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The “Lost Marble Quarry” at Garden Bluff Trust

by Dr. Richard Boyd

This project took place on the Garden Peninsula of Upper Michigan, which geographically is the northern counterpart of Wisconsin's famous Door County Peninsula. Both of these geologic formations are bedrock remnants from the last Ice Age, composed of highly resistant sedimentary rock that the glaciers failed to completely erode. Fishermen and farmers, soon followed by lumbering interests, settled this maritime region of peninsulas and islands in the 1840s.

Ad for Gouley quarry marble

Stone and Marble

I am prepared to furnish Stone of the Best Quality, in any size, at low prices. Contracts taken low, now, for the season of 1890. I also offer for sale

Gray and Blue Marble,

suitable for public buildings, fine stores and elegant private residences.

MRS. M. P. GOULEY,

GARDEN, MICHIGAN.

Whereas many parts of Door County have become highly developed, “the Garden” consists largely of undeveloped shoreline communities retaining a strong maritime heritage with a rural aura.

Mary P. Gouley was an enterprising pioneer who lived on the Garden Peninsula in the late 19th century. She was a friendly, well-educated woman who was also an accomplished musician. About 1870, Mary inherited a large tract of land from Leon Trombly, an uncle with whom she had lived for some years. Trombly, from Bay City, Michigan, acquired the property via a land grant in 1868. This land included the Garden Bluff, a massive limestone outcrop that is part of the western edge of the famous Niagara Escarpment. The rugged shoreline beneath these headlands contains several small, remote coves and river estuaries. One isolated inlet became known as Gouley's Harbor where Mary Gouley built her home and farmed the fertile lands atop the bluff, once cultivated by local Native Americans. She was also an intelligent businesswoman who ventured into farming, logging, milling, and quarrying. In 1880, Gouley reportedly discovered high quality dolomite on her property, as well as sand-

stone and marble deposits. She sent samples of these stones to Chicago for testing and polishing, which were subsequently rated as excellent building material.

Geologically, dolomite (now often called dolostone) is a close cousin of limestone, usually containing larger amounts of calcite and magnesium. This imparts a denser, harder, variable crystalline structure to the rock that often takes a fine polish. Marbles are formed by alteration of limestone or dolostone through recrystallization of the component minerals, and come in a myriad of colors including brown, green, white, black and various shades of blue. Mary Gouley reportedly had a marketable bluish-gray dolomitic marble on her property. It should be noted that the “market definition” of marble departs somewhat from the classic geological description in that marketers usually accept as marble almost any sedimentary ornamental building stone that can be satisfactorily polished.

The area near both Gouley's Harbor and the East Bluff near Puffy Bay are of special geologic interest because two massive rock formations interface in this place.

continued on page 4

Association News

Survey Workshop 2011

The Wisconsin Underwater Archeology Association Workshop on Documentation and Survey Methods for Shipwreck Sites will be held on Saturday, March 26, 2011, from 9:30 am–12:00 noon. The workshop will be held at the Wyndham Milwaukee Convention Center, during the Ghost Ships Festival.

This workshop will provide a basic understanding of how an underwater site is surveyed, mapped and interpreted using manual methods. The class will cover survey objectives and the use of trilateration, offsets and sketches to generate preliminary maps of underwater sites. The workshop will include hands-on practice, using the tools and techniques covered in the discussion, on a nearly life-size mock-up of a Great Lakes schooner. A certificate of attendance or participation is included.

The fee for the workshop is \$49 per person. For further information or to register for the workshop go to the WUAA web site: www.wuaa.org.

Baileys Harbor 2011

On June 4 and 5, 2011 WUAA will be working in Bailey's Harbor to survey two side pieces plus two pieces with keelsons and frames. The latter two pieces will be snorkeling projects while the first two are in about 15 feet of water. Anyone interested in participating should contact either Russel Leitz at rleitz@mwwb.net or Steve Wagner at swagner1922@sbcglobal.net

Meteor Project 2011

The dates for this year's Meteor project are Saturday April 30 and Sunday May 1. Participants will be working on the museum whaleback ship *SS Meteor* in Superior. Anyone interested in participating in the project can email Phil at pkerber@glsp.org.

GLSPS Achievement Award

The Great Lakes Shipwreck Preservation Society received the 2010 *Lake Superior Magazine* Achievement Award. The GLSPS was recognized for its unique dedication to preserving our underwater heritage, for encouraging wise visitation of shipwrecks and for creating a program to return artifacts to places for public appreciation.

The GLSPS, with a modest membership, consistently shows determination and rare ability to fulfill its mission of protecting this special part of our maritime heritage.

WUAA would like to congratulate our partner in the Meteor project on this achievement.

Wisconsin's Underwater Heritage

is published quarterly by the Wisconsin Underwater Archeology Association, a nonprofit association of individuals and organizations interested in studying and preserving the underwater cultural resources and historical sites of Wisconsin.

In addition to publishing this newsletter, the Association also holds

semiannual meetings and provides support to members' research and publication projects. Annual membership dues are \$20. For membership information write to the postal address or go to the web site, listed below.

Mail correspondence to:
WUAA
PO Box 6081
Madison, WI 53716

web site:
www.wuaa.org

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Brendon Baillod
Marshall

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Milwaukee

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WUAA Teleconference

A business teleconference was held January 27, 2011. The following items were discussed.

WUAA has paid for two booths at the Ghost Ships conference as well as the room for our workshop. Dick, Janet, Greg, Kimm, Danny, Betsy and Kevin will submit material to decorate the new display that Janet obtained for WUAA. Emphasis will be on fieldwork photos and underwater photos. We will be selling the Fireboat report, WUAA books, T-shirts and other items at the WUAA booth. Brendon will once again donate shipwreck maps to sell. We will need to have membership forms and fieldwork project flyers. Volunteers are welcome to help man the booth.

The fee for the workshop this year is \$49. It will follow the same format as last year. Brendon will update the web site subscription form with current info.

WUAA training principals met with Dave Thompson from Nautilus a few weeks ago to discuss NAS Course Accreditation. WUAA paper-

work is being prepared. Nautilus will underwrite our initial fee. We have a number of courses that we plan to submit for accreditation. Greg is also continuing preliminary planning for an in-water component to be held at Pearl Lake sometime this year.

Kimm has submitted the Fireboat fieldwork documents to Brendon, who will compile the final report. Kevin will submit final fieldwork images of the site for inclusion in the report. We will initially print 200 copies of the report and sell them for \$10 each.

We will be making flyers for each of the 2011 fieldwork projects (the *Norland*, Baileys Harbor, Clay Banks) to circulate at Ghost ships and we will update the web site with info on the projects as it becomes available. Kimm is negotiating the per seat fee for the *Norland* fieldwork this year. Dick mentioned several interesting shallow sites in the Clay Banks/Sturgeon Bay area that would be good survey candidates. Brendon mentioned that WMM and DCMM are both interested in partnering with WUAA if we want to do any work on sites in their areas.

Brendon will prepare the 501c3 paperwork and review it with the board before submitting. The target for completion is the next action meeting.

Lee has done a Joomla content management site implementation upon which he will base a new WUAA web site. He will be able to begin work on it in April.

Brendon will send out another constant contact email this week. Please forward any emails to Brendon for people you think would like to be included. Articles include: Fireboat Report, 2011 Fieldwork, NAS Affiliation, Ghost Ships Training. Please email Brendon with any other topics.

Action Meeting

The next Action Planning Meeting will be on Saturday, March 12, 2011 at 10 am, at Brendon's house in Marshall.

Gouley's Point



The Lost Marble Quarry

continued from page 1

As mentioned, the Door and Garden Peninsulas are part of the renowned Niagara Escarpment that extends from Indiana up through eastern Wisconsin, forging the backbone of the aforementioned peninsulas, then across Lake Huron and down through the Bruce Peninsula to northern Lake Erie, where it eventually forms Niagara Falls. In Wisconsin, the escarpment is often called the "Ledge," and it harbors many unique plant and animal species, as well as over 500 archeological sites. On the Garden Peninsula, the prominent Niagaran rock formation of the escarpment is called the Manistique Group, which runs up the center of the peninsula. This stratum is generally composed of massive, brownish dolomite about 180 feet thick.

Gouley opened her stone quarry in about 1882, offering product through ads in local newspapers and by brokers in the Chicago area. Some of Gouley's business transactions were briefly described in the early *Iron Port* newspaper of Escanaba, Michigan, and Tom Elegeert, a local historian in that city, has excerpted and published selected clippings. These excerpts clearly document that Gouley provided stone for the foundation of the courthouse in Escanaba and for the exclusive John V. Farwell mansion in Chicago, as well as for various other Midwest building projects. However, the exact amounts of stone removed from the quarry (or its precise location) are not disclosed in those articles. Information suggests that Gouley worked the quarry for about 10 years, ceasing operations before the end of the 19th century.



Niagara escarpment

The fact that Gouley supplied building stone for the Chicago mansion of John V. Farwell is in itself a significant event. The Farwell brothers, John and Charles, were extremely important figures in U. S. history. Charles B. Farwell was Chicago's first "political boss" and is recognized as the creator of the "Chicago political machine!" He eventually became a powerful U.S. Senator, who channeled much of the Nation's business through Chicago enterprises. John V. Farwell was a dry-goods magnate, who organized and operated an immense mercantile distribution system to disseminate products throughout the USA, and especially out to the expanding western frontier. For some time he partnered with Marshall Field, who went on to create his own retail dry-goods empire that persists to current times. In 1882, when the Farwell brothers built side-by-side mansions in Chicago, John's business was doing some \$20 million dollars per year and was one of the three largest wholesalers in the entire country.

The Farwell Mansions were constructed on Pearson Street, between Lake Shore Drive and Michigan Avenue. Charles selected a Queen Ann Style, whereas John's home was

referred to as a "baronial" style into which the contractor incorporated a poured concrete skeleton, one of the first of its kind. This suggests that the "Gouley Stone" was not used as foundational material, but rather as decorative façade.

In the later decades of the 19th century, Delta County, Michigan, was a thriving region of the Upper Peninsula, with booming interests in lumbering, mining and shipping. In the early 1880s, Escanaba, now incorporated as a city and the judicial seat of the County, was in sorrowful need of a regional courthouse, as well as improvements to the existing jail, infirmary, and schoolhouse. A tax levy for these projects was proposed and met with some debate, but the courthouse construction went forth under the supervision of the J. B. Sweath Company for the sum of \$21,900. Year-round work started in 1882 and culminated with official occupancy in 1884. The finished building was a notable structure, Victorian in style with high windows, vaulted ceilings and a unique circular staircase. Although the courthouse suffered a serious fire in 1901, it served the County well until 1961 when it was torn down.

Three different stones were used in the construction of the building, which reportedly had a very deep basement. The walls beneath the water table were built of local stone from Duck Creek, directly laid without any particular facing. This same stone was used at the level of the water table for walls and windowsills, except that it was hammer-faced for a more finished appearance. Dolomite from Gouley's Quarry, polished and hammer-faced, formed the basement wall, cemented in place with a slight front to back slope; each block faced to promote a very close fit. The above ground foundation, as well as the window and door trimming, were done in polished "Bridgeport Stone." Unfortunately, the names for the two other stones used are apparently colloquial terms, so they cannot be identified geologically. Of particular interest is the fact that the courthouse construction required a total of 150 cords of stone from these three separate sources. The significance of that statistic will be apparent later in this report.

Today many historical and preservationist organizations desire to correlate certain historically sig-

nificant buildings with the specific source that yielded material for their construction.

For this precise reason, general interest has arisen in the Gouley Quarry. Unfortunately, its precise location remained unknown as of 2009. Most of the original Gouley lands are presently part of the Garden Bluff Trust, a land conservancy created by John and Karen Wilson from Door County, Wisconsin.

Investigations During 2010

Recently, members of the Wisconsin Underwater Archeology Association (WUAA) developed interest in the Gouley Quarry. This was fostered by a report stating that schooners could load directly from the quarry. That suggested a location on or near the water with sufficient depth to accommodate small vessels and also

requiring some dockage or loading facility. Such sites offer unique opportunities to examine the workaday functions of 19th century pioneer quarries because specialized tools and structures were often left behind or lost overboard during the quarrying and loading operations. In the 1970s prior



The Farwell mansions with John Farwell's on right

to the establishment of the National Lakeshore, examinations of the famous "Brownstone Quarries" in Wisconsin's Apostle Islands yielded many unusual tools and other artifacts. These materials yielded a glimpse into the quarry operations that provided sandstone for many Chicago buildings, the Milwaukee County Courthouse and New York City's famous "Brownstone District."

In May 2010, WUAA received permission to search the Garden Bluff Trust property for the lost quarry. In doing so, certain guiding factors were considered: (1) The quarry had to be located in a place that yielded sandstone, limestone, and marble, because all three types of stone were known to have come from the same site. (2) Since vessels could load directly from the quarry, the site was likely close to the lakeshore where sufficient depth (probably about 5–6 feet) was present. (3) The abandoned pit should contain clear evidence of human activity, including exposed sheer rock walls and perhaps lost tools. (4) Since the quarry was mined for 10 years or more, sufficient material should have been removed to produce a notable void in the rock.

Assuming that the quarry must have been close to the shore and probably near one of the large bluff

continued on page 6

County courthouse in Escanaba ca.1930



The Lost Marble Quarry

continued from page 5

outcrops, the WUAA team walked the entire shoreline encompassing both the East Bluff region and Garden Bluff from Lacombe Bay to Gouley's Harbor. Often one person walked high along the bluff top while others scouted the rocky beach, looking for physical evidence of rock removal or remnants of docking facilities. While excellent samples of the various grades of sandstone, dolomite and blue dolomitic marble were found at various sites, no evidence of any quarrying activity was discovered.

Team member Greg Kent then suggested that perhaps the quarry was closer to Mary Gouley's home near the Harbor itself. This made sense in that workmen apparently mined the quarry during the "off-season" to have stone ready to ship once navigation commenced in spring. Shipping from the protected harbor would certainly simplify both loading and supervisory operations. Moreover, workmen could readily commute by water from the Garden and Van's Harbor communities during much of the year.

Upon searching the area along the gravel road that parallels the north side of Gouley's Harbor, we discovered a sizeable indentation in the cliff that borders the shoreline, largely hidden from view by trees.

The bluff had apparently been mined out at one time, leaving a sheer wall about 30–40 feet high. The size of the pit area measures at least 180 x 50 x 25 feet and could be even larger because the original height and extent of the dolostone bluff in the 1800s can only be estimated today.

Our initial explorations and observations at the site did not disclose any lost tools or other specialized hardware, but a far more defining artifact was found. While examining the quarry, team member Janet Defnet noted some inscriptions carved into the rock wall, somewhat obscured by algal and lichen growth. After some general cleaning, at least six different engravings could be discerned, the most significant of which was "M.P. Gouley," carved in large letters at a height about eight feet up the wall. Other writings included "A. G. Lassett" (or "A. Glassett"), "T.L. Lenhart," "A. A. Kasten," "H.L. + M.L. Erwin," and "/ 10". This latter inscription could well be an abbreviation for 1910, possibly denoting the approximate time the pit was abandoned. Also, what may be an Indian spiral petroglyph was located on one far west wall of the recess. Of course, the name "M.P. Gouley" prominently carved into the rock suggests that this is indeed the "Lost Marble Quarry." Furthermore, the site does largely meet the tenets listed earlier in this report.

Investigations to date have not identified any of the names found in the quarry other than that of "Gouley." Research during 2010 of various records in Delta County, including at Fayette Historical Townsite, failed to disclose any historical relationship between any inscribed name and any prominent

family, business or early settler on the Garden Peninsula. Therefore, it is probable that these are names of itinerant quarry workmen or of visitors to Gouley's Harbor, since Mary was known to frequently entertain guests on her property.

The inscriptions on the quarry walls are at various heights, ranging from about 10–feet high to immediately at ground level. This suggests that they were made at different times during the life span of the quarry. For example, the "M.P. Gouley" name, high on the wall, could have been inscribed using a ladder, but this seems unlikely, and it was probably done when the quarry floor was higher, perhaps in the early days of quarry operation. Similarly, an inscription that today is at ground level was probably made before residual fill had been deposited on the quarry floor. Today, rock and soil fill obviously covers the original floor, resulting from collapse of the overhanging bluff or possibly some trash fill, since hollow pits and sinkholes often become repositories for unwanted rubbish.

The quarry is less than 100 feet from the northern shore of Gouley's Harbor, with a steep embankment leading down to the rocky beach. At the shore, opposite the quarry, a small, wooded promontory juts slightly outward into the cove. Discernible drainage ditches are found on either side of this point, and the rocky ground also contains buried trash, evidence of considerable activity at some past era. In addition, it appears that this area may have been reinforced with earth or cobblestone fill, perhaps to support some dock or tramway for loading stone.

In September 2010, a team of WUAA divers returned to Gouley's Harbor to investigate this possible loading site. As mentioned, a small point projects slightly out into the

Inscription at quarry



cove and the area above the beach appears to have been built up with cobblestone fill. Perhaps some submerged pilings, cribbing or lost tools might be found underwater. Indeed, underwater examinations disclosed remnants of a stone-filled wooden crib that likely once supported some sort of loading dock or ramp. Unfortunately, an impenetrable weed bed occluded the deep water just beyond the outer edge of the crib, so the bottomland there could not be examined at this time. Nonetheless, it seems certain that this was indeed a shipping point for the quarry with sufficient depth for small boats.

Analyses and Conclusions

The exposed quarry face today shows beds of thick-bedded, buff-colored dolomite. No dolomitic marble was found in the quarry, but this material occurs in patchy deposits, and may have simply been mined out over time. As already mentioned, deposits of blue-gray dolomitic marble do occur on the Gouley property.

Using the measurements of the quarry pit previously cited, a total

volume of at least 270,000 cubic feet of stone was probably removed. Maritime cargoes of stone were generally measured in cords, a volumetric measurement that equals 128 cu. ft. per cord with a weight of about 13,000 pounds for limestone or dolomite. Thus, roughly 2,100 cords (27 million pounds) of stone had been removed over approximately a 10–15 year period.

Gouley's Harbor is a fairly narrow inlet, but has sufficient depth to accommodate modest sailing vessels. It is unlikely that very large ships ever frequented the harbor, but small scow-schooners of that day could probably operate in depths of five feet or even less. Craft of moderate size (generally 75 feet or less in length) could load about 25 to 50 cords of stone per visit. The only schooner known to have transported stone from Gouley's was the *St. Cloud* belonging to Capt. Stephenson. This vessel was only 33 gross tons and probably could not carry more than 5–10 cords of rock per cargo. If we assume that the average load shipped from the quarry over approximately a decade ranged from 25–50 cords each, then 5–8 shipments were made each year. This seems perfectly consistent with an operation of this size and with the assumption that approximately 2,100 cords of stone had been removed during the life of the quarry.

While we do not have any data about the quantity of stone required by the Farwell Mansions, we do have an approximate idea of what was required for the Delta County Courthouse in 1882. It was stated that

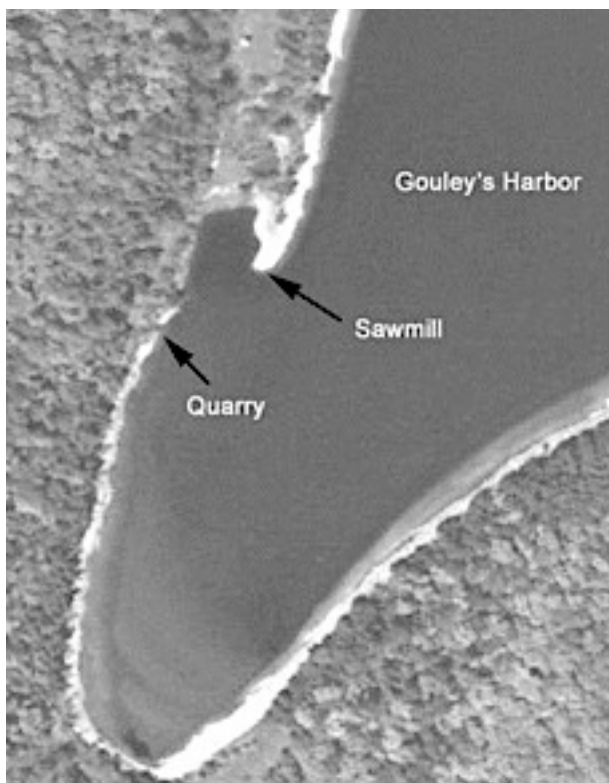
a total of 150 cords of stone from three different sources was used in that building.

Assuming each of the three sources yielded approximately 50 cords of stone to the project, that suggests that at least three or four boatloads were taken from Gouley's Quarry. Again, allowing that most small scows like the *St. Cloud* could carry approximately 10–25 cords per cargo, that output certainly seems quite doable for the Gouley operation.

News excerpts from the Iron Port newspaper refer to both Gouley's "quarry" and "quarries," but our investigations found no physical evidence of more than one, and located right at the Harbor. We suspect that this was just "casual reporting," and that no reporter ever actually visited the site. However, the Garden Bluff Trust encompasses a large acreage, so it is possible that other sites on the property could have been quarried. The East Bluff area contains the remnants of some strange stone buildings, the purpose of which is unknown, and might have been related to some "Gouley operation," be it farming, trapping, or quarrying. Nonetheless, at this time, we believe that only one quarry existed.

We have no information documenting what other structures may have been constructed from "Gouley Stone" or any other applications it may have fulfilled. Never-the-less, it did play an architecturally important role in several prominent buildings and provided an interesting example of 19th century business entrepreneurship on the Garden Peninsula. ■

Editor's note: The complete Quarry report, with notes and appendix will soon be posted on the WUAA web site, at www.wuaa.org.



Wisconsin Underwater
Archeological Association
P.O. Box 6081
Madison, WI 53716



*For those interested in the study and preservation of
Wisconsin's underwater history and cultural resources.*

Coming Events

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| Mar. 25–26, 2011 | Ghost Ships Festival , in Milwaukee. Sponsored by the Great Lakes Shipwreck Research Foundation. For information check their web site at www.ghost-ships.org . |
| Mar. 26, 2011 | WUAA Shipwreck Site Survey Workshop , in Milwaukee. For further information or to register for the workshop go to the association web site at www.wuaa.org . |
| April 30–May 1, 2011 | Meteor Project Weekend , in Superior. Volunteers assist in renovation and maintenance of the museum ship <i>Meteor</i> . For information check the GLSPS web site at www.glsps.org or contact Phil at pkerber@glsp.org . |
| June 4–5, 2011 | WUAA Survey Project in Bailey's Harbor . For information check the association web site at www.wuaa.org or contact Russ at rleitz@mwwb.net or Steve swagner1922@sbc-global.net. |