little tail" – the name of the tiny brush that ancient Romans used as a writing instrument. The first mass-produced wood-cased pencils were made in Nuremberg, Germany in 1662. William Monroe, a cabinetmaker in Concord, Mass., made the first American wood pencils in 1812. Benjamin

Franklin advertised pencils for sale in his Pennsylvania Gazette in 1729. George Washington used a 3-inch pencil when he surveyed the Ohio Territory in 1762. The idea of attaching an eraser to a pencil is traced to Hyman W. Lipman of Philadelphia whose 1858 U.S. patent was bought by Joseph Rechendorfer in 1872 for a reported \$100,000. Numerous graphite rod fragments and ferrules, the metal rings that hold erasers onto the wood pencil shafts, were recovered during our field investigation of the Old Job schoolhouse site.

In addition, cast iron wood stove fragments, window and brick fragments, building hardware, stoneware and whiteware fragments, and shotgun shells were recovered.

Each group of kids that passes through our camp leaves with a greater appreciation of natural and cultural resources, however this year's school house site investigation seemed particularly appropriate for our school-age "junior-archaeologists." In addition, our focus on Silas Griffith's estate, part of the core of the original (1932) Green Mountain National Forest, was fitting as this year marks the 75th anniversary of the Green Mountain National Forest!

"Opening Remarks" (continued from page 1)

"How do we keep our fellow citizens informed and enticed by the work that we do? The VAS board struggles with this constantly. I know it would be a great help if more professionals had the time to keep the VAS better informed of the work that is done in Vermont. Which frankly speaking and rightfully so, our members have a right to demand from us. So I am brave enough to ask you to keep presenting your work to your local communities. Imagine if the 50-some-odd papers delivered over the next couple of days were presented to small groups of people all across the eastern states and Canada, what a huge amount of education you would have delivered without much extra effort.

"Whether you are a professional, avocational or even an armchair archaeologist, the field of Archaeology is often full of frustration and heartbreak.

"So it is a great comfort to me to be in a room with other people who understand why this love affair is worth it.

"And I want to welcome you and thank you for coming. And tell you what a great honor it is to be hosting the ESAF conference.

"So let's teach each other a lot, learn a lot, and have some fun.

"Thank you."

A letter from Sue Smith, one of our long-time Life Members

July 8, 2007

Dear Vic,

Yes, this is my address and will probably be my address until they carry me out feet first My health is still good - knock on wood - but I know I can't go on forever. Thank you, God.

In the meantime, I love receiving the VAS Newsletter and other VAS mailings. I am saddened by Jim Petersen's senseless death. I remember him as an under graduate way back when I was helping to keep the Newsletter alive. Did we use Xerox reproduction then? It was blue printing on white, I think, whatever the means. This was before you were involved. You gave a talk on coke (charcoal) production and blast furnaces for our budding society the first time I heard you.

I read all the newsletters with interest. Familiar names, Joe Popecki, Giovanna (she taught an informal evening class at UVM trying to bring some of us up to speed. This was about 1977), Nick Muller, the men who demonstrated "point" making and the atlatl.

The VAS posters (VAM) go up outside my apartment every July-August. They are great! Good-looking and very good eye-catchers. Vermont and archeology openers for discussion.

All this chatter is really to say, to tell you and all the members of the team that I am so glad that the VAS is prospering. VAS is doing a great job for the young people of the State and all interested citizens.

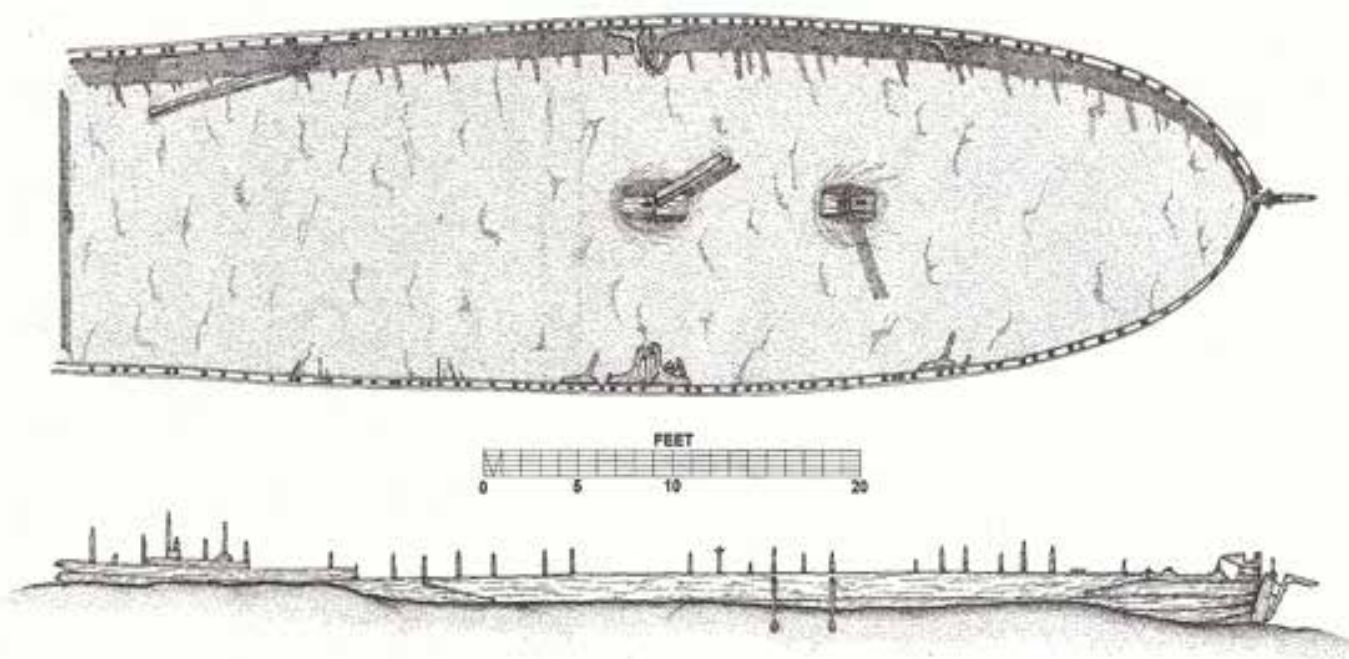
My address label says "L79" and that Life Membership has been a real bargain over the years - lots of memories, interesting articles about areas I can almost identify, read-and-learn education, and reports on old friends' doings. And artwork, - colorful! Do not lose the Colchester Pot! Use a new one if you want, but I am very fond of the familiar one. It will always be *the one* for me.

Sorry I have rambled but at least you know I am still here and rootin' for the VAS.

Keep digging!

Sue Smith
Kalamazoo, Michigan

(Editor's note: Sue and late husband, Durwood Smith, were both involved in the formation of the VAS from the very beginning, as Founders, Board Members, and officers: Sue was Secretary and Durwood was Treasurer and later Vice-President during the 1960s-70s.)



Profile and plan view of the Shoreham Sloop (Lake Champlain Maritime Museum collection; by Adam Kane and Chris Sabick).

Shoreham Sloop

Adam Kane, Lake Champlain Maritime Museum

This past July the Lake Champlain Maritime Museum (LCMM) completed a three-year archaeological study of a shipwreck in the Shoreham, Vermont, waters of Lake Champlain. The vessel is a Lake Champlain canal sloop that dates to the 1820s. The well-preserved, 65-foot long wreck was located in 2003 during the LCMM's comprehensive sonar survey of the bottomlands of Lake Champlain. The vessel, called the Shoreham Sloop (VT-AD-1369), was singled out for Phase III excavation because it is one of only a handful of early nineteenth century merchant sailing vessels found in Lake Champlain. In 2005 the exposed parts of the wreck were documented, and portions of the site were excavated in 2006 and 2007.

Sailing canal boats were built on Lake Champlain when the Champlain Canal opened in 1823 and construction of this vessel type continued into the 1870s. The Shoreham Sloop has two particular features that helped to identify the vessel as an early canal sloop. The shipwreck was found to have a rounded hull; while later canal boats were 'boxy' in shape in order to take advantage of the entire volume of the canal locks. Additionally, the vessel had a bowsprit (a spar extending out from the bow used to set the jib) and later sailing canal boats did not have this feature since a bowsprit would have reduced the length of a vessel's hull. Since the size of the canal locks were fixed, a bowsprit would

have reduced the amount of cargo a canal boat could carry, as well as its profitability.

In the 2006 and 2007 field seasons, nearly three feet of sediment was removed from the bow and stern of the Shoreham Sloop before the underlying hull structure was encountered. Excavations in the bow revealed a series of shelves and storage areas just aft of the stem. The excavations in the stern cabin exposed a complicated arrangement of benches and storage compartments. Iron fasteners, discarded rigging elements, plate glass fragments, leather scraps, and other pieces of vessel equipment were recovered. The only diagnostic artifact found was a single brass button of a style that dates from the 1790s to 1830s, and supports the early nineteenth-century time frame for this vessel.

Though a full analysis of the Shoreham Sloop wreck is still underway, we can already come to some conclusions about the boat. The few artifacts and the lack of cargo suggest that the boat was scuttled at the end of its career, and not lost in distress. The most important findings come from the shape and construction of the hull that helped to assign it an approximate date. The rounded hull form and shapely bow are an interesting contrast to the flat-bottomed, bluff bowed sailing canal boats of the mid-nineteenth century, and suggests this is a rare example of an early sailing canal sloop. The archaeological study of the Shoreham Sloop was funded by Jane's Trust, NOAA's Office of Ocean Exploration, the South Lake Trust, and the Leo Cox Beach Philanthropic Foundation.

**Obsidian in Vermont: Analysis of a
Projectile Point in the Gerald Coane Collection**

*Matthew T. Boulanger, Archaeometry Laboratory,
University of Missouri Research Reactor*

Thomas R. Jamison, Hartgen Archeological Associates

Born in 1898 in Brattleboro, Vermont, Gerald B. Coane (Figure 1) assembled a moderately sized artifact collection during the middle twentieth century. Coane worked in a local factory after having served in World War I. Later in his life, he operated a railroad crossing over the Connecticut River. After retirement in the early 1960s, he began collecting artifacts from archaeological sites in southern Vermont on a regular basis. Like many collectors in Vermont, Coane used his artifact collection as an educational tool, and he gave lectures on archaeology and history to local schools. Upon his death in the 1970s he donated his collection to the Putney Historical



Figure 1. Photograph of Gerald Coane with shovel in hand ca. 1965. Coane is believed to be standing on the bank of the Connecticut River at the site of Fort Dummer. Wantastiquet Mountain and the railroad crossing of the Connecticut are visible in the background.



Figure 2. The obsidian projectile point in the Coane collection, catalog number Y11, a notched and indented-base obsidian biface reportedly found "On the Shore of the Connecticut River" in Vermont. Scale is in centimeters.

Society. A catalog accompanying the collection indicates that Coane focused his collecting close to home. Although he did not record where he collected all of the artifacts, most appear to have been gathered at the West River site (VT-WD-3) located near the confluence of the West and Connecticut rivers.

One artifact in Coane's collection is of particular interest. This piece, numbered Y11 in his catalog, is described as an "Obsidian arrow head found on the shore of the Connecticut River" (Figure 2). This piece is of interest because obsidian, a naturally forming volcanic glass, is rarely found on archaeological sites east of the Mississippi River. Could this obsidian point be scarce evidence for long-distance trade by Native Americans? We have recently conducted several analyses of this obsidian artifact in order to answer this question, and we present here a brief summary of the results.

Source of the Point

The chemical fingerprint of the point was assessed at two facilities: the University of Missouri Research

Reactor (MURR) Archaeometry Laboratory, Columbia, and the Northwest Research Obsidian Studies Laboratory (NWORSL), Corvallis, Oregon. Analyses at MURR were done first using X-ray fluorescence spectrometry (XRF). XRF analysis is essentially non-destructive, and we conducted a series of six assays at varying locations on the point. The resulting compositional data were compared against the MURR database consisting of over 250 obsidian sources characterized by XRF. A second assay of the artifact was conducted using neutron activation analysis (NAA). Analysis by NAA requires that a small portion of the artifact be removed and irradiated. Unlike XRF, NAA allows analysis of the entire piece and it provides data for up to 34 elements. MURR has characterized over 15,000 individual pieces of obsidian by NAA including over 500 geological obsidian sources. Finally the point was submitted for another XRF analysis in a blind study by the NWORSL.

Analysis by XRF at both facilities and by NAA at MURR demonstrate that the point is made from obsidian originating at the *Double H* obsidian source in the northern Great Basin, near the Oregon/Nevada border. Although this source was used prehistorically, obsidian from it was not widely traded outside of the Great Basin (Jones et al., 2003). Further, studies of obsidian artifacts found in verifiable archaeological contexts east of the Mississippi River (e.g., DeBoer 2004; Griffin et al., 1969; Hatch et al., 1990) have never documented obsidian from this particular source.

Age of the Arrowhead: Prehistoric or Modern?

Determining the absolute age of a stone point is not a straightforward process. Radiocarbon dating cannot be conducted on stone, and because the reported provenience of the point is so vague, we cannot identify and excavate the specific location from which the point was taken. Two potential techniques exist for establishing an approximate age for the projectile point: morphology (shape, size, and form) and obsidian hydration dating.

Morphologically, the point (Figure 2) is notched and has a bifurcate base. As such, it could be grouped with the Bifurcate-base Point tradition of the Early Archaic period in New England. Specific point types in this tradition are poorly defined; however, the point resembles somewhat the Swanton Corner-Notched type defined in northern Vermont (Haviland and Power 1994; Thomas and Robinson 1980). Importantly for our discussion, the Early Archaic is poorly documented in Vermont, and long-distance exchange is not considered prevalent during this period. However, given that the point is made from obsidian found in the Great Basin, we compared it to typologies formalized for that region. Curiously, the point clearly fits the type definition of the

Elko Eared type (Justice 2002:298–310, Fig. 27; Thomas 1981:20–22, Fig. 8).

Designation of the point as being of a specific “type” is not sufficient alone to confirm an age for the point. Perhaps the point could be a modern creation made to look like points from the Early Archaic. We used obsidian-hydration dating to test this possibility and to determine whether the point is in fact a prehistoric creation.

Like all archaeological and geological dating techniques, obsidian-hydration dating has various benefits and drawbacks. Put simply, when obsidian is fractured, the newly exposed surface begins to capture moisture (hydrate). Measurement of an obsidian hydration rim involves preparing a thin-section of the artifact and determining the thickness of the rim of hydration. Basically, a thicker hydration rim indicates a greater age for the last time the obsidian surface was broken.

The NWORSL analyzed the thickness of hydration rims on the artifact, and they determined that the point has a hydration rim roughly 7.1 microns thick. This rim was compared to 110 other hydration rims taken from artifacts from *Double H*, and it falls within the upper five percent of all samples. Though we cannot convert this hydration-rim thickness to a specific year or range of years, the sheer thickness of it demonstrates that the point clearly was created before European contact and that it is not a modern fake.

Discussion

Our results demonstrate that the obsidian projectile point in Coane’s collection is a prehistoric artifact made of volcanic glass from an obscure source in the northern Great Basin. The remoteness of this obsidian source, and the distance from it to Vermont, suggest that the Coane “arrowhead” is very likely not the product of prehistoric exchange. The fact that obsidian pieces from *Double H* have not been identified in well-documented archaeological contexts east of the Mississippi River (e.g., Griffin et al., 1969; Hatch et al., 1990) further supports our conclusion that the piece was not traded to the Northeast before European contact. The similarity of the point to the Elko Eared type, a form common to the Great Basin bolster this conclusion.

Though we admit that it is *possible* that the point may have been brought into the Connecticut River valley prehistorically, we believe that the evidence here shows that such a scenario is *highly implausible*. A more reasonable explanation for the evidence at hand is that the artifact was historically brought to Vermont, and that it somehow came into the possession of Coane. It is impossible to state how Coane obtained this piece, or

whether he did in fact find it in the Connecticut River drainage. However, data presented here strongly suggest that the point is not the result of prehistoric exchange into Vermont.

In concluding, we wish to stress that we do not dismiss out of hand the potential for long-distance exchanges of material or ideas by early Native Americans — either into or out of the territory now known as Vermont. Nor do we consider it impossible that such exchanges could have occurred over great distances. However, fantastic claims such as these must be able to withstand scientific scrutiny, and there must be evidence offered to support them.

Postscript

We take this opportunity to stress to anyone conducting archaeological work the importance of maintaining a detailed and accurate catalog of any artifacts they may find and collect. Although we do not encourage illegal collecting or looting of artifacts, we do recognize that much of the current body of archaeological knowledge in Vermont is a product of avocational archaeologists who have been picking up "arrowheads" on their family farms for several generations. We encourage all such collectors to be ethical and responsible about the knowledge that they generate, and to consider how best to preserve that knowledge for the benefit of future generations of curious Vermonters.

An expanded account of the analyses described in this article may be found in volume 35 of *Archaeology of Eastern North America*. Questions concerning the Coane collection and the Putney Historical Society may be directed to Tom Jamison via email at tjamison@hartgen.com. Questions about the analytical techniques used may be directed to Matthew Boulanger at boulangerm@missouri.edu. Information about the analytical techniques discussed here may be found at the Web sites of the MURR Archaeometry Laboratory (<http://archaeometry.missouri.edu/>) and the Northwest Obsidian Studies Research Laboratory (<http://www.obsidianlab.com/>).

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