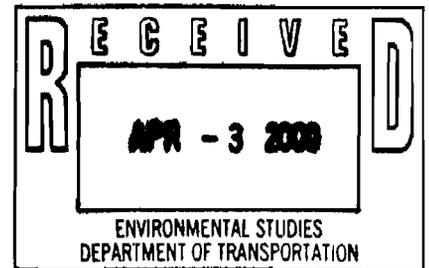


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**The Puncheon Run Site  
and the Settlement System of the St. Jones Valley**

The Puncheon Run Site is a large prehistoric site on the St. Jones River near Dover, Delaware. The site consists of several distinct activity areas, which appear to have been used at different times in the Late Archaic, Early Woodland, and Middle Woodland Periods. Study of this site, along with a review of previously excavated sites along the St. Jones River, has provided new information about the behavior of prehistoric people in this area in the 2000 BC to AD 1000 period. There is little evidence of a shift from diffuse occupations in Middle Archaic times to focal, riverine, base camp occupations in the Late Archaic and Early Woodland. Instead, there is a complex archaeological record that includes various kinds of sites and features spread out across the landscape. Evidence from sites related to the Delmarva Adena and Webb Phase mortuary complexes and the Late Archaic Barker's Landing Complex suggests that there may have also been non-economic influences of site location and function.



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**The Puncheon Run Site  
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**I. Introduction**

SLIDE — WORK SHOT

The Puncheon Run Site is a large prehistoric site on the St. Jones River near Dover, Delaware. We reported on the preliminary results of the excavations here last year, and today we are reporting some of our additional findings. Today I will be talking about settlement patterns in the St. Jones drainage.

SLIDE — DRAINAGE MAP

We actually have a large amount of archaeological data on the St. Jones, including a couple of large surveys and four major excavations: ours at Puncheon Run, the University of Delaware's at the Carey and Island Farm Sites, Parsons at Hickory Bluff across the river from Puncheon Run, and Heite and Blume at Blueberry Hill in the upper part of the drainage.

Working outward from Puncheon Run, and interpreting this broader data in the light of what we found there, I will discuss what we have learned about settlement patterns in this area and, equally importantly, what I think we have NOT learned.

SLIDE — AERIAL

The Puncheon Run Site occupies a peninsula formed by a bend in the river and Puncheon Run, a small perennial stream.

It had an area of more than 12 acres, and it extended along Puncheon Run for more than half a mile. The eastern end of the peninsula had been destroyed by stream channelization and borrow pitting.

SLIDE — CHANNELIZATION

It was excavated in 1997 and 1998 by Louis Berger for the Delaware Department of Transportation, under the general direction of Charles LeeDecker.

## II. The Puncheon Run Site

### SLIDE — SITE MAP

The Puncheon Run Site is large, but most of it had a very low density of prehistoric artifacts. Artifacts and features were concentrated in certain discrete loci, so that the site was, in a sense, a cross between a single site and a landscape with several separate sites on it. The excavation focused on five of the most interesting loci.

**The two I will be talking about today are the Silo Pit Area and the Metate Block.**

#### A. Silo Pit Area

##### SLIDE — SILO AREA OVERHEAD

The Silo Pit Area was in a nearly level field along Puncheon Run about 600 meters from the St. Jones.

In this area the plowzone artifact density was only about 1 per meter square unit, but we nevertheless found a cluster of twelve silo-shaped storage pits dating to between 0 and 400 AD, as well as a scattering of earlier pits and other, miscellaneous features.

We tried every technique we could think of to find out what was stored in these pits — flotation, soil chemistry, phytoliths — but had essentially no luck. We lean toward the storage of marsh roots (tuckahoe) because they would probably leave the least evidence.

##### SLIDE — FEATURE 3

The Silo Pits are particularly important to my interpretation of settlement patterns, because they represent a large amount of storage capacity in an area that was definitely not a “base camp,” that is, an area with long-term occupation.

##### SLIDE — PROFILE OF FEATURE 3

#### B. Metate Block

##### SLIDE — METATE AREA

**The Metate Block**, where a large stone metate and several thousand stone artifacts were found in sandy soils below the plowzone, apparently a camping area dating to between 2500 and 1200 BC. This area is important to my broader comments because it represents the only well-dated component along the St. Jones dating to the Late Archaic period.

##### SLIDE — KIDS AND HEARTH

There were no storage pits in this area; what we had was a number of hearths, a large amount of debitage, and many stone tools.

I chose this particular slide to point out, in the light of Roger Moeller's diatribe, that the person doing the most to fight the kind of isolation and irrelevance he complains about is Kevin Cunningham of DeIDOT. Kevin has consistently emphasized both real research and public outreach.

SLIDE — KIDS DIGGING

SLIDE — FLINTKNAPPING DEMONSTRATION

More than 400 middle school students visited Puncheon Run and participated in the excavations, and we also had other kinds of outreach, illustrating what we can do within the limits imposed by the process we work under.

### **III. The St. Jones Drainage**

SLIDE — MAP OF SITES ALONG THE ST. JONES

Turning to the regional data, to see what kinds of patterns show up there, we can take a look at the drainage of the St. Jones River, which we have studied as part of the Puncheon Run project. The river is about 50 miles long and flows through the coastal plain for its entire length; the fall from its source to its mouth is about 60 feet. It is bordered by wetlands along most of its length, since it takes its source in the swamps of the drainage divide of the Delmarva peninsula and it is tidal for the whole lower half of its length.

SLIDE — JUSTINE COLLECTING PLANTS

There have been a substantial number of surveys and excavations along the river. The most important have been the University of Delaware's excavations at the Carey Farm and Island Farm Sites, where they dug 2000 features

SLIDE — CAREY FARM

Heite Associates excavations at the Blueberry Hill Site, and Parsons' excavations at Hickory Bluff across the River from Puncheon Run, which were concurrent with those at Puncheon Run and have not been fully reported.

#### **IV. The St. Jones Evidence**

##### **A. Caveats**

Before I begin to discuss the settlement pattern along the St. Jones, I want to make two cautionary notes:

- 1) Small size of the study area; we know that in Late Woodland times central Delaware not occupied on a permanent basis, but used occasionally by people whose villages were to the south or the north; and

SLIDE — UDCAR REPORT COVER

- 2) Problems with dating, caused, in particular, by the projectile points which are mostly vague stemmed or side-notched forms like these, made from cobbles. According to Custer, these were in use from before 3000 BC to nearly AD 1000, and our research supports this claim. Some of the point types used to identify different cultures and time periods in other parts of the Middle Atlantic are rare along the St. Jones, especially Fox Creek and Jack's Reef. At the Carey Farm Site, most of the points found with Mockley and Hell Island ceramics were either these stemmed points or generalized side-notched things.

SLIDE — PEBBLE POINTS

These points are Puncheon Run, and they represent the type that we call pebble points; are made from large pebbles or small cobbles, and they often have a piece of cortex on the base. I have been toying with the notion that these small stemmed points represent a distinctive local stoneworking tradition, based on the exploitation of small cobbles.

SLIDE — KNAPPING FEATURE

##### **B. Settlement Patterns**

The general theory of settlement patterns in the Middle Atlantic is that in the Late Archaic Period people shifted from a generalized, diffuse foragers to focal occupations with base camps along the major rivers. My feeling is that, in Delaware, the evidence for this transition is weak at best.

It is certainly true that in this part of Delaware, the largest sites are along the rivers. It is not so clear to me that these sites are long-term occupation base camps.

##### **What is a base camp?**

The first theoretical question I want to raise is, what is a base camp, and how would you know if you found one?

Ethnographers have noted that some hunter-gatherers, called by Binford “collectors” live for large parts of the year at large camp sites, where they perform a wide variety of activities. Some people have one base camp, or two or more seasonal base camps. From these camps they make short forays to specialized gathering or processing sites sometimes called “procurement” sites.

How would you recognize a base camp archaeologically? Although lots of sites in the Middle Atlantic region, and Delaware in particular, have been identified as base camps, the criteria are very vague, amounting to little more than size: big sites are base camps. Two other lines of evidence are commonly pursued:

- 1) the presence of permanent infrastructure required a large amount of labor to construct, such as houses, and
- 2) evidence of a wide variety of activities.

### **Infrastructure**

What about infrastructure? The only features commonly found at prehistoric sites in the Middle Atlantic are **storage pits** and **hearths** (or, if you prefer, fire-cracked rock clusters). Without getting into the Delaware Pit House debate, I will simply say that there are no non-controversial houses at pre-agricultural sites in Delaware, although there are a few pit houses that look pretty good; certainly there are none at many of the sites said to have been base camps. (And if D-shaped pits do represent houses, they don’t help us here, because they are found at small sites as well as the larger sites we are discussing.)

#### SLIDE — HEARTH

Most people recognize that hearths are found on all sorts of sites.

#### SLIDE — SILO PITS

The evidence from Puncheon Run shows that large clusters of storage pits can be found in places that are clearly not base camps.

#### SLIDE — LUMS POND

This is Lums Pond, a small site in Delaware that is a poor candidate for base camp status; and other examples have been found at even smaller sites.

I’ll come back later to my own theory of what these collections of storage pits were for.

### **Tool Variety**

#### SLIDE — GRINDING STONES

The evidence cited for a variety of activities on a site includes things like a variety of tool types, the presence of ceramics or soapstone bowls, and, again, features. I tried to make up a table showing how many different classes of tools had been identified at various Delaware sites, and what I discovered was that the different lithic analysts working in the region use such different systems for classifying tools that the results are not really comparable. But even within the body of sites analyzed by the University of Delaware, the same tool types come up again and again, with very little difference between the large sites and the small ones.

Also, most tool types are not datable, so unless you have sealed, well-dated contexts, there is no way of knowing what period tools like these grinding stones from Coverdale Farm date to.

#### SLIDE— AXE AND GRINDING STONE

And, of course, microwear analysis of the stone tools sometimes shows that a single tool type can have had many functions: we had utilized flakes at Puncheon Run that showed evidence of butchering, cutting grass, scraping hide, and sawing wood.

There is, of course, hardly any seasonality data from any of the alleged Delaware base camps, so we rarely have any direct way of assessing in how many different parts of the year the site was used.

#### SLIDE — LYNCH WETLAND

I have noticed that in some of the Middle Western cases, like on the American Bottom, one of the reasons given for an increasing focus on wetland environments in the Late Archaic is a decrease in the number of sites in upland areas. This is certainly not so in Delaware, where pebble points are the most common ones in absolutely every niche.

#### **Base camps?**

Therefore, I don't see the evidence for long-term base camps in Delaware as being very strong at all. The so-called base camp sites could all just as well be sites like Puncheon Run, where a variety of different activity areas all happen to occupy the same landform.

My view, which has, in the absence of firm data, to be tentative, is that any increase in sedentism was very gradual, and that the first semi-permanent sites may date to the Middle Woodland period— Carey Farm is the best candidate — but only sites with well-defined, well-dated contexts can really answer the question.

#### **V. Beyond Economics**

#### SLIDE — ADENA POINTS FROM COVERDALE FARM

The St. Jones drainage is best known to archaeologists because of two **spectacular mortuary**

**sites, the St. Jones Adena Site and the Island Field cemetery.** So, in investigating settlement patterns in the drainage, I wanted to say something about the possibility that non-environmental factors, such as religion or politics, played a major part in where people lived.

Island Field is particularly interesting in this regard, because, besides the cemetery, it showed evidence of substantial occupation, enough that Custer classified it as a base camp. But it is in a rather odd place for a base camp, on a small island in the marsh with no fresh water. The main importance of the place was probably spiritual. It is also possible that it served as a landing or port for exchange with outsiders who arrived by boat. The St. Jones Adena Site was also well placed for waterborn trade.

#### SLIDE — DRAINAGE MAP

I don't have much to say today about these phenomena, because Puncheon Run produced little evidence for the Delmarva Adena or Webb cultures, but I would like to address an earlier phenomenon, the so-called Barker's Landing Complex.

#### **IV. The Barker's Landing Complex**

##### SLIDE — ARGILLITE BIFACES FROM BARKER'S LANDING

One of the most interesting phenomena of the archaeology along the St. Jones is a Late Archaic culture known as the Barker's Landing Complex. This resembles in most way the other cultures of the region, but it is distinguished by very heavy reliance on imported stone, especially argillite. The argillite quarries near Trenton are only about 100 kilometers from Puncheon Run, and there is some argillite use throughout the Delmarva peninsula. In most contexts, though, argillite makes up 5 to 15 percent of the bifaces. Argillite debitage is even rarer, suggesting that these points were made closer to the source. However, at the Barker's Landing Site, argillite made up 80 percent of all the stone artifacts, including a majority of the debitage. Another 12 percent of the artifacts were made of rhyolite, which has to be imported from even farther away, in the Pennsylvania mountains.

##### SLIDE — ARGILLITE BIFACES FROM COVERDALE

At the Coverdale Farm Site on the Murderkill, 40 percent of the stone artifacts were argillite, and 16 percent were rhyolite. In addition, at least two caches of crude argillite bifaces have been found in the region, one at the Kiunk Ditch Site and one at the Carey Farm Site.

##### SLIDE — CRUDE ARGILLITE BIFACE

The heavy use of argillite at these central Delaware sites and the presence of the biface caches suggests that cargoes of argillite bifaces were brought directly to the area, probably on canoes. The bifaces were cached until needed, and then made into tools. Barker's Landing and Coverdale are also both well placed for water-born trade.

Custer studied all of the surface collections in the Delaware State Museum, and he concluded that the Barker's Landing Complex is a region-wide phenomenon, dating from 3000 BC until about 700 BC, that is, into Early Woodland.

Now, you may have noticed that in my discussion of Puncheon Run I said virtually nothing about argillite, because we didn't find any. In fact, none of the excavations that have been carried out along the St. Jones have produced argillite in more than the usual amounts; argillite made up 7 percent of the bifaces at Carey Farm, which had a large Early Woodland component, and 10 percent of the points at Hickory Bluff. At Puncheon Run, use of argillite and rhyolite was definitely greater in the Middle Woodland period than in Late Archaic times.

### **Problems**

There are major difficulties with Custer's description of the Barker's Landing phenomenon, especially because the data comes from surface collections.

#### **SLIDE — RHYOLITE POINTS FROM COVERDALE**

Coverdale Farm was occupied throughout prehistory. I already showed you some Adena related artifacts, and if you look at this slide of rhyolite points you can see a variety of types. However, some of the argillite points do appear to be Late Archaic and Early Woodland specimens, so there does appear to have been extra use of argillite in the Barker's Landing period.

But not everywhere.

### **Special Sites**

My view is that Barker's Landing cannot be a simple regional phenomenon. Instead, I think that Barker's Landing and Coverdale Farm represent special sites. At the minimum, these sites are the distribution nodes for argillite, which was brought to these sites and then dispersed outward into the region.

### **Political Power?**

I suspect that these sites were the residences of local big men or even chiefs, who used their control of the argillite trade to enhance their power. The presence of sites without argillite, like Puncheon Run, shows that not everyone fell under the control of these developing power centers. Other explanations are possible, such as that the difference between these sites is a functional difference, or that the special sites are religious centers, but it is no longer possible to assert that argillite use was uniform throughout central Delaware.

### **Storage and Resistance**

#### **SLIDE — STORAGE PIT**

In this context of political power and resistance, I find the existence of storage facilities removed from residential centers especially interesting, because of the connection possible connection between pit storage and concealment.

Stephen Potter has speculated that in the Late Woodland, chiefs kept their property in above-ground store houses to show it off, while commoners kept theirs in storage pits at least in part to conceal it from the chiefs.

Of course, you don't need political power to provide an incentive for concealment; I was just reading an account of exploring in New Guinea in which the zoologist paid his native guide in tobacco, which the man promptly hid in a bush, explaining that if he took it home he would have to share it with his relatives.

Pit groups like the ones at Puncheon Run and Lums Pond probably represent the storage of food near the site where it was gathered. People traveled to these sites, gathered or processed some food item, and stashed some of it in the ground right where they were before moving on to other places. The food stored in this way would be, because of its remote location, relatively safe from seizure by grasping chiefs or grasping relatives or destruction by enemies. When it was needed, people could walk back and dig some up.

## **V. Conclusion**

The evidence from central Delaware, and the Puncheon Run Site in particular, suggests that our models are too simple to account for the complexity of the archaeological record.

The evidence does show that occupation along the rivers increased in Late Archaic times. However, there is no corresponding decrease in occupation in other niches, and some of the classic evidence of base camps is lacking: houses or other major infrastructure, evidence of occupation in several seasons, large-scale patterning of remains. The larger sites do have a large variety of artifacts and numerous features, but it seems that the better preserved a site is, the more it resolves into a collection of disparate activity areas, rather than a single base camp.

I think the results of the Puncheon Run investigation show that conclusions about site types and settlement patterns based on surface or other mixed collections cannot be trusted very far, and that to further refine our understanding of cultural change in the region requires the excavation of better preserved sites with well dated deposits.

Thank you.