History in the Third Dimension by Sally Clay

Nine Gould Academy students are at work developing a feeling for the flesh-and-blood of history...

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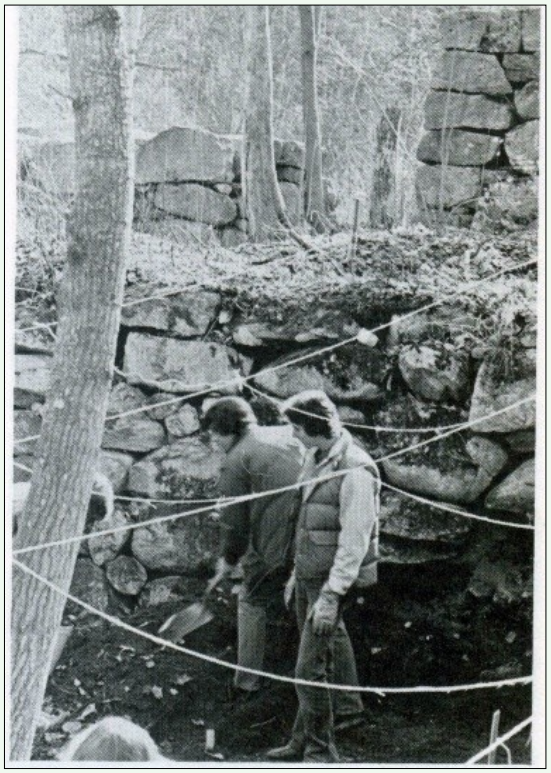
Nine intrepid diggers and their leader set out each week from Bethel, bound for an excavation site along Mill Brook just outside of town. This archaeological team does not seek the discovery of ancient mysteries, but rather a physical contact with the everyday life of our own past.

The diggers are Gould Academy students, and their leader is instructor Alvin L. Barth. For the past 2plus years, Barth has been investigating the site in preparation for his current full-credit course in archaeology.

Once the location of an old stone dam and sawmill built by Eleazer Twitchell in 1774, the site is now owned by the Bethel Inn. Over the course of more than 125 years the water from this dam powered first Bethel's sawmill, then a wool processing mill, a starch factory, a spool and salt-

box factory, a corn cannery, and finally a wood products mill.

The building, which accommodated some of these operations is now gone. But in the soil around its stone foundation many artifacts remain—all objects of the archaeologists search. Although most of the historical facts of the site have already been recorded on paper, discovery of these artifacts adds a personal perspective to Bethel's past, a "third dimension" as Barth calls it.



Gould students dig beneath a grid assembled in order to specify location of the finds. In the background stands some of the magnificent stonework which once formed the site's dam

The dry-wall construction dam (no

mortar between stones) was heavily damaged by flood in 1936, but most of its massive granite boulders remain, witness to the plodding labor of men and horses who hauled the stones and wedged them in place in the days before concrete, cranes, and industrial technology.

Two rusted tub wheel gears still in position reveal that the mill building extended over two sluiceways and used two wheels. Nails of all kinds have been found, from hand-wrought to modern wire construction, indicating at least two phases of construction spanning nearly a century.

Charred fragments of wood and melted bottles testify to the damage wrought by a fire that burned Eber Clough's starch factory in the mid-1800's. Pieces of tin plate and a soldering iron are relics of the corn canning operation in the 1880's.

Among the miscellaneous items found are a silver spoon, some apparent chicken bones, an old-fashioned root beer bottle with wired-on top, and a brown whiskey bottle. Students can only speculate on the uses of the artifacts. Perhaps some wool carding worker around the year 1814 thoughtlessly slipped a silver spoon from his wife's kitchen into his pocket and then employed the utensil to eat his box supper at the mill.

Did a corn factory worker around 1886 have a lunch of fried chicken and root beer? Did Eleazer Twitchell, known as a "jolly miller/' imbibe a little whiskey and throw away the bottle while waiting for customers?

The real story behind these personal relics may never be known, but speculation is as much a part of the archaeologist's job as documentation. Such questioning may lead to more solid evidence from the dig or from historical sources, according to Barth. In any case, it is a feeling for the "flesh-and-blood" of history which provides the "third dimension/'

Bonnie Finkelstein and Tammie Lunt sift dirt from the site in the hopes of turning up a bit of history

But digging is the easy part. Before Barth and his students could actually begin their search, much time

was spent in locating a suitable site and then in preparing it for excavation. After the digging, all artifacts are cleaned, preserved, sorted, classified and sometimes reconstructed. All data must be carefully recorded, then interpreted with the help of existing historical records.

Throughout these processes, Barth has worked closely with Stanley Howe, director of the Bethel Historical Society. In 1975-76, the society was conducting its own research into Bethel's early mills and industry for a Bicentennial booklet and exhibit. Since there are no aboriginal sites in the Bethel area, Howe suggested mill sites for archaeological research. Recently retired Gould math instructor Francis Berry pointed out the Mill Brook site across the road from his house, and the Bethel Inn agreed to let Barth and his students work there.

Before digging could begin, the archaeologists had to survey the land, clear it, then draw maps and plans to use in their work. They then dug test pits to determine the best area for the initial dig and marked off that area with a grid system. The lower foundation of the mill building was chosen for the dig, and the grid system was constructed using strings tied to wooden posts and running horizontally and vertically at right angles to define five-foot squares within the foundation boundaries.

Students methodically and carefully dig in a small area marked by one of these squares, and they identify every artifact, both by the number of the square and also by the depth at which it is found in the soil. Knowing the location of each artifact helps to determine the time period of its use and also makes it easier to match it up with other fragments and to reconstruct broken objects.

"This may not be earth-shaking archae -ology," notes Barth. "But the procedure is the same as you would use in any dig." Objects are carefully carried back to the school, where the students spend tedious hours cleaning, scraping, and treating them. Small fragments found from sifting soil through a wire screen are also cleaned and treated.

Metal, wood, glass, and leather specimens all require different treatment to restore and preserve them. In the case of the many nails found, for example, the Gould students experiment with several means of rust-removal and preservation, hoping to devise best method for treating larger metallic objects. To clean the nails and remove rust, they have tried steel wool and scraping tools, boiling in distilled water, WD-40 (a spray-can product), electrolysis, and various other chemical treatments. Just removing the rust is not enough, however, for if the metal is not protected in some way the oxidizing process will begin all over again and the nails again become rusty. So the students are also trying such methods as dipping the nails in warm wax to pre-

serve them.

Once cleaned and treated, the nails can be sorted, studied, and compared to determine their significance to the history of the mill site. Although nails are not always a reliable means for historical dating, the presence of two or more distinct kinds of nails does indicate different phases of construction.

The three principal kinds of nails are: hand-wrought, machine-cut, and wire nails. Modern wire nails have the familiar round shanks cut from a single wire. Both hand-wrought and machine-cut nails have a square shank. In general, handmade nails were used before 1790, machine-cut after 1790, and wire nails after 1870. All three types of nails have been found at the Mill Brook site, reflecting the first construction in 1774 with hand-wrought nails, and then later building, probably after the starch factory fire in the nineteenth century. More recent repairs are suggested by the modern nails. This empirical evidence has been confirmed by Bethel Historical Society records.

Using similar methods for treating and then evaluating other artifacts, the student archaeologists can identify many of the objects found at an excavation, and these discoveries will "flesh out" known historical records or even prove new data. Finally, the sum of all these discoveries will provide a larger portrait of the site's history.

In the case of the Mill Brook site, this history may sometimes seem more mundane than heroic. "I was looking forward to finding a dinosaur skeleton," confides one student. "Instead, we found chicken bones."

Types of nails found at the site include machine-cut (dating back to the early 1800's) and wire nails (dating from the 1850's on); the earliest type of hand-wrought nails (used in the 1700's) were too fragile to survive

But the Gould pupils are nevertheless learning the general disciplines of archaeology and scientific research. And the Gould team is performing an invaluable service for the community when it digs up local history. For, as Barth points out, in the not-too-distant future, this historical third dimension could become forever lost.

Already the old Bethel Grist mill site down-stream from the Gould excavation has been irretrievably damaged

by road and sewer construction and few, if any, artifacts will be found there. Even the Gould site may soon be overtaken by modern technology. With the recent push for alternative sources of energy, small dams such as the Twitchell one may be resurrected as supplemental energy sources.

"In our present technology, we must have citizen archaeologists—amateurs," notes Barth, who encourages anyone with an interest in archaeology or with an idea for a good dig to take up a notebook, camera, shovel and trowel, and get to work.

For the amateur archaeologist, compli-cated maps and grids are not really essential, only a willingness to record what is found and where it is unearthed. It is also important to clean and preserve as well as possible the objects discovered.

Anyone wishing to embark on a dig ought to contact the local historical society, Barth suggests, for help in digging and for historical information. Findings should eventually be reported back to the society.

The Maine State Museum in Augusta can also supply valuable information, and a trip to see their exhibits would be useful and enjoyable, says Barth.

The dam in 2006—now a feature attraction of the Bethel Inn golf course

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Sally Clay, the author, was a freelance writer/ editor Bittersweet magazine at the time she wrote this article. Ms Clay now lives in Lake Placid, Florida.

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The Hon. Alvin Barth was a member of the Gould Academy faculty; he is a graduate of the academy 1954. Mr. Barth holds a BS from Penn State University and an MBA from the University of Utah. He has been president of the Bethel Historical Society and was a Bethel selectman for two terms. He retired from the Maine House of Representatives after serving four terms by reason of term limits. He now resides at Paris Hill, Maine. (Photo of Mr. Barth appeared in his House of Representative personal profile.)