Spring 2014

Bulletin of the Massachusetts Archaeological Society, Vol. 75, No. 1

Massachusetts Archaeological Society

BULLETIN OF THE

MASSACHUSETTS ARCHAEOLOGICAL SOCIETY

VOLUME 75(1) SPRING 2014

THE MASSACHUSETTS ARCHAEOLOGICAL SOCIETY, Inc.
P. O. Box 700, Middleborough, Massachusetts 02346-0700

THE MASSACHUSETTS ARCHAEOLOGICAL SOCIETY, Inc.
Robbins Museum of Archaeology
Web Site address: www.massarchaeology.org
phone: (508) 947-9005

email: info@massarchaeology.org

The *BULLETIN OF THE MASSACHUSETTS ARCHAEOLOGICAL SOCIETY* is published semi-annually, with a Spring issue, Number 1, and a Fall issue, Number 2. Individual memberships in the Society that include receiving the *Bulletin* are $30. For information on institutional subscriptions and other special rates for membership, as well as requests for back issues of the *Bulletin*, please visit our website or contact the Massachusetts Archaeological Society, P.O. Box 700, Middleborough, MA 02346 (508-947-9005). Publication in the *Bulletin* is a privilege of membership. Manuscripts and comments may be sent to the editor, Curtiss Hoffman, 58 Hilldale Road, Ashland, MA 01721 or e-mailed to c1hoffman@bridgew.edu.

Printed by DigiPrint, P.O. Box 1281, Lakeville MA 02347

Editor's Note
Curtiss Hoffman

Welcome to the Spring 2014 issue of the MAS *Bulletin*! As you are most likely aware, we lost one of our most important long-time members, Eugene Winter, in late February. We dedicated our semi-annual meeting to his memory, and the meeting was followed by a moving reception in which his friends and associates shared their memories of Gene. This issue begins with a lovely memorial piece by Barbara Brown, his companion for his later years. In addition, there are brief articles on unusual artifact finds by Bill Taylor and Bill Moody, a report on the return of a cache of probable Richardson artifacts by the Editor, and an extended essay by Ted Ballard in which he contextualizes the paradigm of opposition to indigenous stone constructions within the colonial history of the area and provides strong documentation for the need for a change in this paradigm. I would point out that the State Archaeologist's offices in several of the states in our region have moved in this direction. It seems incongruous to me that in Massachusetts, which possesses more of these structures than any other state on the eastern seaboard by a factor of more than two, our Historical Commission has not yet done so.

I wish to report that the MAS Board of Trustees has adopted a revised set of guidelines for the submission of articles and images to the *Bulletin*. This will hopefully result in a higher quality *Bulletin* and eliminate the need for corrigenda, such as are provided for the long article by Mary Ellen Lepionka in the Fall 2013 issue at the end of this issue. Images submitted henceforth must all be of high quality. Our Society's photographer, Joseph Bagley, is often able to sharpen images so they are of better quality than the originals, but there is only so much that he can do. Images lose quality every time they are transferred from one format to another; in the case of the *Bulletin*, original .jpg or .tif files are converted into InDesign for insertion into the text, and then the whole is converted into a .pdf file for the printer, so the images need to be very sharp because they will go through at least two such transfers. Images which fail to meet this standard will simply be rejected for publication. After review by our able proofreaders, Kathy Fairbanks and Bill Moody, completed articles will be returned to the authors for final review and emendation before the issue is sent to the printer. These changes may result in publication delay, but the Trustees are in agreement that the improvement in quality will offset this delay.

Ashland MA, June 2014

In Memoriam: Eugene Winter
Barbara Brown

The gift of a great teacher is the ability to lead others to discovery and to share in the joy of that learning. Eugene "Gene" Chester Winter, Jr., was such a teacher. Soft-spoken yet deeply passionate about his work as an educator and as an archaeologist, Mr. Winter touched the lives of countless students, colleagues, and friends. Ever a scholar and gentleman, Mr. Winter, of the Belvedere section of Lowell, died February 24, 2014 after a lengthy illness at age 86.

Gene was born in Lowell in 1927. (He would be quick to tell you that was the year Lindberg flew solo over the Atlantic) to Eugene C. Sr. and Jesse Lennox Winter (*nee* Normandie). Raised on Shawsheen Street in Tewksbury, he attended Foster Grammar School, actively participated in the Boy Scouts and graduated from Tewksbury High School, Class of 1946. Gene played saxophone with the first Tewksbury High School band. He earned his degree in Music Education at Lowell State Teachers' College, supporting himself by

playing the saxophone and clarinet in local clubs. After graduation, Winter joined the U.S. Army (1952-1954). He was stationed in Iceland during the Korean War, and he often said the Army must have had a sense of humor sending a man with the name Winter to Iceland.

After his military service, Mr. Winter began an educational career in Middleton, MA, first as a science teacher and later as Principal of the Howe-Manning School, acquiring his Masters of Education degree from Boston University along the way. Towards the end of his career he left administration behind to return to the classroom, this time to teach music, where he expanded the music program and started the school band. He retired in 1992 after 38 years. Gene was active in the Lowell Historical Society and presided as its president at one time. He contributed to the preservation of Lowell's industrial history and worked to help create the Lowell National Park. Gene also worked to establish the Tewksbury Historical Society, on whose Board he remained until his death.

Gene ardently pursued his love of New England archaeology. Influenced by stories of a Native American who worked for his grandmother in Tewksbury, Gene began his lifelong study of Native American history. Gene first visited Andover's Robert S. Peabody Museum when he was 11 years old, riding his bike from his home in Tewksbury. That visit kindled a lifelong interest in archaeology and history, and Gene became a prominent figure in the archaeology of the Northeast. He worked on projects with Peabody personnel like Doug Byers, Fred Johnson, and Scotty MacNeish. In the 1980s Gene served as caretaker of the Peabody when the museum was all but closed, and again in 2002, Gene's quiet strength helped guide the rebirth of the Peabody. Gene served as the institutional memory of the Museum itself and his knowledge was that of a New England archaeology research library.

As Gene's knowledge of regional archaeology grew, so did his commitment to sharing it. Mr. Winter became an indispensable part of the Massachusetts Archaeological Society. Twice serving as president of the Society and later as the Museum Coordinator of its Robbins Museum of Archaeology in Middleborough, Mr. Winter dedicated himself to educating the general public about the archaeology and history of Massachusetts. He thoughtfully steered the Society through several episodes of growth and change, and oversaw the curation of more than 150,000 archaeological, ethnographic, and archival objects. But, for him and for the many visitors and students who came to the Robbins, these were not just objects behind glass. These artifacts preserved the history of complex and important groups of people whose legacy could still be felt.

Gene was an active member of the New Hampshire Archaeological Society since the mid 1950s and served as its president from 1975 to 1978. Gene played an important role in the creation of the Maine Archaeological Society in 1957, helping to change its status from a chapter of the Massachusetts Archaeological Society to an independent organization.

Gene shared his knowledge and enthusiasm. He published his findings, and equally important, he encouraged and assisted others in getting their work into print. Always a teacher, he gave an uncountable number of public talks, presentations and courses. His students became the seedbed for responsible local archaeology, creating an informed constituency that appreciates and protects the region's archaeological resources. Gene's incredible life of service to Archaeology earned him the Society for American Archaeology's Crabtree Award in 2005, as well as the eponymous Eugene C. Winter Award from the Peabody Museum and Phillips Academy. The Massachusetts Archaeological Society established the Eugene Winter Fund for New England Archaeology in 2012 as a scholarship acknowledging Gene's love of learning and deep knowledge of Northeastern archaeology.

Gene was married to the late Pearl E.(Gammans) Winter and is survived by his daughter Nancy E. Winter of Lowell; sister Lois Hallett and husband Richard and family of Delaware; sister Audrey Desrochers and her family of Plymouth; beloved companion, Barbara Brown of Andover; several nieces and nephews and innumerable friends and colleagues. Gene was pre-deceased by his brother,

Richard Winter. The family is deeply grateful to David Pickul, M.D. and staff and the Merrimack Valley Hospice Team for allowing Gene to live his life as he wished until the end.

In celebration of Mr. Winter's legacy, memorial contributions in support of the Eugene Winter Fund for New England Archaeology may be made to the Massachusetts Archaeological Society, Inc., P.O. Box 700, Middleborough, MA 02346 or through the Society's website at www.massarchaeology.org.

Eugene Winter, 1927 - 2014

A Copper Axe from Kingston

William B. Taylor

Introduction

The Powers Shell Heap M-41-82 is situated on the east side of Foundry Pond in Kingston, Massachusetts. Smelt Brook, which runs into this pond, flows out the far side and continues through swamps to the Jones River and thence to Kingston Bay and the ocean. Although this brook is quite shallow today, in early times a high water level might have allowed canoe travel to the ocean. Shellfish were easily obtained from the nearby shore of Kingston Bay, as well as alewives, shad, smelt, and other anadromous fish which came upstream to spawn each spring in the inland ponds (Sherman 1960).

During the late 1950's members of the Massasoit Chapter of the Massachusetts Archaeological Society conducted an excavation at the Powers Shell

Heap Site. Approximately 3750 square feet were carefully excavated, with artifact recoveries showing earliest use of this site during the Transitional Archaic period. The most extensive occupation took place during the Woodland and Historic Culture periods.

Below the sward appeared 7 or 8 inches of shell refuse, which had been trampled, broken up and mixed with black organic refuse, making artifact recovery difficult. Each 5 foot square was excavated on a horizontal level, with the whole square worked down simultaneously to avoid missing artifacts.

An unusual amount of bone and shell material was recovered, due to preservation from the natural lime leaching through the shell heap. Skeletal remains of shellfish included sea snails, razor clams, shore clams, sea clams, shore and sea scallops, whelk, oysters, quahog, mussel and cockle. Other remains included land snail, turtle, deer, bear, beaver and other animals. Worked bone appeared frequently in the form of awls, fish hooks, arrow points, bodkins and antler flakers. One drilled shark's tooth, three beaver incisors, two bear tusks and many deer teeth also appeared (Sherman 1960).

The most outstanding implement to be recovered came at the end of this dig, when a rare copper axe was uncovered 10 inches below the surface and directly below the shell deposit. Found by the late Richard Bent of Plymouth, this recovery appears to be only the fifth copper axe found in New England. It weighs 1 lb. 12 ½ oz. (809.5 g), is 6 5/8 inches (16.8 cm) long and is 3 3/16 inches (8 cm) wide, tapering to 1¾ inches (4 cm) at the hilt. It is 3/8 inches (0.95 cm) thick at the center and tapers toward the blade and hilt. The cutting edge has been sharpened by grinding, with the bevel extending back 5/8 inches (1.6 cm). The axe has a slight bend overall. On one spot along the blade, a dent has been removed by grinding back 1/8 inch (0.3 cm) or so. Several cracks appear on the surface of this axe, probably due to continual pounding without annealing. Mr. Edward Bielski told me this axe was assayed and found to be of Lake Superior native copper; this axe represents a time level toward the close of the Late Archaic period (Fig. 1) (Taylor 1976).

Origin of Local Copper Artifacts

The Old Copper Culture flourished between 5000 B.C. and 500 B.C. in the Lake Superior region. Most artifacts of native copper are recovered as surface finds from Michigan and Wisconsin {Neiberger 2013}. Occasional examples of finished copper artifacts (axes, celts, pins and adze blades) which are excavated in New England probably represent a limited eastern trade extension from the Lake Superior region. Copper artifacts were all made by the processes of hammering, cutting, annealing and grinding (Willoughby 1935:113). The Old Copper Culture spanned 5,000 years and Native use of copper continued until historic times. Copper mines were located in the upper Great Lakes states and Canadian provinces of Ontario and Alberta. Most copper came from lumps of float copper and were hammered into flat 2"mini-ingots. These were traded to the south and east, sometimes as far as Georgia, Louisiana or New York. Caches of ingots today are found by metal detectors, where they were buried for future trade throughout eastern North America. Partially finished tools (needles, awls, knives, points and beads) were more valuable for trade than plain ingots (Neiburger 2013). These items were often included in these caches and scheduled for future trade too.

During the Early and Middle Woodland period 500 B.C. to 800 A.D., evidence of long distant trade of Great Lake copper artifacts becomes stronger in New England. Adena artifacts appear locally, perhaps brought on by political and social upheaval in the Ohio Valley, which may have resulted in eastward migration of small Adena groups. Several Adena associated burials from Holyoke and Brookfield, Massachusetts have yielded copper nose ornaments, barrel-shaped rolled copper beads, pins, etc. (Keith 1965)

Large old burial sites at East Windsor, Connecticut and Swanton, Vermont have held other copper objects such as pins, copper beads, copper knives or spear points and axes (Willoughby 1935:113).

Conclusion

During the Contact period in New England (1500

A.D. to 1750 A.D.), local Indian tribes received much European sheet copper and brass from fishermen, traders, and explorers. Copper kettles were especially coveted and many artifacts were made from broken pieces of these utensils. Personal ornaments, copper arrow points, rolled sheet copper beads, spoons, awls, bells, etc. were often wrought from this metal, and these are more common finds on Contact sites in New England (Fetchko et al., 1975). Several fine examples of Historic copper artifacts have been found within the Titicut area of Middleboro and Bridgewater, Massachusetts, but this is a different subject and not to be confused with older native copper objects that occur as rare finds along the Northeast coast (Fowler 1973).

Acknowledgements

I would like to thank Dave DeMello for taking this photograph and Laurie Stundis for typing this report; also Joseph Bagley for enhancing the photo.

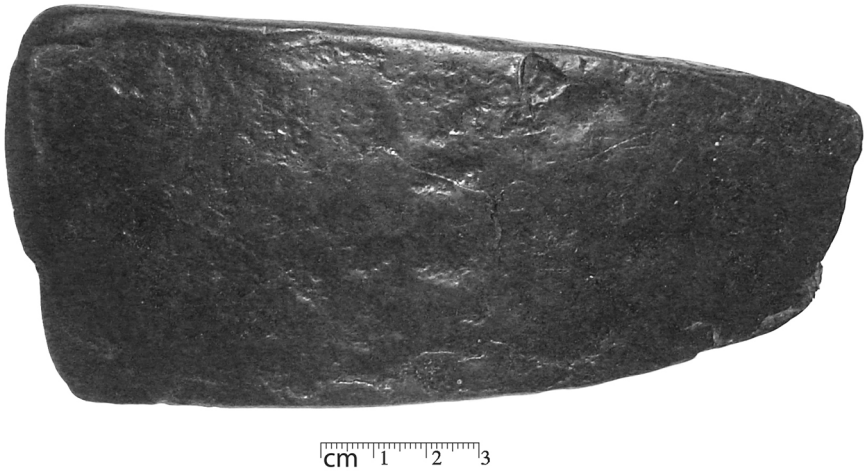

Figure 1: Rare copper axe from Kingston, Massachusetts. Assayed and found to be made of Lake Superior copper. This recovery shows extent of eastern trade routes. Former collection of Edward G. Bielski, Marshfield, Massachusetts. Now the property of the Robbins Museum. Photo: David DeMello.

References Cited

Fetchko, Peter, John Grimes and William Phippen
1975 *Stone Age New England: 10,000 Years of History*. Peabody Museum of Salem, Salem, MA

Fowler, William S.
1973 Metal Cutouts of the Northeast. *Bulletin of the Massachusetts Archaeological Society*, 34(3/4):24-30.

Keith, Barker
1965 An Adena-Connected Burial Site. *Bulletin of the Massachusetts Archaeological Society*, 27(1):1-5.

Neiburger, E.J.
2013 The Old Copper Culture: Mini-Ingots and Trade. *Central States Archaeological Journal*. 60(2):76-79.

Sherman, Charles F.
1960 A Rare Copper Ax from the Powers Shell Heap. *Bulletin of the Massachusetts Archaeological Society* 21(2):17-19.

Taylor, William B.
1976 A Copper Axe from Massachusetts. *Red Skin Magazine* II (4):128-129.

Willoughby, Charles C.
1935 *Antiquities of the New England Indians.* Peabody Museum of American Archaeology and Ethnology, Harvard University, Cambridge, Massachusetts.

A Rare Engraved Obtuse Angle Pipe from Southeastern New England

William Moody

Situated along one of the feeder brooks that flow into the North River in the town of Hanover, Plymouth County, Massachusetts, is a large multi-component prehistoric archaeological site that was under cultivation as agricultural fields from at least the mid-1800s. As residential development gradually overtook the immediate vicinity, the agricultural uses of the site were eventually abandoned, and the remaining undeveloped portion existed primarily as a hay field for many subsequent years. However, around 1988, it again began to see use as farmland for a wide variety of table crops. The author and his associate, Bob Trotta, were given permission by the tenant farmer and property owner to do regular surface surveys, which continued for just over ten years, until the site once more ceased to be used for agricultural purposes. More than 2,200 formal artifacts were eventually recorded and plotted by the author and Trotta, as well as many thousands of samples of lithic debitage being collected.

On one occasion in 1990, the author met a senior gentleman named Earl Richardson who was surface hunting at the site. It was later learned that Mr. Richardson was the son of the late Jack Richardson, a well-known artifact collector from earlier years. It should be noted, in fact, that Jack Richardson's large collection of artifacts made up a substantial portion of the original inventory at the Bronson Museum of the Massachusetts Archaeological Society in Attleboro, Massachusetts (now known as the Robbins Museum of Archaeology, situated in Middleboro).

A friendly acquaintance was made between the author and Earl Richardson, and a couple of weeks later, the author again met Mr. Richardson at the site. An offer was made to take a drive around the area to discuss other archaeological resources that Richardson was familiar with in the North River corridor. During that outing, Richardson brought out from his jacket pocket an extremely rare and fine obtuse angle, or alate stemmed, platform pipe which, he stated, had just been discovered at the very site where we had first met. The find was so fresh, in fact, that the author then observed Richardson carefully removing soil from the pipe's bored mouthpiece with a small stick he had picked up! This artifact later passed into the author's collection. (Part of the pipe's bowl has been professionally restored by Dennis Bushey of Cullman, Alabama.)

This unique pipe is most likely from the Middle to Late Woodland era. It was crafted from steatite and measures 8.8 cm long. The stem itself is 6 cm long, and the diameter of the bowl (oblong rather than round) is 2.5 x 2.0 cm. At the top of the pipe, the angle between the stem and bowl is approximately 45 degrees. The term alate, which means "winged", is employed at times to describe this particular class of platform pipe when the trianguloid stem extends out wider than the bowl in a somewhat wing-like fashion. The "wings" can occasionally be quite pronounced but are often more subtle (Hart 1978:194). What makes this particular example so rare, in the author's opinion, is the fact that it was artistically enhanced by an intricate zoomorphic design engraved along the base. The pipe also includes a notched ridge with tally marks, now somewhat worn away, along both sides of the trianguloid stem area.

Various interpretations could be put forward as to the meaning or purpose of the unusual engraving. From one direction the design may, for example, represent a human-like figure, perhaps shamanic. From the opposite direction, as Trotta has suggested, it could depict a large owl (personal communication January, 2014). If this were the case, the depiction might involve a ritual morphing symbolism, from man to owl and vice versa. It is of course not possible to know with any degree of certainty what the original craftsman had in mind when the engraving was created (Fig. 1). (The accompanying photograph, showing multiple views of the pipe, was prepared by Jeff Boudreau in 2007.)

Similar style pipes have occasionally been discovered in the Northeast over the years and have also been known from other surrounding regions. In 1944 in his book, *The Pre-Iroquoian Occupations of New York State*, William Ritchie recorded a nearly identical artifact recovered by a Kenneth Palmer at the well-known Jack's Reef site in New York. Ritchie attributed the pipe to what he termed the Canandaigua Focus, Owasco Aspect. The Palmer pipe is the same length, style, and lithic material as the Richardson pipe, with nearly identical characteristics except for the uniquely intricate engraving on the Hanover specimen. Ritchie described the Palmer pipe as follows: "Polished obtuse angle elbow pipe of dark steatite, stem trianguloid in section, with notched bead or ridge on either side." The same description could just as readily be applied to the Richardson pipe.

Further light has been shed on this class of artifact in a study that developed out of a symposium held at the 2001 annual meeting of the Society of American Archaeology. Eleven essays were subsequently published in *Smoking and Culture: The Archaeology of Tobacco Pipes in Eastern North America.* In his essay, "Stone Pipes of North Carolina," Jeffrey D. Irwin (2004) observes, "Contributing to the uniqueness of pipes is decoration…. The designs are simple geometric compositions, ranging from a few subtle parallel lines on a single pipe to extensive incising, nearly covering the stem and/or bowl." Irwin continues, "Four of the more common designs—that is, those found on more than one pipe and across multiple sites in and beyond the southern coastal region—include simple and concentric rectangles, ladders, barred triangles, and zigzags." The two motifs of concentric rectangles and a barred triangle are clearly included on the Richardson pipe. Irwin also observes that "no two pipes are alike in decoration" (Irwin 2004:50). Irwin further contends that affirming a ritual use for these pipes is a "relatively conservative" conclusion, and "if we want to understand how pipes were used, we must focus not on their status as artifacts [when] interred with the dead, but on the life these objects held in a cultural setting over an extended use life" (Irwin 2004:51).

Commenting specifically on alate stemmed pipe designs, Irwin notes, "The most conspicuous design suggestive of a Mid-Atlantic pattern is the concentric rectangle (also called nested squares)" (Irwin 2004:56). Pictured in the essay is one particularly notable example of an obtuse angle alate stemmed pipe from the Lowder's Ferry site in North Carolina (Irwin 2004: Fig. 2.5). It is of further interest to consider what Irwin reports on the known geographic distribution of these alate pipes, "The northernmost example documented here is a bent-tube stone pipe from an unknown site in Oswego County, New York" (Irwin 2004:58-59). To this eastern North American range can now be added the incised Richardson pipe from Massachusetts.

Other pipes of this basic style have also been illustrated as early as 1898 in *Pipes and Smoking Customs of the American Aborigines* (McGuire 1897: Fig. 89), where an example from Milford, Massachusetts, is shown. In more recent years, a few additional examples have been pictured in *Ohio's Prehistoric Pipes* (Gehlbach 1998:66); *Collector's Guide to Indian Pipes* (Hothem 1998: 35); and *Hart's Prehistoric Pipe Rack* (Hart 1978:192-194), where the Palmer pipe previously described by Ritchie is prominently displayed in multiple separate views. The Richardson pipe, however, is unquestionably an extremely rare style for Massachusetts and remains unique among this class of ancient artifacts due to the fascinating engraved design incorporated by its prehistoric maker.

Acknowledgements

Much appreciation is owed to Bob Trotta for his constant encouragement in all things archaeological and for his insightful observations which have stimulated countless hours of discussion over the past three decades. And special acknowledgement must be given to the late Jeff Boudreau for his ongoing interest in the author's projects and his ready willingness to provide his expertise in photography and graphics whenever called upon.

Figure 1: Alate Smoking Pipe from Hanover, MA. Photo: Jeff Boudreau

References

Fowler, William S. and Curtiss Hoffman.
1991 *A Handbook of Indian Artifacts from Southern New England*. Massachusetts Archaeological Society, Middleborough, MA.

Gehlbach, Donald R.
1998 *Ohio's Prehistoric Pipes*. Published by the author, Columbus, OH.

Hart, Gordon.
1978 *Hart's Prehistoric Pipe Rack: Prehistoric Pipes of the Mississippi Waterways, East.* Hart Publishers, Blufton, IN.

Hothem, Lar.
1998 *Collector's Guide to Indian Pipes.* Collector Books, Paducah, KY.

Irwin, Jeffrey D.
2004 Stone Pipes of North Carolina. In Rafferty, Sean and Rob Mann, eds. *Smoking and Culture: The Archaeology of Tobacco Pipes in Eastern North America*. The University of Tennessee Press, Knoxville, TN.

McGuire, Joseph D.
1897 *Pipes and Smoking Customs of the American Aborigines*. U.S. National Museum, Washington, D.C.

Rafferty, Sean and Rob Mann, eds.
2004 *Smoking and Culture: The Archaeology of Tobacco Pipes in Eastern North America*. The University of Tennessee Press, Knoxville, TN.

Ritchie, William A.
1944 *The Pre-Iroquoian Occupations of New York State.* Rochester Museum of Arts and Sciences, Rochester, NY.

A Richardson Cache from Dighton?

Curtiss Hoffman

In July of 2013, the Robbins Museum received a phone call from Teresa Saltzman of the Marin County Museum of the American Indian in Novato, California. Their museum was undertaking a NAGPRA inventory, and they had come across a tray of artifacts, described as "celts", which were said to come from Dighton, Massachusetts. She wanted to know if we knew anything about these artifacts, and if there might be a likely descendant to whom they should go. On the request of our Museum Director, David DeMello, she sent an e-mail with an attached file showing the artifact collection. He showed this to me, and I immediately recognized the red and white oval labels showing on most of the artifacts as being comparable to those used by Jack Richardson, whose large collection formed the foundation of the old Bronson Museum.

Our own inventory showed that Richardson had collected in the town of Dighton, as well as other towns in the lower Taunton and Three Mile drainages. The Robbins Museum possesses a total of twelve lots of Richardson artifacts, all or part of which are attributed to the town of Dighton. Unfortunately, only one of these lots has artifact numbers, and most of them are listed as being from multiple towns in southeastern Massachusetts and Rhode Island.

David and I informed Ms. Salzman that there was a good chance that these items were in fact at one time part of the Richardson Collection. Several discussions with her via e-mail ensued. At first there was some confusion as to whether the items had in fact been stolen from our Museum, but we assured her that we had no record of this, and that it is known that not all of Richardson's collection came to the Bronson Museum. We also indicated that it was unlikely that these items would be subject to NAGPRA. The result of these discussions was that Ms. Saltzman obtained approval from Colleen Hicks, her museum director, to donate the artifacts to the Robbins Museum, so that they could be curated closer to their original location. As I was planning a trip to the Bay Area in late August, I agreed to convey the collection from the Marin County museum to the Robbins. I met with the Museum staff on August 19th, and confirmed my impression that the labels on the artifacts were comparable to those used by Richardson for his collection. The staff indicated that they had no

idea how, or when, they acquired the collection. As is the case with many museums, including ours, early collectors did not always specify where their materials came from, and documentation was not always kept. We signed the necessary paperwork, and I conveyed the collection back to Massachusetts.

The collection consists of 22 stone items of argillite (14) and arkose (8), both of which are materials local to the Narragansett Basin in which Dighton is located (Zen et al. 1983) (see Figures 1 and 2). All but one of them has a label of the sort described above. The labels are indeed identical to those used by Richardson, and furthermore the handwriting on them is identical to Richardson's. However, a search of the Museum's inventory showed that we already had in our collection seven Richardson artifacts with identical numbers to those on the alleged Dighton artifacts: #s 1654, 1655, 1656, 1657, 1662, 1666, and 1673. The first five are white quartz cores; #1666 is a dark grey rhyolite core; and #1673 is a grey arkose chipped axe, the label on which indicates that it came from Seekonk. None of the other six artifacts has a provenience. This overlap of numbers is hard to reconcile with the handwriting and labels, but perhaps Richardson sometimes duplicated artifact numbers.

The working on the Dighton artifacts, for the most part, is primary flaking, with only a few showing retouch on the sides or edges. Six of them (#s 1638, 1639, 1642, 1649, 1650, and 1656) appear to show grinding on the ends. Ten of them (#s 1640, 1641, 1644, 1648, 1655, 1662, 1667, 1668, 1673, and the unnumbered item) show cortex on one or more surfaces. For this reason, I consider them to be preforms rather than finished tools. Two of the argillite items, #s 1640 and 1642, show dark reddish iron stains on one or both surfaces. In addition, four other items (#s 1638 and 1653, both of argillite; and #1655 and the unnumbered item, both of arkose) show slight iron stains on one or both surfaces. This could be due to the oxidation of iron inclusions, but it could also be the result of deposition in association with hematite (red ochre) powder. If the latter was the case, then this could be a cache of blanks buried as a ceremonial deposit, with or without association with a burial. If so, then the items might indeed be subject to NAGPRA, either as "sacred items" or as "unassociated funerary objects". However, in other such ceremonial caches I have seen, all of the artifacts are thoroughly covered with ochre (e.g., Fowler 1966), so I lean towards the former explanation. Argillite and arkose sometimes do contain iron impurities which cause exposed surfaces to show red staining.

All of the items are of roughly the same shape, which may be described as a rectangle with rounded corners. Their lengths range from 86.15 mm to 135.20 mm (average = 107.9 mm); their widths range from 33.30 mm to 56.35 mm (average = 50.1 mm); their thicknesses range from 17.10 mm to 30.55 mm (average = 25.7 mm); and their weights range from 68.1 g to 276.0 g (average = 192.2 g) (see Figure 3). Scatter charts of the length/width, width/thickness, and length/thickness ratios (see Figures 4-6) show that most of the artifacts are tightly clustered around these means, with a few outliers (in particular, item #1654 has the lowest measurements in all four categories; item #1648 has the highest length and thickness; and item #1644 has the highest width and weight). This, plus the consistent choice of shape and local material, suggests that the items actually derive from the same deposit. Obviously, in the absence of records, this cannot be demonstrated conclusively.

Despite these uncertainties, we welcome this bit of local pre-Contact history to the Robbins Museum!

References Cited

Fowler, William
1966 Ceremonial and Domestic Products of Aboriginal New England. *Bulletin of the Massachusetts Archaeological Society* 27(3/4)

Zen, E-an, Editor, compiled by Richard Goldsmith, Nicholas M Ratcliffe, Peter Robinson, and Rolfe S. Stanley
1983 Bedrock Geological Map of Massachusetts. U.S. Geological Service, Reston VA.

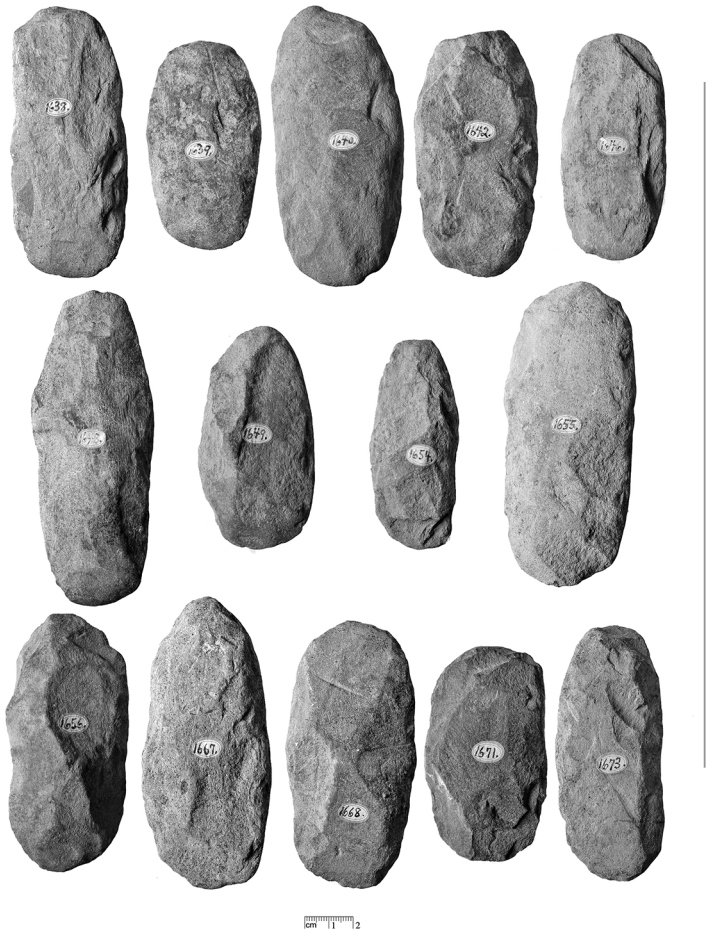

Figure 1: Argillite Preforms from Dighton
Photo: Joesph Bagley

Figure 2: Arkose Preforms from Dighton
Photo: Joesph Bagley

Number	Material	Color	Length	Width	Thickness	Weight	Secondary Flaking
1648	Argillite	grey	135.2	52.15	30.55	238	on end
1655	Argillite	grey	128.6	54.75	28.85	264	on both ends
1644	Arkose	brown	123	56.2	31.45	276	on edge
1667	Argillite	grey	122.25	54.35	26.5	230	none
1640	Argillite	grey	121.25	54.6	23.35	232	none
1641	Arkose	grey	120.45	53.05	27.9	249	on side & end
1643	Arkose	grey	116.3	53.15	21	218	none
1668	Argillite	grey	116	57.3	31.3	242	some on end
1638	Argillite	green	113.45	48.8	23.2	186.5	none
1656	Argillite	brown	111.1	52.1	29.3	225	some on end
1673	Argillite	green	109.05	46.3	22.35	159.4	none
No #	Arkose	brown	108.65	54.35	35.3	259	none
1666	Arkose	grey	104.6	56.35	26.75	194.85	some on side
1642	Argillite	grey	100.9	50.2	24.1	181.3	on end
1650	Arkose	grey	99.35	51	24.9	179.4	none
1646	Argillite	grey	98.55	45.6	19.8	135.2	none
1657	Arkose	grey	96.7	41.65	28.55	143.75	none
1662	Arkose	grey	96.25	42.2	20.85	129.15	none
1649	Argillite	grey	90.15	47.5	25.7	137.3	some on side
1671	Argillite	black	89.45	51.35	23.4	157.9	on side & end
1639	Argillite	brown	87.45	45.2	22.65	122.35	none
1654	Argillite	black	86.15	33.3	17.1	68.1	on end
average			107.9	50.1	25.7	192.2	

Figure 3: Metric Measurements of the Dighton Preforms

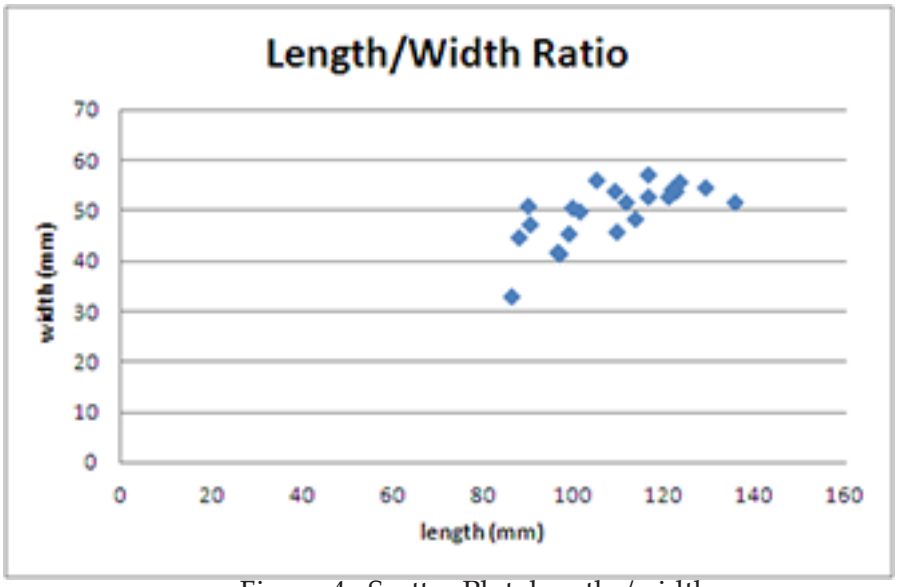

Figure 4: Scatter Plot, lengths/widths

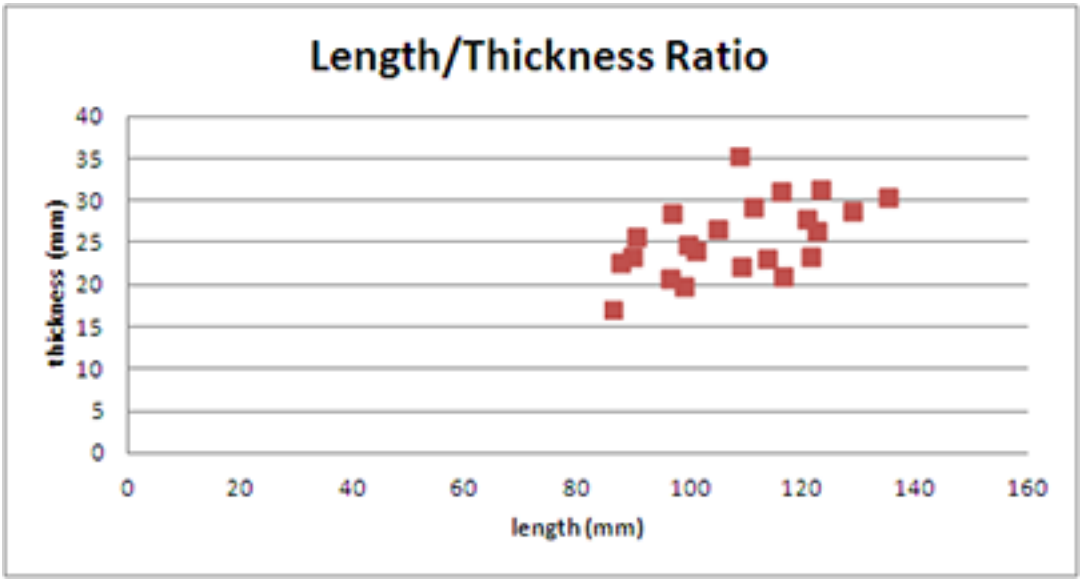

Figure 5: Scatter Plot, lengths/thicknesses

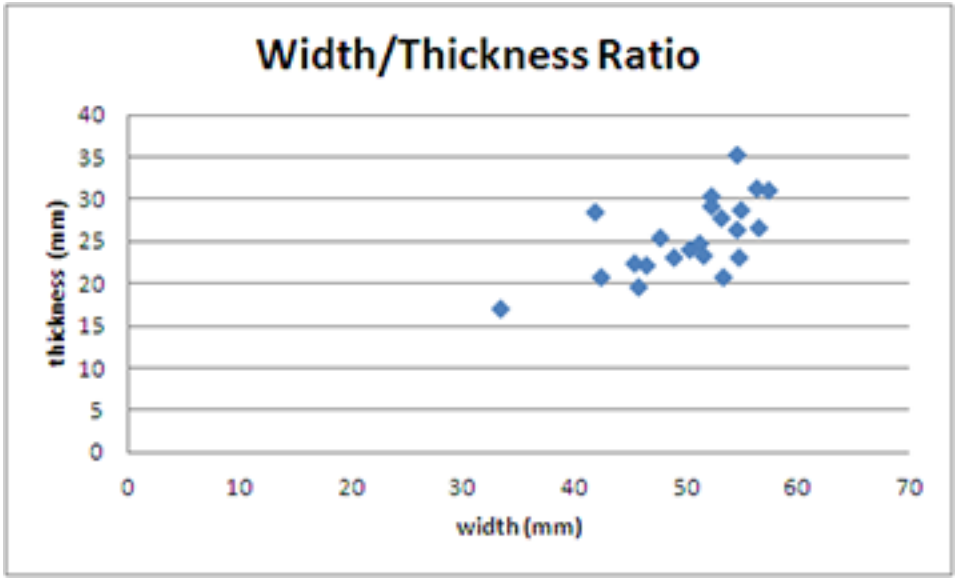

Figure 6: Scatter Plot, widths/thicknesses

It's About Time and the Paradigm

Edwin C. Ballard

Introduction

Since early 1988 I have been accumulating data and reporting on a unique class of "U"-shaped, high ground, laid up stone, surface constructs (Ballard 1999, 2000, Ballard and Mavor, 2006, 2010). These sites are primarily distributed in southeastern New England. In March of 2012, I presented a brief summary of my data and conclusions at the combined meeting of Northeastern Anthropological Association and the Massachusetts Archaeological Society at Bridgewater State University. During the discussion period, a senior member of the archaeological community stated that the subject "did not belong in archaeology" and that it "would poison the minds of our young students." I finally understood from this incident that my evidence and hypothesis that these structures show a Native American cultural use pattern did not fit the ingrained professional archaeological paradigm (Kuhn, 1960, Kehoe,1998).

I suggest that the paradigmatic base of the objections to these ideas is related to the biased history of the Contact Period culture clash formulated from behind the pulpit (Russell, 1980, Jennings 1976). It is further obscured by the dust of the dig, which relies on the primacy of below-surface information. The tone of the objection was the theme of a *Terra Firma* article (Provencher and Mahlstedt,2007): "Some have suggested a Native American origin for these features. There is no archaeological evidence to support this conclusion. When historians and archaeologists have researched stone walls, piles, and chambers, they have invariably demonstrated that these features are associated with the activities of European settlers and have no Native American (or other) origin." In their response to the National Park Service's recognition of the ceremonial nature of the structures at the Turners Falls Airport, MHC staff concluded, "The unwarranted functional attribution of ceremonial or sacred purpose to surface stone constructions that appear to be enigmatic is unwarranted speculation with no empirical evidence," (Simon and Bell 2007), which continued to promulgate the professionals' position statement.

In responding to that position, I will use the data from several sites to reinforce my opinion that the patterns of use for these "enigmatic" U-shaped constructs indicate that they were directly related to ceremonial practices of Pre-European Contact Algonkian Native American culture in Eastern and Southeastern New England.

I have observed that most archaeological professionals I have interacted with have little understanding of the cosmos-based cyclic nature of prehistoric cultures. These cultures were directly connected to the yearly cycle of the sun and stars. The Native American records of their earlier existence were oral. They used the fixed positions of the Sun and stars at important times in the annual cycle and the periodicity of the moon cycle to reinforce their oral memory. These memories were celebrated annually at a significant location (Carmichael et al. 1994) with thanks to their gods for the earthly elements that sustained their continuance. Roger Williams (1643) noted that the Narragansett "used the hilltops to worship their gods" and were extremely knowledgeable about the stars, specifically the Big Dipper. I present evidence below to tie these historical references to the structures.

Discussion

The first site to be considered, DTR #1A (see Figure 7), contains a chocked rocking stone (Figure 1) on a smooth bedrock base on a north/south ridge edge near the northwest corner of Dighton, MA. On the north side of the rocking stone was a 1.5 meter high-backed chair-like "U" construct, situated just below the cliff edge, facing east over a shallow valley and across a facing flat-topped ridge. Several meters south of the chocked boulder, on the edge of the same ridgeline, was the "U" in Figure 2. It faced northeast. On the opposing ridge edge was an apparent foresight, the chocked-in-place lith shown in Figure 4.

There were several other similar "U" shaped constructs nearby, also apparently horizon-oriented. The horizon azimuths are recorded in Figure 7 for site DTR #1A. The figure 2 "U", paired with the Figure 4 lith appeared to be a Winter Solstice Sunrise observation point. The "U" shown in Figure 3 appeared to be oriented to Equinox Sunrise. In March of 1989 I observed, from the "U" in Figure 3, the Spring Equinox Sun rising over an apparent foresight boulder

on the facing east ridge. Vegetation obscured the rise point. On December 22, 1989, while crouched within the Figure 2 "U" I photographed the tip of the rising Winter Solstice Sun as it broke the bedrock plane at the crotch at the base of the chocked in place foresight shown in Figure 4, at two minutes after listed horizon sunrise. As I snapped the shutter, while squatting in the then snow-covered arms of the "U" in Figure 2, I was warmed by the flash of recognition that I was looking at the face of someone's god. I was definitely not in the midst of a colonial farmer's field clearing residue or amid the work of some unidentified wandering seafarer who brought Solstice knowledge to America. I was in the center place of a cyclic culture calendar array: a Native American ceremonial site.

As summarized in Figure 7, 43 of the "U" construct azimuths at multiple "U" sites I have recorded are focused on rising and setting positions of the Sun on Solstices and Equinoxes. Four were directed at sunset on August 13th, similar to the primary horizon azimuth at the Turners Falls Airport Site (Mclelland and Seibert, 2008). Eighteen are focused on two positions of the Big Dipper's Tail Star. One is when the Tail Star crosses the Meridian at dawn on August 13th, or reappears at sunset on January 16th; the other when the two Tail Stars become vertical at dawn on the Fall Equinox (15 degrees true). Roger Williams (1643) noted the Narragansett use and knowledge of "Charles' Wain," the Big Dipper. Two are oriented to the first visible rise of Sirius. Sirius is an event timing star for the Narragansetts. For the balance of the "U"s cited, the azimuth focus is not yet identified. Six of the sites appear to have been used year round. Four are Summer sky oriented, three are oriented to the Winter sky. Two of the four "U"s in the ceremonial array at Site #5 have associated radiocarbon dates, 800±50 BP (Beta-54909) for the Summer Solstice Sunset "U" construct and 860±50 BP (Beta-62401) for the one focused on the first visible rise of Sirius. Three (Sites 1b, 5 and King Phillip's Rocks) show evidence of Native American burials, from a mound on the golf course adjacent to Site #5; near King Phillip's Cave at King Phillip's Rocks (KPR) (Ballard, 2006, 2010); and a burial in one of the piles that was disturbed during gravel removal operations in the 1960's from one of an array of stone piles below the Fall Equinox "U" at Site #1B (Sharples 1994). Two of the sites, KPR and Site #5, had significant numbers of identifiable projectile points from the Transitional Archaic and Woodland periods. Two of the sites have a mid 20th century oral history connection. A senior member of the Dighton, Massachusetts Tribal Council stated that when he was a child in the early 1940s his parents owned a small hill overlooking site #1A and went there to pray (Deslauriers, 2012). That property was sold by relatives after 1992. During a 2005 tour of the KPR Site by an Aquinnah Tribal group, the mother of one of the tribal leaders told me that she had been taken to the site by her parents when she was a child.

Site #4 is on a high ground drumlin northeast of a significant hilltop site on Assawompsett Neck in Middleboro, MA. In 1690 the hilltop was taken by eminent domain by the Selectmen of Middleboro, and four acres on the top were leveled to prevent gatherings of local Native Americans (Leonard, 2003). Recent evidence (Leonard, 2013) extending Site #4 northward verifies a previous hypothesis that a Summer Solstice Sunrise azimuth from the Assawompsett Neck hilltop across White Banks near Wapanucket, connects the hilltop site to Site #4.

As shown in Figures 2, 3, 5, 6, and 8, not all "U" constructs are uniform. I believe the differences are related to material availability and style evolution. Site #6 Acworth, NH, has examples of both large and small "U"s. There are two constructs similar to Figure 6 and three similar to Figures 2 and 3. The two "U"s similar to Figure 6 were hypothesized as Post-Contact "trapping cubbies" (Hall and Woodman, 1972) because "Native Americans did not use stone architecture" and the only solution they could suggest was "that they were trapping cubbies even though they were unconventional ones." The hypothesis was referenced by later archaeologists (for example Neudorfer, 1980, Snow, 1980) to support the then axiomatic non-Native American use hypothesis for "enigmatic" surface stone constructs. At Acworth the opening of the two "U"s similar to Figure 6 were about 0.5 x 0.8 meters, hardly a "cubby hole." Figure 6 is oriented to Winter Solstice Sunrise (Ballard, 1999/2000).

Because of the ongoing disagreements on the use function of surface stonework, I initially kept my reporting focused on the verifiable sky use hypoth-

esis for "U" constructs. Many of the sites had other surface stone constructs, like the hilltop stone pile at KPR, comprised of hand size rounded stones. The Winter Solstice Sunrise "U" at King Philip's Rocks was constructed into the southeast side of that pile.

In the Summer of 2006 I was taken to site BFH #2 (Figure 7) by Jeff Peters , a member of the Mashpee tribe, who had introduced me to several other sites in the Sharon uplands area. There were four identifiable "U"s, three horizon-focused on a Winter Solstice Sunrise azimuth, the other at 15 degrees true. The solstice "U" (Figure 8) was unique. It protruded on a 90 degree angle from a four meter laid up stone "wall" segment that extended southwest from a large hilltop glacial erratic boulder. The "wall" also extended two meters northeast from the opposite side of the boulder. About 12 meters from the "U", two large parallel glacial erratics framed the azimuth line to provide a focus for the Winter Solstice Sunrise. On the eastern downslope from that "U" construct, near to the bedrock cliff edge, was an array of several small flat-topped stone piles. On the southeast edge of the hilltop, the 15 degree "U" looked over the stone pile cairns and the cliff drop to the river below.

Ethnographic Comparisons

Since information about the ceremonial nature of the Pre-European Contact culture record in New England is virtually nonexistent in the "academic" record, I was forced to look for sky use evidence from other Algonkian language-based tribes. About 4000 years ago there was a major cold period. In Canada in the area of lower Hudson Bay, the boreal forest retreated south about 200 miles, and the tundra moved south about 150 miles (Schlessier, 1987).

Proto-Algonkian tribal units, from the Blackfeet in the west to the Mahican/Delaware in the East, migrated south. In the West, movement from Mid- and Lower Alberta to Montana can be traced by the remnant "Medicine Wheel" stone circles. The Big Horn Mountain Medicine Wheel was a sky use "ceremonial site" (Eddy, 1977). It was used into the Mid- to Late 19th century by many Northern U.S. tribes. Further east, the Cheyenne migrated around Lake Superior and onto the Northern Plains, where they were saved from starvation by the buffalo. Their annual "Massaum" renewal ceremony recalled and reinforced the oral memory of their pre-migration beliefs, their migration story and their rescue by the availability of the buffalo. The annual celebration gathering call was triggered by the first visible rise of Aldeberan near Summer Solstice. They traveled north and east to Bear Butte in the Dakotas. The ceremony was triggered by the first visible rise of Rigel, the star at the left foot of Orion, in July, and ended with the first visible rise of Sirius in August. Today that is August 13th; 800 years ago it was first visible about August 1st. These 3 stars are also associated with the Medicine Wheel and the Anderson Mounds in Indiana (Anderson Mounds 1969). The Cheyenne ceremonial communion was bits of buffalo tongue and heart (Schlessier, 1987). Their ceremonial altar was an open area of earth. The sods, after being removed, were placed behind the earth opening in a "U" shape facing east. A trench was dug in the "U" opening and a red and black painted buffalo skull placed in it. As discussed in Ballard (1999), this is the same "U" and dot symbolic construction of the four "U"s in the "U" array dated to 800 B.P. at Mouscochuck Creek, site #5 in Figure 7.

Closer to New England, the southern migration of the Mahican/Delaware from Canada to the area from the southern Hudson River to the Delmarva Peninsula was initiated by that same colder climate event. After King Phillip's War, elements of the Mahican/Munsee tribes migrated west, eventually meeting in Oklahoma. Their midwinter ceremony was held in January during the first Full Moon after the Winter Solstice (Schlessier, 1987, Speck, 1931). The Moon cycle does not coincide with the Sun cycle and ceremonial events needed precise dating, as noted in the Jesuit Relations (N.E.H.G.S., 1856). William Pynchon, in his study of Native moons in about 1650, indicated that the Connecticut River Niantics celebrated midwinter on January 6th, January 16th in our present calendar (the conversion took place in 1752). January 16th is the last day of the second 13-day week after Winter Solstice. Coincidentally, the Munsee Big House ceremony was held at that time, when the Native American Bear constellation was visible through the smoke hole of the Munsee Big House overlooking the celebration. The contribution of the Mahicans to the configuration of the Bear ceremony was

to trace the Big Dipper, the Three Hunters chasing the Bear and four additional hunters, stars from Bootes including Arcturus, on the Big House floor. The ceremony listed 12 nights, and the celebratory evening meal was bear meat. At that time in mid-January, at dusk the tail star of the Dipper crossed the Meridian. Is it only an event coincidence that as noted for the KPR site in figure 7 and discussed in our KPR article (Ballard and Mavor, 2006, 2010) this configuration is repeated?. The "U" constructs there are focused on Winter Solstice and two significant Dipper positions including when the tail star brushes the horizon as it crosses the Meridian at dusk in midwinter. Other Northeastern Native star use evidence includes Verazzano's observation on the use of the Pleiades as a planting cycle indicator (Ceci 1978). Snow (1996) discussed the Pleiades as used by the Iroquois, including its use to initiate their mid-winter ceremonies.

The accumulated evidence that is noted above reinforces my hypothesis that the culture that was here before us was cyclic, using the predictable position of the sun and stars to reinforce the oral memory of the cultural base. The "U" constructs are a relatively permanent marking tool to insure a fixed observation location to reinforce oral memory and to ensure ceremonial schedule accuracy. Those who lived here before us "had no word for time"(Pritchard,1997). They did however have a word for "U" constructs, *Shwiwahkuwi* (Leonard 2013). The sky (Milky Way) was the "path of their spirits" (Pritchard, 1997). The Big Dipper was the connection to the sky, and the vehicle for the return of their gods, the canoe that brought the corn mother of the Alabama to Earth (Swanton, 1929) and the stone boat used by Glooskap to bring his grandmother back from the other side (Nicolar, 1893).

Historical Erasures

In an attempt to comprehend the comfort level of any paradigm, one has to understand its origins (Kuhn, 1960). It was clear that I needed to better understand our historical base. The question was where to start. Our path from a prehistoric cyclic culture to the present, as I learned, had its origins in Middle Eastern prehistory and has a Judaeo-Christian base. Glimpses of its sky-based origins seep through the fog of the past. It had been recorded first orally and then by glyph and script. Our history is written by the winners. Since our knowledge of past climate effects has expanded, I chose to begin my reeducation with the latter part of the Medieval Warm period (900 - 1300 AD.) as a starting point. During that period, agriculture had expanded both in cultures in Europe and the Northeast, leading to an increase of wealth and population. Grain (wheat) was the staple of Europe, seafood and maize for Eastern and Southern New England.

In the early 14th century, disaster struck Europe in the form of a major climate shift, the "Little Ice Age," 1300 - 1850 AD. It was initiated and fueled by high volcanic activity worldwide and a downward shift in sunspot activity (Fagan, 2000). This period of violent climate instability ravaged Europe, causing widespread starvation, migration, pestilence, disease, religious upheaval and wars. In the mid- to late 1500's, small tenant farms in England could not survive and animal husbandry expanded into the available land. Private ownership of land became a "right" in 1610 (Jennings, 1975), but little land was available. During these centuries of instability the Norse retreated from Canada and Greenland, Columbus sailed west and the Basques discovered the North Atlantic fisheries. Salted cod became a European food staple. Subsequently, European diseases decimated the Eastern New England Native population, setting the stage for the invasion of America (Jennings, 1976). There is little record of the climactic effects of the period on the Northeast. We know the Norse disappeared from North America and the Pilgrims arrived at the coldest time of the cycle and lost 40% of their number in the first winter. By the end of the 1622/23 winter they were in such dire straits that the elders scrapped the failed commune principle of common ownership of land and "fair" distribution of its produce by assigning property rights by family to produce their own food. An immediate surplus was generated in subsequent years. Surplus maize was shipped north up to the Kennebec and traded for furs (Salisbury, 1982). This suggests a possible climatic impact on the ability of northern tribes to cultivate. A note in the Jesuit Relations (Lafitau, 1774) indicates that a Jesuit missionary in the 1680's was aware that

Cartier in 1535 had reported Iroquois at Quebec, and that Champlain in 1605 did not find them until he reached Montreal. He asked an Iroquois elder for the reason. He was told it was due to the lack of ability to cultivate.

The invaders, the Pilgrims of Plymouth and the Puritans of Massachusetts Bay, were Calvinists. As such, they were required to "salvage" the uninformed. Their religion was the only path to salvation. They had their own version of the Bible. For most families it was their only book. Children learned to read by it. It was the base for administering laws. During the years of privation, 1620 through the Spring of 1623, the Pilgrims made little effort at salvaging. In fact, they used aggressive tactics to attempt to obtain food from local Natives, alienating them in the process. It was in that mood that Winslow went to visit Massasoit in March of 1623 (Winslow, 1624). He found Massasoit gravely ill. Powaws were praying over him, supplicating their Helper God to spare him. Winslow recognized the illness, administered medications, and Massasoit survived. Winslow spent several days in the presence of Massasoit and his elders. On returning to Plymouth he noted two problems: one was that salvaging would be difficult since the Natives had no Devil; the other was a rumor that a small tribe near Weesagusset was planning to attack Plymouth (Salisbury 1982). The first was resolved by identifying the Helper God as the Devil, and the Powaws as Devil worshippers. To resolve the second, Winslow, Miles Standish, and several militiamen went to Weesagusset in late March and under the guise of a meeting murdered the tribal representative, two powaws (pniese) and four others in the negotiating party (Winslow, 1624) – a more savage than salvaging action.

A second example of a non-salvage operation was what we know as the Pequot War. The English hatmakers' source of furs was the Massachusetts Bay Colony. The Bay Colony's major fur source was the Narragansetts, via the Blackstone and tributaries to the Concord River. The Dutch hat-makers had control the lucrative European market. The major fur source for the Dutch traders in New York was the Pequot, who controlled the Thames River route through Groton. In 1637, due to the difficulties of a sea route around Cape Cod, militia were recruited from the Connecticut River Valley area under the mantra to take out those "Devil worshipping savages." The Pequot were massacred and the English hatters took over the European market from the Dutch (Salisbury, 1982).

The first true salvage operation was initiated in 1646 by the Bay Colony sending John Eliot to preach at Dorchester Mills (Jennings, 1976). When Eliot compared the Native Helper God to the Devil, he was shouted down and scurried back to Boston. The General Court took immediate action. They followed the Biblical directions in II Kings 23, 1-24, "Call the Canaanites down from the hills to worship at the rebuilt temple and kill the 'priests' of Baal". The court enacted laws forbidding the practice of Native religion. The penalty was fine or death. They established the Praying Indian villages and a college at Harvard to train Native ministers. In 1690 the selectmen of Middleboro took over a hilltop on Assawompsett Neck by eminent domain because the local Natives were gathering there (Leonard, 2003). The cumulative result was that Native religion went underground until the passage of the American Indian Religious Freedom Act of 1978.

The other primary conflict was over land. One of the causes of Roger Williams' eviction, first from the Bay Colony and then in 1636 from Rehoboth, was his objection to the land acquisition policies of the colonies. He had insisted on fair and just compensation to the Natives. For Plymouth, the issue came to a head in 1660 with the return of the Monarchy; Charles II reminded the colonies that the land belonged to him. In 1663 Plymouth had to get a confirming document from Phillip on his father's (Massasoit) bound agreement from the 1630's Taunton purchase and another in 1668 to confirm his brother Wamsutta's agreement on the 1661 Rehoboth North purchase. The Taunton South purchase (Dighton, MA) in 1672 was apparently forced on Phillip to prevent individuals from obtaining king's grants, as Phillip had previously refused to sell the area. Site 1A (DTR) is in the northwest corner of that "purchase." In 1675, Plymouth took over the south half of Titicut from Tispaquin and "purchased" one last remaining open area, the 16 Shilling purchase in Lakeville, MA (Leonard,2003), an area that contains several ceremonial sites, one of which was outlined in a recent Bulletin article (Leonard, 2010). With King

Philip and Tispaquin now restricted to small "village" areas, the stage was set for King Phillip's War. The colonies needed land and its fruits for earthly survival and needed to salvage the "uninformed" to earn heavenly credits. They pursued both aims aggressively, suppressing Native religious practice in the process. The residue of our "historical" paradigmatic myth from the colonial period underlies the rhetoric of the M.H.C. opinion about the significance of the Turner's Falls Airport Site.

Conclusion

As I have previously acknowledged, archaeology has been a force behind the correction of the historic record. In this case however, in the Northeast, we have been blinded by the inconclusive dust of the dig and the myth of the paradigm. As a result, we have almost lost the opportunity for developing an understanding of the Pre-European Contact Native American culture in the Northeast.
This paradigmatic blindness includes ignoring a standing stone at the 4000 year old Call site (Winter, 2006) and the dated (875±150 BP, 795±160 BP.) shaped ceremonial stone pile in Freetown, MA. (Mavor and Dix 1989) and the dated (800±50 BP, 860±50 BP) ceremonial "U"s at Mouscochuck Creek (site #5, Figure 7). The historic significance of the pre-invasion Algonkian culture of Eastern and Southern New England is that it was a thriving evolutionary reflection of our once universal cosmos-based prehistoric cultural origins.

It is obvious to me that our Post European Contact history is all about us. We were the winners, and our scribes had written it from their theological perspective. Many of those who wrote the history of our early towns were the ministers, those with the time and education. Our initial universities were theologically based institutions whose primary purpose was to train those to instruct the uniformed. When the land grant colleges were established in the mid-1860's, the products of these Northeastern universities became the history professors (Jennings, 1975) and the New England historical paradigm went national. This version of our history has permeated our educational system from elementary school on. We have been poisoning the minds of our students since 1623. It's time for a change of the paradigm!

References Cited

Anderson Mounds
1969 *The History of the Mounds*. Division of State Parks, Indiana Department of Natural Resources.

Ballard, Edwin C.
1992 Lithic Ritual Structures in the Taunton and Palmer River Basins. Paper presented at the N.E.A.A./M.A.S. Conference. Bridgewater, MA. March 13, 1992.

1999 For Want of a Nail. An Analysis of the Function of Some Horseshoe or "U"-shaped Stone Structures. *Bulletin of the Massachusetts Archaeological Society* 60(2):38-54.

2000 For Want of a Nail. *New England Antiquities Research Association Journal* 34 (2).

Ballard, Edwin C. and James W. Mavor
2006 A Case for the Use of Above Surface Stone Constructs in Native American Ceremonial Land scape in the Northeast. *New England Antiquities Research Association Journal* 40 (1).

2010 A Case for the Use of Above Surface Stone Constructs in Native American Ceremonial Landscape in the Northeast. *Bulletin of the Massachusetts Archaeological Society* 71(1):8-25.

Carmichael, Daniel L. and Jane Hubert, Brian Reeves, and Hild Schancer
1994 *Sacred Sites, Sacred Places*. Rutledge, London.

Ceci, Lynn
1978 Watchers of the Pleiades: Ethnohistory Among Native Cultures in Northeastern North America. *Ethnohistory* 25 (4) 301-327.

DesLauriers, Roger
2012 Personal Discussion E.C. Ballard.

Eddy, John A.
1977 Probing the Mystery of the Medicine Wheels. *National Geographic*, January 1977.

Fagan, Brian
2000 *The Little Ice Age.* Basics Books, New York, NY.

Hall, Jonathan and Eric Woodman
1972 Beehive Shaped Stone Structures: Ancient or Recent Origin. *Man in the Northeast* 5:60-61.

Jennings, Francis
1976 *The Invasion of America*. W.W. Norton, New York, NY.

Kehoe, Alice Beck
1988 *The Land of Prehistory.* Rutledge, New York, NY.

Kuhn, Thomas S.
1960 *The Structure of Scientific Revolutions*. University of Chicago Press, Chicago, IL.

Lafiteau, Joseph Francis S.J.
1774 *Customs of the American Indians when Compared with the Customs of Primitive Times (Mouers Des Sauvages Ameriquains Comparies aux Moeurs des Premiers Temps*), Trans. Fenton, William and Elizabeth Moore, The Champlain Society, Toronto, Canada.

Leonard, Kenneth C, Jr.
2003 *The Beechwoods Confederacy. 1709-1809*. Heritage Books. Bowie, MD.

2010 Identification and Preliminary Analysis of a Late Woodland Ceremonial Site in Southeastern New England. *Bulletin of the Massachusetts Archaeological Society* 71 (1):26-43.

2013 Personal Communication E.C. Ballard.

Mavor, James W. and Byron E. Dix
1989 *Manitou, The Sacred Landscape of New England's Native Traditions*. Inner Traditions International. Rochester, VT.

McClelland, Linda and Erica Seibert
2008 Turner's Falls Sacred Ceremonial Hill Site. Determination of Eligibility Notification. National Register of Historical Places, National Park Service.

New England Historical Genealogical Society
1856 *New England Historical Genealogical Society* Vol. X. Samuel Drake, Boston, MA.

Neudorfer, Giovanna
1980 *Vermont's Stone Chambers*. Vermont Historical Society. Montpelier, VT.

Nicolar, Joseph
1893 *Legends and Traditions of the Redman*. Old Town, ME.

Pritchard, Evan T.
1997 *No Word For Time.* Council Oak Books LLC. San Francisco, CA.

Provencher, Shawn and Thomas Mahlstedt
2007 Stones That Speak. *Terra Firma* 5. Massachusetts Dept. of Conservation and Recreation, Boston, MA

Russell, Howard S.
1980 *Indian New England Before the Mayflower.* University Press of New England, Hanover, NH.

Salisbury, Neal
1982 *Manitou and Providence*. Oxford Univ. Press. New York, NY.

Schlessier, Karl H.
1987 *The Wolves of Heaven*. University of Oklahoma Press. Norman, OK.

Sharples, Robert
1993 Personal Discussion E.C. Ballard.

Simon, Brona and Edward Bell
2007 Fieldstone Wall and Rock Piles. Turners Falls Airport. MHC Opinion: Eligibility for National Register. Massachusetts Historical Commission, Boston, MA.

Snow, Dean R.
1980 *The Archaeology of New England*. Academic Press. San Diego, CA.

1996 *The Iroquois*. Wiley-Blackwell, Hoboken, NJ.

Speck, Frank G.
1931 A Study of the Delaware Indian Big House Ceremony. *Publications of the Pennsylvania Historical Commission*, Vol. 2. Harrisburg, PA.

Swanton, John R.
1929 *Myths and Tales of the Southeastern Indians. Bureau of American Ethnology Bulletin* 88.

Williams, Roger
1643 *Key Into the Language of the Americas.* Editors John J. Teuniss and Evelyn J. Hinz. Wayne State University Press. Detroit, MI, 1973.

Winslow, Edward
1624 *Good News from New England*. Bladen, William and John Bellamie. London.

Winter, Eugene
2006 An Atlantic Phase Mortuary Feature at the Call Site. Billerica, MA. *Bulletin of the Massachusetts Archaeological Society* 67 (2):42-47.

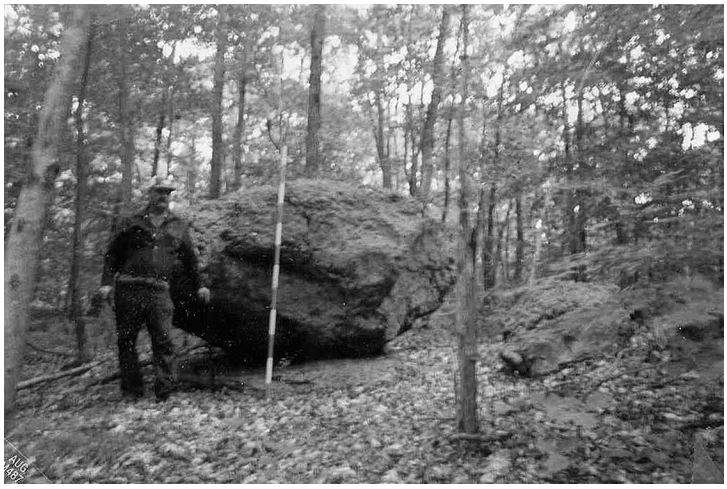

Figure 1: Chocked Rocking Stone. Bracketed by Equinox south "U" and Winter Solstice Sunrise "U" shown in Figure #2, site DTR #1A.

Figure 2: Winter Solstice Sunrise "U" (Fall 1988), site DTR #1A.

Figure 3: Rehoboth Site #1B Equinox sunset "U" Spring 1993

Figure 4: Chocked Foresight, for Winter Solstice Sunrise "U", site DTR #1A

Figure 5: High-backed slab-topped "U", Groton, MA site.

Figure 6: Summer solstice sunrise capped-back slab-topped "U", Acworth, NH.

					Summer Solstice		Winter Solstice		Equinox		August 13		N		unk.	1st Vis.	S	Non
Location	State	Yr. Pub.	Site	Time	SR	SS	SR	SS	SR	SS	SR	SS	0	15	30	Sir.	180	ID
DTR	MA	1999	1A	YR	1	1	2	1	2				1					
Gilbert Kills S.F. Foxboro	MA	1999	2	YR	2	1		2	1				2	1				
Borderlands	MA	1999	3A	YR		1		1	1	1		1						
Sharon East	MA	1999	3	YR	1		1		1					1				
Swanzey	NH	1999	10	YR		1		1		1				2				
Acworth	NH	1999	6	YR	1		1	1				1		2				
Rehoboth	MA	1999	1B	SUM	1	1				1				1				
Middleboro	MA	1999	4	SUM		1				1		1			1	1		
Mouscochuck Barrington	RI	1999	5	SUM		1								1		1		1
Wrentham S. F.	MA	1999	8	SUM	3	1							2		2		1	2
Groton	MA	1999	9	WIN			2					1		1	1			
King Phillip's Rocks Sharon	MA	2006	1	WIN			1	1					2	1				
B. F. Hill 2 Foxboro	MA	2013	-	WIN			3							1				
Sub Total					9	8	10	7	5	4	0	4	7	11	4	2	1	3

Figure 7: Six sites show year round activity. Four are Summer event related. Three are Winter event related. 43 (57%) of the azimuths are focused on solstices and equinox, 18 on two specific positions of the Dipper tail star, four on August 13th sunset and two on the first visible dawn rise of Sirius.

Figure 8: Winter solstice sunrise "U" B. F. Hill Site #2 , Foxboro, MA.

.

Corrigenda to the Lepionka Article

p. 47: Text refers to figures 5-7, Essex Falls artifacts. The image for Figure 7 on p. 87 is a cross-hatch-inscribed sherd from Hog Island in Essex Bay. On the next page is the correct image for Figure 7 (quartz-tempered sherd from Essex Falls):

p. 55: Text refers to animal bones at Old Coffin Farm in Figure 15. However, the image in Figure 15 on p. 88 shows a mounted rocker-stamped potsherd from Riverview. The text reference should be to Figure 16, which shows identified animal, bird, and fish bones

from Riverview of the same species as those identified for the Wingaersheek village site. Figure 16 is referenced correctly on p. 59 in the section on Riverview.

p. 56: Text refers to Matz site artifacts at the Harvard Peabody in figures 17 and 18. The field note, which is unreadable, identifies the location of the point base shown in Figure 17. (The note was included as the only documentation for the site on file, emblematic of the lack of documentation for most of the museum collections I examined.)

p. 61: Text reference to worked bone should be to Figure 10 rather than Figure 9. The text reference to Figure 9 on p. 61 also should be to Figure 10.

p. 65: Text reference to items in the Chadwick Collection in figures 33 and 34 should be only to Figure 33. The shell with note is in the Chadwick Collection, whereas the Jamestown beads are not. Figure 34 is referenced correctly on p. 68.

Figure 7: Quartz-tempered sherd from Essex Falls

Contributors

EDWIN C. BALLARD is an Engineering graduate of Brown University and has an M.B.A. from Boston University. He is a retired Senior Member of the Technical Staff of Texas Instruments Inc., a former Treasurer and currently Trustee of the Massachusetts Archaeological Society, the former Chair of the Research Committee of the New England Antiquities Research Association, and a Trustee of the Carpenter Museum in Rehoboth, MA. He has been a member of the Robbins Museum staff for 20 years.

BARBARA BROWN, a resident of Andover, MA is the retired Director of the Lawrence History Center. She is an archivist and a historian, and a dear friend of Eugene Winter.

CURTISS HOFFMAN is Professor in the Anthropology Department at Bridgewater State University. He has conducted archaeological excavations at numerous sites in eastern Massachusetts, including the Middleborough Little League Site from 1996 - 2002 and 2006 -2013. He is the Editor of the *Bulletin*.

WILLIAM MOODY, a graduate of Tulane University, is a member of the Massachusetts Archaeological Society. He has had a keen interest in prehistoric American archaeology since discovering his first projectile point on his grandfather's farm in Florida over 50 years ago. He has contributed numerous articles to various archaeological journals and forums as well as to the *Bulletin*

WILLIAM B. TAYLOR is a long-time member of the MAS. He has been an ardent collector of Indian artifacts in the Titicut area for more than sixty years. He is a frequent contributor to the *Bulletin,* and serves on the MAS Board of Trustees.

NOTES TO CONTRIBUTORS

The Editor solicits for publication original contributions related to the archaeology of Massachusetts. Authors of articles submitted to the *Bulletin of the Massachusetts Archaeological Society* are requested to follow the style guide for *American Antiquity* (48:429-442 [1983]). Manuscripts should be sent to the Editor for evaluation and comment at c1hoffman@bridgew.edu.

For shorter manuscripts (5 pages or less), texts may be submitted as paper copies. Longer manuscripts should be submitted as electronic files (preferably MicroSoft Word .doc or .docx files, or .rtf files). All text should have margins of 3 centimeters (1¼ inch) on all edges. For electronic files, do not insert artificial spaces between lines; instead, use the Format/Paragraph/Line Spacing function and select "Double". Proper heading and bibliographic material must be included.

Bibliographic references should be listed alphabetically by author's last name and presented as follows:

Gookin, Daniel
1970 Historical Collections of the Indians of New England (1674). Jeffrey H. Fiske, annotator. Towtaid, Worcester, MA.

Several references by the same author should be listed chronologically by year. Reference citations in the text should include the author's name, date of publication, and the page or figure number, all enclosed in parentheses, as follows: (Bowman and Zeoli 1973:27) or (Ritchie 1965: Fig. 12). All information derived from published sources must be cited, whether it is directly quoted or paraphrased. Please check to make sure that citations in the text match bibliographical entries, especially dates of publication.

All illustrations and tables, called figures, must be submitted as electronic originals. Tables should be submitted as separate Excel (.xls or .xlsx) spreadsheets and not incorporated into the text. Figures should be submitted as either .tif or .jpg files, high contrast, in greyscale. Each figure should fit within the space available on a Bulletin page, which is 17 cm by 23 cm (6½ x 9 inches), allowing for margins. Full, half or quarter page figures should be planned carefully. Space must be allowed for captions. Captions should be in title case and should accompany the text in a separate section, in order and numbered to correspond to the figures.

Figures must be referred to in the text and are to be numbered in their order of reference, with their number indicated in the file name. Every item in each figure and each person should be identified. All lettering must be clear and legible. Scales with dimensions, preferably in metric measurements, should be included with all figures for which they are appropriate.

Dimensions and distances should be given in metric units or in metric units and English units, to the same standard of accuracy (e.g., 10 cm or 2.5 inches, not 2.54 inches).

Authors should include a brief (1 paragraph) biography for the "Contributors" page of the *Bulletin* issue.

ISSN 0148 1886