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THE OTHER SIDE OF THE ISLAND: ADDITIONAL DATA
ON THE PREHISTORIC OCCUPATIONS OF
THREE MILE ISLAND

by

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presented at

Mid Atlantic Archaeological Conference
Annual Meeting

Lancaster, Pennsylvania

April 1987

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Abstract

The islands in the Susquehanna River were heavily utilized by the prehistoric and early historic Indian populations. Three Mile Island in Dauphin County, Pennsylvania is one of the larger of these landforms and has been the source for numerous artifact collections over the last one hundred years. In 1967, prior to the construction of the nuclear generating facility, archaeological research conducted by the Pennsylvania Historical and Museum Commission revealed eight "hot spots" of artifact concentration. Excavations were conducted on the northern most of these locales. New information obtained through limited testing and a review of private collections gathered in the last century provide the bases for a more thorough assessment of the island's occupations.

Introduction

The islands in the Susquehanna River were heavily utilized by the prehistoric and early historic Indian populations. Three Mile Island, one of the larger of these landforms located in Dauphin County, Pennsylvania has been the source of numerous artifact collections over the last century. In order to more clearly define the cultural occupations of the island, the authors have inspected several of the extant private collections, reviewed the previous archaeological investigations, and have been permitted to do limited testing. This is an on-going project and the results and conclusions presented here should be regarded as preliminary.

Physical Setting

Three Mile Island is located ten miles southeast of Harrisburg, Pennsylvania and lies within the Gettysburg Section of the physiographic division known as the Piedmont Province. The island, along with others, was formed as a result of fluvial deposition by the Susquehanna River. The carrying capacity of the river sharply decreases as the channel width increases after the stream crosses an east-west trending, very resistant diabase dike just downstream from Middletown.

A change of flow direction occurs after the stream cuts through the diabase dike which crosses the river and

and is represented by Hill Island. The stream is then deflected by a second diabase dike just south of Three Mile Island. The second dike probably created a dam effect on the river, causing a large pool in the vicinity of TMI, not unlike the pool created by the York Haven Dam during low water. This ponding effect produced a habitat favorable to many species of fish and waterfowl and was attractive to the early cultures.

Collections

Artifacts have been gathered from TMI for generations. The earliest documented collection in the study to date was assembled between 1915 and 1940 by the late Martin M. Heisey of Mount Joy, Pennsylvania. During this period the island was extensively farmed and many people surface collected what was brought to the surface by cultivation.

Three Mile Island is now highly restricted and guarded property and, therefore, the collecting of artifacts has been sharply curtailed. Several employees of General Public Utilities stationed on the island do have small assemblages of material gathered from eroding banks and cuts.

Approximately 700 artifacts in private hands have been seen. The collectors were, when possible, questioned as to locales, noted concentrations of artifact types or specific raw materials, conditions under which they were found, and any other details they could provide. The collections, for the most part, come from the southern one-third of the island.

As is the case with many non-professionally gathered material, provenience is quite vague, sometimes only being identified as Three Mile Island. In the best of cases, specific locations can be pinpointed, usually for notable items, but more often only general areas are identified. The best information comes from those that are currently collecting and have "fresher" memories.

Other problems encountered when dealing with assemblages of this nature include: 1) not knowing the existence of location of all collections; 2) selective collection, i.e. the picking up of only complete points or not including potsherds; and 3) the inability of the individual to recognize all types of artifacts.

The artifactual material as seen in these private collections indicates cultural use of the island as early as the Early Archaic. To date, no Paleo artifacts have been seen and no such evidence has been published (Kinsey 1958; Kent, Smith and McCann 1971). Bifurcate points similar to the LeCroy style have been found, as well as projectile points resembling those of the Thebes cluster in the Midwest (Cook 1976).

Bannerstone fragments are also found in some frequency. The Heisy collection alone contains 17 fragments. It also has one complete highly-engraved steatite example. The predominant point style is the Bare Island Straight Stem occurring in a strong percentage of each collection. The lithic preferences are rhyolite and argillite.

The strongest occupation of the southern end of the island appears to have occurred during the period 3000 B.C.-500 A.D., and more specifically 2000-5000 B.C. Broadspears frequently occur. A cache of six in Perkiomen and Lehigh styles was found eroding from a bank in 1986. Fragments of steatite vessels have been found in what seems to be fairly restricted areas.

Both Early and Middle Woodland ceramics have been found, although only one of the collections contained sherds. The styles are reminiscent of those found on the north end of the island in the 1967 excavations by the Pennsylvania Historical and Museum Commission.

Middle Woodland lithics primarily occur as finely executed examples in jasper. No blades were noted. However, as no debitage was retained and the potential for such identification by collectors is limited, the existence of such items remains unresolved.

If Kent's (1984:11) belief that "Late Woodland sites are comparatively infrequent on the islands", TMI is one of those rare cases. The Late Woodland is well represented. Many of the sherds in the collections are Shenk's Ferry Cordmarked and Shenk's Ferry Incised. Triangular points are common and often are made of dark grey to black chert. This is a distinct change in lithic preferences from earlier cultures and corresponds with similar choices elsewhere (Heisey and Witmer 1964). Debitage of this dark chert has been found concentrated in limited spatial areas at several

places on the southern part of the island. A steatite elbow pipe with a raised design was found in 1983.

Evidence for occupation into early Historic times is scant. A burial with glass beads was found eroding out of a bank on the east side of the island. The styles of the beads correspond to a period 1600-1630 A.D. (Kent 1984:317). A Funck Incised rimsherd was found in 1986.

The collections viewed to date provide an opportunity to see fragments of culture but to understand the culture more fully the artifacts need to be seen in context. On such a limited landform having seen extensive impact, can intact cultural data remain?

Previous Archaeological Excavations

In 1967, prior to the construction of the nuclear generating station, archaeological investigations were conducted by the Pennsylvania Historical and Museum Commission. The goals of this project were: 1) to find and record the locations of archaeological sites; 2) to locate at least one site that could be extensively excavated and that would provide information on the deposits, cultural associations and "generally the culture history of the area" (Smith 1977:9).

As the land had laid fallow for sometime prior to this investigation, vegetation had reclaimed much of the farm land. Various amateur archaeologists/collectors were asked to define areas that had produced prehistoric

cultural items in the past. Eight "hot spots" were identified (Figure 1). Of these eight areas, five were trenched by bulldozer, one was trenched by the members of the Susquehanna Chapter of the Society for Pennsylvania Archaeology, and two were unexplored. Smith does not provide information as to which areas were or were not explored. He does not elaborate on what was found in each area tested, only saying that "preliminary excavations in these areas proved unproductive" and "easily differentiated natural stratigraphy and features were practically nonexistent" (Smith 1977:9).

One area, later identified as 36Da50 ("the Three Mile Island site") on the northern tip of the island, was considered worthy of more intense excavation. It proved to be a significant Early to Middle Woodland site with affiliations to the south (Smith 1977; Kent, Smith and McCann 1971).

A second excavation took place. It was an attempt to further document a cache of jasper flake tools found c. 1969 by Thomas Carroll. The cache consisted of 248 specimens that were uncovered on the southwestern side of the island. Excavations were limited to "a number of five-foot" units around a hole dug by Carroll (Smith 1970:44).

Impact of the Construction of Three Mile Island Nuclear Generating Facility

Three Mile Island and adjacent islands were purchased by a predecessor company to Metropolitan Edison in the

early 1900s. The island was incorporated into part of the York Haven dam crossing the Susquehanna River to provide continuous head pressure for the hydroelectric plant. Until the early 1970s, the impact upon the island consisted of numerous vacation cottages along the river banks and several active farms making use of the inland portion of the island.

The island contains 470 acres. Of this, approximately 200 acres on the northern portion were set aside for the power station. A large portion of the west central section of the island was excavated to provide fill for the dikes surrounding the power plant. All of the abandoned cottages were removed and their sites bulldozed. The only relatively undisturbed sections of the island were those wooded regions on the periphery and the southern portions of the island.

1986 Excavations

In an attempt to document undisturbed cultural deposits, interpret the cultural material being eroded from the island's banks and more precisely delineate site boundaries, limited testing began in the summer of 1986. This was made possible only through complex negotiations with GPU and its parent company, Metropolitan Edison. Research was confined to a 75 m long area on the southwest periphery of the island. The area was chosen based on observed surface phenomena. Numerous artifacts were recovered from the eroding banks in this section, and there

was an unusually high concentration of dark grey/black chert debitage. This material is found only occasionally on other parts of the island. There was also an adjacent abandoned road cut which allowed the inspection of deeper levels without the necessity of power equipment. The road cut provided insight into the rate of humus deposition in this area.

Approximately 16 m² were excavated using standard procedures. Units were randomly placed to sample the area. All soils were screened and rocks and cultural material were mapped in place whenever possible. When sterile-looking soil was reached, soil probes were taken to determine the presence of sealed cultural layers.

A total of five features were revealed. Features 1, 3 and 4 were artificial clusters of rock, including firecracked, scorched and beach cobbles showing no physical evidence of fire, heat or alteration. Feature 1 appeared to have been somewhat scattered by cultivation. Two Archaic points of argilite and a large grinding stone were in association with the rocks.

Feature 2 was a rock lined pit or possibly the base of a larger pit. River cobbles had been placed conforming to the pit's morphology. Charcoal flakes had been found in the soil above F. 2 and the base of a triangular point was recovered adjacent to the area. A modified "greenstone" flake was found among the rock base. No changes in soil coloration indicating the boundaries of the feature were noted.

The base of the feature rested at 57 cm below the surface.

Feature 5 was a shallow basin approximately 45 cm in diameter and 15 cm deep. It was the only feature with a discernible feature fill. The fill contained large flecks of charcoal and five broken dark grey chert tools of undetermined cultural affiliation.

All rock clusters were encountered at approximately 50 cm below the surface and had Archaic period artifacts in or near them. Woodland period artifacts including some pottery occurred in the first 30 cm.

A distinct spoil bank of bulldozed material ran from the immediate bank edge inland 10-15 m. This deposit was found to be approximately 70 cm thick and contained a jumble of prehistoric artifacts and modern debris. The soil below 70 cm conformed to that found behind the spoil bank at 0-50 cm. Feature 3, a rock cluster, was encountered at 110 cm below the surface, corresponding to the first signs of the clusters at 40 cm behind the spoil bank.

The excavations established several things. First, intact features do exist with associated cultural data. While not large or impressive, they do document prehistoric activities in the area.

Second, relative vertical stratigraphy is present. Artifacts are not, however, contained within discernible strata but occur in terms of relative depth below the surface.

Finally, the bulldozing of the sites of former cottages may have destroyed site areas, but deposition of

soil around the extreme periphery has sealed some areas from being disturbed from all but bank erosion. Erosion, at this time, is not considered severe.

Summary

Three Mile Island has a long history of occupation and utilization. Cultures from the prehistoric Early Archaic through the historic Susquehannock have used the island. Unlike many of the islands in the lower Susquehanna that have been ravaged by pothunters and floods, cultural data, stratigraphy, and features relating human activity remain for study in future generations.