

EARLY RADIOCARBON DATES FROM A SITE ON THE PEE DEE-SIOUAN FRONTIER IN THE PIEDMONT OF CENTRAL NORTH CAROLINA

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Mountjoy, J.B. Early Radiocarbon Dates from a Site on the Pee-Dee Siouan Frontier in the Piedmont of Central North Carolina. Southern Indian Studies, Vol. 38, pp. 7-22.

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Introduction

In Coe's (1952) discussion of the Pee Dee focus and in a subsequent study by Reid (1967) of Pee Dee pottery from the mound at Town Creek in Montgomery County, North Carolina, accounts are provided of the intrusion and eventual withdrawal of the Indians responsible for the remains of the Pee Dee culture found there. These Mississippian-related people are said to have invaded south-central North Carolina from the southwest at about AD. 1450, originating in the area of the South Carolina-Georgia border and dispossessing people of the archaeological Uwharrie culture in the process. The people of the Pee Dee culture brought with them a new mode of life which included living in large villages supported by well-developed agriculture, the construction of a ceremonial center containing a large temple mound, infant burials in "killed" pottery urns, and stamped surface treatment of a considerable proportion of their pottery vessels. This new way of life was centered at the Town Creek site and radiated out along the Pee Dee River and its tributaries for about 30 miles. After some 200 years of constant warfare, during which time they are said to have contributed nothing to and received nothing from the indigenous culture other than strife, the Pee Dee people were forced to withdraw by the Siouan tribes which were known to occupy the area in historic times.

Coe (1952:308) has called this intrusion "one of the best archeological records of the movement of a people in the southeast. . . ." As such, this situation should provide great opportunities to investigate such cultural processes as colonization and acculturation, or lack thereof, on a prehistoric frontier as they are reflected in archaeological remains. Thus far in North Carolina, most investigation relevant to this cultural development has been focused on the site of Town Creek and what is considered a satellite village of the Town Creek center, the Leak site, located some 10 miles southeast of Town Creek (Reid 1967). In addition, a few Pee Dee potsherds have been found in the Appalachian Summit region of North Carolina (Dickens 1976) as well as in the northern Piedmont near Hillsborough and along the Dan River (Jack Wilson, personal communication 1985). Ned Woodall (personal communication 1988) also has found one sherd of Pee Dee complicated stamped pottery at the McPherson site on the Yadkin River.

In 1973, 1974, and 1985, controlled surface sampling and, test excavations were conducted at the Payne site (31MR15), located in the southern fringe area of the North Carolina Piedmont about 30 miles (48 km) northeast of Town Creek. Approximately 47% of the classifiable pottery recovered from the site pertains to the Pee Dee archaeological culture, which may be related to historic Creek peoples (Fairbanks 1952), and another 47% is attributable to the Uwharrie-Caraway-Dan River series, best known from sites of probable Siouan affiliation (Coe 1952) and located mainly to the north of the Payne site. In 1986, two samples of wood charcoal and one of carbonized corncocks from three excavated features were submitted to the Beta Analytic Laboratory in order to help answer three questions about possible Pee Dee-Siouan interaction in this frontier setting: (1) was the Payne site occupied over a long or short period of time?; (2) does the site occupation date to the early phase of Pee Dee intrusion into North Carolina or near the end?; and (3) was the site occupied by two different Indian groups with different pottery traditions, or by one

group possessing pottery from two different traditions? This article reports the results of the radiocarbon dating and how they relate to the interpretation of the archaeological remains found at the Payne site and elsewhere in the North Carolina Piedmont.

Research at the Payne Site

The Payne site is located on the western bank of the Deep River in northern Moore County, North Carolina (Figure 1). The prehistoric occupation is found on a relatively high terrace of Congaree Silt Loam in the northern half of an 11-acre patch of cultivated bottomland and extends into the narrow strip of climax forest vegetation along the riverbank. The site was called to the attention of the author in 1973 by the owner of the property who reported having found potsherds in a portion of his field. The site was visited by a crew from the University of North Carolina at Greensboro in the fall and due to the heavy ground cover of weeds, a 1 m by 1 m test pit was excavated in the area of the field where the owner reported having found artifacts.

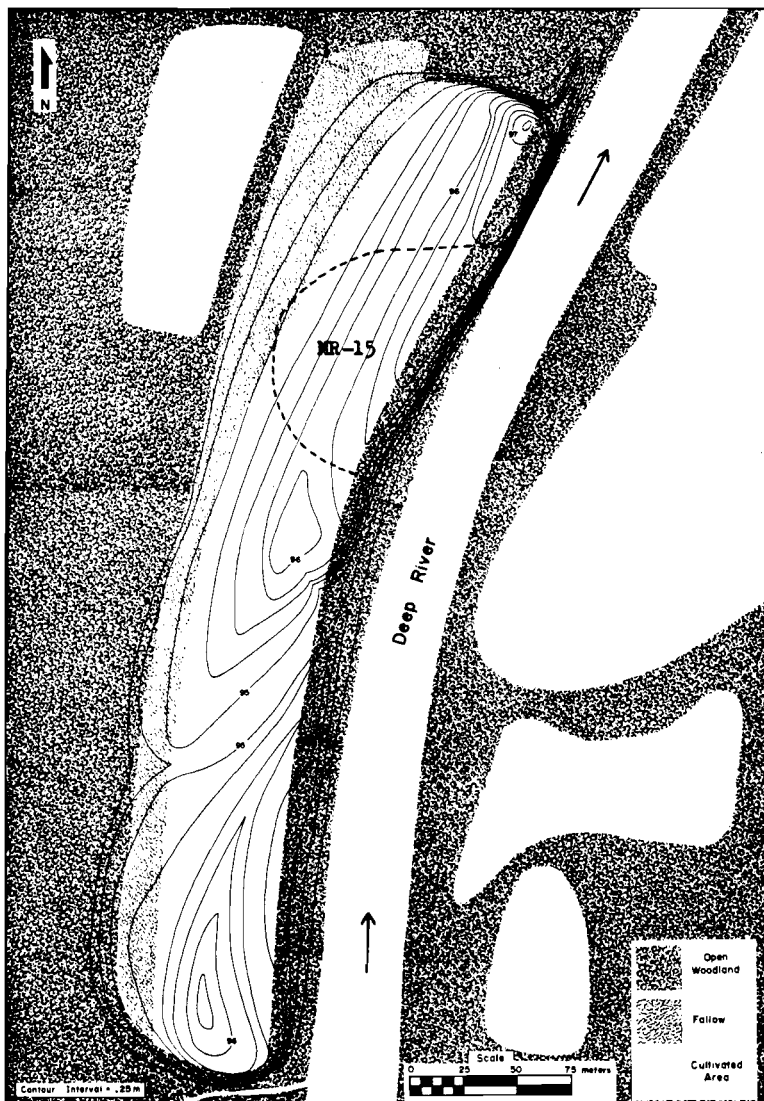


Figure 1. Limits of the Payne site (Mr-15) based on Surface Collection.

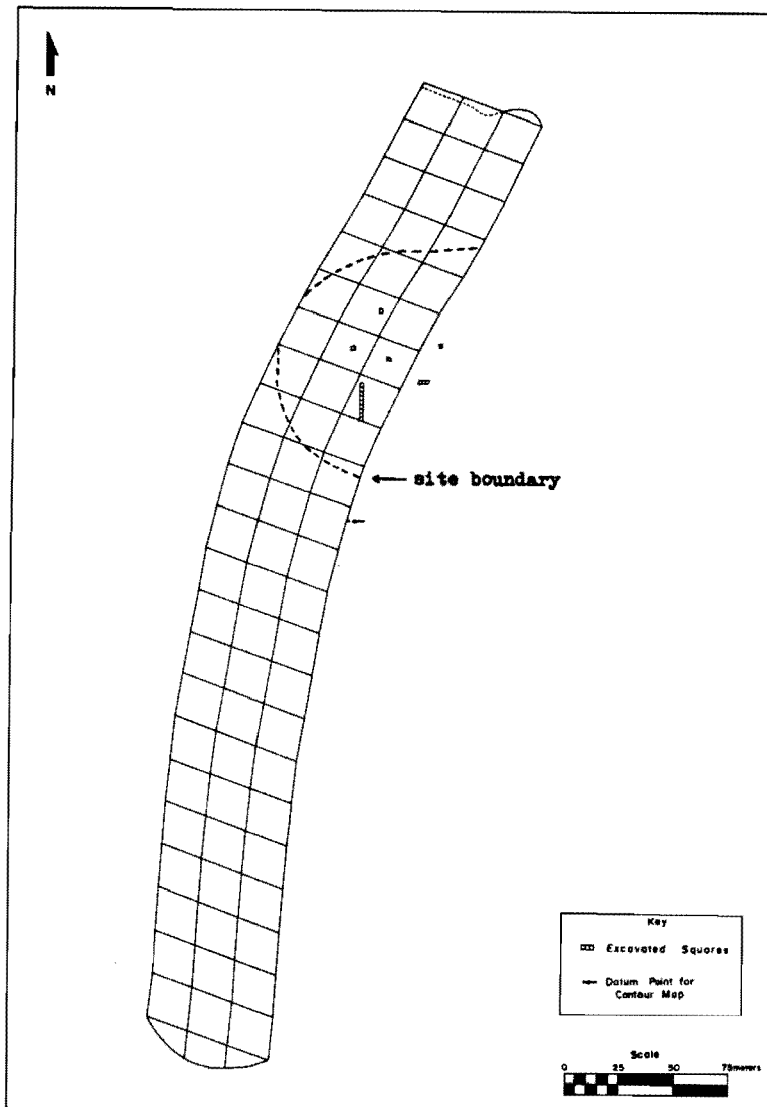


Figure 2. Surface Sampling Units and Excavated Squares at the Payne Site.

The test pit was dug primarily to verify the information provided by the owner and to check for undisturbed cultural remains. The pit revealed undisturbed midden under the plow zone. In addition, a flexed burial of a female, estimated to be 18- 21 years of age (Knick 1974) and lying on her right side, was discovered well below the midden layer. No burial offerings were found associated with the skeleton. This discovery prompted an expansion of the excavation to 2 m by 2 m in order to expose more sub-plow zone midden and better check the context of the burial.

Investigations at the Payne site were resumed in the summer of 1974 and included the systematic intensive surface collection of approximately two-thirds of the entire bottomland field area, the excavation of a trench 18 m long and 2 m wide in the site area, and a strata cut 5.2 m long and 2 m wide along the riverbank on the eastern edge of the site (Figure 2).

The surface collection was made after the field had been disked and three rains had fallen. Seventy-three 20 m by 20 m collection squares were plotted over the disked area and all artifacts were collected from the surface of each square. This collecting method yielded 12,027 items (Table 1). Then, the different types of artifacts were plotted on a map of the sampled area: hoes, hammerstones, nutting stones and grinding stones as individual occurrences, and other types of artifacts as contours of artifact density.

Artifact density contours were plotted for total artifacts, stone, cracked rock by weight, flakes, utilized flakes, projectile points, potsherds and stone, potsherds, plain pottery, pottery with surface treatment, stamped pottery, net impressed pottery, cordmarked and fabric marked pottery, bones and shells. Contours were plotted in

Table 1. Items Recovered from Investigations at the Payne Site.

Material Type	Surface Collection		Excavations		
	1974	1974	1974	1985	
		Macro	Micro	Macro	Micro
Potsherds	3588	3375	1916	2365	88
Pipes	8	5	-	2	-
Cracked Rocks	6348	4297	5320	1362	-
Flakes	1331	1448	2413	2039	1787
Projectile Points	199	177	-	92	2
Scrapers	35	7	-	5	-
Quarry Blades	27	-	-	15	-
Hoes	6	2	-	-	-
Nutting Stones	5	-	-	1	-
Grinding Stones	4	-	-	-	-
Hammerstones	-	-	-	3	-
Axes	2	-	-	-	-
Drills	1	-	-	-	-
Bones/Teeth	461	3616	937	1605	4334
Worked Bones/Antler	-	-	-	1	-
Shells	12	-	58	37	8
Lumps of Baked Clay	-	-	240	129	4341
Metal Items	-	-	7	2	1
Other Items	-	-	14	9	8

such a way to produce from five to seven contour lines for each type plotted. By using a surface density of 100 artifacts (potsherds and stone artifacts exclusive of cracked rock) per area of 400 m² (one potsherd or stone artifact per 4 m²) to define the site boundary, the site encompasses an area of 6,250 m² (Figure 2).

The intent in obtaining the intensive surface collection was to study the horizontal distribution of artifacts in the plow zone and to use that information to generate hypotheses about activity areas that might be present in the underlying deposits undisturbed by cultivation, generally following the model of surface sampling presented by Redman and Watson (1970). However, when it came time to excavate in 1974 field season, we initially chose to investigate the context of the human burial in relation to other site deposits. At the same time, we examined the relationship between the surface and subsurface deposits by excavating a 2 m wide trench from the square containing the burial directly northward through the area of highest projectile point density. This trench was eventually extended to a length of 18 m although it was not possible during the 1974 season to excavate the sub-plow zone deposits in the northernmost 4 m section. No additional human burials were uncovered, but 14 concentrations of midden type debris were located in the subsoil.

A second trench was excavated into the riverbank terrace on the eastern edge of the site (Figure 2) to check for intact midden deposits and buried early cultural horizons. A 1.3 m deep profile was exposed on the north end of the trench, revealing cultural deposits to a depth of 68 cm. It appeared that the lower half of the midden had not been disturbed by cultivation.

The 1974 excavations, which involved both macro-screening and micro-screening of the deposits, yielded a total of 23,832 items (Table 1).

Further excavations were conducted at the Payne site during the summer of 1985. On this occasion three areas were selected for excavation on the basis of surface artifact densities. One 2 m by 2 m unit was plotted slightly northwest of the north end of the 1974 trench (Figure 2) in the area of the highest density of plain pottery sherds and stone flakes (both utilized and non-utilized), based on the idea that this area, which also had a high density of projectile points, might be a locus of butchering and food preparation. A second 2 m by 2 m unit was excavated farther from the north end of the 1974 trench and slightly northeast (Figure 2) in the area of highest density of stamped pottery sherds, based on the idea that this might be an area of dwelling and food consumption. And a third 2 m by 2 m unit was excavated closer to the north end of the 1974 trench and to the northeast of it (Figure 2), in the area between two peaks in density of bone and shell, in order to find out why there was such a difference in surface density. It was also possible to complete the excavation of the 2 m by 2 m unit on the north end of the 18 m trench excavated in 1974, which was in the area of highest density of total stone and high density of projectile points and flakes. In addition, a 1 m by 1 m unit was dug in the wooded area between the cultivated field and the riverbank terrace to check for midden deposits in a potentially undisturbed area of the site.

The 1985 excavations yielded, from both macro-screening and micro-screening, 18,236 items (Table 1). The excavation in the area of highest density of plain pottery uncovered six pits that intruded the subsoil below 40 cm depth and contained potsherds, stone flakes, a few other stone artifacts, animal bones, and some shells.

The excavation in the area of highest density of stamped pottery uncovered some 15 possible postmolds extending in a rough arc in the northern third of the square, seeming to indicate the wall of house 3-4 m in diameter. To the south and within the arc was a midden deposit which covered two shallow sub-floor pits containing midden refuse, and one large sub-floor pit 1.29 m in diameter and extending down 35 cm into the subsoil. The west half of this pit was filled with cultural refuse including pottery sherds, flakes, projectile points, a nutting stone, cracked rock, animal bones and the tip of an antler flaker, and the east half had relatively sterile fill. At the bottom of this pit were found the bones of a human fetus which had died near term with a fetal age of approximately 36 weeks (Louise Robbins, personal communication 1986).

The excavation in the area of low density of bone and shell in between two areas of high bone and shell density revealed no sub-plow zone midden or features, but the small test pit in the wooded area almost due east of it (Figure 2) yielded abundant artifacts to a depth of 90 cm below the ground surface, including five potsherds from the 60 cm to 70 cm level which all fit together and had a filfot cross, complicated stamp design.

The remaining 1985 excavation was in the ninth and northernmost 2 m square of the 1974 trench. At a depth of 40 cm below the ground surface were 30 rather small postmolds and three subsoil pits that were 11 cm, 26 cm, and 30 cm in depth, respectively. The two deepest pits measured 55 cm and 56 cm in diameter, respectively, and were almost entirely filled with carbonized corn cobs, appearing to be what Binford (1967) has called hide smoking pits.

The Cultural Context of the Radiocarbon Dates

Three samples of charcoal which were recovered from the excavations at the Payne site were submitted for radiocarbon dating. The earliest radiocarbon date (AD. 1040 ± 60) (Beta- 18410) (Figure 3) was obtained from a sample of carbonized corn cobs from one of the *hide* smoking pits. The only other cultural remains recovered from this pit by macro-screening were two pottery sherds, both classified with the help of Joffre Coe as Pee Dee complicated stamped, one rectilinear and the other possibly curvilinear. Micro-screening yielded 25 stone flakes and 25 bones, all burned, and many pieces of material resembling caked mud.

A slightly later radiocarbon date (AD. 1090 ± 70) (Beta- 18412) (Figure 3) was obtained from the large and deep sub-floor pit containing the human fetus burial. The fill of this pit contained 46 pottery sherds, four projectile points, one quarry blade, 100 non-utilized stone flakes, six utilized stone flakes, one nutting stone, 24 fragments of cracked rock, 286 animal bones, and one deer antler tine flaker. Micro-screening yielded nine tiny potsherds, 376 stone flakes, 1,345 animal bones (716 of them burned), 759 globs of fired clay, and seven fragments of carbonized nut shells. The pottery sherds, inspected and classified by Joffre Coe, included 25 Uwharrie plain, five Pee Dee plain, and 16 Pee Dee stamped. Of the Pee Dee stamped sherds, at least 12 are curvilinear complicated stamped. It is possible that all the Uwharrie sherds are from the same pot, but the Pee Dec sherds appear to have come from several different pots.

The latest radiocarbon date (AD. 1130 ± 70) (Bcta-18411) (Figure 3) was obtained on charcoal found in a trash pit in the 1974 trench about 8 m from the southern end of the trench. This pit measured 73 cm in diameter (north-south) and extended into the unexcavated area to the east of the trench. This pit contained six pottery sherds, one projectile point, three non-utilized stone flakes, six fragments of cracked rock, and 21 animal bones. Micro- screening yielded 15 flakes of stone, 10 fragments of cracked rock, 62 animal bones, and 10 pieces of shell. Of the six pottery sherds, one lacked surface texturing, and the other five were judged by Joffre Coe to be possibly Caraway net impressed or at least post- Pee Dee.

The Significance of the Radiocarbon Dates

First, all three of the dates from the Payne site overlap for a period of 40 years (A.D. 1060-1100) within the range of one standard deviation. It is therefore statistically possible that all three carbon samples have the same radiocarbon age and that the associated cultural material was all deposited at the same time and could have been left by a single group of people using pottery deriving from different traditions. Or, using the maximum range of standard deviation for the three radiocarbon determinations, the dated remains might have been deposited anytime within a 230 year period (A.D. 980-1210), and indicate occupation of the site by at least one group of people using pottery from two different traditions (Pee Dee and Uwharrie), and a second group using pottery from a tradition (possibly Caraway) different from the other two.

Because of the overlap, it is risky to place a lot of confidence in the inference that one date is earlier or later than another. However, the temporal seriation of the dates does suggest the tentative inference that the Pee Dee remains are the earliest dated and are at least in part contemporary with the Uwharrie remains. The post-Pee Dee (Caraway?) remains are generally later than the other two, but not by a great deal.

All three radiocarbon dates are earlier than the dates which traditionally have been assigned to the associated cultural material. Uwharrie pottery in the Piedmont of North Carolina has been dated to the period A.D. 1200-1500 by Ward (1983) in his synthesis of archaeological investigation in the North Carolina Piedmont, and one net impressed Uwharrie vessel from the Donnaha site on the Yadkin river has been radiocarbon dated to the end of this period (Woodall 1984). However, more recent investigations by Davis and Ward (1988) have indicated to them that Uwharrie pottery was probably being made earlier than previously thought and does not appear to them to have been manufactured much later than A.D. 1200.

Pee Dee pottery has been dated A.D. 1550-1650 by Coe (1952) based on his research at Town Creek, A.D. 1450-1650 by Reid (1967) in his analysis of pottery from the Town Creek mound excavation, and post-A.D. 1500 by Ward (1983) in his synthesis of Piedmont archaeology. However, Pee Dee pottery has been dated A.D. 1250-1450 by Dickens (1976) based on the presence of 31 Pee Dee sherds in Pisgah phase deposits at the Warren Wilson site in the Appalachian Summit area of western North Carolina, and DePratter and Judge (1987) have recently dated Pee Dee remains to the mid A.D. 1300s.

It is also apparent from recent research in the Piedmont (Dickens et al. 1987; Davis and Ward 1988), that the Caraway series which was dated between A.D. 1700 and A.D. 1725 by Coe and Lewis (1952) is prehistoric and probably dates no later than the early part of the A.D. 1500s.

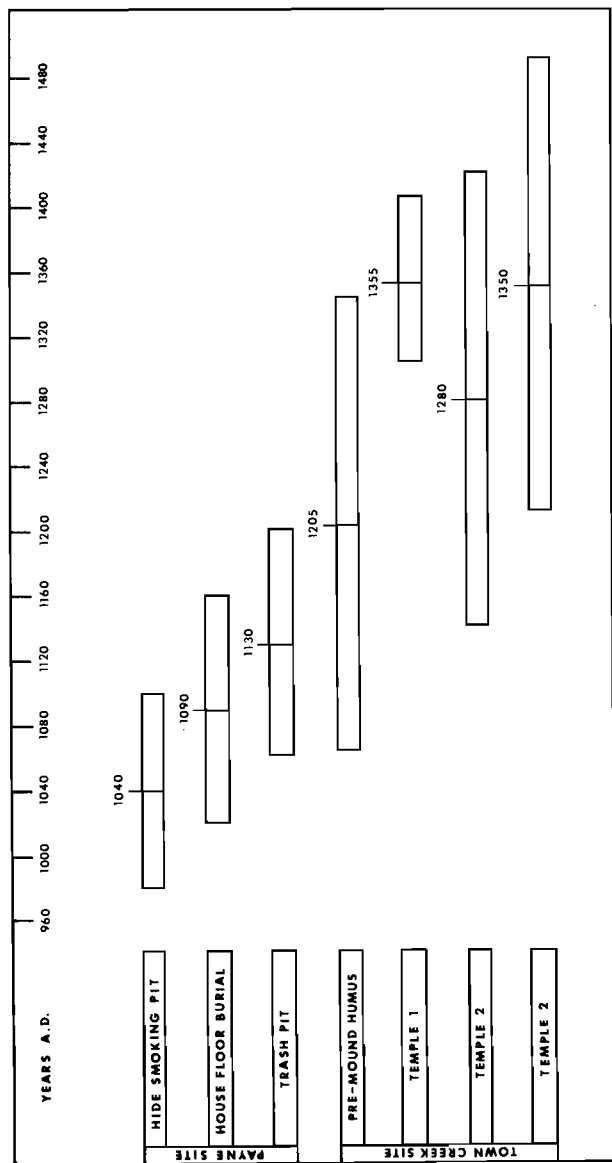


Figure 3. A Comparison of Radiocarbon Dates from the Payne and Town Creek Sites.

The three early radiocarbon dates from the Payne site are potentially important for the resolution of at least three important questions relating to the development of native culture in the south-central North Carolina Piedmont: the date of intrusion of the people responsible for the Pee Dee remains; the nature of that intrusion; and its impact on the local indigenous populations.

Figure 3 shows the three radiocarbon dates from the Payne site in relation to four radiocarbon dates available from excavations in and underneath the mound at the Town Creek ceremonial center (Dickens 1976:198). It appears significant that the earliest radiocarbon date from Town Creek comes from pre-mound humus and that this humus layer contained a higher frequency of Pee Dee complicated stamp pottery than the overlying deposits formed by mound construction and use (Reid 1967:57). This earliest date from Town Creek overlaps on its early end the two dates on Pee Dee pottery from the Payne site, and raises the possibility that the intrusion of people responsible for the Pee Dee pottery in south-central North Carolina occurred in the period A.D. 980-1160. Furthermore, it also is possible that this intrusion

was not accomplished by first establishing a political and religious center at Town Creek and radiating out from that base. Instead, there may have been an initial population expansion into south-central North Carolina and then perhaps 100 years or so later the Town Creek site was turned into a ceremonial center to serve an already fairly large resident population.

There also is the matter of the early presence of corn in the form of carbonized cobs at the Payne site. The radiocarbon date on the carbonized cobs is the earliest obtained at the site, and the associated pottery consisted of two sherds of Pee Dee complicated stamped. The only direct archaeological evidence of maize in the North Carolina Piedmont cited by Ward (1983) comes from the Parker site in the Great Bend area of the Yadkin River (Barnette 1978) and consists of pieces of cobs and some kernels. The Parker site was occupied during Uwharrie times, but investigations in Uwharrie components at some other sites have not produced maize remains, although chipped stone hoes have been found. Since Ward's (1983) synthesis, analysis of the contents of pit features excavated at the Donnaha site on the Yadkin River has revealed the ubiquitous presence of carbonized maize cobs (Mikell 1986). The pottery sherds at Donnaha are primarily of the Uwharrie and Dan River series, and five radiocarbon dates place the major occupation of the site within the period A.D. 1000-1500 (Woodall 1984). None of the pottery sherds found at Donnaha appear to be classifiable as Pee Dee, but some 20-30 sherds show impressions from a concentric circle stamp, and similar stamped pottery has been found at the nearby Hardy site associated with carbon dating around A.D. 1000 (Woodall, personal communication 1988).

Since the Pee Dee and Uwharrie series are believed to be contemporary in the North Carolina Piedmont, the former probably related to Creek peoples to the south and the latter probably related to Siouan peoples of the Piedmont, did maize enter the native Siouan economy prior to and independent of the Pee Dee intrusion, or rather as a result of that intrusion? The association of Pee Dee pottery with Uwharrie pottery and Pee Dee pottery with maize at the Payne site suggests possible transmission of maize from Creeks to Siouans associated with the initial period of Pee Dee intrusion.

Another interpretive problem of archaeology in the North Carolina Piedmont is when and by what process the historic Siouan groups acquired the custom of carved paddle stamping as a common surface treatment for their pottery. Such stamping does not appear to be common in the Uwharrie series which emphasizes cordmarking and net impressing and has been proposed to be proto-Siouan (Coe and Lewis 1952). Stamping (simple, curvilinear complicated and check) does become common during the subsequent phases (Coe and Lewis 1952), and has been linked to historic Siouan peoples through excavations at Upper Saura Town on the Dan River in northern North Carolina (Ward 1983:73). Check and curvilinear complicated stamping arc found in the Caraway series (Griffin 1945; Coe and Lewis 1952), which has been linked to the historic Siouans through excavations at the Fredricks site, as well as in the Hillsboro, Mitchum and Fredricks phases, the later of which has been linked to the historic Occaneechi (Davis 1987). An early date for the introduction of carved paddle stamping to the North Carolina Piedmont Siouan culture by way of the Pee Dee intrusion of Creek related people from the south would allow ample time for acculturation of Siouan groups to this new aspect of pottery technology and would be one way in which the Pee Dee culture had a significant impact on the culture of peoples with whom they came into contact.

Acknowledgments

The field research and laboratory analysis reported on herein was supported by the University of North Carolina at Greensboro Summer School and the UNCG Graduate Research Council. The assistance by Dr. Joffre Coe in the identification of the pottery types is gratefully acknowledged, as is the editorial assistance of Dr. R.P. Stephen Davis, Jr. and Dr. H. Trawick Ward. The 1973 and 1974 fieldwork was accomplished through the good graces of the original landowners, the late Gordon Payne and his wife Henrietta. The 1985 fieldwork was graciously facilitated by the present landowners, Marvin and Barbara Wall.

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