Archaeology, Copper, and Complexity in the Middle Atlantic Region

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Chapter 1

Introduction

Setting the Stage

The Middle Atlantic region has seen intensive archaeological research over the past fifty years (Curry 2018; Gunn 1997; Kent et al. 1971; Kinsey 1972, 1975). Both universities and colleges within the region have produced countless professional archaeologists, geomorphologists, and paleobotanists, specializing in this region. Whether it was prompted by a national depression, interest in creating culture histories, or widespread personal avocationalism, our understanding of Middle Atlantic prehistory continues to be expanded and challenged (Brinton 1885; Cross 1941, 1956; Custer 1996; Kinsey 1972; Kent et al. 1971; Means 2013; Morgan and Lloyd 1922). In the swarm of this fervor, the Middle Atlantic Archaeological Conference emerged, organized in 1969–1970, to provide a venue for new research and exchange of information (Curry 2019; Stewart 2020); and beginning in 1985, the Journal of Middle Atlantic Archaeology put those presentations and new research into print, which still continues today.

However, even with regional prehistories and site-specific research providing a plethora of information in published reports, peer-reviewed articles, and books—gaps in our archaeological understanding of the region still remain. Because of that the Middle Atlantic region was relegated to the shadows of its brother and sister—the Northeast and the Southeast (Raber 2019). So with over fifty years of exploration and excavation, as well as the publication of a whole volume on the prehistory of the Middle Atlantic (Wholey and Nash 2018), this region is still hard to wrap ones finger around.

This book tries to fill one of those gaps—the nature of interaction, an artifact class involved as part of interactions and its effects on prehistoric native groups in the Middle Atlantic region during the Early to Middle Woodland periods (table 1.1). In order to quantify the impact on prehistoric social organization, native copper in the form of artifacts will be used as

Table 1.1 Major chronological periods discussed in the text.

Periods	*Stewart (2018)*	*Stewart (1990, 2003)*	*Custer (1996, 26)*	*Williams and Thomas (1982)*	*Kinsey (1974)*
Early Woodland	1000–500 BC	1200 BC–700/600 BC	1260 BC–AD 0	1000 BC–AD 0	1000 BC–AD 0
Middle Woodland	500 BC–AD 800/900	600/400 BC–AD 900	AD 0–1020	AD 0–1000	AD 0–1000

a proxy. Prehistoric copper artifacts along with other local, regional, and interregional objects of the Early and Middle Woodland periods speak to a "participation" within a larger interaction sphere. More specifically, they appear to be included in a mortuary ceremonial program situated within existing cultural systems that appear in a number of regions (Griffin 1964; Ritzenthaler and Quimby 1962; Thomas 1987), but do not indicate a single, "pan-Woodlands cult or ritual system" (Carr 2005a, 617; Seeman 1979, 306–8, 382–84).

The presence of a mortuary ceremonial program in existence in the region had its origins as far back as the Late Archaic. Acquiring local and exotic objects and using them as part of a mortuary program makes a case for intensifying interactions of certain artifactual classes. The end result of these (inclusive) interactions, as evidenced by the complex mortuary program, has previously been archaeologically interpreted as an increase in social complexity in the region. However, as will be explored in the following chapters, the idea that cultural complexity is necessarily tied to status, rank, or hierarchy may not easily apply in this region (Souvatzi 2007). Complexity, within the Middle Atlantic region in whatever its form, is a result of prehistoric peoples engaging within a number of interaction networks, adjacent to and beyond their borders, whereby mortuary ritual and ceremonialism acts as a mechanism which helps to maintain sociocultural equilibrium.

The use of copper artifacts in prehistoric society starts as far back as 8,000 BC (Bebber 2019; Martin 1999). The "Old Copper Culture," as it was termed, consisted of tanged spearheads, large awls or punches, and socketed axes (Wittry and Ritzenthaler 1956; Pleger 2000). This Middle to Late Archaic manifestation found itself spread throughout the Great Lakes area and west to Alberta and as far east to New England (Curry 2002; Gibbon 1998). Prehistoric mines complete with large hammerstones litter the Great Lakes area in support of raw copper extraction for the manufacture of objects (Holmes 1901). The kind and type of these objects while present throughout

the Midwest and Northeastern woodlands find themselves slowly disappearing during the onset of the Early Woodland.

Also, during the Late Archaic period, the Middle Atlantic, like the Ohio Valley and surrounding area, saw a mortuary system emerge (Griffin 1964; Ritzenthaler and Quimby 1962). Parts of that system included ways to handle the human remains and the types and kinds of associated grave goods that would accompany the deceased and the elaborate ceremonies tied to them (Cunningham and Griffin 1948; Curry 1999, 2015; Custer et al. 1990; Kraft 1976; Regensberg 1971; Ritchie and Dragoo 1960; Stewart 2015). Over time, it is possible that this mortuary system or complex changed and adapted to both internal and external influences. The Middle Atlantic mortuary or burial kit, comprised of the associated and non-associated artifacts, saw increasing evidence of a connection between the Middle Atlantic and the Adena and Hopewell cultures. This kit, composed of both local and far-distant artifacts is a reflection not only of the interaction networks, but also of existing social mechanisms—the relationship among and between people of the Middle Atlantic region and those outside. Penny (1995, 160) states that "the terminal point for all Woodlands trade cycles was the mortuary ritual, in which the primitive valuable became a burial offering used during an elaborate ceremony honoring the recent dead." It is here we see the mortuary ritual imbue these objects with significant social value because of the significance of the deceased while they were alive. It is within this mortuary ceremonialism that Middle Atlantic prehistoric people engaged in interactions of first Adena and later Hopewell burial furniture to maintain existing physical and ritualistic-ideological relationships thereby maintaining a complex egalitarian lifestyle.

The importance of this book is in the valuable and quantifiable information about interactions and mechanisms behind them that are realized through the use of copper as part of the mortuary ceremonial kit. Early and Middle Woodland mortuary ceremonialism's uniqueness is reflected in the description and analysis of the archaeological record, which is interpreted as a physical manifestation of the interpersonal relationships forged among prehistoric groups within the Middle Atlantic region and their connections to adjacent regions. These connections are represented and interpreted, through the archaeological record, as being a direct reflection of the kind and scale of cultural social system in operation at the time.

Previous archaeological publications concerning prehistoric complex societies in the Middle Atlantic have either been from the outside looking in or just skirting around the issue of the existence of social complexity. Archaeologists from this region have discussed examples of increasing social complexity that existed in the region, and while being significant, didn't appear to critically examine how we were defining the term itself and the resulting implications (Custer 1984, 1994, 1996; Hantman and Gold 2002;

Stewart 1989). However, the concept that there existed a form of societal complexity (i.e., ranking, social inequality, hierarchy) in the Middle Atlantic has never really taken root and grown. This book will explore and examine a particular artifact class—material culture that seem to be the result of maintained or created mutual obligations among individuals, families, clans, and communities (Penny 1985, 147) from the Middle Atlantic and other regions. This artifact class (local and nonlocal) manifests itself within "burial equipment" (Perry 1985), playing an integral part in the wider mortuary ceremonial program. This brings us to the question, what is the relationship between individuals, families, clans, and communities who are culturally distant, and yet who possess the same if not similar objects or images? (Penny 1985, 19). How did they come to possess them? What is their meaning, and does that meaning change as ownership changes? Finally, what is the significance of these objects being placed with the deceased?

Stewart (1989, 1994, 2004) and Custer (1984, 1987, 1989), both Middle Atlantic archaeologists have written extensively on the topics of artifact sourcing, trade and exchange, and social complexity when it comes to the region. As will be seen in a later chapter, Custer and Stewart, as well as others have laid out models of trade that would account for the type of objects both present and absent in the region (Brose 1979; Griffin 1952; Thomas 1971; Weslager 1968) However, only recently has there been real applications and testing of these models using actual artifacts. Additionally, while trade and exchange are important mechanisms within prehistoric interactions, they are not the only mechanisms (Carr 2005a). Previous research into the chemical characterization of pre-contact copper artifacts from the region examines the role of interactions and social complexity, specifically as it applies to Early and Middle Woodland mortuary sites (Lattanzi 2007, 2013). Using the chemical characterization of copper artifacts, a central component of the larger mortuary ceremonial kit, we can begin to examine how interaction in specific objects sustained the significance of the wider mortuary ceremonial interaction sphere during the Early to Middle Woodland periods, which was known throughout the Middle Atlantic region and beyond.

Since 2003, I have been interested in how neighboring cultural groups have socially influenced native peoples of the Middle Atlantic region through interaction. I have researched and published on this topic for a number of years analyzing different artifactual data (lithics, copper, and pottery) from the Middle Atlantic region, and this book, a synthesis of the ideas of others, lays out my own ideas and theories on how, and potentially why, prehistoric native peoples achieved that goal. Using a number of different lines of evidence, some archeological and others more theoretical, prehistoric society in the Middle Atlantic can be viewed as a society that was a part of a larger complex interaction network of reciprocal interactions. Exchange of a set

of ideas, a set of traits, a set of social and ceremonial obligations, local and exotic, that helped to frame their own world view as exemplified by mortuary ritual, something that in some small way connected every prehistoric Native American. What is also intriguing about this aspect of prehistoric culture is observing changes in the structure of a mortuary system often reflects changes with the organizational properties of the cultural system itself (Binford 1971, 25; Penny 1989, 69). The role that copper artifacts played in this change is a small, but significant part. It is seen as "burial equipment"—part of a larger ceremonial kit placed with the deceased at the burial. These pieces making up the kit are listed as classes of artifacts, which are used to examine their point of origin and hence interaction. This entire kit that accompanies the dead to the afterlife is an affirmation of their person and social identity when they died, but also their connection with other more distant groups. Potentially how and where they acquired parts of the kit relate to their interaction within a larger sphere. Seeman (2020) and others (Carr et al. 2005, 485, 498, 518; Cowan 1996, 143; Hall 1997, 156) suggest that these goods are not buried because of the importance or status (i.e., aggrandizement via Bursey 2015; Hayden 1990, 1995, 1996), but because it is seen as group contributions or gifts of the deceased.

This book is laid out within a prehistoric social framework set within the Middle Atlantic region. It begins by laying down the work done by those before on the significance and importance of defining and promoting the multitude of characteristics possessed by this region that make it just as influential in the cultural development of the region's native population as other more developed and researched regions. So a case for the uniqueness of the Middle Atlantic region as a solidly established archaeological cultural region is made. Chapter 2 presents a number of authors who have in the past and present defined the Middle Atlantic region based on a number of criteria. As will be shown, there are differences in opinions on how and what those criteria should or should not include.

In the following chapter (chapter 3), the natural and physical environment of the region will be described. The combination of the natural and cultural take on additional environments of available resources, living on the landscape, and manipulating environments. What will be described here is a short introduction and description to the physiographic provinces that exist within the Middle Atlantic region. Afterward, the end of this chapter presents current information on native copper, its origins and presence in the region and beyond.

Chapter 4 discusses interaction(s), what it is, what is does and how prehistoric people use it. Previous models for the Middle Atlantic region, of interaction will later be applied to the analysis of a part of the burial kit—copper. A number of archaeological sites in the region, specifically those

where the recovery of copper artifacts is prevalent, typically mortuary sites are presented in chapter 5. Other sites and/or collections are included as being relevant to the current discussion and help fill in some missing pieces of our knowledge of Early and Middle Woodland occupation in the region. Observations of cultural traits shared by all of these sites/collections will be presented. Chapter 6 then moves into a discussion of complexity, its definition, ways to identify it and whether or not it can be identified in the Middle Atlantic region. A set of expectations are proposed to use against the results of the chemical characterization study in order to evaluate previous mechanisms of interaction. These results add further evidence to our understanding of prehistoric social obligations, reciprocity, and the nature and value of not only the interactions, but of the objects themselves.

The role of complexity as defined and understood in the Middle Atlantic region, while not like that existing in other regions, is still in need of clarification. While there were possibly direct connections between the Middle Atlantic and Ohio Valley peoples, archaeologists still are uncertain as to the intensity of scale of that integration. That key aspect to prehistoric interactions and its mechanisms are a vital and integral part of understanding culture change. Chapter 7 discusses how these connections between the Middle Atlantic region and those outside are not only clear cut, but also help to explore other avenues of complexity in the region.

Lastly, chapter 8 will ask the question, have we got any closer to a fuller understanding of prehistoric cultural change in the Middle Atlantic region? What was the role the Delaware played in the larger interaction mortuary ceremonialism sphere during the Early to Middle Woodland periods and what implications did it have on the society as a whole? How should those who study this period of large social and cultural change tackle current terminology?

I hope that the reader will take it upon themselves to learn a bit more about the prehistoric peoples of the Middle Atlantic region; the information is out there. Our knowledge of an area is only as good as our understanding of it. This book provides more of that knowledge for those who are both on the outside and within the region (Hantman and Gold 2002, 291). If these individuals are based within the region, then it is all the more imperative that they immerse themselves in all of the published and unpublished material. For those outside looking in, "come on, it's okay, come on in, the water is warm."

Chapter 2

The Middle Atlantic Culture Area

The area of focus is the Middle Atlantic region and its original inhabitants are the Lenape or the Delaware. Lenape is what the native inhabitants called themselves. While there are linguistic differences or dialects within the region, they were the "Original People." The term Delaware, which has been described in almost every publication of the Lenape, came from Thomas West, the 3rd Lord De La Warr. He was then appointed governor for life and captain general of the Virginia Colony. The Lenape therefore we more generally called Delaware and that name will be used throughout.

This book is more than just a story about copper artifacts. It is about a region, a people, and a culture area. It is about elevating the prehistory of this region to its proper place among adjacent regions. It is also about how this raw mineral affected and effected prehistoric Native American society starting around 1000 BCE[1]. Most archaeologists who work in this region consider it a culture province or culture region. Like the archaeological southwest, northeast, and southeast regions, the Middle Atlantic (figure 2.1) should be no less different, but it is and has been. One of the reasons why Middle Atlantic archaeology doesn't get press could be the fact that we don't have the Cohokia's, or the Moundvilles, or the Hopewell's. We lack the large-scale earthworks, along with the elaborately adorned and artifact rich burials. We should not however lose site of the fact that while those impressive archaeological remains are what define those cultures, we in the Middle Atlantic have an archaeology that is just as significant as our study and interpretation of it, and so the discussion begins with the evidence showing how the Middle Atlantic region is in its own right, a region worthy of intensive archaeological focus. This region has been referenced as the Middle Atlantic, the Mid-Atlantic, or the Mid Atlantic. The Middle Atlantic region like most other "cultural" regions in North America has been given its own boundaries, that

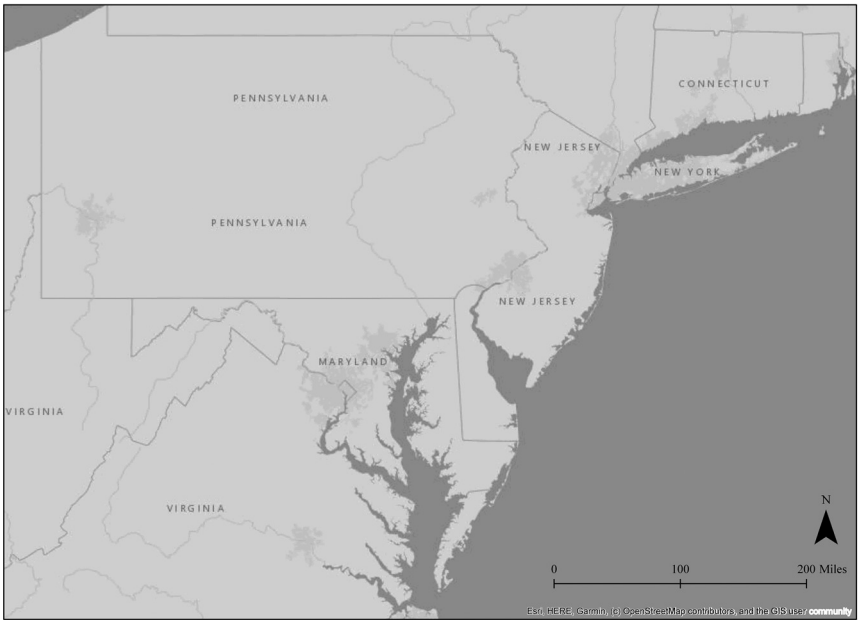

Figure 2.1 Map Showing the Individual States that Make Up the Middle Atlantic Region. *Source*: Gregory Lattanzi.

in some general and fluid way are bounded ecologically, environmentally, physiographically and of course culturally. The remaining discussion presents past and current scholarship on the concept of what the Middle Atlantic region is and how it is culturally different and distinct from those around it.

The similarities in material culture, settlement patterns, and subsistence practices throughout most of the Middle Atlantic Region (MAR), especially the coastal area, beginning in the Early Woodland 1000 BCE–AD 100 suggest much of the region was interconnected. In fact, there appears to be more of a cohesively reciprocal aspect to not only the environment but also to the residing cultural groups. In fact, this connectedness was noticed early on by archaeologists, and so describing and defining it as a region.

It seems to have started with Otis Mason (Mason 1896, 646–47), or at least he is the one who combined the earlier observations of others (Allen 1892; Bancroft 1875; Brinton 1891; Boas 1911; Merriam 1892; Powell 1891; Thomas 1894). Otis in citing these earlier authors, establishes the melding of environment, (flora and fauna) with the specific cultural groups across the country. It is interesting that Otis was able to relay how one part determines or impacts the other is significant in the development of a cultural region and its adaptation. In fact, he stated that "that the more circumscribed the

environment the more dependent the activity must be upon it." Mason equates culture areas with environments, then ties in other scholars studies of Native Americans. Later, William Henry Holmes (1897, 1903) laid the groundwork for establishing such a region archaeologically. He (Holmes 1897, 134) discusses the stone implements from the Potomac and Chesapeake province, indicating a Chesapeake Tidewater region with consistently pronounce biologic and geologic distinctions and these "combined in archaic times produce marked anthropological distinctions." Then in 1903 Holmes further classified this region based on his interpretation of similarities and differences in pottery. He called it the North and Middle Atlantic Slope, which include the North Atlantic (New England) states. This region stretched from Maine down to South Carolina. Holmes based this geographic outline on similarities in pottery manufacture and tempers (figure 2.2). Holmes, however, included the southeast in his description because to him the net-impressed pottery was the key trait for eastern coast peoples (Holmes 1903; Thurman 1985, 25).

Wissler (1927) was the first to present the culture area concept where there are regional differences based on material culture, social behavior, and more importantly food resources. What is significant for our purposes here is that we are examining the social evolution of a culture within a specific and confined or circumscribed regional geographic area. If this culture group can function well in the area, it might develop and we may expect to see a functioning community. This culture then would be for all intent and purpose a regional culture, and over time we would expect to see interactions with other adjoining regional groups and a distribution of cultural traits over time. In 1939, Kroeber (1939, 101) defined cultural areas for all of North America. In fact, Kroeber's map of the distinct regions of cultural groups was based directly on the pottery map produced by Holmes (Kroeber 1939, 104, Map 16). One can see the forming of distinct regional differences based on cultural traits. Kroeber in fact went further creating sub-areas within the Middle Atlantic area (i.e., 3a, 3b, and 3c) that were essentially niches within a general environment.

In fact, many subsequent archaeologists have noticed this patterning that started with Holmes and Kroeber. In 1952, in *Archaeology of Eastern North America*, or "The Big Green Book," Schmitt outlined the concept of the "Middle Atlantic states"—New Jersey, Pennsylvania, Maryland, Delaware, and Virginia. Schmitt's chapter was published posthumously as he died in a car accident before the book was published (Schmitt 1952, 59). His description of components and manifestations were assigned to temporal periods. Interestingly, Schmitt was able to concisely show through site and artifact description a cohesive cultural region in existence in the MAR. This culture continued over time adapting, trading, and integrating bits and pieces from their surrounding neighbors. In fact, what appears to Schmitt (1952, 70) and

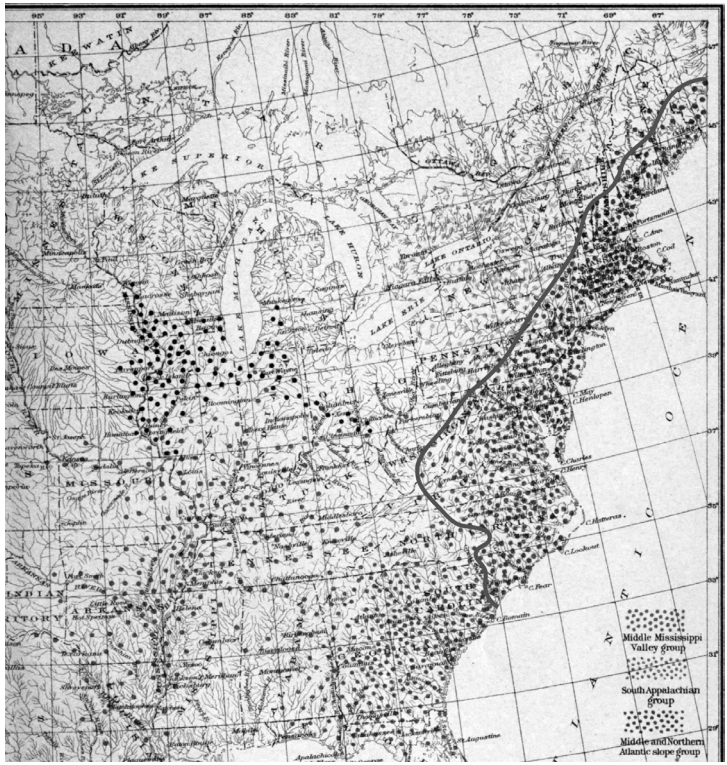

Figure 2.2 W.H. Holmes Pottery Distribution Map Showing the Middle and Northern Atlantic Slope Pottery Group. *Source*: Smithsonian Libraries and Archives.

later described by Hantman and Gold (2002, 290–91) is the active participation in a larger trade interaction sphere centering on a mortuary program, during the Early to Middle Woodland periods.

The the term "Middle Atlantic Seaboard Culture Province" was posited by Stephenson et al. (1963, 200–205) in a seminal work on the site of Accokeek in Virginia. He even drew boundaries designating the region, which he confined to being located within the Coastal Plain (figure 2.3). Although this was a great attempt to define and physically draw out the MAR, Brennan (1969) would later expand Stephenson's northern most reaches to include areas he was excavating along the Hudson River, however, most of the region itself would be within the Coastal Plain. Brennan (1982, 2–3) thought that the Middle Atlantic, because of its geography, environment and people there existed cultural unity and in-situ cultural development, "out of which should come a sense of the correlation and structure of cultures having been lived through various kinds of change and growth."

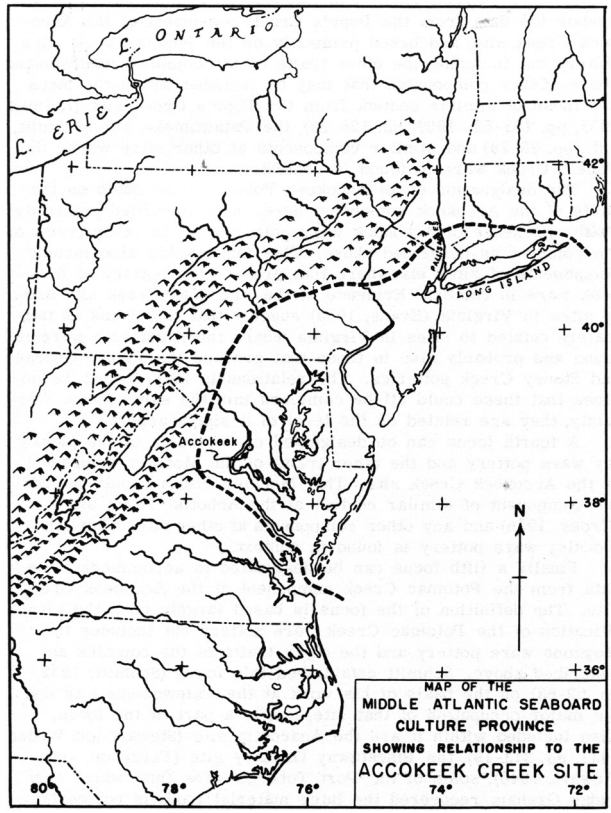

Figure 2.3 Map of Middle Atlantic Region as Denoted by Stephenson (1963). *Source*: Stephenson et al. 1963, image used by permission of the University of Michigan Museum of Anthropological Archaeology.

Kinsey (1971) was the next to enter into the regional descriptive fray, however approaching the region a little differently. Kinsey (1971, 7) finds that while there are many projectile point forms that resemble one another in this culture area, "look-alikes do not necessarily constitute a diagnostic type of known cultural affiliation." However, Kinsey almost does a turnaround implying that because of this similarity of projectile point forms and that they are different than surrounding areas, that the MAR has a distinctive Late Archaic component, or at least one that has not been thoroughly identified as of yet. That this component occupies different environmental zones, it helps as Kinsey (1971, 7) states "to elucidate the Late Archaic in the region" assigning it its own tradition, while in turn solidifying the concept of a MAR or culture area.

Gardner (2002, 155) presents a "pan-Middle Atlantic Coastal Mockley series," similar in concept to Holmes definition based on pottery types. Gardner's thoughts here were for a conference on Piedmont archaeology Here Gardner (1983, 151) in his discussion of the overall prehistory calls the MAR "as much itself an artificial construct as it is an anthropological reality." Gardner sees stylistic separations occurring over time in both pottery and stone tool manufacture possibly because of the different physiographic and environmental conditions, that give this region its uniqueness. Based on all the evidence that has been published over the years continuing even today, there is no doubt that the MAR is an authentic and practical research area in North American (Dent 2018, 371).

With the first publication of the Journal of Middle Atlantic Archaeology, Thurman (1985) presented the reasoning for the Middle Atlantic Coastal province. Like Kinsey, Thurman discusses a specific trait, ceramics, as the glue that binds this region as a "culture area" which for him starts at about the Transitional period into Early Woodland. Thurman also defines this region similar to Stephenson in that it exists within the Coastal Plain where he sees a homogeneity of pottery, like Holmes. Thurman's main treatise is that this Middle Atlantic Coastal Plain should be considered a region and a culture area based on a number of characteristics. These characteristics are specifically, the Mockley type pottery, as being uniform in paste and surface treatment, participation in a trading network with other regions, and lastly a mortuary program that resemble those of the Adena and then later Hopewell. Stewart's (1987) review of Thurman (1985) cites obvious reference omissions of archaeological work and a lack of clarity in showing the reader how Thurman came to his conclusions. Stewart also cites evidence of a wider distribution of lithics than Thurman attests, as well as a much larger and active settlement pattern system utilizing the Outer and Inner Coastal Plain, as well as the Piedmont provinces. Stewart (1987, 104–5) also states that while there is reason to consider Smith's New York pottery sequence as being a northern boundary, there are still some developmental overlaps as well as "stylistic and chronological correlates." In response to Thurman, Stewart indicated that a mortuary model can be posited for the province as well. It can be said that Stewart's review of Thurman's case for a Middle Atlantic coastal region helped in clarifying its core and identifying its fluid boundaries, again the notion of a solely coastal cultural region.

In a volume on the Middle and Late Woodland of Virginia, McLearen (1992, 55–56) uses the phrase a "fall line cultural boundary" which aligns itself to Stephenson's description of the MAR and somewhat to Thurman's as well. The western edge of this region is the Fall Line, the boundary where most rivers and stream end their tidal influence. For McLearn, it is the Middle Woodland expressions of Virginia's Coastal Plain that are more

closely tied to the coastal areas of the Middle Atlantic. All of this, plus increased local variation and southern Chesapeake Bay influences "marking the boundary of the Middle Atlantic as a culture region" (McLearen 1992, 55).

Curry (2018) in his chapter on the history of archaeological work in the MAR lays out, as others have before, that the MAR is a definite and distinct region in which there has been a lot learned, and still more to uncover. He presented the many times people have presented or published their justification for there being a culture area, only to come back the following year and do it again. Even in the last chapter of the volume on the Middle Atlantic Prehistory, Dent (2019) states that identifying a "culture area" is a bit vague because of the ephemeral nature of boundaries, but it does exist in "anthropological reality." We should not be too constrained in our trying to define boundaries for the Middle Atlantic, because prehistorically there were none. What cannot be denied is that all of the previous anthropologists envisioned and articulated that this region in the Middle Atlantic consisted of mostly the coastal regions of New York, New Jersey, Pennsylvania, Delaware, Maryland and Virginia. These discussions, lay out some of the evidence for the regions uniqueness and solidifies its standing as a distinct coastal cultural area.

Beginning sometime in the Early Woodland, and continuing into the Middle Woodland period, these Middle Atlantic cultures exhibit changes in their cultural, social and religious milieu. Interestingly, it is during this time period where environmental and climatic situations resemble current conditions. Cultural groups becoming more sedentary and increased population, necessitate the need for increased interactions with others, for trade in artifacts, spouses, ideas, customs and organized labor projects. Given Dent's detailed explanation of the archaeological background on defining the MAR, I find two points of his worth repeating here. That a strong community of Middle Atlantic scholars and the regions environmental diversity have been thoroughly underappreciated. The growing number of scholars working in this region, the excavation of sites, as well as the amount of publications have also helped to define and shape this region. The region itself is not as homogeneous as other regions, and therefore the MAR is defined by its ecological diversity. Dent also says that there is a unique story in the development of ranked society during the Late Woodland in the Middle Potomac River Valley (Dent 2019, 378–79). Because of these reasons and others not fully discussed here, there is no question that the MAR exists as has been established as culture area and that we should close the book on it so we can all move forward. Future archaeological investigations and interpretations by scholars, cultural resource management professionals and museum curators help to shape this region as its own unique package by presenting their research and publishing the results.

Given the fact that there has been, as seen above, so much ink spilled over whether the Middle Atlantic should be its own culture area or, you should come away knowing without a doubt that yes, there is a MAR and it is not going anywhere. Professional archaeologists, students, scholars, avocationalists, and amateurs have through their excavations, presentations, and publications made it a culture area. Let us now look forward to explaining region-wide cultural change and development.

NOTE

1. BCE is Before the Common Era and CE is the Common Era.

Chapter 3

Middle Atlantic Geology and Native Copper Sources

As stated earlier, the Middle Atlantic region comprises whole and parts of a number of states—New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, and Washington, DC. The regional organization, the Middle Atlantic Archaeological Conference, uses New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, and Washington, DC, into their definition of the region. Curry (2018, 10, Figure 2.1), Custer (1994, 330, Figure 1), Stephenson (1963, 203, Figure 30) and Stewart (1993, 164, Figure 1) all depict similar maps that include the above-referenced states. Whether you use river drainages or geological formations as your defining characteristics, the Middle Atlantic region is itself unique in its geologic and environmental diversity.

Numerous cultural ecologists, soil scientists, geomorphologists, and archaeologists working with this region have presented and published the deep-rooted connection and evolution between the environment and native peoples (Carbone 1976, 1977, 1982; Gardner 1982, 1983, 1987; Foss 1977; Stewart 1983, 1994, 1991; Vento et al. 1994, 2008, 2020). The following is a brief discussion of the underlying geology of the region. The flora and fauna along with the availability of lithic resources within the Middle Atlantic region will not be described here, but sufficient information and description of the physiographic area to understand the environmental conditions in which native peoples inhabited, as well as the geographical locations in which native copper deposits have been identified is presented. As will be discussed later in this chapter, native copper occurs in numerous forms throughout the Middle Atlantic, as well as other regions, well outside the Upper Peninsula of Michigan.

PHYSIOGRAPHIC PROVINCES

The Middle Atlantic region is also composed of a number of different physiographic provinces (figure 3.1). A physiographic province is a geographic region based on specific geomorphology, or physical features and processes of landforms and their relation to geologic structures. The following physiographic provinces are included within the Middle Atlantic region—the Inner and Outer Coastal Plain, the Highlands, the Piedmont, the Ridge and Valley, and Appalachian plateau. Each one of these provinces are briefly described.

Atlantic Coastal Plain

The Atlantic Coastal Plain begins at the eastern shore edge and continues west to its end at the Fall Line and boundary with the Piedmont. There are a number of formations that combined make up the Atlantic Coastal Plain. Formations are combinations of unconsolidated sand, silt, or clay. This province is described as being underlain by coarse sands and gravels of many different Pleistocene formations (Jordan 1964, 60). While some of

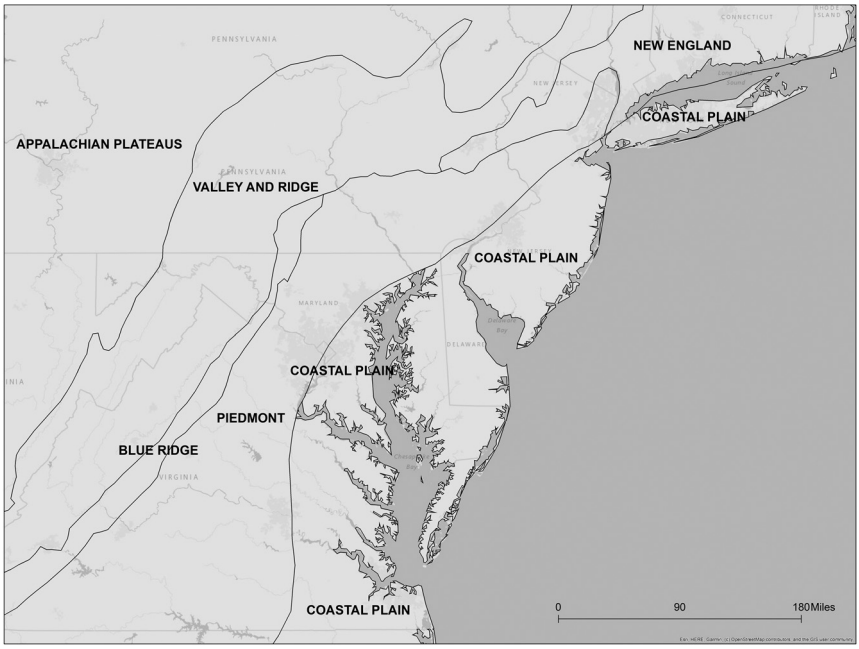

Figure 3.1 Physiographic Provinces in the Middle Atlantic Region. *Source:* Gregory Lattanzi.

the larger cobbles of cherts, quartzite, quartz, and jasper are present in the coastal plain, they, along with pebbles, are the most utilized lithic resource in this province. The predominant landform of the coastal plain is that of flat, weakly dissected alluvial plain "formed by deposition of continental sediments onto submerged, shallow continental shelf, which was later exposed by sea level subsidence" (McNab and Avers 1994, Chapter 21). As stated previously, the Middle Atlantic region has been mainly described as a coastal plain region. The coastal plain is composed of the Inner and Outer Coastal Plain. In the Outer Coastal Plain exists Cretaceous age sand and clay semi-consolidated formations, while in the Pinelands (New Jersey) the sands of Tertiary age are unconsolidated (Harper 2013, 229). Of particular importance in the coastal plain is the Fall Line. In this province most major rivers (e.g., Delaware, Hudson, Susquehanna, Potomac, James, etc.) and the upper reaches of their tributaries are tidal, and "marshes and swamps with plants adapted to both fresh and brackish water conditions line the shores of watercourses" (Custer 1996, 5). These riverine, estuary, marsh areas are plush in faunal and floral species making these areas extremely rich hunting and gathering locales.

The Piedmont Uplands and Triassic Lowlands

As we move west from the coastal plain, we reach the beginning of the Piedmont, which is part of the Appalachian Province. The Piedmont is underlain by sedimentary rocks of Triassic and Jurassic age (240 to 140 million years old) and igneous rocks of Jurassic age. The Piedmont is mostly a rolling plain divided by a series of higher ridges. Its boundary with the coastal plain is characterized by the rock units of the Piedmont and the unconsolidated Cretaceous sediments (Dalton 2006). This is essentially what is called the Fall Line, where the head of tide ends for the larger Hudson, Delaware, Chesapeake rivers and their tributaries.

High amounts of volcanic activity in the Piedmont uplands produced bedrock that contain numerous lithic raw materials used in tool manufacture (Custer 1996, 6). The Triassic Lowlands are not actually lowlands but areas of steep uplands knolls and ridges that contrast markedly with the relatively flat valleys. Streams within the Triassic Lowlands contrast with those in the Piedmont geomorphologically, geochemically and hydrogeologically. The Triassic Lowlands also consist of distinctive rock types. Its bedrock is made of red sandstone, siltstone and shale. They are actually uplands with a fairly rugged topography in some areas (Custer 1996, 10). Much of the rock has been eroded away, however, hills and smaller elevated areas remain.

The Appalachian Highlands

The Appalachian Highlands contains similar rock types to the Piedmont. Interestingly, the New England province is a part of the Appalachian Highlands. This region is mountainous with river valleys extending from upper New England south through Pennsylvania and into Virginia. The Highlands is also contiguous within the Reading Prong in Pennsylvania and the Hudson Highlands in New York State. The Reading Prong (within the Appalachian Highlands) exists in Pennsylvania in a small segment. Consisting of rugged, steep slopes and exposed bedrock more than the Triassic Lowlands.

The Valley and Ridge

The Valley and Ridge (or Ridge and Valley) province features sedimentary and metamorphosed sedimentary rocks 540 to 400 million years ago. Located within the Appalachian mountain region the Valley and Ridge is composed of a series of Northeast to southwest trending synclines and anticlines composed of Early Paleozoic sedimentary rocks. This province is characterized by a series of north-south, steep sided, ridges separated from one another by valleys of lowering width. It is underlain by Paleozoic sedimentary rocks of Cambrian to Middle Devonian age (540 to 374 million years old) (Dalton 2006).

Other resources for the physiographic provinces, as well as the paleobotanical and paleoenvironmental records are widely available. The reader is encouraged to seek other authors who have discussed and published on the vast amount of natural resources available to Native Americans in the region. The following section covers native copper both in a more general sense and then more specifically related to Middle Atlantic resources. The different types and kinds of native copper that occur generally and within the region help to explain accessibility and distribution of this resource.

NATIVE COPPER IN THE MIDDLE ATLANTIC REGION

In the eastern half of the United States, native copper deposits occur from Georgia up into Canada with, surprisingly, many occurring within the Middle Atlantic region (Ross 1935, Figure 12) (figure 3.2). However, deposits occurring as veins that extend to the surface and run underground must be mined in order to extract the copper mineral. The natural copper must also be of sufficient purity to be worked. The Delaware Valley, specifically New Jersey and Pennsylvania, contains some of the richest copper

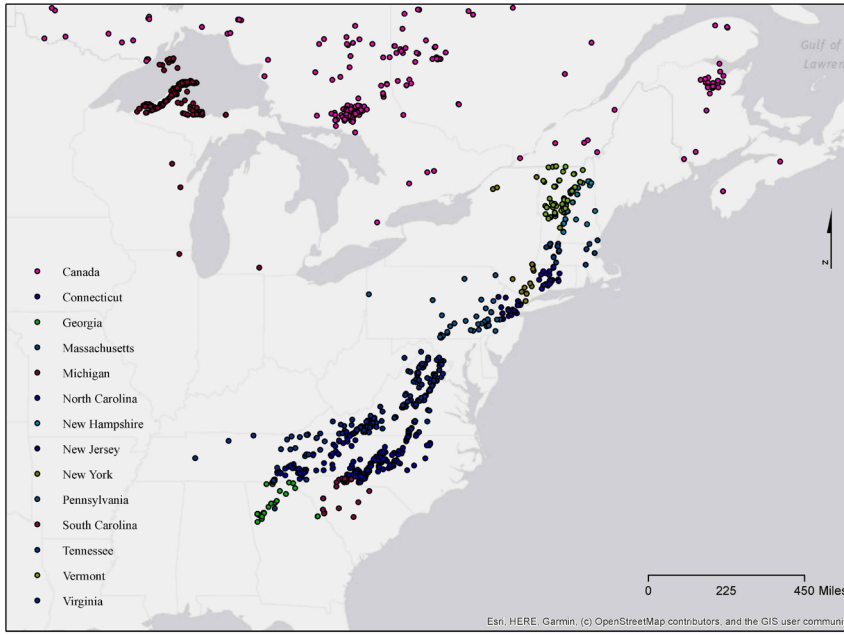

Figure 3.2 Major Copper Deposits in Midwest and Along the Eastern Seaboard. *Source*: Gregory Lattanzi.

deposits on the East Coast (Woodward 1944). The sources of extractable copper and their exact locations within the Delaware Valley have been discussed elsewhere (Lattanzi and Veit Jr. 2006; Levine 1996, 2000; Rapp et al. 2000).

Two types of copper were available to native populations during pre-contact times—exposed surface veins and drift or float copper. The most utilized and familiar type of copper is that which occurs in Michigan in the Keweenaw Peninsular where exposed surface veins were used prehistorically remain visible as pits (Holmes 1901). A thorough search of the literature shows no reported copper mines or open pits used by native peoples in the Middle Atlantic region (Lattanzi 2008; Levine 1996). Prehistoric native copper technology in the Americas was carried out either through cold hammering or through the repeated process of annealing (heating) and hammering (cold) (Childs 1995). Many studies both archaeological and metallurgical have demonstrated that in prehistoric North America, Native Americans heated copper to be able to shape it into desired forms (see Martin 1999, 120–23 and Wayman et al. 1992 for discussion).

TYPES OF COPPER DEPOSITS AND DEFINITIONS

Native copper, one of the transition metals, is one of the few elements to occur naturally (a natural mineral) in both uncombined elemental form and combined forms within the rock. Copper occurs not only as a natural element or alloy, but also as a variety of sulfide, oxide, phosphate and carbonate minerals. Native copper rarely occurs as isometric cubic and octahedral crystals, but more typically as irregular masses and fracture infilling.

The economic importance of copper is of great antiquity (Martin 1999). Economically important elements are typically found across the globe in high concentrations otherwise known as ores. As an ore, native copper is considered a dense concentration of rock, mineral, or native element that exists in an economically exploitable and technologically extractible concentration. As a major element within minerals, copper can be found in chalcopyrite or peacock ore (bornite). More rarely, copper may be found as an element (native copper) that is 98 to 99 percent pure. This characteristic helps to determine copper artifacts made from native copper as opposed to alloyed copper (Anselmi 2004; Ehrhardt 2002, 2005; Fields et al. 1971). Being able to distinguish elemental impurities within native copper provides needed information to create an elemental fingerprint of that copper deposit to use in comparison with copper artifacts. Rapp et al. (2000, 7), and others, describe native copper as occurring within three basic geologic settings called primary, secondary, and sedimentary.

Primary native copper occurs in mafic igneous rock, such as the basalt lava flows in Michigan (Cornwall 1956). Primary deposits have been found in Lake Superior region, Alaska, Appalachian region, Yukon Territory, British Colombia, Northwest Territories, Labrador and Nova Scotia (Rapp et al. 1990, 2000, 7). In such deposits, native copper occurs in the large voids, cracks and fissures within the mafic and ultra-mafic lava flows (Rapp et al. 2000). As lava flows cool, voids, cracks, and fissures form within which copper minerals precipitate, reflecting the unique chemistry of the infilling solution and the minerals from which the solution came. In this way, each native copper deposit has a unique geologic history and therefore a unique chemical fingerprint (McKnight 2007; Rapp et al. 2000; Ross 1935).

Secondary deposits of native copper are mostly located in the oxidized zone (i.e., near the surface). Given the mining technologies in evidence in eastern North America, it seems certain that Native Americans were only using those native copper deposits that were at or very near the surface, within the first few meters or so. The presence of native copper in secondary deposits is hard to document, given that many of these ores were mined heavily during the nineteenth century (Halsey 2008). However some are known

from the southwestern (North and Lueth 2002) and the southeastern United States (Goad 1976).

Sediment hosted deposits, or the third formation of native copper, are formed through sedimentary alteration of primary and secondary ore deposits. These deposits occur primarily as clastic sediments (sandstones and shales) associated with mafic rock (a silicate mineral or igneous rock, rich in magnesium and iron). Native copper is a minor mineral within these beds, probably because these deposits consist predominantly of copper sulfides (Cornwall 1956, 5). The primary ore minerals of these sulfide deposits are pyrrhotite and pyrite, together with chalcopyrite (copper) (Kinkel et al. 1968). These types of deposits were not exploited by prehistoric peoples (Rapp et al. 2000), but they do reflect trace element characteristics of their parent material (Cross 1993, 62).

Harbottle (1982) discusses problems archaeologists face when explaining and describing sourcing the raw material of an artifact. Archaeologists cannot "source" an object (artifact); they can, however, characterize it (trace elements) through various means to look for similarities to generate attributions (Harbottle 1982, 15). The source is the actual mine or quarry from which the natural deposits of material come. Source, in the case of raw materials, can be identical to provenience (= provenance). A production center is described as a craft workshop and not always generally geographically related to the source. A "local source" means the geographical region where the natural deposit (raw material) exists. In the case of prehistoric copper artifacts, say from New Jersey, potential sources of the copper are located within New Jersey, throughout the Middle Atlantic region and the Northeast (Cox et al. 2003; Kinkel et al. 1968; Ross 1935; Singer et al. 2002). These potential sources can be described as being "local" in the sense of consisting of pieces of drift copper found on the surface which were deposited from glacial outwash. These pieces of copper would originate from a source either close by or from a distance.

DRIFT OR FLOAT COPPER

The Upper Peninsula of Michigan was subjected to repeated glaciations. During these glaciations, copper pieces were picked up as the glacier traveled over lodes or veins of copper. Some of these pieces and nuggets became smooth and rounded eventually being deposited hundreds of miles away from its original source (Ross 1935). Drift copper was and is the most accessible and probably the most prevalent form of native copper to ancient Native Americans. This is the same type of copper Peter Kalm (1937 [1750]) describes above that occurred at the mouths of rivers. This additional type of copper, although not

heavily researched or cited (Halsey, 2004), is composed of nuggets or lumps of native copper occurring on or just beneath the surface, having been transported from their natural place of origin by glacial activity (Knowlton 1946; Salisbury 1885). Numerous examples of drift copper have been reported from New Jersey to Wisconsin, from the size of handheld nuggets to large boulders weighing tons (see Halsey 2004, 16, for preliminary list of references).

The idea that drift copper, which was more easily obtained and in smaller pieces, was manipulated by Native Americans, has been in print for well over 150 years (Halsey 2004). Salisbury (1885), in what was a comprehensive report at the time on the dispersion of drift copper in the Midwest, notes that the area in which copper is scattered could be not less than 450,000 square miles. His map displays drift copper occurring as far south as the confluence of the Ohio and Mississippi Rivers. Reynolds (1888), includes not only copper sources in the Blue Ridge Mountains of Virginia for aboriginal use of copper, but also drift copper, which attests to drift coppers existence in the Middle Atlantic states. In 1881, Abbott (1881, 412–13) cites the possible use of local drift copper for artifacts he identified from within New Jersey. Later, in citing copper artifacts found by Dr. Abbott, Skinner and Schrabisch (1913, 30) state that the three spears or knives and a celt "were perhaps made from copper mined within our boundaries, or, possibly from one of the drift boulders of this material that sometimes occur."

If we thoroughly examine the historic literature, we find that numerous locations in the Middle Atlantic did contain various sizes of drift or float copper. Jedidiah Morse's American Universal Geography, published in 1805, noted that "lumps of virgin copper weighing from 5 to 30 pounds and totaling 200 pounds were plowed up in a field on Phillip French's farm, now Rutgers College at New Brunswick" (Lewis 1907, 151). Additionally, in 1839, drift copper was recognized in the same area (Beck 1839). In 1888, Edwin A. Reynolds stated, "Many instances, also, are known of its discovery in the States of New Jersey and Connecticut" (Reynolds 1888, 343), as well as in South Mountain region of Pennsylvania (Stose 1910). These references are just a few of a larger bibliography on drift copper in the Northeast that exists (Halsey 2004; Knowlton 1946; Thayer 1950).

Numerous authors have stated that glacial drift is likely to be the major source of placer nuggets (Brown et al. 1990, 260). Since glaciers covered the northern parts of New Jersey, Pennsylvania and parts of lower New York during the Wisconsin Ice Age (approximately 11,000 to 12,000 years ago), moraine deposits are common in those areas (Widmer 1964, 19, 127–31; Wolfe 1977, 263) and the presence of drift copper is worth considering.

Halsey (2004, 2006), former Michigan State archaeologist, has been critical of scholars regarding their knowledge of drift copper sources and

portrayal of the *dominant copper model* (that copper found in the East originated in Michigan in the Lake Superior basin) as the only reasonable model in existence. Brown et al. (1990, 260) stated, "At this stage in our knowledge the most that can be said about copper sources is the relative potential of certain districts to yield usable nuggets." This is true, not just in Brown's case of Mississippian trade copper, but also in the Late Archaic and in the Early to Late Woodland periods of the Northeast. Halsey (2004, 1–2) has stated that drift copper was likely available to native Middle Atlantic populations during prehistory, and he further suggested that the amount of copper found in post-Archaic contexts is small—too small perhaps "to support theories and constructs of trade networks and a high level of mining on Isle Royale and Michigan's Keweenaw Peninsula." If not a highly complex interaction sphere, then what?

COPPER DEPOSITS IN THE MIDDLE ATLANTIC REGION

While the best examples of primary native copper exist in the Midwest, in particular Michigan, they are also found all along the eastern seaboard (Espenshade 1963; Kinkle et al. 1968; Ross 1935; Watson 1923; Weed 1903; Wherry 1908b, 1910). These examples are known only because of early historical records and historical mining operations. However, these examples attest to the prevalence of native copper sources within the region. If there is a local source of copper used by native peoples in the Middle Atlantic or Northeast region, then identifying such a local source is vital in being able to understand available choices to prehistoric peoples. Weed (1911, 10) describes the different types of copper deposits that exist within the Appalachians—(1) crystalline schists; (2) altered basalts; (3) Triassic rocks close to trap intrusions; and (4) Devonian rocks. Weed further grouped these types "geographically" rather than systematically. His six types are (1) Ducktown; (2) Copper quartz-vein type; (3) Carolinian type; (4) New Jersey type; (5) Pahaquarry type; and (6) Blue Ridge (Catoctin) type. Copper deposits in the Appalachians occur from Anniston, Alabama, to Fredrick, Maryland. Copper from the Appalachian plateau is usually associated with sedimentary deposits that were exposed by erosion and weathering (Goad 1978, 53). "Much of the largest and most important region of altered basic lavas in which the native metal is found is the 'Catoctin Belt,' so named by Keith (1895), and its extension southward in middle northern Virginia" (Watson 1923, 732–33). Watson also notes that native copper occurs in near-surface deposits, embedded in basalt flows and the upper oxidized zone of copper sulfide deposits (Hurst and Larson 1958, 179; Ross 1935, 69–70;

Weed 1911, 158). These deposits are fairly well defined from the northern part of Virginia through Maryland and into Pennsylvania (McKnight 2007, 73, Figure 4.3). It is not hard to imagine native groups collecting copper from more local and regional areas, given its prevalence throughout the Appalachians and Eastern Woodlands. As we shall see below, there was another type of copper that was additionally available to native populations—one that did not require much labor to extract. When looking at the Ross map (1935) or the map of the Copper Deposits of the Appalachian by Kinkel et al. (1968, 382, Figure 98), one can see an interesting relationship between those deposits and the Native American paths (Boyd 2005; Wallace 1952).

The copper deposits follow the edge of the Appalachian Mountain Range almost exactly. Some of the different types of deposits are in separate geographical regions (Kinkel et al. 1968, 381). Native copper is restricted to the Blue Ridge province, but it also occurs in near-surface instances in the Virgilina district in Virginia and North Carolina. The massive sulfide deposits lie in a few narrow belts within the Piedmont Province and the southern part of the Blue Ridge. As seen in the geographical maps of both Kinkel et al. (1968) and Ross (1935), these copper belts follow geologic trends which are tangentially related to the Appalachian boundary.

Within the Middle Atlantic region there exist a few historical references to early copper deposits and copper mining. During the 1650s the Dutch were carrying out mining operations in New Jersey and New York (Wherry 1908a, 727; 1908b, 309–14). The Schyuler mine in Hudson County (Granbery 1907) and the Pahaquarry mine in Sussex County (Burns, Chavez, and Clemensen 1995; Cornwall 1943; Kraft 1996; Vivian 1951; Yolton 1984) are two of the more famous ones. The Schyuler mine was economically more productive than Pahaquarry, although Pahaquarry has a lore associated with it (Decker 1985; Kraft 1996; Weiss and Weiss 1963).

In 1683, William Penn wrote to his backers in England about ‘divers places’ of copper and iron deposits near Schwenksville, Pennsylvania (Wherry 1908a, 727). Then in 1703, Penn was granted that track of land and started extracting copper out of it. The earliest written account of drift copper comes from Peter Kalm (Pehr Kalm), a Swedish explorer, naturalist, botanist, who traveled throughout New Jersey, New York, Pennsylvania and Canada (Kalm and Benson 1937). Kalm when he was visiting Montreal, stated:

> Today I got a piece of native copper from Lake Superior. They find it there almost pure, so that it does not need melting over again, but is immediately fit for working. Father Charlevoix speaks of it in his History of New France. One of the Jesuits at Montreal who had been at the place where this metal is native told me that it is generally found near the mouths of rivers and that there are pieces of pure copper too heavy for a single man to lift up. The Indians there

> say they formerly found a piece about seven feet long and nearly four feet thick, all pure copper. As it is always found in the ground near the mouths of rivers, it is probable that the ice or water carried it down from a mountain; but, notwithstanding the careful search that has been made, no place has been found where the metal lies in any great quantity but only in loose pieces. (Kalm, 524)

Kalm (1937, 202) also indicated that there were holes in the ground where the copper ore was extracted or mined, especially between Elizabethtown (which may be the Schuyler mine) and New York. In addition, he describes mines existing in Pennsylvania "below Newcastle, near the coast," where Indians left their tools behind (Kalm 1937, 202). This statement about mines and tools is also repeated later in Raum (1877, 354); however, the county in which the mine is described is incorrect (Nelson 1893, 183) and his description makes it seem as if the Dutch left the hammers and other tools. Nelson (1883, 183) believed however that Kalm may have interviewed individuals who may not be credible. What is interesting in these early descriptions is that unlike those found within the ancient mines identified in the Michigan region, no evidence of the large mining hammerstones (Halsey 2008, 24; Martin 1999, 100–103) have ever been identified in the Middle Atlantic region.

Chapter 4

Interaction and Meaning in the Middle Atlantic Region

It is quite evident that Middle Atlantic prehistoric peoples, beginning in the Early Woodland, and flourishing in the Middle Woodland were involved in forms of interaction. Artifacts of lithic and other materials (e.g., copper, mica, pipestone, flint ridge cherts) that originate outside the Middle Atlantic region are clearly present. Recently, archeologists have come to understand that more than one mechanism can be and likely is responsible for how raw materials, classes of artifacts, artifact styles, mortuary, and other cultural practices and ideas made their way, throughout the east and into the Middle Atlantic region (Carr 2005b, 578). At its core, interaction used here encompasses much more than the term "trade or exchange" allows. Interaction involves individuals and groups, both locally, regionally and interregional. There are different ways in which prehistoric interaction is manifested—interregionally, through trade networks, vision quests, pilgrimage, buying and selling of ceremonial prerogatives, travels of rising social leaders, mortuary cult, shared religion—and locally through ceremonial-spatial organization of communities, social organization, ritual, and mortuary programs (Carr 2005: 575; Carr and Case 2005: 25). Applying a "thick prehistory" approach, Carr and Case (2005b, 25) use a broad range of perspectives exploring and generating insights into past human situations/events that guide interpretation. Their approach uses agency, practice, and action in an attempt to identify human nature and examine broad scale interaction using mechanisms that are grounded in socially motivated people and individuals (Case and Carr 2005, 21), especially during the Middle Woodland period. These mechanisms are a "composite of diverse distributional mechanisms that were not necessarily integrated" (Carr 2005a, 579). Carr (2005a, 576) takes a more personalized, locally contextualized, and generalized approach in understanding the larger interregional interaction of Middle Woodland Hopewell. What can

be revealed then by the archaeological record of the Middle Atlantic are cultural patterns of interaction within the region itself and among others. Within band and tribal societies, interaction can have a social, religious or economic subtext, and it shapes how native people define themselves and their relationships with others. Groups and individuals are involved in social communication on local and regional scales (Sassaman 1995), and it is the regulation and maintenance of those mechanisms of interactions that sustain social equilibrium both among and between them. Examining individual and diverse mechanisms of interaction help us to understand why cultural patterns develop, why they occur in one region and not in another (Earle 1994, 429), as well as to examine levels of cultural complexity potentially exhibited within a particular cultural group (Carr 2005c; Seeman 2020).

The type and kind of interaction is dependent upon agents actively engaged in forms of communication (Renfrew 1969, 152). Reasons for interaction run the gamut of cultural (e.g., pottery designs, mortuary ceremonialism) and economic significance. Helms (1988) lays out two types of interaction that are based on Sahlins (1981)—trade for the purposes of economic exchange and the other for inclusion or communication. Interaction for the purposes of economics, aligns more with commercial exchange, implying an ongoing separateness between parties, while still maintaining similar interests (Helms 1988, 130; Sahlins 1981, 38), meaning those relationships do not have to be symbiotic. Inclusion implies communal exchanges, giving a sense of reciprocity (gifting) in the act itself, as well as the objects involved (Helms 1988, 129–30). Helms (1988) lays out interaction among prehistoric groups explaining it in relation to the physical distance between other native groups. With regards to both Hopewell raw and finished materials, it is unknown and unclear by which mechanisms (e.g., direct procurement, exchange, buying of religious prerogatives, marriage alliances, mortuary program) these objects are subjected to (Carr 2005a, 593–94, Table 16.1). Therefore being able to identify likely source of material could eventually lead to an understanding of the mechanism by which it was interacted.

The journey taken to reach distant native groups is included with the list of mechanisms. Traveling outside of your region (at any distance) to acquire goods has potential to help maintain access to those goods (raw or finished), maintain alliances, as well as connecting the users and consumers to a power greater than themselves. Helms (1988, 182) stated that in some cases the object being of exceptional craftsmanship carries the weight of being spiritually powerful. Therefore, patterns of interaction can be expected to vary from area to area within a region, as stated above, because of distinct local-regional ritual-ceremonial programs. The role of interaction within geographically dispersed small-scale non-stratified societies help communities keep their identity, obtain needed resources, give them cultural flexibility and create

reciprocal relationships (Cross 1993; Ericson and Baugh 1994). It can be used as a mediator or stress reliever to balance those times of insecurity and resource unpredictability. It can also maintain access to items that symbolize connectedness to the spirit world, which can only be used by those who are either connected to or are a part of that other world, which may be why these kinds of objects are found in mortuary contexts (Hall 1997). The act of traveling outside ones own region in order to obtain special objects, through a vision quest or pilgrimage, puts added significance on the person(s) doing the traveling, the trip itself and of course the object(s) (Helms 1988).

In turning now to the Middle Atlantic region, what reason(s) would people engage in acts of interaction (under whatever mechanism) for objects that will only be buried in the ground? Obviously, there are different social, economic, and possibly religious mechanisms in operation whereby objects find themselves being transported long distances, then mixed with local artifacts and placed in a burial. These objects by their nature and context, are considered valuable and or sacred. Spielmann (2002) discusses the production of specific objects for the intended use in rituals for the purpose of maintaining social relations among far distant groups. As she implies these "socially valued goods" are demanded as they play a critical role in social reproduction (Spielmann 2002, 195). For those living in the Middle Atlantic region, these socially valued goods are obtained by native peoples possibly traveling a great distance, which are brought back and used in a mortuary ceremony. In addition, the act of traveling outside ones area can be seen as having importance as a pilgrimage or vision / ritual quest. Whether it was a single individual, a family group, a shaman or religious leaders making a long trip, it is the trip in and of itself, a spiritual experience that is enhanced with the returning of valuable or sacred objects. For purposes of this discussion, the participation in the act of regional and interregional interaction and in turn the objects themselves are seen as having value. This value is in part because of the association with the sacred powers of a very dynamically perceived universe by prehistoric peoples (Hall 1997; Helms 1988, 130). For objects such as copper, they are seen as embed with great spiritual significance. They are seen as a bridge between the upper, middle, and lower worlds for many native cultures (Carr 2005a; Hall 1997). The burial of these valued objects says more about the people who put them there, then the person(s) with whom they rest. What is the relationship of the living to the dead? Why do we see certain cultural and artifactual similarities between Early and Middle Woodland cultures of the Ohio Valley and those of the Middle Atlantic? What does a mixture of local and interregional objects say about the deceased or about the living, or about the interaction(s) that we know clearly took place? How are we to interpret the act of interaction, the object itself and finally the perceived intent of the person(s) living to place the artifact(s) with the dead? Under the

larger heading of interaction are the specific acts or mechanisms that need to be identified, defined and examined in the context of Middle Atlantic prehistory. Mechanisms like the buying and selling religious prerogatives could be seen as possibly relating to our discussions here (Penny 1989). This is an explicit mechanism that could explain the spread of parts (e.g., copper) if not the whole of a mortuary-ceremonial program (Caldwell 1964; Carr 2005, 586; Penny 1989; Struever 1964; Thomas 1987).

Previous Middle Atlantic prehistoric interaction models relied heavily on trade and exchange as their focus, just one mechanism behind the larger term interaction. These models are also couched with additional mechanisms, and can account for most, but not all, of the burial equipment coming from outside the Middle Atlantic. They can however be used to help further reveal mechanisms involved in the interaction both within and between prehistoric groups.

A NEW LOOK AT MIDDLE ATLANTIC ARCHAEOLOGICAL MODELS OF INTERACTION

Previous assumptions of the presence of copper and other exotic items both in burials and general contexts focus on an influx of groups, namely ceremonial leaders, who carried beautifully, finished artifacts with them into the region from outside (Dragoo 1963, 1976; Kraft 1976; Mounier 2003; Ritchie 1980; Ritchie and Dragoo 1959; Ritchie and MacNeish 1949). Specifically, it has been stated that all if not most of the copper artifacts found in Middle Atlantic sites came from Michigan. This implies that native people within the Eastern Woodlands relied on outside prehistoric groups to bring in these exotic objects and cultural traits into the region. Additionally, scholars have indicated that those in the Middle Atlantic region participated in large interregional trade networks (i.e., Hopewell Interaction Sphere), where these artifacts were traded or exchanged into the region.

Scholars like Ritchie and Dragoo (1960) state this influx of leaders (e.g., ceremonial/ritual, shaman) from the Adena and later Hopewell people, equating these connections with the Ohio Valley starting in the Early Woodland and continuing into the Middle Woodland. Weslager (1968, 194) was the first to suggest that an extensive trade network existed in the Middle Atlantic region. In an addendum to his publication, Weslager posed a number of interesting questions regarding the nature of Adena cultural traits during the Early Woodland period in the Middle Atlantic, specifically in Delaware. Did Adena people actually migrate and settle in Delaware or where they incorporated into the local Woodland populations? Did they move up the Delaware River, or was the migration just a myth and the Adena and Hopewell artifacts

just imported from Ohio by local Delaware groups? Or was the myth just a myth and these Adena and Hopewell objects were imported by local Middle Atlantic peoples and used by them as grave accompaniments? (Weslager 1968, 194). Thomas (1969) after a careful and exhaustive review of the many Adena traits on sites both in the Middle Atlantic and Ohio Valley suggested that there is evidence for the involvement of more than one cultural manifestation on these Middle Atlantic sites. While there were some differences in the presence of certain traits (e.g., burial mounds) he does suggest similarities in mortuary customs along the Atlantic coast occurring in earlier and later periods (Thomas 1969, 14–15; 1987). His interpretation was that an intensive trading system existed between the Middle Atlantic coast and the Ohio Valley, among other areas (Thomas 1969, 15) that was not only in existence during the Adena manifestation, but also to some extent before and after its influence (i.e., Ritchie and Dragoo 1960), possibly into the Middle Woodland. He further suggested that a single explanation would account for the presence of the Adena influenced sites, as well as the Riverton, the Island Field, and, probably at New Jersey sites like Savich Farm. Later, Thomas (1970, 80) suggested that the acquisition of lithic (and maybe other) objects from outside the region, "could not only have been accomplished through Adena intermediaries, but could also have taken place directly." Finally, Kraft (1976) published an exhaustive report and interpretation of the archaeological collection from the Rosenkrans Ferry site. Like the authors above, Kraft questions what did New Jersey have to offer in terms of trade—"What were they trading, and for what? Maybe New Jersey was considered a sacred place to visit? Maybe the state was considered a place of pilgrimage, with sacred places and landscapes" (Ahola 2017; Buikstra and Charles 1999; Emerson et al. 2020). It has been suggested that persistent places (Ahola 2017; Purtill 2012) play a most important role in the lives and deaths of prehistoric peoples. All of these early studies conclude that exotic artifacts from outside the Middle Atlantic region find their way inside the region and end up more often in burials.

A dozen or so years later, Custer (1984) and Stewart (1989) propose models for prehistoric exchange for the Middle Atlantic and the far greater Northeastern region. Their models begin in the Late Archaic Period. Custer starts with a web-like kinship-based network consisting of localized relationships between individuals who have personal ties. Stewart (1989) describes a similar exchange network in the Delaware Valley and Middle Atlantic region as a whole as broad-based. Broad-based networks are informal, nondirectional and maintained by opportunistic individuals. These types of networks are a down the line, hand-to-hand type of exchange as described by Griffin (1952, 360). Broad-based networks continue well into the Woodland period, alongside but independent from other networks. Custer describes changes in the patterns of lithic resource procurement as

being part of this kinship-based exchange network, in which cultural adaptations to environmental changes resulted in changing settlement patterns and population increases (Custer 1984, 39, 1987, 33). The next type of exchange suggested by Custer relies on a long-range, chain-like network, similar to Junker's (Junker 1993, 1996, 2015) ethnographic example of the way prestige goods are exchanged in the Philippines. This network is based on ritualized trade partnerships in areas where resource distribution favored fusion-fission settlement cycles and placed a high adaptive value on symbolic status communication, similar to Binford's (1962, 217–19) change from technomic to socio-technic, where trading evolves into objects as status symbols. Stewart's (1989) other exchange network is described as focused. Focused networks are defined as individuals or small groups of entrepreneurs from the Middle Atlantic traveling outside on sporadic trading missions, pilgrimages, ritual quests, insinuating themselves into the broad-based networks of other areas, bringing back goods (Stewart 1989, 56). Stewart (2003, 342) also states that items gained in trade, generally from sources outside the Middle Atlantic region, end up in burials or other special contexts like caches. Custer (1984, 43) alludes to the idea that both his web-like and chain-like networks can operate together. Stewart (1994) sees a combination of focused and down the line exchanges in operation in the Middle Atlantic region. Interestingly, Custer's chain-like network could, over time, evolve into Stewart's focused network as an almost natural progression of the trade and exchange of significant and specific exotic or ritualistic items. This type of focused exchange seems similar to other mechanisms laid out by (Carr 2005, 593–94, Table 16.1), as well as with Helms (1988). These socially valued items may have been obtained by Middle Atlantic folks on a religious quest or ritual mission (Kraft 1976; Spielmann 2002; Thomas 1969; 1970, Weslager 1968). As stated above, those items brought back, end up in burials, which may in fact relate more to a vision quest or pilgrimage, or gift-giving.

As described earlier the Northeastern Woodlands has been divided, perhaps artificially, into core cultural areas (Wissler 1927; Kroeber 1939, 383) of great time depth (Kowalewski 1995, 149) and with many distinct environmental zones. As such, each native group within their territory must maintain the social and ideological production (i.e., same set of institutions, trading partnerships, ritual obligations), as their surrounding neighbors; otherwise there would be disequilibrium (Kowalewski 1995). Therefore, to maintain stability and minimize social risks within your defined area, cultures partake in various outward displays of activities that result in maintaining those risks, such as feasting, marriage alliances, ideological and/or mortuary ceremonialism, pilgrimages, trade/exchange, gift-giving, and pilgrimage or vision quests.

It is worth looking at how both Kowalewski (1995) and Stewart (2004) examine trade and exchange from a World Systems approach; to account for the variability that trade specifically within egalitarian societies manifests itself in the archaeological record. Trade operates within these "inter-societal networks" or interregional, maintaining equilibrium within the social, political, and cultural structures through interactions (Chase-Dunn and Hall 1998; Stewart 2004). Stewart (1989, 66) stated that "higher frequencies of trade goods can be expected to occur in territories where social differentiation and ritual expression are greatest." Earle (1994) provides some future research goals regarding the changing relationships of the value or use-value of the objects involved in trade within the social or political structure. "Is there a change in status-defining wealth from naturally rare objects to objects rare because of the amount or quality of labor in their manufacture?" (Earle 1994, 434). High quality lithic biface blades, block end tube pipes are the types of artifacts, that cannot be of any utilitarian purpose but only ceremonial or sacred. These would take a highly specialized knapper or other individual to make. Evidence of rare ceramic styles, like Abbott Zoned Incised, or hand-rolled copper beads, gorgets, or embossed copper plates, over a wide landscape maybe evidence of trade lineages between known or affiliated groups. Hantman and Gold (2002, 280), in their analysis of Middle Atlantic exchange, see the limited and bounded distribution of Abbott Zoned Incised ceramics as evidence of these cosmopolitan styles, selective trade between certain groups who have controlled access to this "special-use" pottery. More specifically, the distribution in this particular type of ceramic, according to Stewart (1998, 266–74), and Lattanzi et al. (2015) may represent something that was used in public ceremonies or feasting, whereby exchange is seen as a strategy to relieve overabundance of surplus resources, rather than controlled access to special pottery. Helms (1988, 130) indicates that "for prehistoric societies valued goods may well be valued at least in part because of their associations with the sacred powers of a very dynamically perceived universe." Objects used as part of mortuary rituals are in themselves imbued with "sacred powers." Speciality feasting or ceremonial vessels may have been used during ceremonies involving burial rituals, possibly as part of the post-internment ritual activity (Hayden 1995, 2009; Hayden and Villeneuve 2011; Petauxet et al. 2002; Thomas 1987). It is clear by this study and others that interaction and its many mechanisms do not follow an upward trajectory through time but is "critically responsive to, and intertwined with, broader social and political conditions" (Earle 1994, 420), as well as and ceremonial and ritual. These people were engaged with extra-local ideas, practices and raw materials obtained from other neighboring and distant groups though long-distance travels, enough for them to be archaeologically present in the region, then prehistoric members in Middle Atlantic society from the Early

Woodland to the end of the Middle Woodland must have been liberal enough to value certain artifact classes both those existing locally and outside their region. Given value assigned to artifacts, specifically those deposited with the dead, have a unique advantage over unintentionally discarded artifacts. The intent, not only of the artifact or what it might represent, but also of the individual(s), who are the ones that having a connection to the dead are giving it to them. The type and kind of mechanism(s) that resulted in the artifacts final deposition with the deceased might possibly be known if one chemically examines a specific class of artifact. The chemical analysis of copper artifacts, a specific artifact class, may reveal the lengths to which it was obtained and or produced by the living who ultimately then place it with the deceased. However, before we get to that chapter, archaeological sites containing copper artifacts along with other artifacts, both exotic and local, are presented to provide a Middle Atlantic regional context of a culture engaged in a mortuary program with regional and interregional ties.

Chapter 5

Archaeological Sites Examined in the Region

Prehistoric copper artifacts are found in every state in the Middle Atlantic region, beginning in the Late Archaic (BC 4050) and continuing well into the Late Woodland period (1050 AD) (Bebber 2019). There have been copper axes, awls, socketed spearpoints, and pressure flakers found in a variety of contexts. What follows is not a comprehensive list of these objects by any means, but a number of sites in the Middle Atlantic region exhibiting a list of specific traits, including copper. These traits include single or multiple burials, (cremated or non-cremated), copper beads, copper gorgets, copper cups, large biface blades, gorgets, block-end tube pipes, large oval and leaf-shaped blades made of Ohio/Flint Ridge cherts and they are part of the larger class of artifacts known as grave goods (Kraft 1976, Tables 1 and 2; Thomas 1969, 10–14, 1970, 72–74). All of these artifacts individually are beautifully made out of exquisite materials, produced by specialized craftsmen. One can almost say that these objects are not utilitarian, but produced for a specific event, to be used one time and one time only. Their sheer significance lies in their manufacture and physical attributes and most of all its eventual contextual placement. These artifacts, whether made locally or obtained from a long distance, are used as a proxy in examining social and cultural aspects of prehistoric society. Together these objects as a whole and placed within a burial are taken to represent grave goods, burial furniture or equipment, or a ceremonial "kit." This kit is placed within the burial typically at the time of death on and around the deceased. Sometimes additional artifacts are buried on top of/or near the burial proper as part of future reburial or post-internment ritual activity (Cushman 2007; Thomas 1976, 56). It would help the reader to explain a bit about the concept of a burial kit.

Perry (1989) is the one who coined the term *burial equipment* and *burial kit* (emphasis mine). His description of Hopewell objects, particularly copper ones, are seen as a powerful substance derived from the underworld holding

immense religious significance (Densmore 1929, 86–95; Perry 1985, 149). These materials which comprise several categories of artifacts are assembled in a mortuary context that define burial equipment. The deceased are embarking on a journey and this "burial equipment may have been provided as a kind of luggage to accompany the deceased to the afterlife as an affirmation of personal and social identity once separation from the living is complete" (Penny 1989, 66). Burial equipment then could express in a coded message the identity of the deceased at the time of death. Or it maybe that the objects themselves are the source of power, or what they represent, and in turn the mortuary equipment represents idealized social relations (Helms 1988; Hodder 1982). It could also be that these objects are placed with the individual or individuals that had actually obtained them. As Hodder (1982, 153) stated, "we cannot overlook or disregard meaning and symbolism in analyzing ranking, because behind the social system is a structure of meaning which determines the relationship between material culture and society." It should also be noted that most previous analysis of burial goods have been driven by social and economic aspects as applied to the deceased persons status or ranking, and not an ideological or ceremonial. It must be remembered that burials ornately displayed with exotic goods does not always nor necessarily equate with social status.

When burial kit or mortuary equipment is described, what is actually meant are the grave goods, or a deposit of objects included within the burial proper. So, a deposit is synonymous with kit in the sense that it is comprised of a group or suite of objects that are buried together in the ground, either by themselves or more likely with an individual. These deposits are composed of a suite or range of objects (e.g., copper beads, boatstones, Ohio fire clay pipes, steatite platform pipes, large ovate blades, quartz crystal, mica, etc.) left during a single depositional event (McKnight 2007, 130). The implication here is that a deposit, associated with a mortuary event, directly reflects societal consumption and behavioral patterns at the time of deposition. The artifacts that make up the deposit are taken out of circulation and are emplaced in the burial by living people, most likely kin or relatives of the deceased. Burial deposits are like a time capsule that symbolically represents the type of consumption and behavioral patterns that implicate the type of interaction and the intent behind it. The artifacts themselves then take on or possibly always had significance, due to the fact of where they came from, how they got to be buried here and their connection to the deceased.

The nature and extent to which this burial equipment got to this point is a fundamental question. The following are archaeological sites in the Middle Atlantic region that possess a number of characteristics from which we can draw upon to help in answering our questions regarding prehistoric interaction and its impact on social complexity (figure 5.1). Suffice it to say that this is not an exhaustive list, nor is each site description complete. Their purpose is to inform and to provide an understanding of the type and kind

of sites in the region exhibiting signs of what has been related to social complexity.

In this chapter there are a number of radiocarbon dates and KDE plots and models presented to graphically indicate the chronology of sites mentioned in the text. The program used to calculate the radiocarbon dates with the updated calibration curves was OxCal 4.4 (Bronk Ramsey 2009) and the plots were made using R and R Studio (Bronk Ramsey 2017). The dates used in this book all come from published sources which are all provided in table 5.1.

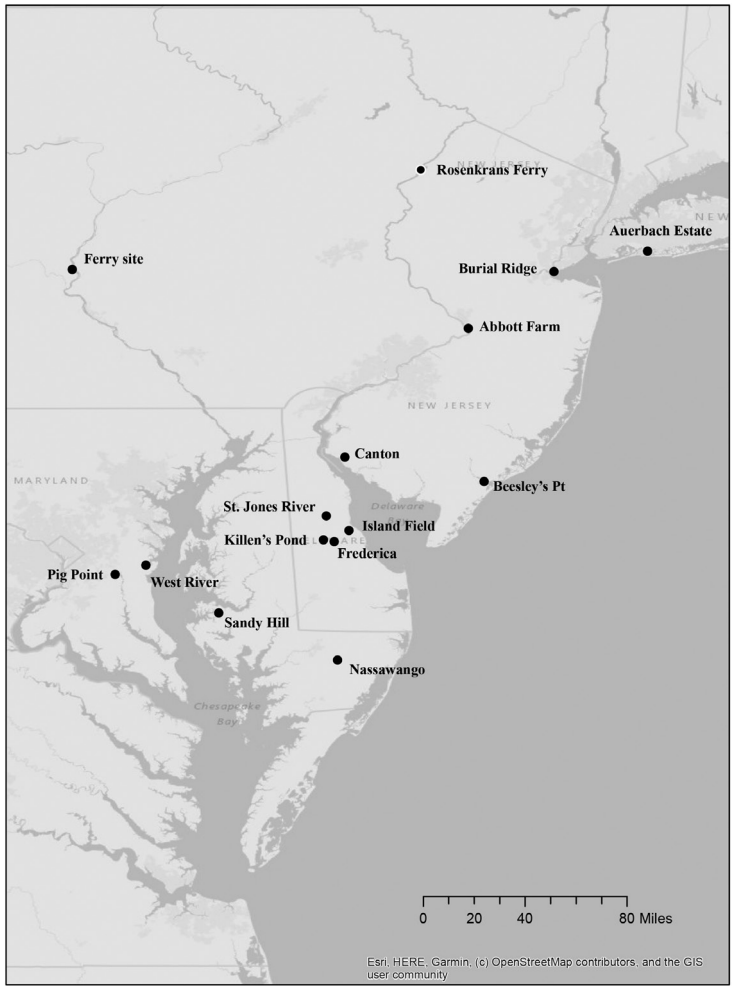

Figure 5.1 Map Showing Location of Archaeological Sites Discussed in Text. *Source*: Gregory Lattanzi.

Table 5.1 List of Archaeological Sites in Region Along with Radiocarbon Dates and References

Site	*C14 Sample No.*	*Context*	*Sample*	*Conventional (BP)*	*Calibrated 2 sigma*	*References*
St. Jones River (DE)	Y-933	Locus E	charcoal	2330 ± 80 BP	BC 594–197	Stuiver et al. 1963, 330 Thomas 1976, 94
West River (MD)	M-419	Ceremonial pit	charcoal	1700 ± 250 BP	BC 232–777 AD	Ford 1959, 1976, 74
West River (MD)	M4-162 (M-416)	Ceremonial pit	charcoal	2310 ± 200 BP	BC 834–121 AD	Ford 1959, 1976, 74
West River (MD)	4170	Ceremonial pit	charcoal	1850 ± 100 BP	BC 46–414 AD	Ford 1959, 1976, 74
West River (MD)	M-418a*	Reburial pit	carbonized bark	1630 ± 400 BP	BC 546–1179 AD	Ford 1959, 1976
West River (MD)	M-418b* (rerun)	Reburial pit	carbonized bark	2030 ± 250 BP	BC 594–440 AD	Ford 1959, 1976
West River (MD)	M-927*	Reburial pit	carbonized bark	2300 ± 200 BP	BC 833–125 AD	Reeve 1992
West River (MD)	M-420B	Ceremonial pit	charcoal	2110 + 200 BP	BC 593–260 AD	Reeve 1992
West River (MD)	M-419b	Ceremonial pit	charcoal	1960 + 200 BP	BC 406–540 AD	Reeve 1992
West River (MD)	M-419c	Ceremonial pit	below sample M-419b	1700 + 200 BP	BC 167–682 AD	Reeve 1992
West River (MD)	M-417a	Ceremonial pit	charcoal	1850 + 200 BP	BC 273–592 AD	Reeve 1992
Rosenkrans Ferry (NJ)	DIC-407	Burial 5	charcoal	2400 ± 60 BP	BC 760–380	Kraft 1976, 23
Rosenkrans Ferry (NJ)	Y-1384	Burial 9	charcoal	2560 ± 60 BP	BC 970–390	Ritchie 1960, 240
Nassawango (MD)	SI-2188	Feature 1	wood charcoal	2440 ± 100 BP	BC 800–260	Beta Analytic 2013
Nassawango (MD)	SI-2189	Feature 1a	wood charcoal	2190 ± 70 BP	BC 391–91	Beta Analytic 2013
Nassawango (MD)	SI-2190	Feature 6	wood charcoal	2190 ± 100 BP	BC 420–61 AD	Beta Analytic 2013
Nassawango (MD)	SI-2191	Feature 9(19)	wood charcoal	2735±75 BP	BC 1056–786	Beta Analytic 2013
Sandy Hill (MD)	na	na	na	na	400–750 AD	Jackson 1954
Pig Point (MD)	Beta-327617	Pit 1	wood charcoal	1850 ± 30 BP	120–249 AD	Luckenbach 2013
Pig Point (MD)	Beta-328505	Pit 1	wood charcoal	1970 ± 30 BP	BC 1–124 AD	Luckenbach 2013
Pig Point (MD)	Beta-330133	Fea. 246	na	1330 ± 30 BP	649–775 AD	Luckenbach 2013
Pig Point (MD)	Beta-332406	Pit 3	na	1750 ± 30 BP	239–401 AD	Luckenbach 2013
Pig Point (MD)	Beta-334761	Pit 4	na	2100 ± 30 BP	BC 198–42	Luckenbach 2013
Pig Point (MD)	Beta-336994	Pit 2	na	2160 + 30 BP	BC 356–289	Luckenbach 2013

Fredrica (DE)	Beta-286850		bone awl	2310 ± 40 BP	BC 466–-325	Jolie and Lowery 2020 Riemer et al. 2020
Fredrica (DE)	Pitt-429	na	na	1615 ± 45 BP	363–564 AD	Custer et al. 1990, 200
Burial Ridge (NY)	Beta-244537	na	bone	1550 ± 40 BP	420–600 AD	Beta Analytic 2008
Abbott Farm (NJ)	Beta-326786	Exec. 2, Pit 55	charcoal	2110 ± 30 BP	BC 350–110	Beta Analytic 2012
Abbott Farm (NJ)	Beta-326785	Exec. 2, Pit 55	charcoal	2210 ± 30 BP	BC 380–200	Beta Analytic 2012
Abbott Farm (NJ)	Beta-326784	Exec. 2, Pit 55	charcoal	2460 ± 30 BP	BC 800–570	Beta Analytic 2012
Abbott Farm (NJ)	Beta-326783	Exec. 2, Pit 55	charcoal	2190 ± 30 BP	BC 400–380	Beta Analytic 2012
Abbott Farm (NJ)	UGAMS#4812	Exec. 2, Pit 55	charcoal	2170 ± 30 BP	BC 359–103	Cherkinsky 2009
Abbott Farm (NJ)	UGAMS#4813	Exec. 2, Pit 55	charcoal	1420 ± 30 BP	592–660 AD	Cherkinsky 2009
Abbott Farm (NJ)	UGAMS#4818	Exec. 2, Pit 55	organic residue	1740 ± 30 BP	245–402 AD	Cherkinsky 2009
Island Field (DE)	Pitt-404	Burial 88	bone	625±90 BP	1253–1445 AD	Custer et al. 1990
Island Field (DE)	Pitt-399	Burial 2	bone	655±40 BP	1279–1397 AD	Custer et al. 1990
Island Field (DE)	Beta-29737	Feature 119	charcoal	710±60 BP	1220–1397 AD	Custer et al. 1990
Island Field (DE)	Beta-29738	Feature 119	shell	800±70 BP	1119–1303 AD	Custer et al. 1990
Island Field (DE)	UGa-5633	Burial 48	bone	990±120 BP	820–1270 AD	Custer et al. 1990
Island Field (DE)	UGa-5648	Burial 94/95	bone	1090±75 BP	772–1050 AD	Custer et al. 1990
Island Field (DE)	Pitt-403	Burial 76	bone	1110±35 BP	877–1020 AD	Custer et al. 1990
Island Field (DE)	Pitt-400	Burial 32	bone	1140±280 BP	349–1324 AD	Custer et al. 1990
Island Field (DE)	Pitt-402	Burial 73	bone	1170±60 BP	771–995 AD	Custer et al. 1990
Island Field (DE)	I-6338	Feature 204	charcoal	1210 ±90 BP	659–993 AD	Custer et al. 1990
Island Field (DE)	AA-3957	Burial 61	bone	1375±75 BP	535–884 AD	Custer et al. 1990
Island Field (DE)	AA-3960	Bone Group A	bone	1400±55 BP	559–703 AD	Custer et al. 1990
Island Field (DE)	AA-3958	Burial 99	bone	1455±55 BP	534–668 AD	Custer et al. 1990
Island Field (DE)	AA-3949	Burial 44	bone	1460±40 BP	551–653 AD	Custer et al. 1990
Island Field (DE)	Pitt-405	Burial 107	bone	1460±40 BP	551–653 AD	Custer et al. 1990
Island Field (DE)	Pitt-401	Burial 60	bone	1550±60 BP	411–612 AD	Custer et al. 1990
Island Field (DE)	Pitt-406	Bone Group A	bone	1595±30 BP	417–546 AD	Custer et al. 1990
Island Field (DE)	Beta-29739	na	na	2110±80 BP	BC 370–62 AD	Custer et al. 1990

Key for Radiocarbon Laboratories: AA-Arizona AMS Facility, University of Arizona; Beta-Beta Analytic; DIC-Dicarb Radioisotope Corp.; I-Teledyne Isotopes; M-University of Michigan; Pitt-University of Pittsburg; SI-Smithsonian Institution; UGA-University of Georgia; Y-Yale University All calibrated dates were obtained through Oxcal 4.4 (c) Christopher Bronk Ramsey 2020, and corrected using Reimer et al. 2020.

NEW YORK

The following describes two archaeological sites in the state of New York. The first one is located on the southwestern tip of Staten Island, and the second is located in Nassau County, Long Island, in the town of Hewlett overlooking Hewlett Bay. Both of these sites are geographically located in the coastal plain, and both are on uplands overlooking some form of estuary/marsh or riverine type of environment. Both sites were dug in the early part of the twentieth century by Pepper, who also excavated the Munsee cemetery in Sussex County, New Jersey (Heye and Pepper 1916).

BURIAL RIDGE

The site of Tottenville or Burial Ridge is located in Staten Island, New York just south of the town of Tottenville (figure 5.1). This site was excavated by many collectors in the 1880s (Skinner 1909, 17–18). This collection was the larger prehistoric cemetery named "Tottenville" at which there were many burials described by Skinner (1909). The archaeological site of Burial Ridge, Tottenville discussed here ended up in the storage areas of the American Museum of Natural History (AMNH) in New York City. It was noted by Skinner (1909, 14) that Pepper in 1895 was directly involved in the excavations on behalf of the AMNH. The skeletal remains were stored in the Physical Anthropology Department while the artifacts were housed in the Archaeology section and so two separate trips to examine the collections were made by the author.

During the examination of the artifacts it was noted that unfortunately none of the copper objects were present or they went missing as they could not be located by myself or the AMNH collections manager. Another item that was not present, identified, or photographed during the visit was a steatite platform pipe that Pepper (Skinner 1909, 172) found during the excavation. However, a description of these artifacts and the burial are still worth noting. The site consists of a well-preserved single child burial, which is rare in highly acidic soils. Second, this burial was highly adorned with many exotic goods, including a stone gorget, copper beads, a worked mica ornament, *marginella* shell beads, a quartz crystal, a lynx lower jaw bone and a group of exotic lithics. Previous researchers have suggested that this child burial dates to the mid-Middle Woodland or late-Middle Woodland based on the kinds of artifacts found with it (Jacobson 1960, 53). However, the artifact collection includes diagnostic artifacts that actually may date this site to the Early Woodland Period. Ritchie and MacMeish (1949, 119–20) reexamined this collection and indicated that the assemblage has a number of attributes

that for him put it in the Early Woodland Period, including a platform pipe, broad corner-notched point, and a large antler flaking tool. In fact, there were a few antler flaking tools present. He dated the site to the Point Peninsula phase, which he later included in the Transitional or Early Woodland times (Ritchie 1944, 119, 1951, 1958, Figure 5). In contrast, additional artifacts such as a rectangular gorget, a worked mica ornament around the neck, the platform pipe, leaf-shaped biface blades, *marginella* shells made into beads and a smokey quartz crystal suggest ties to the Hopewell culture; therefore, placing this site within the Middle Woodland period (Jacobson 1960). An AMS date was obtained on a piece of bone which came back as 1400 ± 40 BP measured age, and calAD 420 to 600 (Beta 244537), which places it in the later part of the Middle Woodland period (figure 5.2). Clearly the ceremonial objects placed with this burial are significant and add to the importance of the individual and the objects placed with them. Additionally, we should note that some not all of the artifacts appear to be of local origin, as well as the fact that the type of artifacts placed within the burial appear similar to artifacts placed within Middle Woodland Hopewell burials.

THE JOSEPH S. AUERBACH ESTATE

The Joseph S. Auerbach site is located in the coastal plain in the town of Hewlett, Nassau County, Long Island, New York. The site, which currently has residential housing and an eighteen-hole golf course, is located on a high ridge overlooking Hewlett Bay. The property was originally the large estate of Mr. Joseph S. Auerbach, a prominent New York City lawyer and in 1916, during the foundation excavation for a new structure on the property, workmen identified bones and artifacts scattered in the spoil pile. Again, this site was brought to the attention of George Pepper of the Museum of the American Indian in New York City. Pepper began excavating what was left of the site in January of 1917. His overall interpretation, including this

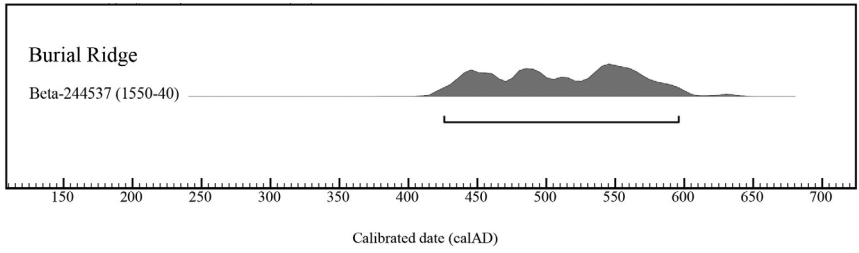

Figure 5.2 Oxcal Graph Showing Burial Ridge Radiocarbon Date. *Source*: Gregory Lattanzi.

author's, after examining the field notes and artifacts, was that this was a burial pit with a number of individuals covering a large area. The foundation for a proposed structure that was being excavated was 28 feet x 72 feet, with the long axis following north. While the workmen were digging out gravel with a scoop (backhoe) at 4 foot below the surface found 162 copper beads, a copper "knife," and a copper gorget (George H. Pepper Archaeological Field Notes 1916). Additional artifacts also included a stone blade and two stone gorgets, which Pepper indicated that he found when sifting through the back-dirt pile. Additionally, while excavating he and a co-worker found additional copper beads, as well as small fragments of human bone, leather and string preserved by the copper salts.

Pepper then opened up a trench also running north-south about 90 feet from the southeast corner of the house foundation, but along the eastern edge of the cellar foundation. In this trench were found possible post molds, and a number of features (indicated as dark areas), some of which had shell, but no other artifacts. One such dark area was a charcoal pocket or lens, occurring 1 foot 4 inches below the surface and about 1 foot 2 inches thick. In this area was the first and only area that Pepper identified as a burial. However, the charcoal area seemed to have copper beads that had fallen onto the pocket from a cave-in of the sidewall. Pepper's notes here are a little confusing as he does not draw the lens or its placement in relation to the artifacts. Furthermore, he does not even have a drawing of the original trench in relation to the cellar. In any event, what was found in this area of the charcoal lens were an additional 142 spherical and 36 tubular copper beads, a copper gorget with 2 holes, a copper celt, and a double-pointed copper awl. All of these either point to a separate by adjacent burial or part of the initial burial. So, it appears to be features consisting of possibly multiple burial pits adjacent to each other. Pepper (1917, 4) even states in the field notes that "a careful examination of the contents of the charcoal pocket and of the surrounding disturbed earth failed to disclose the slightest evidence of the presence of bones, either human or animal." His interpretation of this feature as a burial is just that.

A caveat here is that I have been scheduled to visit the collection at the Smithsonian since March of 2020. Since the COVID-19 pandemic, I have been unable to visit the museum to physically examine the collection itself. However, some general observations are worth noting here, and I was able to obtain high-resolution images of the artifacts. Upon examination of a picture of the blade from the Joseph Auerbach site, archaeologist, and knapper Cresson agreed that based on the smokey areas in the stone and lack of black flecks, this blade is probably made from Mistassini quartzite, from Mistassini Quebec, Canada like the one from Abbott Farm (see below). The copper beads, spherical and tubular, are similar in style and type to other copper beads described here. However, the copper celt described by Pepper,

does not appear to be a celt, especially with a small perforation at one end. Furthermore, given that its overall length is about 4 and a half inches, it appears to be more like a copper gorget than anything else. This one hole perforated copper gorget is extremely similar to the one excavated from the Nassawango site in Maryland (described below), although it was much thinner. Based on the copper artifacts and the gorgets preliminary evaluation would put this site at the Middle Woodland period.

Both the Burial Ridge and Auerbach sites while different in their number of burials have a lot in common in the kind and type of artifacts associated with them. If future analysis of the large biface blade from the Auerbach site determines that it comes from Quebec than a potential connection to the Abbott Farm, and other sites in the region, becomes more significant. The importance of the smokey quartz crystal and Gulf Coast *marginella* beads is also increased.

NEW JERSEY

Precontact copper artifacts are plentiful in the Garden State. The earliest reference for these types of artifacts is by Abbott (1881, 332, 1885), a prolific collector, naturalist, and writer. There are many other isolated finds of what are considered "Old Copper Culture" objects. These objects include large axe blades, or socketed axes, celts and "rat-tail" spearpoints. Most of the Old Copper Culture artifacts identified from within the state have been isolated finds with little to no provenience. There are many artifacts coming from excavated and unprovenienced locations, which have been mostly dated to the Early and Middle Woodland periods.

ROSENKRANS FERRY

The Rosenkrans Ferry site (28-Sx-2) is located in Wallpack Township, Sussex County New Jersey. The site is located in the Appalachian Highlands section of the Ridge and Valley Physiographic Province. Geographically the site lies on a 50-foot bluff on the east side of the Delaware River, where a bend in the river occurs about 900 feet to the south the site where the land takes a sharp dip to low flat ground with a series of knolls and ridges.

The Rosenkrans Ferry site has seen a number of excavations, beginning with Cross (1941, 132–43) working for the New Jersey State Museum (NJSM); she conducted excavations at the site in 1938 in two separate locations, one near the main house and chicken coops and the other to the south close to the bend. During the NJSM excavations, attention was given to depth

of artifacts, features and other aspects of soil deposition (e.g., red veins). Cross's "red veins" most likely relate to lamellae, which are iron deposits in the soil that look like thin red veins that accumulate over time. Notes taken in daily field journals indicate that overall the site had a high degree of integrity. After Cross's excavations, during the summer of 1945, amateur archaeologists Gleason and Dumont recovered a cremation burial (Cross 1945, 4–5) from near Cross's excavation. Later another amateur archaeologist Haggerty, a dentist from Hackensack, New Jersey, visited the site in 1947, excavating an additional eleven burials. Of the twelve burials, four were cremated, one was not determined and the remaining were in flesh burials (Kraft 1976, 41, Table 1).

Kraft (1976) produced a detailed publication of all the previous archaeological work conducted at this site. Kraft (1976, 11) indicated that Haggerty took detailed notes of his excavation, indicating the depth of artifacts and soil type as they were encountered. Of the total twelve burials, nine contained copper beads either in tube or round bead form, and one burial had a large copper boatstone (gorget). Artifacts recovered during the NJSM excavations at Rosenkrans Ferry from non-burial contexts included steatite gorgets, fragments of steatite bowls or pots, an atlatl fragment, and steatite tempered pottery sherds (New Jersey State Museum files).

Kinsey (1972, 450, Figure 122) reports a platform pipe made from non-local Virginia or Ohio Valley anhydrous gypsum recovered from this site, which is now in a private collection, attributing it to the late Point Peninsular or Middle Woodland (ca. 700/600 BC–AD 200) occupation. Only two radiocarbon dates associated with the Rosenkrans Ferry site have been run. The first radiocarbon date came from Burial #5. A sample was submitted to the DICAR Radioisotopes Laboratory, Cleveland, Ohio, and yielded a radiocarbon date of 2400 ± 60 years BP (DIC-407) (Kraft 1976, 23). The second sample came from charcoal from Burial #9 and was submitted for radiocarbon testing at the Yale Radiocarbon Laboratory (Carpenter 1950a, 298–303; Kraft 1976, 31). That sample yielded a date of 2560 ± 120 years BP (Y-1384) (Ritchie 1965, 203). Because of when these samples were originally submitted, both of these dates were subjected to the IntCal 9 program for calibration of uncalibrated dates because of the fluctuation of the level of atmospheric radiocarbon (figure 5.3). The date obtained by Ritchie (1965, 203) was also recalibrated using OxCal 9 returning a date of Cal BC 760–380, and the date obtained by Kraft (1976, 23) returned a calibrated date of Cal BC 970–390. These revised dates along with others listed below are put into table 5.1).

It is not the intent here to expound on the analysis of the artifacts and human remains at Rosenkrans Ferry. The reader is directed to Kraft's (1976) lengthy publication on the site in the *Archaeology of Eastern North America*.

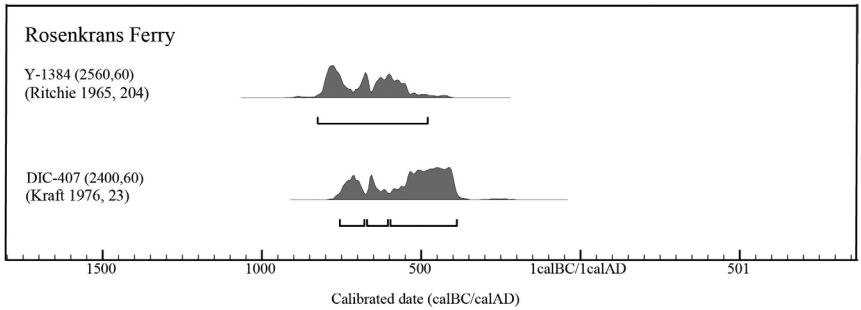

Figure 5.3 Oxcal Graph Showing Rosenkrans Ferry Radiocarbon Dates. *Source*: Gregory Lattanzi.

One thing worth noting is that the more interesting burials found at the site were Burials 3, 4, 5, 10 and 12 which contained shell beads. These burials were the only ones that contained shell beads including *Olivella, Marginella* and *Columella* (whelk). Shell beads like these have been seen as exotic items at both Adena and Hopewell sites (Kozuch 2002; Trubitt 2003), and they are the same beads as those found at the Burial Ridge site mentioned above and the Pig Point site in Maryland (see below). Kraft (1976, 38) notes that the *Olivella* shells from child Burial #12 were examined by Albright of the NJSM, Bureau of Natural History, who determined them as Minute Dwarf Olive variety (*Olivella minuta*), a shallow water gastropod whose range is typically confined to Florida and the West Indies. The infant burial (Burial #5) from Rosenkrans Ferry is also worth noting, as it contained 348 copper beads, a copper celt, an incised gorget, and conch columella beads (Carpenter 1950; Kraft 1976, 33–34). The burial kit or grave furniture is as elaborate and unique as those included with the child at Burial Ridge, Tottenville. There are numerous archaeological and ethnohistoric references to the significance of exotic goods, including shell being placed with infants or children (Hall 1997; Hayden 1995) and especially with children throughout the Delaware Valley (Cushman 2007, 153).

ABBOTT FARM NATIONAL HISTORIC LANDMARK

In 1934, Norman Lister, a resident of Hamilton Township, began digging out a burial containing one adult and two infants, long with a refuse pit directly above the burial and a fire pit surrounding it (New Jersey State Museum files 1968). These burials were located in an area well known for archaeological deposits being the former farmstead of Abbott. The Abbott Farm National

Historic Landmark consists of a large number of sites across the landscape, both along the high bluff and lowlands.

The burials exhumed by Lister were noted as being in-flesh and not cremated. A refuse pit was identified directly above the burial that included possibly intentionally broken, biface blades and pottery sherds, indicating possible post-ritual activity to the site. In the burial itself, a 50-inch-long string of round native copper beads with five drilled disk shell beads in the center was recovered. Additionally, it was noted that the pit contained traces of red ochre, fragments of mica, one jasper point, two argillite blades, one jasper retouched flake scraper, one pitted hammerstone, thirty-nine net impressed and paddle cord potsherds and five fragments of split animal bones. A number of fire pits were identified by Lister during his digging, however, while he does not indicate their location, they are probably related to a larger burial and to subsequent "offerings."

Examination of the "Lister file" at the NJSM indicated that in 1936, Cross, the Museum Site Supervisor, specifically placed her excavation in this area because of the burial reported by Lister. Cross indicated finding the Lister burial area during her own excavations (Cross 1956, 13). At about 57 inches below ground surface on a hard clay bottom, cremated human bone was encountered, which was labeled Skeletons 12a-d, Pit 55. Additionally, a number of copper objects and beads, as well as three copper gorgets, were all covered in red ochre in the soil around the feature. Dorothy Cross described the burial in the following manner.

> Cremation burial of at least four individuals. Bones broken in small pieces, scattered over a 1'2" thick layer of hard, burned earth with brown soil mixed with charcoal particles above. Bottom of layer was 5'11" from surface and it extended over a 17' x 9' area. A thin layer of powered red ochre covered the bones and this was overlain by a 1" layer of charcoal. A 'red vein' extended over part of the burial. Animal bones and artifacts were scattered except for a concentration of copper beads in a 3" band below the burned earth and four strands encircling a disarticulated wrist. Points. A:arg-2; B-chal-4, qu-2. Other artifacts. 1 slate pendant; 3 copper boatstones; 1000+ copper beads; two copper problematicals. Cross (1956, 63)

A copper disk-like object was also found as part of this burial and was later chemically tested by Britton (1967) as part of her master's thesis, and unfortunately it was destroyed as a result. One very intriguing copper artifact is a hemispherical piece of native copper (Cross 1956, 121). "Copper 'skull' is the name given to rare geological specimens formed when copper was deposited around pebbles and cobbles. When the pebbles/cobbles were removed, a bowl-like copper specimen was left somewhat resembling an incomplete

human calvarium" hence skull (Hruska 2000; Neiburger 2002). Additional artifacts include a one-holed gorget made out of gneiss, a Hornblende-Orthoclase-Quartz-based stone that was identified during the excavation trench wall cleanup. This kind of material could have come from any metamorphic terrain, including the Wissahickon Formation of the Trenton area, as well as Pochuck Formation in the Lake Hopatcong region (David C. Parris, personal communication 2012). There was only one biface blade excavated from this feature. This is a clear example of what appears to be Mistassini quartzite knife blade. This lithic material lacks the minute black flecking that is typical of Ramah chert and has more affiliation with the material of the Mistassini quartzite from the Lac Albanel quarry site in North Central Quebec, Canada (Dr. Stephen Loring, personal communication 2007), over 1,700 kilometers from Trenton. Interestingly, as stated earlier, this biface is extremely similar to the one found at the Auchenbach site in Hewlett, New York. There were three copper gorgets also recovered from Burial #12. All three were of differing sizes and shapes. They are also made differently from the Rosenkrans copper gorgets, in that the Abbott Farm copper gorgets are thinner and shaped differently.

Chronological/cultural relationships between the remains that Lister excavated and Cross's burial 12 are quite interesting. No diagnostic lithics, except the biface blade of Mistassini quartzite, were recovered from Cross's excavation, although a small pottery fragment was recovered. A number of pottery sherds were identified within the Lister pit above the burial. These sherds have Abbott Zoned Incised and Abbott Zoned Dentate designs which have been dated to the middle part of the Middle Woodland period (Cross 1956; Stewart 1998). The diagnostic lithics from Lister's excavation can be chronologically placed within the Early to Middle Woodland. There are lithics that can be typed as Fox Creek Lanceolate and Fox Creek blade remade into a drill and some that could be holdovers like Poplar Island (Lattanzi 2013, 88, Figure 4.18). Four AMS dates were obtained from charred material found within this feature, which produced dates of calBC 400–380 (Beta-326783), calBC 800–570 (Beta-326784), calBC 380–200 (Beta-326785) and calBC 350–110 (Beta-326786), respectively. Three additional dates were obtained from the University of Georgia laboratories on organic residues adhered to pottery sherds—calBC 359–103 (UGAMS#4812), calAD 592–660 (UGAMS#4813) and calAD 245–402 (UGAMS#4818). These dates help secure the time that this burial was deposited thereby clearly associating it with the Middle Woodland period (Stewart 2003, 12) (figure 5.4). Presently, this multiple burial is likely related to the Adena/Middlesex of the Middle Woodland period context as suggested by Stewart (1982, 27) and others (Cross 1956, 62; Kraft 1976; Pollak 1971; Thurman 1978; Williams and Thomas 1982, 113–14).

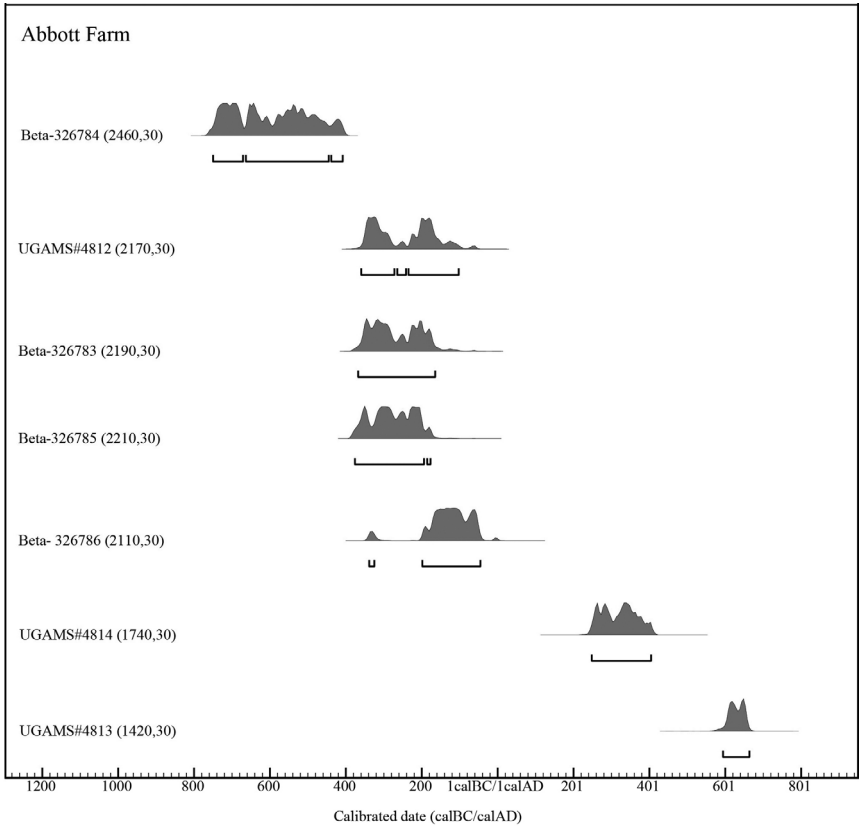

Figure 5.4 Oxcal Graph Showing Abbott Farm Radiocarbon Dates. *Source*: Gregory Lattanzi.

BEESLEY'S PT. (SCOTT) SITE

The Beesely's Pt. site (28-Cm-12) is located in Little Egg Harbor Township, Cape May County, New Jersey. This site was found during the excavation of Louis P. Scotts' summer home in November of 1939 (New Jersey State Museum files). The site is located on a strip of land which forms a part of the southern shore of Great Egg Bay in the Outer Coastal Plain. The overall site sits on a high sandy knoll and covers an area of some 150 by 200 feet, and is probably 18 to 20 feet above high water. The NJSM was contacted in November of 1938 to go and investigate the site. Although amateur archaeologists Werry and Peninno of Vineland actually excavated the site, an archaeologist at the NJSM made drawings of the site, individual burial pits and artifacts.

A total of twenty-four burials confined to the apex of the knoll in an area of 30 by 75 feet and found within two distinct levels. Twenty of the burials were secondarily interred as noted in the file. These included an infant and a dog, all of which lay at an average depth of 24 inches below the ground surface. There were four original burials at a depth of 3 and a half to 4 feet below the present surface. Two of the original burials were described in detail, and they provide clues to the date and importance of this site. Unfortunately, none of the artifacts except some copper beads has been identified for research. Portions of the artifacts have been separated among various collectors and none of which have been comprehensively described or analyzed. Unfortunately, none of the shell that was recovered from this site remained.

No charcoal or other materials were recovered for radiocarbon testing, although charcoal was present. Along with the shell and copper beads, red ochre was identified on some of the burials. Mounier cites a conversation with Keir who was familiar with the artifacts from the Beesley's Point. He stated that

> Charles F. Kier, who was acquainted with the Beesley's Point material, reported in conversation that the assemblage comprised block-end tubes of Ohio fireclay; numerous copper and shell beads; projectile points and cache blades of Flint Ridge, Ohio, chalcedony; a large quantity of gorgets; pottery and red ochre. (Mounier 1981, 54)

The lack of examination both photographic and visual of this collection hinders our ability to identify objects of non-local origin, but based on Kier's description there undoubtedly were.

Authors that have written about the site and its artifacts have concluded that Beesley's Point represents an Early Woodland site with strong affiliation with the Middlesex focus (Kraft 1976; Mounier 1981, 56; Ritchie 1960). The typical one-holed banded gorget and carved shell beads along with large knife blade with similar typology to the one found at the Abbott Farm; however, further strengthen the argument for a Middle Woodland period date. Interestingly, a drawing of artifacts from the site include copper beads, whelk beads and what appear to be either *marginella* or *olivella* beads.

In addition, these artifacts appear similar to those from the other sites mentioned as part of this study. Therefore, it is likely that the date range for Beesley's Point site falls closely within them chronologically.

THE CANTON SITE

The Canton site (28-Sa-44) was collected by Woodruff of Bridgeton, New Jersey between 1949 and 1950. Like with the Beesley's Point site, portions of

this collection are housed at the Bridgeton Public Library in Bridgeton, New Jersey. The actual location of this site is unknown, but rumor has it that it was about 1/2 mile south of the town of Canton, which would put the site along Canton Creek (Mounier 1981). The site is also located in the Outer Coastal Plain physiographic province, with an overall setting described as areas of low hills gently sloping to tidal marshes.

The site consisted of one burial with copper beads and a deposit of similar bifaces. Mounier (2003, 182) had examined the material including the remains and made a cursory analysis. Unfortunately, the burial age or sex could not be determined due to insufficient remaining material. Mounier mentioned that Woodruff took little to no notes of his digging and therefore, not much is known about depth of artifacts, position or any other potential important minutia that archaeologists are always on the lookout for. There was heavy copper staining on the skull of the individual indicating that it was buried with copper. The bifaces were described as cache of seven thin lanceolet biface blades, one with notches for hafting (Mounier 1981, 60, Plate 7, middle bottom row). It is morphologically and typologically similar, then an Early Woodland date can be assigned to this site. Some of these blades are similar in form and shape to the ones in the Tottenville burial. They also appear similar in shape and size to the Meadowood blades typically found in caches (Granger 1978b, 1981).

Unfortunately, no radiocarbon dates were obtained from this site and no notes exist of Woodruff's digging of the site. Mounier (1981, 2003) describes this site along with the Beesley's Point site as having a tenuous link to the Middlesex focus. The presence of copper beads alone does not warrant such a designation, however with the inclusion of a cache of blades one of which appears similar to the one found at a Rosenkrans Ferry Burial #1 as well as other Middlesex related sites on the East Coast (Thomas 1971). It is therefore likely that the Canton site can be attributed to the Early Woodland Period.

EARLY AND MIDDLE WOODLAND SITES WITH COPPER ARTIFACTS IN NEW JERSEY

While many copper artifacts have been identified in the state, only these two have known human remains associated with them. A cremation burial in the Abbott Farm NHL was found by local amateur archaeologists Cunningham and Stanzeski sometime in the 1960s (Stanzeski 1981). The site was located across Wescott Drive from Excavation 2 where the above-mentioned cremation burials were found. The contents of this burial included a Meadowood point, a one-holed stone gorget, a copper pressure flaker, and a large celt. The

only diagnostic finds, the Meadowood point would put this cremation in the Early Woodland Period.

Middle Woodland copper artifacts (round beads, a large gorget) were identified as being found in a burial on Constable Hook, Bayonne, New Jersey (Skinner 1915, 36). At the time of their finding, Skinner indicated that the artifacts were in the hands of a private collector in Brooklyn. It seems based on the limited documentation that the site consisted of a single burial accompanied by artifacts. Through further research these items were found to be housed in the Southold Indian Museum in Southold, Long Island and how they got there is unknown at this time.

PENNSYLVANIA

In the state of Pennsylvania there exists many sites that contain copper artifacts starting in the Late Archaic and ending in the Late Woodland. Additionally, there are stone mounds in north central Pennsylvania and of course at the states western edge bordering Ohio (Dragoo 1963, 1976; McConaughy 2014, 2015). It is the authors contention that these sites exist outside of the boundary set here for the Middle Atlantic region. Furthermore, a thorough review of the literature on those sites would incline one to see a stronger cultural connection to the Ohio area than the Middle Atlantic.

FERRY SITE

The Ferry Site is located along the Susquehanna River, on the west side of the river below the village of Liverpool in Snyder County, Pennsylvania. The site is situated in the Ridge and Valley physiographic region. This site consisted of cremation burial that contained 250 Meadowood blades of Onondaga chert, red ochre and 81 copper beads placed in what looked like a bark container (Gramly and Kunkle 2003). This would date the site to the earlier part of the Early Woodland Period based solely on the Meadowood-like blades (Granger 1978a; Taché 2011). What is not known is whether the cremation was physically within the purported bark container and whether the red ochre was placed on the entire deposit or just the cremains. The site was originally identified by Mr. Les Knuckle, who then sold it to an unknown individual whereby the copper and blades were dispersed and sold off. Interestingly, another cache of twenty-five Meadowood blades was found in 1956 (Staats 1984, 59), not far from the location of the Ferry site; however, no human remains or copper objects were identified within this cache.

DELAWARE

A number of sites in Delaware were the first to explore ideas of a connection with the Adena and then later Hopewell groups. Thomas and later other authors discussed and presented these ideas at a conference which was later published in 1971 (Swartz 1971). Almost all of the sites described below were identified through construction or avocational archaeological investigations.

FREDERICKA

This site has been written about extensively mainly because of the many amazing artifacts found (Custer et al. 1990; Jones 1965; Lowery 2012; Weslager 1968). Originally identified in 1964 by construction workers for the bypass Route 113. Not until a new borrow pit was started was there any indication of prehistoric habitation. The exact dating of the Frederica site has been a challenge due to the availability of material to test. At Frederica two bone samples were subjected to radiocarbon analysis years after the sample collections were made. Custer et al. (1990, 200) reported a conventional date of 335 ± 45AD (PITT-428). Unfortunately there was no indication of what material was tested (Jay Custer, personal communication 2021). Lowery (2012) examined the contents of a feature in the possession of a collector of the site which was described in detail. Within the contents of this feature was a broken deer ulna awl, that was sent off a sample from this awl which was assayed at BC 338 ± 40 (Lowery 2012, 42–43) (figure 5.5). What could account for the discrepancy between the two radiocarbon dates? We know the bone awl was from a feature in possession of the son of the collector and so have little contextual information (Lowery 2012, 36). It is possible that this feature was a later addition to the site, say an example of post-internment ritual activity (Thomas 1976, 56), which would explain the chronological difference.

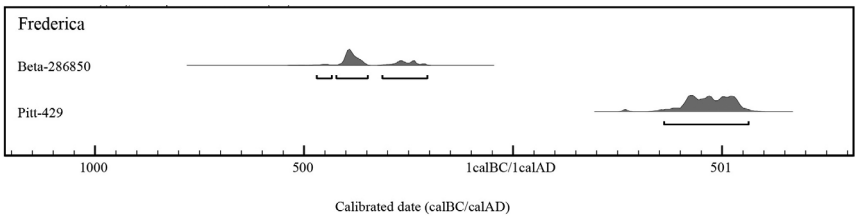

Figure 5.5 Oxcal Graph Showing Frederica Site Radiocarbon Dates. *Source*: Gregory Lattanzi.

KILLEN'S POND

The Killen's Pond site was discovered by workers for the Delaware Department of Transportation in 1938 while excavating for a borrow pit. The site is located 5 miles upstream from the Frederica site, along the Murderkill. Cubbage (1941), a member of the Archaeological Society of Delaware was the first to examine the site and its artifacts. Descriptions of the site indicate that there were two concentrations of burials within a hundred feet of one another (Thomas 1971, 60). The first group comprised six individuals all extended burials placed "one over the other" (Cubbage 1941, 24). One of the burials appeared to have the majority of the artifacts according to Cubbage. Tiny objects all around the neck and chest area were too fragile to remove. Across the lines of these "beads" was a green slate gorget, eight inches long, and around that in a semi-circle were twelve large white (quartz?) arrowheads (Cubbage 1941, 24). Cubbage describes additional artifacts, but it is unclear if they were recovered from this same individual as the gorget. A broken spearpoint, a five-inch-long knife and another blade, three perfect gorgets were also found. Later there was a report of a tubular stone pipe found at the site. Interestingly, Thomas (1971, 60–61) states that there was more than one stone pipe and that there was a cache of eight large ovate blades made of Flint Ridge chalcedony that Thomas himself actually examined. These slight discrepancies are glanced over by Lowery (2012, 27–28) during his review and discussion of the Frederica site. It is presumed that the tiny fragile beads were copper, however if there was the presence of green staining that would have been documented. Unfortunately, not much else is known about this site, including layout, dimensions or where the artifacts ended up.

ST. JONES RIVER

The St. Jones River Site (7K-D-1) is situated on about 10 acres on the edge of an oxbow of the St. Jones river on well-drained soils in an extensive tidal marsh. Fifty-two individuals were found in a series of shallow, wide pits (Weslager 1968, 190–91), which were later reconstructed by Thomas (1976). The depth of the burials ranged from three to five feet, and contained cremated and disarticulated burials (Thomas 1971, 59). The St. Jones River Site was dug by non-professionals in 1960 led by a member of the Delaware State Museum, de Valinger. A large amount of grave goods were identified at the site, some occurring in pits appearing to be associated with the burials. They included 2 large copper gorgets, over 800 copper beads, 19 dog or fox teeth drilled on the base to be used as beads; 27 shell beads (*marginella*, whelk, clam); red ochre was identified in 4 of the 6 loci (features) and mica

sheets were also recovered (Thomas 1976, 105). Interestingly, Thomas (1976) discusses his theory of this site after a review of those familiar with it (de Valinger 1970; Dragoo 1961; Ritchie and Dragoo 1960; Stewart 1970). It is after examining this site and its reconstruction that Thomas suggests that there exists in the state and possibly the region a mortuary program. Thomas (1976) did an extraordinary job at reconstructing the loci at the site based on existing notes and interviews, and the reader is encouraged to read that publication for additional information. Only one radiocarbon date was obtained for this site. Charcoal taken from Locus E was sent to the Yale University laboratory and came back with a date of 2330 ± 80 BP (594-197 calBC) (Stuiver et al. 1963, 300). If we use Stewart's (2018) cut off for Early and Middle Woodland, and based on the artifacts and burials the St. Jones River Site should start in the early part of the Middle Woodland period. If additional information comes to light to help narrow chronology then maybe the date could extend into the later part of the Early Woodland (see figure 5.6).

ISLAND FIELD

The Island Field site (7k-F-17) is located about half a mile from where the Murderkill empties into the Delaware Bay, in Kent County, Delaware (Thomas and Warren 1970). The area of the site is frequently flooded being composed mostly of marshland. Initially discovered in the 1920s, it wasn't until the 1950s that excavations took place identifying a Late Woodland burial and habitation site (Austin et al. 1953). During the 1967 excavation season, an earlier Middle Woodland (or Webb Phase) component was identified.

Eighty-eight burials were identified at the time of Thomas and Warren's publication, after which a permanent structure was built over the exposed excavated portion of the site. Later, Custer et al. (1990) carried out additional research that

> involved completing the excavation of the exposed sections of the cemetery so that the skeletal remains could be removed, biological anthropological analysis of the skeletal remains conducted, and a re-evaluation of the archaeological

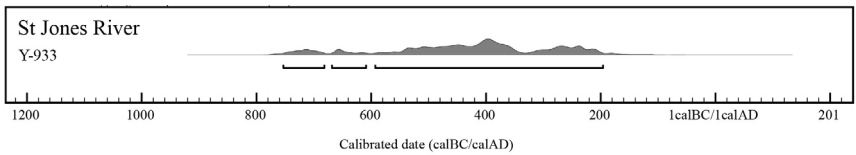

Figure 5.6 Oxcal Graph Showing St. Jones River Radiocarbon Date. *Source*: Gregory Lattanzi.

> data from the site, and integration of the complete set of cultural and biological anthropological data.

Many artifacts were recovered from the site, occurring both within the main burial area and outside in the form of caches and pit features. Typical Middle Woodland artifacts found at the Island Field include a platform pipe of steatite found with a child, a drilled sharks tooth, many implements for stone tool making. Although approximately 158 individuals were recorded, Custer et al. (1990) reexamined the skeletal material concluding that the minimum number of individuals was more along the lines of 69. This would put the number of Middle Woodland burials at Island Field less than those Middle Woodland burials recovered from the Abbott Farm (Cross 1956; Stewart 2015). The break down the data of the cemetery to show that there exists three different sized deposits associated with inhumations. Interestingly, Custer et al. (1990) note that more adult females then males have burial deposits, and the next highest deposit amount is with children. Interestingly the authors note

> no classes of males or females, or adults or younger individuals, receive special burial offerings of grave goods. Grave goods are not common at the cemetery and those that are present are not clearly associated with any special classes of individuals based on age and gender. (Custer et al. 1990, 192)

I would consider this observation an indication of no preferential treatment of any one burial based on status, ranking or hierarchy. This type of behavior is also clearly evident at Burial Ridge, the Abbott Farm and Rosenkrans Ferry where individuals are buried with and without grave goods, irregardless of age and sex.

Another similarity between Island Field and other sites discussed here is the fact that a domestic component exists within and/or around the mortuary features. At Abbott Farm many refuse pits, as well as postmolds have been identified (New Jersey State Museum Abbott Farm excavations notes). The burials at Rosenkrans Ferry were also part of larger settlement along the Delaware River with over 1,000 pottery sherds, additional burials and 33 pits (Cross 1941, 134). Island Field has also had the benefit of having eighteen radiocarbon dates. Custer et al. (1990, 156) noted that one of the dates should be discounted (Beta-29739), because preservatives were used and may have contaminated the bone. Using the Oxcal program to provide current radiocarbon calibration, figure 5.7 graphically shows all of the dates from Island Field as published by Custer et al. (1990, 157). Interestingly, the gap they mentioned between UGa-5633 and Beta-29738 does not appear to be a gap (Custer et al. 1990, 157) but a continuous occupation.

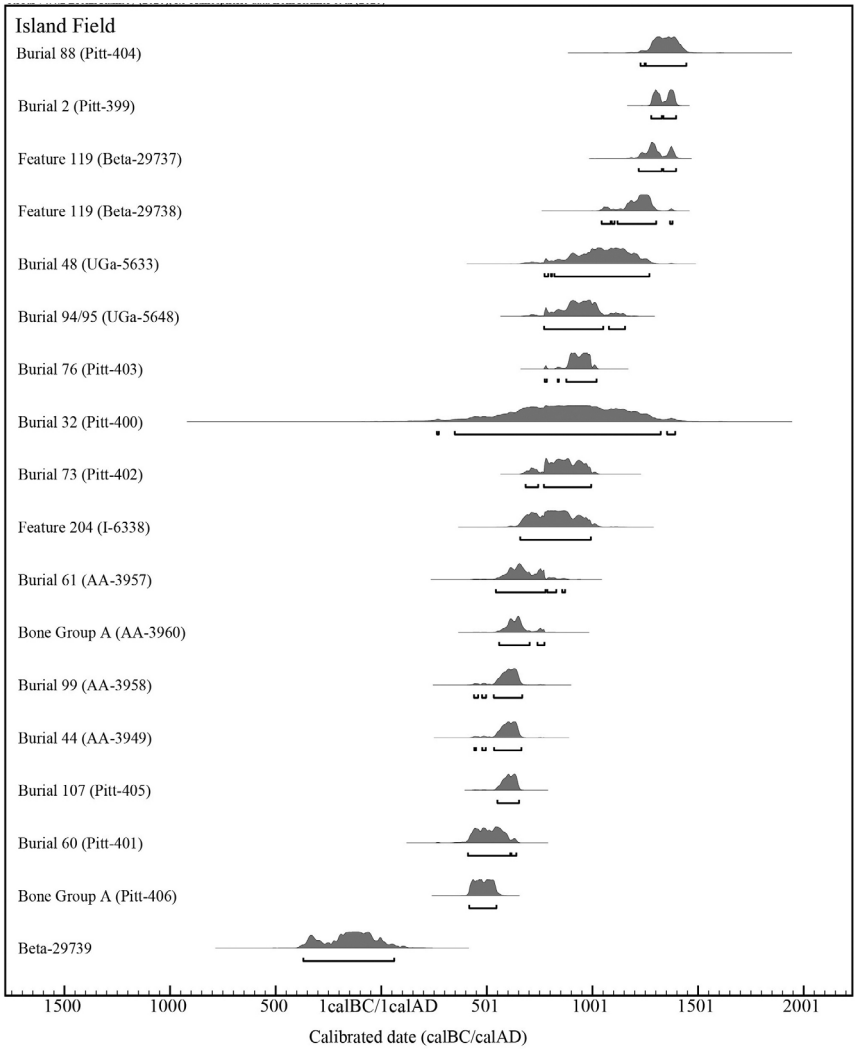

Figure 5.7 Oxcal Graph Showing Island Field Radiocarbon Dates. *Source*: Gregory Lattanzi.

MARYLAND

Like the sites identified in Delaware, those listed from Maryland were also initially identified during a construction project or through avocational investigations. The West River site was excavated through salvage efforts by the Archaeological Society of Maryland in the 1950s (Ford 1958, 1959, 1976).

Only the Pig Point site excavations were carried out through professional archaeological investigations by the Lost Towns Project.

WEST RIVER SITE

The West River site (18An18) was located on the edge of a cliff, 50 feet high, about one mile upstream on the west side of the Chesapeake Bay. Excavation started in 1954, after about half of the site was already gone. The site was described as a charnel house or crematory (14 feet wide and 19 feet long) and a reburial pit (5 feet wide by 7 feet long). Parts of both features had already eroded out of the cliff face at the time of this later excavation.

Ford (1976, 65) had described the site as consisting of a ceremonial pit and a reburial pit based on what appeared to be redeposited cremated remains and artifacts. The ceremonial pit was much larger and consisted of individual cremation pits and separate fire pits (Ford 1976, 70). The fire pits contained no bone and no artifacts, and based on the profiles of their locations in relation to the cremation pits, they could be interpreted as post-internment ritual activity as defined by Thomas (1976). The reburial pit was some feet away from the ceremonial pit. Many artifacts were excavated as part of the recovery effort in this area. Additional artifacts were also recovered by the property owner as early as 1927 and were included in Ford's report and analysis of the site. Within the larger ceremonial feature there were five separate cremation pits, only one individual, a child was covered in red ochre. There were also three fire pits within the larger ceremonial pit.

The reburial pit contained cremated bone, charcoal, lumps of red ochre, burned clay all for the purpose of redepositing cremated remains along with some ceremony. Above and around the cremated remains were artifacts. None appeared to be associated directly with the physical human remains. Of a total of eighteen artifacts in the reburial pit, there were seven blades, four points, a tube and abrading stone, and four pieces of carbonized bark all lying flat. The ceremonial feature contained a great deal more artifacts. Some of the artifacts included eighteen block-end tube pipes with a number of smaller broken pieces, seven gorgets, three hematite pyramids, and four fossil shark teeth. There were also thirty-four blades and knives also found (Ford 1976, 68–71; Weslager 1968, 189). Many of the blades were ritually killed (broken on purpose), which is common at a number of these sites. A total of ten radiocarbon dates have been run on material from the West River site. Ford (1976, 76) indicated that only two were considered the best samples recovered, as they were collected with no modern tree roots, although when looking at all of them as in figure 5.8 they all look pretty much in line indicating little to no contamination.

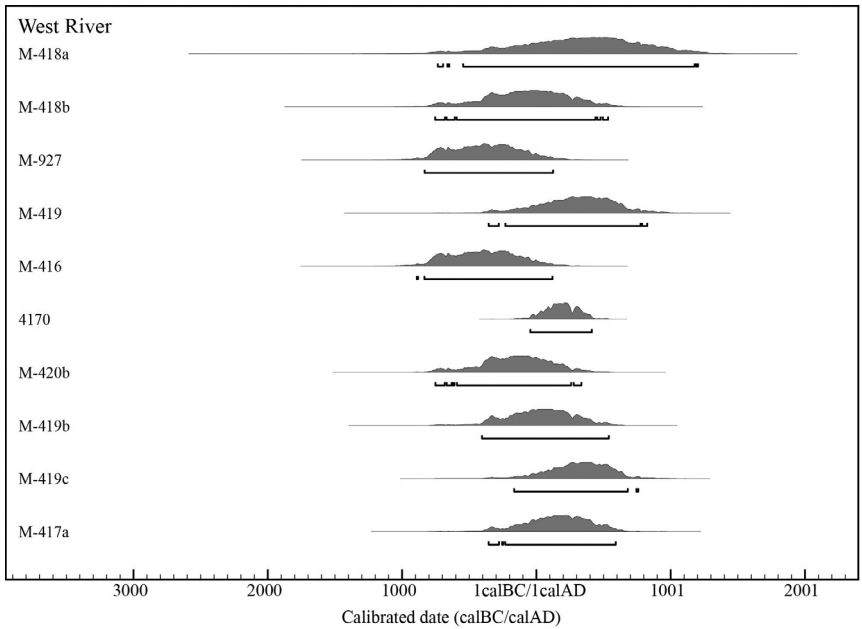

Figure 5.8 Oxcal Graph Showing West River Radiocarbon Dates. *Source*: Gregory Lattanzi.

SANDY HILL SITE

The Sandy Hill site (18Do30) is located near Cambridge in Dorchester County, Maryland on the south bank of the Choptank River. This site actually consists of two separate burial sites. The original ossuary was identified and excavated by Mercer (1897), McIlvaine (1905), and MacLeod (1928), and then Davidson (1935). The second site is located a short distance from the famed ossuary, and the two often get confused (Jackson 1954, 1). In 1927, on the adjoining property, human remains were identified coming from "a mound" of sand that was being used for concrete as part of a construction project (Jackson 1954; Thomas 1970). There is no way of knowing if these two ossuaries may or may not be associated (Jackson 1954). However, it is interesting to note that around 300 individuals were identified from the ossuary with no grave goods recovered (Reynolds 1888).

Because of the published materials and known information we have an idea of the significance of this mound site and its participation in the interaction and communication with the Ohio Valley. Early accounts have the site being constructed of a mound but from descriptions and

photographs it did not appear to be of great height. Additionally, Jackson (1954, 1) mentions more mounds in and around the area of Sandy Hill. There were roughly 100 individuals buried at this site and none overlaying another. Jackson (1954, 2) also indicates that red ochre was placed in the middle of the chests and within this were laid artifacts. Some artifacts identified as missing from the original deposit are mica cutouts, engraved tablets, disks, shell items, ground stone implements, flint knife blades, boatstones, effigy mica/copper sheets, copper breast plates (as in Jones 1965), and platform/effigy smoking pipes. Additional artifacts recovered from the site include 30 block-end tubes, 172 gorgets, 5 pendants, 1 birdstone, 2 boatstones, 86 large blades and spearpoints, 12 various shaped pyramid stones, 1 cone, 12 paint cups of green steatite, 1 of copper and 1 of pottery, 14 small slate pestles, 3 shark teeth, 3 hammerstones, 1 reptile effigy pipe, and around 150 copper beads of various sizes. Interestingly, Weslager (1942, 147) stated these mound burials are of "kings and great men buried with their finest possessions after they had laid temporarily in a nearby Chiacason House," and those of the larger ossuary were the commoners. Jackson (1954, 2) disagreed due to the very poor state of preservation of the mound remains as opposed to the larger ossuary and that they represented a later burial occupation. It is quite unfortunate that there was no charcoal recovered and thus no radiocarbon dates run. However, based on the many artifacts, including reptile effigy pipe, sharks teeth, block-end tube pipes, birdstones and boatstones, it seems likely that this "mound" and its contents would easily be at home in a Middle Woodland setting.

PIG POINT

The Pig Point (18An50) site is located in southern Anne Arundel County, Maryland on the east side of the Patuxet River. Situated within a residential neighborhood at the end of a cul-de-sac, the Pig Point site presented some interesting excavation adjustments having to navigate around driveways and front yards. Initial excavations at the site began in 2009 showed the significance of this site along with the other Middle Atlantic Adena and sites mentioned here. During the 2012 field season a large dark oval feature in the North Block was sectioned and excavated. In this feature was found Robbins blades made of a variety of exotic Midwestern materials, tube pipes made of Ohio pipestone, copper beads, and fragmentary human skeletal remains. The human remains were clearly represented by selected parts given the predominance of long bones (especially femurs) and skulls. Most of these remains had also clearly been universally and

systematically "killed" and indiscriminately mixed as part of some previously unreported, staged mortuary ritual (Luckenbach 2016).

It appears that Pit 1 was repeatedly reused and capped, showing instances of post-internment ritual activity. Near the pit was found three "ritually killed" (deliberately broken) quartz blades, which have been found on other Early and Middle Woodland mortuary sites in the Middle Atlantic region. These blades appeared to be placed as if they were in a container or bag, similar to the in-situ cache recovered at the St. Jones site (de Valinger 1970, 30).

A large number of copper beads (n=570) were found scattered throughout the fill of the pits (mostly Pits 1, 3, and 4), while only 19 were found in surrounding soils outside of Pit 1 (Luckenbach 2016, 131). All had been constructed of small strips and then rolled and hammered into beads. At Pig Point, most beads were found in isolation (indicating dispersal), but occasionally two to six beads (most often three) were found still attached to each other through the action of copper salts. Also found during excavation of the Lower Block were two tube pipe fragments. These tube pipe fragments had been submitted to the University of Illinois for source analysis indicating that they both originated from the Feurt Hill Quarry in the Scioto River Valley of Ohio (Luckenbach 2011). Feurt Hill Quarry is the origin of many pipestone artifacts during Hopewellian times (Emerson et al. 2020).

Since this site had the benefit of being professionally excavated, a handful of radiocarbon dates were run on many samples (Luckenbach 2013). As you can see in figure 5.9 all of the dates put Pig Point clearly in the Middle Woodland period. Unfortunately, copper from this site was not available to be tested as part of the project. Again table 5.1 shows the radiocarbon dates obtained and their associated feature or placement.

NASSAWANGO CREEK

The Nassawango Creek site (18Wo23) is located in Worcester County, Maryland along Nassawango Creek, the largest tributary of the Pocomoke River and southeast of the town of Salisbury. The site, discovered in March of 1973 by two amateur archaeologists, is located on a sand dune 15 meters from Nassawango Creek. The site is located within the Delmarva Peninsula region of the Atlantic Continental Shelf Province, again the coastal plain. This sandy soil suggests an age of stability at about 2,000 before present, which would allow for consistent prehistoric occupation (McCarthy 2007, 9).

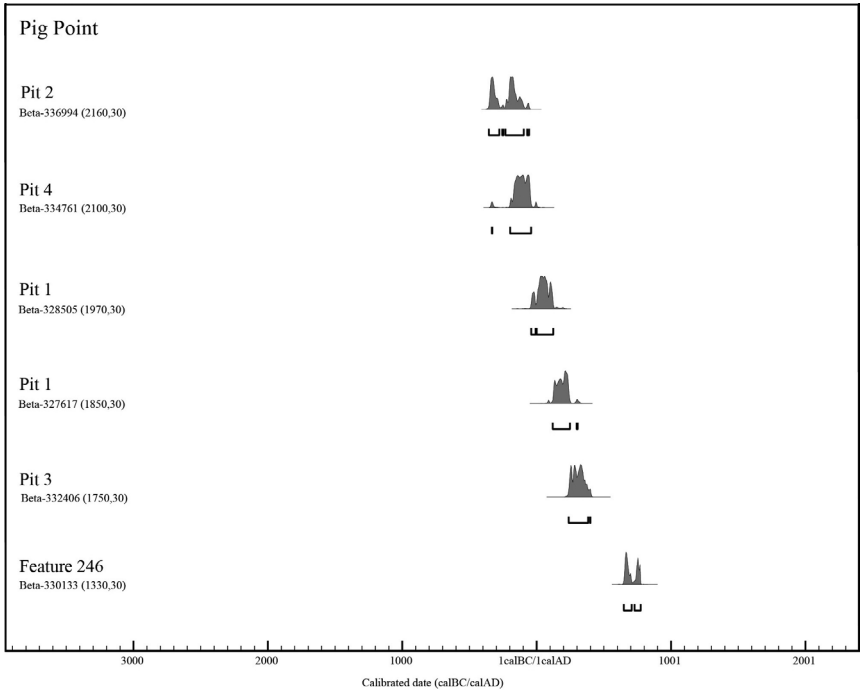

Figure 5.9 Oxcal Graph Showing Pig Point Radiocarbon Dates. *Source*: Gregory Lattanzi.

Of particular importance to this study is the large feature pit where a number of the burials were located. These burials contained the cremated and partially cremated and interred remains of about four individuals. Most of the burials were from an area that contained a number of other burial features identified by the archaeologists. The burials were examined by the Smithsonian Institution (Owsley 1991), indicating that the first burial was an adult female approximately 13–24 years old; the second was a small child about 2.5 to 4 years old; the third was an infant 6 months to 1 year; and the final and fourth burial was identified as a child 4 to 6 years old. This feature is interpreted, based on the examination of the artifacts and field notes, as one large feature that included a multiple burial, similar to the one at Pig Point. The main reason for this interpretation is the fact that all the levels of each separate feature seem to overlap at some point and blend into each other, indicating that the feature was either dug at the same time or dug into a number of times consecutively throughout a set period.

Associated material from the Nassawango site includes 1,987 tubular and round copper beads found both individually and within strands. This puts

both Nassawango and Abbott Farm on par for a number of copper beads. Other artifacts include 388 red ochre fragments, five drills and one broken banded slate pendant, very similar in shape and form to the one from Abbott Farm. Feature 6, which is the larger pit within which Feature 1 was located, contained fabric preserved by copper salts, a banded slate pendant, a large copper pendant, a copper paint cup, copper beads, and crushed quartz tempered pottery. The copper pendant measured 11.6 cm in length, 6.2 cm wide at the base and 4.3 cm wide at the top. This pendant was also very thin with an overall thickness of 0.2 cm. A close examination by the author of this object revealed that it was constructed of thin sheets of copper folded over on itself and hammered thin. The slate gorget measured 9.8 cm in length and 4.8 cm wide at the base and 4.45 cm wide at the top. Its overall thickness was 1.3 cm. This pendant is almost identical to the one found at the Abbott Farm Burial #12 except for lithic type. The copper paint cup is also a very interesting object. It is 2.3 cm in height, 5.7 cm in diameter and 0.2 cm thick all the way around the rim. Upon examination, this artifact appeared to also be constructed of folded-over thin sheets of copper. To create the shape of this object it must have been molded over a piece of worked wood or some other hard surface and then hammered into shape.

Excavators of Nassawango submitted four wood charcoal samples from this burial feature to the Radiocarbon Laboratories at the Smithsonian Institution in Washington, DC (Bastian 1975) (figure 5.10). Sample SI-2188 was wood charcoal from Feature 1, taken from 75 cm below surface. This feature was a burial pit containing charcoal, red ochre, burned bone, cord-marked pottery of crushed quartz temper, stone flakes and copper beads. This sample was from the same depth as top of Burial 3 and immediately above Burial 2. The second sample submitted to the Smithsonian for testing was SI-2189 charcoal also from Feature 1 but at about 50 cm below surface. The third sample SI-2190 came from charcoal from Feature 6, which surrounded Feature 1. The sample was taken from a depth of 90–100 cm below surface. Feature 6 is described

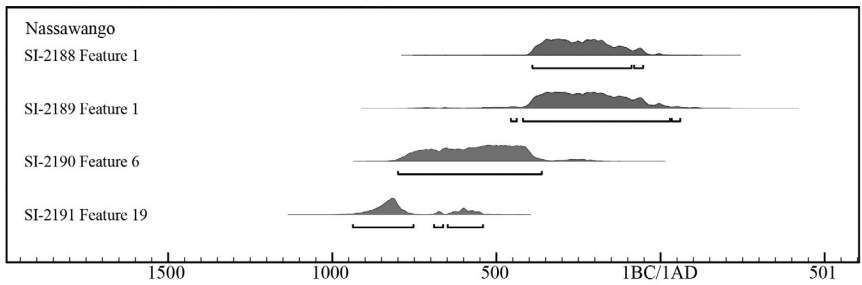

Figure 5.10 Oxcal Graph Showing Nassawango Radiocarbon Dates. *Source*: Gregory Lattanzi.

as a bowl-shaped pit containing burned bone and an in-flesh burial partially preserved by copper salts, associated with banded slate pendant, copper paint cup, fabric, copper beads and cord-marked pottery of crushed quartz temper. Pottery similar to "exterior corded/interior smoothed, generalized side-notched points, and/or contracting stemmed Rossville points" were found in two of the four burials (Wise 1974). Everything from Poplar Island-like, to Bare Island or Lamoka (Ritchie 1961) to Piney Island and Teardrop point were present. These points clearly represent the extreme variability in point assemblages which may have been used contemporaneously, which both Custer (1996, 227–28) and Stewart (1984, 19) mention occur from the Late Archaic to the Middle Woodland. Clearly point typologies have their issues and shouldn't be used as the definitive answer in dating occupations. Lastly, there was a fourth radiocarbon date obtained. This one was from Feature 19 which is on the form submitted to the Smithsonian for dating. Later this number somehow changed on the plan view drawings to Feature 9. The reason is not known, but there are two additional comments to make with regard to the radiocarbon sheet. Bastian and Wise indicate in the notes under-estimated age and basis, that this should date to about 200 BC to AD 200, because the copper indicates Adena associations and that the quality of the beads indicate a late phase. The second comment is under the importance of dating this sample and the authors write that this sample dates a slightly different burial manifestation from that of the other samples. This is the sample that is actually the earliest of the four dating to 2735 $\pm$ 75 BC, or calBC 1056–786 which clearly puts this feature and associated burial and artifacts in the Early Woodland Period. Unfortunately, as indicated below, copper from this feature was not analyzed as part of the study. At the time it was not known by the author that there was an error in the recording of this feature or was going to be possibly the original (first) burial at the Nassawango site.

There are a number of common threads exhibited by all of these sites that should be noted. First is that they are all burials or cemeteries of one kind or another. These burials either contain one individual or multiple inhumations. Second, they all contain different types of grave goods, most if not all, coming from or originating from different locations. Lastly, what the radiocarbon dates from the sites tell us is that the beginning of this mortuary phenomenon occurs sometime around 1000/800 BC and ends around AD 1450 (figure 5.11). The earliest date occurs in the north at Rosenkrans Ferry and the latest date is at Island Field in the south. This brings up additional questions that may not be answerable at this time. Are we seeing a south to north chronological movement of a mortuary complex in the region? By what route are these items to be included as part of the burial kit coming into the Middle Atlantic region? Are we looking at a small group of individuals going on long-distance vision quests or pilgrimages for significant objects to be brought back

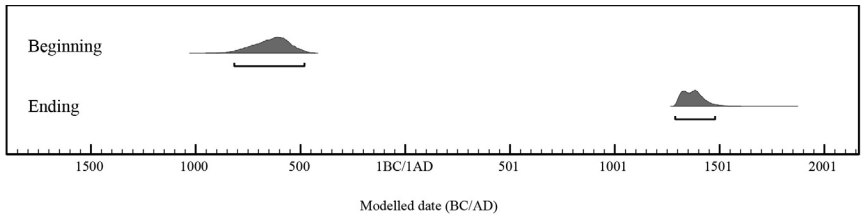

Figure 5.11 Oxcal Graph Showing the Beginning and Ending Date for all of the Radiocarbon Dates Included in the Text. *Source*: Gregory Lattanzi.

to use in mortuary ceremonies? Or are groups of Adena and Hopewell people going to the Middle Atlantic region to engage in interactions.

While only five of these sites, Abbott Farm (including Lister), Canton, Beesley's Pt., Rosenkrans Ferry and Nassawango were included in the chemical characterization study, you can see that many more sites exist in the region that appear to be part of a larger whole. The type and kind of artifacts described here, most of which are considered part of a mortuary or burial kit, are inextricably linked to a cultural phenomenon that existed far beyond the geographical boundaries of the Middle Atlantic region and spanned over a millennium.

Chapter 6

Complexity and Copper Characterization

In this chapter a case for complexity in the Middle Atlantic region is discussed. The first part discusses how complexity is defined, how we should be looking at it, and finally what sort of evidence can we use to help identify it. The following presents the results of a chemical characterization study carried out by the author to test on copper artifacts from sites mentioned in chapter 5. These results will help form the basis of the argument for complexity in some form or another. In the final section, all results and thoughts will be brought together to examine the phenomenon of mortuary ceremonialism and exotic artifacts as they relate to an egalitarian cultural system that exhibits signs of complexity. As a result, a defensible theory of Middle Atlantic interaction, of which a mortuary program is a mechanism of, is formulated, that can not only explain the Adena and Hopewell influence in the region, but also to help in understanding reasons why this influence took hold in the manner it did, resulting in the current archaeological record.

Before describing the archaeological evidence of what is being interpreted as complexity in the Middle Atlantic, the term itself should be defined. When one speaks of or defines social complexity, we typically are thinking of a society at a certain state of sociocultural development. Terms like social complexity, hierarchy, stratification, and ranking are typically thrown around without actually describing or showing how applicable the terminology actually is. Every cultural system is composed of various parts—economic, ecologic, social, political and ritual or ceremonial. As archaeologists we look at all forms of available evidence to make inferences about past cultural behavior on the way to hopefully understand culture process. The contextual and chronological evidence within a site and within a region provide the necessary tools to interpret a cultures social, economic and ceremonial systems.

In the Middle Atlantic region, during the Early and Middle Woodland periods, how do we and how should we apply this term complexity. Complexity, as will be argued for here exists in this region as non-hierarchical, nor is it ranked, in the ways those terms are defined. We know that long-distance interaction existed in Middle Atlantic material culture and social life. Here interaction implies a level of complexity in a particular aspect of Middle Atlantic life, namely participation in a mortuary ceremonial system and the collection, manufacture and use of certain types of objects as part of that mortuary program. The mechanisms behind what is seen archaeologically in the Middle Atlantic can appear to involve and revolve around spiritual, ceremonial, and religious interactions (Carr 2005a, 581, table 16.1). Highly exotic materials, Ohio fired block end tube pipes, large ovate leaf blades of Flint Ridge chalcedony and cherts, platform pipes of stone and steatite, and copper (beads, tools, and gorgets), are actively and intentionally sought for. Some of these objects are found locally while others are found at a great distance. They are brought back to the Middle Atlantic to be emplaced solely in burials or caches. Additionally, the existence of a type of ceremonial mortuary program is present (Thomas 1987). This mortuary program existed throughout the Northeastern Woodlands, possibly originating in the west. It adapted and changed, not only over time, but also in how different cultural groups saw fit to adjust—all groups using different mechanisms as part of the interaction. A major and integral component of the Middle Atlantic program is the burial kit and artifact classes that make it up. Some cultural groups saw this program reach tremendous heights in burial mounds constructed through control of a large labor force, and the participation in long-distance journeys to obtain exotic items as part of the "world renewal ritual." For what is a grave but "a portal to the netherworld by which one returns to the womb of the Earth Mother?" (Hall 1997, 23). Copper is one of those artifact types that represent multiple spiritual realms for native people. In its raw form it is shiny and bright like the sun of the upper world, when it is old and tarnished, it is dark like the lower world (Abanaki references). Copper is thus seen as alive, associated with many creatures all indicating transformations (Turff and Carr 2005, 672).

WHAT IS COMPLEXITY AND IS IT COMPLEX?

There are many ways to define complexity, just as there are many paths to achieve complexity. The notion that complexity must be tied to economic aspects of prehistoric society in every case should be thrown out (Souvatzi 2007, 37). We must look at complexity, not as strictly a bottom up approach, but more like the interplay of the physical and social relationships among

and between both individuals and communities. Seeing complexity as inherent within society helps to understand all forms of society and social organization (Souvatzi 2007, 38). Society is made up of individuals, their agency, and how they interact within and between different social spheres is a fluid and dynamic relationship (Bursey 2015). All aspects of complexity are in a delicate balance working to maintain status quo and equilibrium. The difference between egalitarian, "segmentary societies or tribes and chiefdoms is qualitative not merely quantitative" (Seeman 1979, 39), what emerges is a completely different and changed social system (Peebles and Kus 1977).

Bursey (2015, 127) stated that the archaeological literature fails to discuss and is "missing [are] examples of the maintenance of [aspects within these] egalitarian societies in contexts where the conditions that might allow complexity or an increase in scale (intensification) to develop are present but egalitarianism is maintained". So, one looks to find what context or conditions (e.g., mechanism) that can be used to account for maintaining social behavior and thus social organizational structure. Are these conditions or contexts related to, or part of a larger societal structure, say a system where there exists the homogeneous distribution of ritual objects pointing to a complex relationship between producers and consumers all part of a shared mortuary or ritual ceremonial program? Are we seeing these long-distance activities, whereby ritually sacred objects imbue those directly involved in obtaining them with sacred power or prestige? Are we seeing "ritual or vision quests" to obtain certain specific objects? We see such intensive interactions and cooperation that encourages cohesion, solidarity and equality as they relate to networks of social obligations seen in long-distance acquisition of ritual objects.

In the Middle Atlantic region, we see structured communities with tightly linked individual social units into a cohesive and integrated whole, organized by conceptual rules favoring collective social behavior that promote egalitarianism. It appears that these rules, especially during the Early and Middle Woodland periods in the Middle Atlantic region, centers on the interaction of Middle Atlantic and other regions. Specific mechanisms of that interaction (i.e., mortuary program) include artifacts (both perishable and non-perishable objects) obtained with those groups who also partake in similar programs (i.e., Adena-Hopewell). As stated by others, both the Adena and later Hopewell peoples are currently considered nonhierarchical (Carr and Case 2005, Seeman 2020). However, the interactions under various mechanisms that started in the Early Woodland became only more complex during the Middle Woodland.

The last section in this chapter then discusses the evidence for complexity in the region using results of copper artifacts chemical characterization.

These copper artifacts are a part of the larger burial ceremonial kit and therefore can reveal aspects of interactions and the mechanisms behind them. It is suggested that in the Middle Atlantic region there is a framework composed of and supporting the coordination of social and religious/ritualistic relationships, cooperation, encouraging cohesion, solidarity and equality, that are all part of networks of social and potentially ritual obligations. As part of the analysis of the copper artifacts, a series of expectations were developed, based on the models of interaction presented in chapter 4. These expectations would potentially reveal something about one or more of the mechanisms described by others, which in turn would help to define the nature of complexity in the region (Carr 2005a, 581, table 16.1).

Expectation 1: A deposit representing a single intra-regional source (homogeneous) of copper meets the expectations of a focused exchange network.
Under this scenario, the expectation would be a burial kit of homogeneous material (e.g., all copper grouped together) likely sourced to one particular location inside (intra-regional) the Middle Atlantic region.

Expectation 2: A deposit representing a single extra-regional source (homogeneous) of copper meets the expectations of a focused exchange network.
Under this scenario the expectation would be a burial kit of homogeneous material (e.g., all copper grouped together) likely sourced to one particular location outside (extra-regional) the region.

These two expectations are the same as Stewart's (1989, 1994, 2004) focused exchange network. Individuals or groups, possibly ritual specialists, making a vision or pilgrimage quest from the Middle Atlantic insinuated themselves into broad-based networks inside or outside of the region to obtain specific objects from a single source (Stewart 1989). Items gained through focused exchange are generally found in burial contexts and artifact caches. These types of artifacts would be part of ceremonial exchange and immediately consumed (buried) as part of the mortuary program. This type of behavior would also be clarified as direct procurement with intact consumption as the copper would be immediately deposited in a burial context (McKnight 2007, 44; Renfrew 1975, 43). Interestingly, focused exchange networks "do not appear to involve institutionalized or formalized relations between societies within the Middle Atlantic Region and those in adjacent regions" (Stewart 2004, 342); however, they may involve formalized relations among individual groups within the Middle Atlantic region. This type of interaction would, as Helms (1988) defined involve close strangers as the distance for obtaining such goods is more about the value placed on the objects (esoteric knowledge or sociopolitical).

Expectation 3: A deposit representing multiple intra-regional sources (heterogeneous) of copper meets the expectations of a broad-based exchange network.

Expectation 4: A deposit representing multiple extra-regional sources (heterogeneous) of copper meets the expectations of broad-based exchange network. These scenarios would be represented by copper objects from multiple sources within one burial deposit, the result of localized hand-to-hand interactions, obtaining goods down the line. All of these artifacts would then be "pooled" for their eventual deposition later in time, hence the multiple different copper sources making up the deposit.

These scenarios would be represented by copper objects coming from multiple sources, the result of localized hand-to-hand interactions, obtaining goods down the line. All of these artifacts would then be held, possibly for a burial event or ceremony in the future. This could be a result of a number of different localized kin groups or normal people, possibly adjacent close neighbors, engaged in interactions. These objects would have a more ceremonial focus. This would be similar to Custer's (1984) web-like, down the line exchange, and Stewart's (2004, 342) broad-based hoarding network. Similarly, this would equate with direct pilgrimages or long distant trips to obtain sacred/valued objects to bring back. In looking at these four scenarios one must realize that both focused and broad-based networks can exist at the same time, independently of each other (Stewart 1989, 1994, 79).

RESULTS OF COPPER ARTIFACT CHARACTERIZATION

Chemical characterization studies were carried out on copper artifacts from the sites of Rosenkrans Ferry (n=87), Canton (n=18) and Beesely's Pt. (n=16), Abbott Farm and Lister (n=206), and Nassawango (n=192) (Lattanzi 2008, 2013, 151). A condensed version of the highlighted results are presented here, along with a further discussion of how these results and interpretations can be incorporated into ideas of complexity in the Middle Atlantic which will be presented after.

In examining copper artifacts from a single site as being part of a deposit, what remains is hopefully an accurate depiction of copper acquisition and deposition at a particular time and place. Any relationships identified within and between sites based on the trace-elemental characteristics of the copper will "represent the collective source utilization of a population, and that the chemical composition of each site will then reflect the geological source(s) used by that population through time" (Hill 2009, 258). So, if

there is overlapping of the elemental composition of copper found at sites, we would then argue for interaction between those communities. Now what is the meaning or intent of this interaction is to be discovered. If copper is seen in being distinct and separate clusters, we would further argue that those clusters represent different sources of native copper thereby revealing different mechanisms at play with regards to interactions among and between prehistoric groups.

Once all of the geologic and artifact samples were analyzed and plotted the findings showed interesting patterns (figure 6.1). As previously stated by Rapp et al. (2000, 82) and others (Hill 2009; Lattanzi 2007; McKnight 2007) geologic copper samples unequivocally show separations along geographic boundaries. There is a separation between almost all of the east coast copper and those of the Midwest and Canada.

To show the distinctiveness among copper at all the archaeological sites, the first run was carried out for Lister (#1), Nassawango (#2), Rosenkrans Ferry (#3), Canton (#4), Beesley's Pt (#5) and Abbott Farm (#6) (figure 6.2). There was a grouping between Lister, Abbott Farm and Rosenkrans Ferry, while Nassawango seemed somewhat chemically distinct. More confusing was the fact that Canton and Beesley's Pt. appear to be much higher in Silver (Ag) than copper from the other sites resulting in Canton and Beesley's Pt.

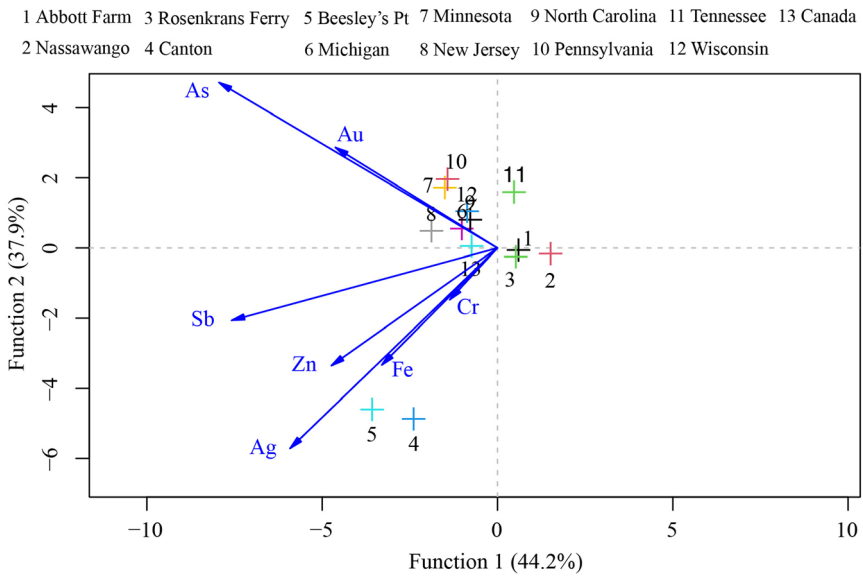

Figure 6.1 Scatterplot Showing Group Centroids of Copper from Sites and Geologic Samples. *Source*: Gregory Lattanzi.

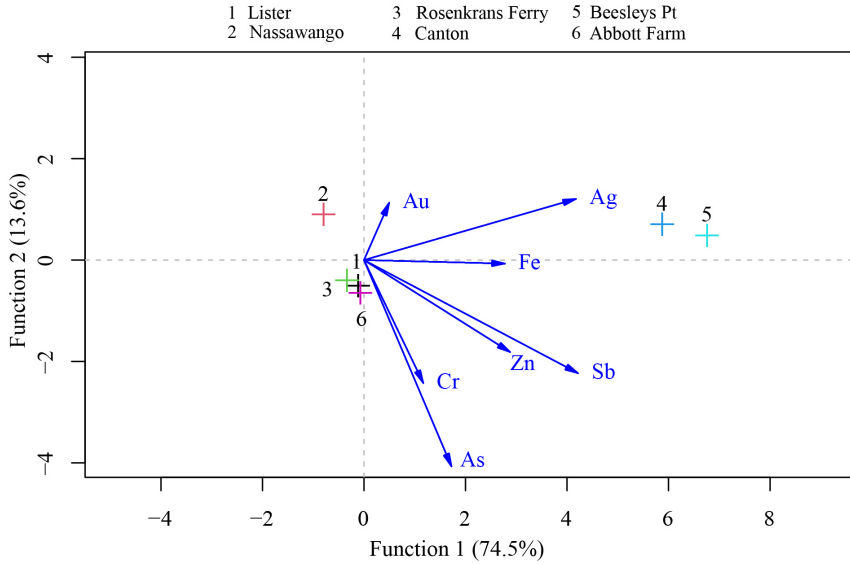

Figure 6.2 Scatterplot Showing Group Centroids of Copper from All Six Sites. *Source*: Gregory Lattanzi.

appearing far away from the other sites and geologic samples. Additional scenarios were run in which Canton and Beesley's Pt. were included with sites and with geologic sources. All of the results proved the same and so, in order to further refine the analysis to account for a greater percentage of variation, those sites were removed from the analysis.

The next step is to compare copper artifacts in relation to the geological copper, which if grouped should display copper from sites closely related to copper from a geological region. To make it clear, as stated earlier, the results here do not indicate the exact source of the copper. What they do tell us is that what distinguishes our "groups" is the level of concentration of certain elements which describe the percentage of variation. When both data from the geologic and artifact copper are run together they show, or rather they predict where groups will be made, according to the occurrence of elements at a specific percentage. So in reference to the figures above, one can see that the eastern sources of copper would naturally group themselves together based on the percentage of certain elements occurring within the ore and the same goes for the Midwest and Canadian samples. Likewise, the concentration of certain elements within artifact copper would more closely align themselves with those elements within the geologic samples.

Figure 6.3 shows Abbott Farm and Lister sites combined, while figure 6.4 shows Abbott Farm and Lister separated along with the Canadian geologic

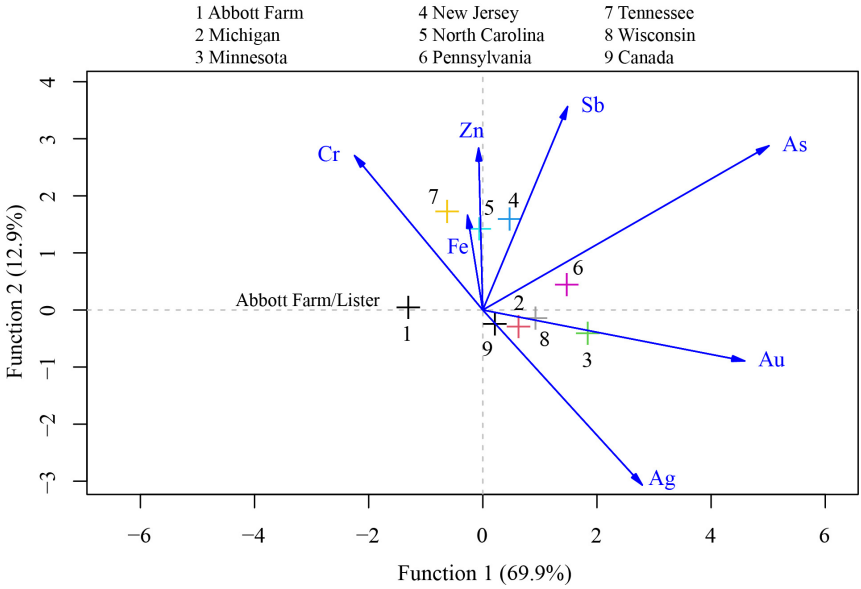

Figure 6.3 Scatterplot Showing Group Centroids of Copper from Abbott Farm and Lister (combined) and Geologic Samples. *Source*: Gregory Lattanzi.

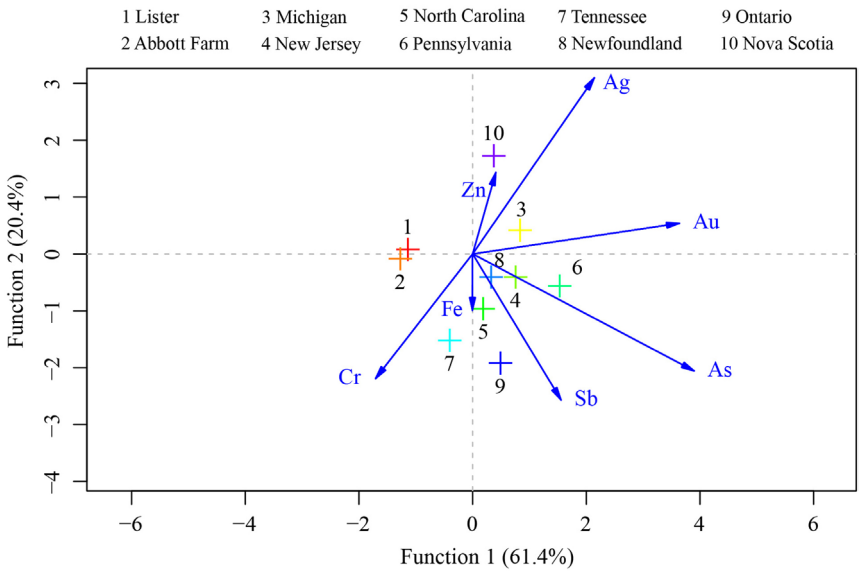

Figure 6.4 Scatterplot Showing Group Centroids from Abbott Farm and Lister (separate) with Canadian Geologic samples also separate. *Source*: Gregory Lattanzi.

samples also separated. Given the fact that both sites were separately excavated, one professionally and one not, there was a likelihood that they represented two distinct burial deposits. One can see there is no real statistical difference in the chemical makeup of the copper from the Abbott Farm and Lister, and that they likely come from the same source location. Furthermore, that likely source would be along the eastern seaboard, as Tennessee (#7) and North Carolina (#5) geologic sources are somewhat close. The Abbott Farm centroid appears to indicate a closer affiliation with the Nova Scotia source (#10), which is inline with the linguistic evidence of the Lenape (Delaware) originating from the north (Goddard 1978; Luckenbach et al. 1987) and Lister is closer to the Tennessee copper. This would suggest additional research and work on clarifying this issue. Working under the assumption that the copper artifacts from Lister and Abbott Farm were both placed in the ground, if not immediately, then within a short span of time, it is possible that the copper likely came from two sources—one in Canada and the other in Tennessee.

The next figure shows how likely Nassawango copper artifacts group with geologic sources. Initially, all of the copper artifacts from Nassawango were lumped together along with the geologic sources. While on first look Nassawango copper didn't align with any of the geologic samples; however, when you separate out copper from each of the individual burial features a different picture emerges. Figure 6.5 shows how copper from the individual Features 2, 3, 4, and 6 are

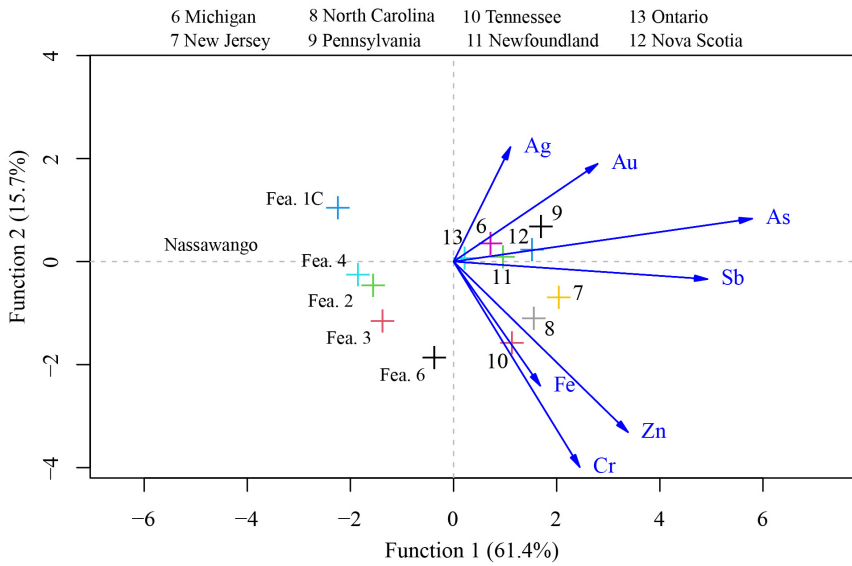

Figure 6.5 Scatterplot Showing Group Centroids of Copper from Nassawango (Burials Separate) and Geologic Samples with Canada also Separated *Source*: Gregory Lattanzi.

statistically associated with the eastern seaboard sources, while Feature 1c is not. This would indicate that there is a difference among the copper deposits within individual burials. Interestingly, Feature 6 had a radiocarbon date, BC 400–20 AD cal (SI-2190), and actually appears to be more aligned with the geologic copper from Tennessee. This would indicate that Early Woodland native people of Nassawango were using southeastern sources of copper at least for this feature/burial. As stated previously, copper from Feature 9(19) was not tested as part of this study and considering it has the earliest radiocarbon date, copper from here may have shown something else, like if it is from Canadian sources.

The last site to be discussed as part of the copper analysis is the Rosenkrans Ferry site. Like Nassawango, figure 6.6 shows separated burials from Rosenkrans Ferry. You can see that it is more in line with Canadian sources than any other group. The fact that there appears to be a higher Silver (Ag) content is interesting, as that point was noted by Kraft (1976, 42) as being the hallmark of Michigan copper and also when looking at just the geological samples. Copper beads from Burials #2 and #5 from Rosenkrans Ferry were submitted to the General Electric Company Materials and Processing Laboratory in Syracuse, New York where they were run against copper from Michigan and Tennessee. The results indicated that since the Michigan copper contain 50ppm (parts per million) of Silver and so did the Rosenkrans beads, that the Rosenkrans beads came from Michigan (Kraft 1976, 42).

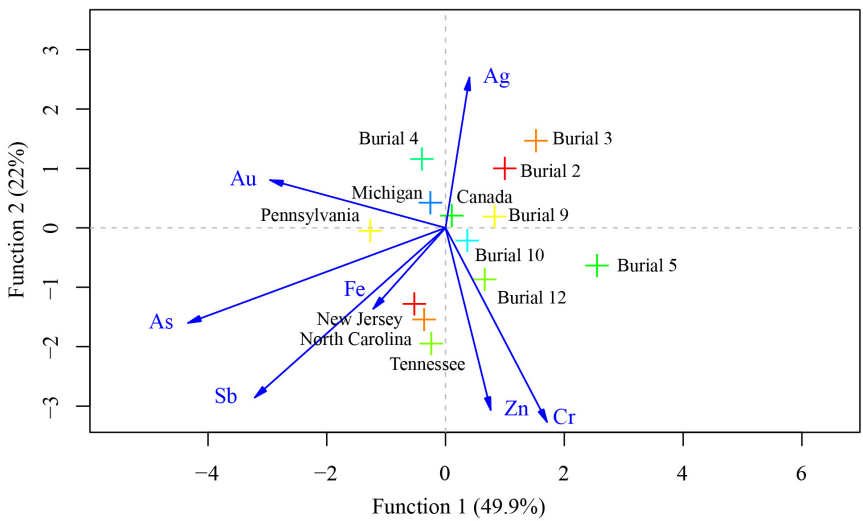

Figure 6.6 Scatterplot Showing Group Centroids of Copper from Rosenkrans Ferry (Burials Separated) and Geologic Samples with Canada also Separated. *Source*: Gregory Lattanzi.

Initial impressions of figure 6.6 indicate that in some burials (#2, #3, #9 and #10) the copper artifacts likely source is Canada, while Burial #12 is leaning closer to the eastern seaboard sources. Burial #5 appears to have a closer affinity to the eastern seaboard sources. Interesting to observe is Burial #4 which is clearly closer elementally to Michigan than the others. This is very interesting to consider given the fact that the two radiocarbon dates obtained for this site hover around cal BC 970 to 380 which is very early. The Early Woodland mortuary site of Boucher in northern Vermont has a date range from BC 885–115 (Heckenberger et al. 1990, 109). Artifacts comprising the burial kits from Boucher are similar to those from Rosenkrans Ferry. They include Ohio clay long tube pipes, Adena bifaces and other lithics made from both local cherts, as well as exotic Mistassini quartzite and Flint Ridge chert (Heckenberger et al. 1990, 117). The comparisons between the Boucher site and Rosenkrans Ferry are many and a newer examination should be undertaken.

While much more work needs to be carried out, both on the copper and the entire burial assemblage, including adding more geologic copper samples to the database, what has been accomplished thus far has been extremely promising.

INTERPRETATIONS OF INTERACTION

The chemical characterization studies of prehistoric native copper artifacts have helped to elucidate cultural contact in the Early and Middle Woodland periods in the Middle Atlantic region. One aspect to note about the dates for these three sites is that there appears to be almost across the board consistency, or at least no major chronological gaps. There are two early dates, the first one being Nassawango (SI-2191) calBC 1056–786 (Burial 9/19) and the second being Rosenkrans (Y-1384) calBC 970–390 (Burial #4). In fact, what is interesting is the fact that there is an initial early burial at these sites and then somewhat later additional burials either placed nearby or directly within or around the main burial pit. This has been seen before at many other sites with other native groups. This post-interment ritual activity is a significant part of Delaware mortuary practices (both burial of human remains as well as hearths/fire pits). It stands to reason that given the closeness and some overlapping of the dates that seems to be one explanation.

The results of the copper analysis indicate a few points worth noting. The first is that among all of the sites tested copper from Abbott Farm (Lister) and Rosenkrans Ferry appear closely related in location of source material. Second Nassawango, while close to Abbott Farm and Rosenkrans, exhibits more variation and therefore is somewhat distant from them. Third and lastly,

both Canton and Beesley's Pt, while exhibiting the same or similar source for their own copper, exhibit more variation between them and the rest of the sites. Reasons for this could be that their likely source was not included in the samples tested, or that there may not have been an adequate sample of a particular location.

Using Stewart's (2018, 2) most updated radiocarbon chronology of the Delaware Valley, the Early Woodland period begins 1000 BC–500 BC, and the Middle Woodland period 500 BC–AD 800/900. This would mean that most of Abbott Farm occurs in the Middle Woodland with one date possibly in the later part of the Early Woodland. One feature at Nassawango would be in the Early Woodland, while the remaining would be in the Middle Woodland. As far as Rosenkrans Ferry goes, one date is in the Early Woodland, while the other skirts both the Early and Middle Woodland periods (continuous site revisitation).

All that being said what we can say about the results of the chemical characterization of copper is the following. When looking closely at the Rosenkrans Ferry site on an individual burial level you can see something very striking. At least four or five of the Rosenkrans burials as seen in figure 6.5 show a clear affinity with the Ontario Canadian copper sources. This is extremely interesting as this is the northern most Late Adena site in the Middle Atlantic. It is also interesting given a possible connection with the Boucher site in Vermont. As mentioned above, linguistic evidence and tradition of the Delaware point to ancestors coming from the Canadian lands and migrating south.

This is a similar conclusion that Levine (2007, 581) came to with her study of the copper from Boucher, where most of the samples were sourced to "Nova Scotia (Cumberland County and Cap D'Or) and it was also the most probable geological origin of the copper from seven of the nine samples from Boucher." Wellman (1994, 46) examined nine beads from Boucher as well; he did find that one of them was sourced to New Jersey and another one to Cap d'Or. Based on those findings and that possibly copper from Rosenkrans Ferry likely sources from Canada implies a number of different theories. Where both of these communities in communication with each other? Given the similarities in materials used in the burial kits, it is quite possible. There is a great physical distance between both sites; however, one can see long-distance travel for esoteric knowledge or obtain sacred objects to be used in mortuary rituals. Furthermore, copper deposits from two individual Rosenkrans Ferry burials appear distinct from the remaining, suggesting different sources. This is true when looking at Burials 4 and more so with Burial 5. Much higher in zinc (Zn), the copper from Burial 5 does not appear to have any close affinity with any of the geologic copper in this testing. This certainly warrants further investigation.

When looking at the results of the Abbott Farm and Nassawango copper one sees an entirely different procurement strategy. Feature 6 copper from Nassawango shows strong affinity with geologic copper from Tennessee. Now this may not mean much but in combination with the Lister copper also being close to Tennessee the dynamic changes. The dates for Feature 6 also match up with those from Abbott Farm. Feature 9 (or 19) which is the earliest date from Nassawango also had copper and pottery. Unfortunately, this was not tested because when originally identified it says Feature 9 on the site plan and feature notes. Upon further examination later, it looks as if it was later designated Feature 19 which is located within the other features and possible the first initial burial dug at the site (Nassawango field notes 1973). As previously stated, nothing substantial stands out in the plot of Abbott Farm-Lister along with the geological samples (figure 6.3). It is possible that there exist closer associations with Lister (#2 on figure 6.3) and Tennessee (#7), and it is just as likely for Abbott Farm (#1) to be associated with #10, Nova Scotia. This would indicate that if Lister and Abbott Farm are one large burial pit, then the copper artifacts emplaced at the same time, comes from two distinct and different geographical locations. This implies that long-distance travel was carried out to obtain these copper sources. These burials at Abbott Farm (Cross and Lister excavations) would indicate a high level of cultural interaction between them and far distant groups. Additional geologic samples from other locations as well as more samples from these existing locations need to be added to the study in order to try and account for the variations.

One final note on these results is that they do not consider the plausible notion that prehistoric peoples during the Middle Woodland found and made artifacts out of drift copper that they saw within their region. The same goes for the Early Woodland populations. However, the use of drift copper does not alter these or other findings, because other studies (Hill 2009, 270; Allert et al. 1991; Rapp et al. 2000) have stated that the bedrock over which glaciers moved would be geologically similar to the drift copper and additional in depth testing of both types of copper would be necessary "if we expect to directly attribute artifact copper to geological sources" (Hill 2009, 271).

Chapter 7

Complexity in the Middle Atlantic Region

A number of authors have explained the evidence for complexity by using the words like "ranking" or "stratification"; however, the evidence seen in the Middle Atlantic region is sporadic, without a definitive pattern and without concrete evidence of real inequality (Friedman 1975). We do not find these objects associated with high-ranking individuals or elites or religious men, as we see no clear distinction of who gets to be buried with these exotic materials and who does not. More importantly there is no evidence of large labor intensive earthworks (mounds) which to house these high-ranking officials. They just do not exist. Furthermore, as stated earlier, when comparing the radiocarbon dates there does not appear to be long periods of in situ development and not much of a chronological lag in time. The statement of Handman and Gold (2002) appears to ring true as they look into the region from the Southeast. Based on the evidence

> what emerges at the larger regional scale of synthesis in the Middle Atlantic is an intriguing cultural pattern of cycling that situates many individual "emergences of ranking" and their variable modes of expression into a coherent and long-term pattern of regional political and social stability previously undescribed for the Middle Atlantic Woodland period. (Hantman and Gold 2002, 271)

There is seen archaeologically in the region the appearance of complexity, which seems to be contingent on scale. The scale of population, scale of access to resources, scale of interaction, and scale of willingness to be fully involved. What may actually be occurring in the region is the cyclical engagement of mortuary ceremonialism by all or a number of Middle Atlantic groups that have evolved since the Late Archaic. This mortuary ceremonialism is a product of cultural group interactions, which places acute emphasis

on individuals and/or people that have provided a necessary service to maintain the balance and order of the social groups earthly and spiritual worlds (Hall 1987), and who are then nicely rewarded in the afterlife. These special individuals or groups travel well outside their natural homeland to far distant places in order to obtain objects. The act of long-distance buying and selling religious prerogatives (Penny 1989), obtaining sacred objects or visiting sacred places-landscapes (Ahola 2017) implies much more than social or economic pursuits. What we are seeing in the Middle Atlantic, especially during the Middle Woodland period, like that of interregional Hopewell is an identity centering on "canonical meanings and the symbols and styles used to express them, rather than a social structure" (Turff and Carr 2005, 667). Canonical meanings as seen in the current case, equate with transformation, power, and humanness. These are similar to Seeman's (1995, 135) notion of Sprachbund where what is most important in the Middle Atlantic is the worldview notion of a core ideology, which may differ in particulars from other regions, however the core concept is universally known by all who come into contact with it (Turff and Carr 2005, 669). These objects used as part of the ideologies are almost solely used in burials and thus are of great ceremonial significance and sacred value. Custer (1996, 163) notes that during ca. 3,000 BC to 1,000 AD in southeastern Pennsylvania and adjacent regions, there are "spectacular artifacts manufactured from exotic materials, extensive trade and exchange networks, and intensively-used riverine sites [which] *hint* at some degree of developing social complexity" [emphasis mine]. The connections between Early to Middle Woodland native peoples of the Middle Atlantic and the Adena and Hopewell cultures was much wider than we thought. There are also interactions with native people of the Canadian northeast. These connections are represented by exotic artifacts made from raw materials outside the region. These artifacts appear to be aspects of a mortuary ceremonial complex that include long-distance spiritual or ritual journeys and large scale feasts or feasts of merit (Hayden and Villeneuve 2011; Rousseau 2001). I suggest that we should focus on what Hantman and Gold (2002, 271) say are the related or independent pathways and the *differences in scale* of the participation and the mechanisms behind those interactions (emphasis mine). It is the scale of the connections, the participation in a mortuary ceremonial program, the scale of the access to resources, and the social dynamics that play a part in all of it. Bursey (2015) states that the use of multiple independent explanatory paradigms could help provide us with a better understanding of prehistoric cultural systems. What strengthens the connection between the Middle Atlantic and the Adena-Hopewell are the many artifactual ties that point to trade of these ritual objects. These objects are the ones typically observed as being buried with and part of the burial kit of artifacts accompanying the dead to the afterlife. At the sites mentioned here there is no distinguishing

factor that points to hierarchy or ranking, let alone social stratification. It does not exist in the Middle Atlantic region at the scale it does in adjacent ones. First some but not all of the items are traded from outside the Middle Atlantic region, likely from the center of the mortuary complex. Second are the copper artifacts, included as part of the burial kit are the result of labor, intensive labor and craft specialization in order to ultimately discard as part of mortuary rituals. Lastly, there is the associated activities that center around and are directly a part of the mortuary complex and native people's cyclical participation in the program.

Considering the evidence for Adena and Hopewell developments observed in the Delmarva, Custer (1983, 1987) presented a description of society where mortuary ceremonialism is seen as a mechanism for group cohesion, and we see there is mortuary ceremonialism occurring throughout the Middle Atlantic region, more specifically within the coastal area. These mortuary rituals, as Custer states, could have been the "event" or social context within which feasting, alliances, marriage, future trading expeditions, and so on could have taken place (Custer 1987, 42). During the Middle Woodland period in the Middle Atlantic region, the presence of Abbott Zoned Incised pots at certain sites in the region, which also include mortuary components, attest to some of these events (Adams and Adams 1991; Barber 2012; Lattanzi et al. 2015; Makin 2019; Opperman 1980; Pevarnik et al. 2008; Rockman 1993; Steadman 2008; Stewart 1982). Additionally, the sites in the Delmarva, while different are participating at a different level then say the New Jersey-New York and Pennsylvania groups. For the Middle Atlantic region there appears to exist different social spheres that operated both in consort and independently as each group saw fit (Robben 1982, 126), like different mortuary programs and different material source locations. Some spheres become integrated while others remain the same. Certain individuals or groups who operate in multiple social spheres, sometimes become elevated, giving rise to processes of social change both within and across spheres (Robben 1982, 127). The result is that these individuals actively participate or are possibly chosen to participate in the larger mortuary complex making the long-distance journey into another sphere (i.e., foreigners) in order to obtain objects of the ceremonialism that would then be used as a transition between this world and the next (Carr 2005a, 593–94; Helms 1988).

More interesting questions arise when examining the archaeological evidence is the fact that there are only a handful of these "mortuary sites" within the region where all of these traits exist. These sites contain both local (lithics, some copper, shell, pottery) and exotic (long-distant) objects (e.g., Flint Ridge cherts, Ohio fire clay block-end tube pipes, copper beads, copper

gorgets, etc.). They contain one to many buried individuals, both secondarily and cremated remains. There does not appear to be in existence a ranked or hierarchical structure within Middle Atlantic cultural groups; however, this type of mortuary ceremonialism, like that seen in the Adena and Hopewell heartlands would be considered evidence of a hierarchical social structure. Given there is no overwhelming evidence of hierarchy or inequality in the area studied, does not mean there was not complexity.

THE EARLY AND MIDDLE WOODLAND IN THE MIDDLE ATLANTIC

Interactions between native peoples of the Middle Atlantic and Adena-Hopewell are represented by exotic artifacts from Ohio and other states, aspects of mortuary ceremonialism and large-scale feasts or feasts of merit (Hayden and Villeneuve 2011; Rousseau 2001) that are seen as mechanisms of interaction whereby, during the transition to the Middle Woodland period we see a change from a widely ranging, foraging society to a more bounded settlement pattern system (Gardner 1982; Wall et al. 1996). A result of climate change and increase in populations, native peoples begin to settle in non-random locations, but mostly along riverine settings. Stewart (1982, 1990) and others (Cavallo 1984; Schindler 2008; Messner 2010) have explained that change as a shift emphasizing on a narrower range of more highly productive resources, anadromous fish, nuts, shell fish, large mammals, as well as seed and tuber producing plants located in and around those riverine or marsh settings. What we have are individual groups, intensification of plant, animal and fish resources, organizing on a cyclical schedule, whereby there is intensive cohesion rallied around the collection, production and consumption of food, burial and post-ritual burial ceremonies, and so on.

I have previously suggested (Lattanzi 2013) that what we are seeing archaeologically in the Middle Atlantic region is a societal structure based on reciprocity. The stability of any social system depends on the "mutually contingent" trade of gratifications where reciprocity equals interactions and its mechanisms (Gouldner 1960, 168). Here both parties are gratified at the outcome of the interaction, and both parties are then locked together into mutual status duties owing each other. Social interaction is therefore initiated and continued because of reciprocity. However, as was discussed earlier, the parties involved do not have to necessarily like each other, they just have to be willing to engage in the act of inclusion (Helms 1988).

For native groups in the Middle Atlantic the key mechanisms of complexity are all there—vision/power questing, pilgrimage to places in nature, travels of medicine persons, elite valuables exchange, pilgrimage to

ceremonial centers, buying of religious prerogatives, intermarriage. In this sense, prehistoric Middle Atlantic groups engaged in complexity as defined as a conceptual tool for integrated nonhierarchical forms of organization and mechanisms for social integration (Souvatzi 2007, 38). This is what the evidence points to for this region; this is why the Middle Atlantic is distinct from other regions. How this is accomplished is through a mortuary program that is "in but not of" the larger and different mortuary programs elsewhere (e.g., Southeastern burial cult, Hopewellian mounds, etc.). As such, we consider "the degree to which group gatherings also involved participation in mortuary ritual" (Obermeyer and Stewart 2017, 8) and how that is expressed in the archaeological record. The long-distance journey to obtain sacred items, whether it be copper (finished or raw) or specially made large ovate blades, and then to return home only to deposit those ritual items into a grave, may help to explain what is behind the variability in these practices over time and at single points in time (Stewart 2018, 200).

In the Middle Atlantic region, prehistoric peoples starting the Early Woodland and becoming more engaged in the Middle Woodland intensified their social and ideological considerations through the specialized extraction, production and manufacture of exotic ritual items. It is this intensification that perpetuated a system where reciprocal obligations based on shared but different concepts of ideology and ritual (Hall 1997). These ritual objects were valuable not because of accumulation—collecting or hoarding, but because they are seen as vital components of the continual maintenance of the social relationship. What we see exhibited in the archaeological and later in the ethnographic record, is a culture area where "complexity can be situated and assessed" through various mechanisms (Helm 1988), which in turn facilitate intensive interaction, cooperation and cohesion. (Souvatzi, 2007, 47).

Chapter 8

Conclusion

What's Next for the Middle Atlantic Region?

Like its near neighbors, the Middle Atlantic region, the Northeast, the Southeast, and the Midwest is its own distinctive cultural region. Middle Atlantic prehistoric cultures were influenced by geography, environment, time and most of all social needs. During the Early to Middle Woodland periods, prehistoric groups in the region participated differently in a complex relationship of interactions, governed by mechanisms that operated both within the region and outside. Models of interaction previously put forth can be seen as limited in scope and narrow in understanding that trade and exchange are but spokes in a very large wheel, which are part of an ever-changing and adaptive cultural system. The role that we as archaeologists must play is one where there does not have to be one answer to our questions, but it turns out was just one of many different mechanisms that could also explain the archaeological record.

As seen with copper, however, it is the social context in which this material played a key role, not only for those living within the exchange system, but also for those who end up with it. Economically, copper does not seem to playing a large role. Copper scholars must recognize "the importance of native copper and its producers varied among indigenous groups over time and space" (Childs 1994, 233), and that is especially true for those in the Middle Atlantic. While we still do not know where these copper artifacts were produced (whether at the point of origin or final place of deposition) we do know its importance to the living, as well as to the dead. Prehistoric travel from the Coastal Plain over the Alleghenies was difficult and time consuming, and the sources of copper (drift) were plentiful throughout the Middle Atlantic region, may be reason enough for those groups to "blow off" Hopewell. But then they did not. They did engage with Adena and then

Hopewell folks as is evident from the many highly crafted lithic and other artifacts present in burials that originate outside the region. Reasons for making a choice to engage in long-distance travel to obtain "specialized" ceremonially charged objects, as Helms (1988, 263) discusses it, is a direct result of engagement in the trading of sacred objects to such individuals who warrant such accolades because of the risk they took.

This study and its implications move beyond the typical economic focus on trade, which is an important topic, but instead focuses on the ideological, the ritualistic aspect of culture change. There existed a mortuary ceremonial complex throughout the greater Northeastern woodlands, in the Southeast and the Midwest dating back probably to the Late Archaic period, and this fact was not lost on Thomas (1970, 1976, 1987). Thomas (1976, 91) was the archaeologist who in publications described a local mortuary program that included "grave furnishing" (i.e., furniture) obtained through participation in a widespread trade and communication network. Thomas (1987, 35) further discusses, after Flannery (1968), how the Delmarva cultural subsystem is influenced by and also operates within other subsystems. In his case, trade in highly sacred objects obtained from long-distance was used in a complex religious structure that was without question "associated with one or more Ohio Valley cultural manifestations" (Thomas 1976, 108). I would add to Thomas' statement that this association continued well into the Hopewell period as that culture advanced both socially and economically. Trade is seen as one of many mechanisms at play through interactions, emphasizing on the symbolic value of objects acquired (including esoteric knowledge) and used as part of a shared knowledge and understanding of the universe (Carr 2005, 601).

It appears based on the analysis of this mortuary ceremonial complex, the interaction network and level of participation of Middle Atlantic groups in the network, a form of complexity existed. This complexity however is not equal to hierarchy, ranking, or stratification, for in this region changes in the social dynamics did not equal economic inequality (Sovatzi 2007, 45). Middle Atlantic egalitarianism was maintained at a level such that the egalitarian nature of Middle Atlantic social organization remained at a stasis of equilibrium, exhibiting no real archaeological evidence of inequality. What we do see is the participation of Middle Atlantic prehistoric groups in a much larger and ever-changing mortuary ceremonial complex, where these objects take on added value. Hantman and Gold (2002) were correct in stating that there was a cyclical patterning of trade that is directly tied into a mortuary program. As such, the result of this trade and eventual deposition of goods as part of the mortuary program, gives "the appearance" of social complexity. The complex social relationships that are clearly evident in this region such that objects obtained through interactions are part of a different but known mortuary complex, provide these objects with sacred value. This value may come

from their specialized manufacture, or their acquisition from a long-distance. Additional evidence of feasting, specialized ceramics, and post-internment ritual activity are some of the additional evidence of mechanisms of interregional interactions that can sometimes divert archaeologists into falling down the rabbit hole of purely economic or hierarchical reasons for exotic artifacts.

There are two distinct, yet intertwined ideas flowing throughout this book. The first is that interactions involve more than just trade of objects, but the way in which individuals seek out, acquire, and eventually dispose of them. The second is that copper as an artifact can be a great storyteller of the past. Copper, especially in the contexts of burial ceremonialism, can be interpreted as directly representative of the people that possessed it. They either voluntarily give it away through trade or exchange, or they combine it with other exotic objects, thereby taking everything out of circulation. The result is that the entire burial kit takes on additional meaning and a new role. How material cultural relates to society depends on the "ideological structures and symbolic codes" given to or imbued in that material culture (Hodder 1982, 153). Here the analysis of copper artifacts, one part of the larger burial kit, can provide evidence of the type and kind of sociocultural organization of the living. The analysis here of an artifact class (copper) that is part of a extremely complex mortuary program hopefully provides an opening from which to see the connection between the living and the dead. That these objects appear in mortuary context and caches, tells us that both intentional and unintentional actions of individuals provide a level of thick prehistory from which we "can explore and generate insights into past human situations to guide our interpretations (Carr 2005b, 55).

Before ending on what I think will leave the reader thoroughly confused about the archaeology of the Middle Atlantic region, I would like to present two things on which to ponder. The first is that while there are many of these sites that have been found, a good many of them were not professionally excavated. Their collections have been divvied up to many individuals who have now passed along with any information they may have had concerning context. Our interpretations and thoughts on Middle Atlantic Adena and Hopewell sites are only as good as their contextual information. Thorough and proper analysis of collections in private hands may be difficult should be pursued, and collections in public trust are worth asking for or applying for permission to examine. The resultant information produced can and will benefit not only professionals but descendant communities as well. The second thought is that given the fact that we are dealing with a region that has seen and continues to see massive development and expansion in both cities and rural areas, sites that once existed are now gone. Those that have yet to be found may never get the attention they deserve. But as time goes on, we have to be okay with that. And that leaves us with our interpretations,

reinterpretations, and the many presentations and publications concerning what we "think" occurred based on the evidence, some of which we know can be flawed.

Many authors have published their own ideas and syntheses on the Adena-Hopewell phenomenon in this region using some of the sites mentioned here. Some of them use the term Delmarva Adena as if it only applies to a specific circumscribed area within the Middle Atlantic region, and that it only includes Adena. While there may be regional differences in mortuary programs and burial kits, the majority of evidence clearly does not support that. I feel that the term Delmarva Adena, while it is appropriate for that area and to the Early Woodland period (Thomas 1976, 106), does not encapsulate the entirety of the evidence for the Adena and Hopewellian impact on the whole Middle Atlantic region. Reevaluation of existing radiocarbon dates and the addition of newer ones will help refine site chronology and cultural association. The archaeological evidence in the Delmarva and beyond, dates well past the time for Adena, in fact as shown here most of the cultural phenomenon under discussion is Adena Hopewell transition if not all Hopewell. Lastly, there are additional sites that fall under this category that do not occur in the "Delmarva." There is no need to single out and separate a portion (Delmarva) of the greater whole (the Middle Atlantic). The Middle Atlantic is big enough to handle it, and looked at as a cohesive culture area, a real understanding of the processes of cultural change can begin. Therefore, Middle Atlantic archaeologists should attempt to identify a new term (I for one do not want to reinvent the wheel) or maybe more rigorously employ those already in the lexicon (e.g., Middlesex), but with emphasis on the region itself—Adena-Middlesex (Stewart 2015, 172), Middle Atlantic Adena and Middle Atlantic Hopewell. These terms are simple enough that all can hopefully agree moving forward should be considered when discussing these cultural manifestations. In conclusion, while there is still so much more to say about Middle Atlantic archaeology, one thing is certain. Just as there are many aspects of prehistoric society that connect this region to her adjoining neighbors, there are also many aspects that make her unique and worthy of further investigation and critical examination.

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