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Editor’s Note
Curtiss Hoffman

2014 marks the 75th Anniversary of the Massachusetts Society, and also the 75th year of publication of the MAS Bulletin. To celebrate our Diamond Jubilee, I am pleased to publish in the Bulletin two articles about one of the very first excavations undertaken by an MAS Chapter, the Davis Farm Site in Sudbury. The participants in this excavation are names to conjure with: Hallam Movius, Ben Smith, Ripley Bullen, J.O. Brew, Fred Orchard. As far as I can tell, only Maurice Robbins’ work at the Faulkner Spring site in Taunton began earlier, in the Fall of 1939, and continued contemporaneously with the excavations described in this issue. Work such as that by Shirley Blancke and Tonya Largy constitute a kind of meta-archaeology: mining the archives of our own archaeological society’s past for previously unpublished or under-published data. As Doc Robbins stated at the head of his Faulkner Spring report, quoting Warren King Moorehead, “Don’t write until you have something to say about something new or something new to say about something old” (Robbins 1980:17). In this issue, as we look back over our society’s 75 years of existence, it is refreshing to find that there are indeed some new things to say about “something old”.

Reference Cited
Robbins, Maurice

The Davis Farm Site, Sudbury, Massachusetts:
A Final Report for the Middlesex Group, 1940-1941

Shirley Blancke

Introduction

The Davis Farm site (19-MD-160, M-23-26), also known as Pantry Brook Village, was situated close to the west side of the Sudbury River near the Sudbury/Concord border. It was the object of three excavations, the main one conducted by the Massachusetts Archaeological Society in 1940-41, and two later small ones by the MAS in 1951 and the Sudbury Historical Society in 1971. The results of these digs have either never been fully published or not published at all, and it is my purpose here both to honor the efforts of many people over many months more than seventy years ago, and to bring to light what they found in terms of current knowledge.

(c) Shirley Blancke 2014
Some of those who worked on the dig have names that are well-known. Hallam L. Movius Jr., a year before the Davis Farm dig, had been appointed assistant curator of Paleolithic archaeology at Harvard’s Peabody Museum. He was already known for his work in Southeast Asia and Ireland. According to his National Academy of Sciences obituary, in 1940, with war looming in Europe and the Far East, he turned his hand to American archaeology in case his areas of interest should become closed to him. The obituary writer deemed the inclusion of the Davis Farm report in Movius’s publications list of 1941 a “puzzling entry,” presumably because it was so far removed from the rest of his work (Bricker 2007:8). Other members of the Peabody Museum who worked at Davis Farm the first season, and some also the second, were: J.O. Brew, Donald F. Brown, Bruce Howe, and Fred Orchard. J.O. Brew was appointed curator of southwestern archaeology at the Peabody Museum in 1941, becoming director in 1948, and had accompanied Movius to Ireland. He became well-known for his work in the American southwest. Donald Brown moved from the Peabody to Boston University and worked in southern European archaeology. Bruce Howe was a doctoral student at Harvard who later worked in North Africa and the Near East, and Fred Orchard was chief preparator at the Peabody (Stoddard 2013).

The crew members in Figure 1 were not identified on the original photograph, but some identifications have been made by Linda Brown Engelmann, Donald Brown’s daughter (Engelmann 2013), and Theodore Stoddard (Stoddard 2013). Linda Engelmann recognized five members of her family: her father; his mother, Alma Brown; his future wife, Linda E. Smith, whom he met on the dig and married in 1948; and Ray and Edith Smith, Linda Smith’s parents. None of these Smiths was related to Ben Smith. Theodore Stoddard identified Natalie Bill and Fred Orchard.

A crew list derived from field notes is in Figure 2. Ripley Bullen, like Ben Smith and Donald Brown, was one of the founders of the Massachusetts Archaeological Society. He worked at the R.S. Peabody Foundation in Andover for several years, and later pursued his profession as an archaeologist in Florida. Among the local collectors, in addition to Smith who lived in Concord, were Harry C. Rice, a Sudbury farmer, and Alfred Mansfield of Watertown, later Wayland. Mansfield once recognized himself on the Figure 1 photo, but I am uncertain which person is he. Charlie Way, known in Sudbury as the architect of the town hall, was a crew member. The crew numbered eighteen the first season but swelled to almost thirty the second, nearly half of whom were women. Among them, in addition to the professors’ wives, Evelyn Brew and Adelaide Bullen, were Elizabeth Atkinson, long-time librarian at Sudbury’s Goodnow Library, and her sister, Dorothy. Natalie Bill’s name figured prominently in the field notes, where she analyzed the debitage from the site by layer and by lithics. Later, as Natalie Bill Stoddard, she helped with cataloging at Harvard (Harvard University 1949-50:274).

Listed by Ben Smith in 1948 as members of a reduced post-war Willoughby Chapter were: George Bates, Roland Robbins, Ben and Peg Smith, all of Concord; Harry Rice of Sudbury, Al Mansfield of Watertown, Kenneth Ayres of Waltham, and R. Ross Holloway of Boston. A Ralph Stevens made notes on the 1951 dig.
Reconstruction of the Methodology for 1940-1941

In reconstructing the excavation, there were two major challenges: 1) identifying which were the artifacts from the excavation, and 2) reconstructing the full excavation plan that was represented by only one detailed, but not fully labeled drawing. Initially, a lack of knowledge of the recording methods made it impossible to understand the over two hundred pages of field notes. Once the excavation’s card catalog was located that coordinated the metric data, Ben Smith’s large number of photographs and drawings, over time, facilitated my understanding of what had been done. It was a gradual process of the proverbial “wood” of the dig coming into focus as the “trees” of highly detailed recording, whose rules had to be figured out, began to make sense.

Separating the artifacts
In the process of computer cataloging Ben Smith’s artifacts from the Davis Farm for the Concord Museum, it became clear there were two artifacts for nearly every number in Smith’s collection catalog for that site, written on the artifacts as the old MAS site number, M-23-26, followed by an object number. There was also a third set of artifacts mixed in with the others that had object numbers but no site number. At that time I had not yet found the excavation’s card catalog, but Ben Smith’s catalog made it clear he had collected from the field area immediately south of the excavated site for about ten years after the dig. Consequently, I potentially identified three distinct sets of artifacts: 1) a set surface-collected by Smith; 2) another, hopefully, the excavation material; and 3) a third set of uncertain origin. If I was right, the big question was whether the excavation material could be separated from Smith’s collecting, as the numbering on both sets was identical. Smith’s catalog, however, had good descriptions of his surface-collected artifacts as well as the dates he collected most of them, so I started to make a separation, assisted by the discovery that Smith often used white ink for his surface collection, while some artifacts in the proposed excavated materials were marked in red. That left a black ink category that could be either, as well as the category with only object numbers. While doing this I found the dig’s card catalog, which made it possible to verify my suppositions about which were the excavation artifacts. The cards contained delicate pencil drawings by Ben Smith that portrayed the artifacts clearly. It also made clear that the third category was field numbers, some of the artifacts never having been assigned catalog numbers at the close of the 1941 excavation season, but all the field numbers as well as the catalog numbers were in the card catalog.

There was a great deal of material belonging to categories not usually included in Smith’s catalog or the excavation card catalog, whose exact location could not therefore be determined, although references to this kind of material were made in the field notes. These were different types of chipping waste, specifically flakes and chunks, some cores, and some hammerstones. A few of these were marked with site numbers, but many were unmarked although stored in bags or boxes identified by site number. I have included all the manufacturing material in the list of chipping waste, as most of it is likely to have come from the excavation.

In addition to Smith’s 1941-50 surface collection there are two other much earlier collections from the area at the Concord Museum that have been listed and compared with Smith’s collection and the excavation material in a section below (pages 37-38).

The data from the card catalog as well as my own artifact and lithic identifications were entered into an Access database. Only some half-dozen artifacts could not be identified or were lost out of 150 from the excavation and 135 in Smith’s surface collection. I have designated the excavation material 19-MD-160(E) to separate it from Smith’s 19-MD-160 surface collection.

Reconstructing the Excavation Plan
After the separation of artifacts, the second major challenge was to reconstruct the excavation plan and the dig’s dual numbering system of pegs and squares. There was no diagram of the excavation plan that showed the complete numbering system, nor any drawing of the profile of any trench or square, except for a very rough sketch of the length of the east side of the main trench (Trench A) in Movius’s few pages of field notes.
Movius’s report described two 24 m x 2 m trenches labeled A and B as well as mentioning a 6 m x 6 m square east of Trench A (1941: 17,18), but the card catalog and field notes covering both the 1940 and 1941 seasons referred to twelve 2 m x 2 m “extension” squares identified by numbers. Ben Smith’s large plan of pits on a grid of twelve 2 m x 2 m squares showed corner peg numbers, but no square numbers (Figure 3). The field notes, however, used the square numbering system rather than the pegs for identification. A set of field notes from 1940 (Sept. 29) was my Rosetta stone. I found a partial diagram of the southern end of Trench A adjacent to the first three 2 m x 2 m extension squares, two of which were numbered. From it I could infer how the rest of the extension squares were probably numbered, and eventually understood the card catalog plotting sufficiently to be able to see that both systems were recorded on there. At that point I could draw a fully numbered excavation plan for the main excavation area (Figure 4).

The card catalog provided three-dimensional (two horizontal and one vertical) plotting of the artifacts’ location in square or trench as well as layer and pit identification when relevant. Sometimes associated material was noted. Later in the dig, horizontal plotting was from the square’s sides, but early plotting from corner pegs necessitated a compass to reconstruct the artifacts’ locations. This was undertaken to see how they might cluster.

The only 1940 field notes in Smith’s collection are for Sept. 29, but that season’s work was summarized in Hallam Movius’s preliminary report (1941). The 1941 field notes start on May 4 and continue to November 16. They run to some 220 small notebook pages, the early months summarized by Ben Smith in a dozen large typewritten pages. He included sketches of some profiles of larger pits, and on the one excavation plan recorded tops and bottoms of pits by depth. On another copy he plotted the positions of some artifacts.

Out of over 250 photographs taken by Ben Smith in both seasons, a few show the excavators, but most provide views of the excavation and pits. Some show a “house floor” layer in profile. General views of the site show that each square was dug individually so that no overall plan of any horizontal layer was identified over the whole area or even a part of it.

The Site

Ben Smith and Hallam Movius undertook to try to find an undisturbed site for the 1940-41 excavation. The area they chose was to the north of a cultivated field, with a farm road running across the north end of the field. In recent times a house and sheds were built in the general area of the archaeological excavations, and the whole area including the field now belongs to an excavation company (Figure 5). An aerial photograph taken in 1967 before there was any building shows the farm road running in a southwest-northeast direction across the top of the field (National Oceanic and Atmospheric Administration [NOAA] 1967). The Sudbury Historical Society’s 1971 dig took place in this field road, on its west side. Duncan Ritchie was told by the Historical Society’s excavators that the MAS 1940-41 dig was located on the southeast side of the hill beyond the present house, where traces of animal pens were still visible (D. Ritchie 2013a). The MAS 1951 dig was to the north of the 1940-41 excavation, also in an area of animal pens. Movius’s report described the 1940-41 location as an “undisturbed area (that) consists of a narrow strip, approximately 20 m wide and 150 m long, . . . the uncleared portion of a large field. This strip is situated at the base of a low hill + 120 feet above the river; only a small portion of it is level. . . . The lower edge is clearly defined by a 3-foot bank and a dirt road separating the strip from the cultivated field. But the entire field is part of the site” (Movius 1941:17). As the excavation eventually showed, the surface humus layer was not in fact undisturbed but was plowed in Historical times. Both hillside and strip were lightly wooded, requiring the removal of at least one tree.

Movius described three terraces he considered to be probably post-glacial in age: the hill, a remnant of one; another at 12-15 ft (3-4 m) where the main excavation was situated; and a 6-8 ft (1-2 m) platform in the field (Figure 6) (1941:17). Hansen’s surficial geology map of the area shows the hill as a
glacial kame, and the two lower terraces consisting of gravel, sand and silt without distinctive morphology, as likely deposited by glacial Lake Sudbury (Hansen 1956: Plate 2). The soil type where the dig was located is 255B, Windsor loamy sand with 3-8% slopes (Natural Resources Conservation Service, US Department of Agriculture 2014). The quantity of quartz chipping debris recovered in the excavation, as well as a large unworked quartz cobble found deep in the sand, indicate that this location was a source of such cobbles, doubtless a major reason for this choice of site by past peoples. Movius speculated about the glacial history of the river valley and its potential for dating the site through associating archaeological materials with potential peat deposits on the 6-8 ft (1-2 m) terrace. Soil samples were taken from Trench A and sent to E. S. Deevey at the Rice Institute (now University) in Houston, Texas, but there is no record in Smith’s material of the aim of this analysis or of any results (Movius 1941:17).

South of the former excavation area at the base of the kame hill, a once cultivated 60-acre (24-hectare) field extends like a promontory, the Sudbury River on its east side, a marsh and a branch of Pantry Brook on its west, and Pantry Brook to the south where it joins the river (NOAA 1967)(Figure 5). For many years this field was a haven for artifact collectors such as Ben Smith, Adams Tolman and Alfred Hosmer, all from Concord, and the material in their collections shows it was a large multi-component site. Smith noted, “A vast quantity of material has been picked up, including hundreds of small quartz arrow points. Literally thousands of these must have been made here, as they may be picked up by the dozen after plowing even today. The main encampment appears to have been situated on the rising ground just under the sharp slope of the hill, as larger implements of a more domestic character were abundant there.” Smith also mentioned a low-lying area to the southeast in the field, 300 ft (91 m) from the river and susceptible to flooding, where he thought it likely that the Indians sowed wild rice to attract birds. “They appear to have shot large numbers of arrows at these birds, for otherwise it is hard to account for the great numbers of perfect quartz points recovered from the area. The arrows which missed birds would end up in the mud of the shallow lagoon . . .

The Excavation Plan, 1940-41

The first digging in 1940-41 opened up two trenches, A and B, described by Movius as lying in an approximately north-south direction across a gently sloping 20 m x 150 m strip on the 12-15 ft (3-4 m) terrace at the hill’s base. Trench A, which proved to be much the more important trench, was dug at the strip’s eastern end through the center of a flat area (Figure 6), and Trench B was opened across the more sloping middle of the strip (Movius 1941:17). Figure 7, however, appears to show Trench B at a higher elevation. Both trenches were 24 m x 2 m, divided into four 6 m sections for artifact-plotting purposes (A-1 to A-4, and B-1 to B-4). Trench B proved to have a very shallow cultural deposit overlying undisturbed Late-Glacial sand and silt (Movius 1941:17), and produced some chipping waste but very few artifacts other than a small cluster of Brewerton points.

Since the flatter southern section of Trench A (A-1) was found to be the most fruitful, 2 m x 2 m squares were consecutively opened up to the east of it. Eventually a block of twelve “extension” squares was dug, four in each of three rows from south to north. Four additional partial squares were excavated on the bank above the field road, extending the south side of the grid towards the road (the “bank” squares). The southern end of Trench A, together with the “extension” and “bank” squares, formed the main excavation area, which measured 10 m x ca 0.7 m and produced most of the artifacts and features (Figure 4). To facilitate artifact plotting, I further subdivided the 6 m x 2 m sections of Trench A that had artifacts into 2 m x 2 m squares to fit the grid of the later extension (A-1.1 to A-1.3, A-2.1 to A-2.3, A-3.1)(Figure 4). Ben Smith’s large horizontal plan of the main excavation area, drawn to scale (Figure 3), shows trench section A-1, the extension and bank squares, over twenty pits, and
a crenellated outline of what remained at the time of Smith’s drawing of the northern edge of a house floor or living area. He drew a separate plan of the different sections of Trench A.

**Stratigraphy**

Movius’s report gave a verbal description only of four levels in the main excavation area which described average thicknesses, soil characteristics, and some of the artifacts (Movius 1941: 18). Augmenting this, a roughly drawn diagram in Movius’s field notes provides a profile of the east side of Trench A before the extension grid was dug (Figure 8). From right to left, it shows the bank above the field road and four 6 m sections of Trench A heading uphill (A-1/ bank, A-1,A-2,A-3,A-4). There are four strata from top to bottom: first, a surface humus level (A); second, the main Pre-Contact cultural level (B); a third level with some artifacts (C); and the sterile subsoil (D). The Pre-Contact cultural level B does not extend all the way across the trench but ends in section A-4. In A-1, level B has two pits (B and ‘G’). The dark yellow sand of Level C shows a few stones, and level D is sterile light yellow sand, both impacted by the pits of level B. Of great importance in the “bank” section, a dark strip just below the surface level labeled by Movius “H.F,” for “House Floor,” extends only a very short distance into section A-1. This shows the stratigraphic position of a Woodland house floor or living area that was located at the bottom of the surface level and at the very top of the Pre-Contact cultural level B.

Rather surprisingly, Movius thought the artifacts all belonged to one culture (1941:19), but due to the work of the last seventy years during which radiocarbon dating allowed a chronology based on changes in projectile point shape and manufacture to be developed, it is now clear that at least four Pre-Contact cultures are represented (Figure 8). The surface humus level A contained mainly Historical artifacts with a few Pre-Contact ones pulled up by the plow, in particular the only Susquehanna Broad point. Movius’s cultural level B was complex but had two broad divisions:

1) at the top were some Middle to Late Woodland artifacts mixed with a few Small Stemmed Point tradition artifacts that could be of Woodland date, but not necessarily so; and

2) lower level B consisted of predominantly the Late Archaic Small Stemmed Point tradition together with Small Triangles, and a few Brewerton points. Level C contained Middle Archaic points only, along with other artifacts.

Movius’s verbal profile is helpful for its fuller description of the characteristics of the different layers, which are outlined in Figure 9 (Movius 1941: 18, 19). Given that the main excavation area was more or less flat, Movius’s average depths work within 5 cm or so, judging by the depth and layers recorded for the artifacts in the card catalog. Level A, from the surface down to 25/30 cm, he characterized as a “slope-wash deposit, which at the base of the hill is composed of loam containing sand lenses, silt and small pebbles.” Uphill it was coarser but essentially the same. Plowed in the 19th century and perhaps later, it contained clay pipe stems, china, glass, and fragments of coal and brick, as well as some Historical uncalcined bone and a few Pre-Contact artifacts.

Movius’s “Culture Layer,” Level B, mainly Late Archaic with some Woodland at the top, extended from 25/30 cm to 55/60 cm. It was lighter and sandier, but dark in color, containing much ash and charcoal as well as tiny fragments of calcined bone and turtle shell. At its top (25/30 cm to 40/45 cm), in the bank section, was a Woodland house or living floor, 10-12 cm thick and composed of packed, greasy, black earth (Figure 8). Level C, a Middle Archaic level, was a dark yellow coarse sand from 60/65cm to 85/90 cm, containing a few artifacts and calcined bone fragments. Level D below the 85/90 cm level was a sterile deposit of light yellow sand, pebbles, water-worn stones, and silt.

**Bioturbation**

Although care was taken by the excavators to record the depth of all artifacts and pits, it is clear that several different kinds of bioturbation existed, whose effects need to be assessed carefully for accurate interpretation. The area was lightly wooded, and outlines of tree roots were at first often thought to be post molds; most of them were later discounted. Animal burrows were extensive, particularly at the bottom of pits, and it seems likely that all of the small number of uncharred seeds and nuts in the pits were introduced in that
manner. Movius’s characterization of the surface layer as a slope-wash deposit suggests that water running through different levels in the past is the reason for the obscured top of at least one and probably more pits. Frost and water collapsed trench walls and cracked surfaces when the excavation was left open during the winter of 1940-41 (for example, the sides of pit C), causing Smith to comment that similar effects would have obscured the outlines of pits left open in the past.

Pit Features

Pits were the most prevalent features of the excavation. Benjamin Smith’s plan of the main excavation area (Figure 3) is an amalgam of features of all time periods. It shows 20 pits identified by alphabet letters, A through S (two of the pits were labeled G), and three or four others. In the margins, Smith made notes for each pit that gave the alphabet letter, pit top dimensions, and the depths of both the top and bottom of the pit. For clarity’s sake, in Figure 3 some margin notes have been omitted and some letters added to the plan. The two pits labeled G, are now ‘G’ and G. Partial plans or profiles of some of the larger pits were in field notes, and other pit profiles were shown in photographs.

Field note description of pits in squares 1 through 12 started out in great detail in 1941, especially for the large pit D, but after September information dwindled to dimensions only for the last seven pits (M to S). Since few pits had datable artifacts, and most had no artifacts at all, I attempted to use depth to address dating. The pits were sorted by time period based on the level at which the tops of the pits appear to have started within the stratigraphic sequence. Using this approach, Figure 10 shows the number of pits at each level. Some caution is needed, however, as the apparent starting depth of one pit, pit D, clearly Woodland from its artifacts, is too low, so that it and therefore perhaps others were likely affected by bioturbation. Pits judged Historical or Woodland by depth or artifacts sometimes contained Late Archaic artifacts. These would have been in the soil through which the pits were dug and do not date the pits. Pit artifacts are described in the artifact section.

In Figure 10, the top Historical Level A contains two pits, ‘G’ and I. The Woodland pits, four in number (C, D, N, B) are found in the top of Level B, the layer of the Woodland living floor. Nine Late Archaic pits (P, M, L, R, F, Q, K, H, G) are found in the lower part of Level B. Five pits appear to be Middle Archaic (J, S, E, A, O), in Level C, but this may be misleading as described below. Six pits contained artifacts, but only pit D can be certainly dated by them.

Both pits judged to be Historical (‘G’, I), were assigned to this period on the basis of stratigraphy alone. They were deep pits extending in Level A from 24 cm and 28 cm respectively down into Level D, the subsoil. ‘G’ was cone-shaped with a top 50 cm in diameter, and showed in Movius’s profile (Figure 8), but no other data was recorded. Pit I, oval in shape and 75 cm x 85 cm in diameter, contained three artifacts, a Squibnocket Stemmed point, a point tip and a flake, all likely accidental inclusions from the pits impacting earlier layers.

Of the four Woodland pits (C, D, N, B) in Figure 10, pits D, C, and B were by far the largest Pre-Contact pits on the site. All were in the north half of the excavation area, well away from the area of the Woodland living floor. Smith’s plan (Figure 3) shows that Pit D was impacted by pit C. Pit D was the largest, about 2 m in diameter with an irregular shape, and over 1 m deep at its deepest. It was composed of many soil, ash, and charcoal lenses, and clearly had been used over an extended period of time. It contained a mixture of Woodland and a few probable Late Archaic artifacts, (in particular a Squibnocket Triangle point at over a meter’s depth), but an incised sherd of late Middle or Late Woodland date together with other likely Woodland artifacts within the pit identified it as a Woodland pit extending through earlier layers (see section on pit artifacts below). This being the case, its top should have been at or above 40 cm in the Woodland part of Level B, making its depth some 1.40 m, but its outline first became clear at 65 cm, in the lower Late Archaic level. Smith thought the pit started higher up but that its outlines had been obscured. He drew two profiles of quadrants on the southeast side (Figure 11) and photographed its outlines (Figures 12, 13). At its base, Pit D contained uncharred seeds and nuts, likely due to burrows, and a bird’s claw.
Pit C, also large, whose top started at 30 cm, was dug into Pit D and was therefore of later date, but almost nothing of it is recorded. Photographs show it consisted of light colored sand (Figure 12) and there is a passing reference to its containing an ashy patch, and possibly a scraper. It may have been one of the sand pits Movius referred to (1941: 19). A large bowl-shaped pit, pit B, was described as a fireplace lined with stones that contained at least four levels of stones, ash and charcoal (Figures 14, 15, 8), and a Wading River point was found under the bottom layer. The height at which the pit started (40 cm) indicates it belonged to the Woodland period. It is similar to a Woodland feature (Feature 12) found by Duncan Ritchie at Puffer Pond, Sudbury (D. Ritchie 2011: 188-192). Both pits B and D contained very small fragments of calcined bone and shell. Woodland Pit N was a small oval 50 cm x 35 cm pit.

Most of the nine pits in the Late Archaic level (P, M, L, R, F, Q, K, H, G) in Figure 10 differed greatly from the large Woodland pits by being small and bowl-shaped, sometimes cylindrical, with diameters around 50 cm. Half were only 10 to 20 cm deep, but two (H, G) were deep enough to penetrate into sterile Level D. They appeared as dark charcoal-stained soil in the lighter surrounding sand, and most contained charcoal and ash (Figures 16, 17). Two pits contained small fragments of calcined bone and shell (Pits L, F). Only pit K had a diagnostic artifact, a Wading River point, and pit H contained a flake. Two pits (H, K) contained uncharred seeds and nuts, likely due to burrows. The cultural component of lower level B is Late Archaic, in particular quartz artifacts of the Small Stemmed Point tradition, and most of these pits occurred in the southern half of the dig where those artifacts were found.

Below the Late Archaic bottom limit of 60/65 cm in Figure 10, five pits (J, S, E, A, O) were in the Dark Yellow Sand of Middle Archaic level C. Although in that level, they are similar morphologically to Late Archaic pits and are thought likely to be of that date, their tops having been obscured by bioturbation. Additionally, none of these pits occurred in squares where Middle Archaic artifacts were found, but S, E, and A were in the southern section, the location of the Late Archaic artifacts. Or, they may in fact be Middle Archaic pits. Pit E contained a small quartz scraper that is likely to be Late Archaic; Pits J and E contained small pieces of calcined bone and shell. Three were shallow (S, A, O), less than 20 cm in depth, but two were deeper (J, E) extending into Level D.

Three pits appear in trench section A-1 on Smith’s plan (Figure 3). On his other trench section plan Smith gave the top depth of the two smallest pits on the west side (I, II) as 56 cm and 58 cm, respectively, which would indicate level B and a Late Archaic date. They were described as ash pockets. The A-2 trench section had a hearth at 30 cm (Woodland) and another at 66 cm (Late Archaic), the latter with a quartz scraper close by. Trench sections A-3 and A-4 had no pits.

House or Living Floor Feature
Movius’s eye-catching reference to the floor of a “typical long house,” and his reporting of the discovery of post molds, raises expectations that were never realized. He stated that only a strip of the northern edge of such a floor, apparently oriented east-west, was visible on the south side of the main excavation (1941:18, 19). He was probably looking at the edge of a darkened layer encountered near the south end of trench section A-1, labeled “H.F.” in his profile (Figure 8), and also referenced by Ben Smith as a dotted line labeled “edge of house floor” in a drawing similar to his Figure 3 plan. The question arises of where else it was seen. In Figure 3 this dotted line extends from trench section A-1 (square A-1.1) eastwards into the first square, where it turns into a solid crenellated line (a pattern probably caused by the digging technique) that disappears on the right at square 10 (Figure 4). A photograph labeled “house floor” shows a darkened area extending across square 10. Although there are passing references to a house floor in the field notes, there was apparently no attempt to trace its outline. A raised darkened layer on the south side of the excavation, dug through in places, may be seen in Figure 18. Movius showed this layer’s Woodland stratigraphical position in Figure 8, which is supported by one artifact. In square A-1.1 a yellow Pennsylvanian jasper knife was found at a depth of 40 cm. It appears to have been south of Smith’s house floor boundary line, i.e. within the house floor, identifying that floor.
and level as Middle Woodland. Barbara Luedtke demonstrated that the use of Pennsylvania jasper in Massachusetts was associated with the late Middle Woodland period (Luedtke 1987).

If the straight edge of a “typical long house” was there it was not uncovered, but based on what evidence there is, a possible edge trajectory is shown in Figure 19. Clearly, there was a dark greasy layer indicating a living floor of some kind. If not a long house, this living area was likely either open or perhaps an amalgam of wigwam floors with an uneven boundary. The excavators used its level as a bench mark for plotting artifacts above or below it. Most of the supposed post molds were dismissed later by Smith as root molds. Two that he drew in field notes could be genuine, but they were found in the Late Archaic level and any relationship to the Woodland living floor is unknown.

Artifacts

Due to the 3-dimensional artifact plotting, it was possible to reconstruct artifact clustering by time period in a horizontal plan of the excavation squares (Figure 19). Woodland artifacts were mainly in the northern squares where the Woodland pits were also located, north of the Woodland living floor layer. Late Archaic Small Stemmed Point tradition artifacts were clustered in the southern part of the excavation where the Late Archaic pits were found. Middle Archaic artifacts were in the southwestern corner and in the southern part of trench A-2, away from what appeared to be Middle Archaic level pits, as judged by depth (see above: Pit Features).

Middle Archaic Period

Level C, a dark yellow sand layer that Movius considered undisturbed, was the Middle Archaic level from which twelve artifacts came, some described by Movius (1941:18). Three projectile points, one Neville and two Neville Variants, suggest a small Middle Archaic presence. A fourth Neville point was out of context in level B. One level C point was in the main excavation area, and the other two were in the sloping upper sections of Trench A where depths of artifacts differ somewhat from the main excavation area, but all were recorded as found in the dark yellow sand layer C (Figure 9).

In the main area, a Neville Variant point of tan quartzite was found in level C at a depth of 75 cm in square 2 near the edge of Woodland pit D (Figure 20:1). It was well below the bottom of Late Archaic level B. By contrast, a black rhyolite Neville point, higher up in level B at 45 cm in square 3 near pit D, was probably pulled up by that pit (Figure 20:4). Further north in the trench A-2 section, the C level of square A-2.1 contained a gray rhyolite Neville point (Figure 20:3), a hammerstone, and part of a gray rhyolite blade at depths of 55 cm for the point, and 60 cm for the others. In square A-3.1 of trench section A-3, a gray rhyolite Neville Variant point was in C level at 60 cm (Figure 20:2) and a hammerstone at 78 cm. Both Neville Variant points occurred at lower depths than the Neville points, but one Neville point was out of context.

In addition to these diagnostic artifacts, nine other artifacts were in level C of adjacent squares in the southwest corner of the main excavation area: squares 1/bank, 1 and 2 (Figures 19, 4). Most were at a depth of 60–77 cm. An adze, a fragment of polished gouge, a leaf-shaped knife made from an argillite flake (Figure 20:7, 9, 5), and a large multifaceted quartz core with cobble rind were in square 1/bank. In square 1, a large unworked quartz cobble was at 60 cm, and a finely made perforator shaft of buff quartzite (Figure 20:6) was found deeper at 86 cm associated with bone fragments and quartz chips. From the same square in dark yellow sand unidentified by depth was a trianguloid knife of gray rhyolite (Figure 20:8). A cobble hammerstone, a large quartz flake with a utilized edge, and a trianguloid thick flake of black rhyolite with a scraper edge came from level C in square 2 (Figure 20:11, 9, 12). Movius mentioned a few quartz flakes and a fragment of graphite, all now unidentified, and there are likely to have been flakes near the hammerstones.

Late Archaic Period

Movius’s Level B contained artifacts from several cultures: among them two apparent Late Archaic cultures, mainly the Small Stemmed Point tradition with Small Triangles and a few Brewerton artifacts; and Woodland material at its top (Figure 9). In the top of level B a few Small Stemmed Point tradition artifacts, which could be that tradition extending into the Woodland period, were mixed
with later Middle or Late Woodland material at approximately 30 cm - 40 cm. In the lower part of level B, from roughly 40 cm - 65 cm, were Small Stemmed Point artifacts and three Brewerton points. Many of the cataloged Small Stemmed Point artifacts were clustered in one main locus; others were scattered singly over the site, or their locations were not recorded. Three Brewerton points in the main excavation area were scattered, while a small cluster of three was found in Trench B away from the main site. A single point from the Susquehanna tradition was in surface level A out of context.

**Late Archaic: Small Stemmed Point Tradition**

There were 56 points of the Small Stemmed Point tradition, which comprised a third of the numbered artifacts in the excavation card catalog. These included Wading River points (22), Squibnocket Stemmed (21) and Squibnocket Triangles (13). The main locus of 36 artifacts, mainly points and scrapers, was in the southeast corner of the main excavation in square 10 and its adjacent squares 10/bank, 11, 7, 4, and 4/bank (Figures 19, 4). The artifacts in that locus consisted of some Squibnocket Stemmed points (5) (Figure 21:10, 11, 12), and Squibnocket Triangle points (2) (Figure 21:14), but Wading River points (14) and small quartz scrapers (12) predominated. Eleven of the fourteen Wading River points in the main locus fell into one of Boudreau’s subtypes, the one-shouldered point (Boudreau 2008a: 18; Figure 21:1, 2, 3, 4, 7). There were also single examples of three other Wading River subtypes, lobate base, angled base and short stem (Figure 21:5, 8, 9). All the Small Stemmed points were concentrated at depths of 35 cm to 50 cm in level B, and were predominantly made of white quartz. A few were made of argillite (gray-green or brown), gray quartzite, rhyolite (black or gray), and one of mylonite. The Wading River points range in size from 1.9 cm to 4.0 cm, and the Squibnocket Stemmed from 2.0 cm to 4.4 cm. There appears to have been no stratigraphic separation between the different point types. Of the many points scattered outside that locus, two are illustrated (Figure 21:6, 13).

The twelve small scrapers in the same level B locus with the points were of white quartz, except for one of brown argillite (Figure 22:3). They fell into three categories: five endscrapers of sub-rectangular or teardrop shape (Figure 21:15, 16, 17, 18; Figure 22:1); four circular or trianguloid scrapers (Figure 22:2-5); and three medium-sized flakes with worked edges (Figure 22:6). Other artifacts in that locus were: the end of a leaf-shaped knife of gray-green argillite (Figure 22:8), a rough slate semilunar edge tool, possibly burned (Figure 22:9), and a black rhyolite perforator fragment with an expanded base (Figure 22:12). A large rectangular sandstone slab with two side notches was a possible sinker or digging-stick blade.

In level B outside the Small Stemmed locus, but probably belonging to that tradition were: two expanded end perforators, one of gray-green argillite (Figure 22:13), the other a black rhyolite perforator fragment that appeared to have a broken Squibnocket Triangle base (Figure 22:11); a small quartz core (Figure 22:7); a sinker made from a small granite cobble with a pecked groove around the middle (Figure 22:10); and a small sandstone cobble sinker with two notches.

Since Jeff Boudreau expressed the opinion that not all Small Stemmed points were projectile points, which need to be symmetrical (Boudreau 2008b), Small Stemmed artifacts in the main locus were examined to explore that idea. Most of the Squibnocket Stemmed points had no apparent special characteristics and seemed symmetrical enough to be projectile points (Figure 21:10, 11, 12). The one-shouldered Wading River points as well as the small quartz scrapers in the main locus were looked at with a loupe glass (8x magnification) for possible use-wear and other characteristics, such as functions as drills or knives. A one-shouldered Wading River subtype had a drill or perforator tip (Figure 21:7), and the single examples of Wading River lobate base, angled base and short stem subtypes also had fine drill tips, the short stem subtype with a tiny curved graver (Figure 21:5, 8, 9). Two points found outside the main locus also had drill tips: a Squibnocket Stemmed point (Figure 21:13), and a mylonite Wading River unshouldered subtype with a curved graver (Figure 21:6).
Under magnification, some one-shouldered Wading River points and circular scrapers appeared to have been knives used for cutting or whittling. Two of the points had thin sharp edges on the shoulder side, and three showed crushing or breaking on that side. Five of the scrapers appeared to have polish on one side, the flake side. Another scraper had a fine enough edge to be a knife, and one was a bifacial scraper with no obvious wear. For what kind of cutting or scoring might such small quartz artifacts have been used? Although no bone artifacts were in the faunal material from Davis Farm, the Small Stemmed Point tradition on Martha’s Vineyard showed expertise in working bone (W. Ritchie 1969), which suggests use on bone. In Andrei Semenov’s classic work on prehistoric technology in Russia, functions of one-shouldered points similar to Wading River points were interpreted through their use-wear (Semenov 1970). Some were seen as awls for skin-working, or gravers as scorers for bone prior to splitting. Perhaps use on skin or bone were functions of the drill points on the Davis Farm Small Stemmed points. Thick blades with polish on one side Semenov interpreted as whittling knives, which could apply to some of the small circular scrapers, and the Wading River points that showed crushing could also have been for whittling, perhaps used in shaping wooden shafts for projectiles. It is suggested that the Davis Farm tools from the main locus are a kit for working bone, hide, and wood.

Late Archaic: Brewerton and Susquehanna Cultures
In contrast to the artifacts of the Small Stemmed Point tradition, the few Brewerton points were scattered except for one small cluster of three Brewerton Eared Notched points found in Trench B, section B-4, at depths between 27 cm and 36 cm in a dark yellow sand layer below the humus. Level B did not exist at this point on the hill and the layer corresponds to level C at the bottom of the hill (Figure 23:1, 2, 3; Figure 9). Two of the points were made of black rhyolite with white phenocrysts and one of gray-green argillite. In the same layer were two quartz multifaceted cores. In the main excavation area, two Brewerton points whose depth appeared to be 45 cm in level B, came from uncertain contexts in mixed layers. One was a black rhyolite Brewerton Eared Triangle point from square 10/bank (Figure 23:4), and the other was a gray chert Brewerton Side-Notched point with a fine graver point, found in square 12 (Figure 23:6). A black rhyolite Brewerton Eared Triangle point was found in square 2 at 55/60 cm apparently above the top of pit D, but its context was undoubtedly disturbed by the pit (Figure 23:5). A finely made leaf-shaped knife of gray rhyolite from the B level in square A-1.2 also may belong to the Brewerton culture (Figure 23:7).

A single Susquehanna Broad point of gray rhyolite, out of context, came from the very top of surface level A in which Historical and Pre-Contact artifacts were mixed in the plow zone (Figure 23:8). Other likely Late Archaic artifacts in level A were: a fine ground slate ulu edge fragment in square 8 (Figure 26:5) (I am using the term ulu for well-made ground slate knives to distinguish them from rough semilunar edge tools); two gray-green argillite perforators with plain and expanded bases, respectively, in square 7 (Figure 26:6,7); and a core of buff quartzite from Trench B-1 (Figure 26:2).

Late Archaic and Woodland Periods: Pit Artifacts
Only six pits contained artifacts, not all diagnostic, so nearly all the pits’ dates were judged by the relative depths at which they started (see above: Pit Features). Of the Late Archaic pits judged by depth, pit E contained a small quartz unifacial scraper (Figure 24:8), pit H a large gray rhyolite flake (Figure 24:6), and pit K had a Wading River one-shoulder point base as well as a large cobble hammerstone. Other Late Archaic points were found, likely out of context, in pits judged Woodland or Historic by depth. A gray quartzite Squibnocket Stemmed point, possibly a knife (Figure 24:7), was immediately under the lowest ash layer of Woodland pit B (Figure 12). Historical Pit I contained a black rhyolite Squibnocket Stemmed point (Figure 24:9), a large buff quartzite flake (Figure 24:10), and an argillite point tip. Found near pit I were three large heavy cobble hammerstones and two retouched flakes, the latter mentioned in notes but not cataloged, so now unidentifiable in the collection.

The largest Woodland pit, Pit D, dated by a potsherd, extended from 65 cm-180 cm, and contained nine artifacts that occurred by depth from
96 cm - 137 cm, as follows: a quartz knife point, a comb-incised rim sherd (Figure 24:1), a black rhyolite point tip, a slate Celt with flaked edges (Figure 24:5), a small ground slate pestle or abrader fragment (Figure 24:4), an argillite Squibnocket Triangle point (Figure 24:3), a small quartz utilized flake, a red Jasper perforator (Figure 24:2), and a quartz core from an uncertain depth. The rim sherd had a dark brown surface and quartz temper, was 8 mm thick, and was decorated with diagonal comb incising (Figure 24:1). The red Jasper perforator, small Celt, and pestle or abrader fragment are all likely to be Woodland artifacts.

Woodland Periods

Three small potsherds were clear Woodland indicators. One sherd, whose only trace of decoration was a single square dentate stamp that is likely to be Middle Woodland, came from surface Level A in trench section A-2. It had one red and one dark surface, quartz temper, and a thickness of 7 mm (Figure 25:1). Described above are a diagonal comb-incised rim sherd that is likely to be late Middle or Late Woodland in date from Pit D in square 2 (Figure 24:1), and three other likely Woodland artifacts from the same pit: a red Jasper perforator, a Celt, and a pestle or abrader fragment. A third sherd, surface collected probably in the field by Smith, has an incised pattern suggestive of Late Woodland chevrons (Figure 25:2).

Artifacts in the Woodland level (the top 15 cm of level B starting at 30 cm down to 45 cm), were mainly on the north side of the excavation area (Figure 19). At that level on the south side was the living floor with its Pennsylvania Jasper knife (Figure 25:6). Use of Pennsylvania Jasper is typical of the later Middle Woodland period (Luedtke 1987). The Jasper knife was at 40 cm in level B, square A-1.1. Near it in the same square were two other artifacts: a quartz scraper with a broken stem of Woodland type (Figure 25:7) and a black rhyolite core-hammerstone. Out of three small rhyolite pentagonal points, only one was in context in square 9 at 41 cm (Figure 25:3), and two were uncataloged (Figure 25:4, 5). Two were of gray rhyolite and perhaps also the third (no. 4) if its buff-tan surface is the result of weathering or burning. They are likely to be late Middle Woodland as they appear similar to the Jacks Reef Pentagonal type, although smaller than the type description (Boudreau 2008a: 45).

With respect to larger artifacts scattered over the site in the top of level B, two Celts and an axe are likely for typological reasons to be Woodland. One Celt of gray quartzite with converging sides towards the base was found in square 6 (Figure 26:3), and a larger one of tan quartzite was in square 3 (Figure 26:4). A heavy Celt-like axe or hoe consisting of a 22 cm rectangular block of schist with a flaked bit at one end came from a mixed level in square A-1.3. Also in the top of level B in square 9 were a sinker made of a granite cobble with two side notches and a partial groove (Figure 25:13), and a leaf-shaped knife base of black rhyolite (Figure 25:9). At similar depths at the top of level B were four semilunar edge tools with flaked edges and flat backs: one of slate in square 6 (Figure 25:15); two of quartz in square 3 (Figure 25:14,16); and in square 5, a large rough tool whose back was formed of cobble rind (Figure 26:1). There were several apparent Woodland artifacts in mixed surface level A. Another stemmed quartz scraper came from square 9 (Figure 25:8); and in the same square A-1.1 as the Jasper knife was a ground slate scraper in the form of a small adze with flaked edges and edge wear on the bit (Figure 25:10). In trench section A-2 was a core of black chert with a worked scraper edge (Figure 25:11), and in Trench B-2, separate from the main excavation, was a thin curved black chert flake with serrated edge (Figure 25:12).

Late Archaic and Woodland Periods: Chipping Waste

For the site in general, flakes and chipping waste were not recorded by trench or square except for square 10. Most are likely to have come from level B. Figure 27 compares square 10 with flakes and chipping waste collected from the rest of the site, some of which were given site numbers, but only 3 were cataloged. Flakes were measured as large (>4.0cm), medium (4.0-1.5cm), and small (<1.5cm), the latter representing mostly trimming flakes. Some large flakes were retouched. Chunks and cores were also listed.

From the site as a whole, nearly 8 kilograms of quartz debitage heavily outweighed all other lithic types, the next most frequent being quartzite at
under 1 kilogram. Lithic types ranked in order of weight are quartz, quartzite, black rhyolite, gray rhyolite, argillite, mylonite, hornfels, red rhyolite, and black chert. The pattern in square 10 was similar to the rest of the site except that it lacked large flakes, and two of the rarer lithic types, hornfels and black chert, were not represented. Perhaps the large flakes were used up in square 10 from Small Stemmed Point artifact manufacture since it was the main locus of those artifacts.

Historical Finds
Apart from a few Pre-Contact artifacts pulled up by the plow, some of which are discussed above, the finds in surface humus Level A consisted mainly of 19th century and perhaps early 20th century fragments of china, china figurines, red ware, glass, coal, clay pipe stems, nails, buttons, shell casings and uncalcined animal bone. Nothing appeared to belong to the 18th century or to come from any earlier Post-Contact context. The bulk of these came from section A-4, the north end of trench A nearest an area of animal pens.

Faunal and Floral Remains
An analysis of the faunal and floral remains is provided in a report in this volume by Tonya Largy. Some implications of these results are referred to in the discussion section below.

The 1951 and 1971 Excavations
The M.A.S. 1951 dig consisted of two adjacent but offset 6 m x 6 m squares to the north of the 1940-41 dig within an area called the “Pig Pen,” and a few test pits dug at the foot of the hill to the south of the previous excavation. The 6 m x 6 m squares extended from a disturbed surface level down into dark yellow sand about a foot deep, which lower down the hill was the Middle Archaic level C of the 1940-41 excavation. (Level B can be seen to peter out at the north end of Movius’s Trench A profile in section A-4, Figure 8.)

In the middle of one of the 6 m x 6 m squares a hearth was discovered, surrounded by eleven stones. It was at a depth of 9 in (22 cm) in dark yellow sand, at the junction with a disturbed surface level. A quartz point was near it, and two post molds were on either side of it. The artifacts occurred at depths from 4-14 in (10-36 cm) in the disturbed surface and top of the underlying dark yellow sand, the probable level C. Three scrapers were plotted on a diagram as dispersed on the edges of the squares. A pitch ball was in the middle of a different square from that of the hearth. A few quartz flakes were scattered at the top of the dark yellow sand and a cluster of 100 quartz flakes was found near the excavated squares, presumably on the surface.

The artifacts from this dig were uncatalogued, but listed in the 1951 excavation notes as: two corner removed quartz points, one triangular porphyritic point, three quartz scrapers, and a ball of pitch. In the old projectile point terminology, “corner removed” covered many point types in different periods, among which was what is now referred to as Neville Variant. In a handful of Smith’s unnumbered Davis Farm points are a buff quartzite Neville Variant point and a quartz Neville style blade with broken stem. If these are the points they would be consistent with a Middle Archaic stratum. The “triangular” point was probably a Late Archaic Squibnocket Triangle (Massachusetts Archaeological Society 1983: 83, 82). Since Brewerton points in Trench B were found in this level, it appears that on the hill, where there was no level B, the dark yellow sand may have contained both Middle and Late Archaic points. To the south of the earlier excavation, six test pits produced a triangular quartz point, a partly disintegrated granite plummet, twelve quartz flakes, eight flakes of mixed lithics, and a large porphyritic flake.

A brief 1971 Sudbury Historical Society dig on the southwestern side of the hill in a hard-packed area adjacent to the old farm road bed was observed at the time by Duncan Ritchie. The Society has no record of the dig, but Ritchie was told they found only a few quartz flakes. Later Ritchie saw charcoal coming from a burrow within the area of the Society’s dig, and examined it to find a pit with charcoal at its base. The pit was cylindrical with a rounded base, 28 in x 26 in (71 cm x 66 cm) at its top, similar to Late Archaic pits E and G of the 1940-41 excavation (Figures 16, 17). Nearby, Ritchie noticed Middle Archaic and Brewerton points in the area of the field that bordered the
Pantry Brook wetlands (D. Ritchie 2013b). At the time of final editing, it has come to my attention that the material from the Sudbury Historical Society’s dig is in the possession of MAS member, Royce Kahler (Kahler 2014). Of ten artifacts I have seen, four are projectile points of quartz: one small pentagonal; one Squibnocket Stemmed; two Wading River. Also of quartz were two biface tips and a cortex flake. There were a trianguloid biface of gray rhyolite and two small gray-green argillite flakes. There is also a box of chipping waste.

Radiocarbon dating

Charcoal that came from the B level (35-65 cm) in square 10/bank of the main excavation, 1940-41, and a second charcoal sample from a pit dug by Duncan Ritchie in 1971 (D. Ritchie 2013b), were sent to Beta Analytic, Inc. for dating. Details of the test results are in Figure 28. Both provided Late Archaic dates: the 1940-41 sample in the late third millennium BC, and Ritchie’s about a thousand years earlier in the late fourth millennium BC, or fifth millennium BP. Ritchie comments that the 4350 BP date from the pit in the Sudbury Historical Society grid is really typical of many C14 dates that the Public Archaeology Laboratory has gotten from a number of large multi-component sites across eastern and southeastern Massachusetts and Rhode Island. There seems to have been an episode of intensive feature construction and use (hearths/firepits, pits with charcoal fill) ca. 4500 to 3500 B.P. It seems to have been associated with Laurentian (Vosburg, Brewerton), Squibnocket Triangle complex, and Small Stemmed Point people (D. Ritchie 2013c).

Comparison of Excavated Material with Artifacts from the Field

Figures 29 and 30 compare artifacts from the excavation with those from the field, in the past called “Gulf Meadow,” in Concord collectors’ surface collections at the Concord Museum. There are three such collections: 1) the artifacts picked up by Smith after the excavation (1941-50), that include artifacts given to him by Thomas Todd; 2) Alfred Hosmer’s collection (1891-1903); and 3) Adams Tolman’s collection (1888-1920).

The projectile point list in Figure 29 shows very few Early Archaic points in the field collections. Tolman’s large quantity of Small Stemmed and Squibnocket Triangle points, 242, supports Smith’s statement noted earlier that hundreds of small quartz points were picked up in the field by collectors. The evidence for a small Middle to Late Woodland occupation at the excavation site is bolstered by Tolman’s Middle Woodland points and a possible Late Woodland Madison point, and by Smith’s Late Woodland Levanna points, although the latter were collected by Thomas Todd, which makes their provenience less certain since they were not collected by Smith himself.

Figure 30, a list of non-diagnostic artifacts, shows thirteen hammerstones, not previously noted, in the column for the excavation. These were in the excavation materials but their locations were not recorded. The only hammerstones in the excavation catalog were four from squares 11 and 12 in level B, one in pit K, and one in level C (Figure 20:11). Twelve more were collected from the field by Smith, and five by Tolman. Taken together with the quantity of chipping waste, it is clear that tool manufacture, particularly of quartz artifacts, was an important activity. Perforators, knives, and scrapers are well represented in the collections and the excavation and suggest skin-working. Tolman’s and Smith’s collections have seven atlatl weight fragments, four winged and two oval that are drilled and polished, and one winged argillite weight that is notched and partially ground. None were found in the excavation. At the Neville site in New Hampshire, winged atlatl weights occurred as early as the Middle Archaic Stark complex (Dincauze 1976: 121), and also were found in a Middle Archaic context at Annasnappet Pond in Carver, southeastern Massachusetts (Doucette 2005: Figure 6). There are five Stark points from the Davis Farm field in Smith’s and Hosmer’s collections, but again none from the excavation. These artifacts suggest that hunting was a major activity rather than fishing, since there are few plummets or sinkers, even though the field site is adjacent to the Sudbury River (Figure 5). Similarly, there are few large woodworking tools.
Two artifacts from the Tolman collection suggest there was a small Paleoindian presence in the Davis Farm field: a base half of what Jeff Boudreau called a fluted point preform that shows a partial flute facet and some side flaking, made of what is probably red Saugus rhyolite; and a flake of Mun-sungan chert with a graver point (Figure 31).

Two small sites or loci that Smith found at the southern end of the field add important evidence to that obtained in the excavation, and augment what is in the Smith, Hosmer, and Tolman surface collections (Figures 29, 30). One was a locus in a raised area at the southwest end of the field promontory, on the north side of Pantry Brook and jutting into the marsh (19-MD-162)(Smith 1950b) (Figure 5: locus A). Of particular interest are two Levanna points that unequivocally demonstrate the existence of a Late Woodland occupation in the field south of the excavation. There is also a small undecorated sherd with holes from missing temper that is probably Middle or Late Woodland in date, and a Fox Creek Lanceolate base. The Middle Archaic period is represented by three Neville points; and the Small Stemmed point tradition by five Wading River points, two Squibnocket Stemmed, and two Small Triangles; but unique in all the material from the site are three Watertown variety Mansion Inn blade fragments of black rhyolite, two bases only and the third apparently burned nearly white. Other artifacts, whole or fragments, are a winged atlatl weight, four perforators and five edge tools, knives or scrapers, one a quartz semilunar knife with flat back similar to Figure 22, no. 9 in the A level. There was chipping debris consisting of flakes, chunks and a black rhyolite core-hammerstone.

On the north side of Pantry Brook 100 ft (30 m) from where it joined the Sudbury river, there was a knoll on a steep bank above the river (19-MD-161)(Figure 5: locus B). Smith noted that the knoll had been partly removed for gravel. It contained a large firepit, 12 ft (3 m) in diameter and 32 in (81 cm) deep with layers visible in a photograph. Smith partially investigated it as part of Warren K. Moorehead’s Merrimack Survey published in 1931, and noted that no shell, bone, or pottery were visible, but without screening, fishbone would not have been seen (Smith 1950c). He also stated he could see no evidence of the Indian fish weir and river crossing that local lore placed at this location, but it is likely to have been somewhat further away, south of Pantry Brook by the eponymous Weir Hill (Hudson 1889:13). A weir in the vicinity, however, suggests that the firepit could have been used for drying or cooking fish with Small Stemmed points used for fish spears, something not apparent from the excavation.

The artifacts from the firepit were mainly Late Archaic with a few from the Middle Woodland period. They comprised: ten Wading River points with four different stem shapes, tapered, square, lobate and one shoulder; fourteen Squibnocket Stemmed; three Small Triangles; a Fox Creek Lanceolate base and a possible Jack’s Reef Pentagonal poorly made on a flake. There were three perforators, one with a Neville base and another with Small Triangle base, the third a fine point made on a gray mylonite chunk. Of six edge tools, one was an asymmetrical Brewerton Eared Notched point, probably a knife, another was a quartz leaf-shaped knife, and the rest were scrapers and knives with typological parallels in the excavation's A level, therefore of probable Woodland date. A small adze-like scraper of ground slate was very like Figure 25, no. 10 but smaller; a quartz semilunar knife with flat back was similar to Figure 25, no. 13, and two stemmed scrapers resembled Figure 25, no. 7. This locus also had chipping debris: flakes and chunks.

Discussion

Smith indicated one reason for choosing the location for the excavation was the number of larger tools and chipping waste found there in comparison to the field. It suggested a habitation, or at least a workshop site, in contrast to the field’s use for hunting that the large number of small quartz points collected there implied. These conclusions were largely borne out by the excavation, but the cultural implications are much more complex than Smith or Movius could have imagined, given the archaeological context of the time.

Middle and Late Archaic levels and a Middle/Late Woodland level were found as well as historical
material at the surface. Dating to compare with the Davis Farm carbon dates may be drawn from two sites (Puffer Pond and site 34-1) in the Assabet River National Wildlife Refuge (NWR) about four miles (6 km) away in Sudbury (D. Ritchie 2011), and from the Staiano site in Wayland (Blanke 1978), just across the river from Davis Farm. At the Assabet NWR Puffer Pond site, the calibrated 2σ end points for radiocarbon dates from the Middle and Late Archaic periods ranged from 6250 B.C. to 2150 B.C., and the Davis Farm dates fit into the Late Archaic part of the range. The Davis Farm Middle Archaic component is undated, but the earliest range of the Puffer Pond’s date points to the 7th millennium B.C. At the Assabet NWR site 34-1, the calibrated 2σ end points for radiocarbon dates for the Early and Middle Woodland periods ranged from 890 B.C. to 430 A.D. (D. Ritchie 2011: 122). At Staiano a large Middle Woodland fire pit was dated to 340 A.D. (1610±360 B.P., 1σ), with a large error, and two Late Woodland pits to 975 A.D. (975±85 B.P., 1σ) and 1310 A.D. (640±85 B.P., 1σ), respectively (Blanke 1978:176,177). These dates suggest the Davis Farm Middle/Late Woodland level may date somewhere in the 500 to 1000 A.D. range or later.

As early as the Middle Archaic period of level C, the site was a small manufacturing area that made use of quartz, indicated by a hammerstone, quartz core and large quartz flake. An unworked quartz cobble deep in the sand of level C suggests the area was of importance as a source of quartz utilized in all periods. At the Neville type site, Dincauze referred to use of quartz in the Neville complex but only slightly in the Stark complex (Dincauze 1976: 120,121), so it is worth noting that only Neville and Neville Variant points were found in the excavation area, while both Neville and Stark points were in the surface collections from the field. Brian Robinson described an extensive quartz technology for the Middle Archaic in Maine that does not necessarily coincide with Neville and Stark points, and which included steep edged “scrapers,” some of which may have been cores (Robinson 1992:96-98). There were also small quartz scrapers at Annasnappet Pond in Carver, Massachusetts (Doucette 2005). It may be noted that at Davis Farm apparently similar scrapers occurred in the B level and not the C level with the Middle Archaic Neville and Neville Variant points. As for habitation in the Middle Archaic, the pit evidence is unclear, but it may have existed if the pits that appear to start in the Middle Archaic level really did start there and not higher up. There were no pits with red ocher listed as a trait of the Middle Archaic in the area of Annasnappet Pond (Doucette 2005). Duncan Ritchie comments that Middle Archaic features seem rare even on extensive sites that have substantial Neville and Stark components (D. Ritchie 2013c). The Middle Archaic had two large woodworking tools, an adze and a fragment of a gouge bit, which have more in common with the celts of the Woodland period than the small tools of the Late Archaic Small Stemmed Point tradition in level B, where no large woodworking tools were found. One full-grooved axe that likely belonged to the Late Archaic period occurred in the field, however.

Charcoal- and bone-filled pits in the Late Archaic lower part of level B indicate habitation at that time. The quantity of Late Archaic quartz points in the field and quartz chipping waste on the excavation site indicates an increase in manufacturing over the earlier period. The predominant Late Archaic culture was that of the Small Stemmed Point tradition, whose point types could not be separated stratigraphically and may have extended into the Woodland period. Two types of distribution were observed: first, Squibnocket Stemmed and Wading River points, as well as Squibnocket Triangles, were widely scattered singly over the site, as were Brewerton points. This distribution suggests most of these were projectile points, although not all, since two of them were drills or perforators. A second distribution type consisted of a cluster of small quartz artifacts comprising mainly scrapers and Wading River points in the southeast corner of the site. This is interpreted as a tool kit of whittling knives, tiny drills and gravers. The kit may have been used for working bone or hide and for making wooden dart shafts for bone or small quartz points. Since no bone artifacts were found at Davis Farm, this interpretation rests in part on comparison with the Hornblower II site on Martha’s Vineyard. Hornblower II’s Late Archaic levels 3 and IB had one-shouldered Wading River points, as well as bone awls, and a drilled bone bead (W. Ritchie 1969: 36, 28). Like Davis Farm, there was also a grooved sinker.
With respect to the few Brewerton points, some were mixed with Small Stemmed points in the main excavation area. But if these two styles were made by one group of people, it raises the question why. Was there a difference in functionality, or is it rather an example of compressed stratigraphy where artifacts that look as if they are associated are not. However, this association is also documented from sites in Westborough, MA (Hoffman 1991b:115) and coastal Connecticut (Funk 1988:35). The small cluster in Trench B was isolated with two quartz cores. This could suggest a small number of hunters of another culture on the move, as at the Dugan’s Brook site four miles (6 km) downstream, although one Small Stemmed point was found with the latter (Dudek 2009).

With respect to the Woodland period at the top of level B, large multi-layered pits, a living floor, and hammerstones point to Woodland habitation and tool manufacture, while the artifacts suggest the boundary between the Middle and Late Woodland periods, likely representing more than one occupation. A stamped sherd, and two incised sherds, one of the latter from Smith’s surface collection, were probably Middle and Late Woodland, respectively. Small pentagonal points reminiscent of Jack’s Reef Pentagonal points are likely Middle Woodland. A living floor layer with a Pennsylvania jasper knife belonged to the Woodland upper B level, but the existence of a longhouse could not be determined. There was no evidence of Pennsylvania jasper having been worked on the site, but a black chert core and flake show use of a non-local lithic, probably from New York State. Quartz continued to be used for some large cutting tools. Several celts suggest heavy woodworking, as in the Middle Archaic, and there were also heavy scraping or cutting tools.

Comparison of this Woodland material may be made with that from three other sites. It shows some similarities with Hornblower II’s level IA (W. Ritchie 1969: 28), but is likely to be earlier. The Hornblower II site had what appeared to be a Middle Woodland Jack’s Reef Pentagonal point, a stemmed quartz scraper, and grooved sinkers. Unlike the Davis Farm excavation, Hornblower II had a bone harpoon head and fish hook as well as Late Woodland Levanna points, shell-tempered pottery like sites in the Assabet NWR (D. Ritchie 2011), and a 14th century A.D. date. Similarities with two other sites are: Davis Farm Pit B is similar to a Middle Woodland circular stone feature at Assabet NWR site 34-I though smaller (D. Ritchie 2011: 188), and also to the large Middle Woodland pit at the Staiano site that contained a sherd with dentate stamped decoration (Blancke 1978:176). Sherds with dentate stamped decoration also came from site 34-I, and a single sherd from Davis Farm. Neither site had incised sherds like those found at Davis Farm, but this type of decoration is associated with the Late Woodland period (D. Ritchie 2004; Hoffman 1991a: 89-91).

Nuts in the faunal and floral analysis pointed to occupation in the fall season during level B, which implies the hunting of deer as well as seasonal waterfowl. The Small Stemmed tradition tool kit and a single deer bone also point in this direction. A mile (1 km) upstream from Davis Farm, Ben Smith found a one-shoulder Wading River point, a Squibnocket Triangle, and an argillite knife point on a small sandy knoll by the river. The knoll was covered with deer tracks, and Smith thought it was a place used by deer to cross the river (Smith 1950d). While one cannot project deer river crossings back to the Late Archaic, it is nonetheless suggestive. The position of a large firepit at the junction of Pantry Brook and the river (19-MD-161) in the vicinity of a reputed Historical period Indian fish weir suggests fishing may also have been more important further back in time than is apparent from the excavation. Comparisons may be made with other Late Archaic/Woodland sites in the same river drainage, such as the fall-winter sites on the Assabet River: the Pine Hawk site in Acton (Waller and Ritchie 2001), and Flagg Swamp Rockshelter in Marlborough (Blancke and Spiess 2006); and the Concord Shell Heap summer site at Clamshell Bluff on the Sudbury River (Blancke and Downs 1995; Downs 1995; Largy 1995; Rhodin 1995). Clamshell Bluff is downstream from Davis Farm and from the other sites as well, suggesting a movement upstream in the fall (Figure 32).

Examination of the Smith, Hosmer, and Tolman surface collections from the field both confirmed and added to information from the excavation. Represented in the field but not in the excavation
were a few artifacts from the two earliest periods, Paleoindian and Early Archaic. The quantity of small quartz points and atlatl weight fragments in these collections, atlatl weights not occurring in the excavation, pointed to hunting activity in the field. Also, the number of knives, scrapers, and perforators seemed to emphasize the likely processing of meat and working of hides as a primary activity as distinct from woodworking, few of which tools were in the field or the excavation.

Conclusion

Over seventy years ago, some thirty members of the fledgling Massachusetts Archaeological Society’s Middlesex County group that became the Willoughby Chapter undertook an ambitious excavation at the Davis Farm site in Sudbury, MA. It extended over two seasons in 1940 and 1941, but because of the start of American involvement in World War II in December 1941, most of the material excavated was never reported. Benjamin L. Smith, a Concord collector and founder of the MAS, enlisted the assistance of Hallam L. Movius Jr. of Harvard University’s Peabody Museum as Director of the dig. The only published report that exists is Movius’s three-page summary of the first 1940 season in the second volume of the MAS Bulletin. Smith’s collection at the Concord Museum is the repository of all this material. After the war two small digs were made at Davis Farm by a part of the Willoughby chapter in 1951, and by the Sudbury Historical Society in 1971.

Before undertaking the reconstruction of this site I wondered why Ben Smith never tried to write a final report, but the detail and complexity was impossible for me to interpret without the aid of a computer that Smith did not have. The site comprised four stratigraphic levels with four Pre-Contact cultures and a trace of a fifth, as well as historical material, bone, shell and charcoal. The lowest and earliest level was Middle Archaic, with a higher main cultural level containing two Late Archaic cultures at its base, and at its top a Middle/Late Woodland level. The surface plow zone contained mixed Historical and Pre-Contact material. It was not possible to determine if Movius saw a longhouse floor, but there was some kind of Woodland living floor. The progress that has been made in chronological understanding over the last seventy years made it possible to identify the time frame of the levels, something that Movius could not undertake. The detailed recording that this new MAS chapter undertook under Ben Smith’s and Movius’s leadership was unusual for that time, and I am glad to have been given the opportunity to shed light on their work.

Acknowledgements

I am especially indebted to Duncan Ritchie for providing one of the charcoal samples for radiocarbon dating, and for his knowledge of the site, and broad areal overview; and also to Tonya Largy for her faunal and floral identifications. Without Linda Brown Engelmann’s and Theodore Stoddard’s recognition of crew members on photographs, most would remain unknown. I was delighted that last summer Linda took me to visit her father, Donald Brown, who was a professor of mine at Boston University. He passed away this February at age 105, as far as I know the last crew member to be alive. Jeff Boudreau photographed the Paleoindian artifacts in Tolman’s collection, and I am fortunate that he gave his opinion on them before his too-soon passing. I regretted not being able to run my conclusions about the Small Stemmed Point artifacts by him. David Wood, Curator at the Concord Museum, kindly checked the historical finds, and I am grateful for the assistance of Judith Fichtenbaum, also of the Concord Museum, for locating references to people. David DeMello and Kathy Fairbanks at the Robbins Museum provided details of the Middlesex group/Willoughby Chapter. I also want to thank Ward Cheney for scanning the relevant parts of Hansen’s surficial geology map for me. When I occasionally encountered Movius in the elevator at the Peabody Museum while I was a research assistant there in the 1960s, it never occurred to me that I might one day be in a position to further a small part of his work.
References Cited

Blancke, Shirley

Blancke, Shirley and Elinor F. Downs

Blancke, Shirley and Arthur E. Spiess

Boudreau, Jeff


Bricker, Harvey M.

DeMello, David
2013 E-mail 2/24/2013: Donald Brown Papers.

2014 E-mail 1/8/2014: Question about the Willoughby Chapter.

Dincauze, Dena Ferran
1976 8,000 Years At Amoskeag, Manchester, New Hampshire. Peabody Museum Monographs, No. 4, Harvard University, Cambridge, MA.

Doucette, Dianna L.

Downs, Elinor F.

Dudek, Martin G

Engelmann, Linda Brown

Funk, Robert E.
Hansen, Wallace R.

Harvard University

Hoffman, Curtiss R.

1991b *People of the Fresh Water Lake: A Prehistory of Westborough, Massachusetts.* Peter Lang, New York.

Hudson, Alfred S.
1889 *History of Sudbury 1638-1889.* Sudbury, MA. Boston, Printed by R. H. Blodgett.

Johnson, Eric S., and Thomas F. Mahlstedt

Kahler, Royce
2014 Personal communication.

Largy, Tonya Baroody


Luedtke, Barbara E.

Massachusetts Archaeological Society (MAS)


Movius, Hallam L., Jr.

National Oceanic and Atmospheric Administration (NOAA)

Natural Resources Conservation Service, US Department of Agriculture
Rhodin, Anders G.J.

Ritchie, Duncan
2004 A Late Woodland and Contact Period Ceramic Assemblage from the Hartford Avenue Rockshelter, Uxbridge, MA. *Bulletin of the Massachusetts Archaeological Society* 56(2):9-17.

2011 Phase III Archaeological Data Recovery Program on the Puffer Pond Site (19-MD-657) and Site 34-1 (19-MD-654) for Road and Trail Improvements. Assabet River National Wildlife Refuge, Sudbury and Maynard, Massachusetts, Vol. 1, PAL Technical Report No. 2372.01. Public Archaeology Laboratory, Pawtucket, RI.

2013a Personal communications and e-mails 8/13/2013 -- 8/16/2013: re aerial photo, archaeological feature record, carbon dates from Davis Farm.

Ritchie, William A.

Robinson, Brian S.

Semenov, S.A.

Smith, Benjamin L.


Stoddard, Theodore
2013 E-mail 9/19/2013: Davis Farm dig.

Waller, Joseph N., Jr. and Duncan Ritchie
Figure 1. Middlesex Group crew members, 1940-41: Left to right: Donald Brown, Alma Brown, unknown, Al Mansfield?, Edith Smith, unknown, Ray Smith, Fred Orchard, Natalie Bill, unknown, Linda Smith. Photo courtesy of the Concord Museum.

<table>
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<tr>
<th>Dorothy Atkinson</th>
<th>Ripley P. Bullen</th>
<th>G. Radcliffe</th>
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<td>Elizabeth Atkinson</td>
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<td>Natalie Bill</td>
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<tr>
<td>Adelaide Bullen</td>
<td>Peter Powers</td>
<td>Robert Woodberry</td>
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Figure 2. Davis Farm crew members 1940-41 from the Middlesex Group and the Peabody Museum, Harvard University.
Figure 3. Ben Smith’s excavation plan, 10 m x ca. 7 m, shows the main excavation area and pits of all time periods. The crenellated line is a northern “house floor” boundary. [Pit and unit labels were added, and Smith’s hand-written notes were deleted, due to their illegibility - ed.]. Pits are listed in Figure 10. Map courtesy of the Concord Museum.
Figure 4. Reconstructed excavation plan with “extension” square numbering, and added grid square numbers for Trench A (A-1.1, A-1.2, A-1.3).

Figure 5. The Davis Farm area marked with the approximate locations of the 1940-41 excavation and loci A and B (Map: Google Earth).

Figure 6. Trench A: on 12-15 ft terrace. The field is the 6-8 ft terrace, the Sudbury River is behind.

Figure 7. Trench B: appears higher than the 12-15 ft terrace. Figures 6, 7 courtesy of the Concord Museum.
Figure 8. Eastern profile of Trench A. A: Rough sketch in Hallam Movius’s field notes showing sections (A-1 to A-4) and layers (A to D); B: Clarified version of sketch with Movius’s handwritten notes and arbitrary level lines deleted. Original courtesy of the Concord Museum.

<table>
<thead>
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<th>STRATA (Movius)</th>
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<td>Plow Zone: Mixed</td>
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<td>Level B (top)</td>
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<td></td>
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<td>Level D: Light Yellow Sand</td>
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Figure 9. Movius’s strata with cultural associations derived from projectile points and other diagnostic artifacts.
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<tr>
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<tr>
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<td></td>
<td>180</td>
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</table>

* Artifacts in pits  ? Tops of pits started higher

**Figure 10.** Schematic profile of pits sorted by pit top depths.

**Figure 11.** Pit D: southeast quadrant profile drawn by Ben Smith. Courtesy of the Concord Museum.
Figure 12. Background: collapsed sandy wall of Pit C; Foreground: Pit D outline.

Figure 13. Pit D quadrant.

Figure 14. Pit B: Stone hearth.

Figure 15. Pit B: Profile below stone hearth. Ben Smith drawing.

Figure 16. Late Archaic Pit E.

Figure 17. Late Archaic Pit G.

All illustrations on this page courtesy of the Concord Museum.
Figure 18. Main excavation looking SE from Trench A: Background: raised house floor level; Foreground: Pits C,D. Courtesy of the Concord Museum.

Figure 19. Horizontal plan of artifact clustering by time.
Figure 20. Middle Archaic artifacts (Level C): 1, 2, Neville Variant points; 3, 4 Neville points; 5, 8, knives; 6, perforator shaft; 10, adze; 7, gouge bit fragment; 9, 12, flake edge tools; 11, hammerstone. Lithics: tan quartzite 1; gray rhyolite 2, 3, 8; black rhyolite 4, 7, 12; gray-green argillite 5; buff quartzite 6; sandstone 10; quartz 9; granite 11. Photo: Shirley Blancke.
Figure 21. Late Archaic points: Small Stemmed Point Tradition (Level B): 1-9, Wading River points; 10-13, Squibnocket Stemmed points; 14, Squibnocket Triangle point; 15, 16, sub-rectangular scrapers; 17-19, teardrop scrapers. Lithics: quartz 1-3, 7-18; mylonite 4, 6; gray rhyolite 5. Photo: Shirley Blancke.
Figure 22. Late Archaic artifacts: Small Stemmed Point Tradition (Level B): 1, Teardrop scraper; 2-4 circular scrapers; 5, trianguloid scraper; 6, flake scraper; 7, core; 8, knife end; 9, semilunar knife; 10, sinker; 11-13, perforators. Lithics: quartz 1, 2, 4-7; brown argillite 3; gray-green argillite 8, 13; slate 9; granite 10; black rhyolite 11, 12. Photo: Shirley Blancke.
Figure 23. Late Archaic artifacts (Level B), and Pit artifacts: 1-5, Brewerton Eared-Notched points; 6, Brewerton Side-Notched point; 7, knife; 8, Susquehanna Broad point. Lithics: black rhyolite 1, 2, 4, 5; gray-green argillite 3; gray chert 6; gray rhyolite 7, 8. Photo: Shirley Blancke.
Figure 24. Pit artifacts:
1-5, Pit D artifacts: 1, incised rim sherd; 2, perforator; 3, Squibnocket Triangle point; 4, pestle or abrader fragment; 5, celt. 6, flake, Pit H; 7, Squibnocket Stemmed point, Pit B; 8, scraper, Pit E; 9, Squibnocket Stemmed point, Pit I; 10, flake, Pit I. Lithics: red jasper 2; gray-green argillite 3; slate 4, 5; gray rhyolite 6; gray quartzite 7; quartz 8; black rhyolite 9; buff quartzite 10. Photo: Shirley Blancke.
Figure 25. Woodland Artifacts (Level B top): 1, dentate stamped sherd; 2, incised sherd; 3-5, small pentagonal points; 6, 9, knives; 7, 8, stemmed scrapers; 10, adze/scaper; 11, core; 12, flake; 13, sinker; 14-16, edge tools. Lithics: gray rhyolite 3-5; Pennsylvania jasper 6; black rhyolite 9; slate 10,15; sandstone 12; quartz 7, 8, 14; black chert 11, 12. Photo: Shirley Blancke.
Figure 26. Woodland Artifacts (Levels B top, and A): 1, edge tool; 2, core; 3, 4 celts. Probable Late Archaic artifacts (Level A): 5, ulu fragment; 19, core; 6, 7, perforators. Lithics: gray rhyolite, 1; buff quartzite, 2; gray quartzite, 3; tan quartzite, 4; slate 5; gray-green argillite 6, 7. Photo: Shirley Blancke.
Figure 27. Chipping Waste from the Davis Farm Excavation, 1940-41.

Figure 28. Radiocarbon results from the Davis Farm:
1. Charcoal from the Late Archaic level B in the main excavation grid, 1940-41.
2. Charcoal from a fire pit dug by Duncan Ritchie within the Sudbury Historical Society’s former grid, 1971.
Figure 29. Diagnostic artifacts from the Davis Farm 1940-41 excavation compared with those from Ben Smith’s, Alfred Hosmer’s and Adams Tolman’s surface collections in the field. Collections curated by the Concord Museum.

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<td>Quantity*</td>
<td>Quantity*</td>
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<td>PalaeoIndian:</td>
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<td>Fluted point preform base</td>
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<td>0</td>
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<th>Tolman Collection 1888-1920</th>
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<td>Quantity*</td>
<td>Quantity*</td>
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<td>5</td>
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<td>-</td>
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* Numbers include fragments

Figure 30. Non-diagnostic artifacts from Davis Farm 1940-41 excavation compared with those from Ben Smith’s, Alfred Hosmer’s and Adams Tolman’s surface collections in the field. Collections curated by the Concord Museum.
Figure 31. Paleoindian artifacts from Davis Farm field, Tolman collection. Top: preform fluted base, red felsite. Bottom: graver, Munsungan chert. Identification and photos by Jeff Boudreau. Courtesy Concord Museum.
The Faunal Assemblage from the Davis Farm Site (19-MD-160; M-23-26)

Tonya Largy

Introduction

The Davis Farm site was first excavated in 1940-1941 by the Middlesex Group, led by Benjamin L. Smith, who was well known for his archaeological research in the Sudbury and Concord drainage. Ben Smith asked Hallam W. Movius, Jr., also a member of the Massachusetts Archaeological Society (MAS), to join the effort as Director of Sudbury Field Work. The onset of World War II interrupted the excavation after the 1941 season (Blancke, this volume).

The faunal assemblage from that excavation has been curated by the Concord Museum, Concord, Massachusetts. All of the material and field notes from this excavation were part of Ben Smith’s collection, given to the Museum after his death in 1981 (Blancke this volume). Two later smaller excavations were carried out in 1951 by the Massachusetts Archaeological Society, and the Sudbury Historical Society in 1971. Notes and perhaps artifacts from the 1951 excavation also were included in Ben Smith’s collection. However, the only faunal recoveries available for analysis presented here are from the first excavation.

(c) Tonya Largy 2014
Blancke recently worked out the site’s chronology based on what we know today, which was not yet available to Movius in the early 1940’s. She was able to assign the pre-colonial levels to the strata determined by Movius. He reported that “recent-looking bones were found in Deposit A,” but that the occupation layer, Deposits B and C, “yielded only numerous tiny fragments, too small for identification” (Movius 1941:19). After her analysis of field records and artifact chronology, Blancke determined that Deposits B and C are really two different occupation layers, not two deposits in one occupation layer. Movius called only Deposit B the “culture layer.” He thought B and C were two deposits of one culture and didn’t realize they belonged to three completely separate time periods, Middle Archaic (C) and Late Archaic/Woodland (B) (Blancke, personal communication, September 6, 2014).

In fact, many of these tiny calcined bone fragments from Deposits B and C are identifiable to class, which provides information about the larger category of animals being exploited in the Archaic and Woodland periods, and suggests a season of occupation for certain areas of the site (Movius 1941).

Recovery Methods

Modern excavation methods include sifting, or sieving soil through screens. The standard screen size generally used in both survey and data recovery in the Northeast is one-quarter inch. In order to recover small fragments of calcined bones in the field, the optimum screen size is one-eighth inch. Even using this smaller screen size, tiny bones can be lost. This issue is discussed in great depth by Reitz and Wing in their volume entitled *Zooarchaeology*, so I will not discuss recovery procedures for fauna in great detail (Reitz and Wing 1999).

However, the recovery methods not used should be discussed in light of fauna available from the 1940-1941 Davis Farm excavation. Besides sifting, soils can be processed in two other ways to recover a greater variety of materials in smaller size ranges. First, they can be water-screened through a one-sixteenth inch (or smaller) screen on site, using a nearby water source if one is available; or second, they can be collected in bulk samples and taken back to the laboratory to be processed by either water-screening or using a flotation machine. Flotation is a water separation process used to extract from the soil very small fragments of both bones and plant materials which otherwise would not be visible. Other materials recovered by flotation include land snails, microdebitage, small pieces of ceramic, and other very small artifacts, such as beads. All of these recoveries provide additional information useful in understanding a site.

The field notes from the 1940-1941 dig provide no information about how the artifacts, including bones and plant materials, were collected (Blancke, personal communication, August 29, 2014). I assume that materials were collected visually as they were noticed while digging. This is likely how most excavations were carried out during the early part of the 20th century before modern professional standards became common. For example, radiocarbon dating of calcined bone fragments was not yet possible as it is today (Zazzo et. al. 2009). Radiocarbon dating was altogether unknown in 1940-41.

Since no sifting was incorporated in the research design, the data are biased with regard to the unburned bone in both the historical and pre-contact levels. Thus, the unburned bone data are biased toward larger animals. In the pre-contact levels, the calcined bone data also are biased. Small, slender bones, such as fish bones and the tiny bones of small mammals, may be lost since they are not seen easily. Since flotation was not commonly used until the 1960’s, no bulk samples were collected for this type of processing, which might have added to the data set from Davis Farm. However, we cannot fault the research team for using methods commonly in use during that time.

Analytical Methods

Analysis of archaeological bones is best done where a modern reference collection of skeletons is readily available for comparison. Analysis of the Davis Farm fauna was carried out in the Zooarchaeology Laboratory, Peabody Museum, at
Harvard University, where the author is on the staff. The assemblage includes unburned and calcined bones, shells, and plant materials (wood, and nutshell).

The larger unburned bones were examined visually, while the much smaller calcined bone fragments were examined using a stereomicroscope under magnification ranging from 10X to 20X. Magnification allows close examination of bone structure, enabling the analyst to determine the class of an animal. Class refers to the broad categories of vertebrates, such as fishes, amphibians, reptiles (which includes turtles), birds, and mammals.

Larger bones were counted and weighed to the nearest one-tenth gram on a digital scale, while the smaller calcined bones were weighed to the nearest one-hundredth gram. All were packaged and labelled according to the original inventory numbers which are included in Figure 1. Plant materials also were examined using a stereomicroscope under magnification ranging from 10X to 30X. These were counted and weighed to the nearest one-hundredth gram on a digital scale.

Results

Fauna
The taxonomic identifications are presented in Figures 1, 2, and 3. Figure 1 shows both vertebrate and invertebrate species recovered from Level A, which is interpreted as a level of mixed soil. Historical materials include the bones of domesticated animals which were brought into the Northeast by Europeans. Figure 2 lists uncharred plant materials found in Level A, Square 10. Figure 3 lists materials from Level B, interpreted as cultural materials from pre-contact occupations. These include calcined bone fragments, shells, and charred plant remains. The letters and numbers listed in the Inventory column are the designations assigned as follows: letters were assigned by Ben Smith, while numbers were assigned by Shirley Blancke for the Concord Museum.

Faunal and Plant Remains
Level A, Mixed Historical and Pre-Contact

The fauna, including bones and shells, were excavated from the North End of Trench A, Section A4. This part of the site was near what the 1951 report referred to as “the Pig Pen” (Blancke, this volume). Identifications of both bone and shell species are presented in Figure 1.

Bones
Identified domestic species (n=17) include pigs (Sus), cattle (Bos), and sheep/goat (Ovis/Capra). Turkey (Meleagris) and white-tailed deer (Odocoileus) are also represented, both of which are native wild species hunted in pre-contact times as well as in historical times. However, turkeys were domesticated in early historical times. Domesticated turkeys were raised in Jamestown, Virginia as early as 1614 and were sent to Massachusetts Bay by 1629, if not earlier (Smith 2006:54).

Figure 4 shows a complete turkey ulna (#1), a mid-section of a left deer ulna (#2), a left distal humerus of sheep/goat (#3), and a left proximal femur, unfused, of a young pig. Modifications include cut marks on the deer ulna, carnivore chew marks on the end of the sheep/goat distal humerus, and evidence that the pig femur was sawn (Figure 4-4). Altogether, six bones were sawn, cut marks are present on three bones, and one left proximal humerus of cattle exhibited cut marks as well as having been sawn and split. The deer ulna fragment looks old, and may be from pre-contact times.

Preservation of unburned bones must be considered when interpreting bones from a mixed context such as Level A. Bones that are not charred or calcined might not be preserved in New England’s acidic soils unless they were deposited toward the end of the Late Woodland period, or if special conditions are present, such as at the Flagg Swamp Rockshelter site (Huntington 1982; Blancke and Spiess 2006).

Shells
Two species of bivalve shells (n=7) were found in Level A and the most complete of these are shown
in Figure 5: Eastern elliptio (*Elliptio complanata*), numbers 1 and two in Figure 5, and Eastern oyster (*Crassostrea virginica*), numbers 3 and 4 in Figure 5. Oysters were available in the market in historical times. Although calcium-rich shells would have preserved better than unburned bones, they are seldom found in southern New England this far inland in pre-contact times. Mussel shells have been found in numerous sites in Eastern North America and mussels probably were used mainly for food (Parmalee and Klippel 1974). In his study of aquatic adaptation of ancient people, Jon Erlandson concluded that “aquatic resources, whenever they were abundant and relatively accessible, have probably always been used opportunistically” (Erlandson 2001).

It is almost certain that Eastern elliptio (river mussel) was harvested from the Sudbury River which flows near the site by Native people living on or near the Clamshell Bluff site (also referred to as Concord Shell Heap) in Concord, Massachusetts (Downs 1995:55). Mussel shells were discarded over the site and many animal bones were recovered from among the shells, having been preserved by the calcium carbonate that leached out of the shells and raised the pH of the soil.

Although only a sample of the bones made it into the collections of the Concord Museum (Blancke 1995), their preservation in the midden led to obtaining AMS dates on two species, deer and redbelly turtle (Largy 1995). The Elliptio shells from Davis Farm are interpreted as more recent deposits since periostracum, a thin dark organic layer on the surface of mussels and other types of shellfish, is present indicating a more recent deposition (Figure 5).

*Plant Remains*

Uncharred plant remains were collected from Level A, Square 10 (Figure 2). One attachment scar of an acorn and one fragment of acorn shell were collected during excavation. Likewise, two fragments of black cherry stones/pits were collected. Both were halves of cherry stones but of different sizes indicating two separate fruits. Since these were uncharred and looked modern, they are interpreted as intrusive in this mixed soil layer.

Level B, Square 10/Bank, 35-65 cm.

Bones and plant materials were recovered from this context and labeled as such. Excavation notes stated that the recoveries included “calcined bone fragments, mixed with tiny bits of charcoal, 3 stone flakes, stone chunks, and pebbles” (Blancke, this volume).

Artifacts and biological materials recovered by the 1940-1941 excavation team from this square and level are considered to be pre-contact cultural materials. The bones are calcined (burned in a high temperature fire) and the plant remains are charred, suggesting that these conditions are the result of human activities, such as cooking, and plant gathering. All of the materials are listed in Figure 3.

*Fauna*

As mentioned, all of the bone fragments are calcined and broken into small fragments. However, it is possible to identify many as mammal and turtle (Figure 6). A total of 56 bone fragments were collected from Square 10. Turtle shells (carapace/plastron) comprise 95% of this sample by count, and 93% by weight. While turtles might be harvested from the mud while they hibernate in the winter, they are much easier to obtain during the warmer months of the year as they move across the landscape in search of nesting places. Their presence provides evidence for a season of occupation from spring through fall in this area of the site. Turtle remains are often found in pre-contact sites. They were identified at Flagg Swamp and at the Concord Shell Heap, and several unpublished sites in Wayland. Since turtles are easy to capture, they would have been easy prey for women and children who often remain close to camp.

*Plant Remains from Level B, Square 10/Bank, 35-65 cm.*

As shown in Figure 3, two samples of charred wood were collected and stored in small match boxes (Box 1 and Box 2). At that time, this was a common packaging method for fragile materials. I examined both samples to remove any extraneous material which might skew a radiocarbon date. Box 1 contained mostly conifer wood with resin canals, indicating they are one of three species - pine, spruce, or larch. Resin canals are present only in these three species of conifers in New England.
Box 2 contained what appeared to be diffuse-porous wood, which resembled beech wood. However, this type of wood is more difficult to identify unless the fragments are larger. A radiocarbon date was obtained from the 5.2 grams of charcoal from this square (Figure 3). The wood samples from Box 1 and Box 2 were combined and returned a calibrated mean date of 2200 to 2030 B.C. (Blancke, this volume).

Level B, Unidentified Square

A separate lot came from an unidentified location in Level B, but the specific context is unknown. The notes for this second lot of material stated that the recoveries included “bone, shell fragments, small calcined bones” (Blancke, personal communication, September 17, 2014). However, there are no shells that made it into the collected materials. An even larger number of calcined animal bones were uncovered from the unspecified location of Level B. A total of 206 fragments were collected. Of these, turtles comprised 31% (n=63) by count and 26% by weight. Mammal bones (n=142) make up 69% by count and 73% by weight. Medium/Large mammals (n=17) are represented in this sample. Deer and mammals with larger and denser bones such as large beavers and wolves might fall into this size range. One caudal vertebra from the tail of a small mammal was also identified.

Plant Remains
Charred nutshell fragments and one unidentified stem were identified, in addition to a sample of charred wood. Nutshell species include hickory (*Carya sp.*, n=23) and one hazel (*Corylus sp.*, n=1). Both hickory and hazel nuts are frequently found in sites. They were a nutritious staple food for hunters and gatherers. An unidentified stem fragment (n=1) was also mixed in the sample. The charred wood sample weighed 5.18 grams and consisted of mostly conifer with resin canals (pine, spruce, and larch) along with some oak. All are listed in Figure 3.

Summary

Davis Farm is similar to many other plowed sites in southern New England. The top levels are usually mixed and often hold artifacts and biological materials from both the top and lower level. When bones are present, it is difficult to tease out the age of bones. However, when the bones of domestic animals with saw marks are identified, this is undisputed evidence of the post-contact period. It is significant that no domestic animal bones were present in Level B and that the calcined bone assemblage is typical of those recovered elsewhere in pre-contact period sites. Inland sites occupied in the warmer months often contain calcined bones of turtles, mostly from their shells, as well as bones of deer and small fur-bearing mammals.

The plant remains are also typical. Uncharred nutshell fragments are sometimes found in the historical levels. They can also be uncovered in post-contact levels because of their size and as the result of bioturbation (activity of insects and small rodents) which causes a downward movement of plant materials and other small artifacts into lower levels.

Even though recovery methods used at Davis Farm may not have found bones of smaller animals or a larger number of charred nutshell, the research at this site provides data on a site which is possibly the first controlled excavation carried out in Sudbury, Massachusetts. This is an important contribution to the database of pre-contact settlement along the Sudbury River. Shirley Blancke is to be commended for taking on the difficult task of unraveling the information it offers.
References Cited

Blancke, Shirley
1995 The Concord Shell Heap and Field at Clamshell Bluff: Introduction and History

Blancke, Shirley

Blancke, Shirley and Arthur E. Spiess

Downs, Elinor F.

Erlandson, Jon W.

Huntington, Frederick W.

Largy, Tonya Baroody
1995 Bone from Concord Shell Heap, Concord, Middlesex County, Massachusetts. Bulletin of the Massachusetts Archaeological Society 56(2)64-70.

Movius, Hallam, L. Jr.

Parmalee, Paul W. and Walter E. Klippel

Reitz, Elizabeth J. and Elizabeth S. Wing

Smith, Andrew F.

Zazzo, A., J-F. Saliege, A. Person and H. Boucher
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Figure 1. Davis Farm – Vertebrates from Level A, Mixed Historical & Pre-Contact.

Figure 2. Davis Farm – Uncharred Plant Remains from Level A, Square 10.
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<td>4.02</td>
</tr>
<tr>
<td><strong>Wood</strong>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2 boxes)</td>
<td>(4 A)</td>
<td>Box 1</td>
<td>0.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4 B)</td>
<td>Box 2</td>
<td></td>
<td>4.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Charred Wood</strong></td>
<td></td>
<td></td>
<td></td>
<td>5.2</td>
<td></td>
</tr>
<tr>
<td><strong>Unidentified by</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Square</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vertebrate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) Testudines</td>
<td>Turtle</td>
<td>C/P, long bone</td>
<td>63</td>
<td>5.49</td>
<td></td>
</tr>
<tr>
<td>(6) Mammalia</td>
<td>Medium/Large</td>
<td>Fragment</td>
<td>17</td>
<td>4.61</td>
<td></td>
</tr>
<tr>
<td>(7) cf. Mammalia</td>
<td>Probably Mammal</td>
<td>Fragment</td>
<td>124</td>
<td>10.36</td>
<td></td>
</tr>
<tr>
<td>(8) Vertebrate</td>
<td>Small animal</td>
<td>Fragment</td>
<td>1</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>(9) Mammalia</td>
<td>Small mammal</td>
<td>Caudal vertebra^</td>
<td>1</td>
<td>0.1</td>
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</tr>
<tr>
<td><strong>Total Vertebrate</strong></td>
<td></td>
<td></td>
<td></td>
<td>206</td>
<td>20.76</td>
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<tr>
<td><strong>Nutshell</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(10A) <strong>Carya sp.</strong></td>
<td>Hickory</td>
<td>Fragment</td>
<td>23</td>
<td>0.93</td>
<td></td>
</tr>
<tr>
<td>(10B) <strong>Corylus sp.</strong></td>
<td>Hazel</td>
<td>Fragment</td>
<td>1</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td><strong>Total Nutshell</strong></td>
<td></td>
<td></td>
<td></td>
<td>24</td>
<td>0.96</td>
</tr>
<tr>
<td><strong>Other Plant</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(10C) <strong>Stem</strong></td>
<td>Unidentified</td>
<td>Fragment</td>
<td>1</td>
<td>0.14</td>
<td></td>
</tr>
<tr>
<td><strong>Total Other Plant</strong></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0.14</td>
</tr>
<tr>
<td><strong>Charred Wood</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(11)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.18</td>
</tr>
<tr>
<td><strong>Total Wood</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.18</td>
</tr>
</tbody>
</table>

^ Tail vertebra  
* Mostly conifer; red oak; possible beech  
** Mostly conifer; some oak

Figure 3. Davis Farm – Calcined Bones & Charred Plant Remains from Level B, Square 10/Bank, 35-65 cm.
Figure 4. Level A, Mixed - Turkey ulna 4-1, Deer ulna 4-2, Sheep/Goat humerus, 4-3, unfused pig femur, 4-4.

Figure 5.: Level A, Mixed - 5-1 and 5-2, Eastern elliptio (river mussel); 5-3 and 5-4, Eastern oyster.
Contributors

SHIRLEY BLANCKE has been a member of MAS since 1970 and was editor of the Bulletin from 1996-2002. She is currently associate curator of archaeology and Native American studies at the Concord Museum, Concord, MA, and is engaged in computer cataloging the museum’s artifact collections. Originally she studied European archaeology at the University of Cambridge and later North American archaeology at Boston University. She was also engaged in creating exhibits for the Hall of Man in Africa at the American Museum of Natural History.

TONYA BAROODY LARGY is an archaeological consultant specializing in the analysis of plant and animal remains from archaeological sites. She is also on the staff of the Zooarchaeology Laboratory, Peabody Museum, Harvard University. Tonya has been active in Wayland archaeology since the late 1970’s, has been involved in numerous excavations in the Sudbury/Assabet/Concord River basin, and has extensive field experience in the broader northeast with the National Park Service. She has served as a Trustee and President of the Massachusetts Archaeological Society.

Figure 6. Level B, Square 10/Bank, 35-65 – Pre-contact, Calcined turtle bones.
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 clhoffman@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
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).