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Preface

The New Hampshire Archeologist presents the results of ongoing archeological research in the state of New Hampshire, and it is a publication of the New Hampshire Archeological Society (together with our Newsletter). It is a delight to provide this, the 2008 bulletin, to our members and other readers who enjoy New Hampshire's past.

Our opening article was originally prepared as a Master's Thesis that was submitted to Plymouth State University. "Canterbury Shaker Village: Medicines…" is the result of years of research by Elizabeth Hall (our outgoing NHAS President), based on work she conducted with medicines and medicine bottles at Canterbury Shaker Village. Previous issues of this bulletin have presented other aspects of research at Shaker Village, but this is easily the most comprehensive study to deal with Shaker medicines, one of the most important industries at that community. While historical sources provide ample information about Shaker medicines, archeological excavations at Shaker Village have uncovered numerous medicine bottles that add significantly to the story.

The second article, by Joseph Belanger, is an overview of evidence for "The Early Archaic Period in New Hampshire… ." This extremely important time period marked the changeover from New Hampshire's first residents, the Paleoindians, to the Archaic cultures that occupied New Hampshire for the next 7,000 years or so. Interestingly enough, after much research by scholars some 20-30 years ago, the Early Archaic has seen only very modest discoveries in recent years. Perhaps this article will help revitalize research into this exciting time period!

New Hampshire State Archaeologist Richard Boisvert is the author of our third article, "Dating Debitage – Assessing Type… ," an analysis of debitage from the Colebrook Paleoindian site (27-CO-38) on the upper Connecticut River. As noted by Boisvert, "it is possible to reconstruct diagnostic artifacts and specific behaviors from debitage alone." This is a critically important insight when dealing with sites of the Middle Paleoindian Period, many of which lack diagnostic projectile points.

As always, we continue to seek innovative manuscripts that deal with archeology in New Hampshire, and I am looking forward to receiving your submissions!

David R. Starbuck
Plymouth State University

Front Cover Illustration

Distribution of Plano Peoples, by Arthur Roberts, J.V. Wright, V.K. Prest, and J.-S. Vincent. In the *Historical Atlas of Canada*, Vol. 1: *From the Beginning to 1800*. Edited by R. Cole Harris, University of Toronto Press, 1987. Reprinted with permission of publisher, copyright University of Toronto Press.

Back Cover Illustration

Archaeological Cultural Constructs, by J.V. Wright, V.K. Prest, and J.-S. Vincent. In the *Historical Atlas of Canada*, Vol. 1: *From the Beginning to 1800.* Edited by R. Cole Harris, University of Toronto Press, 1987. Reprinted with permission of publisher, copyright University of Toronto Press.

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Dating Debitage – Assessing Type: Michaud-Neponset Style Channel Flakes at the Colebrook Paleoindian Site

Richard A. Boisvert, State Archaeologist
New Hampshire Division of Historical Resources

Radiocarbon dates for Paleoindian sites in New England are notoriously difficult to acquire[1]. Only a handful of sites have produced carbon deemed worthy of dating. Dates on specific varieties of projectile points are even more rare. The 2006 excavations at the Colebrook Paleoindian site (27-CO-38) have produced indirect, yet compelling, data that allow a radiocarbon date obtained in 1997 to be affiliated with the Michaud-Neponset projectile point. This attribution is derived from the association with diagnostic debitage found at the site.

In 1997 the Portland Natural Gas Transmission System (PNGTS) conducted cultural resource management surveys in advance of the construction of a gas pipeline from Canada through New Hampshire into Maine. As part of that project a team from Victoria Bunker, Inc. under the direction of Edna Feighner surveyed a transect through the town of Colebrook, NH. This survey encountered a site adjacent to the Connecticut River (Figure 1) which produced Archaic, Woodland and Paleoindian materials (Bunker, Feighner & Potter 1997, Bunker & Potter 1999). This site was defined as large and dispersed, with materials scattered unevenly over several acres of pasture. The Paleoindian component was isolated spatially from the other, later components.

Two independent lines of evidence defined the Paleoindian component. First, the excavations yielded distinctive and unequivocal channel flakes. These waste flakes exhibit the unique configurations of flake scars on the external or dorsal surfaces that identify them as exclusively the product of the manufacture of Paleoindian fluted points. These flakes were found in undisturbed deposits ranging in depth from 25 to 55 centimeters below the surface. The second source of evidence for the Paleoindian occupation was the recovery of a radiocarbon date of 10,290 ± 170 years from a fire reddened hearth. This places the date securely within the Paleoindian era. Interestingly, the lithic artifacts in the Paleoindian component consisted of only debitage and a single biface fragment. No unifaces, retouched flakes or fluted points were recovered. The limited variety of artifacts was attributable to the small scope of the excavations, a one by two meter test pit and three 50 cm square shovel test pits which were confined within a radius of 3 meters.

The significance of the site was made clear to PNGTS. The firm elected to avoid the site by re-routing the pipeline rather than adversely affect the site which would necessitate mitigation through a comprehensive (and expensive) professional archeological excavation. The site was preserved in place.

1. All radiocarbon dates are reported as uncorrected radiocarbon years before present.

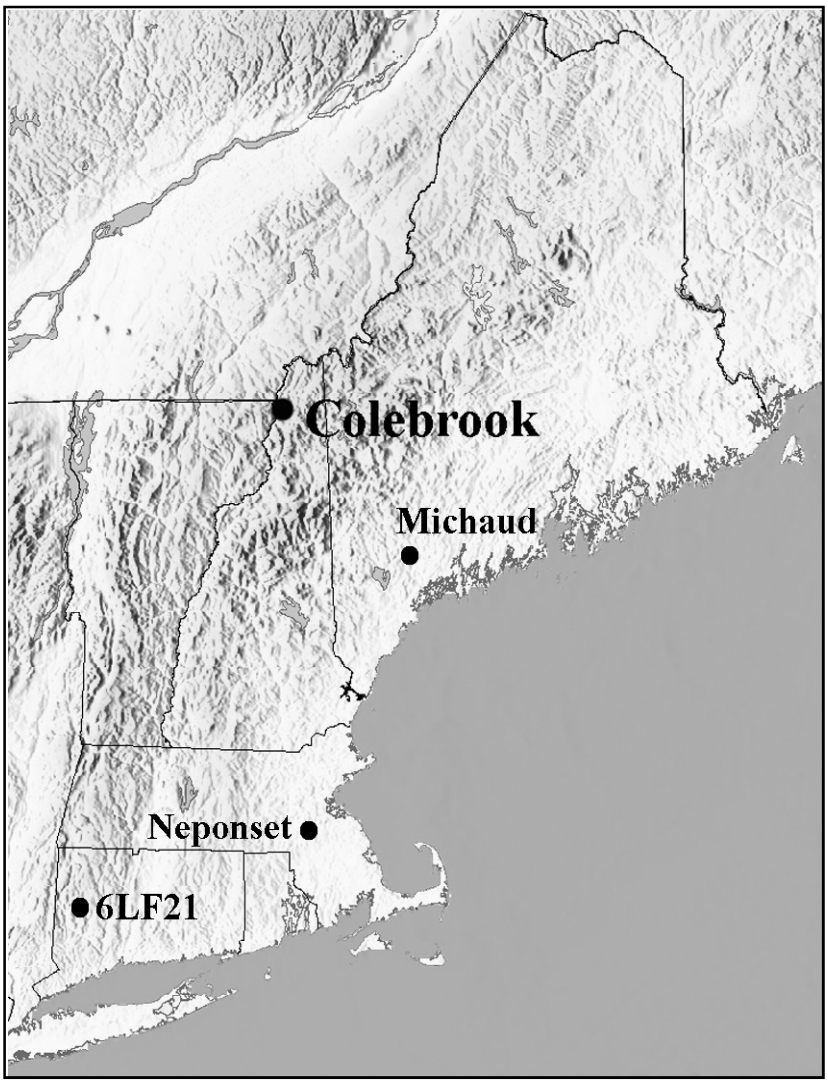

Figure 1. Location of the Colebrook, 6LF21, Michaud and Neponset Sites.

In 2005, the NH Division of Historical Resources contacted the owners of the site and inquired as to their interest in further investigations on their property. They were quite enthusiastic and encouraging. Consequently the 2006 SCRAP field school, under this author and Edna Feighner (who had since joined the staff of the NHDHR) as Co-Principal Investigators, undertook to expand upon the previous investigations. The goals were to identify any additional archeological resources in the parcel at large and to obtain additional information on the extent and content of the Paleoindian component.

The investigations were successful. Four weeks of survey recorded an additional Archaic component on the property and an isolated Meadowood bifacial scraper. Neither discovery was located near the Paleoindian component. The investigations at the Paleoindian component occupied the last half of the field school. An area 60 meters long and 40 meters wide, centered over the 1997 1 by 2 meter test pit, was systematically sampled with 50 cm square shovel test pits excavated on a 4 meter grid. This revealed a culturally sterile zone around the 1997 test pit. Then a small excavation block, initially 4 by 4 meters and eventually expanded to 5 by 5 meters, was established. Excavations reached depths from 45 to

60 cm below the surface, with the bulk of the artifacts occurring 45 to 55 cm below the surface. Debitage in excess of 3200 flakes, scattered charcoal features, post molds and small circular stains were recovered from the excavated block. While excavations were underway it became clear that the site contained many more channel flakes. These distinctive pieces of debitage were documented in the field and additional specimens were identified during the cataloging phase. Sixty-one channel flake fragments have been identified from the 2006 investigations. In addition, a review of the 1997 collection identified additional specimens, bringing the total for the site to 73 channel flake fragments.

At least five distinctive raw materials have been identified (a black chert, a greenish gray chert, a reddish brown quartzite, a dark gray quartzite and spherulitic flow banded rhyolite), 16 sets of refits have been made, and an internal distributional analysis has defined at least four locations within the five meter block that reflect specific episodes of fluted point manufacture.

Of particular interest here are two sets of refitted channel flakes that represent strong evidence that Michaud-Neponset points were being manufactured at the site. This style is characterized by several distinctive attributes and can be best represented in the Intervale Point (Plate 1). The point was discovered in 1888 by an artist in North Conway, NH, and later donated to the Smithsonian Institution (Boisvert 1998). They tend to be long when compared to other fluted points in the Northeast, with lengths ranging from 4 to 11 cm. The blade outline is slightly recurved, ren-

Plate 1. Intervale point.

dering a "waist" at the portion nearer to the base, and the slightly incurvate basal section combines to make slightly prominent flaring corners or "ears." Channel flutes on the Intervale point are extremely long, extending nearly the full length of the 11 cm long point. The channel flutes are relatively wide, being nearly 20 mm wide at the base and tapering to 10 mm wide at the tip end. On each side of the point, secondary channel flutes were manufactured that completely overlay the primary flutes. These secondary flutes are significantly shorter than the primary flutes, and measure less than 25 mm long, terminating in step fractures.

The Michaud-Neponset style is defined in greater detail by Bradley et al. (2008). Secondary fluting is not a defining feature of the style, but is none-the-less well documented. Examples are illustrated by Storck (1997:38, 225) from the Fisher Site in southern Ontario, Deller and Ellis (1992:27-28) from the Thedford II Site in southern Ontario, and Moeller (1980:151) from the Templeton site in Connecticut. McCarty and Spiess (1992:30, 33) also illustrate points with secondary fluting at the Neponset Site in eastern Massachusetts. In all cases, specimens with secondary fluting are among the longest found at their respective sites.

Further afield, examples of secondary fluting are found on the Outer Coastal Plain in central New Jersey at site 28-OC-100. Mounier et al. (1993) report in detail a small (approximately 12 square meter) single component Paleoindian site where, like the Colebrook site, the lithic assemblage was composed almost exclusively of final stage fluted point manufacture debitage. This site had 30 channel flake fragments among the 306 pieces of debitage, the basal fragment of a fluted point and exotic quartz crystal. One third of the channel flakes are secondary fluting flakes. The basal fragment exhibits the recurved lateral edges, incurved base and basal grinding characteristic of the Michaud-Neponset, Barnes or Cumberland styles. The size of the points manufactured at the site, based upon estimates from the channel flakes, is 5 to 8 cm long. Mounier et al. argue that this secondary fluting was a specific manufacturing technique for this variety of fluted point and cite morphological parallels at the Plenge site (Kraft 1973:Plate 1d). Thus, secondary fluting may be considered to be a common, though not necessarily universal, attribute for the Michaud-Neponset fluted point.

The first set of refitting channel flakes is composed of specimens 493 and 461 (Plate 2). These black chert fragments were recovered 1.66 meters apart at levels 9 and 10 in the excavation. Both specimens were recovered *in situ*. Initially there was some doubt that the larger

Plate 2. Refitting channel flakes 461 and

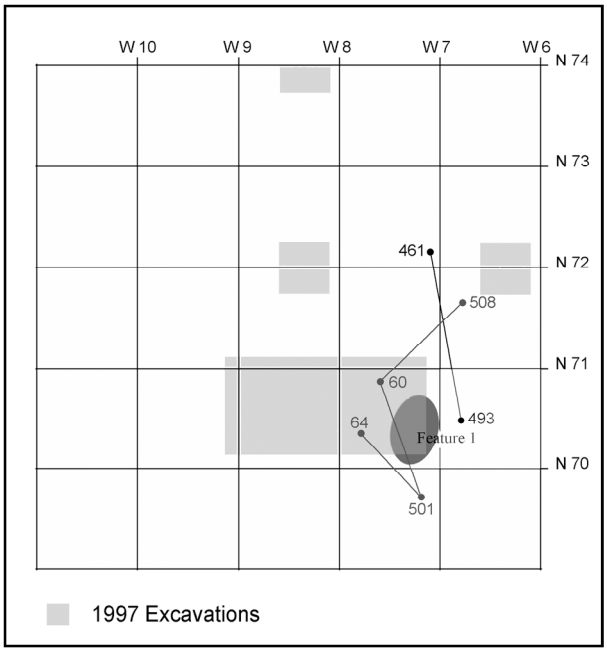

Figure 2. Horizontal distribution of refitting channel flakes and Feature 1.

specimen (#461) was actually a channel flake fragment. It was so identified in the field, and then reinterpreted by the author as a non-specific waste flake when analyzed in the laboratory. Subsequently, while reviewing the collection in January of 2007 for the purpose of identifying additional channel flakes and attempting to find additional refitting combinations of channel flakes, specimen 461 was assessed again by the author. Surprisingly it refit to specimen 493 (previously recognized as a channel flake fragment), thus categorically confirming that it too is a channel flake fragment. More importantly, these refitted fragments reveal specific characteristics that indicate that they were produced from the manufacture of a Michaud-Neponset fluted point. The reconstructed channel flake exhibits two significant characteristics that reflect the Michaud-Neponset style. First, the channel flake represents the second successive flake to be removed from the base of the point. The exterior or dorsal surface exhibits the full width of the initial channel flake removal.

Plate 3. Refit flakes on Intervale point cast.

Second, the distal end of the flake exhibits a step fracture indicating that this flake abruptly terminated. Thus this set of refitted flakes represents a comparatively short, secondary channel flake. The similarity to the morphology of the Intervale specimen is remarkably clear as seen when the Colebrook fragments are overlaid on a cast of that point (Plate 3). In addition to this pair of refitting channel flake fragments, there are four sequentially fluted channel flake specimens from the Colebrook site, clearly indicating that this was a programmatic practice of the knappers at this site.

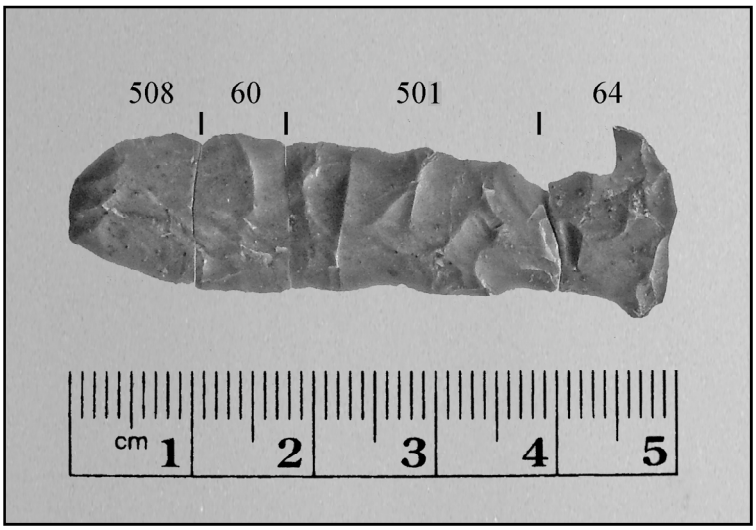

Plate 4. Refitting channel flakes 60, 64, 501 and 64.

The second set of four refitting channel flakes consists of specimens 508, 60, 501 and 64 (Plate 4), in order from the striking platform (proximal) through medial to the *outre passe* or overshot termination at the tip (distal) end. This set of refits constitutes the only complete channel flake identified at the site. Interestingly, these fragments represent half of the greenish gray chert specimens found. The total length of the refitted channel flake fragments is 51 mm. The overall length is not especially great, and flutes of this dimension can be found on Gainey or Bull Brook style fluted points. The morphology of the distal end of the refit sequence, however, clearly indicates that this channel flake extended the full length of the point preform. Rather than ending in an intended feathered or hinged termination, the flake removed the end of the specimen. In fact, one could also classify this segment of the refit group as a biface fragment as it retains flaked surfaces on both sides and minute sections of the bifacial edges. It is worth noting that two of the channel flake fragments, specimens 60 (a medial segment) and 64 (the distal fragment), were recovered in 1997 while specimens 508 (the striking platform) and 501 (a medial segment) were recovered in 2006. The significance of this set of refitted channel flake fragments is that they almost certainly were struck from a preform for the manufacture of a Michaud-Neponset point. This style is the only variety of fluted point for which the channel flutes extend nearly the full length of the point. Tips of points broken in this manner are also reported from the Fisher Site (Storck 1997:62).

These two sets of channel flakes were found in context with Feature 1, a fire reddened hearth initially identified in the 1997 excavations. It was partially excavated and a date of 10,290 ± 170 uncorrected radiocarbon years was obtained (Beta #107429, Bunker, Feighner & Potter 1997:21). Table 1 and Figure 2 show the vertical and horizontal relationship among the channel flake fragments and the dated feature. Not only do the channel flakes co-occur in the same context as the dated feature, but more than 90% of the recovered debitage also occurs in the same levels as the feature. Furthermore, these levels are embedded in alluviated deposits from the early Connecticut River and were therefore protected from bioturbation. The levels are thus intact and the context of the artifacts and features is quite intact. On that basis, the radiocarbon date can be confidently associated with the Paleoindian component at large and the two sets of diagnostic debitage specifically. Thus, a

date of 10,300 radiocarbon years before present can be ascribed to the Michaud-Neponset fluted projectile point.

This date corresponds well with a radiocarbon date obtained from Feature 7a at the Michaud Site in Lewiston, Maine. Spiess and Wilson (1987:84) report a date of 10,200 ± 640 uncorrected radiocarbon years before present. This was a standard date run on a very small sample which accounts for the large sigma. This feature was in a portion of the site that had a comparatively strong presence of flow banded rhyolite, inferring contact further west into New Hampshire. The Neponset Site in Canton, Massachusetts, contains a strong contingent of the eponymous point style (Carty and Spiess 1992:27, 30) and has produced a radiocarbon date of 10,210 ± 60 from a feature (Ritchie 1990:105), thus placing it extremely close to the Colebrook date. Moeller (1980:31) reported a date of 10,190 ± 300 from site 6LF21 in Templeton, Connecticut, which is further supported by a date of 10,215 ± 90 provided by McWeeney (1994:157) at the same site. This site produced a fluted point with a long, wide channel flute and a constricted base with flaring corners making it identifiable as a Michaud-Neponset point. While these dates all effectively cluster together, we must recognize that they fall within the well known radiocarbon plateau which essentially defines the Younger Dryas climatic period (see Curran 1996), and these dates might have been considerably further apart in time than the radiocarbon assays would indicate. Consequently, we must accept with caution that they may not be quite as equivalent as they may seem.

Based on the data presented above, I draw the conclusion that the Colebrook site is a representative of the Middle Paleoindian period. The radiocarbon date taken from a fire reddened feature falls at the appropriate time. Diagnostic projectile points were not found in the investigations, but at least two sets of conjoining channel flake fragments exhibit characteristics that place them comfortably within the parameters that define the Michaud-Neponset point. So, while we did not recover any Michaud-Neponset points at the Colebrook Site, I argue that they indeed were manufactured there.

This collection also reveals that with careful analysis (and some luck) it is possible to reconstruct diagnostic artifacts and specific behaviors from debitage alone. Given that the overwhelming bulk of the artifacts in preceramic sites of the Northeast is indeed lithic debitage, then we are well advised to seek as much interpretive value as possible from this data set. A previous debitage study (Boisvert and Bennett 2004) has proposed that certain Late Paleoindian components can be identified

Table 1. Provenience of refitting channel flakes

Specimen	Segment	Unit provenience	*In Situ* provenience	Depth
461	Medial	N 73 W 7 SE quad	N 72.15 W 7.06	Level 9 40-45 cm
493	Medial	N 71 W 6 NW quad	N 70.51 W 6.79	Level 10 45-50 cm
508	Proximal	N 72 W 6 NW quad		Level 9 40-45 cm
60	Medial	N 71 W 7		Level 11 55-60 cm
501	Medial	N 70 W 7 NE quad	N 69.76 W 7.16	Level 10 45-50 cm
64	Distal	N 71 W 7		Level 10 45-50 cm

on the basis of debitage, and this study is offered as another example of that same potential applied to the Middle Paleoindian. Furthermore, I would argue that as we develop a more precise definition of the diagnostic fluted points of the Northeast, then it should be ever more possible to identify diagnostic debitage and so eventually be able to isolate diagnostic components.

Acknowledgements

Several people were instrumental in making this paper possible. First is Edna Feighner and the 1997 field crew who discovered the Colebrook Site and recognized it as an important Paleoindian camp. The 2006 SCRAP field school also delivered yeoman's duty not only with their conscientious and meticulous recovery, but also the even more demanding detailed excavation of numerous sterile pits surrounding the site so that we could be certain that we had indeed defined the site limits. James Bradley read an earlier version of the article and offered valuable insights that provided significant improvements. The site landowners, who prefer to remain anonymous, deserve special appreciation since without their support none of this would have been possible. Of course, any errors or omissions are the sole property of the author and jealously guarded.

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