CLOVIS MACROBANDS IN THE CAROLINAS

I. Randolph Daniel, Jr., Department of Anthropology, East Carolina University
Albert C. Goodyear, Institute of Anthropology & Archaeology, University of South Carolina

Abstract

The recognition of Clovis in the Carolinas has largely come from statewide fluted point surveys. Studies have focused on style, raw materials, and geographic distributions. Raw material patterns suggest a single macroband centered on the fine-grained metavolcanic stone of the Uwharrie Mountains in the Piedmont. To the south, raw material distributions suggest another macroband centered on the Allendale cherts along the Central Savannah River. Presumably, metavolcanic Clovis points observed in South Carolina represent the southern extent of movement away from the Uwharries. Evidence for two probable Clovis macrobands is presented with the Saluda-Congree-Santee rivers being something of a major physiographic boundary.

Introduction

In the past two decades, great strides have been made in the study of Clovis in this amazingly widespread North American cultural phenomenon. The eastern U.S. in particular has seen great progress in the areas of radiocarbon dating, excavations of sites with good geoarchaeological context, and in the study of chert quarries with their central role in providing cryptocrystalline toolstone critical to Clovis technological systems. While more dating is needed, Clovis in the East and West are essentially contemporary (Waters and Stafford 2007) and studies of caches and quarry related assemblages reveal a basic homogeneity in stone tool technology. The continental wide mapping of Clovis and post-Clovis projectile is also coming of age, providing provocative regional patterning in probable territorial ranges and possible exchange among macrobands (Anderson et al. 2010). Here we present evidence for two probable Clovis macrobands in the Carolinas focusing on the Saluda-Congaree-Santee rivers as a major physiographic boundary.

Clovis in the Carolinas

As elsewhere in the Southeastern United States, the recognition of Clovis in the Carolinas has come from a statewide fluted point survey largely based upon isolated finds from surface contexts (Daniel 2000, 2005, 2006; Daniel and Goodyear 2006; Goodyear 2010; Goodyear et al. 1989; Peck 1988; Perkinson 1971, 1973). Clovis is the predominant fluted point type in both states followed by Redstone and lesser amounts of other presumably post-Clovis point types.

What are labeled as Clovis in the Carolinas do not differ appreciably from Clovis elsewhere in North America except that they have an expanding or excurvate blade. They also tend to have a slightly incurvate base with a shallow basal concavity (Figure 1). Points were fluted by direct percussion off the base in various stages during preform manufacture, often resulting in more than one flute or thinning flake.

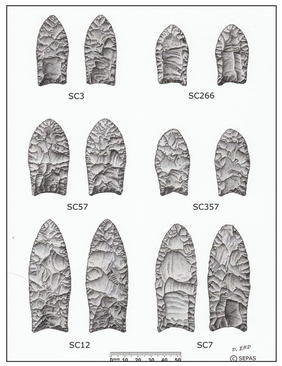

Figure 1. Examples of Carolina Clovis points made from Allendale Coastal Plain Chert.

Perhaps the major difference between Clovis points in the Carolinas is stone raw material use. Coastal Plain chert is the predominant tool stone for Clovis points in South Carolina while the use of metavolcanic stone predominates in North Carolina (Table 1). Allendale County is the primary location of extant Coastal Plain chert quarries along the Savannah River in South Carolina and neighboring Burke and Screven counties in Georgia (Goodyear and Charles 1984). These are Tertiary age marine cherts which start in the Tampa Bay region of Florida and extend northward up the southeastern Coastal Plain including Allendale County, South Carolina, the northernmost quarry exposure (Goodyear et al. 1985). Petrologic descriptions of these sources have been provided by Upchurch (1984), classified as silicified grainstone, which is native to the Flint River Formation (Cooke 1936).

Table 1. Carolina Clovis Points by Stone Types.

State	Metavolcanic	Allendale Coastal Plain Chert	Other Cherts	Other Stone	Total
North Carolina	96 (47.5%)	0	61 (30.2%)	45 (22.3%)	202 (100%)
South Carolina	86 (26.2%)	147 (44.8%)	34 (10.4%)	61 (18.6%)	328 (100%)

In North Carolina, metavolcanic stone sources are present in the Carolina Slate Belt in the eastern Piedmont and from the Uwharrie Mountains in particular (Daniel and Butler 1991, 1996; Steponaitis et al. 2006). The Uwharries consist of a loosely defined, narrow chain of mountains about 46 km long between Badin and Asheboro in Stanly, Montgomery, and Randolph counties where numerous quarries have been identified. In North Carolina, the Carolina Slate Belt consists mostly of rocks originally deposited on or near the earth's surface by volcanic eruption and sedimentation. The term "slate belt" refers to the low-grade metamorphism that produced a slaty cleavage in many rocks. Of interest here is the high-silica metavolcanic rock commonly referred to as "rhyolite" that was extensively quarried prehistorically due to its good to excellent conchoidal fracture (Daniel 1998; Steponaitis et al. 2006)

A few other raw material patterns should be noted. First, Clovis artifacts of other raw material types are present in both states. For example, points made from quartz, and orthoquartzite were used but are recorded in much lower frequencies than either Coastal Plain chert or metavolcanic stone (Table 1). Geologically, quartz and orthoquartzite is widely available in both states, although not in the concentrated abundance of the Allendale and Uwharrie sources. Moreover, the knapping quality of these materials is highly variable. Second, chert Clovis points are present in North Carolina (Daniel 2000, 2006; Daniel and Goodyear 2006) and South Carolina (Table 1) that appear to represent a variety of unknown sources based upon the color and texture of the artifact raw material. Whatever their source, they most likely originated outside the state. Interestingly, Coastal Plain chert artifacts appear to be exceedingly rare in North Carolina. Finally, metavolcanic Clovis points are present in South Carolina most of which appear to be made from the siliceous metavolcanic Uwharrie sources in North Carolina. There are metavolcanic bedrock sources and quarries known to exist in the western Piedmont of South Carolina (Benson 2007), although they tend to be fairly localized, rare, and often of inferior flaking quality compared to Uwharrie rhyolite. Generally speaking, then, metavolcanic Clovis points in South Carolina because of color, banding and siliceousness tend to macroscopically resemble Uwharrie material rather than South Carolina metavolcanic stone which is often prone to chemical weathering (Goodyear 2010). In sum, analysis of Clovis raw material use combined with sourcing studies suggests two geographically discreet bedrock sources provided the vast majority of toolstone in the Carolinas: the Uwharrie metavolcanic stone sources in the North Carolina Piedmont and the Allendale chert sources in the Coastal Plain of the middle Savannah River (Figure 2).

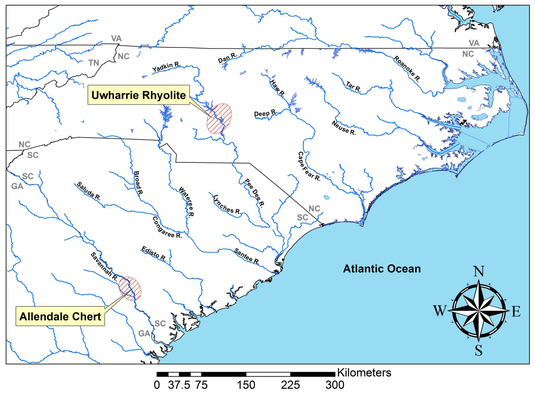

Figure 2. Locations of the major Clovis toolstone sources in the Carolinas.

Spatial Patterns

The toolstone sourcing studies described above provide a unique opportunity to examine potential spatial patterns in the distribution of Clovis points by raw material across both states (Figure 3). Perhaps the most obvious pattern is that Coastal Plain chert dominates Clovis artifact distributions in southern South Carolina while metavolcanic points dominate in North Carolina and northern South Carolina. This pattern clearly reflects the influence of the respective raw material sources in each state. Given this raw material spatial distribution, we are intrigued by the possibility that this pattern might represent the geographic ranges of two macrobands centered on their respective toolstone sources: the Uwharrie Mountains metavolcanic stone sources to the north and the Allendale Coastal Plain chert sources to the south.

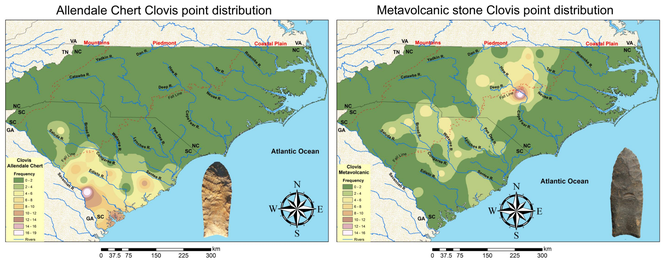

Figure 3. Distribution of Clovis Allendale Chert and metavolcanic points.

A closer examination of this distribution also reveals a possible boundary between the two proposed regions as indicated by the area where the distribution of metavolcanic points meets the distribution of chert points. This occurs near the Saluda-Congree-Santee rivers in the northern part of South Carolina (Figure 4). To the north metavolcanic Clovis points predominate while to the south Allendale Coastal Plain chert points predominate. This boundary is most evident in the Piedmont with the Saluda River and on the Coastal Plain with the Santee River (Figure 4). To examine this possible boundary a distributional study was conducted of Clovis points by raw material found within 20 km of the Congaree and Santee Rivers (Goodyear 2013). This produced a sample of 38 Clovis points. Of these 28 or 74.8% were exotic to this area with 19 coming from the Savannah River region and 9 from probable Uwharrie sources. Only 8 points were made from orthoquartzite, a definite local sedimentary material (Figure 4). This suggests that Clovis groups coming from the different provinces were bringing their tools with them rather than residing in these river valleys for extended periods of time and using local toolstone. Accordingly, this zone is likely a place of interaction between the two macrobands or an aggregation zone rather than an aggregation site.

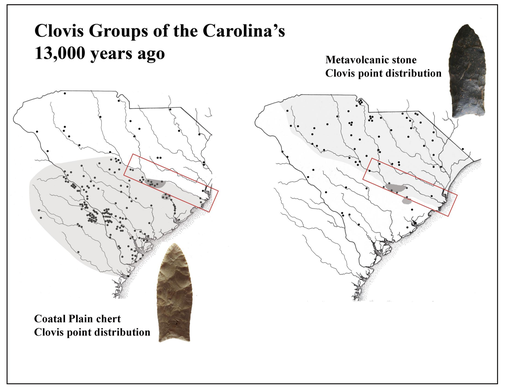

Figure 4. Clovis Points (*n*=38) within 20 km of the Congaree and Santee Rivers (outlined in red): Allendale Coastal Plain Chert-19, Metavolcanic-9, Orthoquartzite-8, Quartz-2.

Metric data on point dimensions provides evidence that South Carolina metavolcanic points likely had their origins in North Carolina. Boxplot comparisons of Clovis point maximum length, blade width, basal width, maximum thickness, and concavity depth indicate no significant differences between metavolcanic points from North Carolina and South Carolina save for point maximum length (Figure 5). Median point length (60.2 mm) for North Carolina (*n*=69) Clovis points is significantly greater than median point length (50.0 mm) for South Carolina Clovis points (*n*=41). The absence of significant differences in point dimensions between the two assemblages except for point length is consistent with the notion of a decrease in tool length as a function of distance from toolstone source (Daniel and Goodyear in press).

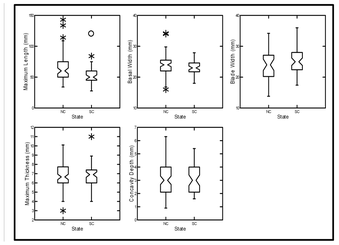

Figure 5. Boxplots comparing dimensions of North Carolina (NC) and South Carolina (SC) Clovis points. Boxes are notched at median values; box edges are the median values for the upper and lower halves of the data (the hingespread). Vertical lines show the range of values that fall within 1.5 hingespreads. Asterisks mark outlier values and zeros mark extreme values. Box notches form confidence intervals around median values. If notch intervals around medians of two different data sets do not overlap, then the two population medians are different at a 95 percent confidence interval.

Last, there is another line of evidence which suggests movement from the Uwharrie Mountains down into South Carolina that was realized while plotting the distribution of metavolcanic Clovis points (Daniel and Goodyear in press). There are several linear alignments of points that are apparent, including one that is of particular interest in the northern part of the state running east-west (Figure 6).

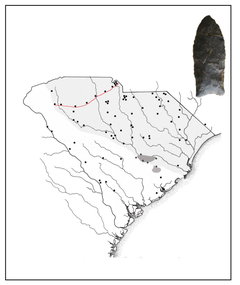

Figure 6. Possible Clovis trail.

It starts in the vicinity of York, South Carolina and crosses over the Saluda River. Nine points form this line and seem remarkably linear given how few metavolcanic Clovis points have been mapped for the western part of the state. Furthermore, the suggested line bears a tantalizing similarity to the 1775 Mouzon Map showing the historic trail from the Cherokee to the Catawba Indian settlements (Cummings 1966; Myer 1928). This possible association was further checked by comparing five named drainages crossed by the Mouzon trail with a modern map of South Carolina with the same named drainages. The nine points are within 5 to 10 km of this historic trail. The possibility of a long-lived trail on the order of several millennia is certainly intriguing, one that might exist due to easy places to ford streams and rivers which have remained essentially unchanged over 13,000 years (Daniel and Goodyear in press). If these alignments in fact do represent travel ways by Clovis peoples, it illustrates another type of cultural information that is potentially available in Paleoindian point mapping data bases where reasonably precise proveniences are recorded (e.g., Anderson et al. 2010).

Conclusions

Using a sample of 530 Clovis points, it has been shown that two geographic clusters exist related to the two dominant toolstone sources in the Carolinas. They are suggestive of two demographic groups of Clovis people, contemporary macrobands centered on the Uwharrie Mountain sources in North Carolina and the Allendale type Coastal Plain cherts of the Savannah River. It is proposed that a physical and culturally significant boundary was present from the Saluda River down through the Congaree and Santee Rivers. The high proportion of points foreign to the Congaree-Santee segment derived from raw material sources from the north and south, suggests a zone of human interaction where the two macrobands aggregated periodically for social purposes and mate exchange. The possible travel way running across the Piedmont in South Carolina may be another indication of interaction between the two possible macrobands.

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