Another Look at the Rock Art of Southeastern New England

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Another Look at the Rock Art of Southeastern New England

Peter Anick

This paper presents a recent survey of petroglyph sites in southeastern New England which lie along a water route from Narragansett Bay, on the southern coast of Rhode Island, to Assawompset Pond, the largest inland body of fresh water in Massachusetts. I review the known history of these sites, assess their current condition, and offer possible interpretations based on ethnographic and historic considerations.

New England's forested landscape, with its tough bedrock and rough glacial moraine, provides a poor canvas for the production of rock art. Nevertheless, small isolated petroglyph sites throughout the region confirm that rock art was produced in the northeast. In the centuries following the arrival of European settlers, interest in stone carvings waxed and waned. As early as 1680, Massachusetts scholars were debating the meaning of images found on a boulder in Taunton (Delabarre 1928). In the 1760s, the Reverend Ezra Stiles sought out and documented inscribed rocks, convinced that they were the work of Phoenician navigators (Dexter 1916). In the 19th century, Viking enthusiasts cited "rune-shaped" inscriptions to bolster their contention that Leif Eriksson had made landfall in New England (Rafn 1837). Brown University psychology professor Edmund Delabarre photographed all the sites he could locate around Narragansett Bay in the 1920s. Convinced he had found evidence of early Portuguese explorers among the engravings, he surmised that Indians had taken up carving in stone only after seeing Europeans do it (Delabarre 1919). In 2002, after several decades of tracking down sites, archaeologist Edward Lenik published the most comprehensive survey of rock art throughout the northeast (Lenik 2002). Drawing on archaeological evidence, Algonkian Indian ethnography and a growing body of American rock art research elsewhere, he concluded that most of these engravings, both prehistoric and historic, were best explained as the handiwork of Indian shamans.

Despite these occasional bursts of interest, New England's rock art remains relatively unknown and unprotected today, vulnerable to the destructive forces of nature, vandalism, and expanded land use. Although a long-time Massachusetts resident and rock art enthusiast myself, I was unaware of any local rock art until 2006 when I joined the New England Antiquities Research Association (NEARA), a volunteer organization studying New England's enigmatic lithic sites (www.neara.org). Like the handful of curious researchers before me, I began the process of tracking down leads, looking into ethnographic and historic records, visiting and recording sites, and speculating about their origin

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and function. This paper will focus on a collection of petroglyph sites in southeastern New England that lie along a water route from Narragansett Bay, on the southern coast of Rhode Island, to Assawompset Pond, the largest inland body of fresh water in Massachusetts (Figure 1). For Native Americans, this was a major thoroughfare and a bountiful ecosystem from the end of the Ice Age through the European Contact period. As I attempted to track down petroglyphs described by previous researchers, I discovered that some had disappeared or suffered degradation since they were last documented. In some cases, repeated visits to a site under varying lighting conditions revealed additional context not previously reported. And on occasion, a new find turned up, augmenting the relatively meager local inventory. This paper presents a summary of my findings and impressions. It is intended to (1) provide an introduction to sites in the region, with pointers to previous research; (2) report on the current state of the sites, wherever possible comparing their current states with former conditions; and (3) explore plausible interpretations and dates based on historic, ethnographic, and geological considerations.

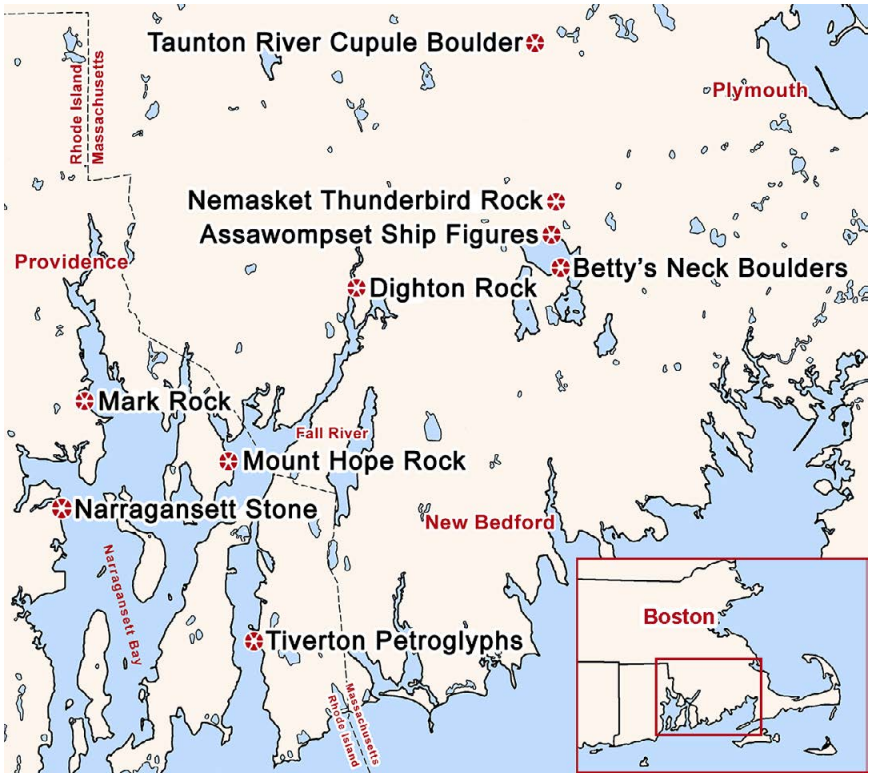

Figure 1. Map showing the approximate locations of petroglyph sites described in this paper in eastern Rhode Island and southeastern Massachusetts.

Dating and Interpretation of New England Rock Art

Before launching into our survey of sites, a few comments regarding dating and interpretation of petroglyphs in the northeast are in order. Archaeologists divide Native American prehistory into three broad periods based on changes in tool technology (Lenik 2002). The *PaleoIndians* (ca. 12,500–10,000 B.P.) were nomadic hunter gatherers who moved into the area after glaciers receded at the end of the last Ice Age. As the climate warmed and open grassland was replaced by forest, the *Archaic* period (ca. 10,000–3,000 B.P.) saw the development of more diverse lifestyles, along with larger settlements and more elaborate ceremonialism. The *Woodland* period (ca. 3,000–400 B.P.) was characterized by the adoption of horticulture and ceramics. The arrival of Europeans ushered in the *Historic Contact* period (ca. A.D. 1500–1800).

Because rock art is usually found above ground rather than within a definitive archaeological context, it is notoriously difficult to date. Evidence of metal tool use or depictions of European artifacts (e.g., clothing, ships, or houses) can help identify a carving as Post-Contact. For earlier imagery, comparing rock art figures with designs on portable art found within known archaeological contexts can be suggestive. If a site is located along a coast, it is sometimes possible to bracket a petroglyph's age based on sea level change over time. As glaciers receded, ground which had been compressed below the weight of the ice sheet underwent "isostatic rebound", increasing in altitude. At the same time, the melting ice caused sea level rise. Depending on the rate of these two competing processes, the coastline fluctuated over time, either exposing fresh stone or covering it.

At some Scandinavian petroglyph sites, such as Alta in northern Norway, stylistic differences have been observed that correlate with the images' height above the current shoreline (Tansem 2014). This suggests that rock art was created close to the shoreline where the sea spray suppressed vegetation and lichen growth, exposing new smooth surfaces for carving. As the land rose higher due to isostatic rebound (which outpaced sea level rise in Norway), vegetation spread over the

former coastal carvings while newly exposed shoreline became available as a fresh canvas. Mark Hedden (2004) applied a similar logic to dating rock art sites in Machias Bay, Maine. There, unlike in Norway, sea level rise has exceeded the rate of isostatic rebound for millennia. As the seas rise, wave action removes the thick glacial till overlying the coastal bedrock, while the tide differential (up to fourteen feet) keeps a wide swath of shoreline free of vegetation. Hedden observed that freshly exposed bedrock is more suitable for carving, since the rock becomes more brittle with longer exposure. Using height above sea level along with other evidence, he has been able to establish a chronology of styles of anthropomorphs, which he interprets as illustrating an evolution of shamanic practices from 3,000 years ago into the Post-Contact period.

In southern New England, post-glacial isostatic rebound resulted in some thirty meters of land rise between 16,000 and 10,000 years ago (Oakley and Boothroyd 2012). After that time, the shoreline was determined primarily by sea level rise. Between 10,000 and 5,000 years ago, waters rose sharply by about 25 meters. The last 5,000 years contributed an additional rise of about 4 meters, with the rate slowing over time. Assuming that land even a short distance from the shore would soon be covered in vegetation, the extent of exposed rock available for coastal rock art for much of the Holocene would have been a relatively narrow strip along the ever-rising intertidal zone. Merwin et al. (2003) note that all the known rock art sites along Narragansett Bay are currently within the intertidal zone. They reason that the choice of the interface of land, sea, and sky may have been culturally intentional, not simply a matter of availability of carvable stone. Therefore, they date coastal sites to the Historic or Proto-Historic (Late Woodland) periods and speculate that underwater archaeology along shorelines might yield earlier examples of rock art. However, a storm surge could certainly expose rock above the intertidal zone, which widens the window of possible dates for New England's coastal rock art sites.

As with dating, the interpretation of rock art in the absence of direct ethnographic knowledge is problematic and, at best, a matter of informed speculation. At the time of European contact, most New England tribes spoke a dialect of the Algonkian language family, also widely spoken in Canada and around the Great Lakes. Algonkian ethnography, as recorded from the Great Lakes to Maine, reveals a world view which places great value on knowledge obtained from dreaming and visions (Lenik 2009). Spiritual beings known as *manitous* were thought to inhabit special places in the landscape. Individuals who could communicate with these beings could derive power and medicine from them. Among the Contact period Ojibway, medicine men (shamans) often memorialized their encounters with spirit beings using pictures drawn on birch bark scrolls. Grace Rajnovich (1994) argued that red ochre pictographs found painted on cliff walls along lakes and rivers throughout the Canadian Shield could be deciphered in a similar way. Shamans had the ability to take on the forms of the animal and human-like *manitous* which they encountered while in trance. Thus, the zoomorphic and anthropomorphic beings painted on the rock walls may have portrayed both the spirits who dwelt there and the transformed shamans themselves. We will consider southeastern New England petroglyphs in a similar light.

Mark Rock

We begin our survey at Mark Rock, which lies on the shore of Warwick, Rhode Island, below the mouth of the Providence River in the northwest corner of Narragansett Bay. Ironically, while the Reverend Ezra Stiles is known to have visited the Greene family who owned the property in the late 1700s, he was apparently unaware of the inscriptions nearby (Delabarre 1928:240). Thomas H. Webb, Secretary of the Rhode Island Historical Society, inspected the site in the 1830s but dismissed it as containing only modern graffiti. A century later, Edmund Delabarre recognized Indian carvings among the European names and dates. He described the site as an outcropping of fine grained sandstone ("graywacke") composed of a number of fractured sections with smoothly worn surfaces. A photograph (Figure 2) shows it lying mostly within the intertidal zone, stretching some seventy-five feet along the water's edge, and some fifty feet up a slight incline to a ledge crowned by houses and vegetation. Delabarre identified fourteen pecked figures he felt could be Native American in origin, including several geometric designs and oddly shaped anthropomorphs (Figure 3). His diagram of the site (Figure 4) shows that the carvings were dispersed throughout the site, with each of his four anthropomorphs appearing on a different rock surface. He believed that these images were the product of 17th century Indians who were inspired to carve on stone after having observed the European settlers doing it. As to their meaning, he interpreted some as Post-Contact Indian "signatures." He

Figure 2. Photograph of Mark Rock ledge as it appeared in 1928 (Delabarre 1928:Figure 69).

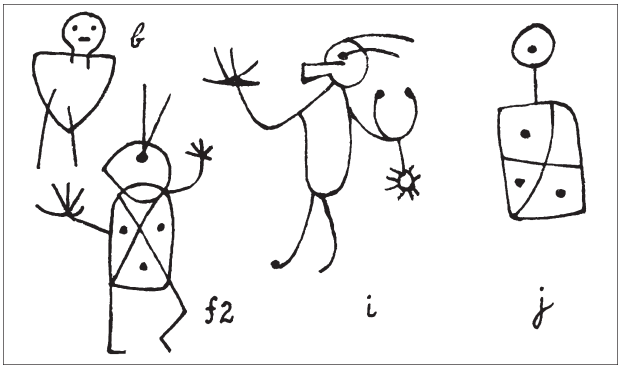

Figure 3. Delabarre's sketches of four anthropomorphs carved into different slabs, in areas labeled b, f2, i, and j (Delabarre 1928:Figure 84).

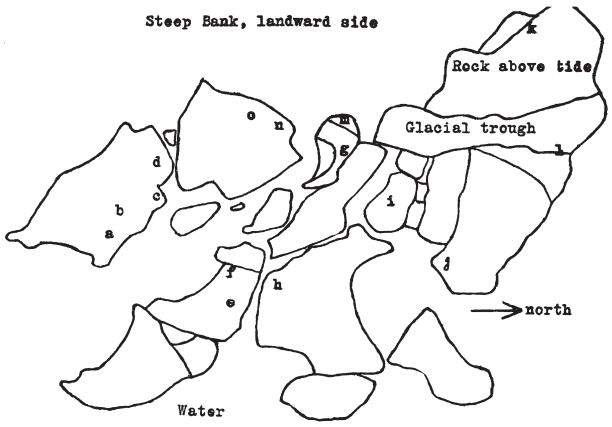

Figure 4. Delabarre's diagram of Mark Rock panels with alphabetically labeled image locations (Delabarre 1928:Figure 70).

felt, for example, that a simple boat-like image and a bow and arrow matched Indian signatures found on 17th century deeds. But, noting that the other figures were "scattered, individual, unrelated, like the modern initials," he dismissed their significance. "There is no story told," he wrote, "no historical event indicated, no information conveyed." (Delabarre 1928:253–254)

In 1978, Ed Lenik visited the site and interested a Warwick resident, Charles Devine, in continuing the search for any surviving glyphs. Devine felt that some 60 percent of the ledge was by then buried in sand, perhaps as a result of major hurricanes in 1938 and 1954 (Lenik 2002). But he managed to locate and photograph two of Delabarre's anthropomorphs (Figures 5, 6), several geometric designs (Figures 6, 7), and one further anthropomorph that Delabarre appeared to have missed (Figure 8).

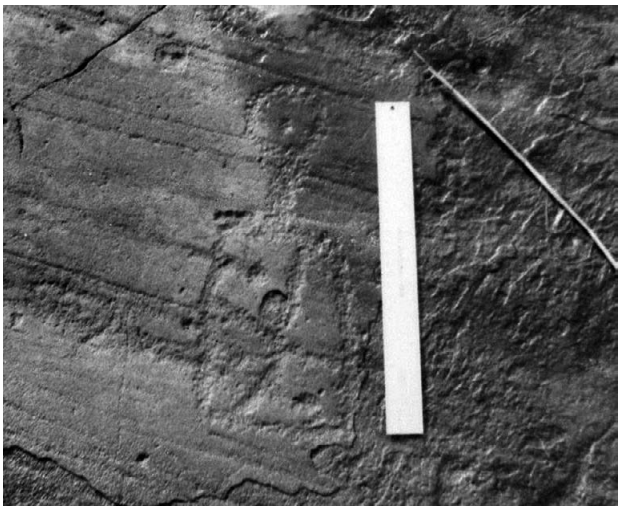

Figure 5. Charles Devine's 1979 photo of Delabarre's anthropomorph in area j, with one-foot rule alongside.

Figure 6. Charles Devine's 1979 photograph of anthropomorph and geometric design in Delabarre's area i, both chalked, with one-foot rule alongside.

When I visited the same spot thirty years later in 2008, I was dismayed to find that sand and sea grass had enveloped most of the ledge pictured in Delabarre's photo. Only a few graywacke slabs remained exposed on the beach (Figure 9). A comparison of the images

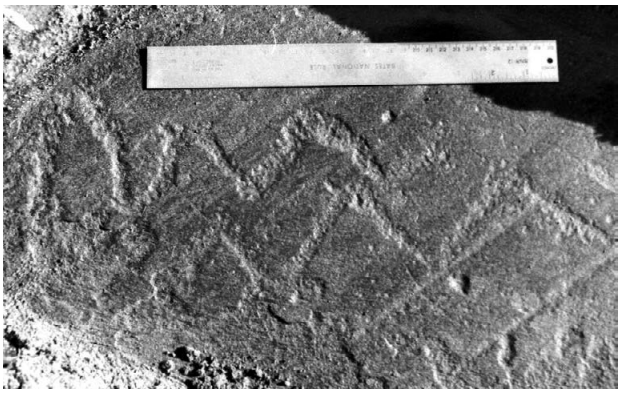

Figure 7. Charles Devine's 1979 photograph of two zig-zag lines, with one-foot rule alongside.

Figure 8. Charles Devine's 1979 photo of a chalked anthropomorph not mentioned in Delabarre (1928), with one-foot rule alongside. Note the deeply carved initials above.

Figure 9. Exposed rock surfaces at Mark Rock site in 2008. Photo by Peter Anick.

visible on these slabs with those labeled in Delabarre's diagram revealed that the surviving outcrops were remnants of the very northwestern section of the original ledge. Brushing away some sand at the edge of one boulder, I was able to locate the top of the anthropomorph in Delabarre's area j. As shown in Devine's photo of the complete figure (Figure 5), the outline consists of a series of densely pecked dints. I could also barely discern the anthropomorph shown chalked in Devine's photo in Figure 8 (shown unchalked in Figure 10). Although marred by substantial spalling of the rock's thin crust, the outline, composed of many tiny indentations, appears to depict a head or mask with two feathers or horns, a triangular neck and two arms bent upwards at the elbows, consistent with the interpretation rendered in Devine's chalked photo. Some natural pitting on the boulder adds to the obfuscation of the figure.

On a second slab just up the slope to the west, above the intertidal zone and surrounded by vegetation, I located part of a floral design previously recorded by both Delabarre (Figure 11a) and Devine (Figure 11b). In 2008, two of its deeply pecked petals were still clearly visible but the remainder of the stone containing the image had severely deteriorated (Figure 11c). Comparing my photo to Delabarre's 1928 and Devine's 1978 photos reveals the progression of deterioration. Delabarre's image (Figure 11a), chalked for better visibility, shows an intact "flower" with a pitted, possibly drilled, center and five broad petals, each containing a large pecked dot. In Devine's photo (Figure 11b), unchalked,

Figure 10. Unchalked close-up of Charles Devine's anthropomorph, showing lines made up of many small dints. Photo by Peter Anick, 2008.

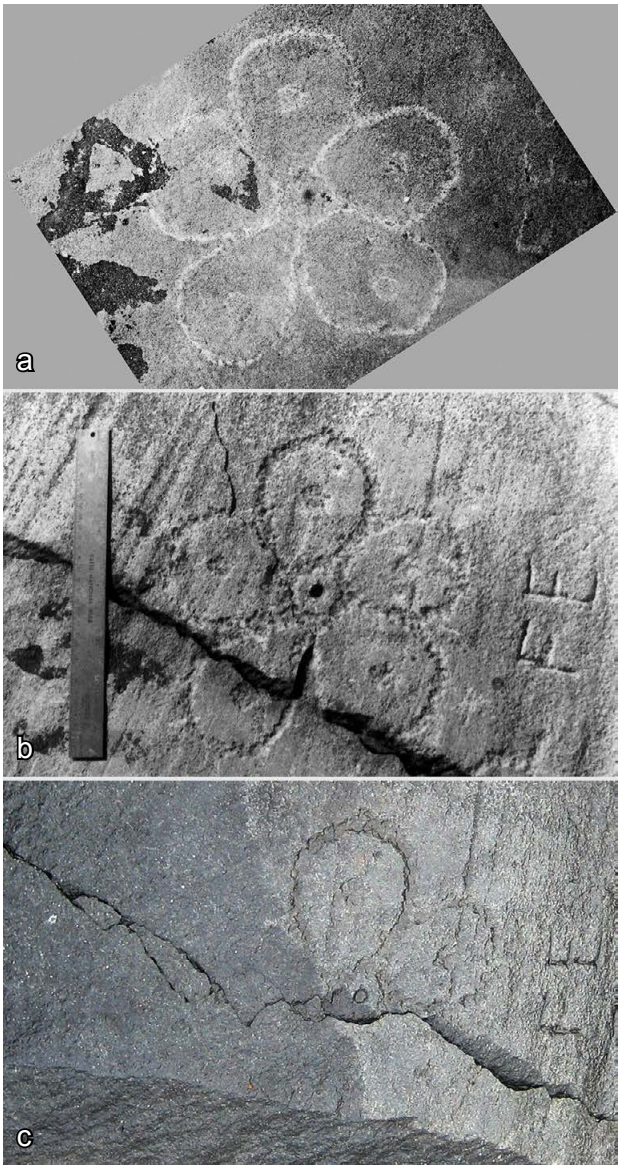

Figure 11. (a) Chalked floral motif on Mark Rock, as photographed by Delabarre (1928:Figure 86, image rotated to match orientation of later photos). (b) Unchalked floral motif, photographed by Charles Devine in 1979, showing the presence of a large fissure running through the lower petal. (c) Photograph taken in 2008 showing further damage to the boulder containing the floral motif. The entire bottom of the slab has broken off and disappeared. A new fracture now runs through the center of the design. Photo by Peter Anick.

the outline remains clear but a large natural fissure has appeared, probably due to freezing/thawing of water in a fine crack over the intervening half century. By 2008, the entire lower section of the boulder had gone missing, a victim of either natural processes or the opportunistic prying of a vandal. The disappearance of the fractured section had further weakened the remaining stone such that a new crack now ran through the original center of the image, which had begun spalling. Given the rapid decay of this exposed image, the burial of most of the other boulders over the past century may actually have served to preserve them better than continued exposure, although root action by the vegetation now growing over them may also pose a threat. In 2017, I returned to the site. Sand and vegetation had further covered the few remaining boulders and some previously identified images were harder or impossible to find. Sand continually washing over the boulders in the tidal zone was abrading the already faint engravings. More spalling was apparent as well.

Concerned about the rate of disappearance of the site, I contacted Charles Devine to learn how he had managed to take photographs of many images which I could no longer locate at all. To my surprise, he told me he had used Delabarre's map to dig nearly a foot down through mud and vegetation in order to expose carvings which had been buried, he believed, since the earlier hurricanes. Figure 12 shows the depth of carvings in Delabarre's Area f before high tide returned to

Figure 12. Charles Devine's 1979 photo of chalked carvings in Delabarre's area f, now located more than a foot below the current ground level. Note the ripples in the Bay water at the top of the photo.

refill the hole with sand (Devine 1981). He had found that, even though spalling of the thin crust had nearly eradicated some images, the camera was able to pick up traces of pecked lines that were barely visible to the naked eye. Devine was unable to excavate all the figures documented by Delabarre, but his photos increase our confidence in the accuracy of both Delabarre's map and his hand-drawn renditions.

Delabarre's dating and interpretations, however, can be called into question. To be sure, the many names, dates, and initials carved into the rocks demonstrate the use of Mark Rock well into historic times. There is even a large pecked profile of a man's head in a hat smoking a pipe (Figure 13). Looking very much like a comic caricature, it is accompanied by the initials "R F P." The "flower" motif, located above the high tide mark, is also likely a Post-Contact petroglyph, albeit older and probably Indian. Prior to European contact, Indians used stiff porcupine quills in their sewn decorations on clothing and therefore favored straight, geometric designs. But once the French taught the Indians how to embroider using silk thread and beadwork, naturalistic curved designs such as floral representations became very popular (American Indian Publishers 1981:545–548). Figure 14 shows many examples of late 19th century floral designs on clothing.

As for the anthropomorphic carvings, Delabarre speculated that the crossed lines on the torsos of his figures in Areas j and f2 represented the uniforms of Colonial soldiers. However, the lines could also be interpreted as sashes worn by a chief or shaman. Sashes and belts (e.g., wampum) were known to have been used in civil and religious ceremonies, a practice that continued into historic times. Early photos of Ojibway often showed them wearing one or more sashes (as in Figure 14). Tales of the legendary warrior hero Glooscap describe him receiving power from a magic belt (Leland 1884). Other features of Delabarre's anthropomorphs may also reflect shamanistic practice. The missing arms and/or legs and the "one-eyed" and zoomorphic faces could be intended to signal a trance state in which the shaman was transformed into a spirit being. The raised arms of Delabarre's figures in Areas f2 and i (Figure 3) may indicate the giving or receiving of medicine, similar to the "arms up" motif depicted on Ojibway song scrolls (Rajnovich 1994:75).

Figure 14. One-Called-From-A-Distance (Midwewinind), a Chippewa from White Earth Reservation, Minnesota, 1894, wearing sash and floral designs. (National Archive, American Indian Select List number 14.)

Figure 13. Head, neck, and shoulders of pipe smoking caricature on Mark Rock, with the initials "R F P" to the right. Photo by Peter Anick, 2008.

Lenik's dating of the figures deviates from Delabarre's Post-Contact assessment, instead ascribing many of them to the pre-contact Woodland period (Lenik 2002). Given the rate of sea level rise, the lower portions of the ledge could have been stripped of glacial till and vegetation by storm action as early as 3,000 years ago. The pecking styles used to produce the various petroglyphs on Mark Rock also fit a rough chronology. Of the two anthropomorphs that I was able to photograph in 2008, the outlines consist of many small,

shallow dints, as if produced by direct percussion with a stone tool. These images appear very worn and are extremely difficult to see. Sections have gone missing due to spalling of the thin crust. In contrast, the flower design is pecked using much deeper and broader overlapping dints, resulting in a bolder and more readily detectable outline. Located on higher ground, this boulder may have been exposed later as sea level continued to rise. There is less spalling of the crust at this level, although degradation due to splitting along deep fissures is progressing rapidly. Finally, the pipe-smoking caricature, not likely of Native American origin, is produced with longer and, in some places, more widely spaced dints, as if made by indirect percussion with a metal chisel-like tool. The many initials and dates are also either very deeply pecked or abraded with a metal tool.

Tiverton Petroglyphs

In 1768, Ezra Stiles made detailed drawings of anthropomorphic petroglyphs he found on two graywacke boulders located at the water's edge in Tiverton, Rhode Island, on the east side of Narragansett Bay (Delabarre 1928). Both of these boulders were documented again by Rhode Island antiquarians Thomas H. Webb and John R. Bartlett in 1835 (Delabarre 1928). When Delabarre went searching for them in the 1920s, he could locate only one of them (Delabarre 1928). Lenik also reported finding only one when he visited in 1978 (Lenik 2002). Thirty years later, when I scoured the beach at low tide, taking advantage of the low morning sun to cast shadows in even the most shallow of grooves, I spotted the missing slab. It was jutting out of the intertidal zone in a cluster of boulders, partially covered in gravel, its smooth flat top sloping up slightly towards the water. It is possible that previous searchers had passed by when the sun was too high or when gravel concealed the stone, although I learned later that archaeologist Daniel Lynch had also rediscovered the boulder a few years earlier (Lynch 2005). The second of the two stones recorded by Stiles was in the same cluster of boulders, located slightly further into the bay. I had arrived close to low tide and at that point its base was gently lapped by water. A photo by Lenik from 1978 shows it resting in a completely dry gravel bed (Lenik 2002:148).

Following Delabarre's numbering scheme, I will refer to these boulders as "Stiles 1" and "Stiles 2." Stiles's 1768 drawings are reproduced in Figures 15 and 16, while the Webb and Bartlett drawings are shown in Figure 17. Figure 18 shows the relative locations of the

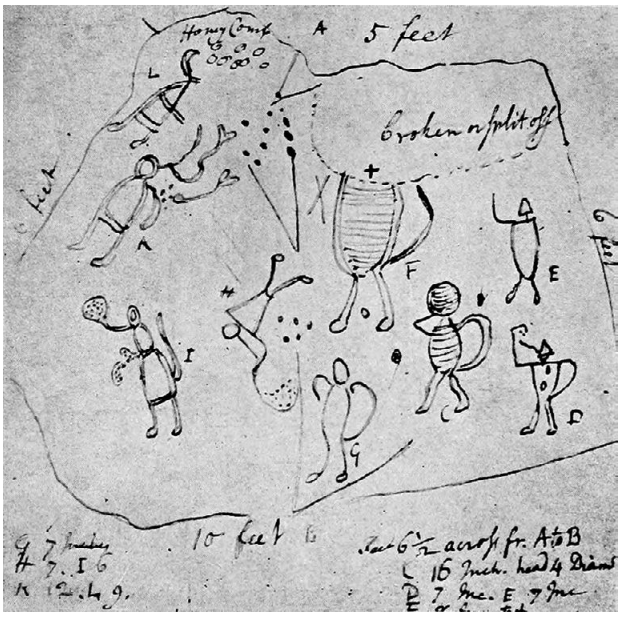

Figure 15. Ezra Stiles' 1768 drawing of the first of two carved boulders at Tiverton, Rhode Island (Delabarre 1928:Figure 62).

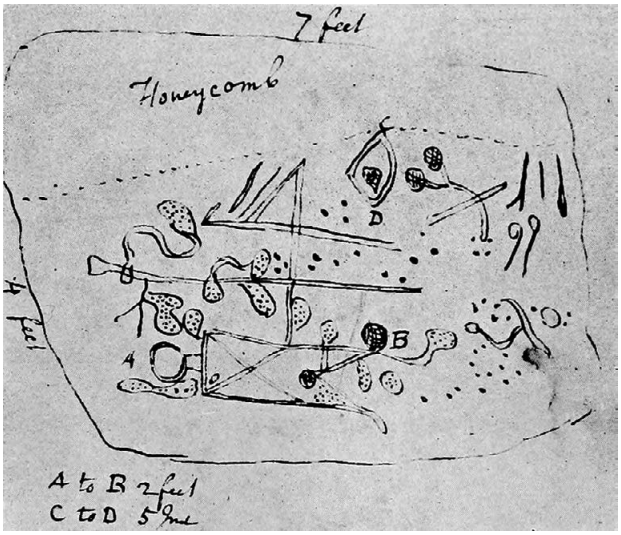

Figure 16. Ezra Stiles' 1768 drawing of the second of two carved boulders at Tiverton, Rhode Island (Delabarre 1928:Figure 63).

two boulders. At high tide, the water level may rise two to four feet higher, enough to submerge the images on both stones. The surface of the Stiles 2 boulder (in the foreground) is much rougher, partially honeycombed. Its pecked images are carved deeper and thicker. The images on Stiles 1 are smaller, more elegantly executed, and worn smooth, likely due to years of abrasion by salt water and gravel.

Comparing my 2008 photo of the Stiles 1 boulder (Figure 19) to Stiles' drawing, it is straightforward to match up the four figures with triangular torsos. The

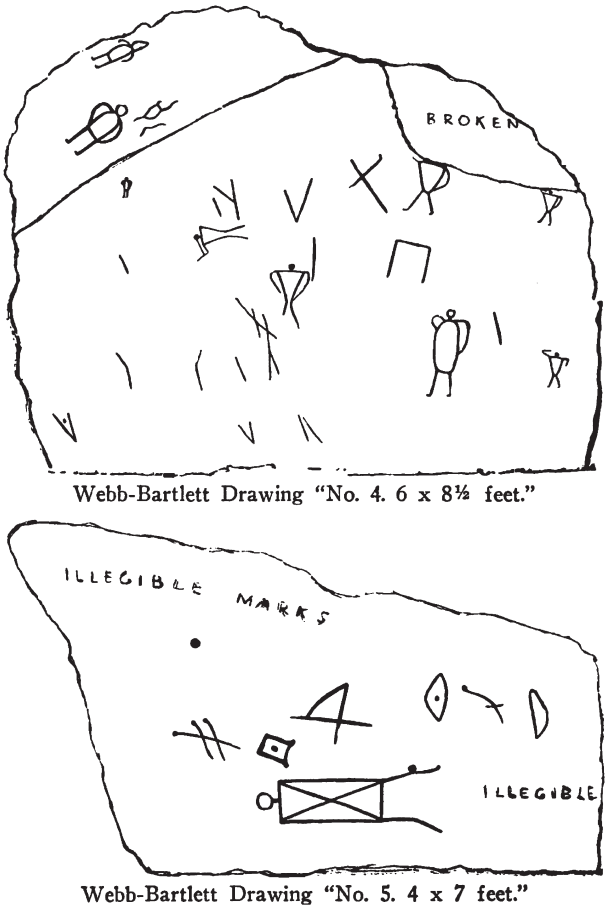

Figure 17. Webb and Bartlett's 1835 drawings of the two Tiverton petroglyph boulders (Delabarre 1928:Figure 230.)

Figure 18. 2008 photo showing Tiverton, Rhode Island, petroglyph boulders. "Stiles 2" is in the foreground. "Stiles 1" is the smooth, flat slab on the shore. Photo by Peter Anick.

upper left portion of the boulder has broken off since Stiles visited the site, leaving behind only a pair of legs where Stiles had indicated two full figures once existed. Stiles' drawing includes three additional figures on the

Figure 19. Tiverton "Stiles 1" petroglyph boulder in 2008. Photo by Peter Anick.

foreground panel which are not apparent in my photo. While they may have been partially obscured by gravel covering the bottom of the slab, my impression at the time was that Stiles may have interpreted natural grooves and pockmarks as elements of the engraving. The Webb-Bartlett drawing also excludes one of Stiles' figures.

While scratching my head over these contradictory impressions, I discovered a set of photographs in the New England Antiquities Research Association (NEARA) Archives taken by Malcolm Pearson in 1942. A professional photographer and amateur antiquarian, Pearson is best known for his photographs of stone ruins at Mystery Hill in New Hampshire and Upton Chamber in Massachusetts (Goodwin 1946). His Tiverton photos include close-ups, both chalked and unchalked, of several of the figures. Chalking (now discouraged as harmful to petroglyphs) allows the accentuation of features that don't show well in photographs, but it also conceals details and can make it difficult for later reviewers to make an independent assessment of the images. At the time Pearson took his photos, much more of the boulder was exposed than when I visited in 2008. The upper left section, containing two large figures when Stiles first recorded it, had not yet fractured off! Several of his photos appear to have been taken after further removal of up to a foot of gravel around the base of the stone, no doubt to check for more engravings (Figure 20). No further carvings were evident. In fact, considered together, the figures appear to form a ring around the upper portion of the boulder, suggesting that this upper section was the full extent of the exposed surface when the carving was done. Poses and stylistic similarities shared among some of the figures raise the possibility that they were intended to portray

Figure 20. Malcolm Pearson's 1942 photo of the Tiverton "Stiles 1" boulder after excavating around the base and chalking the figures. Photo courtesy of NEARA Archives.

a single scene. Feet pointing consistently to the left imply motion in that direction. One of the nine figures, in the center of the lower line, is upside down relative to the tilt of the stone and to all the other figures. Assuming that the lower line of figures ringed the bottom of the exposed stone at the time of carving, the single upside-down figure is suggestive of a scene commemorating the death of an important person. Or, to give it a shamanic reading, the configuration could portray a shaman descending into the earth (or into the sea at high tide) while surrounded by dancers, some raising their right arms, not unlike the motion made by Delabarre's figure i on Mark Rock (Figure 3). Vastokas and Vastokas (1973:70-71) cite ethnographic descriptions of Ojibwa shamans' birch bark records to assert that rock art depictions of raised hands, such as those found at the Peterborough Petroglyph Site in Ontario, denote "gestures of reverence, supplication, or communication with the sky, and more specifically to the Great Spirit, Kitchi-Manitou."

Stylistic differences among some of the figures appear to weaken the case for a single-scene interpretation. Two of the figures on the right have fully pecked bodies (e.g., Figure 21a), while two on the far left have large rotund outlines and unusually shaped, hood-like "heads" (e.g., Figure 21b). The remaining five figures with triangular torsos are slightly smaller and more elegantly pecked and abraded. Treating these distinctions as significant, the ensemble could be seen as four *pairs* of figures surrounding the central upside-down figure. The two (vertically associated) pairs on the right side of the boulder appear to have one arm raised and one akimbo, while the two triangular figures on either side

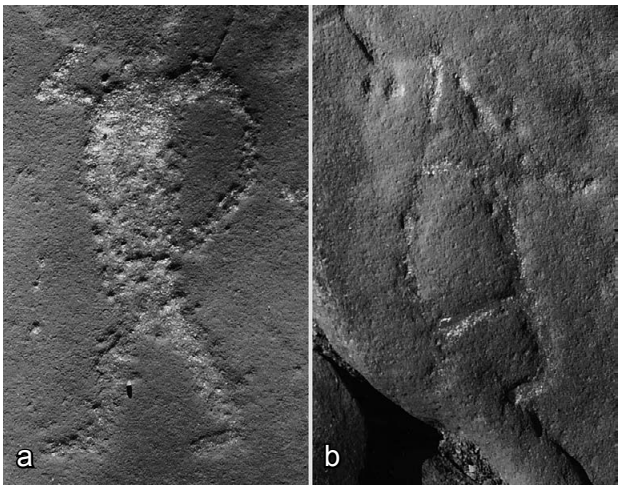

Figure 21. (a) Malcolm Pearson's 1942 close-up of the fully pecked figure on "Stiles 1" Tiverton boulder, bottom row, second from the right. The head area has spalled off and was not included in his photo. (b) Malcolm Pearson's 1942 close-up of the outlined figure on "Stiles 1" Tiverton boulder, upper left corner. Photos courtesy of NEARA Archives.

of the upside-down figure have both arms akimbo and share similar, leftward tilting orientations. While some features of the two figures on the upper left section are now missing, the Webb-Bartlett diagram (Figure 17) shows them both oriented in the same direction, with their arms aimed down.

Pearson's chalked photo (Figure 20) helps to visualize the arrangement in terms of paired figures. These differences may reflect temporally distinct carving episodes by different "artists." However, they could also have been intended to represent persons of different status or participants playing different roles within a single activity. Several similar figures can be found some three hundred miles to the north on a narrow ledge of shale projecting into the Kennebec River in Embden, Maine. Among dozens of pecked designs are three anthropomorphs with hollow triangular torsos, portrayed with one arm bent down and the other bent up at the elbow (Lenik 2002:Figures 36–38). Hedden (1996) identifies these figures as belonging to "Style 6" in his chronological classification, dating them to the Late Woodland/Early Contact period. He writes, "Style 6 anthropomorphs representing entities with spiritual potency are distinguished by triangular torsos, either outlined or solidly dinted, with angular corners… These angular figures are frequently represented in active postures with unidirectional linear feet and/or legs bent at the knee to suggest running"(Hedden 1996:17). He further observes that "a number of anthropomorphs associated with Style 6 figures lack the trian-

gular torso, a distinction that may indicate supplicants or participants in shamanistic performances who have not yet gained spiritual power" (Hedden 1996:18).

In my 2008 photos, the upside-down figure (Figure 22) appears to be without arms and with a long, extended head, suggestive of a mask. However, Pearson's 1942 photo, while partially chalked, reveals details that have since eroded (Figure 23). In his image, we can see what appears to be an upraised arm bent at the elbow holding a long thin object that might be a pipe. This conforms with the line drawings made by Stiles (Figure 15) and Webb-Bartlett (Figure 17). For most North American Indians, the pipe is considered a sacred possession with living power (Rajnovich 1994:122).

Figure 22. 2008 close-up of the upside-down figure (photo inverted). Photo by Peter Anick.

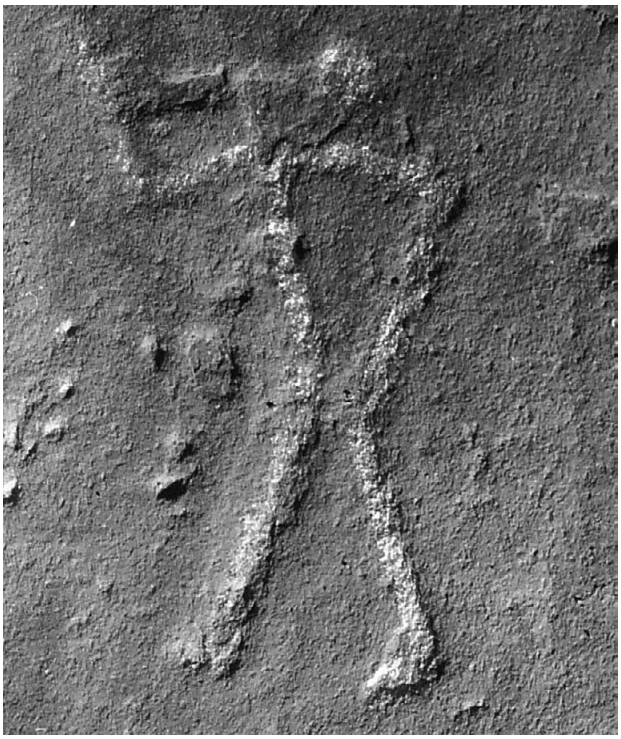

Figure 23. Malcolm Pearson's 1942 lightly chalked image of upside-down figure, showing more detail. Photo courtesy of NEARA Archives.

The second boulder ("Stiles 2") also shows signs of erosion, presenting a number of ambiguities between natural and artificial features (Figure 24). Stylistically distinct from its neighbor, it is dominated by a single deeply pecked rectangular anthropomorph with interior crossed lines. Both Stiles and Webb-Bartlett saw a long neck and circular head emanating from the torso. However, these are not very deep and may be natural features of the rock. Lenik interpreted a deeper cupule within the purported "neck" as the figure's head (Lenik 2002:148). Several other deeply cut angular lines also stand out in the oblique sunlight, along with a shallower diamond shaped outline with a central inscribed dot. Another large cupule, possibly a natural pit which has been manually enhanced, can be seen to the right, along with a straight groove. A photo taken by Malcolm Pearson in 1942 (Figure 25) shows that the boulder has remained relatively unchanged since then. His lighting angle offers another look at the relative depth of the lines associated with possible artificial features.

The rectangular anthropomorph, with its interior crossed lines, is reminiscent of several figures we have encountered on Mark Rock, especially Delabarre's figure j, with its long neck and circular head (Figure 3). There are several lines adjacent to the torso which could be interpreted as an arm and legs, although they

Figure 24.Close-up of figures on Tiverton "Stiles 2" boulder. Rectangular "anthropomorph" is in the foreground. Its shallower round head and thick neck (containing a cupule) may be natural features. Other features, such as legs on the "torso" and a diamond shape with central dot above the torso are ambiguous as well. Photo by Peter Anick, 2008.

Figure 25. Malcolm Pearson's 1942 photo of Tiverton "Stiles 2" boulder. Photo courtesy of NEARA Archives.

seem oddly placed relative to the torso. Again, the choice of a boulder in the intertidal zone may have been significant, especially as this particular boulder, riddled with honeycomb and natural ridges, might seem an unlikely choice for carving when smoother surfaces were available on nearby boulders strewn along the shore. Perhaps the round head and neck were already natural features of the rock, drawing attention to the boulder as the abode of a spirit or a place of power. In Native American folk tales, shamans are described as sorcerers with a wide range of special talents, including the ability to travel underwater (Speck 1919). Thus, carving an image on a rock that would be underwater part of the day may have served to assert or enhance that particular power. As noted earlier, if we assume a one-meter rise in sea level over the past 1000–2000 years, both of the Tiverton boulders (like much of the Mark Rock ledge) would have been within the intertidal zone from the Middle Woodland period on. Hedden's observation that freshly exposed surfaces were preferred for carving would also lend credence to a Middle Woodland date for these sites. On the other hand, the pace of natural degradation we have observed over the last fifty to hundred years might be evidence for a shorter effective lifespan and hence a more recent (i.e., Late Woodland or Proto-Historic) creation date.

Mount Hope ("Northmen's") Rock

Mount Hope is a natural hill on the eastern shore of Bristol, Rhode Island, a peninsula situated between Narragansett Bay and Mount Hope Bay near the mouth of the Taunton River. The area was a spiritual high ground for the Pokanokets. It was the birthplace of the powerful Wampanoag sachem (chief) Massasoit who befriended the Pilgrims, as well as the site of his son Metacomet's capture in the waning days of King Philip's War, the Indians' ill-fated uprising against Colonial encroachment. In the 1830s, an exchange of letters between Thomas Webb, then Secretary of the Rhode Island Historical Society, and the Danish antiquarian Carl Christian Rafn put Mount Hope on the map for a totally different reason. Rafn had been studying the Norse sagas to determine where Viking explorers had made landfall in the Americas. Webb's accounts of inscription rocks around Narragansett Bay, including one mentioned by Ezra Stiles at Mount Hope, fit right into Rafn's theory. With the publication of Rafn's *Antiquitates Americanae* in 1837 (Rafn 1837), local Norse enthusiasts got caught up in the search for anything even vaguely resembling Viking remains. And it wasn't long before "Northmen's Rock" was reported found on the beach just north of Mount Hope. On one corner of the large graywacke slab was a small but distinct outline of a boat and, below it, a cryptic inscription. Edmund Delabarre located and photographed the carvings but he strongly objected to the popular Norse explanation. Regarding the boat image, he concurred with another recent skeptic who found that its form reminded him "not of a Norse bark, or Indian's canoe, but of a modern white man's boat with its bow uplifted and its stern set low in the water" (Delabarre 1920). He likewise dismissed any resemblance between the purported inscription and Norse runes.

In 2017, I located the boulder on the beach to the east of "Viking Drive" and "Erickson Lane" in Bristol (Figure 26). It took a while to make out the boat image and inscription, as the rock was now littered with carved names and dates. The boat outline, thin and shallow, lay directly underneath the more boldly carved date "1920", which is oriented in the opposite di-

Figure 26. Mount Hope Rock, Bristol, Rhode Island. Photo by Peter Anick, 2017.

rection (Figure 27). The name "E. King" accompanies the date, occupying the space between the boat and the supposed Viking inscription. As best I could determine, the so-called Viking inscription was composed primarily, if not entirely, of natural ridges and fissures in the rock, which would explain why it matched no known alphabet!

Figure 27. Close up of boat carving and "Viking inscription" on Mount Hope Rock (2017). Both are now partially overwritten with the name "E. King" and the date "1920" (upside down in the photo). The date is carved right over the shallow boat image, indicated by the arrow. The supposed inscription lies just under the upside-down "E. King" below it and extends to the right. Photo by Peter Anick.

Because of the significance of the area to the Wampanoags during the contact period, it is tempting to interpret the boat outline as an Indian creation. Lenik (2002) argues that it is similar to Indian marks found on deeds at that time, as well as to a glyph on Mark Rock. The style of the boat, as noted earlier, does not resemble an Indian canoe, although a similar outline is said to appear on an inscribed sandstone tablet found on a shell heap in Long Island in the late 19th century (Delabarre 1928:259)

Rafn's theory of a Viking presence in Narragansett Bay continues to resonate with some antiquarians. In the 1960s, a boulder known as the Narragansett Stone which contained two lines of clearly identifiable runes (Figure 28) was discovered in the tidal zone off Pojac Point. However, its antiquity has proved difficult to ascertain and the fact that it had never been reported earlier, in spite of great local interest in Viking inscriptions in the 19th century, has lent to suspicion that it is a recent forgery. In 2015, following a controversial disappearance, it was recovered and moved to the Old Library Park in Wickford, Rhode Island.

Figure 28. The Narragansett Runestone at low tide in its original location off Pojac Point in Narragansett Bay (2008). Runic characters can be seen in the foreground, just under the water. Photo by Peter Anick.

Dighton Rock

Twelve miles up the Taunton River from Mount Hope lies what is arguably the most written about petroglyph in the Americas. Here, where the salt water of the bay meets the fresh water of the Taunton watershed, Dighton Rock rested for millennia on a gravelly bank within the intertidal zone. Its five-foot-high, eleven-foot-long face would have served as a natural billboard for anyone navigating up the river (Figure 29). The glacial erratic was described by Delabarre (1928:21) as "a gray, medium to coarse grained feldspathic sandstone boulder, presenting toward the river a nearly plane and smooth natural face, inclined at an angle of 39° to the vertical." Just upstream from it lay "Grassy Island," a thin strip of land that was host to Indian settlements dating as far back as the Archaic period but deserted six hundred years ago due to rising tides (Johnson and Raup 1947). Across the river at a higher elevation ideal for viewing game, the "Boats" archaeological site saw ac-

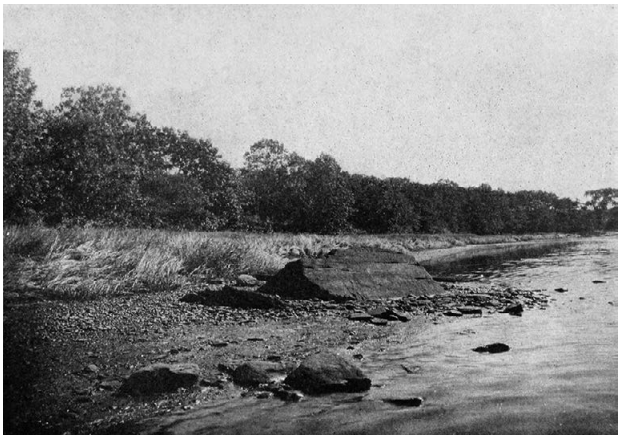

Figure 29. Dighton Rock, in its original location in the intertidal zone along the Taunton River (Delabarre 1928:Frontispiece).

tivity from the PaleoIndian through Contact periods, with heavy occupation and ceremonialism evident during the Late and Transitional Archaic (6,000–2,700 B.P.) (Bello 2015). The boulder's location below the head of tide of a major waterway within a biologically rich and diverse zone would have made Dighton Rock a very attractive place for ceremony.

The rock became an object of fascination for Colonial scholars just a few years after the Wampanoags were driven out of the area in the wake of King Philip's War. It was illustrated as early as 1680 by the Reverend John Danforth (Mallery 1898:Plate LIV; Schoolcraft 1854, Vol 4:119). Although the local Indians likely had oral history relating to such a prominent landmark, the settlers at that time were more interested in eradicating Indian religion than studying it. By the time the Reverend Ezra Stiles began recording petroglyphs a century later, the thought of indigenous origins was already being dismissed in favor of the more Biblically relevant Hebrews and Phoenicians (Dexter 1916). In the mid-19th century, Carl Christian Rafn's adherents championed its inscriptions as compelling evidence of the Vikings' discovery of New England (Delabarre 1928), even though the Scandinavian interpretation was rejected by ethnologist Henry Rowe Schoolcraft in 1854. Edmund Delabarre himself, while judiciously disparaging such earlier conjectures, ended up developing his own theory of foreign origins. Teasing a name and date out of the maze of lines carved into the rock, he convinced himself that the Portuguese navigator Miguel Corte-Real had left his marks on the stone in 1511 (Delabarre 1928).

Twenty years after the publication of Delabarre's book, his theory caught the attention of Portuguese-American Manuel Luciano da Silva, a Rhode Island doctor who examined the markings and managed to identify even more Portuguese symbols (Da Silva 1971). Da Silva was aghast that the rock had been left in the river where tides submerged it in polluted water twice a day. In 1962 he successfully lobbied to have it lifted onto a nearby coffer dam and ten years later secured further protection in the form of an enclosed pavilion to house it. With the addition of maritime displays and signage detailing the wide range of theories, he turned it into a museum and became its first volunteer curator. As a result of his tireless advocacy we can now visit Dighton Rock by appointment rather than by wading into the Taunton River at low tide.

When Dr. da Silva unlocked the museum door for my first visit in 2008, I found the forty-ton boulder lurking behind a glass wall, lit from below by a row of yellow lights (Figure 30). It did not take long to understand why no two diagrams or chalked photos from 300 years of scrutiny were ever identical. Its rough rock face contains many engraved lines that are difficult to follow or make sense of. They cross each other and blend into indentations in the rock that may or may not be man-made. Horizontal fractures, some quite wide, run across the stone like lines in a notebook. In a few places, modern graffiti obscures the carvings underneath. After my initial disorientation, I found myself focusing on the major discernable figures that most published diagrams (such as the early illustrations assembled in Mallery 1898:Plate LIV) and photos portray. From left to right, these are (1) a face with deeply pecked, human-like eyes and mouth above a large triangular torso (Figure 31); (2) a small quadruped with a vertically partitioned body and two long, straight horns (Figure 32); and (3) a pair of round faces perched on oddly shaped torsos (Figure 33). Geometric designs and unidentifiable figures fill the remaining space. It is helpful to compare the current state of the rock with a daguerreotype from 1853 on which figures were chalked (Figure 34). Published by Schoolcraft (1854, v.4:Plate 14), this daguerreotype was the basis of widely circulated later illustrations (e.g., Mallery 1898:Figure 49). We can see that the long horizontal fractures were much thinner then. Deep zig-zags have been incised above the eyes of the large face on the left, giving the impression of a king's crown. Loss of stone around a horizontal fissure on the right side of the boulder has left a large gap in the long, curvy torso belonging to the rightmost face. It is clear that the freeze-thaw cycle would have continued to wreak damage had the stone been left in the river exposed to the elements.

Figure 30. Dighton Rock on display at the Dighton Rock Museum in 2008. Photo by Peter Anick.

Figure 31. Figure with human-like head, deeply pecked eyes, and triangular torso on left side of Dighton Rock. Photo by Peter Anick, 2008.

Figure 32. Quadruped with horns, vertical lines and dots in torso, located in lower center portion of Dighton Rock. Photo by Peter Anick, 2008.

On the whole, the designs on Dighton Rock bear little resemblance to other known rock art around the Bay. But, as with the anthropomorphs at Mark Rock and Tiverton, it is possible to interpret the figures within the context of Algonkian shamanism. Frank Speck, who collected stories of Penobscot shamanism in Maine, wrote that "Every magician had his helper which seems to have been an animal's body into which

Figure 33. Right section of Dighton Rock, showing a pair of round faces attached to curving torsos without arms. The eyes of the rightmost face lie just below the zig-zag line in the upper right corner. Much of its torso is now missing. To their left are enigmatic superimposed designs and modern graffiti. Photo by Peter Anick, 2008.

Figure 34. Daguerreotype of Seth Eastman on Dighton Rock, with chalked inscriptions, 1853. Attributed to Horatio B. King. Image has been reversed from original daguerreotype. Digital image courtesy of the Getty Open Content Program, image No. 84.XT.182.

he could transfer his state of being at will…It could be sent on any mission whatsoever according to the shaman's will" (Speck 1919:249–251). Thus, the human faces attached to non-human bodies may represent spirit beings or shamans who are transforming into animals while in trance. On the far right, a pair of faces peer out from irregularly shaped and apparently limbless bodies (Figure 33). A wavy line emanates from the head of the rightmost figure, reminiscent of the "radiating power lines" emanating from a shaman's head at a pictograph site in northwestern Ontario (Rajnovich 1994:Figure 113). The hourglass body shape of the

large figure on the left most resembles Algonkian hourglass and X-shaped representations of eagles and thunderbirds (e.g., Rajnovich 1994:Figures 34, 35, 66, 98), although it lacks the wings typically attached to such a torso. The thunderbird is one of the most important creatures in Algonkian mythology, a powerful bird-like spirit with the ability to change into a man (Lenik 2012). If the shape of the torso was indeed intended to resemble a bird, its missing wings may have conveyed the same information as the missing arms on the oddly shaped beings on the far right. Medicine men are commonly depicted without arms on Algonkian birch bark song scrolls (e.g., Rajnovich 1994:Figures 48, 74, 102, 132). Several of the anthropomorphs on Mark Rock are also missing arms (Figure 3).

Speck writes that one of the roles of the Penobscot shaman was to protect the family's hunting territories against trespassers: "A shaman could detect when other hunters were intruding upon his family tract. He could then take measures to thwart and punish the infringement. From this situation arise numerous tales in which we hear how intruders are discovered in animal guise, in which traps are sprung, hunting trips spoiled by bad luck and the like. The malefactors are then spiritually persecuted by the shaman of the group, who may himself be the proprietor of the territory" (Speck 1919:244). Seen in this light, the large anthropomorphs with their human-like faces and deep, forward-peering eyes may have been carved into this public billboard as part of a prehistoric security system, intended to warn intruders that this territory was under shamanic surveillance.

Another fascinating figure on the panel is the quadruped. It is smaller than the human-faced figures on the far sides and located in a central position on the rock. Its long, straight "horns" look less like the short ears or elaborate antlers typically associated with naturalistic Algonkian deer images and more like the horns or feathers found on some anthropomorphs (e.g., Susquehanna River glyph in Nevin 2004:251) or "mythic creatures" (Lenik 2010). The torso is divided by vertical lines into four sections, each containing a pecked dot. Rajnovich (1994:98) relates that a line or lines through the body of an animal is a common device on bark scrolls and pictographs of the Canadian Shield to indicate spirituality, in which case the quadruped here may represent a spirit animal or animal "master." The dots within each partition, however, are an unusual addition. Lenik (2002) offers the suggestion that the lines and dots are ribs and internal organs of a deer or elk drawn in x-ray style. I am reminded of the anthropomorphs documented by Delabarre on Mark Rock, some of which also show partitioned torsos containing dots (Figure 3). Perhaps the lines and dots on this animal were intended to portray the garments of a shaman, in which case the quadruped, with its long "horns," extended legs and wide hooves, may be a depiction of a shaman in flight in animal form. In any case, this figure would have spent much of its existence journeying between the worlds above and below water.

Ed Lenik may have been the first researcher to seek out a local Native American interpretation when he corresponded with Manitonquat, an elder of the Assonet Band of the Wampanoag, in 1998 (Lenik 2002:133). Manitonquat ("Medicine Story") ascribed the carvings to Weetucks, a traditional culture hero and medicine man. According to his account, passed down from his grandfather, Weetucks had received a vision about people of greed and violence who would one day reach New England from across the eastern sea. Weetucks carved the panel on Dighton Rock as a warning to "continue to follow in a sacred path, the way of the Creator" in order to "survive to help heal the earth and restore the balance of life" (Lenik 2002:133–134). For Manitonquat, then, the rock is a teaching device within which each design element plays a role. The two figures on the right are a pair of humans, one who looks back upon the imposing figure of the Creator and the "marvelous figures of the Creation" and one who looks east across the sea. A lightning bolt above the head of the east-gazing figure warns of the destruction that would come from following the new ways. This interpretation shows that the rock continues to have modern relevance for Native peoples, while differing from academic conjectures about shamanism.

Estimating the antiquity of the Dighton Rock carvings is difficult since there are few definitive constraints. Delabarre (1928:186) dated them to the Contact period, in part because he felt the Indian-made images should post-date the initial use of the rock face by Portuguese navigators. If the images were related to shamanism, they may have been carved within the intertidal zone for symbolic or magical reasons, thereby dating their creation to Woodland times when sea levels had risen sufficiently to bring tides high enough to submerge the images. However, unlike the low lying graywacke slabs at Mark Rock and Tiverton, the Dighton boulder stands as a five-foot-tall glacial erratic. It could have been a prominent feature of the river bank even before the tides of the bay rose high enough to lap at its base. As a supernatural territorial marker, it could have

been exploited as far back as the Archaic period, when local populations were growing and ceremonial activity was on the rise at the neighboring Boats occupation site.

Taunton River Cupule Stone

Continuing upstream along the Taunton River, its path takes a sharp turn to the east at the city of Taunton, then winds to the northeast and into the town of Bridgewater. A number of major archaeological sites lie along this stretch. Dr. Curtiss Hoffman, a Bridgewater State University anthropology professor, offered occasional canoe trips along selected sections of the river to introduce paddlers to the region's prehistory. In 2012, he was scouting out a route for one canoe trip when he chanced upon a cupule boulder in the river just downstream from one of the Taunton watershed's most significant early Archaic (8000–9000 B.P.) occupation sites.

Cupules, small hemispheric cup-shaped hollows, may be the most widespread form of "rock art" throughout the world. Yet very few examples are known in New England. In New Hampshire, there is a flat slab known as the Endicott Rock with dozens of small, tightly packed cupules (Lenik 2009:44). It once rested at the outlet of Lake Winnipesaukee, close to Indian fish weirs built to catch anadromous fish returning to spawn each spring. A second cupule stone, containing four smooth tennis-ball sized depressions, sits high atop a rocky seaside cliff in Niantic, Connecticut (Lenik 2002:159). As a participant in Dr. Hoffman's 2012 Taunton River trip, I was fortunate to inspect and photograph the freshly discovered cupule boulder, possibly the first found in Massachusetts. As shown in Figure 35, it sits close to the western bank, surrounded by water. Eighteen cupules appear in two rows along the upper sloped ridge of the northern side of the boulder. No carvings were observed on the southern side. The water level was relatively low at the time of the trip and detritus still lodged on the boulder indicated that the river level had until recently been higher, closer to the lower edge of the two rows of cupules. This may explain why all cupules were carved along the top: any lower surfaces were likely below water at the time the work was done.

Figure 35. Taunton River Cupule Stone in 2012. Note the detritus and lighter coloration on the lower portions of the rock, which provide an indication of the typical water level for the river. Photo by Peter Anick.

Interpretation of cupules, like rock art in general, is highly speculative, although ethnography elsewhere in the Americas associates some cupule sites with fertility and rainmaking (Gillette and Greer 2014). The appearance of the Taunton boulder bears little similarity to the two aforementioned New England cupule stones. The Endicott Rock's location near a fish weir, along with its random distribution of many small cupules resembling fish eggs, hints at shamanic magic related to the annual fish run. By contrast, the Niantic stone's orderly arrangement of four large, evenly smoothed cupules reminds me of a palette suitable for the preparation of paints or plants. As for the Taunton River boulder, Dr. Hoffman noted that it was located at the last convenient canoe pull-out before reaching a section of rapids further downstream. Thus, it may have served as a kind of fluvial road sign. The fact that all cupules were located on the upstream face of the rock lends some support to this hypothesis. Another possibility is that, perhaps like the Endicott slab, it was somehow related to the annual anadromous fish run. Although we saw no evidence of a stone weir here, the boulder, located so close to a major prehistoric settlement, may have served as a convenient staging area for netting fish, especially fish coming up the narrow channel on the boulder's western flank.

It is tempting to date the cupules to the Early Archaic, the period when the nearby occupation site saw its greatest use. However, the site continued to be occupied sporadically up through the Early Woodland period (2,000 B.P.) and the Taunton River would have been used as a major transportation route throughout prehistory.

Assawompset Pond Petroglyphs

Following the Taunton River back downstream from Bridgewater brings us to the junction with its tributary, the Nemasket River. The name is Wampanoag for "place where the fish are" and if we were to navigate up the Nemasket, as the Wampanoags did each summer, we would be tracing the route of the largest herring run

on the eastern seaboard. Eventually we would reach the north shore of Assawompset Pond, the Wampanoags' "place of the white stone" and the largest body of fresh water in Massachusetts. When the glaciers receded at the end of the last ice age, they left a glacial lake here, and when it drained, winds created dunes out of the silt left behind. By 9,000 years ago, the northwest shore of the remaining pond formed an ideal ecological niche for human occupation and the area remained seasonally utilized well into the Historic period (Robbins 1980).

What lured me to the area in 2007 was not an abundance of fish but rather an odd assortment of petroglyphs described in Lenik's Picture Rocks book. These included foot and hand prints, a flying thunderbird, and a "carved figure of a ship on a boulder off the north shore of Assawompsett Lake" (Lenik 2002:128). The ship image, with what appeared to be a raised mast, was sometimes cited (Boland 1961) as evidence that the Indians had recorded seeing a Phoenician vessel here 2,000 years ago! Lenik felt that shamans had carved these images on particular rocks and ledges to derive power and leave permanent messages on spiritually charged features of the landscape. This practice could have continued into the Contact period, at which point shamans would have availed themselves of metal tools. Lenik thought this could have been the case with the ship glyph, which appeared cut with a metal tool.

As with most New England petroglyphs, locating this one took some effort. A local informant remembered seeing it as a youth carved into a boulder just off the north shore of Assawompset Pond, not far from the site of the Wapanucket archaeological excavations of the 1970s (Robbins 1980). It was located within a marshy area usually inundated, but the water level was unusually low in the winter of 2007, exposing a number of boulders along the shoreline. Surveying each in turn, I eventually spotted it on the south vertical edge of a large flat-topped stone, facing into the lake (Figure 36). The carving was quite small, about six centimeters long, and very easy to miss. As the photo in Figure 37 shows, the indentations are v-shaped, as if made by blows with a chisel-like metal tool. The wide "hull" at the bottom has slight indentations curving up on both ends. If this were indeed a sign produced by a shaman, its positioning on the vertical side of the stone rather than the top might be consistent with either a desire to keep it inconspicuous or to allow it to descend beneath the water when lake levels are high.

Lenik (2002) reports a thunderbird pecked into a boulder nearby as well. After scouring the shoreline

Figure 36. Boulder at the shore of Assawompset Pond containing a small ship-like figure (arrow). The ship glyph appears as a dark shadow located slightly above the smaller stone in the foreground. Photo by Peter Anick, 2007.

Figure 37. Close up of the Assawompset Pond ship figure. The fin-like "rudder" at the bottom is a shadow effect, not an intentionally carved feature. Photo by Peter Anick, 2007.

with my local informant who, again, had seen it years ago, we determined that the boulder in question now lay almost completely buried in sand and thick vegetation. We left this bird in its nest.

Across the lake, a small plot of land known as Betty's Neck had long remained an enclave for Wampanoag

families who had survived the devastation of the tribe in the aftermath of King Philip's War. A pair of long boulders still lounge on the narrow beach, their smooth faces gleaming in the afternoon sunlight (Figure 38). Exquisitely carved initials, names, and dates ranging from 1712 to 1955 adorn their vertical faces like a giant visitors' log. At opposite ends of one of the stones, along its lower edge, a pecked footprint and pecked handprint look oddly out of place (Figures 39, 40). Local lore has it that the footprint is that of Betty (Assowetoh), daughter of John Sassamon, a Christianized Indian who, suspected of treason by the Wampanoags, was murdered and dumped under the ice of this very lake shortly before the commencement of King Philip's War. Lenik (2002:122), noting their stylized designs with splayed fingers and toes, finds it more likely that both footprint and handprint were the work of Indian shamans. If so, these two imprints may have been the first items carved on the rock. Given all the available surface area to choose from, the selection of spots along the bottom edge is interesting. The lower right corner is not a particularly easy place to work, nor the most eye-catching. Perhaps being close to the ground and the water was of significance to the maker.

Figure 39. Pecked footprint on lower left side of boulder at Betty's Neck. Photo by Peter Anick, 2012.

Figure 38. Pair of boulders containing historic engravings on the south side of Assawompset Pond at Betty's Neck. The oval indicates where a footprint is pecked just above the sand line on the left boulder, along with the boldly carved date "1749." A pecked handprint in the lower righthand corner of the same boulder is blocked by the boulder in the foreground. Photo by Peter Anick, 2007.

Figure 40. Pecked handprint on lower right corner of boulder at Betty's Neck. Photo by Peter Anick, 2007.

As NEARA Massachusetts state coordinator, I would occasionally organize field trips to the area, and on one of these trips I was told of a second ship glyph carved somewhere along the northern shore, again visible only when the water level was low. A few years later, during a drought, we kayaked up the unusually shallow Nemasket River to the dam that separated the river from the lake and searched in vain for the rumored petroglyph. Disappointed, we stopped to inspect the simple gatehouse before heading back to our kayaks. It was no more than a cement platform designed to support long wooden planks that could be slipped in and out to control the amount of water draining from the lake. A subsequent web search revealed that it had been

constructed in 1894 after the City of Taunton was authorized to use the lake as their water supply. Damming the lake had raised the water level by some five feet.

About a year later during another dry spell, I got word that the second boat glyph had been located. Its position was somewhat unexpected, on the side of an unexceptional low stone among a string of small boulders that lined the shore just west of the outflow of water into the Nemasket. As seen in Figure 41, the glyph is very similar to the first ship figure in shape and manner of production, with sharp v-shaped incisions and upward curls on both ends of its "hull." It is also nearly identical in its dimensions, with a 6 cm. hull length, 4.5 cm. height and 2.8 cm. "sail" length. But I was most curious to compare the heights of the two glyphs relative to the water level of the lake. Using string, poles, and plumb bob, we managed to compute the heights of both glyphs, confirming my hunch that they would be identical. The similarity in shape, size, and height strongly suggest they were made at the same time by the same person(s) for the same reason. To be at the same height relative to the water level implies either that (1) they were both carved when the water level was up to the hull, or (2) the carver made an effort to measure the height of each glyph relative to the water level. If the water level of the lake before the dam was put in place was truly five feet lower, option 1 seems less likely. This suggests a creation date *after* the dam was built and a function somehow related to the water level, such as a high or low water marker.

While researching this possibility, I ran across a reference to a drill hole made in a boulder in the Nemasket River in 1897. It had been utilized by local businesses to record the high water mark of the river after the dam was installed (Romaine 1969). This brought to mind a shallow conical drill hole I had noticed on the boulder containing the first ship glyph. It can be seen in Figure 42 as the small dark hole to the right of the glyph at roughly the same height. Taken together, these observations provide circumstantial evidence that the two "ship" glyphs are actually 19th century survey symbols designed to mark a desired water level of the lake, perhaps utilized during the construction of the dam/gatehouse to determine its proper height.

Figure 41. Second "ship" figure on the north shore of Assawompset Pond, just west of the outlet into the Nemasket River. Photo by Peter Anick, 2016.

Figure 42. Close-up of boulder containing the first Assawompset Pond "ship" figure, showing a conical drill hole to its right at roughly the same height. Photo by Peter Anick, 2016.

Nemasket Thunderbird Rock

We will conclude our survey with another relatively recent find, located a short distance back down the Nemasket River from Assawompset Pond. The *Bulletin of the Massachusetts Archaeological Society* reported a thunderbird and a cross-in-circle design discovered by a hiker in 2007 (Taylor 2008). A few years later, responding to an inquiry by Ed Lenik, I decided to include the site in a field trip I was organizing with a local researcher familiar with the area. The petroglyphs, it turned out, were carved into adjacent sides of a large granite boulder that rested atop a wooded hill overlooking the river (Figure 43). Encroaching office park development nearby may have aided in the discovery. As shown in Figure 44, the 21 cm wide x 23 cm tall cross-in-circle design is deeply chipped into the center of the flat, vertical side of the boulder. Ed Lenik, who joined us on the trip, commented that the cross within a circle is a common Indian motif with a number of symbolic interpretations.

Walking around the boulder to the left brought us face to face with a second carving, a stick figure rendition of a thunderbird (Figure 45). Unlike the deeply

Figure 43. Nemasket Thunderbird Boulder. The thunderbird figure is near the top of the shadowed portion of the rock face, just above the head in the foreground. The star figure is on the lower left side, to the right of the man's wrist. The cross-in-circle motif is on the face to the right, in front of the woman with the white hat. Ed Lenik is standing behind the boulder, in the white jacket. Photo by Peter Anick, 2011.

Figure 44. Close-up of cross-in-circle motif on Nemasket Thunderbird Boulder, showing lichen and moss covering it in November, 2011. Photo by Peter Anick.

chiseled motif hacked into the adjacent rock face, this 11 cm. tall image was more delicately incised into the smooth surface. The stick figure design is one of several different renderings believed to represent the thunderbird in prehistoric New England iconography (Lenik 2012). It appears, for example, on incised pebbles excavated in a Late Archaic context (4,300 B.P.) at the Wapanucket site, barely two miles away (Figure 46a), and on a pendant dated to the Late Woodland period in Duxbury (Figure 46b). After admiring the thunderbird, I carefully scanned the rest of the rock and detected a third image below it to its left, camouflaged

Figure 45. Close-up of thunderbird figure on Nemasket Thunderbird Boulder. Photo by Peter Anick, 2011.

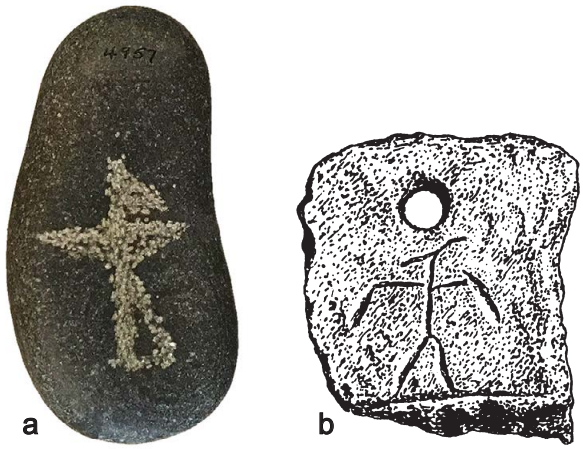

Figure 46. (a) Thunderbird image carved onto a pebble, found in Late Archaic layer (4,300 B.P.) of Wapanucket excavation. On display at Robbins Museum, Middleborough, Massachusetts. Photo by Peter Anick, 2017. (b) Late Woodland pendant from Duxbury, Massachusetts, containing incised thunderbird image. Drawing by William Fowler, courtesy of Robbins Museum.

against the lichen speckled wall. It was a small "star" in the shape of an asterisk (Figure 47).

The star and thunderbird were likely made at the same time, by abrading with either a fine metal tool or sharp stone. The stylistic similarity with the Duxbury pendant figure (Figure 46b) would suggest a Late Woodland date. The cross-in-circle motif on the adjacent rock face, however, appears to have been made by hacking at the surface with a heavy metal tool, perhaps an axe. Inspecting the lines comprising the center cross, we can see that in some sections the stone fractured cleanly, leaving a long, straight, v-shaped line, while in other areas the hacked lines are awkwardly executed, with several blows not even angled correctly. While it is

Figure 47. Close-up of star figure on Nemasket Thunderbird Boulder. Photo by Peter Anick, 2011.

reasonable to assume that a boulder perched atop a hill overlooking the important Nemasket River would be considered a place of *manitou* or spiritual power for a shaman, several features of the carvings make me suspicious of an early provenience. The age of the trees surrounding the stone (as seen in Figure 43) suggest that the area had been relatively clear of trees until quite recently. Given the size and depth of the circle, it seems unlikely that it would have gone unnoticed for so long, even if partly camouflaged by lichen and moss. When I revisited the site in 2017, I found that all the lichen and moss had been stripped away, presumably by someone seeking to take unobstructed photographs. As shown in Figure 48, the exposed lines now look freshly cut, showing no repatination. Since we have photos taken before the lichen was removed, an analysis of the rate of repatination and lichen/moss growth for this boulder might provide a window of possible dates.

Figure 48. Close-up of cross-in-circle figure after removal of moss and lichen. Photo by Peter Anick, 2017.

As for the thunderbird, the horizontal line drawn below it feels anachronistic. Representing a ground line is common in modern drawings but very rare in Indian petroglyphs. One exception is the Duxbury thunderbird pendant (Figure 46b), which appears to include a horizontal line below the figure. As a result of NAGPRA (Native American Graves Protection and Repatriation Act) repatriation, the pendant is no longer on display at the Robbins Museum. However, a close examination of the drawing suggests that the apparent ground line may actually be a natural ridge in the stone itself. Given the uncanny similarity of the image on the boulder to the image on the pendant, it is possible that the boulder thunderbird is a recent copy of the pendant figure, including the apparent ground line. On the other hand, if a report of the carving can be found which predates the Duxbury find, the close resemblance between the two would be good evidence for a contemporaneous (Late Woodland) provenience.

Conclusions

This survey of sites in southeastern New England demonstrates that the region's indigenous inhabitants were not immune to the urge to leave their marks in stone. Whether these examples represent the tip of an iceberg, i.e., a continuous tradition of rock art over millennia, or the sporadic ventures of a few inspired individuals remains unclear. Until relatively recently, any carvings that could not be ascribed to trans-Atlantic seafarers were typically dismissed as inconsequential, as "nothing but the scratches of some idle Indians, without any meaning" (John Bartlett, quoted in Delabarre 1919:297). Thanks in large part to the efforts of archaeologists like Grace Rajnovich, Mark Hedden, and Edward Lenik, researchers now have access to a growing body of data from which to explore plausible contexts in which these scratches do have meaning. Sadly, our study shows that nature and neglect are taking a toll on sites through spalling, fragmentation, abrasion, sea level rise, and the encroachment of soil and vegetation. Petroglyphs at the water's edge are particularly vulnerable, highlighting a need to apply modern recording techniques such as photogrammetry and laser scanning before sites deteriorate further or disappear altogether.

As new data comes in, we may find that some petroglyphs are not necessarily ancient, or not Native American. But there is a good chance that many more prehistoric sites await discovery and documentation. A North Carolina recording project begun in 1997 us-

ing public outreach and collaborative partnerships has increased the number of documented rock art sites in their state from seven to fifty (USDA Forest Service 2017). A similar effort is overdue in New England.

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