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UPPER MISSISSIPPIAN VILLAGE STRUCTURE AND FORMATION: SPATIAL ANALYSIS OF SUNWATCH, A FORT ANCIENT SITE IN SOUTHWEST OHIO

By

Robert Allan Cook

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ABSTRACT

UPPER MISSISSIPPIAN VILLAGE STRUCTURE AND FORMATION: SPATIAL ANALYSIS OF SUNWATCH, A FORT ANCIENT SITE IN SOUTHWEST OHIO

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This investigation focuses on the SunWatch site, a Fort Ancient village occupied during the height of the Mississippian period (ca. A.D. 1200 to 1400). Assessment of the growth and structure of social units is the main focus of the study, particularly the development of corporate groups and integrative institutions as a consequence of regional interaction. Village social structure is investigated using Middle Mississippian and ethnographic models of corporate group and leadership composition. Village formation is examined utilizing expectations derived from the development of localized corporate groups and the spatial context of diagnostic feature and artifact attributes. Regional interaction is examined within a peer polity framework, comparing key elements of Fort Ancient and Middle Mississippian architectural grammars and the petrographic sourcing of pottery.

Fort Ancient villages often contain artifacts and house forms more common among neighboring Middle Mississippian societies, and many of these increase in frequency over time. Earlier models of Fort Ancient development emphasized these facts, suggesting that these groups developed as a result of Middle Mississippian population migrations. More recent models have downplayed these data, suggesting that Fort Ancient societies developed as a result of local influences—interactions with Middle Mississippians were insignificant. However, this dissertation is the first study to systematically investigate the problem.

to Andrea,

who made this possible

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provided endless access to data and field records from SunWatch and were generous in their extensive and long-term loans of reference materials and artifacts. Furthermore, their constant coordination of volunteer efforts was invaluable in completing the project. In particular, I want to thank Amanda Herrington and Jesse Harrison for conducting a multitude of menial tasks and Will Irwin for making me consider the possibility that House 1/71 was remodeled. Andy Sawyer (DSNH/SunWatch Site Anthopologist/ Manager) assisted with mapping a stockade line, provided access to artifacts currently being exhibited, and allowed the author to access restricted parts of the property to obtain clay samples used in the petrographic analysis. I thank Mark Meister (DSNH Executive Director) who allowed access to museum collections under his direction and kindly encouraged this project.

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James Heilman III (retired DSNH Curator of Anthropology) deserves special mention for overseeing the primary excavation of the site on which this research is based. Without J. and the considerable financial support of Mrs. Virginia Kettering, SunWatch would not exist. J. also initially recognized much of the social and ritual patterning at SunWatch, in particular astronomical alignments and the unique nature of the west side. Perhaps most importantly, J. made a pottery analysis conducted by Ted Sunderhaus and myself possible. For in many ways, it was out of this study that the present project grew. Furthermore, he has consistently supported my research throughout the years, despite some differences we may have had in matters of interpretation. In particular, he encouraged my exploration of the Mississippian dimensions of SunWatch. His passion for the site is indeed infectious. J. has always said that Fort Ancient can be explained as the "country cousins" of Middle Mississippians. I am not sure he realizes just how true this may be.

Most important in this whole endeavor has been the unfailing support of Andrea Cook, my wife and closest friend. Without her patience, encouragement, and sacrifices made over the last six years, this project and preceding doctoral program could not possibly have been completed. I dedicate this dissertation to her in partial repayment of this considerable debt.

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CHAPTER 1: INTRODUCTION

> There is a great need for a drastic revision of our thinking about Fort Ancient. (Griffin 1967)

> ...what we see in the Fort Ancient cultural complexes is the blending of elements derived from Mississippianized neighbors with traditions long held by Middle Ohio Valley inhabitants. (Essenpreis 1988:19)

It has long been known that Upper Mississippian societies, including Fort Ancient, contained various blends of Late Woodland and Middle Mississippian characteristics (Griffin 1943; Gibbon 1982; Hall 1986). It has also become clear that Middle Mississippian hallmarks such as shell tempered pottery increased over time in Upper Mississippian groups (Drooker 1997; Henderson 1992a). However, the processes by which Middle Mississippian characteristics spread to these peripheral groups and the social contexts within which they occurred are poorly understood (Gibbon 1982). Despite earlier suggestions that Middle Mississippian groups contributed heavily to the development of Fort Ancient societies (Essenpreis 1978; Griffin 1943; Prufer and Shane 1970), more recent studies have downplayed this issue (Pollack and Henderson 1992, 2000a; Henderson 1998). However, no study has specifically investigated the problem.

Research Objective

This problem is addressed in the current study by examining the types of Middle Mississippian patterning exhibited by the spatial structure of a Fort Ancient village. The main goal of this investigation is to identify Fort Ancient village formation and the relationship between this process and interactions with Middle Mississippian groups. The focus is on explaining similarities in the spatial organization of Fort Ancient and Middle Mississippian villages.

Specific attention is placed on identifying the communal and residential structure of Fort Ancient villages. At the communal level, the focus is on identifying elite areas using "grammatical" rules defined from the spatial patterning of Middle Mississippian communities (Lewis et al. 1998). The careful identification of elite areas is critical as it is within these spaces that leadership and ritual functions were situated. It has long been known that village leaders were key participants in Mississippian systems of inter-regional interaction. The rise and fall of Mississippian elites has been repeatedly defined as a system of status validation best characterized in terms of peer polity interaction (e.g., Brown et al. 1990; Renfrew 1986), often marked in terms of site structure (Benchley 1970; Hall 1991). Ritual functions of elite areas are also important for assessing interaction as these events undoubtedly accompanied exchange and mobility. Therefore, these spaces provide a dynamic context for considering the influence Middle Mississippian interactions had on Fort Ancient evolution.

The residential focus of the study is on the development of corporate groups and constituent households. This emphasis provides a framework in which to assess whether Fort Ancient villages were comprised of segmentary social groups as are common in autonomous villages (Chang 1958). Furthermore, defining kin-based social groups provides specific contexts within which to situate Middle Mississippian materials and features – if migrations did occur they can be situated in particular locales within the community. If Middle Mississippian groups can be identified then the influence they had in Fort Ancient communities can be assessed. Of particular concern is the relationship between residential units and elite areas, particularly leadership and ritual functions. Establishing which if either of these particular social institutions can be directly related to Middle Mississippian involvement would considerably enrich current explanations regarding the structure of Fort Ancient villages.

This study utilizes a broad theoretical framework for considering the possible types of interactions that occurred between Middle Mississippian and Fort Ancient groups, illustrated by a case study. Findings are used to conclude that Fort Ancient was a Mississippian expression best characterized as an Upper Mississippian social system. In pursuing this objective, this study contributes to our understanding of Mississippian evolution and more general processes of social interaction and change.

Research Context

Our understanding of the Fort Ancient region has improved dramatically in the last twenty years, due largely to carefully designed research projects aimed at establishing major changes over time. The best example of this work sampled key sites located throughout northern Kentucky (Pollack and Henderson 1992, 2000a). Fort Ancient developments in this region have been placed in a well-supported general theoretical framework, arguing that Fort Ancient villages developed from scattered family groups at about A.D. 1200. Largely from this work, it is clear that Fort Ancient villages developed as several kin-based social groups aggregated under a variety of situational types of leadership (Henderson 1998; Pollack and Henderson 1992, 2000a).

Several studies have recognized a Middle Mississippian contribution to Fort Ancient evolution. Earlier investigators directly attributed Fort Ancient origins to Middle Mississippians via small-scale population migrations (e.g., Griffin 1943; Prufer and Shane 1970). Subsequent research discussed the development of Fort Ancient as stemming from local groups interacting with Middle Mississippian, downplaying migration-based explanations (Essenpreis 1978; Robertson 1980). Robertson's (1980) study, in particular, drew attention to the emergence of social institutions as a response to interaction with Middle Mississippian groups, a process that created the need for social solidarity. Essenpreis (1978) argued that distinctions in Fort Ancient assemblages and settlement systems reflect different levels of interaction local groups had with Middle Mississippian populations. Groups located closer to Middle Mississippians became more "Mississippianized." Nass and Yerkes (1995) specifically compared Fort Ancient and Middle Mississippian site structure, suggesting that they were similar but do not specifically address relationships between these groups. One study used a core-periphery approach for understanding the problem, concluding that Fort Ancient was a Middle Mississippian periphery, occupants of which served as middlemen in exchanges between Middle Mississippian and Iroqouis populations (Dincauze and Hasenstab 1989; but see Griffin 1993).

More recent syntheses have downplayed Middle Mississippian involvement in the formation of Fort Ancient societies, focusing instead on continuity with Late Woodland predecessors (e.g., Pollack and Henderson 1992, 2000a; Riggs 1998). While Late Woodland continuities with Fort Ancient are supported in terms of pottery styles and the lack of social ranking and settlement hierarchies in Fort Ancient societies, the larger perspective of how Late Woodland societies changed into Fort Ancient ones within the Mississippian world has been lost. In this perspective, Middle Mississippian characteristics of Fort Ancient assemblages have been largely depicted as inconsequential to the development of Fort Ancient. Contact between Fort Ancient and Middle Mississippian groups was sporadic and relatively unimportant (Pollack and Henderson 1992, 2000a).

The approach followed in the present study extends the findings of Nass and Yerkes (1995) to specifically consider how the similarities in social structure arose between Middle Mississippian and Fort Ancient societies. The concern here is not with Middle Mississippian characteristics that are absent from Fort Ancient societies (i.e., ranked settlements or burials). Rather, the attempt is to develop an explanation to account for the striking similarities in village structure that arose between Fort Ancient and Middle Mississippian groups. I also utilize Pollack and Henderson's (1992; 2000a) model of Fort Ancient evolution but seek to broaden the argument to include a Middle Mississippian dimension.

Methodological and Theoretical Issues

This study addresses long-standing methodological and theoretical problems associated with using typological constructs when examining social change. Particular problems are associated with culture historical frameworks and evolutionary stages. While these constructs are useful for categorization and investigation of larger scale problems, they are inappropriate tools for investigating social change.

Culture historical frameworks assume that cultures are geographically bounded and homogenous entities, although the physical, material, and geographic diversity comprising human societies is well-known (e.g., Hodder 1982). Culture historical frameworks are most useful for the investigation of larger spatial scales involving questions relating to differences in environmental adaptations, which may well characterize distinctions between Mississippian populations, but they are particularly poor for examining exchange of materials and ideas between groups. This is particularly true in border areas, which have been recognized as particularly active arenas of social change (Rice 1998).

Previous Fort Ancient research has recognized inherent problems with culture-historical approaches to discerning social changes in Fort Ancient populations (Essenpreis 1978; Graybill 1981, 1984), but the focus has not been explicitly concerned with developing ways to model inter-regional interaction. To understand the development of Fort Ancient we need to look beyond the geographic boundaries that are useful for different ends. This study attempts to accomplish this goal by focusing on the social and temporal contexts of Middle Mississippian attributes in Fort Ancient villages over the course of their formation. Following Chang (1958), the focus is explicitly on delimiting small social groups and not beginning with larger constructs like "cultures." Determining the specific ways in which Middle Mississippian societies influenced the development of these groups is an important first step in furthering our understanding of Fort Ancient evolution.

The problem evolutionary typologies present when using them to examine processes of social change have also been recognized for some time (Yoffee 1993). On a general level, "chiefdoms" and "tribes" characterize Middle Mississippian and Upper Mississippian societies, respectively. However, these categories are not particularly useful when it comes to examining boundary situations, which are often made up of various forms of transitional societies. This problem is made more apparent by recent research that is advancing a relatively decentralized view of Middle Mississippian social complexity (Milner 1998; Muller 1997). This should not be taken to imply that "chiefdom" is an inappropriate category for defining the social structure of Middle Mississippian groups, simply that a less-complex view changes the nature of peripheral interaction as smaller sites in a given Middle Mississippian system are more autonomous in this framework (Muller 1997).

This theoretical framework places rural Middle Mississippian societies on a more equal footing with Upper Mississippian groups; it is to those sites that we must look for peers with whom Fort Ancient groups interacted. Examining the development of Fort Ancient holds the more general potential of furthering our understanding of developments along other boundaries between "chiefdoms" and "tribes" and the variation between these points along the continuum of social complexity (Yoffee 1993). Following recent Fort Ancient research, I attempt to break down social types into key institutional forms of complexity (Henderson 1998). However, I extend this effort to specifically consider the involvement of Middle Mississippian groups.

Case Study

The problem of discerning Fort Ancient village structure and growth in relation to exposure to Middle Mississippian populations is investigated using the SunWatch site, a village occupied during the height of Middle Mississippian developments in the Midwest (A.D. 1200-1400) (Heilman et al. 1988). This village exhibits the clearest expression of characteristics found in many middle Fort Ancient sites and may be the first site in the area to contain the classic Middle Fort Ancient circular form (Drooker 1997) (Figure 1).

SunWatch is ideally positioned for investigating this issue in that it is located along a border between Fort Ancient and Late Woodland groups in a locale far removed from the main avenues of river-based interaction where sites are complicated by multiple occupations and generally non-extensive and/or poor excavation histories (Figure 2). Perhaps this region contains groups more retentive of a Late Woodland social system (Essenpreis 1978). It clearly has all the characteristics of Fort Ancient societies, often being used as one of the primary examples of social structure at the village level (Henderson and Pollack 2001).

The site contains clear spatial patterning indicative of an occupation by an integrated social group (Heilman et al. 1988). There are several discrete clusters of structures and pit features in a well-defined village plan organized around a red cedar center pole, which was used in part to chart solar alignments (Heilman and Hoefer 1981). Previous research has also presented a strong case for localized households and possibly clans (Evans-Eargle 1998; Heilman 1988b), a chief's residence (Nass 1987; Nass and Yerkes 1995), a male-oriented sodality (Harold 1985; Robertson 1980), a system of dual social

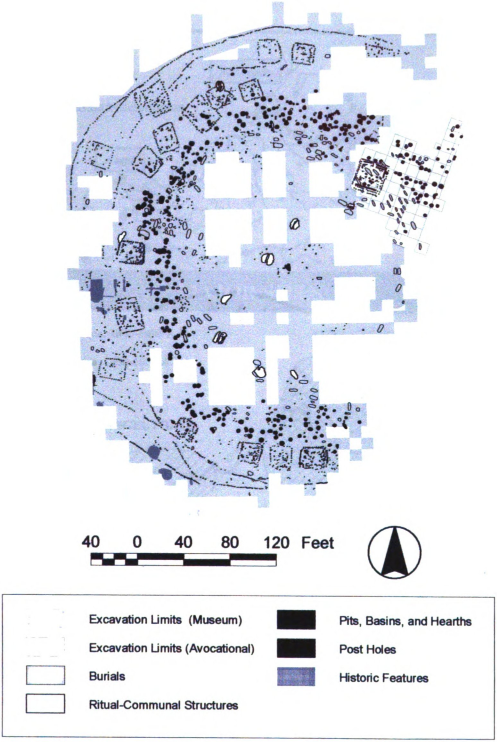


Figure 1. SunWatch site map.

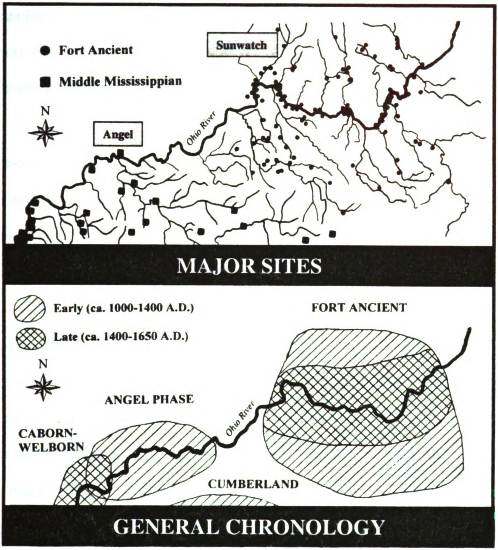


Figure 2. Locations of major Mississippian sites in the study area (top) and generalized depiction of changes in settlement locations over time (bottom). (Sources: Drooker 1997: Figure 4-2; Henderson 1992a: Figure 1-1; Pollack 1998: Figure 1.1; Stout and Lewis 1998: Figure 7.1.)

organization (Cook and Sunderhaus 1999), and Green Corn ceremonialism (Heilman et al. 1988). Each of these is consistent with findings at lower-level Mississippian sites and many Eastern Woodland native groups descended from Mississippian societies (Hudson 1976).

Based on a visual inspection of structure and stockade relationships, it is apparent that the village was rebuilt and remodeled at least once. This observation was supported by a preliminary examination that found later radiocarbon dates to co-vary with shell-tempered pottery and other later Fort Ancient traits in these locales (Cook and Merz 2000).

Taken together, these characteristics set the stage for an examination of growth and change within one Fort Ancient village during the height of Misssissippian interactions, enabling a diachronic examination of site-level group dynamics, including individual household and corporate group developments and the establishment of larger integrative mechanisms, which comprised the Fort Ancient system.

Organization of Volume

The volume begins with a description of the theoretical framework developed for the study, followed by an overview of major developments associated with the Late Woodland, Middle Mississippian, and Fort Ancient time periods. Emphasis is placed on the co-development of Mississippian societies and similarities in site structures (e.g., households, mortuary patterning). This review sets the stage for an examination of the structure and formation of the SunWatch site. After reviewing the excavation and research history of the site, the methodology is presented. Results of the analysis of site structure and formation are then presented. The study concludes with regional and theoretical implications, including suggestions for future research at site and regional scales.

CHAPTER II: THEORETICAL ORIENTATION

> ...one must look at archeological sites as local social groups instead of as cultures or phases. Cultures are fluctuant, but social groups are clear-cut. Therefore, I suggest that it should be the archaeologist's first duty to delimit local social groups such as households, communities, and aggregates, rather than to identify archeological regions and areas by time-spacing material traits, since cultural traits are meaningless unless described in their social context. (Chang 1958:324)

To investigate the development of Fort Ancient social structure, a theoretical framework was developed to accommodate narrower and broader scales than have traditionally been examined. Foremost, the focus was on spatial contexts from which reliable behavioral correlates could be drawn, not defining the research universe to culture-historical constructs poorly suited for social analyses (Dunnell 1971). This study does not assume that Fort Ancient is any one definable group, but represents a starting point for examining variation present within Fort Ancient societies. Investigations have primarily attempted to define Fort Ancient as something separate from Middle Mississippian by emphasizing what it lacks (e.g., hierarchy in burials or settlement system) without first examining inherent variation that may prove most useful for understanding its genesis.

This approach reorients explanations of Fort Ancient origins and social structure away from spatial-temporal frameworks designed for other purposes, a common problem in North American archaeology (Essenpreis 1978; Hart and Brumbaugh 2003). The theoretical framework focuses on development of village social structure within a broad geographic and temporal framework, emphasizing border areas as particularly dynamic places of social change. This study also utilizes recent theoretical advances in inter-regional interaction.

Narrowing the Perspective

The smaller scale focuses on the dynamics between households and larger social groups. The village was selected as the unit of analysis as it is the largest social arena known to exist for Fort Ancient. Fortunately, the social structures of autonomous farming villages are reasonably well known from earlier ethnographic studies.

A literature review of autonomous villages with particular attention on deriving models for archaeological interpretation revealed three forms: unplanned villages, planned villages, and segmented villages (Chang 1958). Unplanned villages lack formal structure. Planned villages are usually small groups of a few independent houses arranged according to a preconceived plan. They are often circular in form with a central plaza, which sometimes contain a men's house or chiefly residence. Planned villages contain one lineage. Segmented villages contain lineages arranged in localized groups forming clusters of households within the community. Usually there is only one segment. If the community contains more than one segment, one is of greater importance. Within lineage segments, households may or may not be arranged to a preconceived plan. Segments sometimes contain their own plaza, men's house, or other special buildings. Ninety-four percent of the ethnographic cases of segmented villages included in the sample contained two or more lineages, each being localized in one segment of the community (Chang 1958:306-307).

Lineages are the most common component within village structures. As noted above, lineages are either singular or multiple and are usually localized as segments within villages. In smaller-scale societies, households are the central production unit but are not self-sufficient in that they frequently cooperate with other households, and some tasks are undertaken collectively in lineages or village groups (Sahlins 1968:75).

Evolution of Village Social Structures

Social evolution has been examined from one of two perspectives: typological and processual (Upham 1990). The typological approach assumes that all human groups move through the same basic social stages, each being composed of key social and economic attributes (e.g., Johnson and Earle 2000; Service 1962). Each form represents increased intensification of a resource base (usually agricultural) and a corresponding increase in social complexity and hierarchy. Bands or family/hamlet groups are typified by hunting/gathering economies. Tribes or local groups most often practice agriculture or are located in areas of natural abundance and are typically comprised of aggregated band-like groups. Chiefdoms or regional polities represent the first hierarchical arrangement, expressed in both settlement systems and social statuses. Of these groups, tribes are the most variable rendering their identification particularly problematic (Upham 1990). Processual approaches focus on institutions and covarying sets of behavior emphasizing that changes may occur at different rates in different subsystems.

The processual approach is better able to identify the range of variation present in a given society rather than forcing it into a type (Upham 1990; Yoffee 1993). This approach is more conducive to examining specific forces of change. However, societal types serve a useful purpose in much the same way that categories such as "fish," "amphibian," "reptile," and "mammal" aid paleontological investigations of biological evolution (Spencer 1997). Archaeologists would find it difficult to study social change if all societies were simply lumped into one group. Types are useful for ethnological purposes and societies throughout the world at points of relative stasis do appear quite similar, and it is the periods of transition that are most unique (e.g., Marcus and Flannery 1996; Spencer 1997). The usefulness of each approach has led many contemporary researchers to integrate both type and process perspectives.

Johnson and Earle's (2000) typological evolutionary scheme—based on changes in residential unit size and socioeconomic organization—has been applied to several cases of emerging social complexity including Fort Ancient (Pollack and Henderson 1992, 2000a). The model posits that scattered lineages of related households (25-35 people) aggregated into local groups (100-200 people) during the Middle Fort Ancient period (A.D. 1200-1400) (Pollack and Henderson 1992, 2000a). Based on Johnson and Earle's (2000) model, a number of factors could have precipitated this development, including food storage or defense. Communities often form a politically and ritually integrated group although many religious and ceremonial functions in multi-lineage communities continue to center around separate residential units. Several households often share activity areas, and segmentation of social groups is continuous (Johnson and Earle 2000). The group usually has a headman, but it typically fragments on a seasonal basis into its constituent kin groupings. Also, internal disputes can often lead to fragmentation, particularly in the context of growing communities. Relationships between communities are often important for security as warfare is common and such relationships are contracted on an individual family basis. Ceremonialism is important for publicly defining groups and these interrelationships. Resources are initially held by each kin group, although the group may become more centralized under a charismatic leader as population increases (Johnson and Earle 2000:33).

Lineages and households contained within them are the key building blocks of human societies, and they are particularly important in middle-range social groups (Sahlins 1968). As a result, they have factored heavily into theories of social evolution. Larger villages contain complex social arrangements whereby lineages are increasingly controlled by an individual authority. Autonomous villages are fundamentally a collection of independent lineages. Differentiating lineages is important in villages containing several independent groups. Land ownership becomes marked when more than one lineage is present and may become more important as social stress increases within expanding villages.

It has long been recognized that societies and communities become more complex as smaller social groups develop into larger ones. Larger groups of people require institutionalized systems of control, as mobility is not as regular an option (R. Kelly 1989); these structures change as scalar thresholds are reached (Johnson 1982). A critical change happens when it becomes necessary to integrate formerly separate social units. New integrative institutions often form in villages by promotion from the original autonomous units and one lineage usually becomes dominant (Flannery 1972; Johnson and Earle 2000:35). Whether this asymmetry evolves into social rank or stratification, however, is another question. Only in some cases were conditions present to foster such a development.

Practice theory has been invoked to explain the process associated with differential ranking between lineages and the importance of this in the evolution of human societies. According to Marcus and Flannery (1996), population growth was an unintended consequence of sedentism and agriculture. Groups could not fission as they had in the past as leaving a village meant losing housing, storage facilities, and land, each of which involved considerable labor investments. Integrative mechanisms were developed to overcome the social problems associated with aggregation. Larger social groups such as clans and moieties were created through the recognition of descent from common mythical ancestors. In many societies, highly respected men drawn from each major descent group in the village were initiated into fraternal sodalities from which less respected men were excluded. Female rituals focused on residential areas where immediate ancestors were invoked, while male ritual activities were performed in a Men's House, a ritual structure built by the initiates. This social structure crosscut kin groups, thus serving to integrate the village. Unintended consequences of this system were that egalitarian relations became asymmetrical which ultimately led to social hierarchy (Knight 1990; Marcus and Flannery 1996).

Integrating Scales through Practice

Thus far, theoretical expectations regarding social divisions in villages have been outlined. However, as the problem is a dynamic one involving the examination of change in one community, relationships between corporate households and integrative groups need to be explored. Practice theory is a useful approach for this purpose as it focuses on the interdigitation of larger and smaller scale contexts, facilitating the analysis of change as a result of individuals interfacing with social structures (Bourdieu 1977; Giddens 1984). To understand larger processes associated with social change smaller contexts need to be examined, as the relationship between the two is dialectic (Giddens 1984).

Previous work on smaller social scales has often focused on reconstructing residence patterns and identifying individuals in material culture (Hill and Gunn 1977). While potentially enlightening, this approach was never developed beyond simplistic notions of residence (Allen and Richardson 1971; Stanislawski 1978). More recently the focus has been placed on the remains of household activities. In achieving this end, practice theory has often been employed and the goal has shifted to diachronic rather than synchronic questions:

> Rather than seeing the theoretical shift in the field as a move from structures and systems to persons and practices, it might thus be seen as a shift from static, synchronic analyses to diachronic, processual ones. Viewing the shift in this way, the practice approach comprises only one wing of the move to diachrony, emphasizing microdevelopmental processes... (Ortner 1984:158)

The small-scale emphasis of practice theory focuses on frequently occurring activities, those tasks that are undertaken without planning, often daily events or the

> ...little routines people enact, again and again, in working, sleeping, and relaxing, as well as little scenarios of etiquette they play out again and again in social interaction...[all cultural practices] are predicated upon, and embody within themselves, the fundamental notions of temporal, spatial, and social ordering that underlie and organize the system as a whole. (Ortner 1984:154)

Recent archaeological applications of practice theory emphasize social differences between remains of daily, repetitive tasks such as trash and food preparation and larger scales such as site structures. This approach is particularly useful for contact situations (Lightfoot et al. 1998). Larger public contexts such as those exhibited by the overall structure of a site tend to be consistent and controlled by the more dominant group if more than one group is present. Smaller contexts such as households exhibit more variation indicative of histories of these smaller social groups (Lightfoot et al. 1998).

Political power is associated with control of resources and/or control of organizational aspects of society. According to Giddens (1984), power is generated through two structures of domination: ones involving allocative resources and those using authoritative resources. Allocative resources include materials and means of production, whereas authoritative resources involve organizational aspects of human beings and time (Giddens 1984:258). Many evolutionary models emphasize allocative resources when authoritative resources are just as crucial as they are essential to the successful development of material resources: "...allocative resources cannot be developed without the transmutation of authoritative resources" (Giddens 1984:260). The combination of both is needed.

This framework has been used to examine the emergence of elites in Mississippian society (B. Smith 1992). The role of solar observatories in Middle Mississippian societies had long been explained as emerging for managerial purposes to facilitate better scheduling of crop planting during times of economic stress (e.g., Peebles and Kus 1977). However, woodhenges also serve as storage containers for the solar calendar, acting as esoteric knowledge of the elite (B. Smith 1992). Additionally, they were impressive visual reminders of the elite role in maintaining this important means of communication with the solar sphere: "They confirmed in monumental fashion the direct link between the sun and the chiefly elite" (B. Smith 1992:28). In doing so, this knowledge legitimized elite power.

Broadening the Perspective

Changes in local social structures can only be fully understood in relation to larger processes. The ways in which regions have been delineated and interpreted has changed considerably over the last several decades. Specifically, archaeologists have recognized the need to develop frameworks specifically for addressing variation present in a given material assemblage rather than considering cultures as mass, unitary phenomena (Hodder 1978; 1982).

Open Social Systems

Culture historical frameworks are useful for ordering information on a general level, for initial investigations in a given region. However, using them as more than classificatory units (e.g., temporal ordering), for example to investigate questions of social change, has hindered the development of important behavioral questions in archaeology (Dunnell 1971; Hart and Brumbach 2003). Culture historic units are abstractions of artifact assemblages; they are not cultural realities (Taylor 1948). Furthermore, they assume a normative view of culture (Essenpreis 1978:145). As a result, they are not useful for addressing variation within societies (Hart and Brumbach 2003:749). These groupings foster interpretations of change that are step-like and progressive and are not conducive to the examination of social boundaries, arguably the most active arenas of change (Lightfoot and Martinez 1995; Stein 2002).

Early approaches attempting to identify culture process focused on delineating internal workings of social systems and have since moved toward inclusion of external influences. More recent approaches to the investigation of social systems can be characterized as "kinetic" in that they examine how they came to be what they are while earlier studies viewed process in functional terms or "thermodynamically" (Crumley 1979). Peripheries are now seen as active locales of change instead of passive peripheries (Lightfoot and Martinez 1995; Rice 1998; Schortman and Urban 1987), and culture change is being increasingly modeled as actively situated along frontiers and borders (Rice 1998).

All societies are complex in ways that may differ (Nelson 1995). Defining societies as either "hierarchical" or "egalitarian" is too simplistic to capture variation within particular subsystems. This shift has led to the development of an approach known as regional heterarchy. Regional heterarchies are open systems in which the component elements have "the potential of being unranked (relative to other elements)" (Crumley 1979) or the potential of being "ranked in a number of ways, depending on systemic requirements" (Crumley 1994). We need to move beyond the dichotomous view of social complexity—an approach that often leads to the proliferation of categorical distinctions—to determine how particular subsystems are hierarchical (Feinman and Neitzel 1984). It encourages archaeologists to examine the hypothetical continuum between such types by focusing on the different dimensions of social and political organization that are possible (Rautman 1998:330). Within this more open framework social boundaries are seen as particularly active areas in their own right, not simply as passive recipients of core developments (Lightfoot and Martinez 1995; Stein 2002).

The heterarchy concept has been applied to Fort Ancient developments to account for internal social processes (Henderson 1998). In a thorough analysis of Middle Fort Ancient society in central Kentucky, Henderson (1998) recognized that different subsystems were situationally ranked, but the system never developed into a permanent hierarchy.

Regional Interaction

In contrast to core/periphery frameworks that have been applied to non-state societies with questionable conclusions (Lightfoot and Martinez 1995), peer interaction models are more appropriate for investigating the development of less complex societies (Brown et al. 1990; Renfrew 1986). Studies utilizing this framework have examined societies ranging from state to tribal levels of social organization and have included both Middle Mississippian (Brown et al. 1990) and Upper Mississippian (Drooker 1997) groups. In general, the approach has only been used internally; however, it is also useful for addressing inter-regional interaction (Renfrew 1986).

The basic tenet common to peer interaction models is that one cannot look to the development of a given polity in isolation; separate polities develop simultaneously (Renfrew 1986). A *polity* is defined as "the highest order sociopolitical unit in the region in question" (Renfrew 1986:2). In most farming societies including Fort Ancient this unit is the autonomous village.

Several expectations can be derived regarding the outcome of peer polity interactions and sociopolitical change. Fundamentally, the expectation is that groups change together, and that innovations cannot be attributed to a single locus. Competition including warfare and emulation are common, as is increased social complexity of the less complex partner (Renfrew 1986). Social interaction between neighboring polities should result in similarities at highly visible levels (Renfrew 1986; Wobst 1977). The causal role of peer polity interaction can be ascertained if there is evidence of contact prior to the changes in question as well as some idea why interaction can be seen to have had a role in facilitating the observed change (Renfrew 1986:7).

Peer polity interaction specifically focuses on the development of social structures such as political institutions, systems of specialized ritual and non-verbal communication, and the development of ethnic groups and language (Renfrew 1986:1). Peer polities should share many structural homologies, including similarities in site layout which is indicative of similarities in social organization (Renfrew 1986:4-5). New institutional features form to increase production, and societies become more complex.

> In a region with peer polities which are not highly organized internally, but which show strong interactions both symbolically and materially, we predict transformations in these polities associated with the intensification of production and the further development of hierarchical structures for the exercise of power. (Renfrew 1986:8)

This focus fits well with other findings regarding the formation or institutionalization of social groups, in relation to outside pressures, particularly for the institutionalization of the sexes:

> ...until the community has representative contact with other socio-cultural systems, it may not achieve the stability required for the institutionalization of the sex groups. ...When this marginal position is interpreted and then communicated to the villagers, male solidarity results: the men draw together for security... (Young 1965:104)

The development of male-oriented sodalities in Fort Ancient society has been seen as a response to this very process (Robertson 1980).

Studies of inter-societal interaction have started to address the role of material culture. In contrast to earlier studies that focused exclusively on pottery variation, more recent studies have questioned the sensitivity of pottery, along with other utilitarian items, which are not likely to be the most sensitive markers of ethnicity (although they may be important for other reasons). Highly visible and non-utilitarian items are better candidates for serving this function (Gibbon 1982, 1995; Jones 1997; Wobst 1977).

Schortman and Urban (1987) build on these ideas by noting the importance of key artifacts that signal ethnicity in interaction (diacritics) stressing that these items specifically pave the way for inter-regional interaction. (These items often vary from group to group.) In other words, diacritics often precede prolonged contact. These interactions may be between only a few people in higher-level positions in their respective societies. Despite what may be only a few people interacting the consequences may be significant. Few interactions can lead to larger social changes and these need not be acculturative in the strict sense but are often in the direction of increased complexity of the less complex group.

Summary

The theoretical model outlined in this chapter stresses the need to examine social groups at a small scale before defining larger social units. To draw meaningful correlates regarding the composition of social groups, smaller social contexts (e.g., households, lineages) should be examined before defining larger units (e.g., aspects, phases). This approach contrasts with those focused on defining broad areas in a culture history perspective, which continue to hamper investigations of social composition and change as they assume regions to be comprised of homogenous entities.

The evolution of autonomous villages, comprised of independent households, was chosen as the focus as this is one of the most common forms of social groups in emerging agricultural societies and is the predominant Fort Ancient site type. Therefore, defining the formation and social structure of this site form is a critical step in developing models of Fort Ancient evolution. Specific attention is placed on discerning whether particular social units were associated with village leadership and to what extent males can be associated with this institution. This is important for further understanding the type of social complexity expressed by Fort Ancient populations.

I have chosen to broaden the perspective to include a regional context that can account for the variation present within many Fort Ancient assemblages, focusing on neighboring Middle Mississippian groups. Peer polity interaction models have proven useful for examining inter-regional interaction, particularly among non-state societies. This model emphasizes the co-development of neighboring societies and identifies specific forms of similarity that should be expressed among peers. This approach has proven useful for assessing intra-regional Fort Ancient interaction (Drooker 1997), but has not been applied to inter-regional interaction between Fort Ancient and Middle Mississippian populations. By doing so, this study places migration-based explanations of Fort Ancient development into a dynamic framework, outlining the types of interactions and movements that occurred during the formation of Fort Ancient villages.

CHAPTER III: MISSISSIPPIAN OVERVIEW

This chapter positions the SunWatch site and the Fort Ancient concept into a broad regional and temporal framework. Fort Ancient sites are considered to be Upper Mississippian expressions, similar in kind to Oneota groups. Emphasis is placed on shared characteristics rooted in Late Woodland developments, and peer interactions responsible for Mississippian transformations between A.D. 1000 and 1400. Evolutionary arguments are presented for Upper and Middle Mississippian societies focusing on developments along their peripheries. The goal is to outline distinctions and similarities and to assess environmental and social reasons for differences between Middle and Upper Mississippian societies. Particular attention is focused on variation in Mississippian social complexity as expressed in site structures, household organization, and mortuary patterning.

Differentiating Mississippian Societies

Middle and Upper Mississippian distinctions can be traced back to Holmes' (1886) geographical differentiation of late prehistoric pottery into Upper, Middle, and Lower Mississippian types. Middle and Upper Mississippian were in common usage by 1930 and would later contribute to the development of the Midwestern Taxonomic System to "bring order out of the chaos of archaeological units of varying size and complexity, for many of which the term 'culture' was used" (Griffin 1985; McKern 1939; Phillips et al. 1951). This system resulted in the formation of four archaeological constructs based on nested sets of shared attributes: component (single site), focus (closely related sites), aspect (series of foci), and phase (many aspects).

Middle and Upper Mississippian societies are generally located in distinct environmental zones. Middle Mississippian mound centers are typically located along major rivers with the more complex groups being situated in broad aggraded valleys with developed backwater areas containing abundant wetland resources as well as soil most suitable for intensive agriculture (B. Smith 1978, 1985; Ward 1965). While exceptions to this pattern exist (Clay 1976; Goldstein 1991; Goldstein and Richards 1991; Muller and Stephens 1991), this preference can still be considered a general trend for Middle Mississippian systems. In contrast, Upper Mississippian groups were located on smaller rivers and notably in areas within the prairie peninsula, including the fragmented eastern portion dotting parts of Indiana and Ohio (Figure 3).

The environmental distinction between Middle and Upper Mississippian groups factors directly into explanations of distinctions in social complexity. For example, it has been argued that Upper Mississippian groups were socio-politically less complex than Middle Mississippians because their environment was less productive for intensive maize cultivation (Griffin 1985). However, it has also been suggested that if agricultural potential were the only significant factor, Upper Mississippian environments could have supported much larger populations (Brown 1982). It can be concluded that maize agriculture constituted less of Upper Mississippian diets at least partially by choice. Upper Mississippian groups possessed a unique subsistence adaptation, one well-suited to their environment that took advantage of natural resources as much as agricultural products (Brown 1982). In this and several other respects, they remained more

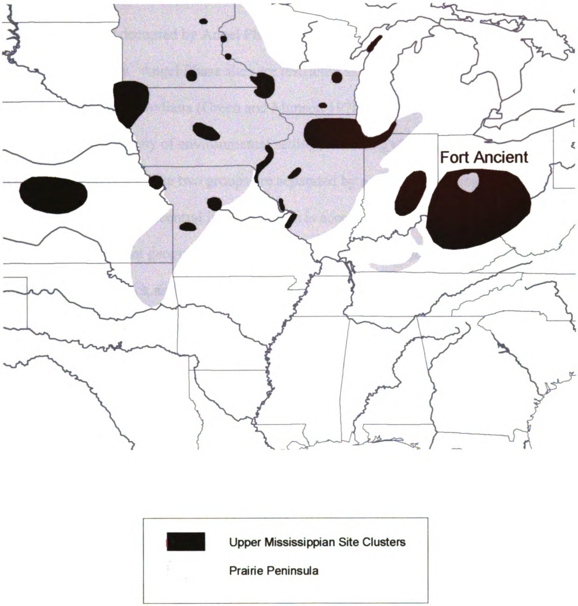


Figure 3. Upper Mississippian site concentrations in relation to the distribution of the prairie peninsula and outliers. (Sources: Hollinger and Benn 1998: Figure 1; Stuckey 1981: Figure 9 [after Transeau 1935].)

closely tied to Late Woodland predecessors than did Middle Mississippian groups.

This environmental distinction is clear between the lower and middle portions of the Ohio valley, areas occupied by Angel Phase Middle Mississippian and Fort Ancient groups, respectively. Angel Phase sites are restricted to the mature floodplain of the Ohio River in southwestern Indiana (Green and Munson 1978), while Fort Ancient groups are located in a wide variety of environmental settings including plains and plateau ecoregions (Figure 4). The two groups are separated by a northern extension of the Interior Plateau in south-central Indiana, which is accompanied by the Falls of the Ohio—two significant geographic barriers that undoubtedly hindered travel overland and along the river (Pollack and Henderson 2000a). (Emerson [1999] notes a similar barrier between Apple River and Oneota.)

The Fort Ancient concept can be traced back to the late nineteenth century when it was used to define the remains of an "extensive village-dwelling culture" inhabiting southwestern Ohio (Moorehead 1892; Putnam 1886). Working at South Fort Village, Mills (1906:135-136) coined the term "Fort Ancient Culture" which he defined as a pre-Columbian way of life represented by established homes, developed agriculture, stored food, and intertribal trade. The Fort Ancient archaeological construct was later expanded to include sites found in south central Ohio (Mills 1904), northern Kentucky (H. Smith 1910), southeast Ohio (Griffin 1943), and adjacent parts of West Virginia and eastern Kentucky (Dunnell 1961; Mayer-Oakes 1955). There was no criterion that was exclusive to Fort Ancient sites and the limits of Fort Ancient were set by the locations of

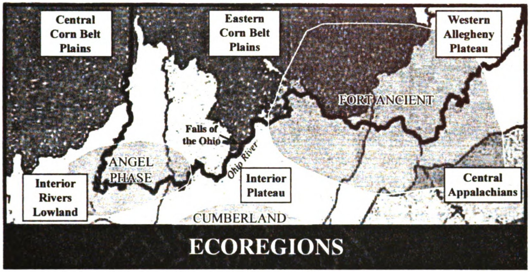


Figure 4. Ecoregions encompassing the study area. (Source: www.epa.gov.)

other culture areas rather than anything intrinsic to Fort Ancient:

> ...having engulfed all of the middle Ohio Valley, Fort Ancient began to encroach on village site complexes for which other terms already had precedence. ...If past students had known what is known today, it is doubtful that they would have taken all of the diversity subsumed by Fort Ancient and attempted to apply a single label to it. ...Fort Ancient is not a cohesive cultural entity but the sum of three, possibly four local traditions...no such *cohesive* entity exists. (Graybill 1984:40-41)

In contrast to the Oneota (Brown 1982), Fort Ancient has not been defined on the basis of a specific environmental adaptation but is more a summation of variable assemblages in disparate environments sandwiched between previously defined phenomena. However, the distribution appears to fit rather well with the Oneota pattern of adaptation to the prairie peninsula, adhering to the classification of Fort Ancient as an Upper Mississippian expression (see Figure 3).

Late Woodland Roots

As questions about culture change have become a more common element of Mississippian investigations, developments during the earlier Late Woodland time period have assumed greater significance (J. Kelly 1990b; McElrath et al. 2000). Three consecutive transformations that occurred during the Late Woodland time period factored into the development of Mississippian societies (McElrath et al. 2000). First, between A.D. 300-400 there was a demographic shift away from areas of natural abundance, and populations became more evenly dispersed across the landscape. This process is associated with the development of a more sedentary lifestyle associated with an increased reliance upon Eastern Agricultural Complex agricultural crops. Second, by A.D. 600 the bow-and-arrow was introduced and became the dominant form of projectile throughout the Eastern Woodlands. This technological change has been associated with increased hunting, inter-group competition, and increased mobility (Seeman 1992). Third, between A.D. 800-900 maize agriculture began to constitute a significant portion of the diet (J. Kelly 1990b).

These transformations led to marked changes in the relations between peoples. Prevailing arguments focus on increased cooperation and warfare, the latter of which is evident in the osteological record as well as in more consolidated, structured, and protected settlements (Milner 1999; Milner and Schroeder 1999). Before Late Woodland times, mobility was a common response in times of economic or social stress (Muller and Stephens 1991). Hence, warfare and defense do not regularly occur until family groups became more permanently grouped within villages during the Late Woodland period (Church and Nass 2002:37; Milner and Schroeder 1999:104).

Emergent Mississippians

Unsurpassed data regarding Late Woodland peoples that developed into Middle Mississippian societies comes from the Emergent Mississippian period in the American Bottom. Regional summaries of dietary assemblages in this region have found that a steady increase in population levels throughout the Late Woodland period (A.D. 300-750) was accompanied by higher levels of starchy seed agricultural products (J. Kelly 1990b:143). Changes in ceramic technology may be related to improved processing of starchy seeds (Braun 1983), leading to the production of better food consistencies more suitable for weaning infants. This decreased birthing interval increased fertility, resulting in population growth (Buikstra et al. 1986).

Settlements attributable to the Late Woodland and Emergent Mississippian periods consist of circular villages and smaller clusters of structures. Villages with clusters of three to four houses surround plazas with communal features. The spatial pattern of these settlements suggests the presence of a few localized lineages, with centralized features possibly reflecting a village's ceremonial role within a larger system of settlements (J. Kelly 1990b:144-145). These villages were egalitarian but contained the seeds for the development of hierarchical relations characteristic of Middle Mississippian settlement systems (Knight 1990; J. Kelly 1990b). Asymmetry between constituent social groups could have led to social ranking where control of resources and production were at stake (Knight 1990).

A model of the development of Mississippian settlement patterns suggests that site forms represent a progression of three types based on the relationship between cultural systems and their environments (Clay 1976:139-140, based on a model by Emery and Trist 1965). Middle Mississippian site form was a function of environmental variation and the perceived shift in the importance of immediate subsistence concerns relative to the regional coordination of activities.

According to Clay (1976:139-140), the first type of site (tactical) results when a group emphasizes environmental variables. Generally, they do not cooperate with other sites and they are scattered in areas of maximum economic productivity. Settlements represent considerable change through time, as they adapt to their local environment. Intra-site patterning reflects egalitarian relations as there are few status distinctions, artifact assemblages are relatively homogenous, and few trade items are present. The second type of site (strategic) depicts greater regional interaction as they are more centrally located. They contain evidence of greater planning and labor in the form of mounds, plazas, and earthworks. There is less temporal change as site size remains stable and structures are rebuilt, often in the same locations. Greater regional cooperation appears as surrounding sites of various sizes, complexity, and functions form. The third type of site (operations) is often associated with environments containing clustered resources with social groups reaching carrying capacities. Competition often increases in these communities, including the appearance of fortifications.

Fort Ancient's Predecessors

In the Middle Ohio Valley, the Late Woodland period begins about A.D. 500 and persists until the beginning of the Fort Ancient period at A.D. 1000. Distinctions are most apparent between the earlier and later portions of this time period and geographic distinctions are evident between the western and eastern portions of the region (Pollack and Henderson 2000b; Seeman and Dancey 2000).

The early Late Woodland is characterized by larger villages, consisting of circular middens with and without plazas, some of which are enclosed by ditches or stockades presumably for defensive purposes (Pollack and Henderson 2000b; Seeman and Dancey 2000). Arrangements lacking plazas suggest the lack of leadership above the household level (Dancey 1992). The establishment of villages represents increased nucleation in contrast with the dispersed Middle Woodland settlement system of hamlets surrounding ritual precincts of mounds and earthworks (Dancey 1998). Early Late Woodland mortuary activity often became linked with a particular community. Late Woodland villages are generally associated with stone-mound mortuaries containing rock cysts, slab vaults, and pavements.

A.D. 650 marks a turning point throughout the region. Small sites begin to appear with distinct assemblages consisting of Jack's Reef projectile points and thicker, rock-tempered ceramics. This has been termed the Jack's Reef Horizon and may represent the introduction of bow-and-arrow technology into the region (Seeman 1992). However, this shift does not occur at many Late Woodland village sites in southwest Ohio (e.g., Sand Ridge and Turpin). These sites demonstrate continuous village occupation from Late Woodland through Fort Ancient times (Riggs 1986, 1998). At these stratified locales, Late Woodland ceramics and projectile points physically intermix with Fort Ancient materials (Seeman and Dancey 2000:592).

Upper Mississippian Origins

Three scenarios—migration, interaction, independent development—have been offered as explanations of Upper Mississippian origins. While explanations vary between Oneota and Fort Ancient interpretations, there is a remarkable similarity between them. The key question is how much of Upper Mississippian can be associated with Middle Mississippians and how much is related to local Late Woodland populations? Answers to this question have changed considerably over the years, as a result of increased data and shifting theoretical viewpoints, and it could well be that multiple answers are in fact correct (Gibbon 1982). All but the most recent interpretations are couched within culture area/culture historical frameworks, inappropriate for examining social change. No explanation has closely examined peripheral developments.

Early studies relied on migration and/or acculturation scenarios to account for the origin of Upper Mississippian peoples. This approach is typified by the work of Griffin.

> The Fort Ancient Aspect appears to have been strongly influenced by Middle Mississippi, both by actual migration of peoples bearing a "Mississippi" culture into the southwestern part of the Fort Ancient territory and by diffusion of traits... Fort Ancient could hardly have appeared as a cultural entity until after the Middle Mississippi peoples had formed a strong group...The Oneota Aspect and the Fisher Focus also were stongly influenced by Middle Mississippi, so that, to some extent, the Oneota and Fort Ancient aspects can be linked together on the basis of their marginal relationship to what is thought of as "pure" Middle Mississippi. (Griffin 1943:257-258)

Griffin (1960) elaborated on the Oneota portion of his argument suggesting that Middle Mississippian peoples moved north from Cahokia, Oneota was an adaptation to a northern deciduous forest habitat and/or a response to climatic deterioration beginning around A.D. 1300. Prufer and Shane (1970) identified the Baum Phase in central Ohio as the point of origin for Mississippian migrants who developed into Fort Ancient peoples. Subsequent radiocarbon dates have revealed that the timing of these migrations was earlier as the first Upper Mississippian sites are coeval with the earliest Middle Mississippian sites (Gibbon 1982). Some researchers have argued that the decline of Cahokia is related to the formation of Upper Mississippian as emigrants settled in distant lands (Pauketat and Emerson 1997; Stoltman 1991).

Distinctions within earlier Fort Ancient and Oneota time periods have been attributed to distinctions in both environmental variation and Middle Mississippians "influences," a term which has not been clearly defined. The earliest manifestations of Oneota and Fort Ancient societies were more variable than subsequent developments, which has been explained as differential adaptations by a homogenous group to diverse environments (Cleland 1966) or differential acceptance of diffusing traits by relatively isolated peoples (Gibbon 1972).

The most recent explanation of the development of Fort Ancient society suggests that these groups developed almost exclusively from Late Woodland peoples (Henderson 1998; Pollack and Henderson 1992, 2000a). This explanation has explicitly examined Fort Ancient developments from an internal perspective, seeing little need to invoke a Middle Mississippian component.

In contrast, Oneota origins have been recently described as a result of a "tribalization," a process that emphasizes Middle Mississippian involvement in the formation of tribal borders (Emerson 1999). This model is distinct from earlier interaction and migration models for three reasons. First, it situates "influence" specifically on simpler (non-Cahokia) chiefdoms nearer to Oneota developments. Second, it relies primarily on social reasons for Oneota developments. Third, it provides a specific example of chiefdom/tribe expectations based on ethnographic support. Expectations derived from chiefdom/tribe relationships include: (1) population aggregation into larger groups, (2) increased leadership centralization, (3) increased evidence of warfare, and (4) the presence of a buffer zone and territorial boundedness (Emerson 1999:12). These expectations are supported with archaeological evidence concluding that Oneota originated in direct relation to more complex Middle Mississippians: "complexly organized, warlike societies 'create' neighbors who must, for the sake of survival, emulate them and socially, politically, and even spatially coalesce to defend themselves" (Emerson 1999:40). The main conclusion is that resulting changes were a way of creating an ethnic identity distinct from Middle Mississippian chiefdoms. This ethnic construct disappeared after the chiefdoms collapsed (Emerson 1999).

Mississippian Social Complexity

Examinations of change in Upper Mississippian societies cannot be isolated from Middle Mississippian developments. The following survey of Mississippian development reveals how marked changes in Upper Mississippian societies co-occur with Middle Mississippian evolution. First, conceptions of Middle Mississippian social complexity are explored. Second, temporal and spatial linkages between Middle and Upper Mississippian groups are examined, focusing on relationships between Fort Ancient and neighboring Middle Mississippian groups (Angel Phase).

Middle Mississippian Decentralization

Interpretations of Middle Mississippian complexity have ranged from those positing the occurrence of state level societies (e.g., Fowler 1974; Hall 1991), to those proposing they were far less centralized and complex (e.g., Milner 1998; Muller 1997). The system appears to have developed in relation to status validation as goods are usually associated with emblems of rank and the appearance of exotics is reciprocal rather than one of economic and political centralization characteristic of complex chiefdoms or states (Brown et al. 1990). This shift in focus to peer relations centers social interactions that seem to have established Middle Mississippian systems.

Middle Mississippian chiefdoms ranged in size and complexity, often being characterized as complex and simple based on the numbers of vertical differentiations in respective settlement hierarchies. Complex chiefdoms contain two or more tiers of political administration while simple chiefdoms contain only one (Anderson 1994). Blitz (1999) presents a horizontal alternative to this model suggesting that paired mound sites may represent two simple chiefdoms that fused together. It appears that as these sites grew they fissioned into "mother-daughter" chiefdoms. This model presents an alternative commensurate with available data without utilizing more complex political models, and systems of dual organization are commonly reported at Middle Mississippian sites (Blitz 1999; Hudson 1976; Zeder and Alder 1996).

The types of models formulated to address interactions between Middle and Upper Mississippian societies have been directly influenced by differing conceptions of Middle Mississippian social complexity. Those who favor greater complexity for Middle Mississippian groups often view material patterning in the archaeological record within a core/periphery perspective, arguing that Upper Mississippian peripheries were under the control of paramount chiefdoms or states like Cahokia (e.g., Dincauze and Hasenstab 1989; Peregrine 1992).

In contrast, those who conceive of smaller, less complex Middle Mississippian centers maintain that peripheries—including both Middle and Upper Mississippian societies—were politically autonomous (e.g., Milner 1998; Muller 1997). The recent conclusion that Middle Mississippians are less complex changes the ways in which peripheral developments can be modeled. Specifically, peer interactions between autonomous polities place rural Middle Mississippian villages and Upper Mississippian societies on an equal footing.

Fort Ancient Peripheralization

This study recognizes Upper Mississippian groups as complex egalitarian societies (Henderson 1998), but suggests that this complexity can be more precisely defined in relation to peer polity developments with rural communities surrounding smaller chiefdoms. If large Middle Mississippian chiefdoms such as Cahokia were not as complex as previously thought (Milner 1998), it holds that smaller chiefdoms were even less complex. Interestingly, smaller chiefdoms are often located in areas nearest to Upper Mississippian developments (e.g., Emerson 1999).

Fort Ancient developments are temporally related to the development and collapse of the neighboring Angel chiefdom (A.D. 1000-1400 [see Figure 2]). Angel and Fort Ancient settlements are relatively rare between A.D. 1000 and 1200. In central Kentucky, the Early Fort Ancient period (A.D. 1000-1200) is typified by small, scattered hamlets of five or six structures lacking a distinct plan (Pollack and Henderson 1992, 2000a; Sharp and Turnbow 1987:150). Features often consist of small basins and pottery is generally undecorated and similar to Late Woodland vessels. Late Woodland architectural characteristics are found at Early Fort Ancient sites including similarities in house form and the use of ditches to enclose sites (Allman 1959).

The Angel chiefdom reached its peak of development between A.D. 1200 and 1450 (Hilgeman 1992). During this time, most of the major earthworks at the Angel site were constructed, and the settlement hierarchy was also developed (Figure 5). This is precisely the time period in which Fort Ancient villages became commonplace and sites were located throughout the entire region (Pollack and Henderson 1992; 2000a; also see Figure 2).

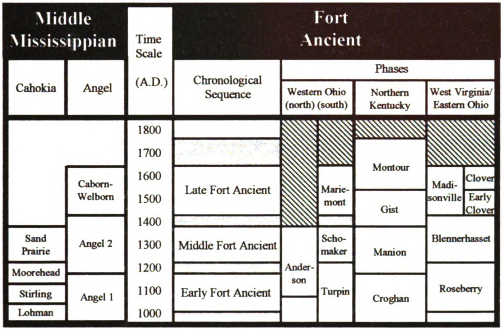


Figure 5. Established chronologies for culture historical units located within the study area. (Sources: Drooker 1997: Figure 4-3; Hilgeman 1992; Milner 1998: Figure 1.7).

This development is accompanied by increased pottery decoration, the intensification of mound use (Figure 6), shell being used more as pottery temper, and the regular occurrence of wall-trench houses at sites in the western part of the region (Figure 7). Middle Mississippian diagnostics are also present at several sites in the western area including painted and Ramey-like pottery sherds, pottery with "Cahokia" shoulders, Mill Creek hoes, and a human effigy pipe resembling one from the Kincaid site (Drooker 1997:90; Oehler 1973).

According to a recent assessment of the temporal affiliation of Fort Ancient villages (Kennedy 2000), those sites attributable to the Middle Fort Ancient period tend to be clustered in the western and southern portions of the region, relatively close to Middle Mississippian populations. In contrast, Early Fort Ancient sites are found in greatest concentration in central Ohio and the tri-state area including portions of Ohio, Kentucky, and Indiana (Figure 8).

Distinct changes in Fort Ancient settlement and interaction occur after the decline of the Angel chiefdom and the relocation of Middle Mississippian peoples of the lower Ohio Valley into the Caborn-Welborn phase (see Figure 2). Late Fort Ancient (A.D. 1400-1650) settlements are larger, fewer in number, and tend to be concentrated near the Ohio River. Perhaps this shift was precipitated by environmental degradation (Kennedy 2000). However, social reasons for this settlement shift cannot be discounted as the restructuring of Angel groups into Caborn-Welborn settlements would have altered networks of social interaction (Pollack 1998). Some artifact styles became more homogenous across the Fort Ancient region (e.g., pottery), reflecting increased internal interaction and the establishment of

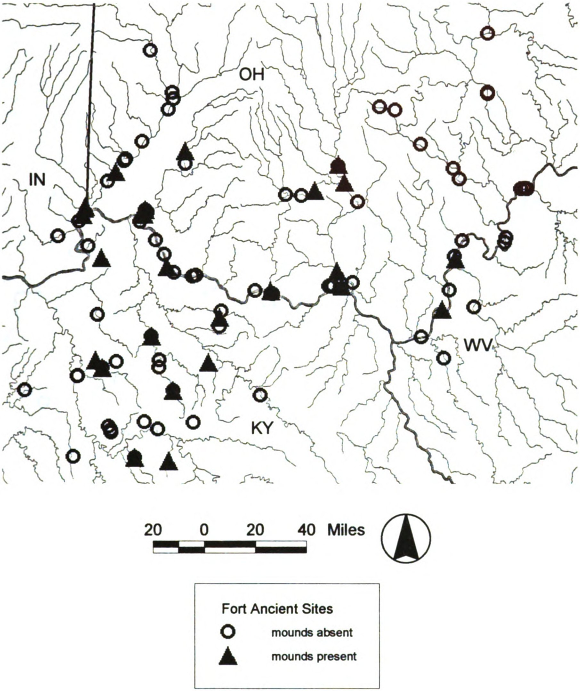


Figure 6. Distribution of Fort Ancient sites associated with mounds. (Source: Drooker 1997; base map courtesy of Bill Kennedy.)

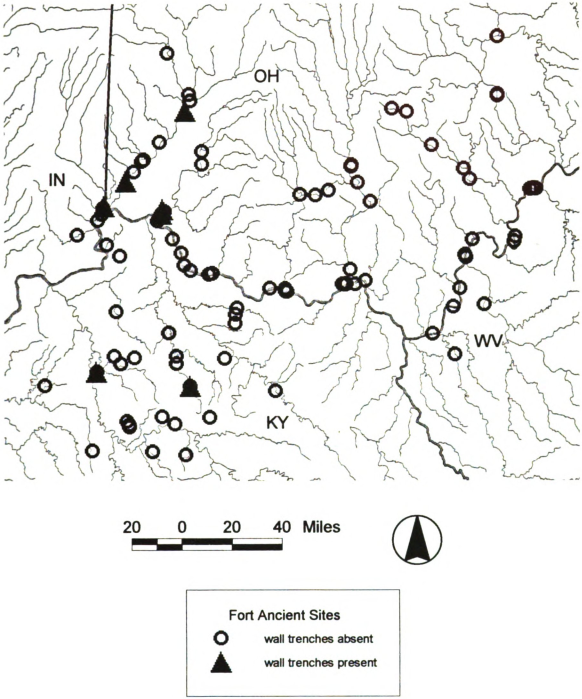


Figure 7. Distribution of Fort Ancient sites containing wall trench houses. (Source: Drooker 1997; base map courtesy of Bill Kennedy.)

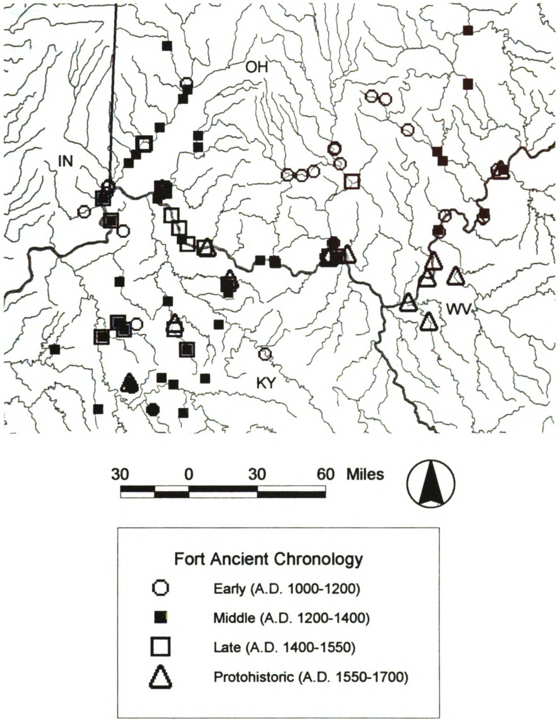


Figure 8. Distribution of Early, Middle, Late, and Protohistoric Fort Ancient sites. (Source: Kennedy 2000.)

broader exchange networks (Drooker 1997; Henderson and Pollack 1992, 2000a). It may not be a coincidence that Middle Mississippian and Fort Ancient settlement patterns underwent drastic changes at similar times.

The general village form does not change during the Late Fort Ancient period. Late Fort Ancient villages are generally larger and palisades occur more regularly. Houses become larger and longer, similar to Huron structures (Cowan 1988). Storage pits are more frequently located in structure interiors, perhaps indicative of subsistence pressure due to overcrowding (Carskadden and Morton 2000; Hart 1993; Wesson 1999), and/or increased social differentiation (Hendon 2000). Burials are clearly structured in rows in some villages (e.g., Hardin [Hanson 1966]).

Settlement hierarchies and seasonal uses of special-purpose sites may have developed during the Late Fort Ancient period, after A.D. 1400 (Essenpreis 1978), although the evidence is equivocal. Seasonally-used sites may also become common after this time (Purtill 1999; Turnbow and Jobe 1984; Turnbow et al. 1983). However, others have suggested that Middle Fort Ancient villages were also abandoned seasonally but winter camps have not been located (Shane and Wagner 1993). Essenpreis (1978) proposed that the Late Fort Ancient Madisonville system contained a settlement hierarchy as a result of direct affiliations with Middle Mississippian groups (but see Pickard 1993). The problem with both of these aspects of the Fort Ancient settlement system is the lack of large-scale systematic survey data on which to base interpretations. Therefore, at this point nothing conclusive can be said with respect to either of these important possibilities.

Mississippian Site Structures

Mississippian villages exhibit a range of site plans, household configurations, and mortuary practices. A brief review of these key elements of Middle and Upper Mississippian village structure provides a comparative basis against which the SunWatch site can be judged, to assess specific similarities in the organization of space.

Site Plans

Mississippian site plans include four basic types: mound centers, villages, hamlets, and farmsteads. Middle Mississippian settlement patterns were usually hierarchical arrangements including each type. Upper Mississippian communities generally lack settlement hierarchies and include various combinations of villages, hamlets, and seasonal or special-purpose sites.

Middle Mississippian mound centers contain an architectural grammar consisting of three elements—mounds, plazas, and stockades—arranged in a variety of configurations (Lewis et al. 1998). The clearest use of the flat-topped pyramidal structures was to support public buildings and leader residences. The largest mound at a site was likely the residence of a chief, while smaller mounds supported houses of lineage heads (Muller 1997). In the case of multiple mound centers, the distribution of mounds seems to be a grander version of the residential household square (Muller 1997:185). Circular or square plazas are defined by these mounds and often contain a central post or large structure. Red cedar center posts were often used for displaying the town emblem, scalps of enemies, torturing captives, or playing games (M. Smith 2000:88).

The layout of Middle and Upper Mississippian villages is similar. Each contains a central plaza surrounded by residential areas. Communal features, most common of which are center poles, are frequently located in the plaza. Mounds are often located at the interface between plaza and residential areas. Large chiefly and/or ritual structures are also common in elite areas located along plaza edges closer to village centers than non-elite residential areas. The largest mounds in Middle Mississippian communities represent the ruling lineage and are positioned in the village center, or in the western or northern sides of the plaza in closer proximity to the village center than lower ranked social groups (Chapman 1976; Lewis et al. 1998). Large structures often predate construction of these mounds. Mounds were often constructed in locales where chiefdoms developed or where a village was promoted up the settlement hierarchy (Clay 1976).

Several characteristics can be associated with elite areas. Storage volumes are often larger relative to house size (Nass and Yerkes 1995; Wilk and Netting 1984), or there may be different storage practices in this area such as interior or controlled storage (Wesson 1999). The remains of ritual activities often accompany these areas, most notable of which are items relating to the Green Corn ceremony (Hudson 1976). Burial distinctions are often associated with elite areas (Milner 1998).

The clearest understanding of Fort Ancient villages can be derived from those occupied for relatively short durations. There are three such sites, Capitol View (Henderson 1992b), Horshoe-Johnson (Hawkins 1998), and SunWatch. Capitol View and Horshoe-Johnson represent shorter occupations than SunWatch and, therefore, are better suited for examining earlier stages of village formation. Capitol View is located in northern Kentucky and was occupied during the later portion of the Middle Fort Ancient period (ca. A.D. 1400). Horshoe-Johnson is located in southwestern Ohio and was occupied toward the beginning of the Middle Fort Ancient Period (ca. A.D. 1100/1200). Unfortunately, as plowing greatly impacted this site, it is not known whether the pattern is complete; the village may have been much larger (Hawkins 1998).

Capitol View and Horshoe-Johnson exhibit similar forms in that they each contain two arcs of houses arranged around an open plaza (Figure 9). The main difference between these villages is that Horshoe-Johnson is considerably smaller than Capitol View. Each arc has four structures and at Capitol View households are clustered in groups of two. Henderson (1992b:239) mentions that the spatial arrangement of the houses suggests that gaps had been left between the six structure areas which would have been filled in had the community continued to grow by the arrival of new households. Carskadden and Morton (2000) broaden the explanation to include internal growth that could also have contributed to village expansion. The most obvious gap at Capitol View

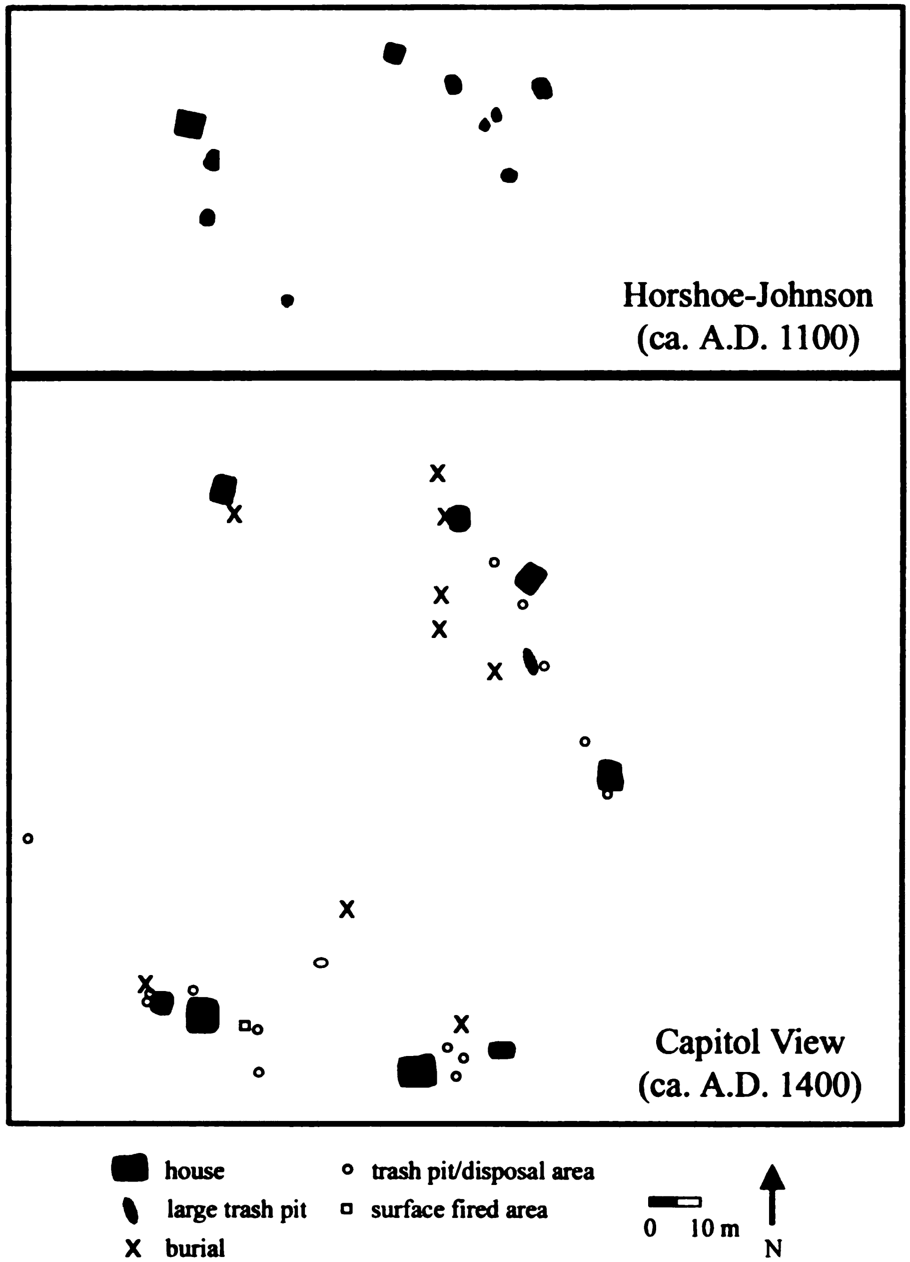


Figure 9. Distribution of features at the Capitol View and Horshoe-Johnson sites (after Henderson 1992b: Figure 5 and Hawkins 1998: Figure 6.2, respectively. Note that non-house features are not shown for Horshoe-Johnson).

is in the western part of the site where ceremonial and political institutions are located at SunWatch (Heilman et al. 1988). Capitol View may have been socially complete but just not large enough to develop integrative institutions.

Houses and Households

European explorers occasionally visited communities of Middle Mississippian descendants and recorded observations on households as well as their corresponding social forms and uses. Among the Creek and neighboring cultures, households often incorporated several buildings, each with a special purpose (Bartram 1789; Swanton 1946). Households utilizing multiple structures were either of higher rank and/or were further along in the cycle of family development (Hudson 1976). The most elaborate type included four structures, one for a kitchen and winter lodge, one for a summer lodge and reception hall for visitors, one for a granary and storehouse, and one for storing trade goods (Bartram 1789:55-56). Several investigators have noted that Middle Mississippian houses are often clustered into groups of four around a family plaza (Collins 1997; Mehrer 1995; Mehrer and Colllins 1995; Muller 1997; Rogers 1995).

The Creek also built lighter structures for summer uses and heavier ones for winter functions (Adair 1775). Among the Cherokee, it has been noted that structures were often grouped into pairs—one rectangular and one round. Open-walled rectangular structures were used during the summer months while round houses were more efficient for heating during the winter (Bartram 1789). Round and square structure pairs have been recorded in several Mississippian regions (Polhemus 1990; M. Smith 2000; Sullivan 1995).

Larger Mississippian structures have most often been attributed to communal or chiefly functions. A relationship between larger structures and a small degree of centralized food storage has led several researchers to conclude that chiefly residences were often present within Middle and Upper Mississippian villages (Nass and Yerkes 1995, Wesson 1999; M. Smith 2000). Larger structures have also been interpreted as the remains of Big Houses or council lodges (Hawkins 1998; Heilman et al. 1988; Sullivan 1995).

Single-post houses were the norm for Fort Ancient populations while wall trenches were preferred by Middle Mississippian societies. Fort Ancient houses changed in form and size, evolving from small, round or square houses to larger, square and rectangular structures (Pollack and Henderson 1992). The shift from round to square houses may be related to the shift from foraging to farming (Whiting and Ayres 1968). The only late Fort Ancient sites to contain round/oval structures are winter sites where hunting and gathering activities occurred (Turnbow and Jobe 1984), a finding consistent with ethnographic observations (Whiting and Ayres 1968). The shift to longer and larger houses (post-A.D. 1400) may be related to changes in family structure. Cowan (1988) has argued that this represents a shift from patrilineal, nuclear to matrilineal, extended families and attributes the development to contact with Iroquois groups who were expanding their territory and regularly visiting the Ohio Valley at this time. Oneota houses also evolved from small, square and round houses to larger, longer ones, with similar interpretations offered for the shift from nuclear to extended social groups (Hollinger 1995).

Households have been proposed for Fort Ancient sites based on pottery refit patterning and the clustering of ceramic attributes (Heilman 1975, 1988b; Mills 1904). Nass and Yerkes (1995) argue that household craft production was similarly organized for households within a Middle Mississippian hamlet and a Fort Ancient village. The only notable distinction was that the leader's house was larger and contained increased storage potential, which may indicate that a food surplus was used for hosting non-local individuals and neighboring groups at feasts (Nass and Yerkes 1995).

Mortuary Patterning

Two key principles have been discovered by which the Mississippian mortuary domain was structured. The first pertains to social complexity, which varied between ranked and egalitarian systems. Middle Mississippian cemeteries contain evidence for both systems (Goldstein 1980; Milner 1984), while Upper Mississippian burials only reflect an egalitarian structure (Griffin 1992). Middle Mississippian evidence for ranking is restricted to mound centers (Milner 1984), where a particular segment of the population is interred in mounds accompanied by exotic artifacts and treatment regardless of sex or age (Peebles and Kus 1977). In contrast, rural Mississippian communities have produced mortuary assemblages more consistent with egalitarian societies, although they are still part of a hierarchical settlement system (Goldstein 1980). The second principle is that Middle Mississippian burials at both village and mound center sites are spatially structured in row patterns. The spatial arrangement of Middle Mississippian burials in rows represents the material expression of corporate groups who controlled critical or restricted resources (Goldstein 1980).

Several Fort Ancient sites exhibit clear linear patterning in the distribution of burials and it appears that the general trend is for the mortuary program to become more structured over time, including a higher incidence of multiple burials. Late Fort burials contain more grave goods in general and pottery in particular. There is evidence that some degree of social differentiation existed within Middle Fort Ancient communities, and this tendency became more pronounced in Late Fort Ancient social groups. Mounds are no longer present and burials become more structured in rows or inside houses. Children and young adults are more frequently buried with status items. Engraved weeping eye and rattlesnake gorgets reflect interaction to the south. Limited evidence exists in parts of the Fort Ancient area for a mortuary program involving defleshing, manipulation, and curation of selected bones before burial, the use of corn and bean offerings, and the ritual killing of pottery vessels (Henderson and Pollack 2001:178). A few Late Fort Ancient sites contain ossuary-like deposits with as many as 14 individuals represented in one feature (Carskadden and Morton 2000; Henderson and Pollack 2001).

Conclusion

This chapter has presented a broad overview of the formation and differentiation of Mississippian societies located in the study area. Emphasis was placed on defining the general similarities between settlements associated with Upper and Middle Mississippian societies in the region. While Fort Ancient is a poorly defined entity, many sites clearly exhibit characteristics attributable to both Late Woodland and Middle Mississippian groups.

Models explaining Fort Ancient evolution have shifted from migration-based explanations to those downplaying significant interactions between Middle Mississippian and Fort Ancient groups. Earlier models argued that Middle Mississippian migrants were solely responsible for initiating the development of Upper Mississippian groups, while more recent explanations have relied exclusively on Late Woodland contributions to the development of Fort Ancient societies. There have been surprisingly few attempts to bridge the gap between these extremes.

The reliance on Late Woodland contributions stems partly from the lack of clear burial ranking and settlement hierarchies, two classic Middle Mississippian traits. The problem with this conclusion is that it focuses on the most complex types of Middle Mississippian sites for comparisons when we have known for some time that rural Middle Mississippian settlements exhibit an egalitarian structure similar to that expressed by Fort Ancient. Current models of Middle Mississippian social complexity present a relatively decentralized view, far from earlier models stressing a state-level society. By extension, this renders rural Middle Mississippian sites as more autonomous entities than previously thought. The less complex Middle Mississippian model has not been integrated into studies of peripheral developments.

Late Woodland sites located in southwest Ohio are commingled with Fort Ancient villages. Early Fort Ancient sites are concentrated in central and southwest Ohio and contain artifacts (e.g., pottery) and features (e.g., ditches) that are often similar in style to

Late Woodland examples. As Fort Ancient villages develop, several similarities with Middle Mississippian settlements become evident. This includes the use of a similar architectural grammar, including the placement of mounds, plazas, and centralized features. During the Middle Fort Ancient period (A.D. 1200-1400), villages were commonplace, although earlier villages are known in various portions of central and southwest Ohio. During this time, site locations are most common along the boundary closest to Angel phase Middle Mississippian groups. This pattern changes during the Late Fort Ancient period, after Middle Mississippian groups restructure downstream. Late Fort Ancient sites appear to exhibit Mississippian-like mortuary patterns including the clear use of burial rows and the regular interment of pottery vessels.

Middle Mississippian residential units often consist of multiple households, representing either functional differentiation for one family or different stages in the growth cycle of domestic units. Insight into Fort Ancient household composition can be derived from less intensively occupied Fort Ancient villages, particularly the Capitol View site. The one clear example contains two segments, specifically lacking the western ceremonial precinct commonly found at Middle Mississippian and Fort Ancient sites. The basic pattern of residence appears to be two closely spaced households.

Several expectations can be derived from the preceding Mississippian overview, from which to operationalize the theoretical framework into a methodology suited to testing the extent to which Fort Ancient villages meet the criteria to be included as a Mississippian site type. This includes multiple scales of analysis, ranging from households and mortuary domains to overall site structure.

CHAPTER IV: SUNWATCH SITE BACKGROUND

The SunWatch Site (33My57) is located on the west bank of the Great Miami River three miles south of Dayton, Ohio. SunWatch was originally named the Incinerator site, as it was located beneath the plowed surface of a farm field adjacent to an incinerator, both of which were owned by the City of Dayton. Previously, the Vance family owned and farmed the land, and several historic structures and features associated with their use of the property were standing or located during excavation (Lileas 1988a). The site opened to the public in 1988 as "SunWatch" for two reasons. First, the incinerator is no longer standing. Second, "Incinerator" is not as effective for public attraction, and "SunWatch" better fits the archaeological significance of the site as astronomical alignments factored heavily into its recognition as a National Historic Landmark (Heilman et al. 1990). Due to excellent preservation and a relatively short-term occupation, the site contains invaluable information on Fort Ancient society.

Excavation History

The site was discovered by landowners and collectors who noticed abundant quantities of prehistoric artifacts washing out of the plowed agricultural surface of the Vance family farm (Lileas 1988b). It is not known how long the area was collected before systematic recording of data was initiated but, presumably, it had been subjected to this activity for some time. The land was plowed for much of the twentieth century and several historic and natural features have been located at the site. Fortunately, collecting activities were mainly limited to surface contexts.

Avocational

The site was initially recognized by Kenneth McNeal, an avid collector at the site from 1930 to 1970 (Lileas 1988b). McNeal subsequently told avocational archaeologist John Allman about the Vance farm and Allman proceeded to excavate a small portion of the northeastern part of the site between 1964 and 1966 (Allman 1968). This area produced numerous Fort Ancient pit and burial features. Allman was later joined and succeeded by another avocational archaeologist, Charles Smith, who was assisted in his excavations by family members and groups of Boy Scouts (C. Smith n.d.). Smith uncovered the first house to be associated with the Fort Ancient Anderson Phase as well as numerous burials and pit features. Smith proceeded with excavations until 1969 (Allman 1968; C. Smith n.d.). This team excavated a sizeable portion of the northeastern quadrant of the village using a 10' x 10' coordinate system oriented along West River Road (Figure 10).

As far as can be discerned based on field notes and collections, excavation strategy consisted of removing the plowzone, locating features, and hand-sifting feature fill for diagnostics and larger artifacts. Inventories were made of individual pit and burial features although these consist only of tools and diagnostics. Unfortunately, artifacts were not consistently labeled according to provenience and the inventories are only useful on the most general level.

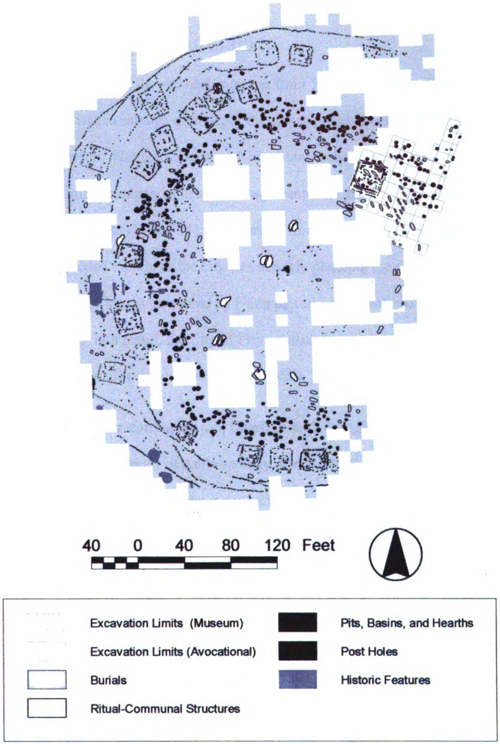


Figure 10. SunWatch site map.

Dayton Museum of Natural History (DMNH)

The DMNH excavated the site each summer from 1971 until 1988. The initial goal of their excavations was to salvage as much of the site as possible before it was destroyed by the City of Dayton. Not realizing that an important archaeological site was present, the city was planning to expand a nearby sewage treatment plant, which would have directly impacted the site (Figure 11). As a result, from 1971 to 1975 DMNH excavations proceeded rapidly as the city was actively planning the expansion project. In 1975, the site became legally protected by being placed on the National Register of Historic Places and, as a result, the City of Dayton abandoned plans for expanding the sewage plant in the vicinity of the site (Lileas 1988b).

In 1969, a week after starting the job, Charles Smith brought the site to the attention of J. Heilman (DMNH Curator of Anthropology, 1969-2000). At the time, the site's preservation was not an issue, and the museum logged it as a potential research interest. However, in 1970 it became known that the City of Dayton was inadvertently planning to destroy the site in the process of upgrading and expanding a nearby sewage treatment facility. Additional sewage treatment ponds, of which several are located immediately to the west of the site, were going to be constructed over the village. Heilman realized that these additional ponds would greatly impact if not destroy the site. Because the site contained numerous intact features, human burials, a structure, and had great potential for further significance, the DMNH began extensive salvage excavations in 1971. The City of Dayton permitted this initial salvage work while continuing to make plans for the sewage treatment expansion.

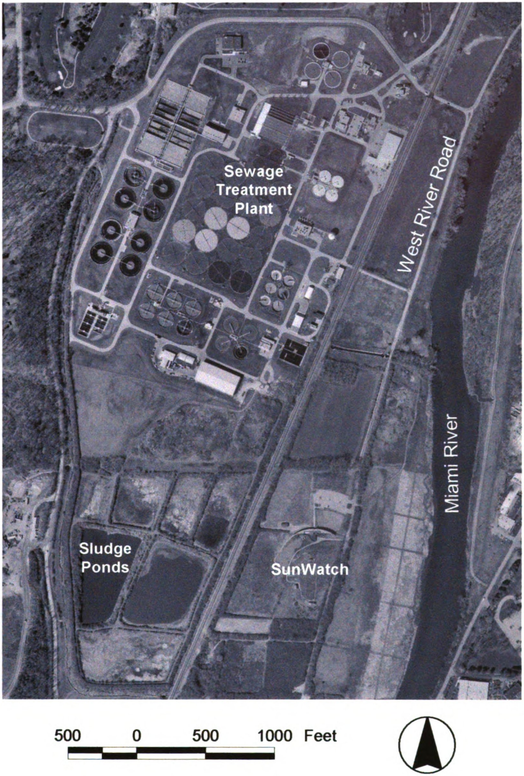


Figure 11. Aerial photograph of the SunWatch site and the surrounding landscape. (Source: Montgomery County Auditors Office [1999].)

From 1971 until 1988, Heilman directed the excavations with a crew of one staff member, along with many volunteers and summer class students. The excavation method was relatively straightforward. A grid pattern of 10' x 10' squares was established to be consistent with avocational excavations. The grid pattern was oriented toward magnetic north instead of following the orientation of West River Road. Throughout the salvage period, features were excavated as one provenience and ¼" mesh was used regularly for screening feature fill after 1971. Throughout excavations, the plowzone was hand-sorted with the exception of one ten foot transect that was stripped with a bulldozer. After 1975, excavation strategy shifted to include excavation of all features in 3" levels and the flotation of ¼ of most features (Heilman et al. 1988). All artifacts were curated with the exception of fire-cracked rock, which was noted but not counted or weighed and was discarded in the field.

Excavations began in the northeastern part of the site, adjacent to avocational excavations (see Figure 10). Subsequently, several trenches were placed across the site which revealed stockade lines, structures, trash pits, storage pits, and burials in the locations of surface artifact concentrations (Lileas 1988b). By the end of 1971, over 60 excavation square units had been excavated which included three house structures, sixty storage/trash pits, and seven burials. In 1972 and 1973, the basic village pattern was revealed consisting of a central plaza and pole complex, surrounded by circular zones of burials, storage/trash pits, houses, and stockades. Excavations proceeded in salvage format until 1975 when the site was granted federal protection (Heilman et al. 1988). After this time, emphasis shifted toward the western portion of the site. By the early 1980's excavation had slowed considerably due largely to the shift toward reconstruction and analysis efforts. Formal excavations stopped in 1988, the year the site and interpretive center opened to the public. The goal was to preserve unexcavated parts of the site until better methods were developed or research on the extant collection produced specific questions to be addressed with further excavation.

Features excavated by avocational archaeologists reveal a pattern of pits and burials commingled with a large house pattern. Structures excavated by the DMNH were positioned in circular pattern around the pit features and are enclosed by a stockade, which contrasts with the location of the avocational structure. Additionally, the avocational structure was a wall trench house (Allman 1968, C. Smith n.d.). As will be presented in Chapter VI, both Allman and Smith are clear in their independently recorded notes that the trenches are prehistoric in origin and actually represent the first of two structures represented by the posthole pattern. Wall-trench houses have been found at several Fort Ancient sites in southwest Ohio (Drooker 1997), as well as elsewhere in the Fort Ancient area (Henderson 1992a).

Merging Excavation Blocks: A Cautionary Note

It was difficult to precisely merge the two excavation blocks. A large part of the problem was related to the fact that avocational field notes indicated that their grid was oriented "north." It was assumed that this meant magnetic north and not an arbitrary measure in relation to the road. Fortunately, two of the three datums that were established and mapped by avocational archaeologists were still intact from which to orient the grid. Also, museum excavations relocated one burial and the western portion of the avocational excavation block. Each of these sources of information was used to merge the two excavations together. However, the result only tentative; a more precise location of the extent of avocational excavations should be established in the future. Hence, spatial interpretations particularly in the areas of the site where these excavation blocks meet should be taken with a small degree of caution.

Analytical History

Intensive excavations at SunWatch have provided an unmatched database for exploring many aspects of Fort Ancient village life. There have been numerous analyses conducted over the past three decades; those most pertinent to the current investigation are reviewed here.

Astronomical Alignments

The center pole complex has been interpreted as an astronomical calendar, aligning with solar and stellar phenomena and particular houses, pit features, burials, hearths, and posts within the village (Goss 1988; Heilman and Hoefer 1981). The discovery of uncarbonized Eastern Red Cedar in the center posthole (Wagner 1979) is consistent with other well-documented Eastern Woodland calendrical systems (e.g., the Cahokia "Woodhenge" [Wittry 1969]).

According to Heilman and Hoefer (1981) and Goss (1988), the center pole and the four poles that form a parallelogram around it, align with the rising sun and the hearth of Structure 1/71 at two times each year, near the beginning of spring (April 29) and in late summer (August 14). These dates coincide with the planting and harvesting schedule for this locale. The center pole and four aligned postholes located to the northwest form another alignment with the rising sun and the hearth of Structure 2/87 on the winter solstice (December 22). Three overlapping pits containing an abundance of artifacts are positioned on the solar alignment that occurs at each equinox (Heilman and Hoefer 1981; Goss 1988). The winter solstice and equinox are commonly marked in other early calendrical systems in various regions of the world, lending cross-cultural support to these hypotheses (Aveni 1989, 2003) (Figure 12).

The center pole may also have aided in the observation of stellar phenomena. In a brief examination of stellar alignments, the achronal rise of the Pleiades (October 17) and Vega (April 22) were singled out as they aligned with the center pole and cedar posts located to the south of Structure 1/71 (Goss 1988). A final alignment was hypothesized on the basis of an anomalous mortuary signature—one individual was killed with four projectiles, buried with a limestone pipe, underneath a cedar bark covering (a similar finding was made at the Collins site [Douglas 1975]). This burial aligns with the center pole, a cluster of posts, and two features containing an abundance of lithic tools and finely crafted projectile points. Presumably, this is a stellar alignment as it is oriented on a north-south axis. Based on the burial and ethnographic data, it may have resulted from a ritual involving arrow sacrifice to promote plant fertility (Robertson 1980:14-15).

<u>Social Structure and Ritual Activities</u>

SunWatch research has largely focused on examining social and ritual behavior. Social inferences have been drawn from pottery and lithic refit patterning and their

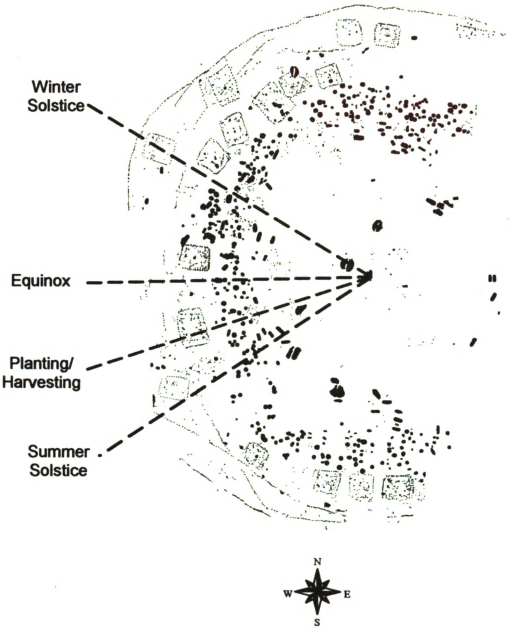


Figure 12. Proposed astronomical alignments (adapted from Heilman and Hoefer 1981).

distributions, concentrations of burnt corn, the sizes of structures and storage pits, and the composition of the mortuary domain.

Heilman (1975, 1988) conducted a cross-feature refit analysis of pottery rim sherds and was the first to recognize that the site contained discrete spatial patterning, perhaps related to the localization of households. Results suggested that there were three to four spatial units; refits occurred within each area but not between them (Figure 13). Minor differences in temper types and design motifs were also noted between these areas. Heilman (1988b) further suggested that these units represent matrilocal groupings (Deetz 1965; Hill 1968; Longacre 1970), based on the assumption that females made the majority of the pottery which has been documented among many historic tribes in the Eastern Woodlands (Harrington 1913:223).

Lithic refits produced a pattern distinct from pottery (see Figure 13). The pattern is more focused on linkages between a single house (Structure 2/78) and the remainder of the village. Robertson (1980, 1984) utilized spatial divisions based on pottery refits to compare frequencies of lithic tools and debitage. A large percentage of lithic debitage was recovered from the vicinity of Structure 2/78, while the majority of finished tools were located elsewhere. Based on the assumption that males manufactured lithic tools, Robertson (1980, 1984) suggested that this activity was spatially discrete and Structure II/78 was a Men's House. Robertson (1980) suggests that the intensive manufacture of hunting implements in the west area resulted from male hunting expeditions to procure meat to use in the Green Corn ceremony. A literature review added further support to this hypothesis (Harold 1985).

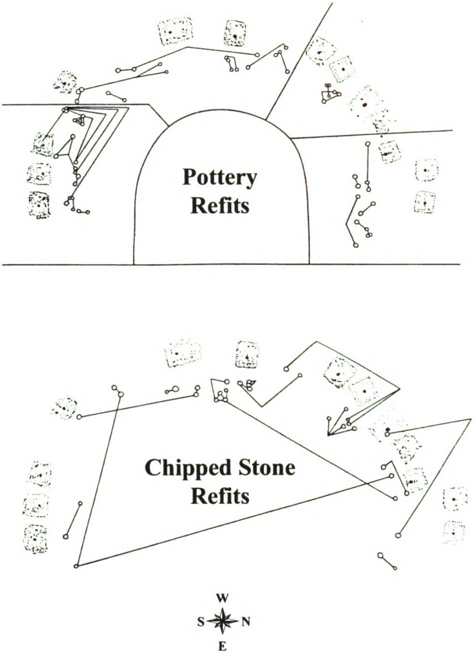


Figure 13. Initial pottery (top) and chipped stone (bottom) refits (adapted from Robertson 1984: Figures 2 and 4).

The distribution of burnt corn and large storage pits helped clarify the ritual nature of the west side of the site. Burnt corn was recovered in significantly more storage/trash pit features in this area (69%) when compared with the south (27%) and north (8%) parts of the site (Heilman and Hoefer 1981). Based on this concentration of corn in conjunction with the large structure (House I/71), located on the planting/harvesting solar alignment, Heilman and Hoefer (1981) suggested that the structure was a Big House. This type of communal structure was often used in the Green Corn ceremony and is present in many villages located throughout the Eastern Woodlands (Hudson 1976). A later study reached a different conclusion regarding the function of this large structure. Nass (1989) utilized the same spatial units identified by pottery refits but concluded that this locale more likely housed a village leader. The west area contained a significantly larger storage potential than other portions of the site and contained some evidence for craft specialization, both of which are suggestive of a chiefly residence in broader Mississippian terms (Nass and Yerkes 1995). It is important to note that these two interpretations for this structure—Big House and chief's lodge—are not mutually exclusive.

Evans-Eargle (1998) analyzed the mortuary pattern to assess basic characteristics of the site's social structure. In this study, she demonstrated that the site contains clear evidence for an egalitarian social organization, whereby differential treatments can generally be associated with age and gender. Burial areas contain clusters of males, females, and children suggestive of kin groupings (Evans-Eargle 1998; Knight 1990). Evans-Eargle (1998:97) further suggests that these groupings represent internally ranked clans, as one individual per group appears higher in rank than others. A total of three individuals are unique in status markers, with one being a good candidate for a village leader/shaman. Interestingly, the male ritual area (see above) contains only adult males and children. According to Evans-Eargle (1998:98), this system is most consistent with Johnson and Earle's (2000) acephalous local group type of tribal organization due to the observation that the site lacks evidence of extensive storage and redistribution of surplus. However, this conclusion regarding storage contradicts Nass' (1989) findings, which would be more indicative of a Big Man type of social structure. Evans-Eargle's (1998) conclusion is consistent with the evolutionary model for middle Fort Ancient development hypothesized by Pollack and Henderson (1992, 2000a).

The most recent spatial analysis involved the re-investigation of the pottery assemblage. The main goal of this study was to further examine Heilman's (1975, 1988b) spatial hypothesis based on a more representative sample of pottery. This was important as all studies summarized above have rested upon that foundation. Pottery refits were nearly doubled in quantity including several refits that connected previously bounded areas (Figure 14). Based largely on this pattern it was hypothesized that the village contained evidence of a dual division which organized as many as five residential units (Cook and Sunderhaus 1999; Sunderhaus and Cook n.d.). A subsequent investigation of the spatial patterning of selected mortuary characteristics revealed a dual pattern similar to the pottery refit pattern (Cook n.d.). Importantly, each of these findings (localized households, clans, sodality, Big House, chief's house) fits with a dual division structure which was a general organizing principle for many Mississippian communities (Hudson 1976).

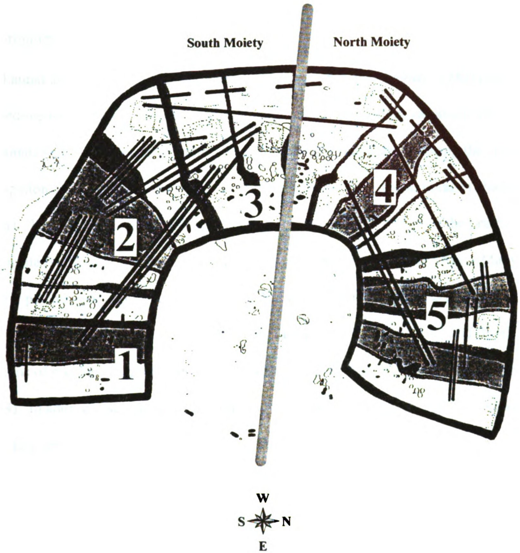


Figure 14. Proposed dual division based on additional pottery refits. (Source: Sunderhaus and Cook n.d.)

Environment, Diet, and Seasonality

Faunal and floral analyses conducted by Shane (1988) and Wagner (1988) have helped reconstruct local vegetation and climatic conditions, dietary variation, and seasonality of SunWatch inhabitants. The environment was warmer during the site's occupation as indicated by the presence of rice rats in the faunal assemblage (Shane 1988). The site was located within or near a pocket prairie (an outlier of the prairie peninsula [see Figure 3]), in close proximity to a variety of forested environs. Many prairie patches were noted along the Miami Valley during the original land surveys (Cooper 1800; Stuckey 1981). Supporting evidence includes both faunal and floral remains of species that prefer semi-open forest or prairie habitats (Shane 1988; Wagner 1988). In addition, several daub remains and mud-dauber wasp nests contain impressions of prairie grasses suggesting its use in construction.

Faunal and floral remains reveal a subsistence pattern based on both wild and domesticated foods. Villagers gathered a variety of nuts (hickory, butternut, black walnut, hazelnut, and a small amount of acorn), fruits (sumac, nightshade, blackberry, grape, hackberry, hawthorn, groundcherry, plum, pawpaw, and cherry), and a variety of greens and small-seeded annuals (purslane, chenopod, panicgrass, knotweed, wild bean, little barley, vervain, and bedstraw). Of this variety of plants, the most abundant and ubiquitous are sumac, purslane, nightshade, panicgrass, and chenopod—79% of all identified small seeds at the site consist of these types (Wagner 1988:91). Domesticated plants include corn, beans, squash/pepo, sunflowers, and tobacco. The ubiquity of corn, beans and squash suggests that they were very common within the village (Wagner

1988:106). Carbon isotope ratios also indicate a high percentage of corn in the diet (Conard 1988; Schurr and Schoeninger 1995).

Faunal remains reveal use of both non-domesticated and domesticated species. Deer (76%) and elk (10%) constitute the majority of the faunal assemblage. Fish, bear, raccoon, squirrel, and birds are also common. Shane (1988) suggests that turkeys and dogs were domesticated. The five dogs present in the assemblage are each fully articulated (Allman 1968; Shane 1988), which suggests that they were intentionally buried perhaps in conjunction with ritual occasions.

It has been hypothesized that SunWatch inhabitants were seasonally mobile, following a settlement pattern similar to Miami and Potawatomi groups (Fitting and Cleland 1969). The general pattern was for villages to be occupied most intensively during the agricultural season; winter months were spent in family groups at hunting camps. Expectations derived from this model were applied to SunWatch by determining the season of deposition for features containing juvenile deer mandibles (n=39) (Shane and Wagner 1993). Six features were used during the spring, 17 were used during the summer, and 16 were used during the winter. Significantly more deer were deposited during the spring and summer months. Winter pits contained only select cuts of meat. Using this evidence, it has been argued that village members temporarily residing in winter camps provisioned the remnant population (Shane 1988:203-205; Shane and Wagner 1993). A specific problem with this model is the lack of hunting camps in the area, and during the middle Fort Ancient period in general (Henderson and Pollack

2001). Strong cases for hunting camps have only been documented for late Fort Ancient sites located in Kentucky (post-A.D. 1400) (Turnbow and Jobe 1984).

Seasonal activities were investigated by examining floral contents and tool assemblages associated with seasonally-identified features (Ramsey-Styer 1995; Wagner 1996). Floral remains indicate that winter pits contained more evidence for burning and spring pits contain the most fruit (Wagner 1996:263). Tool use indicative of hunting and hide working occurred in pits of all seasons, but few complete tools were present in winter pits. Antler point production also occurred in all seasons. Shell hoes were located in spring and summer pits, while all fishing hooks and preforms were recovered from winter and spring pits (Ramsey-Styer 1995:112).

Key Problem Areas

This chapter has presented a brief summary of the substantial excavation and analytical history of the SunWatch site and has distilled key findings that have been developed and refined by several researchers over a considerable period of time. This village continues to be the type site regarding Fort Ancient social structure. However, there are potential problems with what we think we know about the site and several new areas of research that could considerably expand our understanding of this important prehistoric village.

Basic Problems

There are several basic problems that could weaken current interpretions of analytical findings. First, there are several published maps of museum excavations, none of which are complete. Second, analyses have not integrated avocational findings with those of the museum, with the exception of a biological distance and stress study (Giesen 1992). While avocational collections and notes lack much provenience data, they are critical for interpreting this village. As these notes were not donated to the museum until 1992, many previous investigations did not have access to them. In particular, detailed mortuary data are included in feature descriptions and profiles were completed for all excavated features from which feature type and volume could be derived. Third, most previous investigations of artifact or feature sets were completed before excavations ceased. Hence, most data sets are incomplete. Key data sets need to be completed at a basic level before more fully examining behavioral questions.

New Questions

Two areas of investigation would add to and refine existing interpretations regarding the social structure of SunWatch: an examination of site formation and identification of specific contexts containing Mississippian features, artifacts, and spatial patterns. These areas of inquiry led to the development of a theoretical perspective that could explain the forms of inter-regional interaction that could have produced the observed pattern (see Chapter II).

An examination of site formation needs to include a consideration of both natural and cultural processes (Schiffer 1983). First, variation in collection strategies has not been assessed although salvage work did not employ the use of screens in 1971. Also, the potential impact of historical activities has not been considered. Aside from recovery and preservation issues, all previous investigations have assumed the site did not contain spatially discernible time depth. A recent study has specifically investigated this issue, demonstrating that the site contains pontential in this respect (Cook and Merz 2000).

What effect might site formation have on interpreting social patterns? One clear possibility is that the evidence for a system of dual organization might be a function of time. Perhaps settlement shifted from one part of the site to another or additional social segments joined the village during its occupation. It is also possible that seasonal mobility is better explained as a result of different occupations rather than part of a single seasonal round. These issues cannot be addressed until establishing a temporal framework with which to negate these explanations. These are not mutually exclusive explanations, but we need to account for these factors before concluding that a system of dual organization was present.

Examinations of social structure have focused on the presence of communal spaces, ritual structures, a chiefly residence, clans, and dual divisions. And the presence of clans and moieties have only been based on suggestive evidence; they have not been directly compared with ethnographic accounts from the general region which describe the physical locations of these social units within circular villages. While household contents have been generally assessed (e.g., Nass 1989), specific models of residential composition have not been investigated. Specific attention to social groups comprising residential units is important for understanding the building blocks of the entire society. Identification of the formation history and smaller elements of social structure would facilitate the construction of more robust models of social structure. For example, examining the internal development of corporate groups and village-wide social structures could be used to address the intersection of regional and local dynamics at a time when Fort Ancient villages were initially forming.

CHAPTER V: METHODOLOGY

This chapter describes specific approaches and data sets used in this study of Fort Ancient village structure and growth. Assessing the structure and growth of localized residential and corporate groups is the main focus at the residential level. The development of a leadership and ritual precinct to meet needs of a growing community is the main focus at the community level. As behavior is a multivariate phenomenon, representative data sets from all key features and artifact classes were considered in this investigation, seeking concordance between them for the most robust conclusions (Carr 1985).

Village Structure

The spatial segmentation of the village into social spaces was investigated through the application of Mississippian rules of site design and ethnographic and theoretical expectations regarding patterning in residential and mortuary features.

Identifying and Comparing Residential Units

Dividing the site into meaningful residential units began with the identification of an elite area. The literature review of Mississippian site structure resulted in the consistent finding that elite residences are positioned in closer proximity to village centers than other residential units (see Chapter III). Recall that these areas often contain architecturally distinct structures (larger, special building materials) along with storage distinctions (larger storage areas, restricted structures). Parts of the site that could be demarcated on the basis of proximity to the center pole formed elite areas.

To assess whether one part of the village was closer to the village center, the center pole was buffered in five-foot circular increments using ArcView GIS 3.2. Initial divisions were made on the basis of pit features, as they comprise the most common form at the site. Locations of architectural features and burials were then examined to determine if similar rules could be applied to these domains. The western part of the site should be closer to the center pole as the most consistent conclusion regarding SunWatch has been the ritual uniqueness of this area (Evans-Eargle 1998; Harold 1985; Heilman and Hoefer 1981; Heilman et al. 1988; Nass and Yerkes 1995; Robertson 1984; Wagner 1979). However, aside from distinctions recognized for structures in the area, and general observations made about feature contents in the surrounding area, this part of the site has not been systematically divided (see Chapter IV).

Utilizing a model for identifying localized households (Flannery 1976), distinct breaks in the distribution of features were observed, which were used to further divide residential zones. Descriptive statistics for areas divided on the basis of these rules were calculated for all associated feature and artifact attributes. Chi-square tests were run on selected artifact frequencies to determine significant groupings of attributes.

<u>Examining Village Mortuary Variability and Corporate Groups</u>

The mortuary investigation involved two inter-related components. First, village-wide patterning was examined utilizing proximity methods used for discerning whether parts of the village were closer to the center pole. The mortuary assemblage was divided into the same concentric rings identified in the residential portion of the study. Sex, age, leg position, and associated artifacts for burials within these rings were compared using descriptive statistics and chi-square tests to determine significant distinctions.

The second component of the mortuary investigation involved applying specific rules for the identification of social groups. The ubiquitous nature of lineages and the fact that they often form smaller parts of villages makes them an attractive candidate for archaeological investigations of social structure (see Chapter II). However, as lineages imply a particular system of descent and are notoriously difficult to reconstruct even in ethnographic settings, it is not the most useful starting point for archaeological investigations (Allen and Richardson 1971). The term "corporate group" is preferred in this investigation as it is a more neutral in its social implications while maintaining a rule of lineal inheritance.

Corporate groups were identified using mortuary remains, building on a series of hypotheses derived from ethnographic data (Saxe 1970), which were confirmed and modified using rural Middle Mississippian populations (Goldstein 1976, 1980). The portion most germane to the present study pertains to the spatial structure of cemetery plots.

> To the degree that corporate group rights to use and/or control crucial but restricted resources are attained and/or legitimized by means of lineal descent from the dead (i.e., lineal ties to ancestors), such groups will maintain formal disposal areas for the exclusive disposal of their dead, and conversely. (Saxe 1970:119)

In applying this model to two rural Middle Mississippian cemeteries, Goldstein (1980:124) determined that the placement of burials in visually distinguishable rows was a key component to their structure. The formal definition of a row followed Goldstein (1980:103):

> A row is the set of all burials falling between a pair of parallel lines 1½ body lengths apart, subject to the conditions: (1) that the set includes at least five complete burials, (2) that at least five burials have parallel axes of orientation, and (3) that the rules of inclusion for burials, specified below, are satisfied.

The specified rules of inclusion focus on proximity and orientation. Proximity identifies that the burials must be closer to each other than to any other burials, the exception being for a burial in a row but not near others in that row in which case it should be included so long as it is has the same orientation as the others and is not located near any other row. Orientation specifies that body axes only need to be parallel (i.e., head to toe is acceptable), the only exception being if a perpendicular body is closer to a given row than to any other burials and if it also falls within one body length of the others (Goldstein 1980:103-104). The central finding of the study was that in Mississippian societies the control of resources was marked in part through burials patterned in rows.

The Goldstein/Saxe model provides a useful framework for examining whether corporate groups are present within a given cemetery pattern in general and for Mississippian societies in particular. Given the focus in this investigation on the relationship between Middle and Upper Mississippian societies with an emphasis on social structure, I began by examining row patterning (as defined above). However, operationalizing the method for identifying corporate groups in circular villages involved the development of additional rules that could more fully account for the observed patterning. Thus, arc-shaped groups in relation to the five-foot buffers from the center pole (see above) were given priority, within which the presence of row patterning was investigated.

Applying these rules resulted in the identification of a series of arc and row patterns forming spatially-distinct groups. Groups were identified on the basis of the proximity of individual graves to one another – burials must be closer to each other than to other burials. The only exception was made for burial patterning clearly anomalous from surrounding areas. These groups were then assessed in terms of whether they contained arcs and rows, rows only, or arcs only. If the excavation extent for the group was adequate but there were no apparent rows or arcs, the group was defined as a cluster. If a group lacked rows and arcs but was not sufficiently excavated, they were defined as indeterminate forms. Burial groups were compared using descriptive statistics.

Cluster analysis was used to independently examine these rule-based groups and to identify additional patterns crosscutting burial group affiliations. A hierarchical cluster technique known as Ward's method was used with a specified result of four clusters. Scores were measured using squared euclidean distance. Mortuary characteristics were included if they were present in more than two burials, excluding sex and age determinations. SPSS 11.0 was used to complete this statistical procedure.

Village Formation

Village growth was examined in three consecutive ways. First, the overall architectural sequence was established and visually compared with temporally distinct feature forms. Key feature forms were then statistically linked with artifact attributes to assess the types of changes that occurred at the village level. Results were joined with the architectural sequence and the cluster analysis of burials to define changes in each realm at the village level. Second, and within the framework of architectural growth, residential developments were examined. After examining temporal affiliations of household activity areas, the development of corporate groups was investigated. Third, the formation of village leadership and ritual was assessed within the context of village growth.

Architectural Rebuilding

Four lines of evidence were used to assess architectural construction episodes: stratified deposits, stockade/house relationships, radiocarbon assays, and house rebuilding. The first three of these data sources do not require specific explanations, except to indicate that four additional radiocarbon assays were obtained from structures to assess the timing of the inner and outer ring of houses as well as the ritual structure. Outer houses (1/87, 2/87) and the ritual house (2/78) were tested for this purpose. A carbon sample from House 1/72 was also submitted for radiocarbon testing as it was the only house that could not be reliably associated with neighboring pit features. All new and extant radiocarbon ages were calibrated using INTCAL98.14c (Stuiver et al. 1998).

House structures contained several lines of evidence useful for making chronological distinctions. The most obvious criteria is posthole pattern duplication in houses and the center pole. In a study of a rural Mississippian village that contained both house structures and a center pole, Oetelaar (1993) found a direct relationship between these architectural features; the center pole feature had six lobes suggesting it was replaced six times and most of the structures were rebuilt six times based on discrete patterns of wall trenches. Each of these rebuilding efforts occurred in the same locations. A similar pattern of plaza post and house rebuilding was documented at an Angel Phase village (Munson 1994).

Rebuilding assessments for SunWatch included similar criteria. However, as the house structures are single-post construction, it was not as easy to discern the frequency of discrete construction episodes. Two lines of evidence were used to examine this relationship: posthole densities and daub concentrations. In an examination of Iroquois houses—also of single-post construction—posthole density was the best indicator of structure duration (Warrick 1988). In the present study, simpler structures were considered to be those with fewer postholes per square foot of structure area, and the smallest ratios were used to calculate duration of occupation in structures with denser posthole patterns (Warrick 1988). Ethnographically-documented structures similar to those at SunWatch (i.e., earth and wood) have a use-life of about 20 years (Cameron 1991). To estimate village occupation, this figure was increased according to the number of reconstruction episodes represented by houses with higher ratios of postholes per structure area.

House perimeters and areas were established by connecting the midpoints of each wall posthole. These measurements were derived for two reasons. First, it was reasoned that larger houses could be indicative of a later construction date, as Fort Ancient house size increases over time (Pollack and Henderson 1992). Second, house areas were used to estimate population size using estimates derived from a study generalizing southern Algonquin proxemics (30.8 to 55 ft^2 per house occupant) (Brose et al. 1979). This was chosen over other population estimates as population density in structures is culture-dependent and southern Algonquin groups are most closely affiliated geographically with the inhabitants of Fort Ancient sites. This measure was used to examine household population and changes in overall village size over time.

The last village-wide architectural pattern examined was the distribution of temporally-distinct feature forms (see below). Major feature forms were compared with the sequence of architectural construction, the expectation being that rebuilt houses should be concentrated near concentrations of earlier feature forms, and the reverse should also be true.

Once these spatial distributions were visually assessed, the relationship between feature form and artifact attributes was examined to produce a village-wide determination regarding temporal covariation between features and artifacts, results of which were compared to the chronology established independently for houses and stockades. Principal components analysis, a multivariate statistical technique useful for examining relationships between variables, was utilized for this purpose. This technique identifies major trends in a data set; if a set of variables possesses some underlying common factor their values are correlated with one another. The common factor can be seen in some sense as the average of the group of variables; the more closely related they are the stronger the common factor will be and the more meaningful it is on its own as a substitute for the original variables. A transformation of the data is effected in which a large percentage of the variation in many of the variables is compressed into a smaller number of variables, such that the new variables are uncorrelated with one another (Doran and Hodson 1975; Shennan 1988).

As the purpose of using this technique was simply to assess which artifacts were correlated with feature form, the full potential of principal components analysis was not utilized. A total of 16 different tests were conducted, each one comparing feature forms with suites of artifact attributes, grouped by class and type (e.g., pottery temper). It is important to note that this end could also have been accomplished using correlation tests alone, but would have been far less efficient. In essence, the study utilized principal components as an exploratory technique. Only components with eigenvalues greater than one were considered to be meaningful. The logic behind this is 1.0 represents the variance of a single variable in the correlation matrix, and if a component has a lower eigenvalue it actually accounts for less variation than any one of the original variables (Johnston 1978:46). Scores ≥ 0.4 and ≤ -0.4 were used as the cutoff for accepting a correlation between a given artifact attribute and feature form. All data were standardized with a mean of 0 and a variance of 1. SPSS 11.0 was used to complete this statistical procedure.

Development of Corporate Groups

The dynamic component of the project at the residential level focused on the growth of corporate groups in relation to localized household activity areas and architecture. The examination of temporal change within social structures located at a single site is a critical though often neglected aspect of mortuary investigations, largely due to methodological difficulties (O'Shea 1984). In this study, household activity areas provide a critical link between burial groups and house structures with which to test a general ethnographic model of residential development.

Household identification involved three steps for segregating sets of structures and pit features from one another, based on expectations for localized households which should produce observable breaks in their combined distributions (Flannery 1976). First, pit features were visually examined in terms of their proximity to each other. Features in closer proximity than to other features were considered to be distinct activity areas. Second, inter-feature pottery refits in the shortest distance class (<25') were used to refine these groupings. (Larger refits were examined to assess household growth and village-wide integration [see below].) Third, these activity areas were considered to be household-specific if they were located closer to particular house structures. Each resulting household activity area formed the basis of the smallest spatial comparisons in this study.

Frequencies of diagnostic feature and artifact attributes were statistically compared with household activity areas to identify a sequence of use. Correspondence analysis, a multivariate statistical technique similar to principal components analysis, was used for this purpose. This approach shares the same basic principles as principal components analysis. It is distinguished largely on the basis of the number of relationships that can be simultaneously examined. Using principal components analysis, component scores can be plotted to see which cases are similar, and relationships between variables, and between variables and components can also be plotted. However, in correspondence analysis, the relationship between cases, between variables, and those between variables and cases can all be analyzed together and represented in the same scattergram, greatly facilitating interpretation. The result of this test visually reveals which items are most associated with a given spatial unit in relation to all other items in the matrix (Shennan

1988:284). In this study, data matrices consisted of frequencies of diagnostic attributes in each household activity area. Diagnostics included feature form, and key pottery and projectile point form attributes. XLSTAT 7.0 was used for correspondence analyses.

An ethnographic model of residential development was used to identify diachronic trends associated with family growth (Goodenough 1956; Goody 1972). While this model has been applied most notably in archaeology to explain the establishment and growth of Mayan households (Haviland 1988; Tourtellot 1988), it is appropriate for examining localized corporate group development more generally (Goody 1972). Specific expectations of this model are that certain structures were occupied first (founders) and formed the nucleus of localized extended family developments consisting of structures linked to the parent.

Three data sets were used to interpret the development of corporate groups identified in the mortuary pattern: architectural rebuilding, early and late household activity areas, and pottery refits. Later household activity areas should be associated with houses lacking evidence for remodeling. In contrast, earlier pit-artifact groups were expected to be located near houses that were rebuilt. Medium refits (25-100') were examined to assess how residential units of differing ages were related to each other. The expectation was that older areas would be linked with more recently established neighbors, which would support the general ethnographic model of localized family development. Portions of a corporate group containing more burials should be located near activity areas and houses established earlier in the village occupation.

Development of an Elite Area

It has been repeatedly shown that there is a linkage between local population size and the types of socio-political institutions needed to administer that group. When a local group exceeds a certain population threshold, leadership institutions develop at a level above the local household (see Chapter II). The basic question asked in this study was whether an elite area developed later in the village occupation, concurrent with the growth of other residential zones.

Ritual Remains

With a firm understanding of the basic social units comprising the site and their formation over time relative to the elite area, focus was placed on examining the ritual integration of those units. Specific emphasis was placed on further developing material correlates of the Green Corn ceremony, which has been previously suggested for the site (Heilman et al. 1988; see Chapter IV).

The Green Corn ceremony, also known as the busk, was one of the most widespread renewal rituals among Eastern Woodland tribes and likely existed among many Mississippian populations as well (Hudson 1976). In addition to being a harvest celebration, the Green Corn ceremony marks the beginning of a new year. Emphasis is placed on disposing old materials and cleaning household spaces. Specific material expectations can be derived from an early account of this ceremony.

> When a town celebrates the busk, having previously provided themselves with new cloaths, new pots, pans, and other household utensils and furniture, they collect all their worn-out cloaths and other despicable things, sweep and cleanse their houses,

> squares, and the whole town, of their filth, which with all the remaining grain and other old provisions, they cast together into one common heap, and consume it with fire. After having taken medicine, and fasted for three days, all the fire in the town is extinguished. During this fast they abstain from the gratification of every appetite and passion whatever. A general amnesty is proclaimed...
>
> On the fourth morning, the high priest, by rubbing wood together, produces new fire in the public square, from whence every habitation in the town is supplied with the new and pure flame. (Bartram 1789:399)

This description identifies communal disposal and burning of household garbage and notes the importance of a hearth feature during these types of ceremonies. Additionally, large quantities of corn are prepared in the hearth used for the production of the new fire (Witthoft 1949:57).

Two specific material correlates can be derived from these accounts: the distribution of burnt artifacts and ecofacts (particularly corn) and the location of densely filled features and extramural hearths in the ritual area. Burnt corn should be concentrated near a distinct hearth in a ritual precinct and among households who most frequently participated in the ceremony. In addition, pottery refits were examined with the specific assumption that the majority of households should be connected to the ritual area. If a consistent pattern of pottery refits connects a ritual precinct with most houses in the village this would provide considerable additional support for the communal trash criterion. The rationale for this is that in the process of cleaning private residences, not all of the broken pottery would be collected; hence, the longest pottery refits (>125') should be most reflective of such types of village-wide behavior.

In addition to these specific correlates, it is useful to consider house locations and construction materials, along with positioning of solar alignments and seasonally-filled features (see Chapter IV). House patterning is important for considering the nature of a square ground, the public space used during these ceremonies (Hudson 1976; Witthoft

1949). Square grounds either consist of a single structure divided into four areas used by differing social segments within a village or four different structures of different functions and construction materials (Hudson 1976). Red cedar is particularly associated with ritual activities. Solar alignments are useful for denoting the time of the year associated with these spaces and have been used previously for this purpose (Heilman et al. 1988). Locations of seasonal features were considered as it was reasoned that this could provide an independent test for alignments (i.e., if alignments marked seasonal behavior, this should also be marked in the locations of seasonally-filled features).

Assessing Mobility and Exchange

Sourcing raw materials used in artifact production has long proven to be useful for addressing archaeological questions regarding exchange and mobility patterns. Ceramic composition was focused on in this study as a small percentage of the pottery was tempered with shell, long considered to be one of the defining characteristics of Mississippian society. A necessary baseline component is to assess whether or not the raw materials used to make shell-tempered pottery were the same as those used to manufacture grit-tempered pottery, which represents the majority of the assemblage. Results of this test are critical for building models of interaction between villages, including elite behavior and population movement.

Various methods have been used to determine the composition of ceramics. A geological technique referred to as petrography is used for determining the physical composition of clays (sand, silt) while neutron activation analysis is the most common technique for determining the chemical composition of clays (Rands and Bishop 1980).

Until recently, it was thought that these methods complemented one another; however, a recent empirical test has shown that petrographic analyses are better suited for identifying non-local clays in site-level assemblages (Stoltman and Mainfort 2002:1). Hence, this method was chosen for use in the present investigation.

Shell and grit-tempered body sherds were selected from each residential zone, the earliest and latest dated contexts at the site, from one set of overlapping features, and from three ritually-filled features. Samples were also taken from a sherd containing a unique mixture of local and non-local attributes. This artifact contained Mississippian style negative painting over a Fort Ancient rectilinear guilloche design and was tempered with both grit and shell. A saltpan fragment, a diagnostically late Fort Ancient vessel form, was also included in the sample. A total of 17 body sherds were included in the sample (11 grit tempered, 5 shell tempered, and one grit/shell tempered). Two local clay sources were examined for control purposes (Figure 15). It was reasoned that these locales would provide a general range of depositional contexts useful for understanding the variation of the local clay deposit as one was located on a cut bank of the Miami River (2,630' from the center pole) and the other was on the first terrace of the river (900' from the center pole). Lane Fargher conducted all petrographic analyses (Fargher 2004).

Data Sets

This section describes all data sets used in the analysis. These multiple data sets were compiled in Excel 2000 and exported as .dbf files that were linked to ArcView GIS 3.2 feature tables. Once all data sets were joined with the GIS, files were exported in .dbf

Figure 15. Locations of local clay sources (labeled A and B) sampled for petrographic analysis. (Aerial photograph courtesy of Montgomery County Auditors Office [1999].)

format for use in various statistical tests using SPSS 11.0 and XLSTAT 7.0 (see above).

Burials

Temporal analysis of the mortuary population was linked with findings made in the principal components analysis of pit features. Associations made between specific artifact and feature attributes were used to aid in the interpretation of burial placement.

General temporal indicators for burials were based on body position and row composition. Body positions were categorized as fully flexed, semi flexed, extended, secondary, or disarticulated (Figure 16). Body positions are more typically flexed among Late Woodland populations than for Fort Ancient groups (Drooker 1997). Burial rows containing more adult burials were considered to be older than adjacent rows containing fewer interments.

Mortuary data included sex, age, leg position, grave covering, and associated artifacts. Data for burials excavated during museum excavations were derived from Evans-Eargle (1998; see also Giesen 1992), and avocational mortuary data were based on Allman (1968) and C. Smith (n.d.).

Pit Feature Form

Feature form was used to assess internal site chronology. Pit features changed from bell shaped to straight sided and volumes generally increased over time in the Fort Ancient area (Henderson 1992a). The following pit forms were recognized at this site:

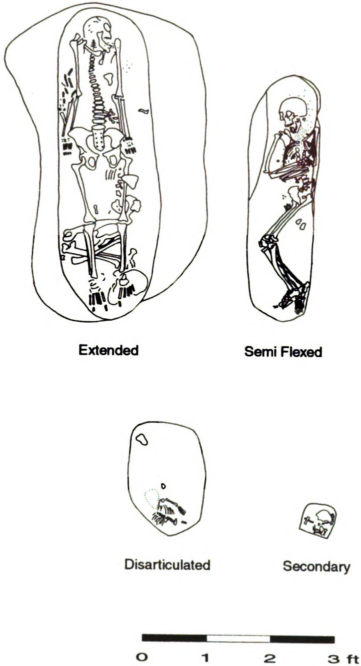


Figure 16. Leg positions and disposition types used for mortuary analysis. (Note that the extended burial is in a grave containing multiple burials, one fully flexed and one secondary.)

bell shaped, deep flat bottom, shallow flat bottom, and basins (Figure 17). These categories were determined in a previous study (Nass 1987). The present study utilized those data along with subsequently excavated features categorized into the same types. Standard procedures were followed for estimating volumes, which were obtained for all formal features from which a reliable profile was obtained. Volumes were utilized to normalize artifact densities and to serve as a measure of storage potential.

Pottery

Pottery characteristics are sensitive to change over time in the Fort Ancient region, particularly temper types and vessel forms. Shell-tempered pottery appears to have been gradually adopted by Fort Ancient societies and by A.D. 1400 it became the exclusive tempering agent (Henderson 1992a). Six other temper types were included in the study: grit, grit/shell, sand, mica, quartz, and grog.

Vessel and appendage forms also change through time. Vessel forms include jars, bowls, and pans. Appendages include lugs, straps, and a variety of effigies. Pre-A.D. 1400 assemblages are almost exclusively jars, while later sites have the full range of vessel types. This diversification in morphology occurs as Madisonville ceramics develop, which are shell tempered with strap handles and few decorative motifs (Turnbow and Henderson 1992).

Design characteristics also change over time. Surface treatments include cordmarking, smoothed cordmarking, and plain. Undecorated cordmarked rims and necks are more characteristic of the Late Woodland period. While particular neck designs cannot be

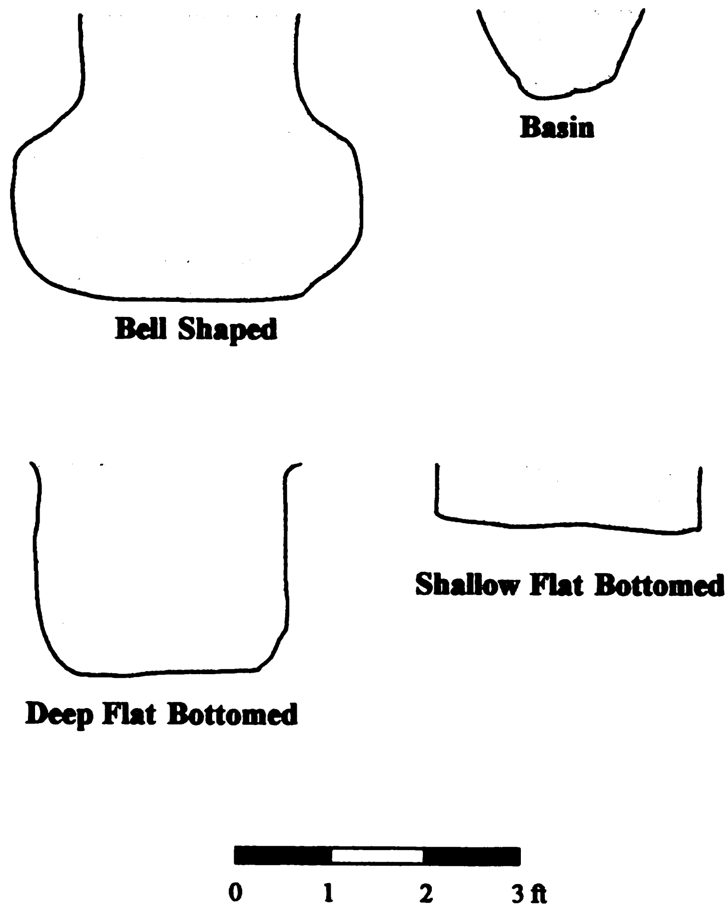


Figure 17. Feature form typology used in the study (as defined by Nass 1987).

associated with particular time periods, a general rule is that Middle Fort Ancient (A.D. 1200-1400) is marked by the most intensive decoration; pottery associated with earlier time periods is generally cordmarked while later Fort Ancient vessels are most often plain.

Four design fields were included in this study: neck, rim, lip, and interior portions of vessels (Figure 18). Neck decorations were grouped into five themes: guilloche, line filled triangles, scrolls, crosshatching, single slash, and herringbone motifs. Considerable variation was present within each of the guilloche, line filled triangle, and scroll groupings (Figure 19). Designs were generally simpler and less variable on vessel rims, lips, and interiors, most likely due to the smaller spaces of these design fields. Rim designs were grouped into a variety of line filled triangle and scroll subtypes. Other types include: single slash, multi-slash, crosshatching, punctuates, punch and drag, oval cordmarked, oval incised, lunar impressed, and castlillated (Figure 20). Lip designs are dominated by simple motifs such as oval incised and cordmarked, and single slash patterns; however, scrolls and line filled triangle designs occur in low frequencies. Interior designs are limited to single repetitive motifs (Figure 21).

Pottery data were derived from all rim and neck sherds from features excavated by the museum and are based on an earlier study (Sunderhaus and Cook n.d.). Sunderhaus and the author developed categories for that analysis, with assistance from J. Heilman. Sunderhaus recorded all data used in the present study.

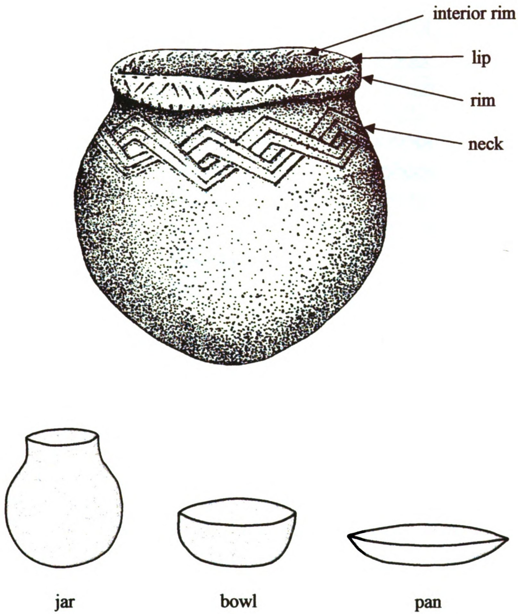


Figure 18. Pottery illustrations showing key design fields and vessel forms. (Detailed illustration by Sue Nelson, courtesy of the Dayton Society of Natural History.)

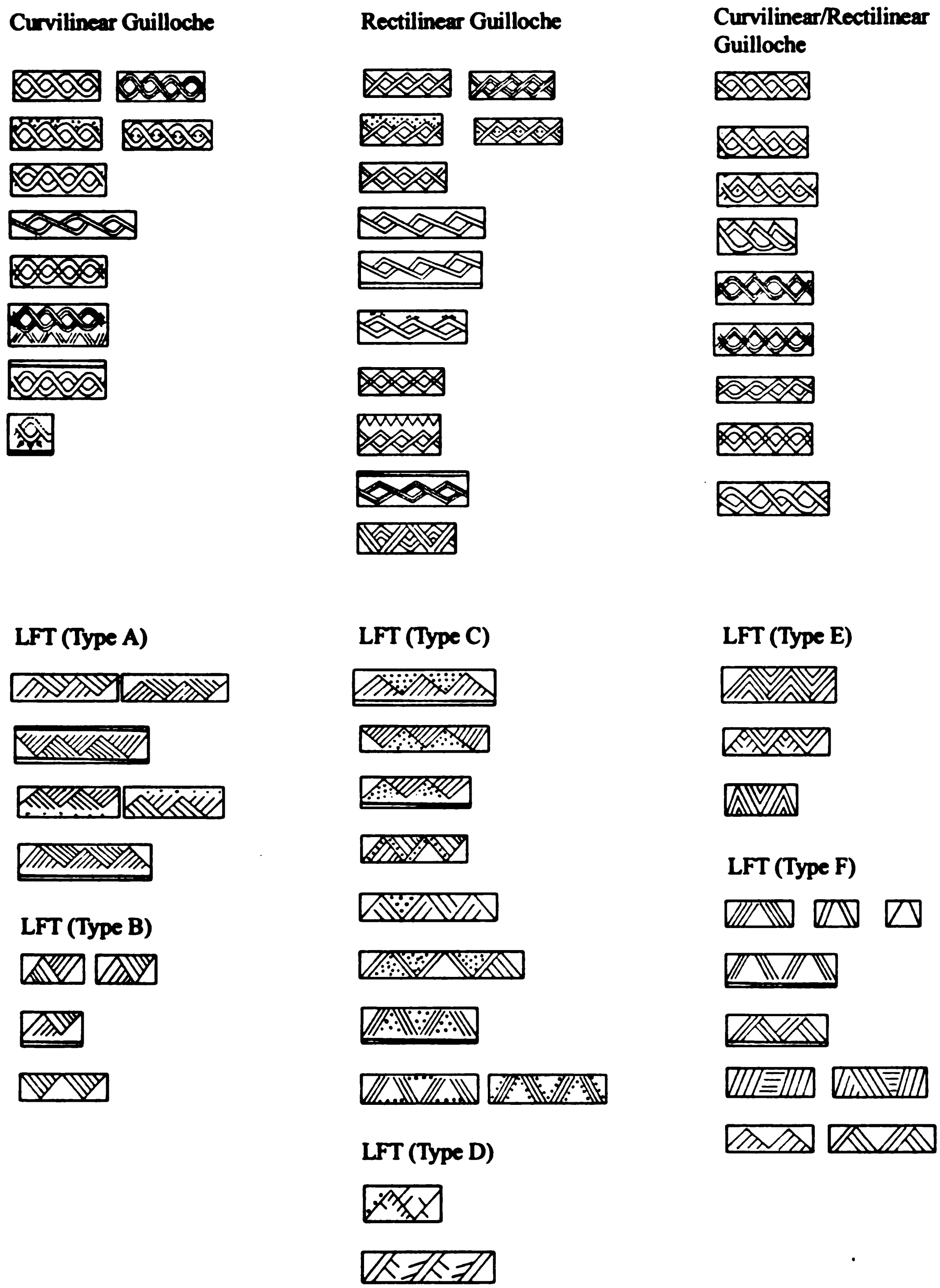


Figure 19. Pottery neck design groups and internal variability. (Drawings by Thomas Grooms and Robert Cook.)

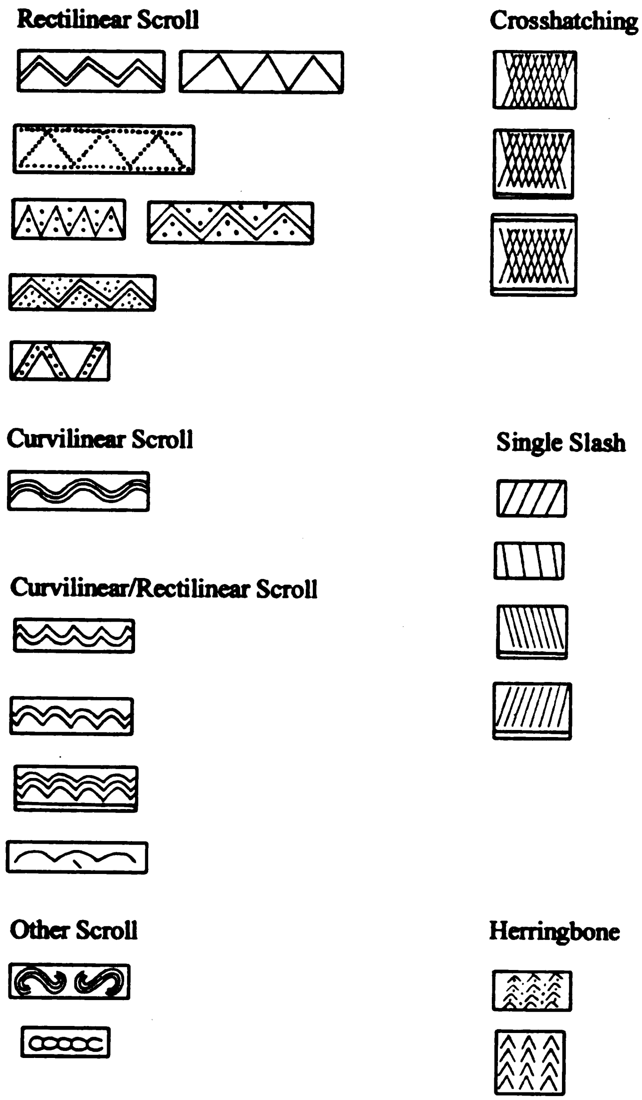


Figure 19. Continued.

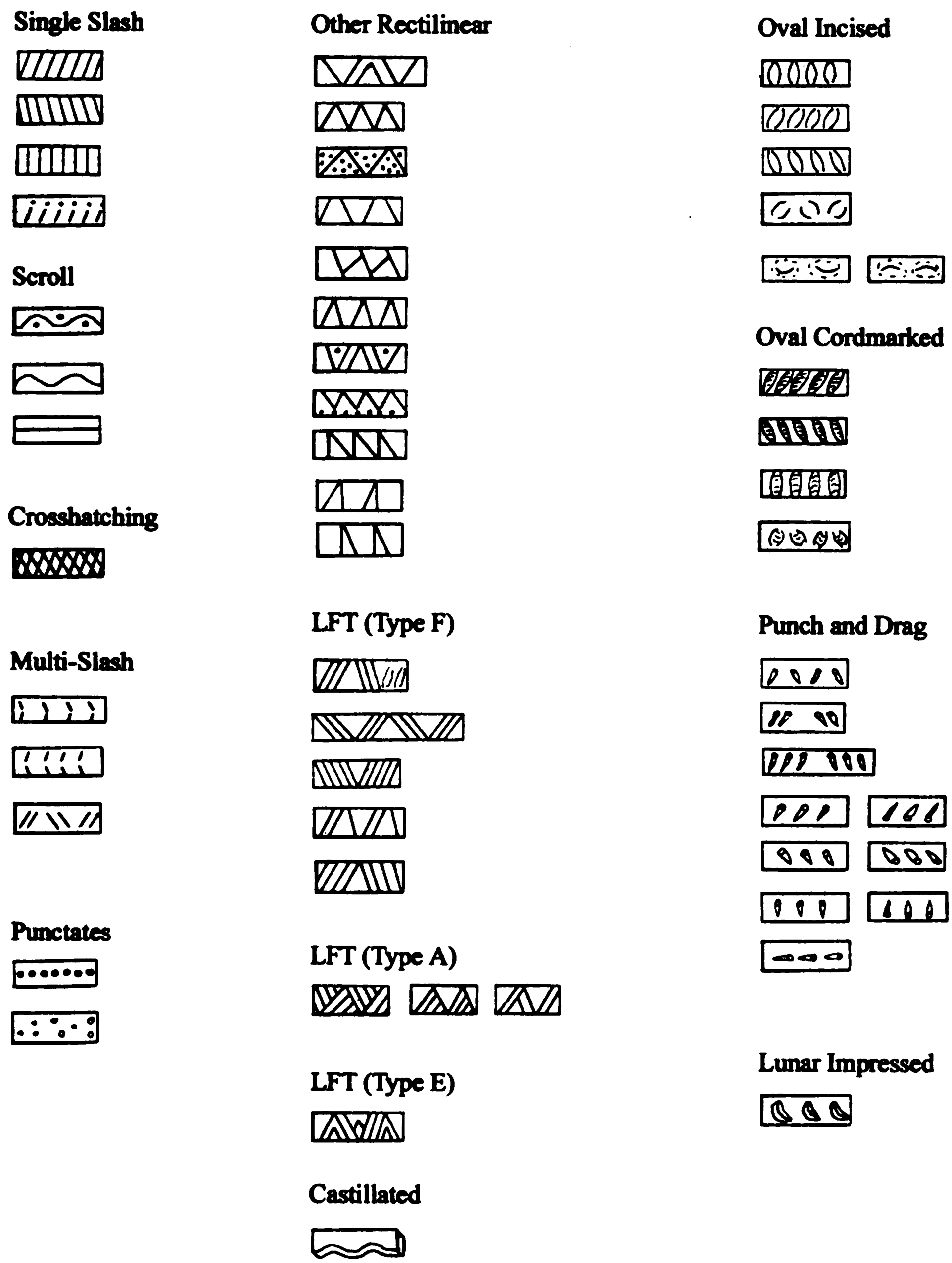


Figure 20. Pottery rim design groups and internal variability. (Drawings by Thomas Grooms and Robert Cook.)

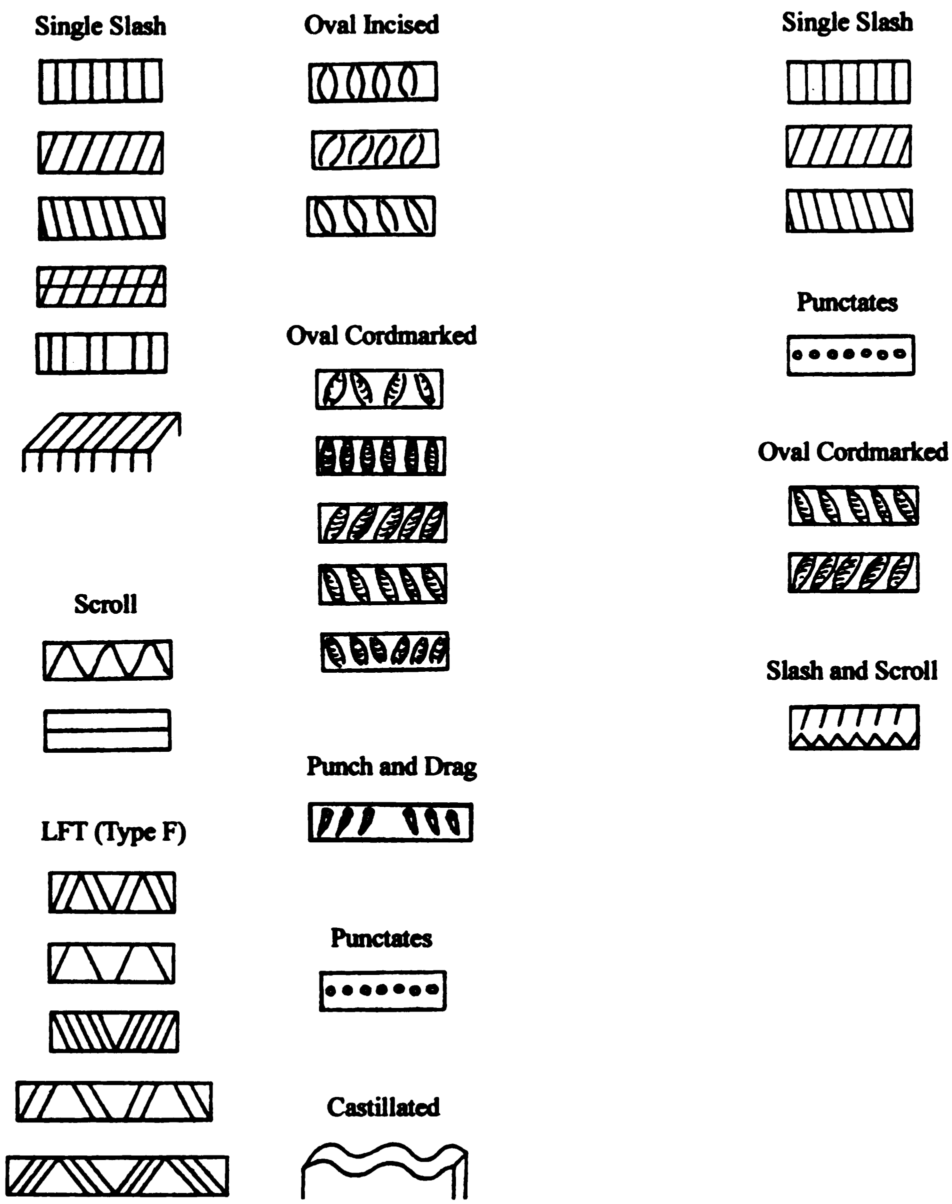


Figure 21. Pottery lip (left two columns) and interior design (right column) groups and internal variability. (Drawings by Thomas Grooms and Robert Cook.)

Lithics

Throughout the Fort Ancient region, significant temporal variation has been proposed for changes in the shape of triangular point sides and bases (Railey 1992, Litfin et al. 1993). Early Fort Ancient assemblages (A.D. 1000-1200) are typified by incurvate sides and convex bases, Middle Fort Ancient assemblages (A.D. 1200-1400/1500) often depict straight sides and flat bases, while Late Fort Ancient (post-A.D. 1400) assemblages are dominated by excurvate sides and concave bases (Figure 22).

A wide variety of projectile point types diagnostic of earlier time periods were also present in the assemblage. The locations of these artifacts were examined to help assess site formation, and Late Woodland projectile points were particularly relevant in this respect. It was also reasoned that the locations of earlier projectile points would help focus future work on potentially buried deposits or possibly reflect curation behavior by Fort Ancient occupants. Non-Fort Ancient projectile points were grouped into the following time periods: Paleoindian (10,000-8,000 B.C.), Early Archaic (8,000-6,000 B.C.), Middle Archaic (6,000-4,000 B.C.), Late Archaic (4,000-1,000 B.C.), Early Woodland (1,000-100 B.C.), Middle Woodland (100 B.C.-A.D. 400), Late Woodland (A.D. 400-1000). All points were grouped into established categories (Justice 1987) (Table 1).

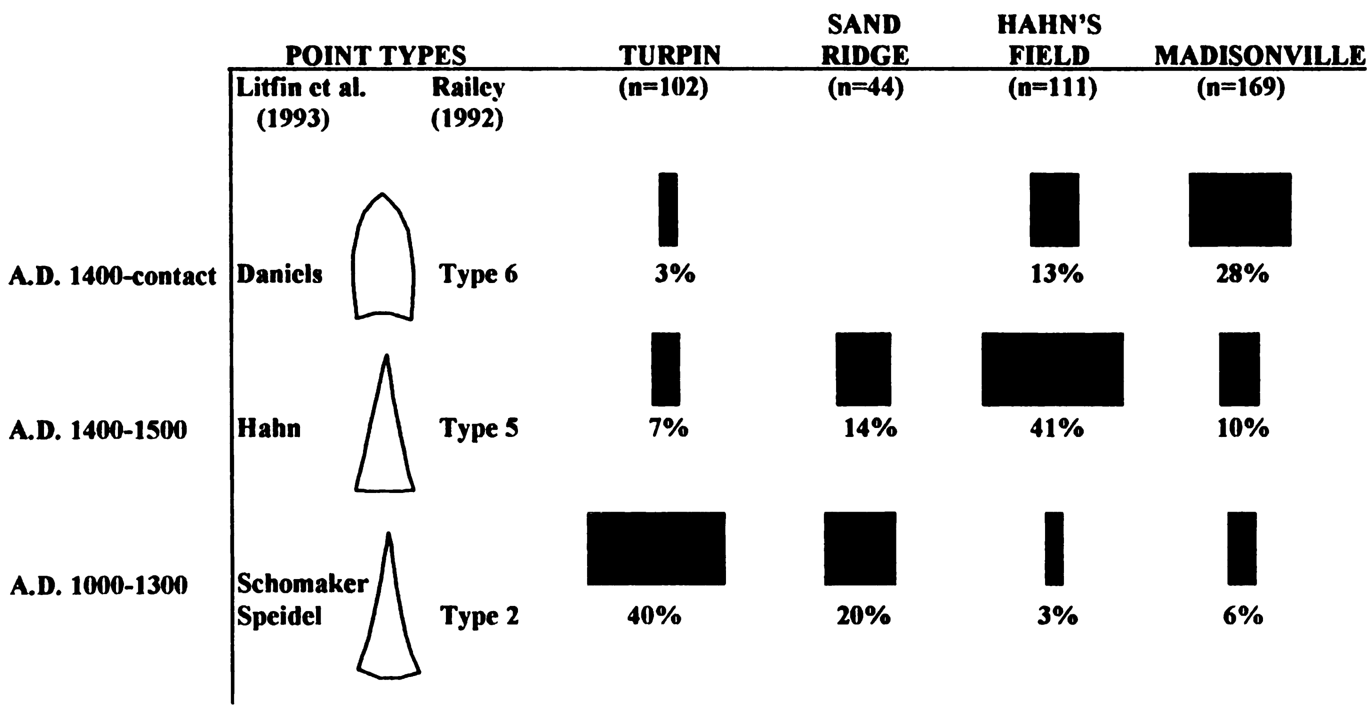


Figure 22. Seriation of key Fort Ancient point attributes at selected sites (adapted from Drooker 1997: Figure 6-63).

Time Period	Projectile Point Type	Reference
Paleoindian	Clovis	Sellards 1952
Early Archaic	LeCroy Bifurcate Base Kanawha Stemmed Kirk Corner Notched St. Albans Side Notched Thebes	Kneberg 1956 Broyles 1966 Coe 1964 Broyles 1966 Winters 1963
Middle Archaic	Raddatz Side Notched	Wittry 1959
Late Archaic	Brewerton Eared Notched Brewerton Eared Triangle Brewerton Side Notched Brewerton/Matanzas Lake Erie Bifurcate Lamoka McWhinney Merom Expanding Stem Trimble Side Notched Vosburg Corner Notched	Ritchie 1961 Ritchie 1961 Ritchie 1961 Ritchie 1961; Munson and Harn 1966 Prufer and Sofsky 1965 Ritchie 1961 Geistweit 1970; Vickery 1972 Perino 1968; Winters 1969 Winters 1969 Ritchie 1961
Late Archaic/ Early Woodland (transitional)	Harrison Turkey Tail Meadowood	Perino 1971 Ritchie 1961
Early Woodland	Kramer	Munson 1966
Middle Woodland	Lowed Flared Base Hopewell Bladelet	Winters 1963 Pi-Sunyer 1965
Late Woodland	Chesser Notched Jack's Reef Corner Notched Raccoon Notched	Prufer 1975 Ritchie 1961 Mayer-Oakes 1955

Table 1. Non-Fort Ancient projectile point types.

Chipped stone tools include a variety of implements, many of which were multi-purpose in function. Knives were grouped into two types: Fort Ancient and large triangular. The distinguishing characteristic of Fort Ancient knives is the presence of a weak shoulder approximately 15-25 mm above the base. Drills were grouped into triangular, bipointed, and corner notched forms, the latter of which are possibly reworked projectile points. Scrapers were divided into two forms: endscrapers and sidescrapers. Endscrapers were manufactured by removing small flakes from the distal margin of a large flake whereas sidescrapers were made by working a lateral flake margin. Preforms were grouped into triangular point preforms and other preforms. "Humpbacks" were not distinguished from triangular point preforms, although others have made this distinction (Munson and Munson 1972; Robertson 1980). Spokeshaves contain a broad concavity and are often referred to as "shaft straighteners" as their form suggests use for scraping and smoothing spear or arrow shafts or similarly shaped implements. Burins are pointed piercing tools most similar in function to drills, awls, or gravers. Retouched flakes are casual tools that contain sporadically-located flake scars limited to small areas of consecutive retouch that are too ambiguous for assignment to a specific tool type.

Chipped stone debitage or the non-modified debris that results from the manufacture of chipped stone tools consisted of cores, shatter, and flakes. Cores include any block of raw material from which flakes were removed during the manufacture of stone tools. Wedges are tools that were either the intentional end product of the bipolar technique (Tixier 1963) or are created by battering, where the artifact is pounded into hard dense materials such as bone, antler or wood. They are rectangular in shape and exhibit bifacial flaking and battering on two or more edges. Shatter denotes angular pieces of chert lacking attributes of controlled flaking (e.g., striking platform, bulb of percussion). Shatter is often the result of flaws in the raw material and can occur at any point in the reduction sequence, though most are from core interiors and, hence, smaller in size. Flakes are usually the smallest form of debitage, consisting of waste material from the reduction of larger flakes or cores into distinct tool forms.

A variety of artifacts were fashioned by grinding or utilizing granite, limestone, and slate. These include tools, adornments, gaming pieces, and items of ritual significance. Tools consist of hammer stones, pitted stones, abraders, celts, choppers, manos, and metates. Adornment and gaming pieces include circular discs, chunky stones, gorgets, and banner stones. Gorgets and banner stones were adornments. Ground stone pipes were elbow-shaped or effigy-shaped and were manufactured from limestone or slate.

Chipped stone data from features excavated between 1971 and 1977 were analyzed previously (Robertson 1980). Original data were shared with the author who analyzed the remainder of the chipped stone assemblage using a compatible scheme. All ground stone was categorized for this study by the author.

Bone, Shell, and Teeth

A wide variety of artifacts were manufactured from animal bone, antler, shell, and teeth. These were grouped into two functional categories, tools and adornment. No clear temporal associations have been suggested for these artifacts based on regional studies.

Tools were made from bone, antler, and shell. Bone tools include a variety of awls primarily made from deer bone (ulnas, scapula, leg, rib), although several elk (scapula and ulna) and turkey (legs) bones were also used. Pins, fishing hooks, beamers, knives, combs, turtle shell bowls and spoons, and needles comprise the remainder of the bone tool assemblage. Antler tools include flakers, projectile points, awls, and scrapers. Mussel shell was also used as raw materials for the manufacture of tools, including hoes and spoons.

Beads and pendants were manufactured from a variety of fauna. Pendants were usually made by drilling a single hole in elk, bear, fish, and wolf teeth. Single drill holes were also present on fragments of bone or shell suggesting their use as pendants. Pendants were generally carved from local shells into triangular, circular, or amorphous forms. Beads were primarily fashioned from shell although bone beads were also present. Shell and bone discs were also present, which were used as ear adornment.

Lynn Simonelli and the author developed all bone, shell, and tooth artifact categories. Data were collected by Lynn Simonelli with the assistance of Bill Kennedy.

Summary

This chapter has presented procedures used to assess the structure and growth of a Fort Ancient village. Particular attention was focused on utilizing multiple lines of evidence for assessing the growth of localized corporate groups and the development of an elite area. Methods for identifying these spaces focused on Middle Mississippian models. Elite areas should be closer to the village center and corporate groups should be recognizable as spatially-distinct entities. The dynamic component of the project assesses the growth of these social forms by linking the pattern of architectural growth with diachronic indicators from activity areas and mortuary remains.

CHAPTER VI: VILLAGE STRUCTURE

Site structures are the end result of dynamic social processes. As a result, they include both synchronic and diachronic dimensions. This chapter identifies village structure – in terms of residential and mortuary spaces – at the end of the site's occupation and assesses major distinctions between site areas.

Residential Spaces

As outlined in the methodology, residential spaces were divided on the basis of proximity to the center pole and distinct gaps between features. An elite residence was identified as a result of applying the proximity rule and other residential areas were divided on the basis of distinct feature gaps (see Chapter V).

Centering Leadership and Ritual

The center pole was buffered in five-foot increments enclosing the entire village area. The resulting map was inspected to assess whether any features were closer to the center. The 125' buffer clearly serves as a significant dividing line for pit features located in the western part of the site (Figure 23), as 95% of pit features located in the western portion of the village were within 125' of the center pole while only 5% of pits in the southern and northern portions of the site were within this boundary.

Inspection of other buffers resulted in a series of 30' increments that most simply explains the structure of the village. Proximity rules for the elite and other residential areas are as follows:

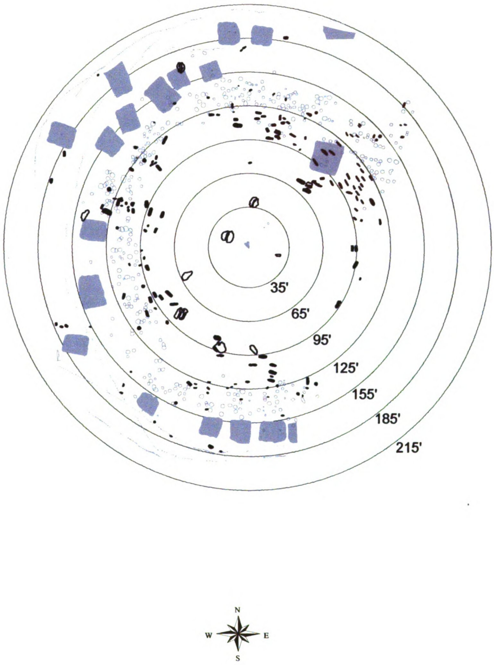


Figure 23. Circular buffers around the center pole (see text for explanation).

elite area:	burials:	<125’ from the center pole
	pit features:	95’–125’ from the center pole
	houses:	>125’ from the center pole
other residential areas:	burials:	<125’ from the center pole
	pit features:	125’–155’ from the center pole
	houses:	>155’ from the center pole

These rules account for the majority of the feature patterning, particularly for pit and house features. Burials are more variable, although most are located within 125’ of the center pole for all site areas. Many burials in the elite area are located within 95’ of the center pole, simply matching the closer proximity of all other features in this area (the elite area is 30’ closer to the center than other residential zones). Elite burials also demarcate the borders of the group of elite pit features located in closer proximity to the center pole. The combination of proximity and demarcation by distinct burial groups provides an effective means for segregating the elite area from the remainder of the village.

There are two notable exceptions to these rules of proximity. First, a pair of houses and two groups of pit features in the northwest part of the village are bisected by the 125’ and 155’ buffers. Second, a house and several burials in the northeast part of the village are similar to the elite area in terms of proximity to the center pole. In fact, the house is located squarely in the main burial zone, making it the closest structure to the center pole. The nature of these exceptions and particularly the connection between the closest house and the elite area is explored throughout the study, beginning with further segregation of residential units within the northern part of the site.

Four Areas

The northern residential zone was divided into two areas on the basis of a distinct gap between pit features in the vicinity of a large structure (Figure 24). A similar gap is located between Areas 1 and 2, but this matched the proximity rule (both gap and proximity rules segregate Areas 2 and 3 from adjacent residential units). Importantly, the only clear breaks in feature distributions occur between Areas 1 and 2 and Areas 3 and 4. No break is discernible between Areas 2 and 3, which is consistent with the similarity in proximity to the center pole for these two areas. Pit features and contents for these areas are compared below (raw data are listed in Appendix A).

Pit and House Features

There are many distinctions between these four areas (Table 2). Area 4 contains the most pits (n=106), Areas 1 (n=90) and 2 (n=80) contain comparable numbers of pit features, and Area 3 contains the lowest frequency of this feature type (n=64). Features are considerably larger in average volume for Areas 2 and 3. On average, the features in Areas 2 and 3 are 100 liters larger than features located in Areas 1 and 4. House structures are more consistently distributed for each area: Area 1 (n=4), Area 2 (n=3), Area 3 (n=4), Area 4 (n=4). However, house areas vary considerably. Average house size is considerably larger in Area 2 (mean=452 ft^2) and Area 3 (mean=428 ft^2) than in Area 1 (mean=335 ft^2) and Area 4 (mean=303 ft^2). Population estimates are similar for Areas 1, 2, and 4; Area 3 produced a higher range. Larger house size fits well with larger average feature volumes in each area (Figure 25). Area 2 has considerably more features per house structure and larger features relative to house area than Areas 1 and 3. Area 4

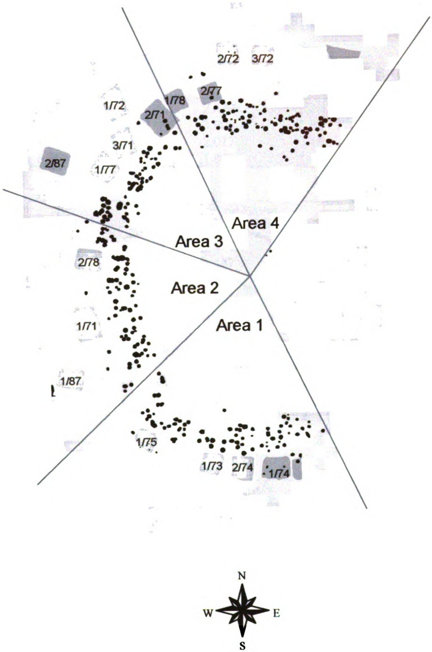


Figure 24. Four feature areas.

	Pit Feature Volume					
Area	N	sum (ltr)	sum (cu.ft.)	mean (ltr.)	range (ltr.)	S.D. (ltr.)
1	90	29,924.91	1,056.67	433.69	16-1261	292
2	80	35,066.71	1,238.23	473.88	22-1956	375
3	64	27,209.70	960.79	503.88	23-1860	376
4	106	36,031.85	1,272.31	383.32	1-1812	361

	Debitage		Pottery		C-S Tools	
Area	N	density	N	density	N	density
1	7,938	7.51	2,430	2.30	390	0.37
2	10,049	8.12	3,609	2.91	433	0.35
3	4,918	5.12	2,077	2.16	190	0.20
4	5,265	4.14	1,882	1.48	287	0.23

	Bone/Shell		Ground Stone		All Artifacts	
Area	N	density	N	density	N	density
1	558	0.53	138	0.13	11,454	10.84
2	549	0.44	147	0.12	14,787	11.94
3	360	0.37	115	0.12	7,660	7.97
4	460	0.36	131	0.10	8,025	6.31

	House Area and Population				
Area	N	sum (sq.ft.)	mean (sq.ft.)	range (sq.ft.)	pop.est.
1	4	1,340	335	265-419	25-44
2	3	1,356	452	369-580	23-41
3	4	1,713	428	391-465	31-56
4	4	1,217	303	268-364	22-39

	dfb		sfb		bell		basin		irreg.		indet.		total	
Area	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1	11	12.2	13	14.4	41	45.6	5	5.6	9	10.0	11	12.2	90	100.0
2	13	16.3	8	10.0	47	58.8	8	10.0	2	2.5	2	2.5	80	100.1
3	11	17.2	8	12.5	32	50.0	5	7.8	3	4.7	5	7.8	64	100.0
4	20	18.9	22	20.8	34	32.1	18	17.0	1	0.9	11	10.4	106	100.1
total	56	16.4	52	15.2	154	45.0	36	10.5	15	4.4	29	8.5	342	100.0

Table 2. Feature and artifact volume and density data for four feature areas.

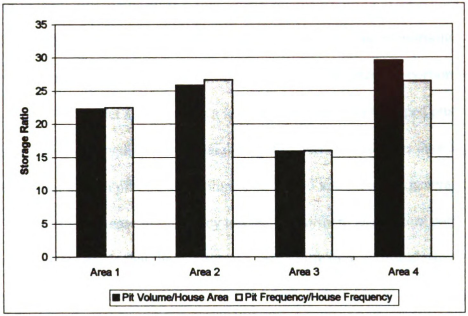
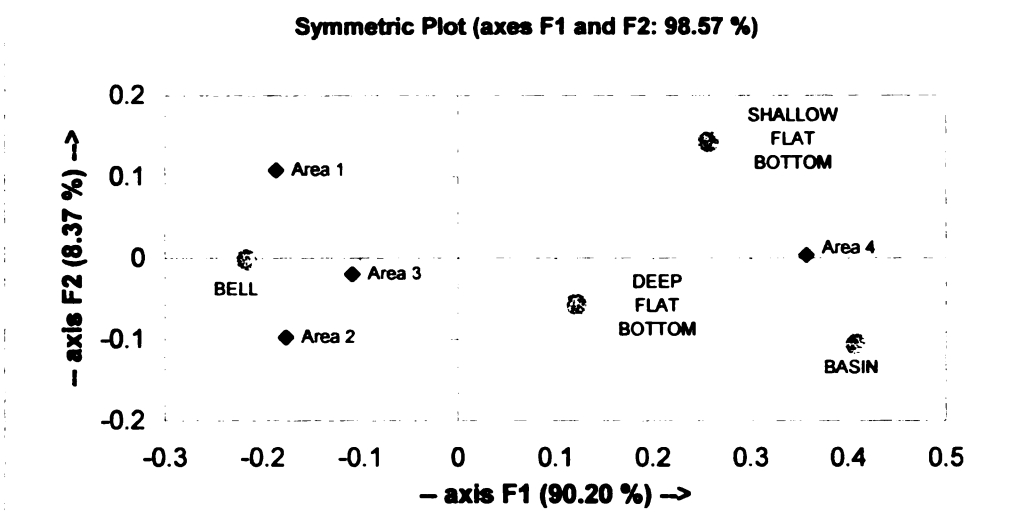


Figure 25. Bar graph comparing storage ratios in four feature areas.

contains the most pit features per house. However, this is likely a distorted picture as many more features have been excavated in this part of the site relative to houses. Therefore, it should be excluded from comparison on this basis

More than half of the deep flat bottomed, shallow flat bottomed, and basin shaped pit features occur in the northern two areas. This pattern intensifies through the avocational excavation block where 70% of the features are deep flat bottom. The proportions of feature types are similar for Areas 1 and 2. Area 2 contains the highest proportion of bell shaped pits. Area 4 is distinct as it contains a lower occurrence of bell shaped pits. The difference is that this area contains more straight sided pits and more basins than any other area. Deep flat bottom pits are also common in Area 3 and there is a general trend for straight sided pits to increase in frequency toward the northern and eastern parts of the site. A chi-square test reveals that the relationship between feature form and site area is significant (p=0.021) and correspondence analysis shows shallow flat bottom pits and basins related to Area 4, bell shaped pits with Areas 1, 2, and 3, and deep flat bottom pits with Areas 3 and 4 (Figure 26).

The higher proportion of deep flat bottom, shallow flat bottom, and basin shaped pits in the northern parts of the site can be explained in at least four ways: feature reuse, functional differentiation, differences associated with distinct groups of people, or temporal change over time in one population.



	Area 1	Area 2	Area 3	Area 4	Total
dfb	11 (14)	13 (14)	11 (10)	20 (17)	55
sfb	13 (13)	8 (13)	8 (9)	22 (16)	51
bell	47 (40)	47 (40)	32 (30)	34 (50)	160
basin	5 (9)	8 (9)	5 (7)	18 (11)	36
Total	76	76	56	94	302

Chi-square (observed value)	19.527
Chi-square (critical value)	16.919
DF	9
p-value	0.021
Alpha	0.05

Figure 26. Correspondence analysis of feature form by four feature areas, including a chi-square test of this relationship (expected values in parentheses).

Artifacts

Each area contains similar proportions of artifact classes. However, artifact density is markedly higher in Areas 1 and 2 (see Table 2). In particular, there is a higher concentration of chipped stone debitage in these areas. Pottery is concentrated in Area 2, while bone, shell, and ground stone artifacts occur in relatively even proportions throughout the site.

The low occurrence of debitage in Areas 3 and 4 is difficult to explain, necessitating a consideration of factors that could have contributed to this pattern, beginning with sampling error before invoking behavioral explanations. As mentioned in Chapter IV, feature contents were not regularly screened in 1971 and the western portion of the site may have been less impacted by plowing as the Vance family house was located here. This is an obvious problem as most features in Area 4 were excavated in 1971 (Figure 27), and many features located in the western and southern parts of the site are situated within areas that appear to have been lawns during private use of the property as a family farm (Figure 28). As a result, these areas would have been less impacted by plowing than the northern part of the site, possibly resulting in higher artifact densities.

To assess the impact hand-sifting may have had on artifact density, debitage was examined more closely. First, all debitage was excluded from artifact totals revealing a more even distribution between site areas. Second, flake size was compared for each area resulting in the finding that larger debitage (>4 cm) was more evenly represented than smaller debitage in each area (<4 cm). Shatter was also under-represented in Area 4. (Figure 29). Based on this finding, it seems likely that small debitage is under-represented in Area 4 due in part to sampling differences.

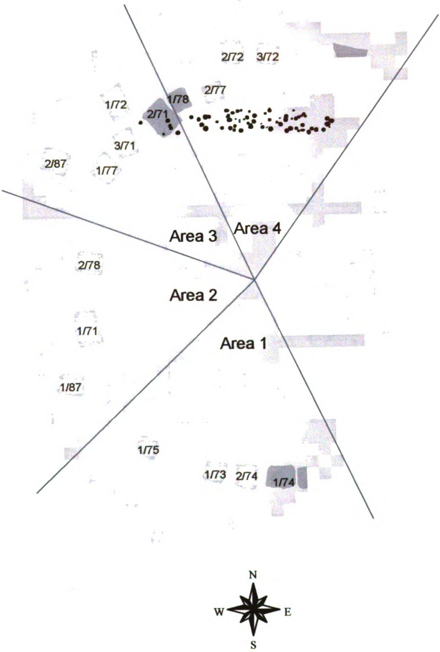
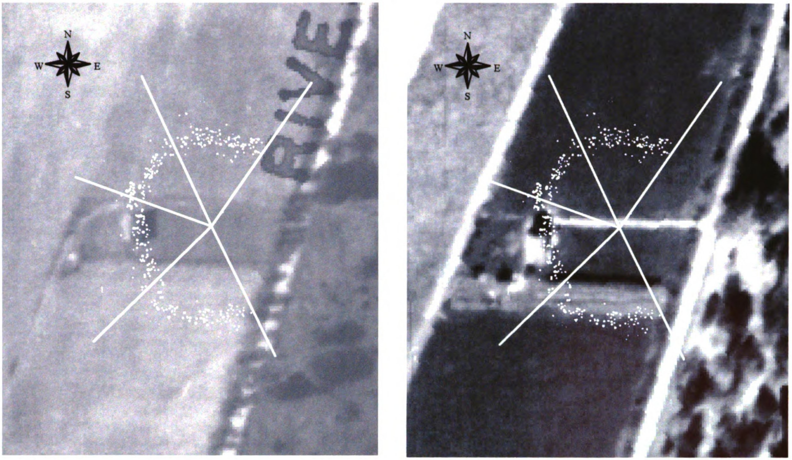


Figure 27. Location of features excavated in 1971.



1938 **1949**

Figure 28. Feature distributions superimposed over aerial photographs of the Vance family farm in 1938 and 1949. (Source: Montgomery County Auditors Office [1999]. Note the presence of a lawn only in the central [1938] and southern [1949] portions of the site.)

	Secondary Flakes			Decortication Flakes			Other		
Area	>4 cm	2-4 cm	<2 cm	>4 cm	2-4 cm	<2 cm	cores	wedges	shatter
1	20	1149	4362	32	551	545	221	46	1013
2	28	1162	6020	36	552	608	247	44	1184
3	10	692	2518	13	334	321	147	29	853
4	24	789	2876	22	369	301	199	40	645

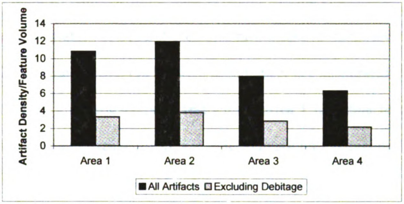


Figure 29. Bar graph of artifact densities by area with and without debitage (bottom) and a list of debitage type and size by area (top).

Nothing can be done about small artifacts that may not have been recovered except to bear this in mind when interpreting differences between areas, particularly concerning the density of debitage between Area 4 and the rest of the site. Due to the unclear effect this variation in excavation had on the assemblage, interpretation of the lower density of artifacts in this area should be taken with some caution.

Pottery Morphology. Pottery temper types considerably vary between site areas, although grit temper dominates the entire assemblage (89%) and each area (87-91%). The distribution of minority temper types is more revealing of intra-site distinctions. Shell tempering is concentrated in Area 2 (52%), quartzite tempered sherds are most common in Area 2 (30%) and Area 3 (38%). Grit/shell temper is concentrated in Area 1 (34%) and Area 2 (25%). Grit/grog temper is restricted to Area 3, limestone temper is restricted to Area 3 (71%) and Area 4 (29%), and limestone/grit only occurs in Area 1 (20%), Area 2 (40%), and Area 3 (40%). Mica temper is concentrated in Area 2 (30%) and Area 3 (29%). Sand temper is present in similar proportions (26-28%) with the exception of Area 2 (18%).

Vessel form is dominated by coiled jars (99%), which occur in similar proportions in each area. Minority vessel forms are concentrated in Area 1 and Area 4. Pinch pot jars occur most frequently in Area 1 (43%), while pinch pot bowls are concentrated in Area 1 (45%) and Area 4 (45%). Coiled bowls are present most frequently in Area 2 (42%) and Area 4 (38%). The coiled pan is also located in Area 4. Appendage types are dominated by lugs (63%) and straps (25%).

Chi-square tests comparing the distribution of mica, shell, and grit/shell temper in each area is significant ($p<0.0001$). A chi-square test comparing the distribution of pinch pots to bowls in each area is also significant (p=0.027). However, the distribution of appendage forms is not significant (Table 3).

Pottery Design. The majority (84%) of pottery vessel necks are decorated, and designs on rims are also common (39%). Lip (8%) and interior (2%) portions of the vessel are rarely decorated. There are no appreciable differences in the distribution of curvilinear guilloche designs, although rectilinear guilloche motifs are more common in Area 2 (34%) than other areas and guilloche motifs taken as a whole occur most often in Area 2 (36%). Unusual line-filled triangle motifs are more common in Area 2, including Types B (43%), C (52%), and D (100%). Line-filled triangle Types A and F are concentrated evenly in areas 1 and 2 (Type A=33% [Area 1], 32% [Area 2]; Type F=35% [Area 1], 32% [Area 2]). Line-filled triangle Type E is concentrated in Areas 2 (44%) and 3 (44%). Crosshatched designs are also concentrated in Area 2 (52%). Single slash motifs are clustered in Areas 1 (35%) and 2 (35%). Herringbone designs are only present in Areas 1 (40%) and 2 (60%). Negative painting is present on vessel necks in Areas 2 (67%) and 4 (33%). Areas 3 and 4 contain the majority of scroll patterns on vessel necks, including curvilinear scroll (Area 3=33%, Area 4=67%), and indeterminate scroll patterns (Area 3=67%, Area 4=33%). Rectilinear scroll motifs are concentrated in Area 4 (40%). Curvilinear/rectilinear scroll designs are restricted to Areas 2 (60%) and 4 (40%).

Rims containing line-filled triangle Types E and F are concentrated in Area 2 (Type E [100%], Type A [64%]), while Line-filled triangle Type F are most common in Area 3 (33%). Multi-slash motifs are concentrated in Area 2 (36%) as were single slash

Temper Type	Area 1	Area 2	Area 3	Area 4	Total
mica	98 (118)	133 (136)	132 (109)	87 (87)	450
shell	17 (31)	60 (35)	22 (28)	17 (23)	116
grit/shell	144 (110)	105 (127)	84 (101)	87 (81)	420
Total	259	298	238	191	986

Chi-square (observed value)	52.309
Chi-square (critical value)	12.592
DF	6
p-value	< 0.0001
Alpha	0.05

Appendage Type	Area 1	Area 2	Area 3	Area 4	Total
lug	145 (140)	197 (201)	132 (128)	134 (139)	608
strap	52 (57)	85 (81)	48 (52)	61 (56)	246
Total	197	282	180	195	854

Chi-square (observed value)	1.788
Chi-square (critical value)	7.815
DF	3
p-value	0.618
Alpha	0.05

Vessel Form	Area 1	Area 2	Area 3	Area 4	Total
pinch pots	23 (17)	11 (15)	5 (5)	14 (16)	53
bowls	3 (9)	11 (7)	2 (2)	10 (8)	26
Total	26	22	7	24	79

Chi-square (observed value)	9.182
Chi-square (critical value)	7.815
DF	3
p-value	0.027
Alpha	0.05

Table 3. Chi-square tests of temper types, appendage types, and vessel forms (expected values in parentheses).

designs (36%). Oval cordmarked designs are evenly spread throughout the site, while oval incised are concentrated on Area 1 (29%) and Area 2 (32%). The majority of rectilinear scroll motifs are located in Area 4 (34%), while curvilinear scroll patterns are restricted to Area 2 (33%) and Area 4 (67%). Other scroll patterns are concentrated in Area 1 (50%) and Area 2 (50%). Crosshatched and lunar impressed designs are restricted to Area 3. Punctates and punch-and-drag motifs are concentrated in Area 1 (punctuates [32%], punch-and-drag [24%]), Area 2 (punctuates [37%], punch-and-drag [30%]), and Area 3 (punctates [25%], punch-and-drag [27%]). Area 1 contains the majority of the castillated rims (67%).

Curvilinear scroll patterns on vessel lips are restricted to Area 1 (33%) and Area 2 (67%). Line filled triangle Type F is concentrated in Area 1 (40%) and Area 2 (47%). Punctate designs are restricted to Area 2 (50%) and Area 3 (50%). Punch-and-drag motifs are restricted to Area 3 (67%) and Area 4 (33%). Single slash motifs are more common in Area 2 (32%) and Area 3 (28%). Oval incised lip designs are concentrated in Area 1 (37%), while oval cordmarked motifs are concentrated in Area 2 (34%). Areas 2 and 4 contain the only occurrences of linear scroll and castillated designs.

Designs located on the interior portion of vessel rims are most variable in Area 1 and Area 3. Oval cordmarked motifs are restricted to these areas (Area 1[40%], Area 3[60%]). The slash-and-scroll motif is restricted to Area 3. Punctate designs are located in Area 1 (50%), Area 3 (25%), and Area 4 (25%). Single slash designs are concentrated in Area 3 (34%).

A chi-square test comparing the distribution of guilloche, line-filled triangle, and plain necks in each area is significant (p=0.001), although the large sample size undoubtedly contributed to this figure. Despite the grouping of unique rim designs, a chi-square test comparing the distribution of line-filled triangle and scroll designs in each area is not significant (p=0.089) (Table 4).

Projectile Points. Convex-based triangular projectile points are concentrated in Area 1 (30%) and Area 2 (43%), straight-based triangular points are concentrated in Area 2 (44%), and concave-based triangular points are concentrated in Area 4 (36%). A chi-square test comparing the distribution of convex, straight, and concave bases in each area is significant (p=0.022) (Table 5).

Non-Fort Ancient points and unidentifiable fragments are unevenly distributed throughout the site. The paleoindian point is located in Area 3. Early Archaic points are concentrated in Area 1 (33%) and Area 4 (33%). Middle Archaic points are located in Area 2 (50%) and Area 4 (50%). Late Archaic points are also concentrated in Area 1 (42%) and Area 4 (31%). Transitional Late Archaic/Early Woodland points are located in Area 1 (50%), Area 3 (25%), and Area 4 (25%). The Middle Woodland point is located in Area 3. Late Woodland points are also concentrated in Area 1 (30%) and Area 4 (40%). Projectile point tips are concentrated in Area 1 (33%) and Area 2 (37%). Unidentifiable projectile fragments (non-tip) are also concentrated in Area 1 (33%) and Area 2 (37%) (see Table 5).

Chipped Stone Tools. Triangular drills occur in higher proportions in Area 1 (22%), Area 2 (29%), and Area 4 (33%). Bipointed drills are located in Area 1 (33%) and Area 4 (67%). Area 4 has the only occurrence of corner-notched drills (n=2). Indeterminate

Neck Design	Area 1	Area 2	Area 3	Area 4	Total
guilloche	1089 (1071)	1552 (1559)	845 (873)	814 (797)	4300
lft	510 (469)	662 (684)	382 (382)	331 (350)	1885
plain	249 (308)	478 (449)	279 (251)	231 (229)	1237
Total	1848	2692	1506	1376	7422

Chi-square (observed value)	23.116
Chi-square (critical value)	12.592
DF	6
p-value	0.001
Alpha	0.05

Rim Design	Area 1	Area 2	Area 3	Area 4	Total
lft	18 (19)	27 (29)	26 (18)	14 (20)	85
scroll	98 (97)	152 (150)	85 (93)	108 (102)	443
Total	116	179	111	122	528

Chi-square (observed value)	6.505
Chi-square (critical value)	7.815
DF	3
p-value	0.089
Alpha	0.05

Table 4. Chi-square tests of neck and rim designs (expected values in parentheses).

Chipped Stone Tools	Area 1	Area 2	Area 3	Area 4	Total
drills	22 (26)	25 (26)	15 (15)	23 (19)	85
scrapers	22 (20)	20 (20)	10 (11)	13 (14)	65
knives	26 (26)	26 (26)	19 (15)	14 (19)	85
triangular preforms/humpbacks	42 (40)	41 (40)	20 (23)	31 (29)	134
Total	112	112	64	81	369

Chi-square (observed value)	5.100
Chi-square (critical value)	16.919
DF	9
p-value	0.826
Alpha	0.05

Triangular Point Bases	Area 1	Area 2	Area 3	Area 4	Total
concave	7 (8)	7 (14)	7 (4)	12 (7)	33
straight	37 (41)	72 (67)	24 (21)	29 (33)	162
convex	33 (28)	47 (45)	8 (14)	22 (23)	110
Total	77	126	39	63	305

Chi-square (observed value)	14.763
Chi-square (critical value)	12.592
DF	6
p-value	0.022
Alpha	0.05

Table 5. Chi-square tests of chipped stone tools and triangular projectile point bases (expected values in parentheses).

drill forms are concentrated in Area 1 (34%), Area 2 (34%), and Area 3 (24%). Endscrapers are concentrated in Area 1 (44%) and Area 2 (25%). Sidescrapers are also disproportionately located in Area 1 (31%) and Area 2 (31%). Indeterminate scraper fragments are concentrated in Area 2 (46%) and Area 4 (38%). Fort Ancient knives are concentrated in Area 1 (45%) and Area 3 (36%). Large triangular knives are concentrated in Area 1 (33%), Area 3 (24%), and Area 4 (29%). Leaf shaped knives are slightly more common in Area 4 (33%) and lanceolate knives are more common in Area 4 (40%). Flake knives are concentrated in Area 1 (31%) and Area 2 (47%). Gravers and burins are concentrated in Area 1 (34%) and Area 2 (32%). Triangular preforms/ humpbacks are also concentrated in Area 1 (31%) and Area 2 (31%). Other preforms are concentrated in Area 1 (31%) and Area 2 (38%). Retouched flakes are concentrated in Area 1 (27%), Area 2 (29%), and Area 4 (30%). Miscellaneous broken bifaces are also concentrated in Area 1 (33%), Area 2 (29%), and Area 4 (31%). Blades are concentrated in Area 2 (47%). Spokeshaves are concentrated in Area 4 (40%). A chi-square test comparing the distribution of drills, scrapers, knives, and triangular preforms/humpbacks in each area is not significant (see Table 5).

Chipped Stone Debitage. Cores are concentrated in Area 1 (27%), Area 2 (30%), and Area 4 (24%). Wedges are also concentrated in Area 1 (29%), Area 2 (28%), and Area 4 (25%). Shatter is concentrated in Area 1 (27%), Area 2 (32%), and Area 3 (23%). Both decortication and secondary flakes are concentrated in Area 1 and Area 2, primarily smaller (<4 cm) cases (see above discussion).

Ground Stone. Hammer stones are concentrated in Area 1 (25%), Area 2 (29%), and Area 4 (28%), while pitted stones are more common in Area 1 (32%), Area 2 (26%), and

Area 3 (26%). Manos are concentrated in Area 1 (24%), Area 2 (28%), and Area 4 (29%), while metates are clearly focused on Area 3 (54%). Chunky stones are located in Area 1 (50%) and Area 2 (50%), while chunky stone preforms are restricted to Area 2 (33%) and Area 3 (67%). Limestone discs are also restricted to Area 1 (75%) and Area 2 (25%), while the limestone disc preform is located in Area 3. A chopper is located in each area. Celts are concentrated in Area 2 (42%), and the celt preform is also located in Area 1. Slate discs are concentrated in Area 1 (33%) and Area 2 (50%). The slate preform is in Area 3. Banner stones are most common in Area 2 (50%), while banner stone preforms are concentrated in Area 4 (63%). Circular stones are concentrated in Area 1 (67%). Abraders are concentrated in Area 3 (30%) and Area 4 (39%). Unidentifiable fragments are concentrated in Area 4 (67%). A chi-square test comparing the distribution of pitted stones, manos, celts, and abraders is not significant ($p=0.065$) (Table 6).

Bone and Shell Tools. Awls are present in relatively equal percentages throughout the site, with the exception of scapula awls, which are concentrated in Area 1 (47%). Pins occur in relatively even proportions (25-31%) in each area except Area 3 (17%). Needles are concentrated in Area 1 (36%) and Area 4 (36%). Fishing hooks are concentrated in Area 1 (36%) and Area 2 (29%) and fishing hook preforms are most common in Area 1 (26%), Area 2 (35%), and Area 4 (29%). Beamers are slightly more common in Area 2 (28%) and Area 3 (31%). The two beamer/awl tools are located in Areas 1 and 3, and the two scapula knives are located in Areas 3 and 4. Flakers are

Ground Stone	Area 1	Area 2	Area 3	Area 4	Total
pitted stone	52 (45)	43 (45)	43 (39)	27 (36)	165
mano	18 (20)	21 (21)	14 (18)	22 (16)	75
celt	5 (7)	11 (7)	5 (6)	5 (6)	26
abrader	3 (6)	4 (6)	7 (6)	9 (5)	23
Total	78	79	69	63	289

Chi-square (observed value)	16.081
Chi-square (critical value)	16.919
DF	9
p-value	0.065
Alpha	0.05

Bone Tools	Area 1	Area 2	Area 3	Area 4	Total
fishing hook	35 (30)	28 (28)	16 (16)	17 (22)	96
pins	94 (108)	109 (103)	61 (60)	88 (81)	352
awls	134 (131)	111 (125)	85 (72)	97 (98)	427
flaking tool	18 (20)	29 (19)	6 (11)	12 (15)	65
cut/snap antler	80 (72)	67 (69)	31 (40)	56 (54)	234
Total	361	344	199	270	1174

Chi-square (observed value)	20.087
Chi-square (critical value)	21.026
DF	12
p-value	0.065
Alpha	0.05

Adornment	Area 1	Area 2	Area 3	Area 4	Total
teeth	20 (17)	17 (15)	3 (6)	9 (12)	49
shell	14 (16)	16 (14)	7 (5)	10 (11)	47
bone	27 (28)	22 (26)	11 (10)	24 (20)	84
Total	61	55	21	43	180

Chi-square (observed value)	5.376
Chi-square (critical value)	12.592
DF	6
p-value	0.497
Alpha	0.05

Table 6. Chi-square tests of ground stone tools, bone tools, and adornment (expected values in parentheses).

concentrated in Area 1 (28%) and Area 2 (45%). The antler scraper is located in Area 4, while the antler awl is in Area 3. Large hoes are present in even proportions in each area (22-28%), while small hoes are concentrated in Areas 2 (50%) and 3 (33%). A turtle shell spoon is present in Area 1 and Area 4, while turtle shell bowls are concentrated in Area 2 (73%). Antler points occur in similar proportions in each area (22-27%), although antler point preforms are restricted to Area 3 (29%) and Area 4 (71%). Cut/snap debris is similarly distributed in Areas 1 (34%), 2 (29%), and 4 (24%), but is less common in Area 3 (13%). A chi-square test comparing the distribution of awls, pins, fishing hooks, flaking tools, and cut/snap debris in each area is not significant (p=0.065) (see Table 6).

Bone and Shell Adornment. Bear tooth and claw pendants are restricted to Area 1 and Area 2, and elk tooth pendants are only located in Area 2 and Area 4. Wolf/dog tooth and mandible pendants are heavily concentrated in Area 4. Dog burials are also concentrated in this area (n=4), although one dog burial is located in Area 2. Shell pendants are concentrated in Area 1 (29%) and Area 2 (32%). The olivella shell is in Area 2. Bone beads are concentrated in Area 1 (31%), Area 2 (27%), and Area 4 (31%); bone bead preforms are restricted to Area 2 and Area 3. A bone disc is present in Area 4, a bone pendant and a turtle shell gorget are located in Area 1, and an owl effigy is in Area 3. Barrel beads and disc beads are restricted to Area 1 and Area 2. Drilled deer phalanges were relatively even in their distribution (25-33%), with the exception of Area 3 (17%). Shell discs were concentrated in Area 4 (44%). A chi-square test comparing the distribution of adornment grouped into teeth, shell, and bone material classes in each area is not significant (see Table 6).

Summary

Area 1 contains most of the circular stones, bone pendants, oval incised pottery lip designs, and pinch pot jars. Area 2 represents the elite residence based on significantly closer proximity of features in this part of the site. This area contains most of the shell-tempered pottery, blades, celts, turtle shell bowls, and a suite of pottery designs (rectilinear guilloche [neck], line-filled triangles B, C, and D [neck], crosshatching [neck], line-filled triangles E and F [rim], multi-slash and single slash [rim]). Area 3 contains a lower proportion of most artifact attributes simply because it was smaller in terms of volume and density. However, Area 3 also contains several unique artifact attributes, including all grit/grog-tempered pottery, most of the metates, and crosshatched and lunar impressed pottery rim designs. Additionally, the paleoindian point, limestone disc preform, slate preform, antler awl, and owl effigy are located in this area. Area 4 contains a house located in the closest proximity to the center pole, and the majority of wolf and dog remains, leaf-shaped and lanceolate knives, spokeshaves, and shell discs. Additionally, corner-notched drills, and the saltpan, antler scraper, and bone disc are located in this area.

Each of the four residential units were linked to each other in terms of specific artifact and feature attributes. Areas 1 and 2 contain dense concentrations of artifacts, including the majority of the grit/shell-tempered pottery, four pottery neck designs (line-filled triangle Type A and F, single slash, herringbone), and scroll lip motifs on pottery vessels. Convex-based triangular points, fishing hooks, flakers, shell pendants, chunky stones, slate discs, chipped stone preforms, debitage, point tips and other fragments, scrapers, flake knives, burins, and bear tooth and claw pendants are also concentrated in these two residential units. Areas 1 and 3 contain the majority of interior pottery designs, Fort Ancient knives, and beamer/awl tools. Areas 1 and 4 contain the majority of the pinch pot bowls, Early and Late Archaic and Late Woodland projectile points, bipolar drills, turtle shell spoons, and bone needles. Areas 2 and 3 contain larger houses and pit features, are located closer to the center pole than other areas, and are not distinguishable from one another in terms of distinct breaks in their respective feature distributions. These two areas also contain the majority of quartz and mica temper types, line-filled triangle Type E neck designs, punctate and single slash lip designs, beamers, small hoes, and bone bead preforms. Areas 2 and 4 contain the majority of the coiled bowls, castillated lips, curvilinear/rectilinear scroll necks and curvilinear scroll rims, and all negative painted pottery, elk tooth pendants, and the Middle Archaic point. Areas 3 and 4 contain most of the curvilinear scroll neck designs, antler point preforms, deep flat bottom features, limestone-tempered pottery, and abraders.

Mortuary Spaces

The ubiquity of pit features proved useful for demarcating the concentric structure of the village in general and the closer proximity of the western part of the site in particular. How does the mortuary pattern fit with this spatial framework? Are there characteristics in addition to concentric patterning to help explain the spatial structure of the mortuary population? In addressing these questions, the spatial pattern was assessed in terms of the proximity of burials to plaza poles and by comparing the internal structure of spatially-distinct burial groups. Cluster analysis was used to independently examine spatial clustering (see Chapter V for methodological details - raw burial data are presented in Appendix B).

Proximity to the Center Pole

Three concentric rings of burials were defined on the basis of proximity to the center pole and their spatial relationship with pit features. The simplest division segregates burials into three rings: (1) burials located within the plaza; (2) burials located in the area containing pit features; and (3) burials located in the house and stockade area (Figure 30). In residential zones, these rings generally correspond with 30' increments (<125' = plaza ring, 125-155' = pit feature ring, and >155' = house and stockade ring). As discussed above, features located in the western area are closer to the center pole. This did not appear to affect the placement of Ring 3 burials in that they remain situated between 155' and 185' from the center post. However, burials in Ring 1 and 2 are located 30' closer to the center, but the relationship with the features appears to be very similar.

Five key distinctions exist between these three rings in terms of age, leg position, grave coverings, secondary disposal, and associated artifacts. Ring 1 contains a larger proportion of adult burials, with a higher relative occurrence of extended leg positions, and are more often covered with limestone slabs (Table 7). Secondary burials are exclusively located in Ring 1. Moreover, they are located only in the first or second position from the plaza (see below, Burial Groups). Due to small sample size, empty

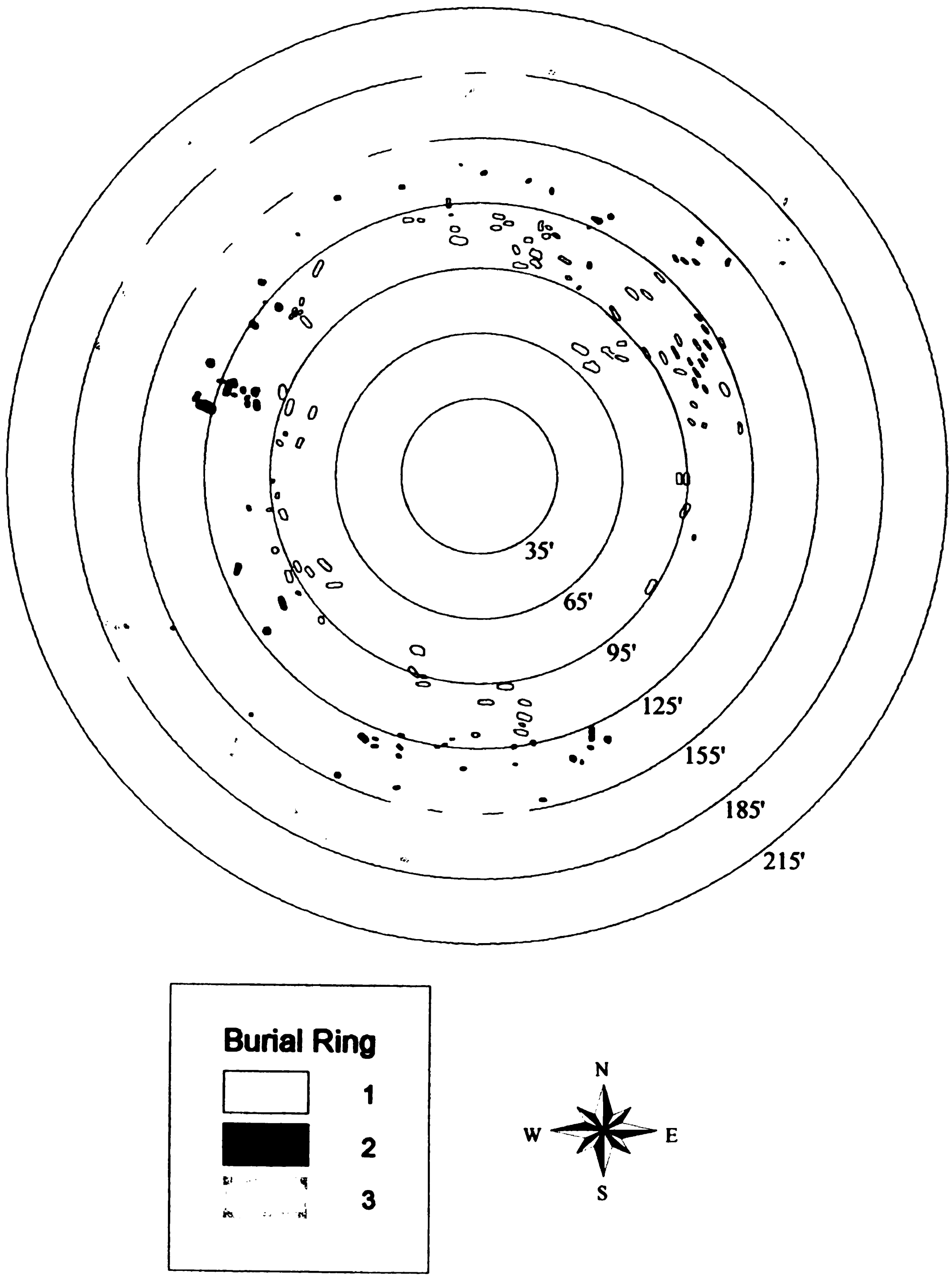


Figure 30. Three-part division of burial distribution based on concentric patterning from the center pole.

SEX

Burial Ring	Indet. (%)	Female (%)	Male (%)	N
1	43.0	25.0	32.0	100
2	79.4	7.9	12.7	63
3	72.7	18.2	9.1	22

AGE

Burial Ring	<10 (%)	10-20 (%)	20-30 (%)	30-40 (%)	40-50 (%)	50-60 (%)	N
1	38.0	11.0	8.0	32.0	11.0	1.0	100
2	77.8	3.2	-	9.5	9.5	-	63
3	72.7	-	9.1	9.1	9.1	-	22

LEG POSITION

Burial Ring	Fully Flexed (%)	Semi Flexed (%)	Extended (%)	Second. (%)	Indet. (%)	N
1	14.0	25.0	48.0	6.0	7.0	100
2	22.2	15.9	44.4	-	17.4	63
3	22.7	31.8	27.3	-	18.1	22

GRAVE COVERING

Burial Ring	Limestone (%)	Bark/Posts (%)	No Cover (%)	N
1	76.0	1.0	23.0	100
2	42.9	-	57.2	63
3	45.5	9.1	45.5	22

Table 7. Sex, age, leg position, and grave cover comparisons between burial rings.

graves do not reveal as strong a pattern, but two are located in Ring 1 and one is positioned in Ring 2. The two empty graves located in Ring 1 are in the adult section are also in the first or second position from the center pole. Chi-square tests reveal significant relationships between burial rings and age ($p<0.0001$) and grave covering ($p<0.0001$). Leg position does not significantly vary between burial rings (Table 8).

Artifacts are present to a similar degree in Rings 1 (26%) and 2 (29%), but are less common in Ring 3 burials (14%). The occurrence of specific artifacts was often restricted to one or two rings. Ring 1 contains all occurrences of ochre, deer phalanges, tubular shell beads, turtle shells, chunky stones, pottery, burnt stones, shell spoons, and slate pendants. Ring 2 contains all whelk shells, beamers, fish teeth, deer seismoids, antler flakers, bobcat teeth, shell pendants, and awls. Rings 1 and 2 contain all occurrences of lithic projectile points, burnt corn, wolf/dog teeth, barrel shell beads, disc shell beads, shell discs, and pipes. Wolf mandibles and other teeth were only found in Rings 1 and 3.

Burial Groups

A total of 15 burial groups were identified (Figure 31; see Chapter V). The spatial restriction of burial groups was relatively clear-cut with the exception of Burial Groups 9 and 10. While the pattern is generally without gaps between Burial Groups 8, 9, and 10, these were segregated into three groups on the basis of the anomalous patterning associated with Burial Group 9, which exhibits a pattern distinct from adjacent groups. Group 8 is more similar to other groups. It is difficult to know whether Group 10

Burial Ring	Child	Adult	Total
1	43 (59)	57 (41)	100
2	50 (37)	13 (26)	63
3	16 (13)	6 (9)	22
Total	109	76	185

Chi-square (observed value)	23.084
Chi-square (critical value)	5.991
DF	2
p-value	< 0.0001
Alpha	0.05

Burial Ring	Fully Flexed	Semi Flexed	Extended	Total
1	14 (18)	25 (23)	48 (46)	87
2	14 (11)	10 (14)	28 (27)	52
3	5 (4)	7 (5)	6 (9)	18
Total	33	42	82	157

Chi-square (observed value)	5.878
Chi-square (critical value)	9.488
DF	4
p-value	0.208
Alpha	0.05

	limestone slabs		Total
Burial Ring	present	absent	Total
1	76 (61)	24 (39)	100
2	27 (39)	36 (24)	63
3	10 (13)	12 (9)	22
Total	113	72	185

Chi-square (observed value)	20.424
Chi-square (critical value)	5.991
DF	2
p-value	< 0.0001
Alpha	0.05

Table 8. Chi-square tests comparing age, leg position, and limestone slabs between burial rings (expected values in parentheses).

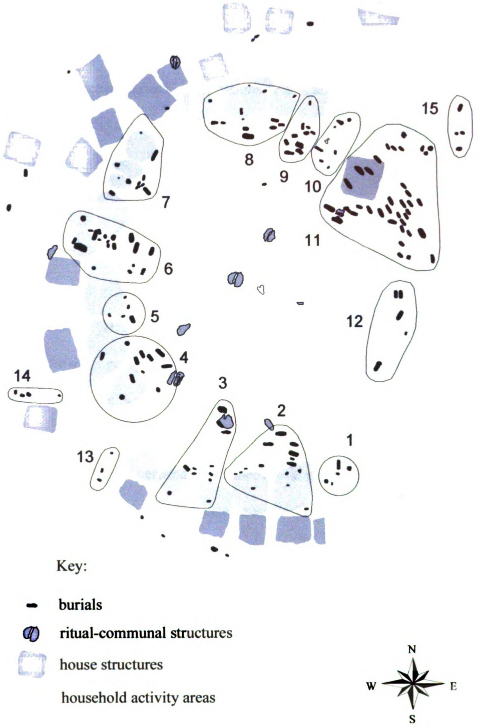


Figure 31. Map showing locations of burial groups.

represents a similarly complete pattern as it is situated on the border between museum and avocational excavation blocks.

Based on the presence of various combinations of arcs and rows, and the more amorphous pattern associated with clusters, the following typology was derived:

Burial Group Type	Burial Group Number
arcs-rows	2, 3, 4, 6, 8, 10, 11, 12
arcs	5, 7
rows	13, 14
clusters	9
indeterminate	1, 15

The most common burial group type is the arc-row pattern. Six of these burial groups (2, 3, 4, 6, 8, 11) are similar. (Burial Groups 10 and 12 were not included as they are not comparable with the other groups in this category in terms of excavation extent.) For comparative purposes, these burial groups were oriented in the direction that would be seen from adjacent residential structures and work areas (Figure 32).

The superimposed arcs and perpendicular lines reveal a pattern of conjoined arc-row segments focused on one or two burials located nearest the plaza. Ritual-communal structures are often (67%) located in direct association or in close proximity to these burial groups. The only exceptions are Burial Groups 6 and 8 which may be associated with the more centralized ritual-communal structures located to the west and north of the center pole, respectively (see Figure 31). Moreover, when there are two or more segments they are usually associated with specific residential feature groups (see Chapter VII). Groups 2, 3, 4, 8, and 11 are notable in this respect (see Figure 31). A single row pattern (as defined in Chapter V) was present in only four arc-row groups (2, 4, 6, 11).

Comparison of attributes of the 15 burial groups revealed several distinctions (Table 9). Burial Groups 1, 6, 12, and 15 contain only adult males and children, and Burial

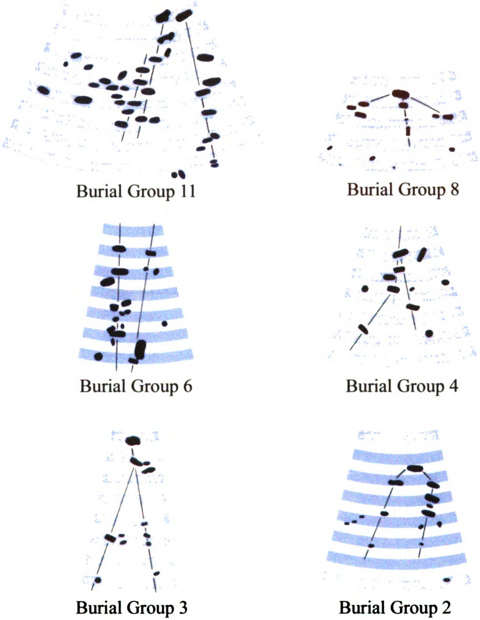


Figure 32. Selected arc-row burial groups.

SEX

Burial Group	Indet. (%)	Female (%)	Male (%)	N
1	83.3	-	16.7	6
2	62.5	18.8	18.8	16
3	68.8	25.0	6.3	16
4	30.8	30.8	38.5	13
5	100.0	-	-	5
6	55.6	-	44.4	18
7	71.4	14.3	14.3	14
8	64.3	21.4	14.3	14
9	70.0	10.0	20.0	10
10	85.7	14.3	-	7
11	31.5	34.3	34.3	35
12	20.0	-	80.0	5
13	100.0	-	-	3
14	100.0	-	-	4
15	75.0	-	25.0	4

AGE

Burial Group	<10 (%)	10-20 (%)	20-30 (%)	30-40 (%)	40-50 (%)	N
1	83.3	-	-	-	16.7	6
2	62.5	6.3	18.8	6.3	-	16
3	68.8	-	6.3	12.6	12.6	16
4	30.8	7.7	-	46.2	15.4	13
5	100.0	-	-		-	5
6	55.6	-	5.6	22.2	16.7	18
7	71.4	-	-	14.2	14.2	14
8	57.1	7.1	7.1	7.1	21.4	14
9	50.0	20.0	10.0	10.0	10.0	10
10	71.4	14.3	-	-	14.3	7
11	25.7	14.3	2.9	48.6	2.9	35
12	20.0	-	-	80.0	-	5
13	100.0	-	-	-	-	3
14	100.0	-	-	-	-	4
15	75.0	-	25.0	-	-	4

Table 9. Sex and age composition of each burial group.

Group 10 includes only adult females and children. Burial Groups 5, 13, and 14 only contain children. Leg position is consistent with the exception of Burial Group 4, which contained the lowest percentage of extended burials (23%) and, consequently, the highest proportion of flexed burials (69%). Burial Groups 6 and 11 contain a higher proportion of limestone slabs (Table 10).

Artifacts are most common in Burial Groups 1 (50%), 2 (31%), 4 (39%), 6 (40%), 8 (43%), 9 (46%), 10 (43%), 12 (60%), 13 (33%), and 15 (50%). The occurrence of artifacts is less common in Burial Groups 3 (13%), 7 (14%), and 11 (3%); no artifacts are present in Burial Groups 5 and 14. The occurrence of individual artifact types varied considerably between burial groups. To assess this variation, each artifact type was scored as present or absent by burial group (Figure 33). The occurrence of certain artifacts was limited to particular groups or sets of neighboring groups. For discussion purposes, burial groups were segregated into the following partitions:

Partition	Burial Groups
northeast	7, 8, 9, 10, 11, 12, 15
west	4, 5, 6, 14
south	1, 2, 3, 13

Northeastern burial groups were the only ones to contain beamer/awls, slate pendants, shell spoons, burnt stones, pottery, chunkey stones, turtle shells, wolf mandibles, and deer phalanges. Fish teeth were restricted to one western group. Deer seismoids, antler flakers, and bobcat teeth were only present in southern groups. Artifact types restricted to the northeast and west groups include lithic projectile points, burnt corn, wolf/dog teeth, shell pendants, and antler projectile points. Artifacts occurring only in the south and west groups include awls, hammer stones, and whelk shells. Items recovered only from northeast and south groups include barrel shell beads, tubular shell beads, pipes, and

LEG POSITION

Burial Group	Fully Flexed (%)	Semi-Flexed (%)	Extended (%)	Secondary (%)	Indet. (%)	N
1	-	50.0	50.0	-	-	6
2	6.3	18.8	56.3	12.5	6.3	16
3	18.8	6.3	37.5	-	37.5	16
4	46.2	23.1	23.1	7.7	-	13
5	-	40.0	60.0	-	-	5
6	27.8	22.2	44.4	-	5.6	18
7	7.1	7.1	57.1	7.1	21.4	14
8	7.1	28.6	35.7	-	28.5	14
9	10.0	20.0	60.0	-	10.0	10
10	28.6	28.6	42.9	-	-	7
11	17.1	20.0	51.4	5.7	5.7	35
12	20.0	40.0	40.0	-	-	5
13	-	33.3	33.3	-	33.3	3
14	-	75.0	-	-	25.0	4
15	75.0	-	25.0	-	-	4

GRAVE COVERING

Burial Group	limestone (%)	bark (%)	absent (%)	N
1	50.0	-	50.0	6
2	50.0	-	50.0	16
3	25.0	-	75.0	16
4	69.2	-	30.8	13
5	40.0	-	60.0	5
6	83.3	-	16.7	18
7	64.3	-	35.7	14
8	42.9	7.1	50.0	14
9	60.0	-	40.0	10
10	71.4	-	28.6	7
11	82.9	-	17.1	35
12	100.0	-	-	5
13	33.3	-	-	3
14	-	-	100.0	4
15	100.0	-	-	4

Table 10. Leg position and grave coverings of each burial group.

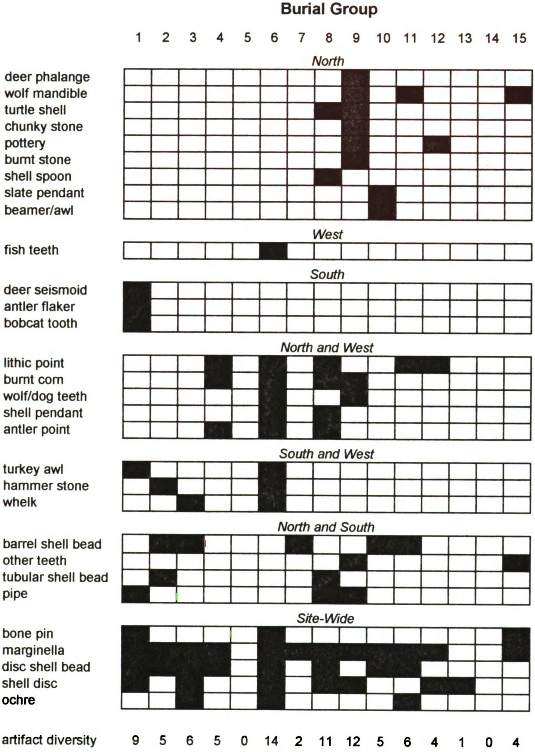


Figure 33. Presence/absence of artifact types by burial group.

other teeth. Marginella shells, shell discs, disc shell beads, bone pins, and ochre were located in groups throughout the village. Artifact diversity was considerably higher in four burial groups (1 [n=9], 6 [n=14], 8 [n=11], 9 [n=12]). Interestingly, three of these groups (6, 8, 9) are the same ones linked to centrally positioned ritual-communal facilities (see Figure 31).

Three additional findings further distinguish the northeastern part of the site. First, the concentration of wolf and dog teeth and mandibles already noted for this area is consistent with the locations of dog burials (Figure 34). Second, the orientation of flexed burials is generally away from the center pole for burials located in Burial Groups 6, 8, 9, and 10 (Figure 35). These two patterns are remarkably similar.

The final distinction for the northeastern area pertains to several burials that appear to be aligned with the plaza post located near the wall-trench house. While much remains unexcavated in this part of the site, and that which has been excavated is somewhat compromised by merging two different excavations (see Chapter IV), two alignments are noteworthy (Figure 36). This may be the beginning of a pattern similar to that expressed by the majority of the burials around the center pole, or may be wolf-related ritual behavior at a sub-village level. It is possible that this marks the emergence of another plaza signifying village segmentation. Secondary plazas have been documented at other Fort Ancient sites (e.g., Madisonville [Drooker 1997]).

Burial Clusters

Fifteen attributes met the criteria developed for the cluster analysis. These are listed below (for rules of inclusion see Chapter V):

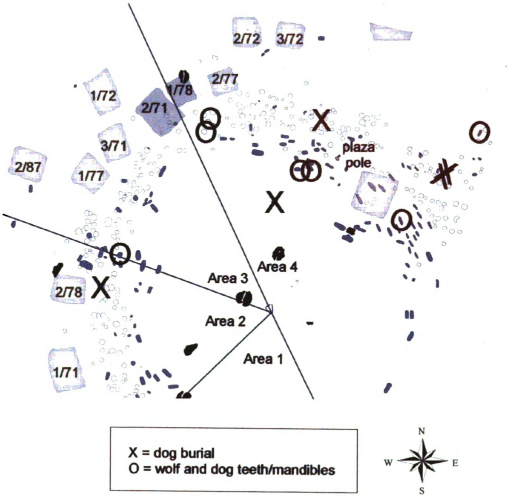


Figure 34. Spatial distribution of wolf and dog remains in burials and pit features.

Figure 35. Angle of spine orientation for flexed burials (note that avocational burials are not included due to a lack of comparable data).

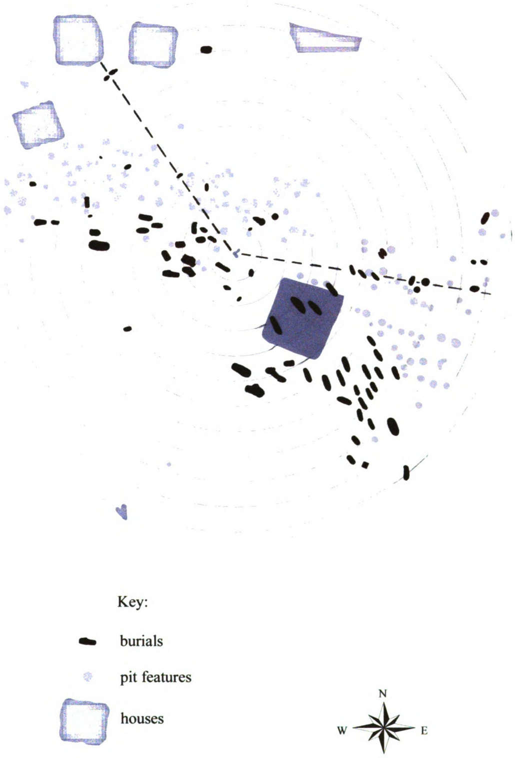


Figure 36. Alignment of burials in relation to small plaza post (buffers are in 10' increments).

flexed legs	wolf mandibles
limestone slabs	other teeth
marginella shells	bone pins
barrel beads	pipes
disc beads	hammerstones
shell discs	lithic projectile points
burnt corn	antler tip projectile points
ochre	

The four cluster solution revealed key distinctions in the occurrence of these attributes. Sex and age composition of each group also varied in significant ways (Table 11).

Leg Position and Covering. Cluster 1 consists exclusively of flexed burials, whereas the other three clusters mostly contain extended burials. No burials in Cluster 3 contain grave coverings, while the majority of Cluster 4 burials are covered with limestone slabs. Burials in Clusters 1 and 2 are covered with limestone slabs in similar proportions.

Artifacts. Cluster 2 contains the highest proportion of each artifact type, the only exception being barrel beads, which are exclusive to Cluster 4. Shell discs are exclusive to Cluster 2, where they are present in nearly half of the graves. Marginella shells are also notably more common in this cluster.

Sex and Age. Clusters 1 and 4 contain similar proportions of children and adults (both male and female). Cluster 1 is characterized by having the eldest set of burials, which are most often between the ages of 30 and 60. Clusters 2 and 3 are similar to each other in that they consist predominantly (Cluster 2) or exclusively (Cluster 3) of adult males and children. However, upon closer inspection it is clear that Cluster 3 contains mostly children, whereas Cluster 2 is more similar to the other clusters in this respect. The majority of adult burials in Cluster 2 are in the 30-40 year range, while age distribution is more even in Cluster 3. Cluster 4 has a higher percentage of younger adults than Cluster 1.

Variable	Burial Cluster 1 (%)	2 (%)	3 (%)	4 (%)
legs flexed	100.0	18.5	-	5.5
limestone cover	62.7	66.7	-	96.4
marginella shells	7.5	77.8	-	1.8
barrel beads	-	-	-	18.2
shell discs	-	40.7	-	-
wolf mandibles	-	7.4	-	1.8
bone pins	1.5	14.8	-	-
pipes	1.5	7.4	-	-
hammer stones	4.5	7.4	-	-
lithic proj. pts.	6.0	7.4	-	-
burnt corn	3.0	7.4	-	-
disc beads	-	18.5	-	12.7
antler proj. pts.	3.0	3.7	2.8	1.8
ochre	-	3.7	-	3.6
other teeth	1.5	3.7	-	1.8
N	67	27	36	55

Sex	Burial Cluster 1 (%)	2 (%)	3 (%)	4 (%)
Indet.	43.3	59.3	91.7	56.4
Female	26.9	7.4	-	25.5
Male	29.9	33.3	8.3	18.2
N	67	27	36	55

Age	Burial Cluster 1 (%)	2 (%)	3 (%)	4 (%)
<10	41.8	55.6	88.9	49.1
10-20	3.0	3.7	2.8	16.4
20-30	4.5	7.4	5.6	5.5
30-40	28.4	25.9	2.8	23.6
40-50	20.9	7.4	-	5.5
50-60	1.5	-	-	-
N	67	27	36	55

Table 11. Comparison of sex, age, and associated artifacts for four burial clusters.

Spatial Distribution. The spatial pattern of the four clusters fits well with observed distinctions between concentric burial rings (Figure 37). Clusters 1 and 4 are most often positioned within Ring 1, which is expected as these groups contain higher proportions of adult burials. Similarly, Cluster 3 is mostly distributed throughout Ring 2 which is where we would expect a group dominated by child burials to be located. Cluster 2 is concentrated in four parts of the village. Burial groups located in these areas contain more artifact types and a higher proportion of male interments. Cluster 2 burials are not located in burial positions closest to the center pole; these spaces are restricted to members of Clusters 1 and 4.

Cluster 2 is unique. It mainly consists of males between 30 and 40 years of age and children, possesses a unique artifact type (shell discs) found with both adult and child members, and members are clearly concentrated in the four cardinal directions. Given that artifact diversity is highest among the members of this cluster, a final examination was conducted to better isolate specific individuals of importance as those containing the most diverse artifact types (see Chapter V). A histogram identifies four individuals as containing the most diverse artifact sets (Figure 38). Two burials with the most diverse artifacts were positioned within burial groups containing only adult males and children (Burial Groups 1 and 6). Moreover, the graves containing these two individuals were positioned perpendicular to the plaza in clear contrast with the prevailing circular pattern of the mortuary program (see Figure 37).

Interestingly, the location of hammer stones in burials closely matches the concentration of tool making debris from pit feature contexts (Figure 39). The two individuals with the most diverse artifacts—indicative of more achieved statuses—were

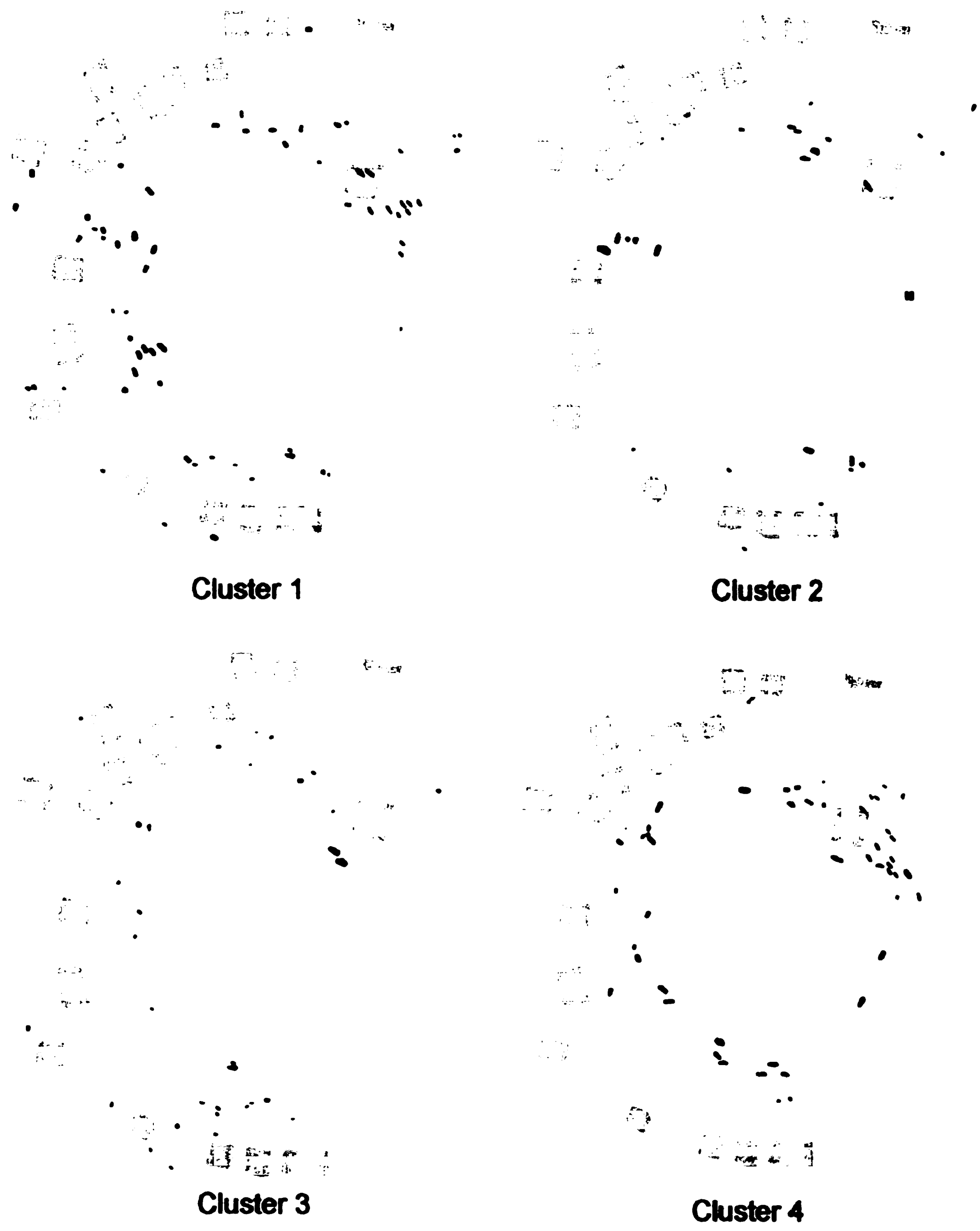
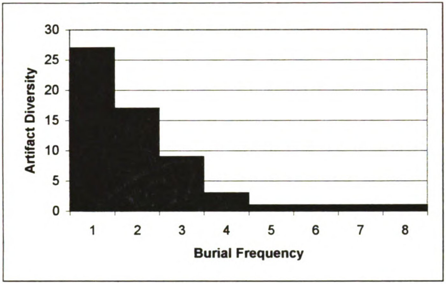


Figure 37. Spatial distribution of four burial clusters.



Artifact Diversity	Sex	Age	Leg Position	Covering
5	indet.	7	extended	limestone slabs
6	male	32	extended	limestone slabs
7	male	41	extended	limestone slabs
8	male	35	extended	limestone slabs

Figure 38. Histogram of artifact diversity for individual burials.

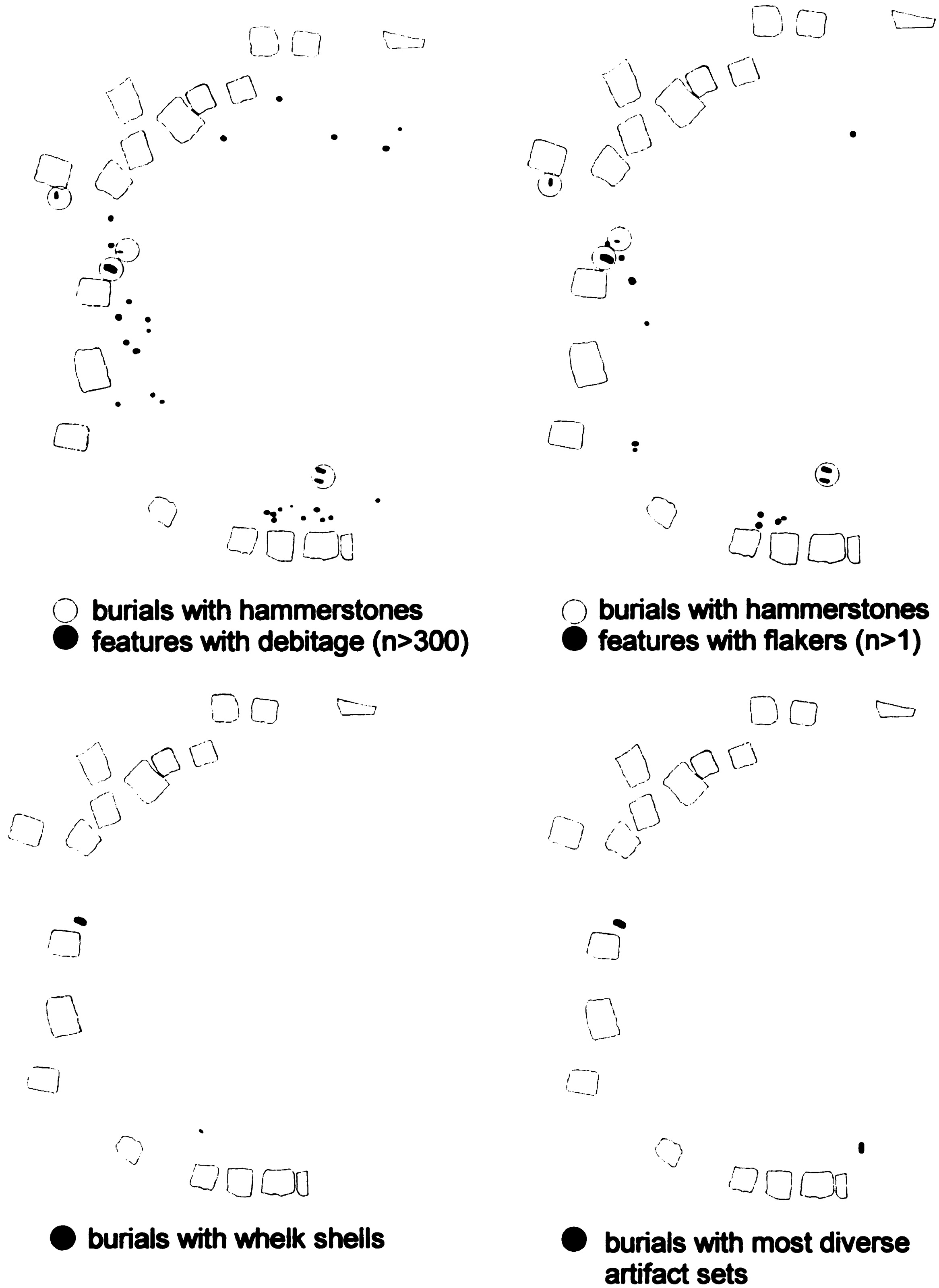


Figure 39. Specific mortuary relationships between the southern and western site areas.

located perpendicular to the burial row pattern and were positioned in the west and south parts of the site. The individual with the most marked treatments (most diverse artifacts and most instances of exotics including a whelk shell) was located in the elite area. The only other occurrence of a whelk shell was with a multiple burial, which included a child and an infant in Area 1 near House 1/73. In addition to mortuary indicators, a biological study of genetic disease also concluded a strong genetic similarity between south and west parts of the site (Knick 1977).

Discussion

Four residential units and 15 corporate groups were defined by applying rules derived from a Middle Mississippian mortuary study. Comparisons made between these spatial units produced several significant results. This concluding section discusses differences and relationships within and between residential areas and corporate groups, stressing linkages between these units.

Area 2 is significantly closer to the center pole and this part of the site is bordered by the most distinct burial groups and solstice alignments (see Chapter IV), and contains a unique house structure made from red cedar. Area 2 also contains more features and a higher proportion of artifacts than other site areas, particularly pottery, debitage, and chipped stone tools. Not only are average feature sizes larger here and in Area 3, but Area 2 contains markedly more storage per structure area. Area 2 contains significantly more shell-tempered pottery, guilloche and plain neck designs, and straight-based triangular points.

Areas 1 and 2 contain more fishing hooks, flakers, grit/shell-tempered pottery, line-filled triangle neck designs, and convex-based triangular projectile points. Debitage density was also markedly larger in these two areas. As suggested by an earlier investigation, this area also contains dense concentrations of lithic artifacts (Robertson 1980). However, the present study concludes that Area 1 also contains a high debitage density. Area 1 contains significantly more pinch pots than other areas.

Areas 2 and 4 contain significantly more coiled pottery bowls and scroll neck designs. Area 4 contains significantly more concave-based triangular points and less pitted stones. Area 3 contains more metates and Areas 3 and 4 contain more abraders. Area 3 contains a low occurrence of awls, pins, and cut/snap debris. Areas 2 and 3 contain more mica and quartzite-tempered pottery. Storage volumes are also much larger in these areas. Wolf remains and related adornment and corner-notched drills are generally restricted to Area 4. The only pan vessel in the assemblage is located in this area and rectilinear scroll motifs on pottery necks and rims are also concentrated here.

The analysis of mortuary spaces produced results consistent with the proxemics expressed in the distribution of pit and house features. The overarching principle was related to the role of the center pole in spatially segregating adult from non-adult burial areas, elite from non-elite residential areas, and in arranging cemeteries used by corporate groups. The examination of both burial rings and groups were instrumental in revealing the spatial composition of these principles of social structure.

Corporate group behavior was most often expressed as arc-row groups containing two or three conjoined segments. These segments converged on one or two burials located closest to the center pole and linked with individual ritual-communal facilities. The position of these facilities in relation to burials was distinct in the southern part of the site where they were integrated directly into the portion of the group nearest the plaza. In contrast, the northern ritual-communal facilities were located closer to the center pole than to their respective burial group.

Most burial groups contained similar proportions of sexes and ages, although four groups consisted only of males and children, three contained only children, and one was restricted to females and children. The burial group positioned between the elite residence and southern area contained more flexed burials. Two burial groups, located in Areas 2 and 4 had a higher incidence of limestone slab coverings and were further marked as sharing numerous artifact types – including all wolf and dog teeth and mandibles – and similar orientations of the flexed burials. Many unique artifacts were present in northern groups, while the southern groups lacked artifacts distinct from those found elsewhere at the site. Northern burial groups were further distinguishable as two groups of burials were oriented toward the smaller plaza post instead of the center pole.

The concentric structure of the mortuary program, the uniqueness of the northern burial groups, and the relationship between burials in the elite area and northern groups were independently supported by a cluster analysis. Additionally, this statistical technique identified a group of burials not detectable in terms of proximity to the center pole or to one another as bounded social groups. This group is dominated by 30 to 40 year old males and children and includes all occurrences of shell discs, most wolf remains, and the most diverse sets of artifacts. The most diverse artifact interments were positioned in cardinal directions within the village. Artifact diversity, whelk shells, and associations with lithic debitage and hammer stones suggest that the village leader is more closely related to southern kin groups and is specifically linked to craft production. This distinction fits well with the close connection between Areas 1 and 2 in terms of feature and artifact distributions.

The three methods utilized to examine the spatial structure of this Fort Ancient cemetery were each useful and work well together. Burial groups define corporate group structures, the basic social units in the village. Corporate groups were clearly positioned in relation to the center pole and burials were organized accordingly. The spatial organization of mortuary behavior in this fashion fits well with the circular structure of the village. Row patterning similar to that identified by Goldstein (1980) was also present but the SunWatch pattern is distinct, largely due to the circular structure of the settlement.

CHAPTER VII: VILLAGE FORMATION

This chapter examines the formation of social groups identified in the previous chapter, focusing on segmented residential units linked with corporate groups and the emergence of village-wide institutions. The first step toward this goal is to examine evidence for architectural rebuilding efforts, results of which are combined with temporal indicators derived from feature and artifact relationships within the context of household activity areas.

Architectural Chronology

Several parts of the village produced evidence for architectural growth. This is particularly clear in the northern part of the site which contains many more postholes than the southern area (Figure 40). Relationships between stockades and structures (stratigraphic and overlapping), the spatial distribution of radiocarbon assays, and evidence for house rebuilding were used to investigate architectural formation.

Stockades

Spatial relationships between stockade segments and house structures suggest that the village grew outward over time. This growth pattern appears to be restricted to the north and west parts of the site. A stockade segment bisects House I/72 and several stockade segments are obscured in areas of subsequent construction (e.g., near Houses 1/87, 2/87, 2/72, and 3/72), leaving stockade "spurs" near House 1/72 and House 2/74. During excavation of the southern spur, the following was noted:

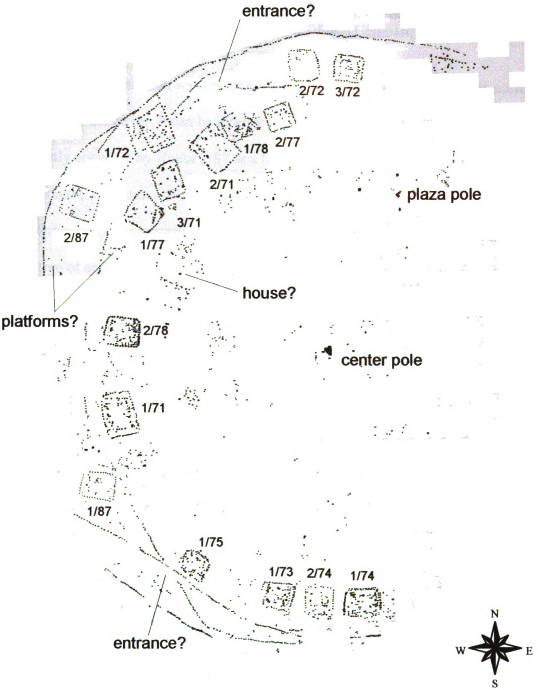


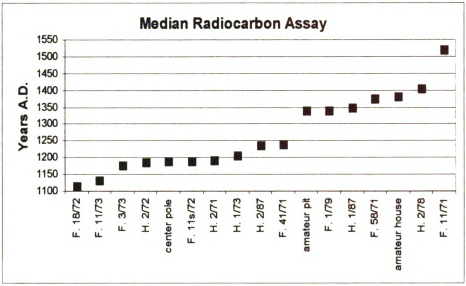
Figure 40. Site-wide posthole patterning.

> These are part of an older stockade apparently—they were stratigraphically lower than the stockade wall to the north of them. I do not think they were contemporaneous although I may be wrong on this. (Heilman, 1974 field notes for Unit S180W130)

No stratigraphic information was observed for the stockade spur located in the northwest part of the site. However, it can be inferred that this segment continued through the area subsequently occupied by House 2/87 as a line of postholes internally bisects that structure on the short axis. Two posthole groups that appear to be platforms are located near different stockade segments in the northwestern portion of the site (see Figure 40). This pattern of architectural duplication further supports village growth.

Radiocarbon Assays

Prior to this investigation, a total of 13 carbon samples had been radiocarbon dated, and four additional carbon samples were submitted for radiocarbon dating as part of the present study (Figure 41; see Appendix C). Samples were selected from key house structures, three being located in the western portion of the village (House 1/87, 2/87, and 2/78). Based on their location in the outer ring of the village, it was expected that House 1/87 and House 2/87 would produce later dates. It was also expected that House 2/78 would produce a later date if the ritual precinct developed after the village grew to integrate multiple kin groups. The final sample was selected from House 2/71, a large structure located in the northern part of the site commingled with numerous pit features. On this basis, it was suspected that this structure could date earlier in the village sequence.



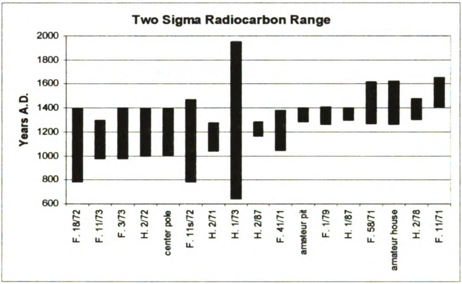


Figure 41. Plots of radiocarbon assays displaying median ages and two sigma ranges (see Appendix C for all radiocarbon data).

The temporal distribution of median radiocarbon assays suggests two episodes of occupation (see Figure 41). The spatial distribution of radiocarbon assays reveals that most of the later dates occur in the northern and western portion of the site, adding further support for a later use of these areas (Figure 42).

Carbon samples from features (n=8) were assessed in relation to feature size. Results indicate that feature volume increases through time. The feature that produced a thirteenth century date is markedly larger than earlier features; however, all later features are also larger than those dating to the twelth century. A chi-square test comparing volumes for dated features is significant ($p=0.028$); however, the Yates' correction and Fisher's exact tests – more appropriate for small sample sizes – are not significant (Figure 43). As expected, large features (volumes >1000 liters) are distributed in site areas containing two rows of houses, a pattern which clearly extends into the avocational excavation block (Figure 44). All dated features are bell shaped, indicating that this form was used throughout the occupation.

<u>In Situ House Rebuilding</u>

Close inspection of individual house patterns clearly indicates rebuilding efforts in several instances (Figure 45). Particularly clear examples include House 1/72, House 1/73, House 1/74, and House 1/75. The house excavated by avocational archaeologists was also rebuilt (see below).

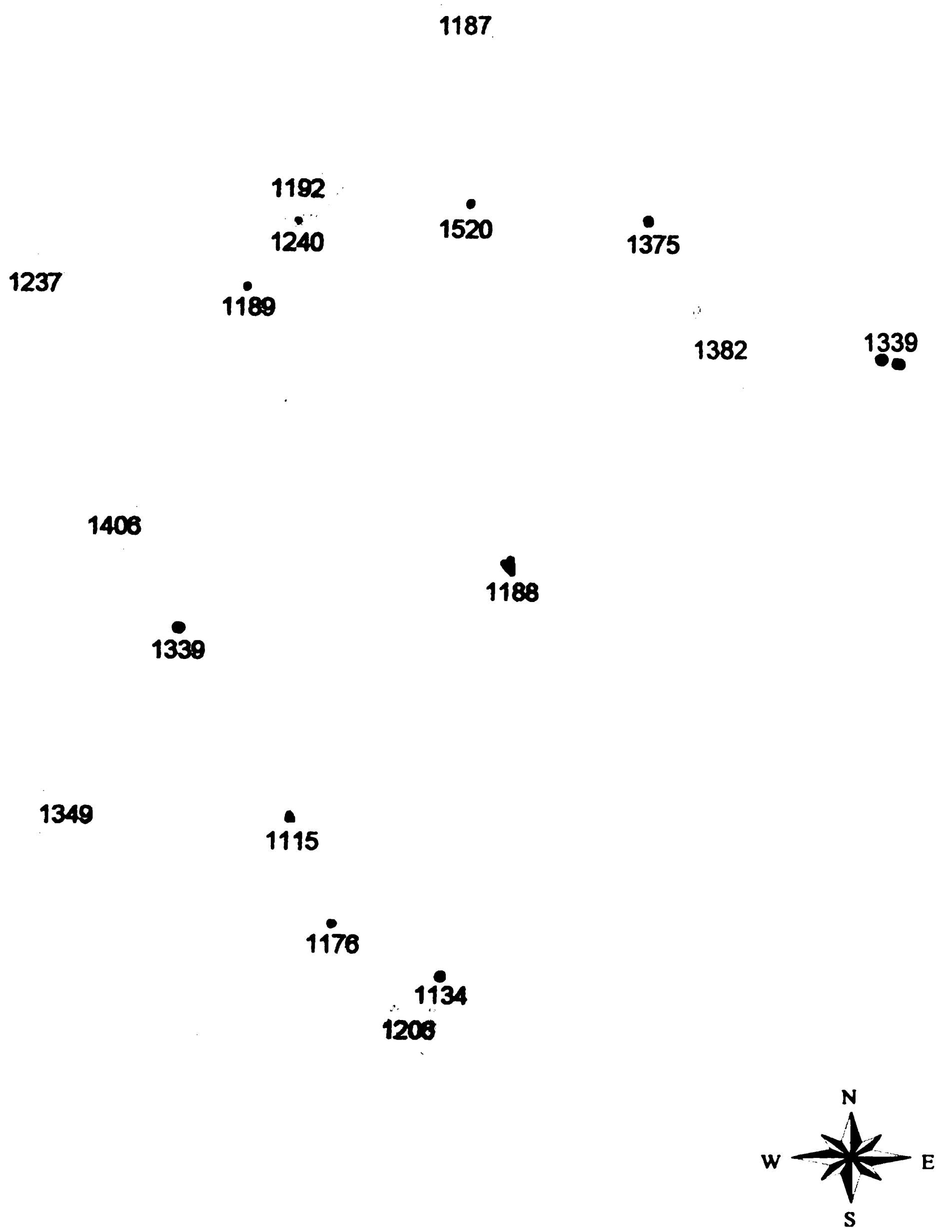
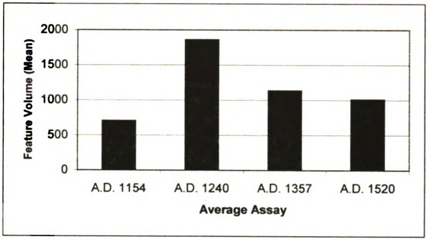


Figure 42. Spatial distribution of median radiocarbon assays.

Median Assay	Fea. Vol. (liters)
A.D. 1115	786.52
A.D. 1134	745.19
A.D. 1176	565.97
A.D. 1189	721.38
A.D. 1240	1860.02
A.D. 1339	1477.63
A.D. 1375	788.22
A.D. 1520	1010.09



	Fea. Vol. <1000	Fea. Vol. >1000	Total
< A.D. 1200 (median)	4 (2.5)	0 (1.5)	4
> A.D. 1200 (median)	1 (2.5)	3 (1.5)	4
Total	5	3	8

	Value	DF	p-value
Chi-square	4.800	1	0.028
Chi-square with Yates' correction	2.133	1	0.144
Fisher's exact test (one-tailed)			0.071

Figure 43. Median assays of dated features compared with feature volume, including statistical tests (expected values in parentheses).

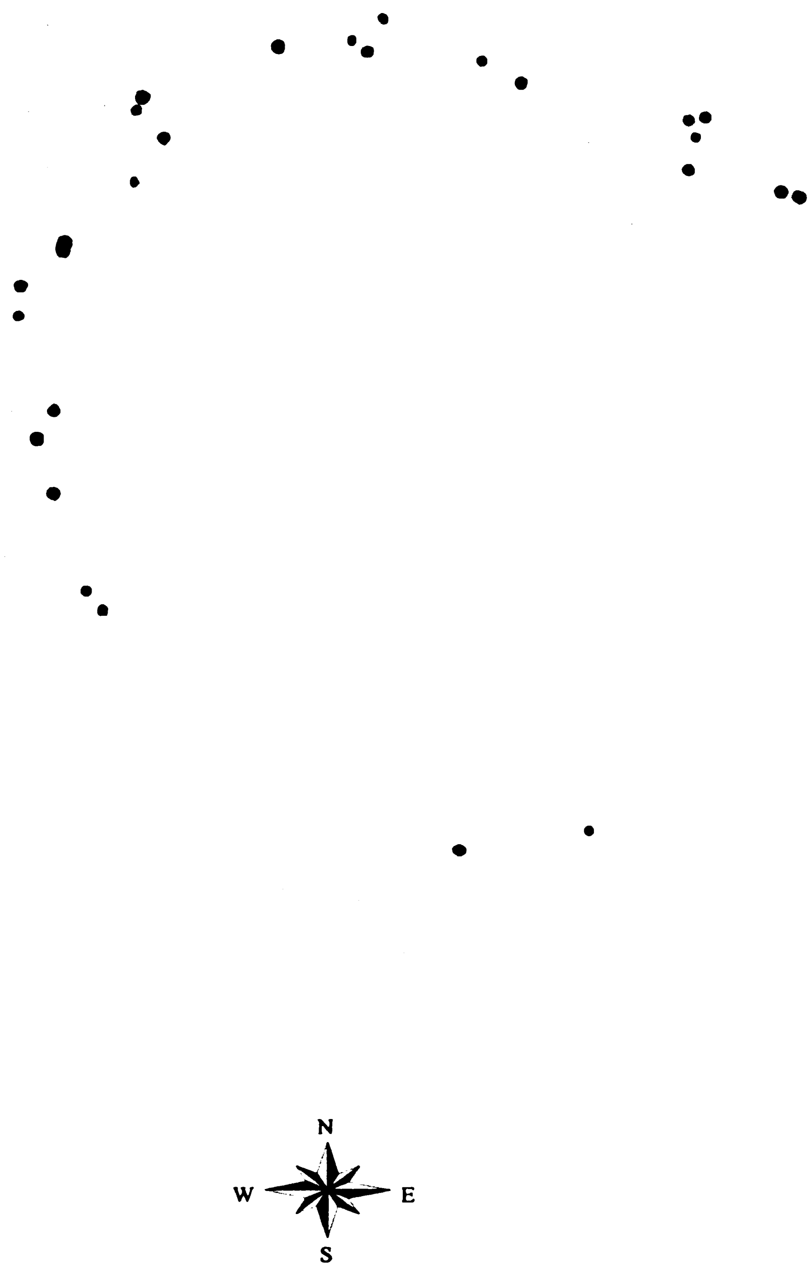


Figure 44. Spatial distribution of large features (>1000 liters). (Note their concentration in relation to the second ring of houses.)

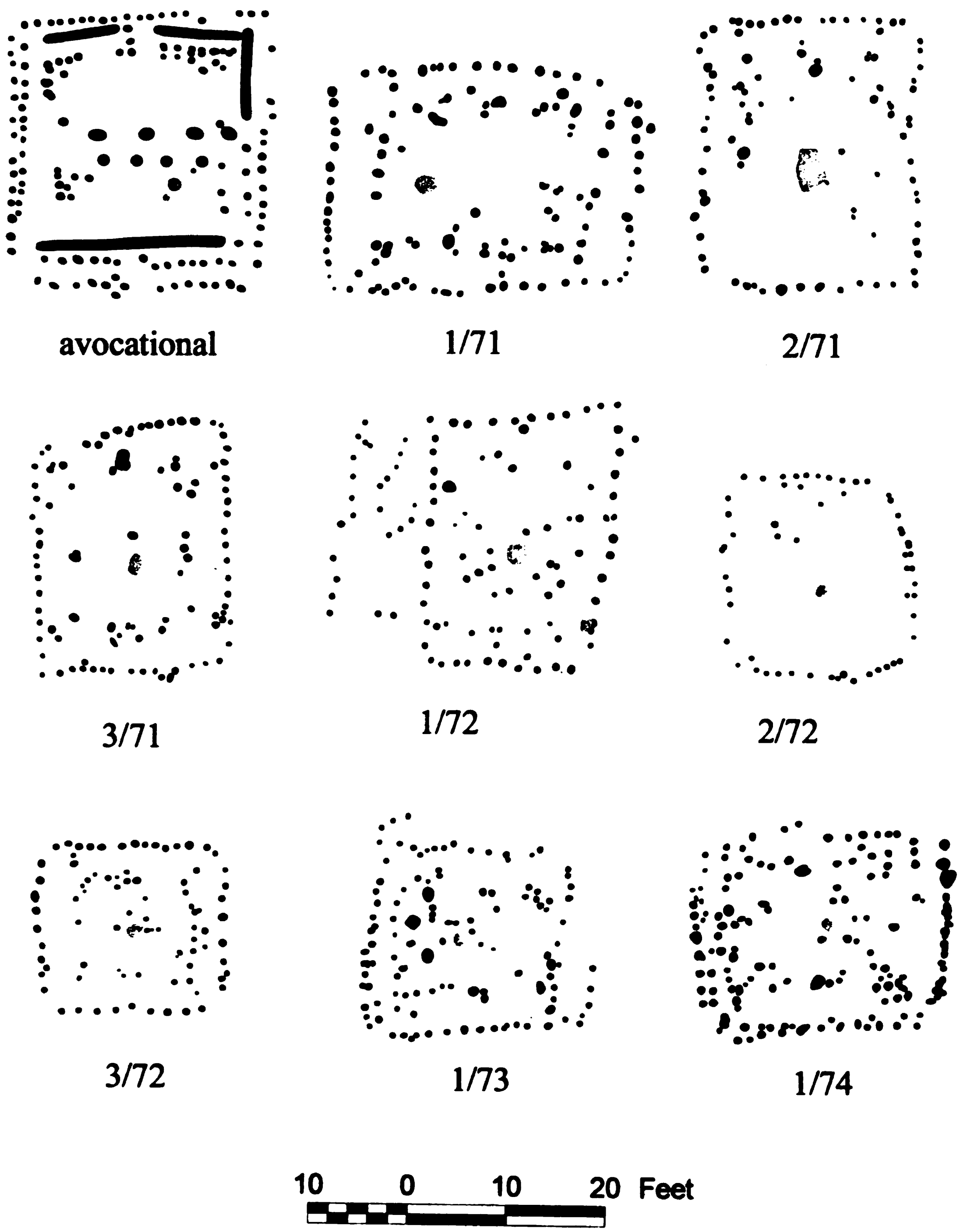


Figure 45. Detailed house patterns.

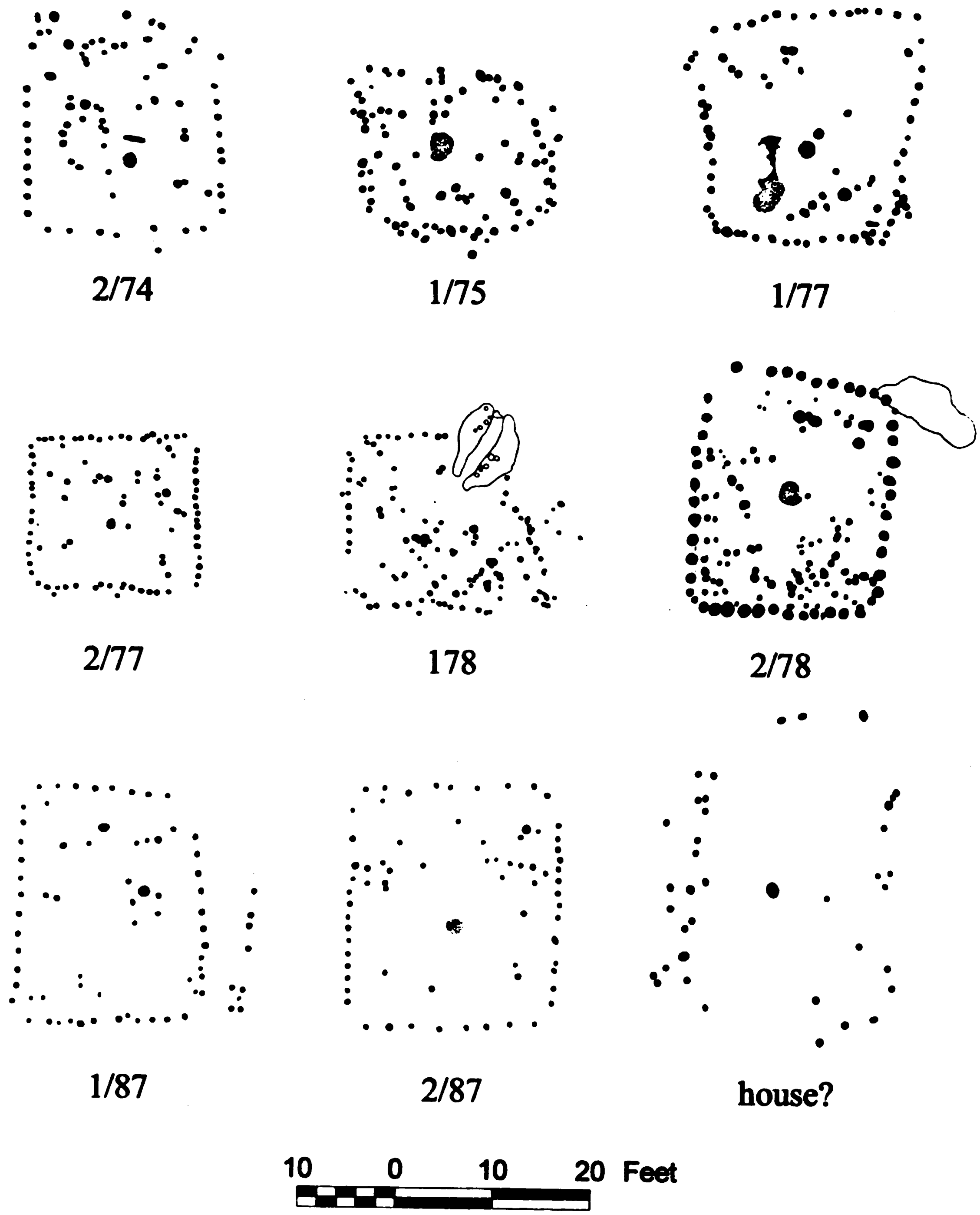


Figure 45. Continued.

A Stratified Wall Trench House

The presence of a wall trench structure at SunWatch has been suspect on the basis of the excavation strategy employed by avocational archaeologists. However, avocational field notes clarify the existence of wall trenches in this structure.

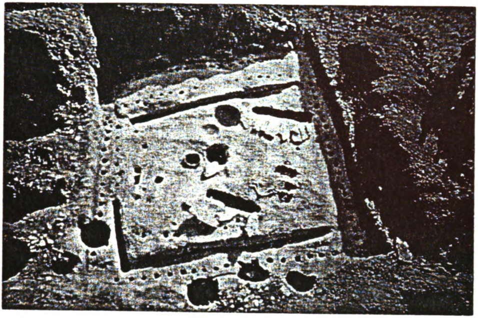
> About 68 inches from the South wall, a row of holes was found 13 inches below the floor of the house. These were found only because we found a long, narrow pit parallel with the South wall, about one foot wide, and about twenty feet long. (C. Smith n.d.:2)

This summary is independently confirmed in a letter written by John Allman, the other avocational archaeologist to work on this structure, to James B. Griffin (February 10, 1969) in which he states:

> ...there are two rows of post holes, but there are smaller holes in the trench shown inside the above holes that are continuous all the way across. Also, there is dark earth indicating a trench on the inside of the post holes on the north side, which makes us think that two different houses were built on this site. You will also notice a similar trench on the near end of the east side, and the smaller holes beyond it, which tend to bear this out.

The fact that this structure included wall trenches seems incontrovertible, based on these independent observations, along with detailed photographs (Figure 46).

This structure consists of two houses separated by alluvial deposits (Figure 47). The first structure was located after uncovering a series of postholes below two burials. The structure was excavated by tracing the outline of postholes (the strategy thought to lead to the existence of wall trenches), after which fill was removed with a backhoe. Subsequently, several interior postholes and hearth features were located. After documenting these features, excavation continued 6-8 inches below the floor where a flexed burial with a slate pendant was located beneath a mass of burned structural timbers. More postholes and several wall trenches were also located on this level.



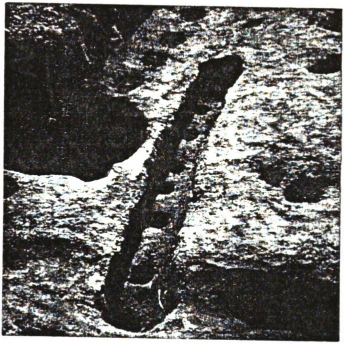
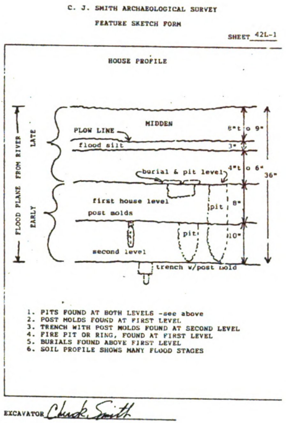


Figure 46. Photographs of the house structure excavated by avocational archaeologists, showing complete excavation (top) and wall trench detail (bottom).



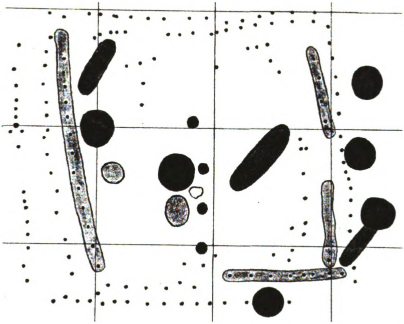


Figure 47. Field drawings of the wall trench house in plan and profile views (from Chuck Smith's field notes, courtesy of the Dayton Society of Natural History).

As field notes are unclear on several issues, the following sequence can only be tentatively forwarded (Figure 48). The first house was located approximately two and one-half feet below the ground surface and consisted of a structure that utilized both single-post and wall-trench construction. This structure clearly burned, perhaps trapping an individual inside or perhaps the individual died in the house prompting the structure to be burned, among other possibilities. The fact that this burial was in the same position as other burials in the subsequently formed row makes it more likely that this body was intentionally placed in this position before the structure burned. After a period of time represented by 6-10 inches of alluvium, a larger house was built using only single-post construction methods. After this structure was abandoned, the area became preferred for burial placement, several of which were placed in clear arc and row patterns. Some time elapsed as many burials are located approximately twelve inches above the last structure, although no distinctions could be discerned in the mortuary pattern in relation to burial depth.

Sequencing Single-Post House Structures

Variation in posthole density relative to structure size was used to further ascertain temporal differences (see Chapter V). Two houses were not included in this analysis: (1) the wall trench house as it was clearly rebuilt based on stratigraphic evidence; and (2) House 1/78 as its eastern wall could not be reliably defined (Table 12).

Houses were grouped into three rebuilding classes based on natural breaks in the distribution of posthole to area ratios (Figure 49): (1) low = 0.16–0.21 postholes per ft^2,

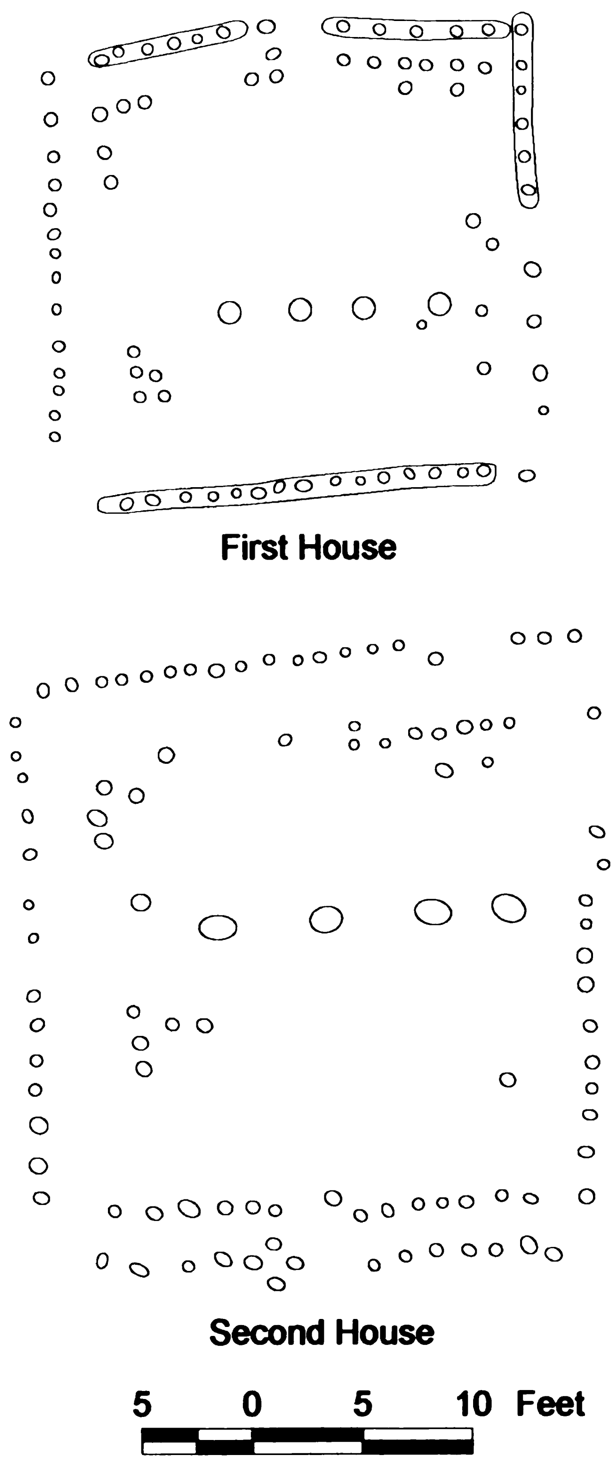


Figure 48. Conjectural layout of first and second houses excavated by avocational archaeologists (based on Chuck Smith's field notes, courtesy of the Dayton Society of Natural History).

Number	Wall PH	Interior PH	Total PH	Area (sq.ft.)	Perimeter (ft.)	Pop. Estimate
1/71	62	55	117	580	93.7	11 - 19
2/71	62	31	93	588	96.9	11 - 19
3/71	65	34	99	391	77.9	7 - 13
1/72	47	35	82	465	87.5	9 - 15
2/72	46	12	58	364	71.1	7 - 12
3/72	42	44	86	313	66.6	6 - 10
1/73	58	54	112	300	66.5	6 - 10
1/74	56	93	149	419	78.1	8 - 14
2/74	33	43	76	356	71.8	7 - 12
1/75	54	38	92	265	61.9	5 - 9
1/77	63	21	84	414	79.0	8 - 13
2/77	65	28	93	268	64.0	5 - 9
1/78	42	51	93	272	63.8	5 - 9
2/78	51	102	153	407	76.4	7 - 13
1/87	43	25	68	369	73.4	7 - 12
2/87	45	27	72	443	80.5	8 - 14
avocational	113	71	192	686	101.2	13 - 22
					Total:	126 - 224

Table 12. House structure data and population estimates.

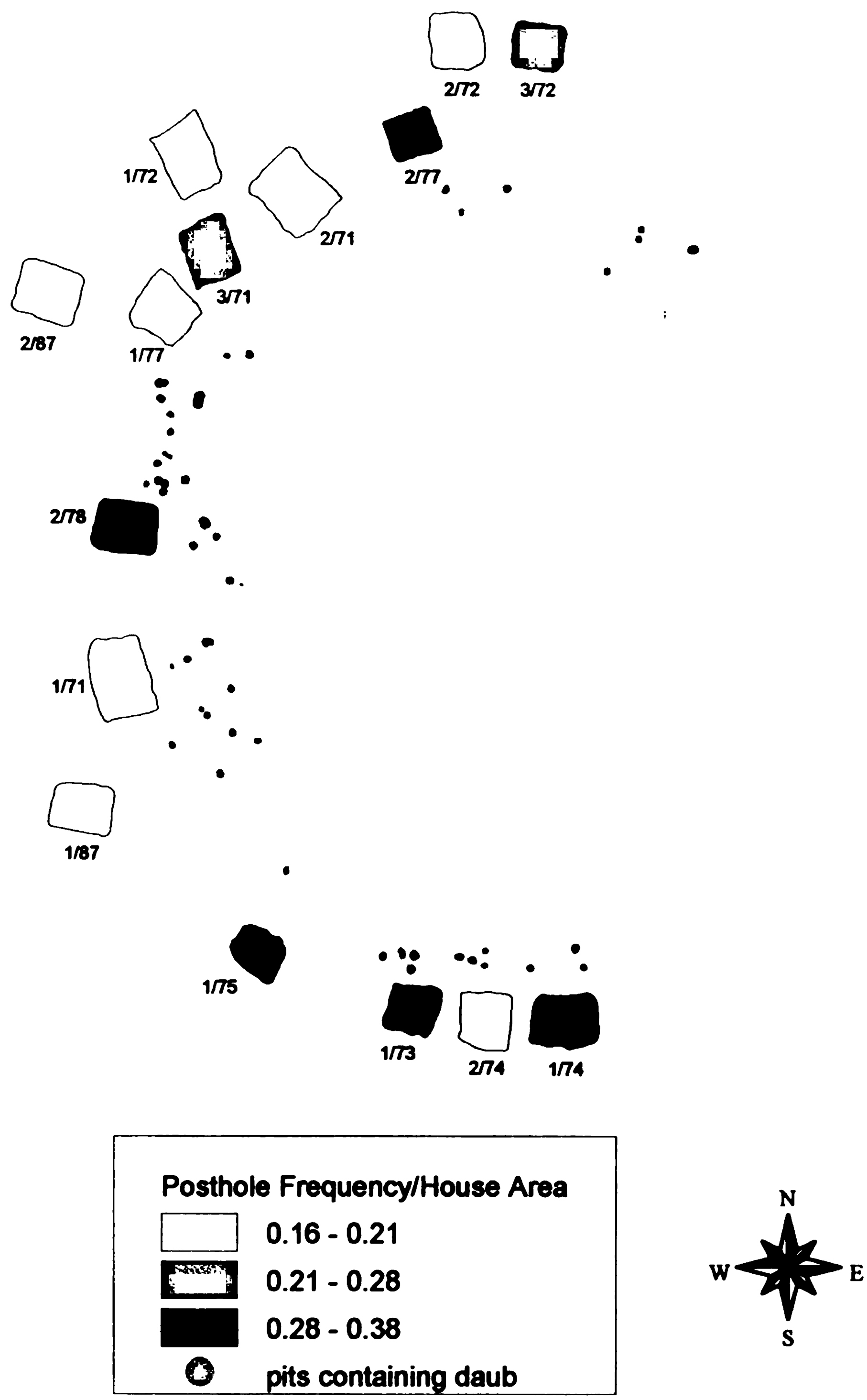


Figure 49. Daub distribution in features and posthole density for each house. (Note that higher densities are more likely to have been rebuilt.)

(2) medium = 0.21–0.28 postholes per ft^2, and (3) high = 0.28–0.38 postholes per ft^2. The majority (60%) of houses in the high rebuilding class are located in Area 1. Not surprisingly, these are the same three house patterns (1/73, 1/74, 1/75) that contained clear evidence for architectural modification. In contrast, houses in the low rebuilding class are predominantly located in other portions of the site.

The distribution of daub corresponds well to the locations of rebuilt structures. House 1/71 is the only structure situated near a heavy daub concentration lacking a higher proportion of postholes relative to area. The possibility that this house was rebuilt was explored by placing a smaller house over it, providing a close fit. Of course, this exercise is merely suggestive of rebuilding, although expansion of similarly positioned large houses have been documented in Middle Mississippian villages (e.g., Munson 1994).

Based on rebuilding ratios, it is estimated that the village was occupied for approximately 40 years, as similarly-constructed houses last an average of 20 years (Cameron 1991) and houses indicating repair at SunWatch contain twice as many postholes per area than those lacking such evidence. Furthermore, the shape of the center posthole indicates it was replaced at least once, most likely coinciding with residential growth.

Feature Form and Artifact Attributes

Principal components analysis proved effective for linking many artifact and feature attributes (Table 13; see Appendix D). The majority of artifact types are associated with bell shaped pits. This includes the following chipped stone types: convex, straight, and

	Bell Shaped Pits	Deep Flat Bottom Pits	Shallow Flat Bottom Pits
Chipped Stone	convex base tri. pts. straight base tri. pts. concave base tri. pts. sidescrapers flake knives retouched flakes triangular preforms other preforms debitage	L. Woodland pts.	M. Archaic pts. Ft. Ancient knives side-notched tri. pts.
Ground Stone	hammer stones pitted stones manos celts circular stones abraders metates	banner stones metates	
Bone and Shell	awls (scapula) awl (leg) awls (splinter bone) fishing hooks pins beamers hoes shell pendants flakers	wolf mandibles shell discs	awls (ulna) flakers
Pottery	mica temper grit/shell temper grit temper shell temper jar (coiled) lug strap other appendages plain (neck) herringbone (neck) single slash (neck) curvilinear guilloche (neck) rectilinear guilloche (neck) curv./rect. guilloche (neck) line filled tri. Type A (neck) line filled tri. Type D (neck) line filled tri. Type E (neck) line filled tri. Type F (neck) line filled tri. Type F (rim) multi slash (rim) punctates (rim) punch and drag (rim) plain (rim) oval cordmarked (lip) single slash (lip) plain (lip) single slash (interior) plain (interior)	bowl (pinch pot) negative painted pottery all scroll designs (neck) crosshatched (neck) oval cordmarked (rim) oval incised (lip)	shell temper jar (pinch pot) bowl (coiled) other scroll (lip)

Table 13. Summary results of the principal components analysis (see Appendix D for detailed results).

concave-based triangular projectile points, triangular preforms, other preforms, debitage, sidescrapers, flake knives, and retouched flakes. Ground stone tools are also most commonly associated with bell shaped pits, including hammer stones, pitted stones, manos, celts, circular stones, and abraders. Associations between bell shaped pits and bone and shell tools and adornment include awls (splinter, leg, scapula), fishing hooks, pins, beamers, shell hoes, and shell pendants. A variety of pottery attributes are associated with bell shaped pits including all appendage forms, three pottery temper types (grit, grit/shell, mica), and coiled jars. The majority of pottery designs are also associated with bell shaped pits, including ten neck designs (plain, herringbone, single slash, guilloche [curvilinear, rectilinear, curvilinear/rectilinear], line-filled triangles [Types A, D, E, F]), five rim designs (plain, multi-slash, punctates, punch and drag, line filled triangle Type F), three lip designs (plain, single slash, oval cordmarked), and two interior designs (plain, single slash).

Deep flat bottom pits are related to a variety of artifact types including Late Woodland points, banner stones, shell discs, wolf mandibles, and pinch pot bowls. Specific pottery design types occur more often in these features as well, including negative painted, crosshatched, and all scroll neck designs. Oval cordmarked rim designs and oval incised lip motifs are also associated with deep flat bottom pits.

Shallow flat bottom features are related to the fewest artifact variables. These include Middle Archaic points, Fort Ancient knives, side-notched triangular points, ulna awls, pinch pot jars, coiled bowls, and scroll lip designs.

Three artifact types are associated with two feature forms. Flakers and shell tempered pottery are common to both bell shaped and shallow flat bottom pits. Metates are associated with bell shaped and deep flat bottom pits.

A visual examination of the distribution of feature forms reveals a general association between deep flat bottom pits, shallow flat bottom pits, and basins and houses that (1) lacked evidence for rebuilding, and/or (2) produced later radiocarbon dates (Figure 50). Deep flat bottom pits are particularly concentrated near the wall trench house, and new houses in Areas 1 and 2. The majority (70%) of features excavated by avocational archaeologists are also deep flat bottom pits (not shown in Figure 50), further supporting the association between the wall trench structure and this feature form.

Residential Developments

This section investigates temporal evidence from features associated with household activity areas. These data sets are then used, along with architectural evidence and burial characteristics, to assess the growth of corporate residential units.

Temporal Affiliations of Household Activity Areas

Following rules outlined in Chapter V, a total of 20 household activity areas were identified: Area 1 (n=5), Area 2 (n=4), Area 3 (n=5), Area 4 (n=6) (Figure 51). Average feature volumes are larger in nine activity areas, based on a natural break in their distribution at 450 liters (1.2, 1.3, 1.4, 2.2, 2.4, 3.1, 3.3, 3.4, 4.1) (Table 14).

Correspondence analysis comparing feature forms, triangular point bases, pottery designs, appendages, and temper types in each activity area (Figure 52; Figure 53)

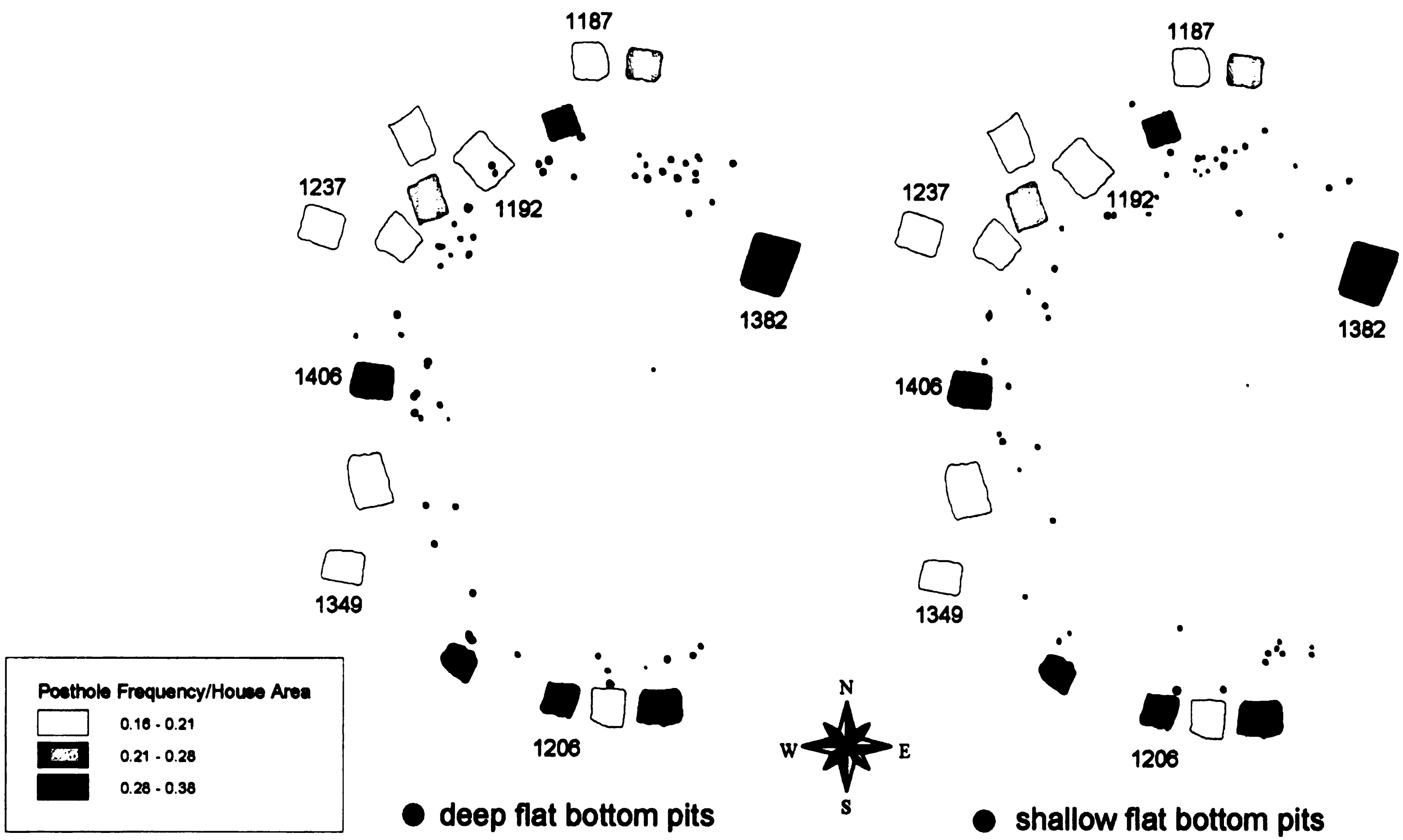


Figure 50. Distributions of key feature forms in relation to rebuilt and radiocarbon-dated structures. (Darker houses are most likely rebuilt [see text].)

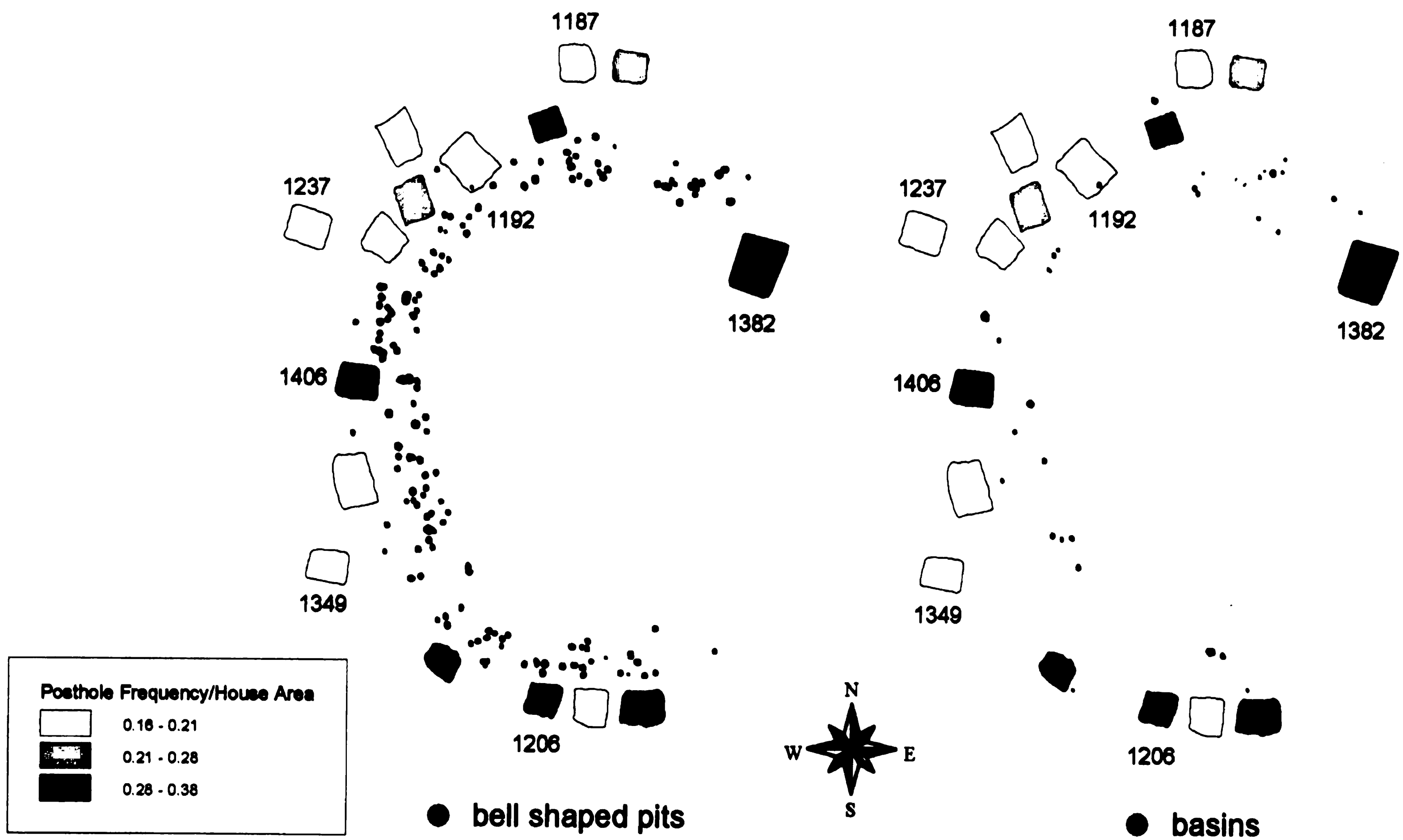


Figure 50. Continued.

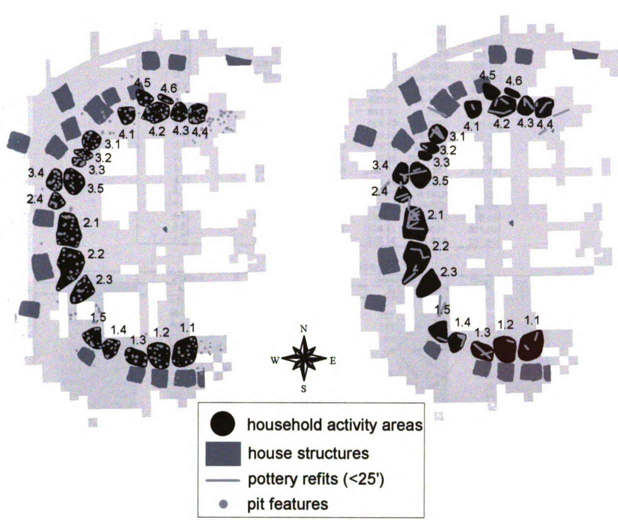


Figure 51. Map showing feature clusters based on feature proximity and short-distance pottery refits (<25').

Pit Feature Volume

Fea.Group	N	sum (ltr)	sum (cu.ft.)	mean (ltr.)	range (ltr.)	S.D. (ltr.)
1.1	20	5,329.87	188.20	355.32	16-1261	351.26
1.2	15	7,623.77	269.20	508.25	104-952	256.65
1.3	8	3,404.68	120.22	486.38	96-913	284.46
1.4	12	5,374.59	189.78	488.60	187-970	234.41
1.5	11	3,810.40	134.55	423.38	69-733	260.75
2.1	24	9,434.11	333.13	449.24	53-1956	463.16
2.2	19	8,901.36	314.31	523.61	22-1478	366.00
2.3	16	7,005.78	247.38	437.86	26-1317	361.46
2.4	11	6,724.45	237.45	611.31	64-1042	317.25
3.1	13	6,797.90	240.04	566.49	54-1225	393.84
3.2	9	3,599.44	127.10	399.94	23-1207	357.69
3.3	9	1,892.61	66.83	473.15	185-738	248.11
3.4	13	6,966.96	246.01	633.36	287-1218	247.80
3.5	10	3,584.80	126.58	398.31	43-1164	374.75
4.1	7	4,868.05	171.89	695.44	457-1213	246.62
4.2	21	9,276.37	327.56	441.73	4-1812	477.08
4.3	12	2,118.91	74.82	192.63	4-739	246.96
4.4	18	6,678.17	235.81	392.83	11-873	287.93
4.5	6	2,036.43	71.91	339.41	12-694	321.50
4.6	5	1,365.68	48.22	273.14	38-653	257.50

Artifact Density

	Debitage		Pottery		C-S Tools		Bone/Shell		Ground Stone		Total	
Fea.Group	N	density	N	density	N	density	N	density	N	density	N	density
1.1	2,280	12.11	400	2.13	79	0.42	77	0.41	25	0.13	2,861	15.20
1.2	2,715	10.09	465	1.73	92	0.34	156	0.58	35	0.13	3,463	12.86
1.3	715	5.95	498	4.14	85	0.71	112	0.93	23	0.19	1,433	11.92
1.4	431	2.27	314	1.65	41	0.22	84	0.44	19	0.10	889	4.68
1.5	591	4.39	355	2.64	41	0.30	56	0.42	26	0.19	1,069	7.95
2.1	3,368	10.11	1,135	3.41	117	0.35	157	0.47	36	0.11	4,813	14.45
2.2	2,601	8.28	806	2.56	122	0.39	120	0.38	39	0.12	3,688	11.73
2.3	2,440	9.86	649	2.62	96	0.39	128	0.52	39	0.16	3,352	13.55
2.4	543	2.29	548	2.31	43	0.18	72	0.30	23	0.10	1,229	5.18
3.1	669	2.79	557	2.32	33	0.14	71	0.30	21	0.09	1,351	5.63
3.2	824	6.48	168	1.32	27	0.21	30	0.24	8	0.06	1,057	8.32
3.3	726	10.86	333	4.98	14	0.21	39	0.58	24	0.36	1,136	17.00
3.4	1,740	7.07	523	2.13	71	0.29	109	0.44	27	0.11	2,470	10.04
3.5	606	4.79	281	2.22	22	0.17	67	0.53	12	0.09	988	7.81
4.1	1,066	6.20	291	1.69	66	0.38	54	0.31	18	0.10	1,495	8.70
4.2	260	0.79	343	1.05	36	0.11	98	0.30	12	0.04	749	2.29
4.3	137	1.83	190	2.54	13	0.17	36	0.48	4	0.05	380	5.08
4.4	596	2.53	336	1.42	27	0.11	50	0.21	16	0.07	1,025	4.35
4.5	200	2.78	166	2.31	16	0.22	27	0.38	9	0.13	418	5.81
4.6	479	9.93	134	2.78	30	0.62	47	0.97	28	0.58	718	14.89

Table 14. Pit feature volume descriptive statistics and associated artifact densities.

	dfb		sfb		bell		basin		irreg.		indet.		total	
Fea.Group	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1.1	2	10.0	5	25.0	8	40.0	1	5.0	3	15.0	1	5.0	20	100.0
1.2	3	20.0	1	6.7	9	60.0	2	13.3	-	-	-	-	15	100.0
1.3	-	-	1	12.5	6	75.0	-	-	1	12.5	-	-	8	100.0
1.4	1	8.3	-	-	10	83.3	-	-	1	8.3	-	-	12	99.9
1.5	2	18.2	2	18.2	5	45.5	-	-	1	9.1	1	9.1	11	100.1
2.1	6	25.0	4	16.7	10	41.7	2	8.3	2	8.3	-	-	24	100.0
2.2	1	5.3	1	5.3	14	73.7	2	10.5	-	-	1	5.3	19	100.1
2.3	2	12.5	1	6.3	10	62.5	3	18.8	-	-	-	-	16	100.1
2.4	1	9.1	1	9.1	8	72.7	1	9.1	-	-	-	-	11	100.0
3.1	4	30.8	1	7.7	7	53.8	-	-	1	7.7	-	-	13	100.0
3.2	3	33.3	1	11.1	3	33.3	2	22.2	-	-	-	-	9	99.9
3.3	1	11.1	-	-	4	44.4	1	11.1	-	-	3	33.3	9	99.9
3.4	1	7.7	1	7.7	8	61.5	1	7.7	2	15.4	-	-	13	100.0
3.5	-	-	3	30.0	6	60.0	-	-	-	-	1	10.0	10	100.0
4.1	3	42.9	-	-	4	57.1	-	-	-	-	-	-	7	100.0
4.2	1	4.8	7	33.3	10	47.6	3	14.3	-	-	-	-	21	100.0
4.3	5	41.7	-	-	-	-	6	50.0	-	-	1	8.3	12	100.0
4.4	7	38.9	1	5.6	6	33.3	3	16.7	-	-	1	5.6	18	100.1
4.5	1	16.7	2	33.3	2	33.3	1	16.7	-	-	-	-	6	100.0
4.6	-	-	2	40.0	2	40.0	-	-	1	20.0	-	-	5	100.0

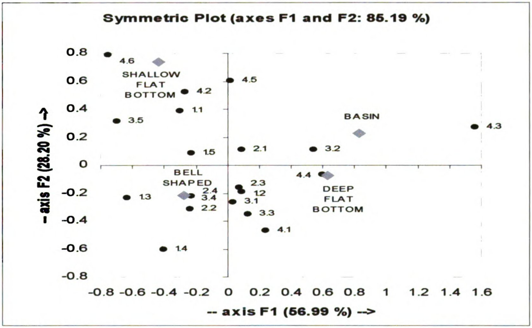


Figure 52. Correspondence analysis biplot comparing feature form and household activity area (bottom) and raw data (top).

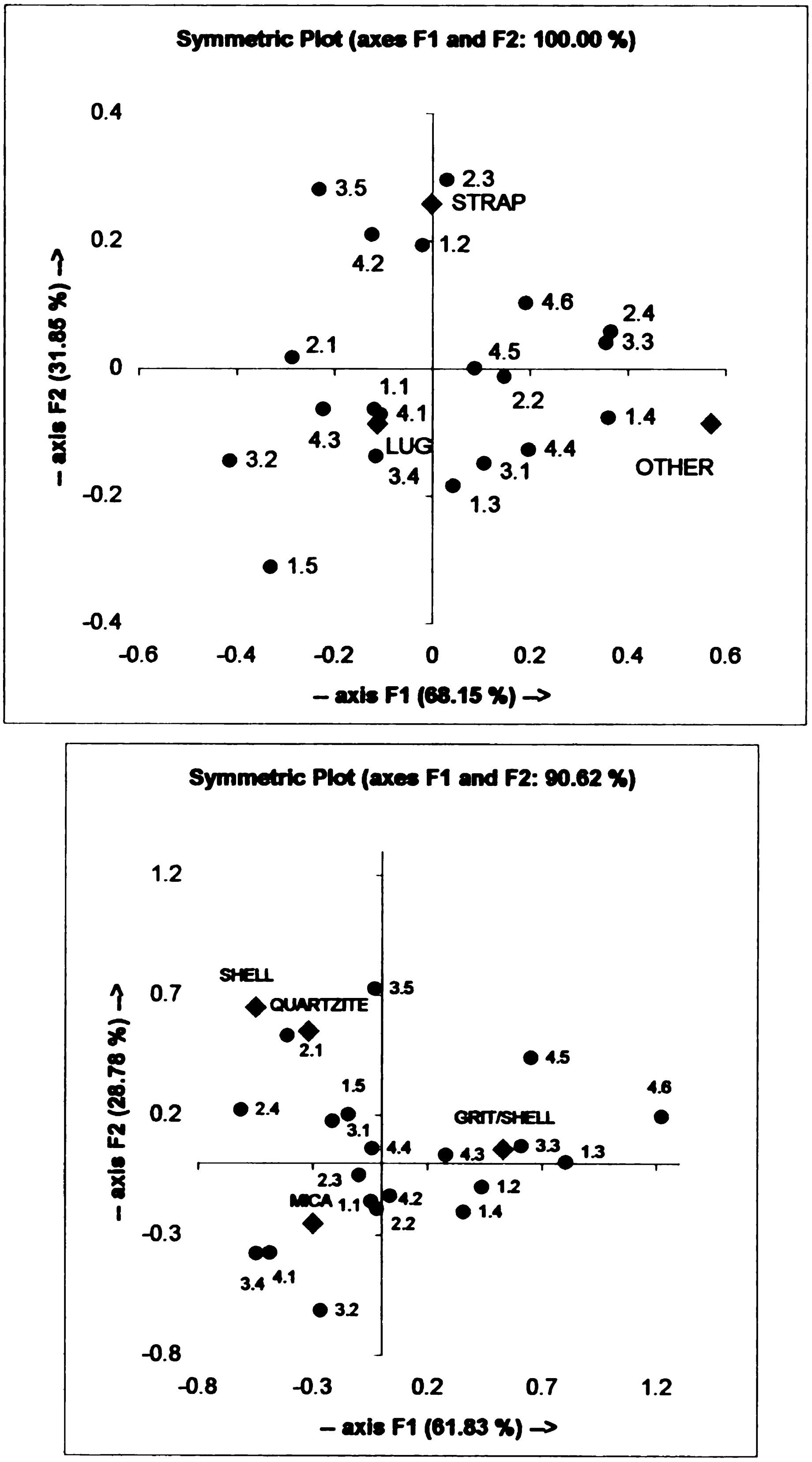
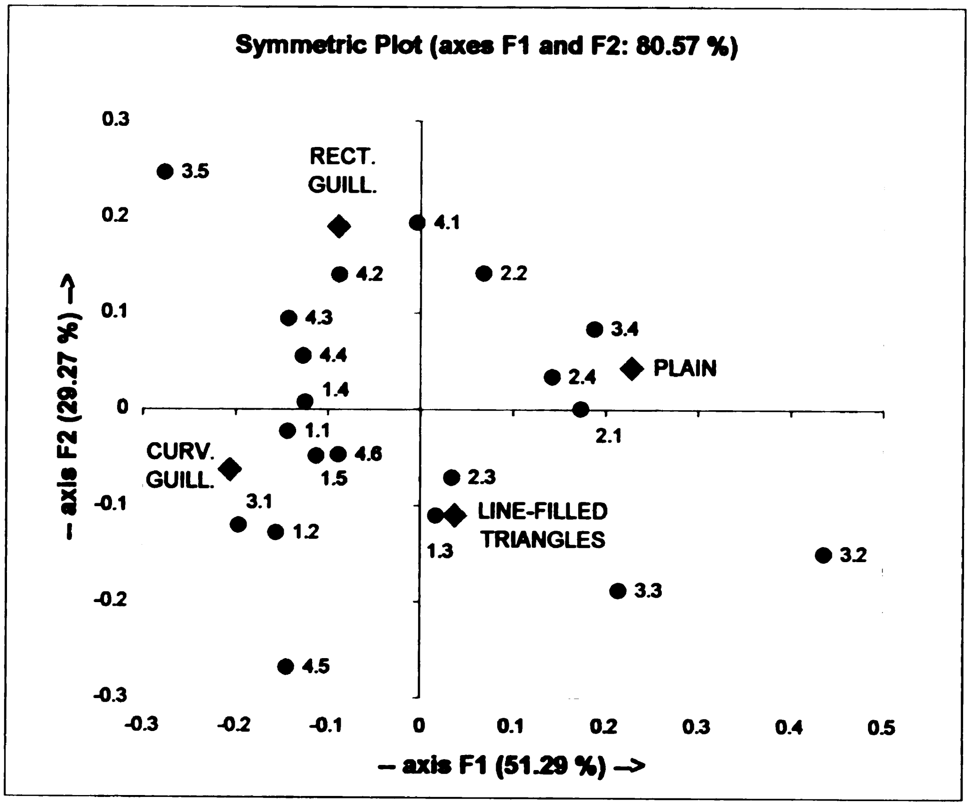


Figure 53. Correspondence analysis biplots comparing diagnostic artifact attributes (gray diamonds) and household areas (black circles).



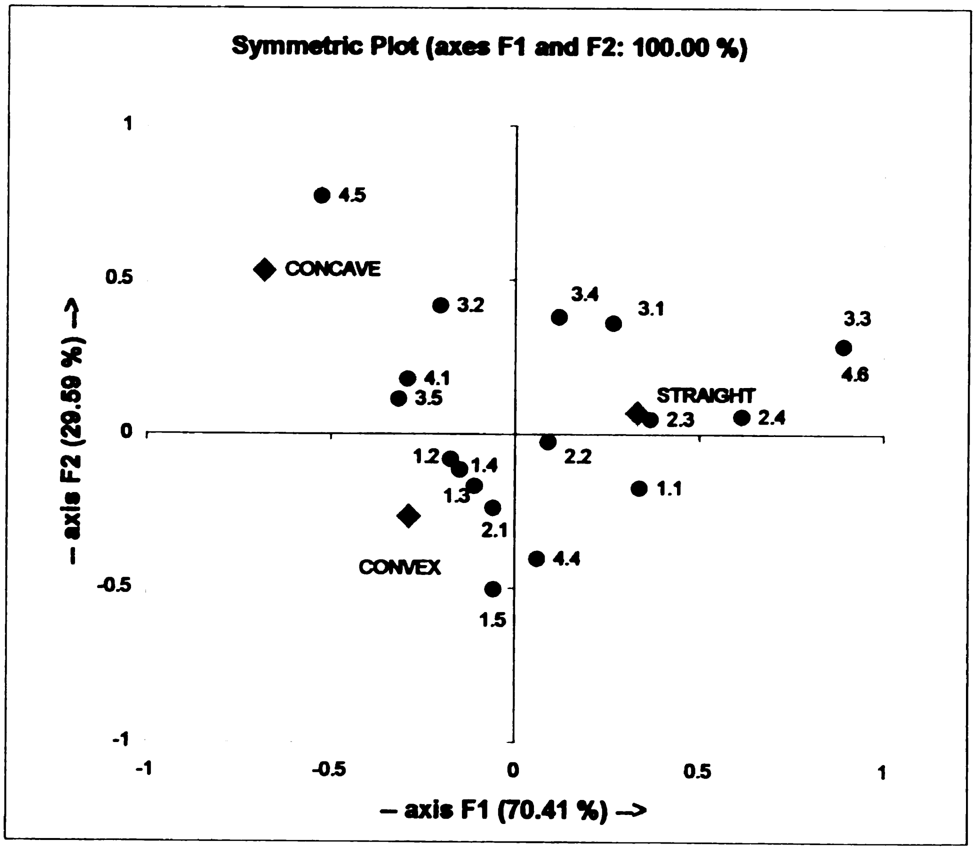


Figure 53. Continued.

produced clear associations. Shallow flat bottom features are concentrated in five activity areas (1.1, 3.5, 4.2, 4.5, 4.6) and bell shaped pits correspond with six activity areas (1.3, 1.4, 1.5, 2.2, 2.4, 3.4). Deep flat bottom pits and basins correspond with three activity areas (3.2, 4.3, 4.4). Both deep flat bottom and bell shaped pits correspond with six activity areas (1.2, 2.1, 2.3, 3.1, 3.3, 4.1). Convex-based triangular projectile points correspond with four activity areas (1.2, 1.3, 1.4, 1.5), straight bases with seven activity areas (1.1, 2.3, 2.4, 3.1, 3.3, 3.4, 4.6), and concave bases with two activity areas (3.2, 4.5). Both convex and straight bases correspond with one activity area (2.2), and concave and convex bases correspond with two activity areas (3.5, 4.1). Shell and quartzite temper types correspond with two activity areas (2.1, 3.5), grit/shell temper corresponds with seven activity areas (1.2, 1.3, 1.4, 3.3, 4.3, 4.5, 4.6), and mica temper corresponds with seven activity areas (1.1, 2.2, 2.3, 3.2, 3.4, 4.1, 4.4). Strap appendages correspond with four activity areas (1.2, 2.3, 3.5, 4.2). Plain necks correspond with three activity areas (2.1, 2.4, 3.4).

Associations between activity areas and diagnostic artifact attributes were plotted with architectural evidence for village growth, generally producing compatible results (Figure 54). Activity areas positioned near more recently constructed houses often contain larger average feature volumes, deep flat bottom features, straight and concave triangular point bases, and strap appendages. Plain necks and shell temper are more localized near new houses in the western part of the site.

For analytical purposes, activity areas corresponding with three late attributes were considered to represent a later use in the occupational sequence (Table 15). This includes one activity area in Area 1 (1.2), three activity areas in Area 2 (2.1, 2.3, 2.4), and three

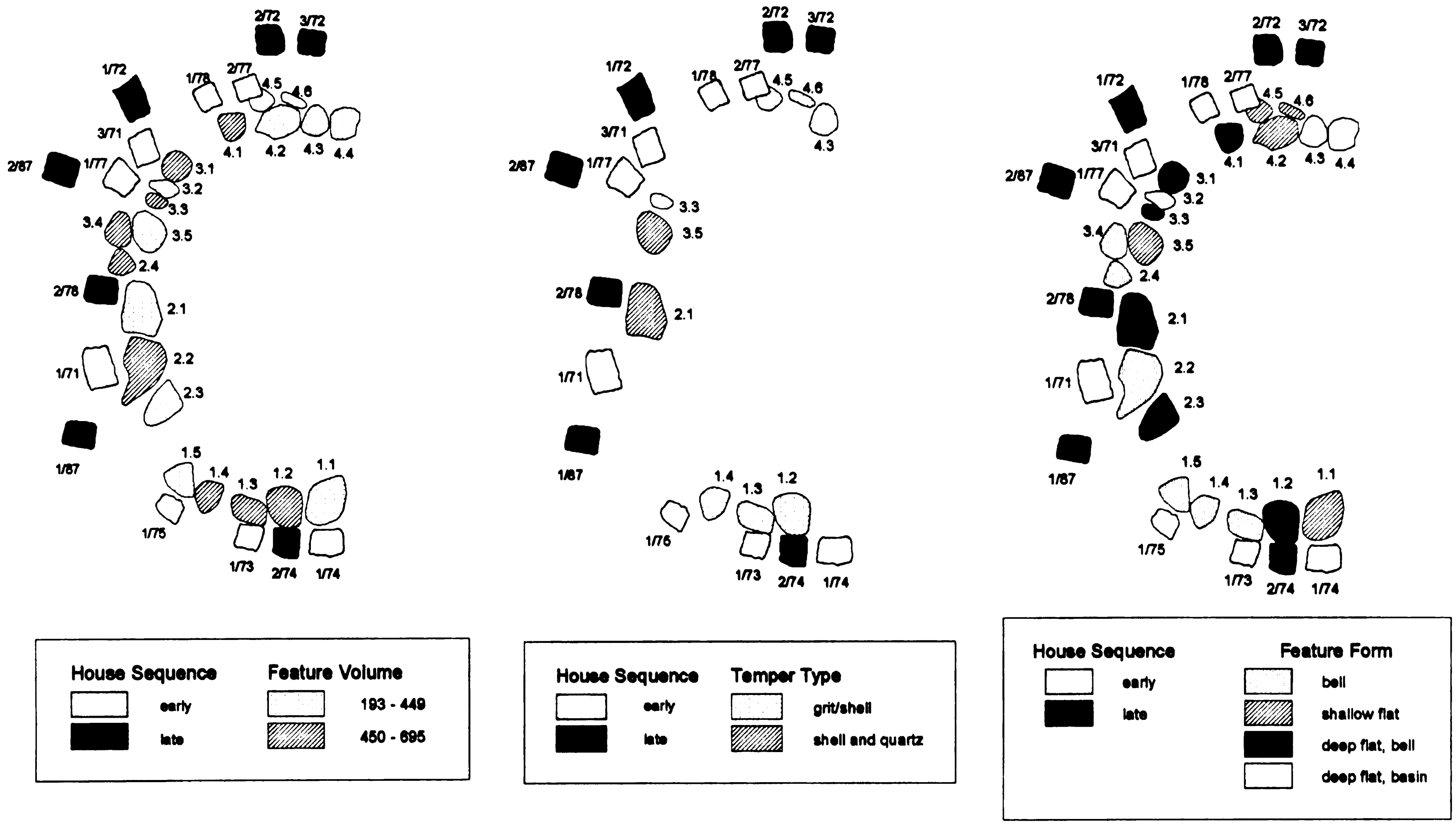


Figure 54. Maps comparing the architectural sequence with activity area diagnostics.

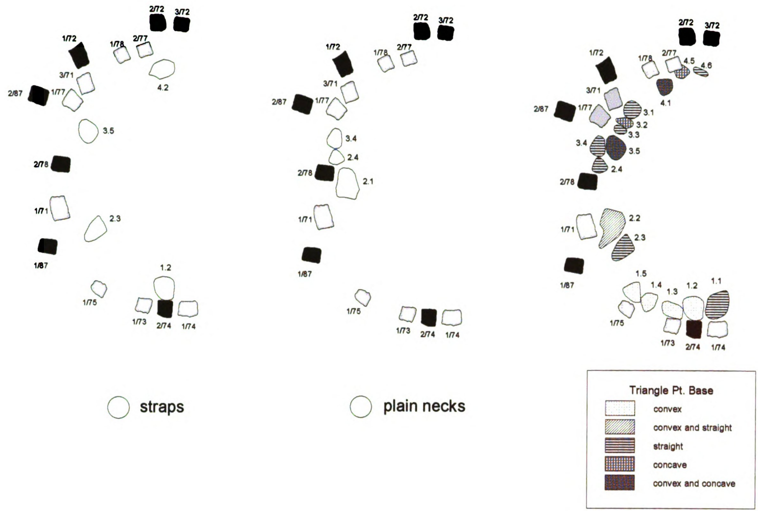


Figure 54. Continued.

activity area	shell-tempered pottery	strap appendages	plain pottery (necks)	straight or concave based pts.	large features (>449 liters)	deep flat bottom pits
1.1				x		
* 1.2		x			x	x
1.3					x	
1.4					x	
1.5						
* 2.1	x		x			x
2.2					x	
* 2.3		x		x		x
* 2.4			x	x	x	
* 3.1				x	x	x
3.2				x		
* 3.3				x	x	x
* 3.4			x	x	x	
3.5	x	x				
4.1					x	x
4.2		x				
4.3						x
4.4						x
4.5				x		
4.6				x		

Table 15. Diagnostic markers by activity area (asterisks indicate areas with three or more markers).

activity areas in Area 3 (3.1, 3.3, 3.4). Activity areas in Area 4 failed to produce more than one association per area. However, deep flat bottom pits were associated with three activity areas (4.1, 4.3, 4.4). Based on the fact that this feature form was consistently associated with later structures, these areas were also considered to be later additions. Activity Areas 4.5 and 4.6 were also considered to be used later than Activity Area 4.2 based on their association with straight and concave projectile points and their location further away from the plaza, overlapping with House 2/77.

Growth of Corporate Groups

Three data sets were compared for each area to assess the development of localized corporate groups: architectural growth, activity area temporality, and mortuary patterning. The focus on multiple lines of evidence limits the sample to Burial Groups 2 through 11, as other groups lack one or more of these data sets due to their location near excavation limits (Figure 55).

Elite Groups

Five burial groups (4, 5, 6, 13, 14) are associated with the elite portion of the site. Burial Group 4 is the only group to contain predominantly flexed burials and is positioned near a leader compound. The concentration of deep flat bottom pits in Activity Area 2.3 and the relatively late radiocarbon date for House 1/87 support a later addition of these spaces, whereas House 1/71 and Activity Area 2.2 were likely used throughout the village occupation. Burial Groups 13 and 14, located on either side of House 1/87, are aligned with the later area. While Burial Group 13 is located in Area 1,

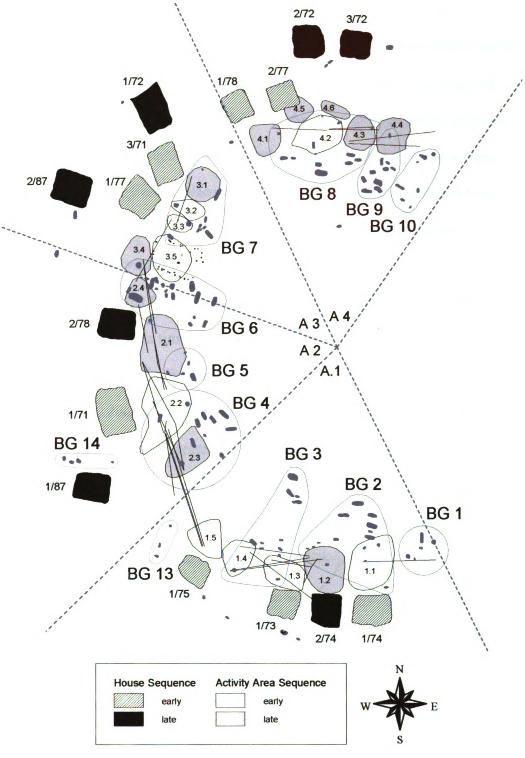


Figure 55. Map of corporate growth, comparing architectural and activity area sequences with burial group locations and pottery refits (25'-125'). (A = Area; BG = Burial Group.)

it is aligned with Burial Group 4; this connection is further supported by pottery refits (see Figure 55). The three tightly grouped burials in Burial Group 14 are located outside of the inner stockade, further affiliating these individuals with this house and the later stage of village use. The orientation of this house is similar to the wall trench structure, both of which are positioned roughly at 45° angles to the plaza, whereas other houses generally parallel the plaza. Similar placement of special-purpose structures has been noted for Middle Mississippian sites, in close association with central structures interpreted as residences of village leaders (M. Smith 2000).

All indications suggest that Burial Group 6 developed late in the occupational sequence of the village, during a time of village expansion, the arrival of non-local groups, and the development of a ritual area focused on House 2/78. Burial Group 6 contains evidence for a village leader and consists exclusively of males and children, most of which are extended (see Chapter VI). This burial group is surrounded by later activity areas, and is positioned between a ritual structure and an area of restricted storage. Both mortuary and residential attributes link this area with the group concentrated near the wall trench house. This finding adheres well to theoretical expectations of male ritualism forming along with village growth (Marcus and Flannery 1996; see Chapter II), expanding an earlier hypothesis regarding the development of a male-focused institution in the village (Robertson 1980).

The high incidence of flexed burials in Burial Group 4 suggests that this group is more related to local groups. In contrast, Burial Group 6 developed later in time and in a closer relationship with new groups. Grave goods are more common in both groups in positions located farther away from the center pole (Figure 56). This suggests that

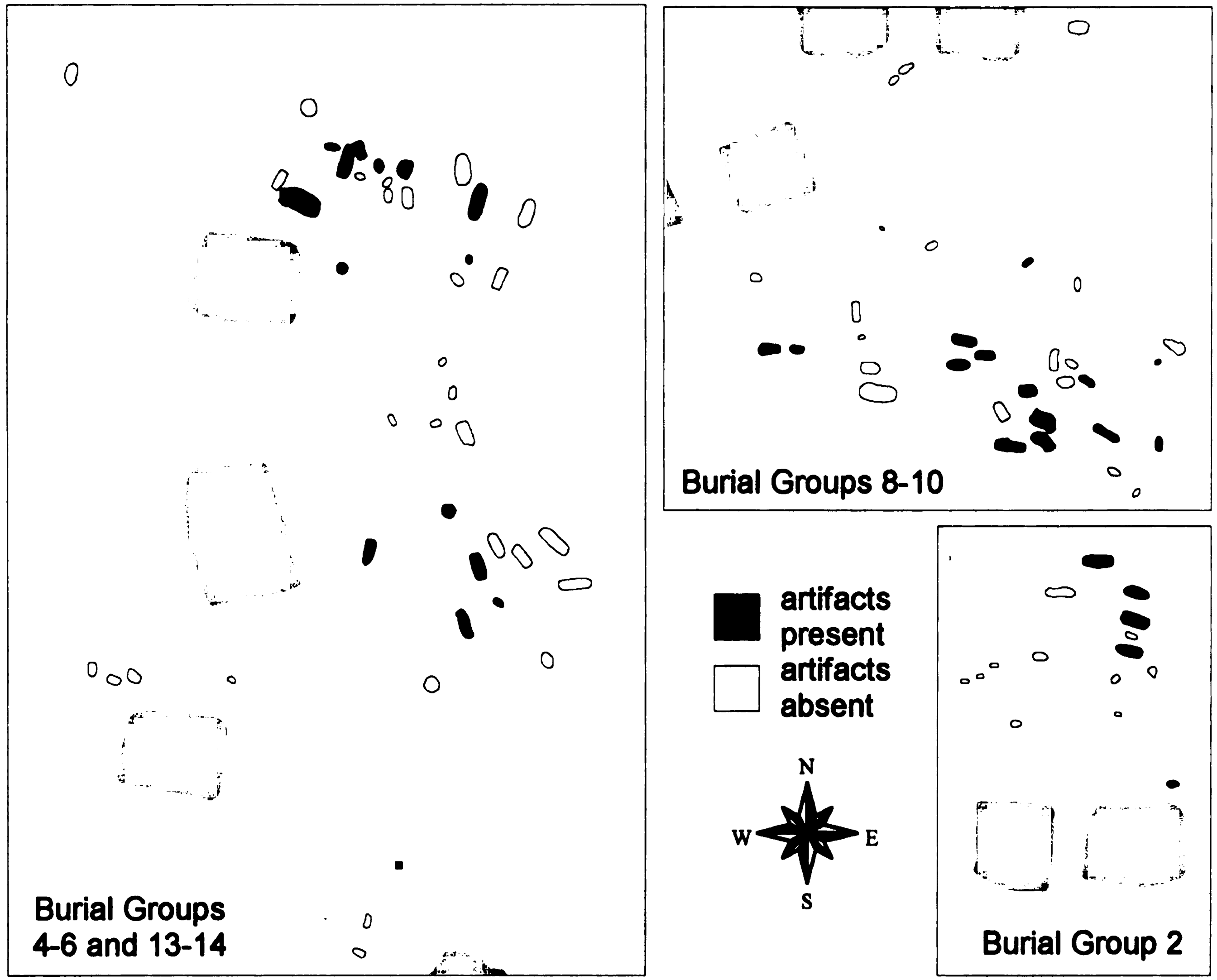


Figure 56. Presence and absence of artifacts in key burial groups.

these burials post-date those located in closer proximity to the center pole. Perhaps valuable objects were removed to burial contexts as the village became more complex, reducing inflation costs (Soffer 1985).

Non-Elite Groups

Closely Integrated Local Groups. Area 1 contains two burial groups linked to residential activity areas and house structures. Burial Group 2 links two activity areas associated with Houses 1/74 and 2/74. Based on all lines of evidence, House 1/74 was constructed before House 2/74. House 2/74 was not rebuilt, deep flat bottom pits are concentrated near this structure, and there are fewer adult burials in the portion of the burial group associated with this area. Average population size per house increased from 10 to 11. The activity area associated with the new house contains larger features, shell discs, scroll designs on vessel necks, abraders, and a metate. At least two of these attributes can be associated with a later use, based on their association with deep flat bottom pits. This relationship was indicated in the principal components analysis, but is perhaps best illustrated in continuous distributions of these attributes (Figure 57). Clearly, this house formed as the northern and western parts of the village grew. Burial Group 3 also links two activity areas with individual houses (1/73, 1/75), but lacks any indication for one preceding the other. At an average of eight individuals per house, population estimates are slightly lower than for Burial Group 2.

Interestingly, pottery refits crosscut these divisions showing a strong connection between House 2/74 and House 1/75. Based on one refit, House 1/74 appears to be more closely linked with an adjacent residential unit, much of which remains to be excavated.

Figure 57. Distribution of selected "new" artifact attributes.

This pattern could have arisen as a consequence of members of the newer House 2/74 being more closely linked with House 1/75 than was the case for House 1/73.

House 1/75 is set apart from other houses in Area 1. This house and associated activity area are spatially segregated from Houses 1/73, 2/74, and 1/74, which form a distinct cluster in the southern portion of the site. This house lacks an association with a particular burial group, although pottery refits clearly link this household with other activity areas in Area 1 and Area 2. Hence, House 1/75 is not only unusual in terms of its isolated position, but this house is also strongly linked into both of its neighboring structure clusters. Furthermore, this household is the only one at the site to be positioned near the intersection of both stockades, and appears to be the location of a village entrance (see Figure 40). Because all temporal indicators suggest an early appearance of this household (intensive house remodeling, relatively small feature volumes, and correspondence with bell shaped pits, convex-based triangular points, and lug appendages), this house appear to have been one of the first constructed in Area 1.

Development of a Courtyard Complex. Area 3 was occupied for the least amount of time, based on the low occurrence of burials and artifacts relative to house area in comparison with other residential units (see Chapter VI). The concentration of straight-based projectile point forms, larger features and houses, and shell-tempered pottery suggests that this area was used most intensively later in the village occupation. The unique arrangement of houses with an interior courtyard is reminiscent of Middle Mississippian household patterning (Rogers and Smith 1995).

Burial Group 7 links four houses and associated activity areas in Area 3. Houses 1/77 and 3/71 formed the center of a social unit that expanded in two directions, including the construction of Houses 2/87 and 1/72. This conclusion is based on the centralized concentration of burials within the group and pottery refits which link adjacent areas to the center. House and feature size support this growth pattern rather well.

Activity Area	Mean Feature Volume	House	House Area
3.1	567	1/72	465
3.2	400	3/71	391
3.3	473	1/77	414
3.4	633	2/87	443

Radiocarbon dates and architectural evidence further support this sequence (see above). Average population estimates for this corporate group increase from 20 to 22 individuals per house pair.

The Concentration of New Ideas. Burial Group 8 links three activity areas associated with four houses (1/78, 2/77, 2/72, 3/72). The central activity area (4.2) formed the nucleus to which adjacent activity areas (4.1, 4.3, 4.5, 4.6) were added. This conclusion is based on multiple lines of evidence: feature frequency is highest in this area (bell shaped features in particular), while fewer but larger deep flat bottom pits are located in adjacent areas. Additionally, there are more burials in the central portion of the burial group, pottery refits link both new areas to the older one, and straight and concave-based triangular points correspond with outer activity areas (4.5 and 4.6).

The evidence for rebuilding indicated that House 2/77 was constructed early in the sequence, and House 1/78 was most likely constructed at a similar time based on its similarity to House 2/77 and the location of both structures within the inner stockade.

Unfortunately, it is not possible at this point to associate particular structures with activity areas in this portion of the site. Average population estimates increase from seven to nine individuals per house in the earlier and later houses, respectively.

Details regarding Burial Group 9 enrich interpretations of this area. This cluster of burials is easily distinguished from adjacent groups. A suite of characteristics further segregates these burials from others at the site: the association with the largest concentration of deep flat bottom pits, the presence of unique burial goods, the close proximity to the wall trench structure, and the close proximity to the smaller plaza post. These distinctions raise the possibility that these individuals were part of a distinct group joining the village later in the site's occupation. Most importantly, it appears that this group's arrival to the village coincided with the expansion of the corporate group initially represented by the central portion of Burial Group 8.

Additional support for the growth of Burial Group 8 can be seen in terms of the locations of specific artifact types in activity areas and burials. In this burial group, graves containing artifacts are limited to burials associated with newer activity areas (see Figure 56). In particular, a shell disc and pipe – located in several graves in Burial Group 9 – were located in burials near a new activity area (4.1) associated with Burial Group 8. Late Woodland points were concentrated in earlier feature clusters, and shell discs were restricted to later activity areas. Abraders and pitted stones were only present in later activity areas.

Development of Village Ritual and Leadership

Closer proximity of pit features to the center pole, higher incidence of storage potential relative to house size, locations of larger and clearly marked burial groups, and the presence of a ritual structure clearly demarcate the elite area from adjacent residential zones. All indications are that this area developed later in time in relation to the growth of Area 3 and Area 4. The goal here is to examine the extent to which this process can be associated with regional interaction and ritual behavior, both of which are often associated with village growth (see Chapter II).

Petrographic Results

Petrographic analysis was undertaken to determine whether there was a distinction in clay sources used in the manufacture of shell-tempered pottery as compared with grit-tempered pottery, to be in a better position to assess regional mobility and exchange patterning (see Chapter V). Results of the investigation thus far have revealed that shell-tempered pottery is not only concentrated near newer houses in the village, but is most directly associated with the elite area (Figure 58). Therefore, shell temper appears to be related to village growth (which may include mobility) and the establishment of a leadership and ritual precinct (which is often related to exchange).

There were two significant results of the petrographic analysis. First, there was no significant statistical difference in terms of the composition of inclusions present in shell and grit tempered pottery, indicating that the raw materials were gathered from the same types of contexts. The only exception is the grit/shell-tempered sherd but the sample was too small to assess significance (Figure 59; see Appendix E). Second, the paste of shell-

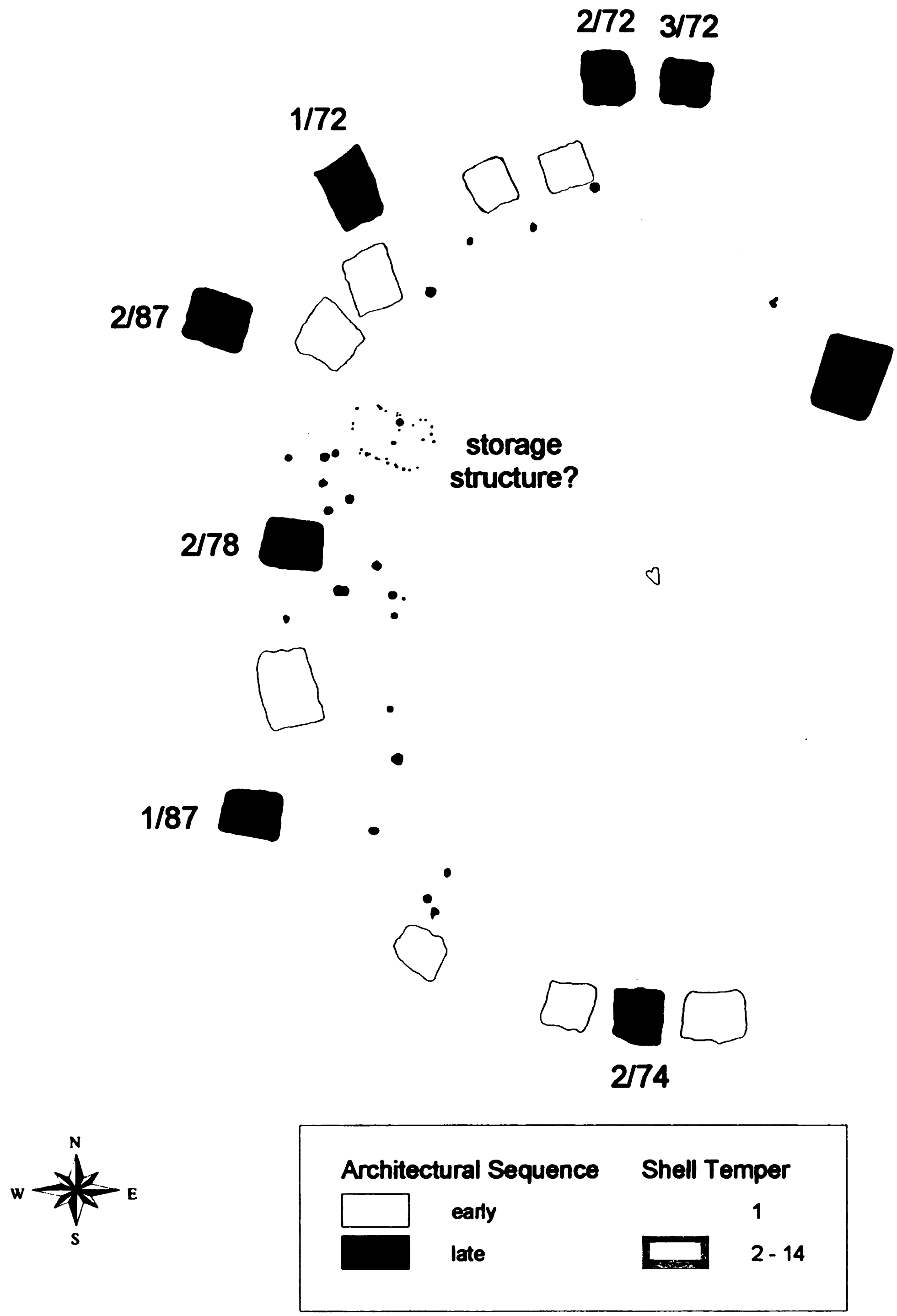


Figure 58. Distribution of shell tempered pottery in relation to the architectural sequence.

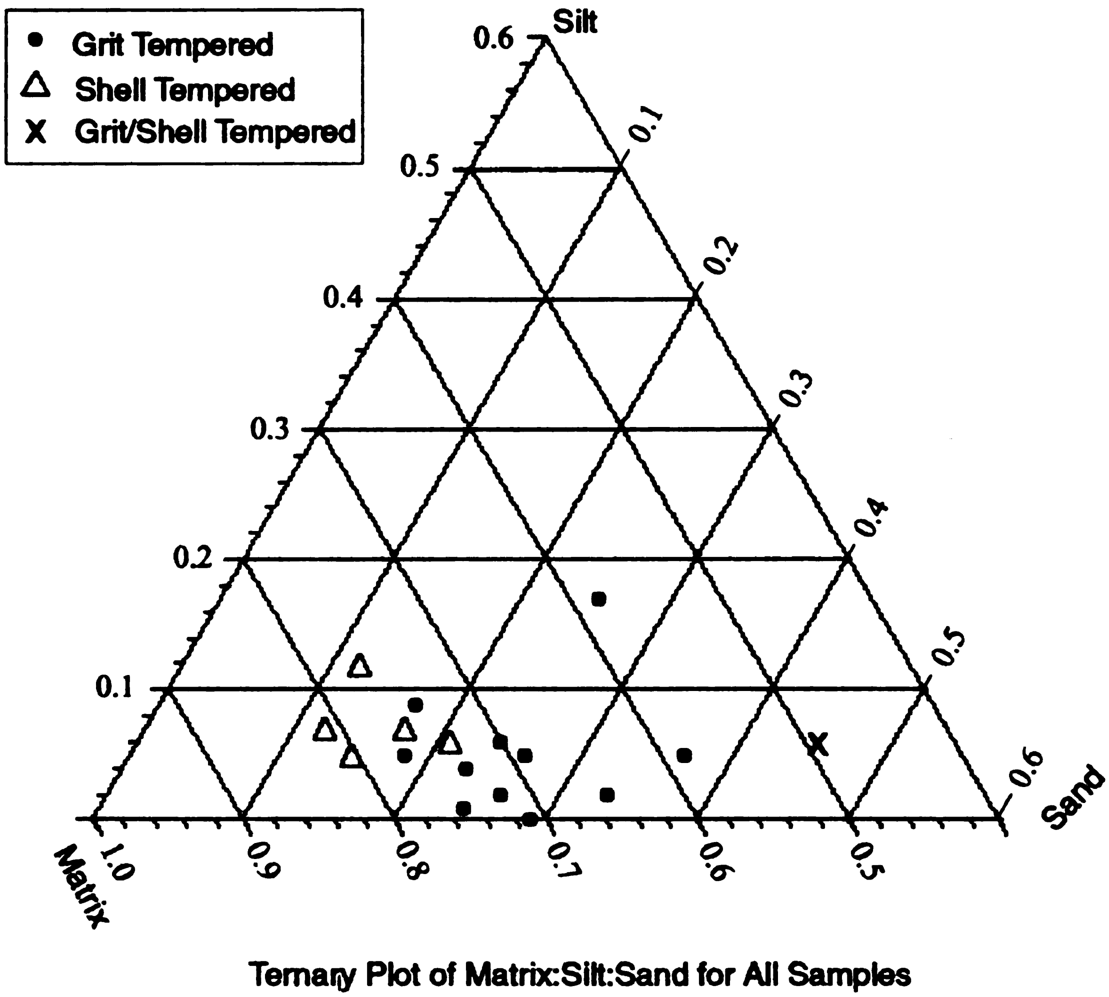


Figure 59. Ternary plot displaying results of petrographic analysis.

tempered sherds generally lacked metamorphic inclusions, which were abundant in all other sherds and both local clay sources. Metamorphic inclusions are most likely related to glacial origins of deposits (Fargher 2004). Alternatively, it is possible that the clay used to make the shell tempered pottery was meticulously cleaned, although this is less likely (Lane Fargher, personal communication).

Based on this evidence, Fargher (2004:9) concluded that the grit-tempered and mixed tempered pottery was produced locally and shell-tempered samples were either imported or produced with clay from a different source than the clay used to produce the grit-tempered samples (Fargher 2004:9). Several explanations could account for the variability in clay source used to manufacture shell-tempered pottery. Three of these possibilities include:

(1) people moved in;
(2) pottery vessels were traded in; and/or
(3) same inhabitants started to use different sources over time.

Morphological differences have been previously noted for shell-tempered pottery, suggestions being that these vessels were derived from a differing pottery tradition (Sunderhaus and Cook, n.d.). This observation provides more support for the first two explanations. The concentration of shell tempered pottery near the newer structures supports potters moving into the village. The general concentration of pottery in the elite area could also be related to exchange, but these are not mutually exclusive explanations.

Non-glaciated clay sources are located a considerable distance from the site, the closest potential sources being in the portion of the Interior Plateau in northern Kentucky and possibly portions of southwest Ohio and south central Indiana (see Figure 4). Many earlier and contemporary Fort Ancient sites are located in southwest Ohio, most notable of which is the State Line site, which contained many more Middle Mississippian architectural and artifact characteristics than SunWatch (Vickery et al. 2000; see Chapter VIII). A regional sample of both sherds and sources near these sites is needed before making any additional conclusions regarding regional processes. Unfortunately, another analysis of the composition of Fort Ancient pottery in southwest Ohio – including samples from the State Line site – did not examine the specific mineralogical composition with which to compare data presented here (Tankersley and Meinhart 1982).

An additional finding of the petrographic analysis is that the grit/shell-tempered, negative painted/rectilinear guilloche sherd contained metamorphic inclusions. All results of the petrographic analysis suggest that some pottery came from outside and production of these types of vessels was continued using local sources (Fargher 2004). Interestingly, this sherd was located directly in front of the ritual structure.

Revisiting Green Corn Ritualism

The central argument regarding the ritual structure of SunWatch has been that a ceremony similar to the historic Green Corn ceremony was practiced (Heilman et al. 1988; Robertson 1980). The goal here is to further examine this important hypothesis and to specifically connect this ritual with other parts of the village and the growth of the elite area.

Specific data sets considered here include artifact densities, feature form and seasonality, burnt corn, solar alignments, and pottery refits (see Chapter V for discussion of these criteria). These data sets are similarly distributed (Figure 60). A

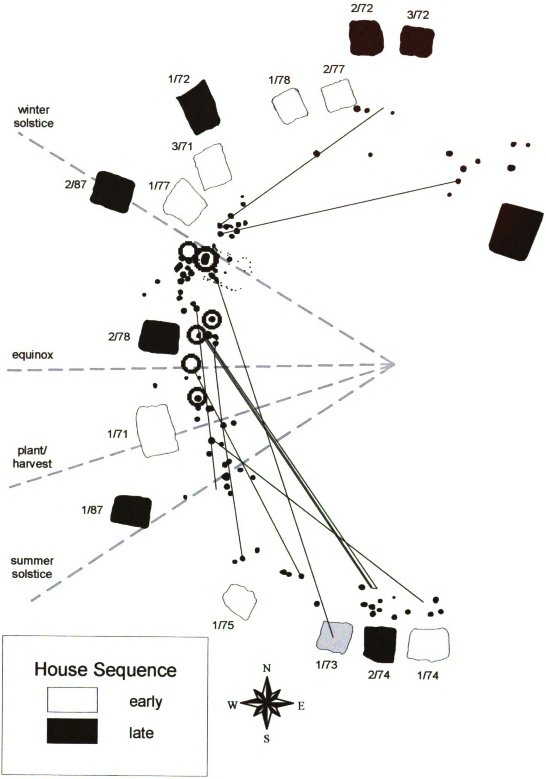


Figure 60. Map of burnt corn (solid) and ritually-filled (open) features in relation to large pottery refits (>125'), solar alignments, and the architectural sequence.

particularly strong similarity is visually apparent for the distributions of burnt corn and pottery refits (>125'). Specifically, concentrations of burnt corn are located near structures throughout the site built later in the occupational sequence, and pottery refits link these areas together. Burnt corn is specifically concentrated near the winter solstice, summer solstice, and planting/harvesting alignments with few occurrences near the equinox alignment.

Pottery and bone/shell artifacts are concentrated in two features in the elite area, 19ww/74 and 5/78, and debitage density is markedly higher in Feature 1/79 (Figure 61; see Figure 60). The distribution of faunal remains could not be quantified, as they have not been completely inventoried. However, features that produced substantial amounts of pottery in particular are noted as also containing many animal remains. For example, field notes from Feature 19ww/74 describe an "exceptionally high quantity of pottery…lots of bone – mainly deer and some turtle…many whole mussel shells. Incredible amount of bone" (Louise Robbins, 1974 field notes on file in the Anthropology Department [DSNH]).

Feature 19ww/74 is the westernmost pit in a group of four overlapping features oriented along the equinox alignment. Feature 5/76 also consists of four overlapping features located in front of the ritual structure, and the last feature in this row contains two dog burials. A distinct feature (12/76) was located inside the area of restricted storage. This feature is a large bell shaped pit containing a distinct ledge around the opening, possibly for reinforcement during repeated use. This feature and an adjacent pit contained the only occurrence of grog-tempered pottery, which are likely of Middle Mississippian derivation (Sunderhaus and Cook n.d.). This pit was

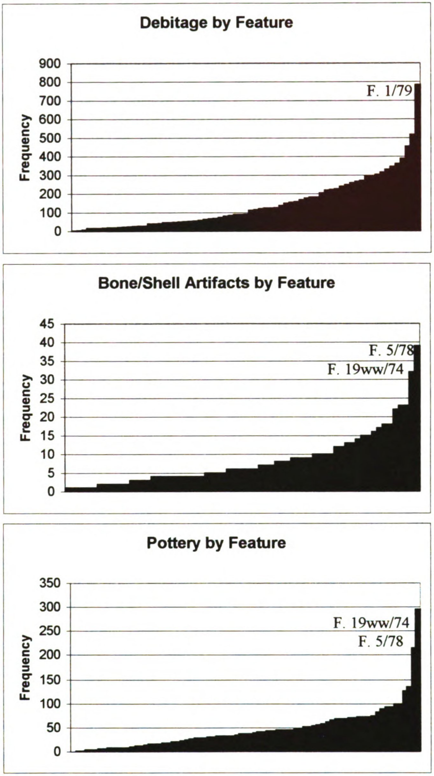


Figure 61. Histograms of debitage, bone/shell tools, and pottery distributions for features located in the elite area.

located near a substantial extramural hearth and was the only feature with evidence of both winter and summer uses (Shane, personal communication).

Pottery refits spanning the greatest distance (>125') are concentrated in the vicinity of ritual features. Pottery refits are particularly common from every house located in Area 1 to the ritual structure. In particular, a single feature associated with House 2/74 contains three refits linked to the feature containing the dog burials associated with House 2/78. Two refits link distinct concentrations of burnt corn in Area 4 with features located near this area. All pottery refits are focused on the ritual structure.

Locations of seasonally-filled features were used to investigate the annual timing of ritual activities independently of solar alignments (Figure 62; see Chapter V for methods used by Shane for determining seasonality). The relationship between these data sets is clear in this part of the site; visual inspection revealed a close association between winter features and the winter solstice alignment and between spring/summer features and the summer solstice alignment. House 1/71—one of the largest houses at the site—is located on the planting/harvesting alignment and is associated with spring and summer features. The winter solstice alignment is associated with the area of restricted storage and is located near features that were more often filled in the winter months. This finding suggests that, as an alternative to restricted storage, this area could have been used as a winter structure (Carskadden 1992), as the main ritual precinct appears to have been used most intensively between the equinox and winter solstice. The area containing a chiefly residence (Nass 1987) and/or Big House (Heilman et al. 1988) was spatially bound by

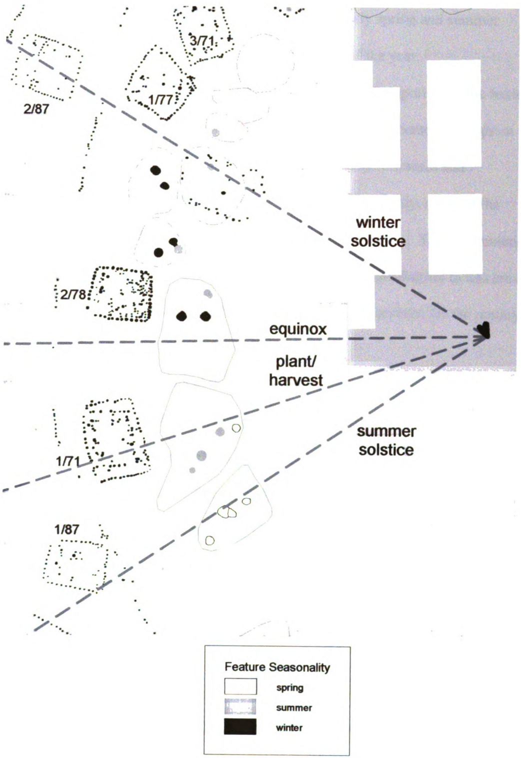


Figure 62. Location of elite features attributable to a particular season in relation to solar alignments. (Source: Orrin Shane, personal communication.)

equinox and summer solstice alignments and contained mostly spring and summer features, indicating more intensive uses during these times of the year.

A renewal ceremony similar to the Green Corn ceremony is supported on the basis of artifact densities, burnt corn, and pottery refits linked with houses located throughout the village. Individuals from throughout the village would clean their houses and communally dispose of the debris during such an occasion. Inevitably, some of the broken pottery would be left behind and disposed of near their house. The accumulation of broken artifacts could also have resulted from intensive craft production in this area, which often accompanies ritual occasions, although this fails to account for the pottery refit pattern.

A final consideration with respect to this ceremony is the fact that non-local groups often participate in the event. This process accounts for much of the data, not least of which is the discrepancy between artifact density and house area in the north. The growth spurt concentrated in the north may be the result of people living for a short time with family members in this part of the village.

> After all of the people from the various towns had assembled at the site of the ceremony, their first order of business would have been to arrange places to live for the duration of the ceremony. In some cases they would have stayed with fellow clansmen who lived in or near the town where the ceremony was to be held. But if room were scarce…the various clans would have had to erect temporary shelters. (Hudson 1976:367)

It is a distinct possibility that families and individuals joined the social groups in the northern part of the site for short periods of time on a regular basis, most likely in conjunction with ritual events.

A Brief History of SunWatch

A close consideration of radiocarbon assays from pit and house features, evidence for architectural rebuilding of houses and stockades, diagnostic feature and artifact attributes associated with household activity areas and burial groups, and pottery refits revealed a consistent pattern of village formation. Four corporate groups and an elite area developed during two stages of village formation. Difference in household frequency is supported by burial placement and is most likely attributable to different stages in the developmental cycle of social units. Corporate groups developed in a localized fashion, as the village was integrated by means of an elite residence and a distinct ritual precinct.

Two similar types of kin groups came together to initially form the village, located in the southern and northern parts of the site. The southern group grew at a steady rate while the northern group increased dramatically with the addition of another group concentrated in the vicinity of the wall trench structure (see Chapter VI).

The first stage of construction was concentrated in Area 1 and Area 4, based on the association with early radiocarbon dates for structures and pit features, and the concentration of grit and grit/shell tempered pottery, convex-based triangular projectile points, smaller feature and house sizes, and Late Woodland points in these areas. The earliest houses built at the site were located in two closely spaced pairs in Area 3 (1/77, 3/71 and 1/78, 2/77) and three evenly spaced structures in Area 1 (1/75, 1/73, and 1/74). Based on the concentration of straight-based triangular points and the low artifact densities near Houses 1/77 and 3/71, these were likely built slightly later in time. The first of two center poles and House 1/71 were also in use at this time. The inner stockade enclosed these structures.

The second stage of construction was concentrated in Areas 2, 3, and 4, based on the association with later radiocarbon dates for structures and pit features, and the concentration of straight-sided features, shell tempered and plain pottery, straight and concave-based triangular projectile points, and larger feature and house sizes. This included the addition of two houses in Area 4 (Houses 2/72 and 3/72) and the addition of House 1/72 and 2/87 in Area 3. Two houses were built in Area 2 (1/87, 2/78) and House 1/71 may have been expanded at this time. House 2/74 was added to Area 1 as new groups joined the village and the elite area formed. The outer stockade enclosed all houses within the village.

Area 1 contained two closely related corporate groups occupying adjacent pairs of houses; one pair formed during the village occupation and one was present throughout the occupation. Area 2 consisted of an elite residence where leadership and ritual functions developed later in the occupational sequence. Based on pottery refits and a host of shared attributes, House 1/75 was equally related to corporate groups in Area 1 and the elite area. Early artifact and feature attributes corresponded with activity areas associated with this structure, suggesting that this was one of the first houses built in the village. Areas 3 and 4 each contained one corporate group, each of which was associated with four houses and activity areas. Area 3 developed in close coordination with the elite area, based on similarity in feature and house size, the concentration of quartzite and mica-tempered pottery, and the overlapping ritual sphere focused on the winter solstice alignment. The lower artifact and burial densities associated with Area 3 suggests that it was occupied for a shorter duration of time or was used less intensively than other site areas.

The development of the elite area was examined in relation to outsiders, ritual, and exchange. Ritual and leadership formation in the village appear to have been coterminous. This process is best understood within the context of practices associated with peer polity interaction with Middle Mississippian groups, based on similarity of site structure to Middle Mississippian villages and its development in conjunction with the appearance of the wall trench house (see Chapter VIII).

Village leadership was most likely associated with a local kin group located in Area 1 and specific mortuary connections link burials associated with House 1/75 to the village leader. Development of leadership appears to have coincided with the arrival of individuals or small social groups. Rituals and exchange accompanied this process as is common in ethnographic accounts of small-scale movements into villages (Chagnon 1968). Long-distance exchange and/or population movement is supported by petrographic analysis of shell-tempered pottery, in addition to the presence of a single wall trench house associated with a suite of unique artifact and feature attributes.

The concentration of ritual and leadership activities in the area bounded by solar alignments has been known for some time (see Chapter IV). Data presented here have expanded our understanding of the significance of the winter solstice. This alignment is the most redundantly marked at the site including the hearth in House 2/87, the location of an extramural hearth and an unusual feature containing Middle Mississippian pottery, and an area of restricted storage, all of which is in close proximity to the ritual house and burial precinct.

CHAPTER VIII: REGIONAL AND THEORETICAL IMPLICATIONS

This study has investigated the social structure and formation of the SunWatch site, a Fort Ancient village occupied during the course of Middle Mississippian developments in adjacent regions. The theoretical perspective incorporated multiple spatial scales, focusing on household and corporate group dimensions within a broader framework including village and regional scales. Regional data and theoretical perspectives were incorporated that could best account for variation among architectural, mortuary, pit feature, and artifact attributes. Examining Middle Mississippian dimensions of this site proved useful for furthering our understanding of the process of inter-regional interaction and village formation.

A Model of Fort Ancient Village Social Structure and Formation

This study has demonstrated the utility of incorporating general ethnographic and Mississippian dimensions into models of Fort Ancient village formation and social structure. The following sections summarize key findings of the investigation in relation to existing Fort Ancient models, focusing on the structure and development of an elite residence, the formation of corporate groups, and residential variation and regional integration of populations.

<u>An Elite Residence and Village Growth</u>

The elite residence at SunWatch adheres to rules associated with Middle Mississippian site design as this area is significantly closer to the center pole, contains unique architectural patterning, storage distinctions, and is clearly associated with solar alignments marking ritual activities. Evidence supports the conclusion that this area served to integrate local and non-local groups, a finding which fits well with existing models of Fort Ancient evolution (Pollack and Henderson 2000a). However, the explicit Middle Mississippian ritual connection expands the view to include peer polity interactions (including population movements) into models of Fort Ancient development.

The emergence of local leadership and Mississippian ritual functions in the west side corresponded with expansion in the residential zones of the village and the elite residence formed as the village grew in relation to regional processes. Mississippian-related artifacts and features occurred later in the occupational sequence. These were often localized around particular structures strongly suggesting their linkage to the emergence of particular institutions. Petrographic analysis supports a non-local source for some of the shell tempered pottery, a source located nearer to neighboring Middle Mississippian groups. These findings raise the distinct possibility of population movement, generally coinciding with the growth of this district.

Middle Mississippian exchange was ritualized and used in part by a local leader to establish power. Mississippian material culture, while a small component of this Fort Ancient village, could not have been in a clearer context regarding the impact Mississippian exchange had on site structure, including both the center pole and the elite area. By re-focusing the problem away from the low occurrence of Mississippian artifacts, the presence of Mississippian ideas has become clearer.

Specific linkages were made between the elite precinct and other residential portions of the village. The area located to the north of the elite area was not discernible in terms of feature gaps and was positioned closer to the center pole than other areas. Similar to the elite residence, this area also contained larger houses and features. Additionally, quartzite and mica-tempered pottery and metates occurred more frequently in this area, and grit/grog-tempered pottery and limestone and slate disc preforms were exclusive to this part of the site. The low density of artifacts and concentration of later diagnostics in Area 3 is indicative of a shorter occupation span; perhaps this residential unit was established in conjunction with the growth of the elite area.

Corporate Groups and Households

The identification of corporate groups and their development specifically expands our understanding of Fort Ancient residential behavior by revealing processes by which smaller villages became larger as a result of both internal growth and the joining of additional groups to a village. While these processes have been mentioned as possibilities (Carskadden and Morton 2000; Henderson 1992b), they have not been directly investigated prior to the current investigation. This also expands our understanding of corporate developments on a more general level through the specific examination of growth of corporate groups represented in both mortuary and residential spaces.

Expectations of corporate groups as bounded sets of mortuary areas were met and adult burials in particular were spatially structured in arc-row patterns, which are interpreted as a general Mississippian pattern adapted to a circular village structure. Adults were buried closer to the village center, a common finding at other Fort Ancient villages (Henderson and Pollack 2001). This study specifically identified this space as being located in the same proximity to the center pole as the elite residence. In contrast, children were more often buried in the pit feature zone, suggesting a close connection between human and plant fertility (storage) as has been suggested for Neolithic communities (Bradley 1998). The first rule was to define the group spatially, including both child and adult members. The second rule was to internally partition the population into "adult" and "non-adult" statuses based on distance to the center of the village.

Cluster analysis supported these concentric divisions but also revealed an additional finding. One cluster was distributed in four specific locales, closely matching cardinal directions. These burials were unique in that they contained a greater diversity of artifact inclusions, and consisted mostly of males and children. Moreover, they contained the only occurrence of shell discs and the majority of wolf and dog remains. These burials were densely grouped near the ritual structure in the elite area and near the wall trench house in the northeastern part of the site in the heaviest concentration of deep flat bottom pits. Moreover, many flexed burials are oriented in a distinct pattern in this part of the site and several graves are aligned with the smaller ritual post. This is consistent with the anomalous nature of the residential component in this portion of the site.

Two to four household activity areas were directly associated with individual corporate groups (i.e., cemeteries were shared by multiple households) (Figure 63). Segmentation of corporate groups is supported by concordance between burial row frequencies, architectural rebuilding, and temporally-distinct material and feature

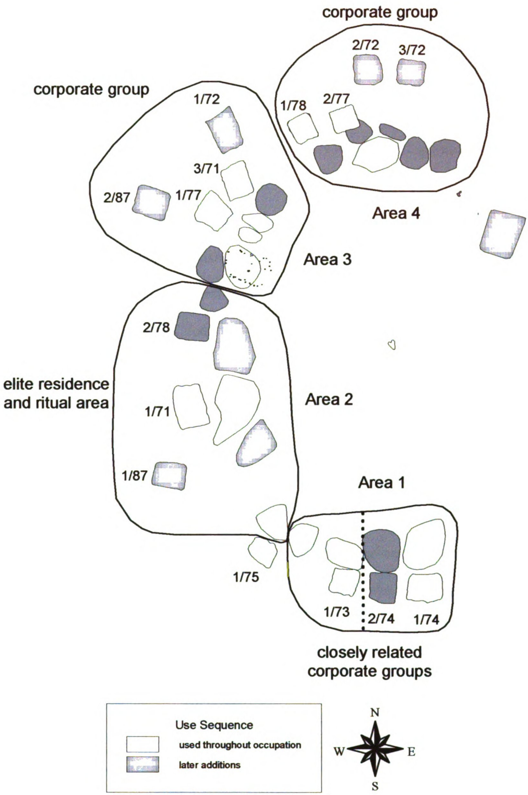


Figure 63. The basic model of residential composition and corporate growth.

indicators in household activity areas. When more than two households were associated with a corporate group, the oldest members were positioned in a central location from which subsequent households formed. Corporate groups appear to have started with two closely spaced households, adhering well with findings at villages occupied for shorter time periods (Henderson 1992b; see Figure 9). Pottery refits linked newer houses to older ones, which were interpreted as founders of corporate groups. Stronger linkages of newer houses to the founding households suggests that these families were more dependent on the parent than established ones, which is often the case in segmented social systems (Fortes 1953). Differences in the numbers of households comprising a corporate group appear to be related to stages in the development cycle (Tourtellot 1988).

What Kind of Mississippian Periphery was Fort Ancient?

A broader framework is needed to understand Fort Ancient development, including both a geographic and temporal component. Developments associated with the formation of ritual and leadership institutions during the Middle Fort Ancient period occurred within a context of peer interactions with Mississippians, or groups directly interacting with them. The function of these institutions was to integrate the village to meet the needs of a larger population. Each of the following six theoretical expectations regarding the functioning of peer polity systems were supported in this study:

(1) structural homologies at highly visible levels: includes presence of center pole, elite areas, and corporate groups;

(2) contact prior to change: earlier Fort Ancient sites often contain Mississippian trade items (Drooker 1997);

(3) prestige goods (diacritics [Schortman and Urban 1987]) with higher status individuals: whelk shells and shell discs;

(4) increased complexity of the less complex group: all indications are that leadership and ritual was established as a result of interactions with Mississippians;

(5) presence of traveling peers: presence of a wall trench structure that was associated with distinct feature forms and artifact attributes; and

(6) integrative mechanisms: later date for ritual structure, and clear associations with Mississippian materials in context of clear pattern of ritually-integrated corporate groups.

Mobility and Population Aggregation

By identifying key elements of site structure and the particular context of Mississippian artifacts, this study has shown that the relationship between local and non-local influences in the formation of Fort Ancient villages was dynamic. In particular, this includes the movement of Mississippian individuals and/or social groups moved into local villages, factoring heavily into subsequent developments. These findings contrast with earlier conclusions that Fort Ancient developed from migrating Middle Mississippian groups in isolation of local populations (Prufer and Shane 1970). Results of this study are more in line with the conclusion that interactions between Late Woodland and Middle Mississippian groups were variable, resulting in some groups developing a more "Mississippian" settlement system than others (Essenpreis 1978) and the emergence of particular institutions as a response to inter-regional interaction (Robertson 1980).

The likelihood of migrations factoring directly into the formation of Fort Ancient villages requires specific considerations of the types of moves that occurred. This includes considering the movements of both social groups and individuals. There are several ways in which the patterns revealed in this study could have formed in the context of population movements. The facts to consider closely are the localization of a suite of material culture closely affiliated with an individual wall trench house, and the concentration of shell-tempered pottery in the elite area, most if not all of which was produced a considerable distance from the village. The wall trench house and related items suggests that a family, possibly part of a wolf clan-like group, moved into the village. Alternatively, this pattern could have arisen in the context of short-term stays within these social groups: "If the traveler found members of his clan in the town, he spent the night in one of their households; if not, he spent the night in the town house" (Hudson 1976:314-315). The concentration of shell-tempered pottery, some of which appears to have come from a considerable distance from the site, near new households in the elite area suggests the movement of individuals into this area, perhaps as part of marriage alliances, among other alternatives.

Population movements and aggregation have long been discussed in the context of the fusion of dual social groups (Levi-Straus 1963). This has been widely noted for Middle Mississippian villages (Blitz 1999), and is consistent with ethnographic accounts in the Eastern Woodlands in general (Hudson 1976) and among southern Algonquins in particular (Callendar 1978). The basic characteristics of this form of social system and particular characteristics associated with southern Algonquin groups are presented followed by further consideration of the SunWatch case (Cook and Sunderhaus 1999).

Dual systems of social organization are particularly effective for population aggregation (Lowell 1996), which characterizes the Middle Fort Ancient period in particular (Pollack and Henderson 2000a). On a general theoretical level, Levi-Strauss

(1963:161) has noted that "...dual organizations...[are] the historical result of the fusion of two populations differing in race, in culture, or simply in power." And Chagnon (1968:70-72) has observed among the Yanomamo that moiety divisions facilitated the fission and fusion process, whereby villages break and form at their weakest points. Perhaps the dual division structure evolved to function as a ready-made design for the fusion and fission processes, the need for which may have become more marked as agriculture intensified which has been noted for Middle Mississippian populations (Blitz 1999).

Southern Algonquin villages often contained localized moieties and clans. Moieties were often associated with the Earth and Sky and often determined the residential structure of the village, "with Earth clans inhabiting the northeast half of each settlement and those of the Sky moiety the southwest" (Callendar 1978:615). The Earth moiety includes clans with animal names associated with the earth (e.g., Bear, Deer, Wolf), whereas Sky moiety clan names were animals associated with the sky (e.g., Eagle, Thunder) (Callender 1978:615; Radin 1923). Each moiety often served distinct functions. For example, the Sky moiety provided the tribal chief while the Earth moiety served to police the community (Radin 1923:183). Despite the fact that these distinct halves performed unique roles, they were often linked through reciprocal obligations and exogamous relations. Economic specialization has also been noted among southern Algonquin moieties (e.g., Hoffman 1893) as well as more generally (Ortiz 1969). Some moieties are directly associated with winter and summer seasons (Ortiz 1969).

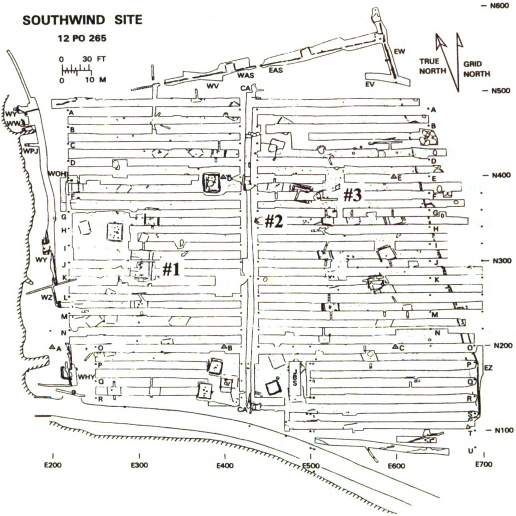
Data presented in this study support a moiety-like structure for the occupants of SunWatch, but expand the case to include a temporal and ritual dimension. A southwest/

northeast division of the site is supported by numerous artifact attributes in pit feature and mortuary contexts, with evidence of a village leader from the southern portion of the site. Hunting/warfare and fishing gear were more common in the south while some food processing implements were more frequently located in the north, supporting an economic differentiation of village halves. The concentration of wolf and dog remains in adjacent corporate groups in the northeastern part of the site supports the presence of a clan-like group (the wolf is an "earth" animal in the southern Algonquin model [Callendar 1978]). Spatial patterning of several artifact forms suggests that reciprocal relationships existed between village halves, specifically occurring during the growth of each group.

A Comparable Mississippian Peer

Fort Ancient is located on a Middle Mississippian periphery. Some studies have downplayed this fact while others have stressed it, but this study is the first to systematically explore the issue. A brief comparison with a neighboring Middle Misssissippian village reveals striking similarities in overall site structure. This comparison is intended only to begin focusing attention on the appropriate site types to discern the nature of these interactions. Studies comparing Fort Ancient villages with Mississippian mound centers have been misdirected.

The Southwind site, located in southwestern Indiana, is the clearest example of an Angel Phase village (Munson 1994) (Figure 64). The layout of this site is very



Key:

#1 Big House-type structure
#2 plaza post
#3 single-post house

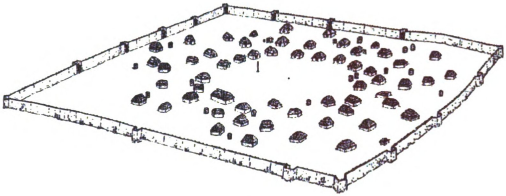
Figure 64. Southwind site map (adapted from Munson 1994).

similar to SunWatch with multiple rows of houses surrounding a plaza with central features. Plazas are of a similar size at both sites and houses form distinct groups within each village. Overall house rebuilding was similar at each site with the plaza pole and houses being rebuilt multiple times.

The relationship between plaza features and the western zone is similar at both sites. Large houses are located in the western parts of each site. Interestingly, the distance from the plaza poles to these structures is nearly identical (Southwind = 134' and SunWatch = 133'). Moreover, there are also two plaza markers at Southwind as was the case at SunWatch, each being located in similar positions within the respective villages.

A final similarity was observed for a structure located in the northeastern part of each village. All houses were wall trenches at Southwind with one exception being a large single-post structure in the northeastern part of the village. This location is very similar to the position of the wall trench structure at SunWatch.

While site layouts are similar for these villages, there are clear distinctions (Figure 65). The Southwind stockade is square with bastions, no burials were present, and subterranean storage/trash features were rarely encountered (storage was primarily in above ground granaries). The absence of burials may be related to distinctions in mortuary behavior whereby rural cemeteries were often located outside of villages (e.g., Goldstein 1980). Also, it is possible that this difference relates to the hierarchical settlement pattern with burials occurring more frequently in mound centers. Above ground storage may be due to poor drainage of local soils (Cheryl Munson, personal communication).



Southwind

SunWatch

Figure 65. Artistic reconstructions of the Southwind and SunWatch sites. (Southwind illustration by Ellen Sieber and Cheryl Munson; SunWatch rendering by Jeff Door and Robert Cook. Note that the highlighted portion of SunWatch is conjectural.)

The purpose of this comparison is to note the similarity of the overall pattern of village architecture between Fort Ancient and Middle Mississippian peers. The intention has not been to suggest that these two particular sites interacted but that these types of sites resulted from peer interactions. The conclusion from this preliminary comparison is that if Fort Ancient residential architecture and stockades were replaced with Middle Mississippian architectural features, these two groups would appear to be very similar.

The Persistence of Time

Fort Ancient and Middle Mississippian peer interaction may have deeper roots as long-distance ritualized interactions are often recurring between regions (Bradley 1998). Exchanges between earlier groups living in the Fort Ancient and Middle Mississippian regions can be minimally traced back to Middle Woodland period. The connection between Ohio and Illinois was well-established since Middle Woodland times which may help explain why many early Fort Ancient sites are located in a former Middle Woodland "core" (see Figure 8). However, Middle Fort Ancient sites are often located nearer to the Middle Mississippian border suggesting the development of more closely spaced peer relations. The earliest date from Blain village comes from a feature containing both Fort Ancient and Middle Woodland materials (Prufer and Shane 1970:232). Blain village and the Kramer site are both located adjacent to Middle Woodland earthworks and some Middle Woodland mounds have instrusive Fort Ancient burials (e.g., Seip, Tremper) (Griffin 1943:213-214). It may not be coincidental that mortuary behavior provides a linkage between Middle Woodland and Fort Ancient groups.

Unfortunately, not as much is known about the Late Woodland period in the region. However, as was alluded to earlier, villages developed in Ohio during this time. There is an uninterrupted sequence of Late Woodland villages in southwestern Ohio and many early villages are located in the central Ohio Hopewell core.

Further Work

To develop a better understanding of the problem of Fort Ancient and Mississippian interaction and the social structure of Fort Ancient villages, further investigation is required at both site and regional scales. Despite considerable variation in villages based on previous work, some general principles became clear from this study from which to suggest productive avenues of inquiry.

SunWatch and Other Villages

At SunWatch, additional stratigraphic and areal excavations are needed. Units excavated by the museum located near the wall-trench house should be excavated to the depths at which this structure was located to more closely examine the nature and extent of this distinct area. Stratigraphic excavations should also be undertaken near the southern stockade segment that exhibited evidence for buried deposits.

Areal excavations at specific locations within the site are needed to assess whether additional structures are present. Of primary importance is whether additional houses are located in the pit feature/mortuary area where the wall trench house and an additional structure were situated. There are many posthole patterns extending into unexcavated areas in the northern part of the site (see Figure 40). The western and southern portions of the site may also contain additional structures. It is not possible to fully assess the village pattern without examining these areas. Also, the east side of the site should be tested although most features may have been destroyed during the construction of West River Road (see Figure 11). The plaza and areas outside the village should also be examined.

Findings made at SunWatch could be used to further examine other Fort Ancient villages. Specific characteristics of interest identified in this study include several key elements of site structure, including the role of the center pole, the structure of burial groups, and proximity of houses.

Well-excavated villages occupied for a shorter duration than SunWatch are missing the ritual precinct and have paired households (see Chapter IV), which matches the SunWatch pattern rather well as it has been shown that the elite area was established later in the occupational sequence. Specific attention should be focused on locating additional center poles as they have not been documented at other Fort Ancient sites. This is particularly important given that SunWatch exhibited such a clear relationship between this feature and the ritual/mortuary realm. Burial rows are evident at other Middle (e.g., Capitol View [1992b]) and Late Fort Ancient sites (e.g., Hardin [Hanson 1966]), some of which also contained a row of adult males (e.g., Madisonville [Drooker 1997]).

Wall trench architecture has been documented at many Fort Ancient sites (see Figure 7). While most often there is only one structure of this type per village, areal excavations have been too limited to deduce a general pattern. Sites lacking a wall trench structure may contain buried deposits as the SunWatch example was located in an unusual position in a village of single post structures. If it were not for a burial intruding on this house and the avocational archaeologists diligently following this lead, we would have no reason to suspect this was present.

Controlled comparisons need to be made between villages containing wall trench architecture. One such example is the Schomaker site, located approximately 35 miles downriver from SunWatch (Cowan et al. 1990). This site also contained one wall trench structure surrounded by deep flat bottom features and produced radiocarbon dates similar to the SunWatch wall trench house. This house was also rebuilt; however, both structures utilized wall trenches in their construction. Similar to SunWatch, this structure was positioned over pit features; however, it was located on the southern side of the village and did not contain burials. Interestingly, radiocarbon dates from this village are also bimodally distributed suggesting similar temporality. (This temporal patterning may be indicative of Fort Ancient sites in general [Carr and Haas 1996]). Pottery from the Schomaker site is all shell tempered, but other artifact types suggest strong similarities to SunWatch (Cowan et al. 1990).

It is quite possible that shell-tempered pottery was introduced to SunWatch via trade and/or population movements from Schomaker or a nearby village (Sunderhaus and Cook n.d.). The petrographic analysis reported in this study needs to be expanded to further examine this issue, for it is a distinct possibility that migrants from the State Line site (or sites in this area) helped form sites like SunWatch and Schomaker. Sites located in this portion of the Fort Ancient region are earlier, and contain more Middle Mississippian characteristics, including higher occurrences of shell-tempered pottery (Vickery et al. 2000); intermediate sites contain relatively even percentages of shell and grit-tempered vessels (Figure 66; Figure 67).

Many sites contain a few Middle Mississippian diagnostics and varying degrees of shell-tempered pottery. The context of Mississippian diagnostics in particular needs to be investigated, as the pattern was unusually clear at SunWatch. A close consideration of the contexts of these items and testing them to determine if they were non-local was invaluable in furthering an understanding of the role interaction played in village growth and the establishment leadership and ritual institutions.

The Fort Ancient Region and Beyond

The Fort Ancient region has always suffered from a lack of surveys and comparative studies with other Middle Mississippian peripheries. The lack of systematic large-scale survey data makes it impossible to assess the settlement system although it has been extensively argued that Fort Ancient both lacked and contained a hierarchical system in some locales. While there is more support for the former argument, in reality we do not know enough to determine this with a high degree of confidence. More information is needed from a large region surrounding a Fort Ancient village to learn about non-village types of sites. A regional survey in the vicinity of SunWatch and southwestern Ohio would make a lot of sense considering we know so much about the site. Only after such investigations are undertaken will we be in a position to build regional models from which to address broader behavioral questions (Rossignol 1992).

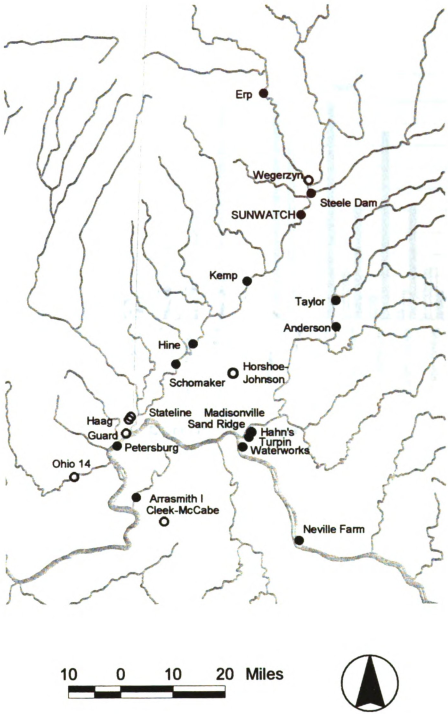


Figure 66. Major Early (open) and Middle (solid) Fort Ancient site locations in southwest Ohio and adjacent areas. (Source: Kennedy 2000.)

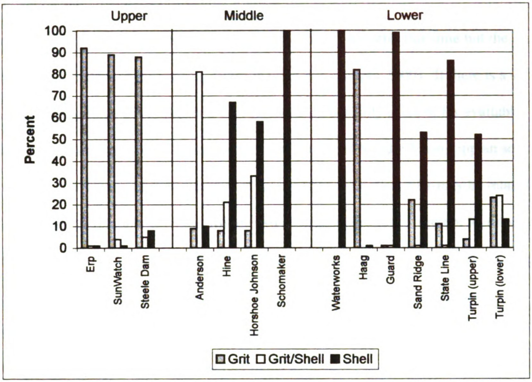


Figure 67. Bar graph comparing grit and shell pottery temper types at sites located in the upper, middle, and lower portions of the Miami drainages. (Source: Sunderhaus and Cook n.d.)

A second problem related to the lack of survey data is that we have no solid basis for conclusions that large parts of the Fort Ancient region were abandoned after A.D. 1400. Recent studies are beginning to show that this area was used after this time but the frequency and extent of these occupations is unknown (Harper 2000). If there is a shift in settlement patterning, environmental models alone do not fully account for available evidence as this change coincides with the restructuring of Middle Mississippian societies downriver. The timing of the Middle Fort Ancient period in particular may be related to the maximum geographic extent of Middle Mississippian groups. It cannot be ruled out that changes in Fort Ancient settlement are related to these shifts in Middle Mississippian social systems. Studies elsewhere have effectively shown abandonment to be a combination of environmental and social factors (Cameron and Tomka 1993; Cordell 1997), and have argued that moieties facilitated aggregation processes that often precede such regional departures (Lowell 1996).

The boundary between Middle Mississippian and Fort Ancient groups needs to be closely examined. Clear connections with Middle Mississippian groups, local population growth, and the disappearance of the Angel phase each need to be considered along with environmental factors if we want to advance our understanding of the simultaneous shift in Fort Ancient and Middle Mississippian settlement patterning.

This study has offered an explanation for the emergence of similarities between Fort Ancient and Middle Mississippian villages. In doing so, the Upper Mississippian designation of Fort Ancient was revisited with renewed confidence. I believe that further comparisons would only enrich this model. By starting with variation present within one village and broadening the view to closely consider the context of artifact attributes changes the way Fort Ancient and Middle Mississippian relations are perceived. As further research is conducted within this framework, we will be in a position to begin the task of applying analytical methods identified by K. C. Chang so many years ago.

APPENDICES

APPENDIX A

Pit Feature Data

Key

Feature Type:	1	deep flat bottom
	2	shallow flat bottom
	3	bell shaped
	4	basin
	5	irregular
	10	missing
	11	incomplete excavation
	12	natural
	14	combined context
	15	posthole-like depression

	house activity area	four areas	feature type	feature volume	feature depth	hammer stone	pitted stone	mano	metate	chunky stone	chunky stone (pref.)	limesone disc	limestone disc (pref.)	chopper	celt	celt (pref.)	slate disc	slate disc (pref.)	bannerstone	bannerstone (pref.)	circular stone	abrader	misc. ground stone	core	wedge	shatter	decort. (>4 cm)	decort. (2-4 cm)	decort. (<2 cm)	second. (>4cm)	second. (2-4 cm)	second. (<2 cm)	tri. pt. pref.	tri. pt. (conc./st.)	tri. pt. (conc./excurv.)	tri. pt. (conc./incurv.)	tri. pt. (conc./indet.)	tri. pt. (st./st.)	tri. pt. (st./excurv.)	tri. pt. (st./incurv.)	tri. pt. (st./indet.)	tri. pt. (conv./st.)	tri. pt. (conv./excurv.)	tri. pt. (conv./incurv.)	tri. pt. (conv./indet.)	tri. pt. (s-n)	tri. pt. (indet.)	Paleoindian pt.	E. Archaic pt.	M. Archaic pt.	L. Archaic pt.
code	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
22/73	1.1	1	5	-	1.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	12	1	3	3	0	17	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
23n/73	1.1	1	3	-	2.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	28	2	6	3	0	22	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23a/73	1.1	1	3	447.32	2.66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25/73	1.1	1	3	293.03	1.95	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	16	0	46	2	14	14	0	26	70	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27/73	1.1	1	2	123.72	1.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28/73	1.1	1	2	37.67	0.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/74	1.1	1	2	60.06	0.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/74	1.1	1	2	166.52	0.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	9	0	2	1	0	5	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/74	1.1	1	5	-	0.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/74	1.1	1	2	231.88	1.33	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	16	1	7	11	0	9	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/74	1.1	1	3	1260.47	4.10	3	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	7	3	50	0	36	19	3	82	186	1	0	0	0	0	2	0	1	2	0	0	2	0	0	0	0	0	0	1
7/74	1.1	1	1	46.57	2.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	1	0	4	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/74	1.1	1	3	271.23	2.00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	8	0	3	3	1	13	59	1	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0
17/74	1.1	1	5	-	0.52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/74	1.1	1	4	15.79	0.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/82	1.1	1	3	545.86	2.80	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1	20	1	16	22	0	35	264	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3/85	1.1	1	3	540.63	2.70	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1	48	3	22	24	0	32	236	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/86-87	1.1	1	1	372.97	2.30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	1	7	0	7	7	0	6	80	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/87	1.1	1	10	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/86-87	1.1	1	3	916.15	3.20	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10	3	47	0	22	36	0	30	294	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0
13/73	1.2	1	3	874.86	3.50	3	4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	8	0	43	1	14	4	1	26	45	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
16/73	1.2	1	3	589.18	3.20	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	19	0	4	0	0	6	14	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
17/73	1.2	1	1	331.18	2.72	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/73	1.2	1	3	306.91	2.60	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	7	1	4	2	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
19/73	1.2	1	3	674.40	3.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	8	0	2	3	0	7	16	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
20/73	1.2	1	4	104.09	0.97	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	1	3	0	15	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21/73	1.2	1	4	110.99	1.08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	1	1	1	0	5	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/76	1.2	1	1	700.17	2.68	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	34	0	11	8	0	34	95	1	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0
7/82	1.2	1	3	616.36	3.20	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	2	32	2	21	31	0	40	169	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
1/83	1.2	1	3	544.20	3.70	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	4	2	36	1	20	44	0	34	228	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/83	1.2	1	3	951.58	3.95	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5	2	49	4	27	56	0	59	290	2	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3/83	1.2	1	2	184.60	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	26	0	4	10	0	15	100	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/83	1.2	1	3	568.00	3.60	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	2	23	1	25	21	0	33	216	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	1
5/83	1.2	1	1	485.84	2.60	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	15	0	11	6	1	15	80	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0
4/85	1.2	1	3	581.41	2.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	18	3	23	12	1	48	272	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
9/73	1.3	1	5	-	2.60	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5	0	5	3	0	9	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/73	1.3	1	3	745.19	3.40	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	6	0	18	1	15	9	3	44	34	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1
12/73	1.3	1	2	300.25	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	1	2	0	0	7	11	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

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1/78	1.3	1	3	912.48	3.80	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	11	3	36	0	39	26	1	32	135	3	1	0	0	0	0	0	0	2	0	0	1	1	1	2	0	0	0	0
2a/78	1.3	1	3	297.56	2.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	0	3	8	0	8	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2n/78	1.3	1	3	95.98	1.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	1	1	0	1	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/78	1.3	1	3	452.43	2.60	4	5	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	1	25	0	9	9	0	18	64	3	0	0	0	0	0	0	0	2	0	0	1	0	0	1	0	0	0	1
4/78	1.3	1	3	600.79	3.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/72	1.4	1	3	187.43	1.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3	5	0	2	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1/73	1.4	1	5	-	2.20	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/73	1.4	1	3	654.02	2.70	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	1	0	12	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3/73	1.4	1	3	565.97	2.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	7	0	9	2	0	11	6	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
4/73	1.4	1	3	600.79	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	7	0	2	0	0	5	19	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5/73	1.4	1	3	252.63	2.60	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	0	0	0	0	3	5	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
6/73	1.4	1	1	343.17	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5	0	3	0	0	4	14	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
7/73	1.4	1	3	414.21	1.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	4	0	2	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/73	1.4	1	3	574.18	2.60	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0	2	2	0	5	20	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
15a/73	1.4	1	3	208.95	1.80	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3	0	3	2	0	3	14	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
15e/73	1.4	1	3	970.27	3.15	1	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	16	0	4	4	0	25	26	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
15w/73	1.4	1	3	602.77	3.10	2	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	7	0	17	1	2	10	2	11	48	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21/72	1.5	1	10	-	0.00	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	14	0	8	4	1	10	12	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
22/72	1.5	1	3	278.33	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	2	1	0	10	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24/72	1.5	1	5	-	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/75	1.5	1	2	68.77	0.70	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/75	1.5	1	3	726.50	3.00	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2	5	0	3	9	0	6	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14/75	1.5	1	3	665.06	3.20	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	6	8	0	25	63	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0
12/80	1.5	1	3	732.45	3.20	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	4	0	12	0	14	10	0	15	107	1	0	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0	0
13/80	1.5	1	2	82.95	1.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/80	1.5	1	3	561.44	2.50	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	16	0	7	7	0	4	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2a/75	1.5	1	1	300.64	2.00	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	4	14	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2n/75	1.5	1	1	398.26	3.30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	3	0	11	34	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
12/74	2.1	2	3	287.37	1.95	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	0	17	1	13	7	0	27	384	2	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	1
13/74	2.1	2	1	245.36	1.40	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	30	1	10	5	0	13	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14/74	2.1	2	1	305.75	2.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	18	0	6	3	0	11	16	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
19e/74	2.1	2	1	208.47	1.55	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	13	0	4	5	0	8	28	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
19c/74	2.1	2	5	-	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	32	0	9	5	0	22	95	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0
19ww/74	2.1	2	3	1956.11	4.70	1	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	13	2	57	4	38	20	7	85	136	2	0	0	0	0	1	0	1	1	1	1	0	2	0	1	0	0	0	0
20/74	2.1	2	3	608.45	2.80	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1	22	4	8	12	0	20	103	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
26/74	2.1	2	1	415.42	2.30	0	1	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	5	1	14	0	9	11	0	22	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28/74	2.1	2	3	277.48	2.00	0	1	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	8	0	19	0	15	33	0	29	412	2	0	0	0	1	0	1	2	1	0	0	0	2	0	0	0	0	0	0
29/74	2.1	2	2	52.61	0.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31/74	2.1	2	3	410.53	3.00	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	8	0	27	2	6	6	0	17	23	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0
1/76	2.1	2	4	156.45	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0	9	13	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
2/76	2.1	2	3	760.29	3.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	17	1	4	14	0	21	124	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
3w/76	2.1	2	1	1241.79	3.40	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	6	8	1	7	103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3e/76	2.1	2	1	762.23	2.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	50	0	20	30	3	44	177	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0

code	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
4/76	2.1	2	3	840.60	3.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	0	1	0	1	3	0	0	0	0	0	0
5e/76	2.1	2	3	-	4.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	50	1	15	10	1	27	118	1	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0
5w/76	2.1	2	3	310.50	1.60	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	15	0	6	8	1	22	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
5c/76	2.1	2	3	-	2.60	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	8	1	5	5	0	11	18	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
16/76	2.1	2	2	142.41	0.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
5/79	2.1	2	2	71.91	0.85	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/79	2.1	2	2	176.39	0.90	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	2	19	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
7/79	2.1	2	4	76.76	1.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/79	2.1	2	5	109.25	1.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	4	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/75	2.2	2	3	534.26	3.00	0	2	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	24	1	18	4	2	25	61	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0	0	0
3/75	2.2	2	3	413.65	2.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	1	4	0	3	8	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0
4/75	2.2	2	3	377.41	2.90	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	6	0	1	1	0	8	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/75	2.2	2	1	267.84	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	1	1	0	6	10	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6/75	2.2	2	3	1062.85	3.65	2	5	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	17	1	5	3	0	15	37	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0
7/75	2.2	2	3	-	4.75	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	35	0	18	17	1	46	226	1	0	0	0	0	0	1	1	1	0	0	0	2	0	0	0	0	0	0
8/75	2.2	2	3	609.28	2.80	3	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	9	0	2	2	0	4	24	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/75	2.2	2	3	653.74	3.50	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	7	3	8	0	1	13	21	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
20/75	2.2	2	3	763.50	3.00	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2	17	2	6	1	0	27	65	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
25/75	2.2	2	2	22.11	0.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
20/76	2.2	2	3	733.01	3.15	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	17	0	6	0	0	13	47	1	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0
25/76	2.2	2	4	48.49	0.65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/79	2.2	2	3	1477.63	3.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	2	47	4	21	35	1	55	612	3	0	0	0	1	0	0	0	2	1	1	0	1	0	0	0	0	0	0
2/79	2.2	2	3	516.70	2.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	11	1	9	11	0	19	68	2	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0
4/80	2.2	2	4	49.72	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	2	0	0	2	12	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
9/80	2.2	2	3	486.13	2.45	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1	31	2	9	13	1	21	181	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
10/80	2.2	2	3	417.04	2.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	18	0	9	12	0	5	111	2	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0
1/85-86	2.2	2	3	468.00	2.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	2	47	1	15	21	1	16	188	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
17/75	2.2	2	10	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/75	2.3	2	3	533.41	2.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	11	0	6	1	0	19	29	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0
16/75	2.3	2	1	341.55	1.55	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	0	3	3	0	17	9	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
12/79	2.3	2	3	232.73	1.65	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	7	8	0	10	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/79	2.3	2	3	203.85	1.60	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5	0	0	0	6	4	1	14	37	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
14/79	2.3	2	3	330.69	2.80	1	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	3	92	0	12	25	0	14	166	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/79	2.3	2	3	843.43	3.00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	2	12	3	39	41	2	63	216	2	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0
16n/79	2.3	2	1	284.26	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	0	4	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16s/79	2.3	2	2	136.07	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	2	0	1	4	0	9	54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/80	2.3	2	3	1316.53	3.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	43	0	12	23	0	35	171	0	0	0	0	0	5	0	1	0	0	0	0	1	0	0	0	0	0	0
3/80	2.3	2	4	108.44	1.90	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	32	0	3	21	0	11	166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/80	2.3	2	3	665.91	3.00	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	9	6	24	0	11	13	0	25	160	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
6/80	2.3	2	3	426.93	2.30	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	33	0	13	11	1	11	129	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/80	2.3	2	4	38.06	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	0	5	4	0	6	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/80	2.3	2	4	25.77	0.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	2	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14e/80	2.3	2	3	550.11	2.70	4	7	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	15	0	7	7	0	16	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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14w/80	2.3	2	3	966.02	3.75	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	6	1	33	0	16	20	0	21	122	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
5/78	2.4	2	3	772.93	4.00	6	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0
6e/78	2.4	2	3	522.08	2.80	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6ew/78	2.4	2	2	85.79	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6c/78	2.4	2	3	672.14	22.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6cw/78	2.4	2	3	660.25	2.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6w/78	2.4	2	3	670.44	2.77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/78	2.4	2	3	457.81	2.70	1	1	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	9	0	19	1	16	16	0	12	51	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
8/78	2.4	2	3	779.44	3.50	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	8	0	24	0	14	25	0	27	198	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0
9/78	2.4	2	3	1042.19	3.70	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	5	0	4	9	0	10	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13e/78	2.4	2	1	997.68	1.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0	1	1	0	1	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13w/78	2.4	2	4	63.70	0.65	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	2	0	1	2	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/72	3.1	3	2	53.93	0.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	1	1	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
3/72	3.1	3	3	452.92	2.99	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1	16	1	6	3	0	10	17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/72	3.1	3	3	1108.74	3.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	21	0	9	5	0	16	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/72	3.1	3	1	1167.34	4.08	2	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	5	2	5	2	5	3	0	12	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/72	3.1	3	3	397.84	2.73	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	8	0	6	2	0	14	14	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/72	3.1	3	3	390.85	2.09	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5	1	9	0	0	9	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8/72	3.1	3	3	1224.52	3.70	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	7	0	3	0	0	7	8	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
9/72	3.1	3	5	-	1.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11s/72	3.1	3	3	721.38	4.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	7	5	0	22	15	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
11n/72	3.1	3	1	305.21	1.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	27	0	8	2	0	26	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/72	3.1	3	1	268.00	1.97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	1	6	2	0	10	7	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
17/81	3.1	3	1	270.17	1.45	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	6	0	6	3	0	9	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/82	3.1	3	3	439.00	1.95	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	8	0	8	12	0	11	68	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
10/72	3.2	3	1	215.74	1.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24/80	3.2	3	2	220.49	1.30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	2	15	1	5	7	0	7	181	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
26/80	3.2	3	3	1207.25	3.20	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	12	0	7	7	0	17	42	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/81	3.2	3	3	646.66	2.70	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	28	0	13	27	0	25	142	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
10e/81	3.2	3	1	102.52	1.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/81	3.2	3	3	339.47	1.70	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	12	0	12	26	0	17	113	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
13/81	3.2	3	1	491.22	1.60	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	5	0	0	8	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/81	3.2	3	4	353.20	1.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19/81	3.2	3	4	22.89	0.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/77	3.3	3	3	359.85	2.80	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	2	37	1	4	12	1	13	33	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
19c/80	3.3	3	10	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19n/80	3.3	3	3	737.71	2.60	1	4	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	2	68	0	12	12	1	24	153	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19s/80	3.3	3	3	610.14	2.60	1	3	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	4	1	15	0	5	4	1	11	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20/80	3.3	3	10	-	0.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25/80	3.3	3	14	-	0.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	3	0	8	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25n/80	3.3	3	1	-	2.10	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	6	5	0	5	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25s/80	3.3	3	3	-	1.50	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	21	0	6	9	0	6	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/81	3.3	3	4	184.91	2.05	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	3	2	1	2	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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18/76	3.4	3	3	528.31	2.80	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	38	0	10	6	0	24	74	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
19/76	3.4	3	3	638.16	4.50	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	50	0	15	7	1	26	79	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
22/76	3.4	3	3	682.62	3.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	2	9	4	0	16	42	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
24/76	3.4	3	5	-	3.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	2	1	0	6	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5/77	3.4	3	1	484.15	1.68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	7	0	2	6	0	4	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6n/77	3.4	3	3	683.18	3.60	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	42	1	10	2	1	16	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6s/77	3.4	3	2	578.51	1.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/77	3.4	3	5	-	0.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/77	3.4	3	3	287.09	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	2	3	0	6	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/77	3.4	3	3	1218.00	3.30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	63	0	36	27	1	50	232	3	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1
9/79	3.4	3	4	398.94	1.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1e/84	3.4	3	3	868.00	3.40	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	17	0	9	7	0	21	83	1	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0
1w/84	3.4	3	3	600.00	3.70	3	3	2	2	0	0	0	0	0	0	0	0	1	1	0	1	3	0	34	1	70	1	26	41	1	50	284	1	1	0	0	1	3	0	0	1	0	0	0	0	0	0	0	0	0	1
9/76	3.5	3	3	201.30	1.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	17	0	6	6	0	12	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
10w/76	3.5	3	3	605.39	3.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	4	1	0	8	9	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
10e/76	3.5	3	10	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5	0	3	2	0	15	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/76	3.5	3	3	321.35	2.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	2	6	0	8	17	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
12/76	3.5	3	3	1163.92	3.90	5	0	4	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	5	1	31	1	13	14	0	31	86	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
14/76	3.5	3	3	291.34	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	7	0	1	1	0	3	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/76	3.5	3	3	761.61	2.95	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	0	8	6	0	17	90	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
17/76	3.5	3	2	87.20	0.71	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/77	3.5	3	2	109.30	0.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	0	0	2	0	3	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/77	3.5	3	2	43.39	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/71	-	4	2	132.38	1.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24/71	4.1	4	1	743.53	2.72	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5	1	6	1	2	9	13	0	0	0	0	1	1	0	1	2	0	0	1	1	1	0	0	0	0	0
25/71	4.1	4	3	456.77	2.12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	6	0	5	1	1	5	10	2	1	0	0	1	0	0	0	1	0	1	1	0	0	0	0	0	0	0
26/71	4.1	4	1	659.96	3.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	7	0	7	4	0	12	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27/71	4.1	4	3	567.86	2.49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	0	6	0	0	9	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28/71	4.1	4	1	553.70	2.82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	2	0	0	8	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
31/71	4.1	4	3	1212.68	3.20	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	1	0	5	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/81	4.1	4	3	673.55	2.80	2	2	2	1	0	0	0	0	0	1	0	1	0	0	1	0	0	1	14	8	70	3	42	76	3	97	586	5	0	0	1	0	1	0	2	0	0	0	0	2	0	0	0	0	0	0
3/71	4.2	4	1	267.55	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	0	3	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/71	4.2	4	3	431.18	1.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	0	3	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
7/71	4.2	4	3	709.12	2.75	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	16	0	1	0	1	8	7	0	1	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	1	1
8/71	4.2	4	3	489.25	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	8	0	0	2	1	2	6	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/71	4.2	4	3	715.38	2.56	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	6	0	4	0	0	3	6	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
10/71	4.2	4	4	58.89	0.65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/71	4.2	4	3	1010.09	3.17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	8	2	4	3	0	9	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/71	4.2	4	4	4.42	0.33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/71	4.2	4	3	269.04	2.11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	3	1	0	5	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17/71	4.2	4	2	125.17	1.30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/71	4.2	4	2	114.42	0.84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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19/71	4.2	4	3	1811.55	3.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	5	0	2	0	0	8	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
20/71	4.2	4	3	922.98	2.93	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	7	0	5	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1
21a/71	4.2	4	2	355.13	1.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	1	0	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21b/71	4.2	4	3	743.74	2.66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
22/71	4.2	4	3	1093.15	3.00	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	2	2	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16/60	4.2	4	4	52.18	0.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	5	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33/71	4.2	4	2	29.60	0.52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/71	4.2	4	2	19.03	0.62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14/71	4.2	4	2	27.75	1.07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16/71	4.2	4	2	26.75	0.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29/71	4.3	4	1	451.58	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	4	0	0	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
30/71	4.3	4	1	338.34	2.34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	1	0	0	0	5	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32/71	4.3	4	1	217.44	1.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	1	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
35/71	4.3	4	10	-	0.00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	2	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36/71	4.3	4	1	325.11	1.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	4	0	1	1	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
44/71	4.3	4	1	738.91	2.60	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	8	1	3	0	0	10	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49/71	4.3	4	4	7.65	0.56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	1	0	0	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37a/71	4.3	4	4	4.00	0.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37b/71	4.3	4	4	4.00	0.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37c/71	4.3	4	4	4.00	0.65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37d/71	4.3	4	4	4.00	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43/71	4.3	4	4	23.88	0.70	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46a/71	4.4	4	4	163.96	1.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46n/71	4.4	4	1	657.65	2.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47/71	4.4	4	1	805.19	3.25	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	7	0	9	3	0	9	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50/71	4.4	4	3	705.83	3.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	11	0	2	0	0	11	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53/71	4.4	4	3	873.22	2.95	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	5	0	8	1	0	9	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54/71	4.4	4	1	447.85	2.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	2	0	0	4	10	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0
55/71	4.4	4	3	224.36	1.40	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	3	0	3	0	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56/71	4.4	4	2	92.64	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	0	3	0	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57/71	4.4	4	3	517.69	2.12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
59/71	4.4	4	1	228.38	1.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60/71	4.4	4	1	256.29	1.42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61n/71	4.4	4	1	233.01	1.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61a/71	4.4	4	1	254.39	1.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/72	4.4	4	3	355.22	2.15	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	1	0	1	8	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/81	4.4	4	3	830.92	2.30	3	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	20	2	44	0	23	25	2	37	233	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
51/71	4.4	4	4	11.44	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52/71	4.4	4	4	20.13	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/83	4.4	4	12	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/71	4.5	4	3	694.33	2.55	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	6	0	17	0	7	1	0	17	11	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/77	4.5	4	2	73.05	0.45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	2	2	0	4	26	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
12/77	4.5	4	4	67.28	0.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	1	2	0	2	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/77	4.5	4	2	11.80	0.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/77	4.5	4	1	532.27	1.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	11	1	10	4	2	13	38	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8/81	4.5	4	3	657.70	2.65	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0

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7/81	4.6	4	3	653.00	3.00	6	8	3	1	0	0	0	0	0	1	0	0	0	0	0	0	2	0	15	3	48	1	26	34	1	41	215	2	0	0	0	0	2	2	3	1	0	0	0	0	0	0	0	0	0	1
20/81	4.6	4	5	38.04	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21/81	4.6	4	2	108.48	0.70	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	1	2	3	0	14	34	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/82	4.6	4	2	144.59	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	1	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/81	4.6	4	3	421.57	3.10	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	4	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32/74	-	-	2	13.89	0.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17/80	-	-	1	178.09	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/72	-	1	3	786.52	3.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	13	0	9	1	2	15	47	0	0	0	0	0	2	0	1	0	1	0	0	0	0	0	0	0	0	0
19/72	-	1	3	554.93	3.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	6	0	6	2	0	24	27	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0
20/72	-	1	4	35.91	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25e/72	-	1	10	-	2.09	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	15	2	8	5	0	15	35	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
25w/72	-	1	1	705.88	3.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	3	2	1	17	12	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
14/73	-	1	2	81.92	0.68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	0	0	2	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
26/73	-	1	1	271.80	1.50	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	20	0	5	2	0	6	29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
29/73	-	1	5	-	0.52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/74	-	1	1	345.73	2.30	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	5	1	17	0	9	14	1	27	66	0	0	0	0	0	0	0	1	1	0	1	1	0	0	1	0	0	0	0
10/74	-	1	2	139.86	1.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	0	0	1	0	2	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/74	-	1	2	340.41	1.34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/74	-	1	3	1051.24	4.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	32	0	23	13	1	77	192	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0
16/74	-	1	5	-	2.16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	1	10	12	0	23	45	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
22/74	-	1	5	-	0.63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24/74	-	1	2	24.55	0.54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/75	-	1	4	42.85	0.55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/76a	-	1	15	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/76a	-	1	15	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/76a	-	1	15	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21/74	-	1	15	-	0.90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/87	-	1	11	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	19	1	9	14	0	11	133	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
no. 2	-	1	11	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
no. 3	-	1	11	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
?/75	-	1	10	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/75	-	2	3	644.39	3.00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	18	0	12	14	0	39	173	1	0	0	0	0	0	1	3	3	0	0	0	0	0	0	0	0	0	0
23/75	-	2	2	94.10	0.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	0	3	1	0	11	24	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
24/75	-	2	3	692.24	3.25	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	40	0	15	13	3	46	152	3	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	1	1
6n/76	-	2	1	454.96	1.95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	2	1	1	8	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6s/76	-	2	1	208.17	1.70	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	9	0	2	1	0	8	29	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
3/79	-	2	3	426.10	2.80	2	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	17	1	8	1	21	5	0	24	145	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
4/79	-	2	1	105.89	1.65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	1	4	0	2	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17/79	-	2	3	179.78	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	2	9	0	10	16	0	14	93	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/80	-	2	3	195.36	1.75	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	5	1	3	2	0	9	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
no. 1	-	2	11	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34/71	-	3	1	493.19	2.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	0	7	6	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
38/71	-	3	3	669.58	2.95	1	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	9	0	0	0	0	6	18	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0

code	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
39n/71	-	3	1	240.09	1.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41/71	-	3	3	1860.02	4.90	1	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
42/71	-	3	3	284.89	2.50	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/72	-	3	3	427.37	1.82	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/81	-	3	2	80.00	0.40	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
5/81	-	3	2	73.00	0.45	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/87a	-	3	15	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39a/71	-	3	4	239.85	0.92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58/71	-	4	3	788.22	3.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63/71	-	4	3	793.09	3.50	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64/71	-	4	3	620.89	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65/71	-	4	2	-	0.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66/71	-	4	3	583.52	1.80	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67/71	-	4	1	392.72	2.10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68/71	-	4	3	477.95	1.85	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27/74	-	4	2	112.49	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/75	-	4	2	83.41	0.60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/77	-	4	2	78.45	0.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/77	-	4	2	48.41	0.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14/77	-	4	4	17.95	0.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16/77	-	4	2	10.27	0.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21/80	-	4	4	32.98	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/80	-	4	2	146.66	1.15	5	0	2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
23/80	-	4	1	578.43	1.90	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
6/81	-	4	2	78.00	0.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/81	-	4	3	1083.80	3.20	7	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
2/84	-	4	3	570.00	2.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
5/85	-	4	1	380.00	1.90	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1/72a	-	4	15	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/88	-	4	4	0.60	83.54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/89	-	4	4	16.14	0.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	-	4	11	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/88	-	4	2	60.04	0.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/89	-	4	11	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	-	4	11	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/72a	-	4	15	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/84	-	4	3	959.00	3.30	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/88	-	4	3	624.74	3.10	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
4/72a	-	4	15	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/88-89	-	4	3	996.58	2.80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
69/71	-	4	10	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/88	-	4	10	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/88	-	4	10	-	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/80	-	4	4	21.52	0.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

code	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
39n/71	0	0	0	0	0	0	0	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41/71	4	0	15	1	3	0	0	19	15	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	1	0	0	0
42/71	2	0	3	0	1	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/72	4	1	17	0	7	8	2	19	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
4/81	0	2	4	0	1	9	0	3	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/81	2	0	5	0	4	6	0	6	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/87a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39a/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58/71	4	1	5	1	1	1	0	11	15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
63/71	1	1	11	0	2	0	0	12	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64/71	3	1	9	1	10	4	0	31	34	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
65/71	1	0	4	1	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66/71	1	1	3	0	2	0	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67/71	0	0	2	0	3	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68/71	2	0	6	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
27/74	2	0	1	0	1	2	0	6	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/75	2	0	5	0	2	1	0	3	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/77	0	0	1	0	0	0	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/77	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16/77	0	0	2	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21/80	1	1	2	0	4	1	0	8	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/80	8	0	26	0	9	11	0	8	58	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/80	11	0	45	1	21	13	0	30	146	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
6/81	0	0	0	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/81	4	3	28	1	13	16	1	31	115	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2/84	3	4	28	0	9	10	0	19	140	3	0	0	0	0	1	0	0	1	0	0	0	1	1	0	0	0	0	0
5/85	4	2	15	0	2	3	0	7	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/72a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/88	2	2	6	0	5	2	0	6	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/89	0	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/88	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/72a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/84	3	2	20	2	6	12	3	17	178	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0
3/88	22	2	21	0	32	29	1	48	274	5	0	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0
4/72a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/88-89	24	0	19	2	26	17	1	76	294	2	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0
69/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/88	1	1	3	0	3	3	1	11	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

attribute	L. Archaic/E. Wood. pt.	M. Wood. pt.	L. Wood. pt.	other pt. frag.	pt. tip	tri. drill	bipointed drill	c-n drill	other drill	endscraper	sidescraper	other scraper	F.A. knife	large tri. knife	leaf-shaped knife	lanceolate knife	flake knife	misc. broken biface	burin	other preform	spokeshave	blade	retouched flake	awl (ulna)	awl (scapula)	awl (rib)	awl (leg)	awl (splinter)	awl (other bone)	pin	needle	fish hook	fish hook (preform)	beamer	bone knife	flaker	antler scraper	awl (antler)	worked antler	large hoe	small hoe	turtle spoon	turtle bowl	bear tooth pend.	elk tooth pend.	claw pend.	wolf mandible	shell pend.	olivella shell	beamer/awl	ant. proj. pt.
code	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102
22/73	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
23n/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23s/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25/73	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	2	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
27/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28/73	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	7	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/74	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/74	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6/74	0	0	0	0	0	0	0	0	1	1	1	0	1	1	0	0	1	1	0	1	0	0	0	0	0	0	2	2	0	4	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
7/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/74	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/82	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	1	0	0	0	0	3	0	2	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
3/85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	3	2	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
1/86-87	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/86-87	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	2	6	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/73	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	1	4	0	2	0	1	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
16/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0	3	0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0
17/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/73	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	1
19/73	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20/73	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21/73	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/76	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
7/82	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	2	0	0	2	0	0	0	0	4	0	2	0	1	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
1/83	0	0	0	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	2	0	4	0	2	0	1	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
2/83	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	3	0	1	0	1	4	1	3	1	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0	0	1	0	0	1
3/83	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/83	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	6	0	1	0	1	0	1	0	2	3	2	2	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/83	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	2	1	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/85	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	3	0	2	0	3	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
9/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11/73	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	0	7	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	4	0	1	0	0	3
12/73	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

code	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77
1/78	0	0	1	1	5	1	0	0	0	1	0	0	0	0	0	0	4	1	5	0	1	0	2	1	1	0
2a/78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0
2n/78	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/78	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	1	0	4	2	0	0	4	0	0	0
4/78	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	3	1	0	0	0	0	0	0
23/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3/73	1	0	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	0	1	0	0	0	1	0	0	0
4/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
5/73	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
6/73	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/73	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8/73	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15a/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
15e/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
15w/73	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
21/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
22/72	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14/75	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
12/80	0	0	0	2	4	0	0	0	0	0	1	0	0	0	0	0	1	0	3	1	1	1	0	0	0	0
13/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
2a/75	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2n/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
12/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0
13/74	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
19e/74	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19c/74	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
19ww/74	0	0	0	0	0	1	0	0	2	1	0	0	0	0	0	0	0	0	1	2	0	1	0	0	1	0
20/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26/74	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0
28/74	0	0	0	3	1	0	0	0	0	1	0	0	0	1	0	0	0	1	0	2	0	0	1	0	0	0
29/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31/74	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3w/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
3e/76	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0

code	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102
1/78	1	5	0	5	0	5	2	3	0	1	0	0	0	5	0	0	0	0	0	0	0	1	0	0	3
2a/78	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
2n/78	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/78	0	3	1	2	0	1	0	2	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	1
4/78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1/73	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/73	1	0	0	3	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/73	0	2	0	1	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
4/73	2	0	0	1	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
5/73	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
6/73	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/73	1	2	0	2	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0
8/73	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
15a/73	1	1	0	0	0	0	0	1	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
15e/73	0	0	1	3	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
15w/73	1	2	2	1	1	2	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
21/72	0	3	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
22/72	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/75	0	1	0	1	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	2
14/75	1	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12/80	0	4	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2a/75	1	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2n/75	0	0	1	6	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/74	0	3	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/74	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
14/74	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19e/74	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
19c/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
19ww/74	6	4	0	3	1	2	0	4	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
20/74	1	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
26/74	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28/74	1	0	0	1	0	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
29/74	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31/74	0	2	0	4	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1/76	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
2/76	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3w/76	2	0	0	3	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
3e/76	0	1	0	9	0	0	0	2	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	1

code	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102
4/76	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	3	0	0	1	1	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	2
5e/76	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5w/76	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5c/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
16/76	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/79	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
1/75	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
5/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
6/75	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	1	1	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
7/75	0	0	0	0	1	1	0	0	1	0	0	0	0	0	1	0	0	0	1	5	0	0	0	0	0	0	1	1	0	1	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0
8/75	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
18/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	6	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
20/75	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	3	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	1	0	0	0
25/75	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20/76	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	1	1	9	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	2
25/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/79	0	0	0	1	4	1	0	0	0	1	1	0	0	0	1	0	1	2	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	0	0	1	0	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
4/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/80	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
10/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	1	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/85-86	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	2	4	0	0	3	0	0	0	0	2	1	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
16/75	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
12/79	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/79	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
14/79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
15/79	0	0	0	0	1	0	0	0	0	1	0	1	1	0	0	0	1	1	2	0	0	1	2	0	0	0	0	4	1	3	0	2	0	2	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1
16n/79	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
16a/79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/80	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	1	2	2	0	1	0	1	0	0	0	1	2	1	3	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
5/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	3	0	0	0	0	2	0	2	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
6/80	0	0	0	2	1	0	0	0	0	0	0	1	0	0	0	0	1	3	0	1	0	0	0	0	0	0	0	3	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
7/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/80	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
14e/80	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	4	0	0	0	0	2	0	0	0	0	0	0

code	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102
14w/80	0	0	0	1	1	2	0	0	0	0	0	3	0	0	0	0	0	1	3	0	0	1	0	0	0	0	1	0	0	1	0	1	2	3	0	0	0	0	0	6	0	0	0	1	0	0	0	0	0	0	0
5/78	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	9	2	5	1	2	1	5	0	5	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0
6a/78	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6aw/78	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6c/78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6cw/78	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6w/78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/78	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	2	0	3	2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8/78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	6	1	0	0	2	0	0	0	1	2	0	3	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
9/78	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13e/78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13w/78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3/72	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	1	1	1	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
4/72	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5/72	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/72	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1
9/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11a/72	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1
11n/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1/82	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
10/72	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	4	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	1
24/80	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/81	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0	1	0	2	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	1
10a/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/81	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	5	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
19c/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19n/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	4	1	4	1	1	0	4	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
19a/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
25/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25n/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25a/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

code	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102
18/76	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0
19/76	1	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	4	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
22/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
24/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
5/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6n/77	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2	2	0	0	2	0	4	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	1	4
6s/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
9/77	0	0	0	0	1	2	0	0	2	0	0	0	0	0	0	0	1	0	2	0	1	0	0	0	0	0	0	5	0	2	0	0	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1
9/79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1e/84	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
1w/84	0	0	0	0	2	0	0	0	0	0	1	0	0	0	1	1	1	2	4	2	1	0	3	0	2	0	2	7	0	5	0	1	0	2	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
9/76	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
10w/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10e/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12/76	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	2	3	3	7	0	3	0	4	1	0	0	2	0	3	0	0	1	0	0	0	0	0	0	0	6
14/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/76	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2	0	0	0	1	1	0	5	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0
17/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/77	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24/71	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25/71	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	1	0	0	0	1	0	0	1	0	0	0	0	1	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
26/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28/71	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	2
31/71	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2/81	0	0	0	1	1	4	0	0	0	0	0	0	0	0	0	0	0	6	1	4	0	0	1	0	0	0	1	3	0	4	0	1	0	5	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1
3/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	2
7/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	1	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	3	0	3	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
9/71	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	0	1	0	0	0	0	0	4	0	0	0	0	0	0	0	1	0	0	1
10/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/71	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
13/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/71	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1
17/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

code	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102
19/71	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
20/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21a/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21b/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	2	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1
16/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
32/71	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
35/71	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
36/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44/71	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
49/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
37a/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37b/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37c/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37d/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46a/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46n/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
47/71	1	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
50/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55/71	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56/71	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57/71	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
59/71	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61n/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61a/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
3/81	0	0	0	0	2	2	0	0	0	1	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	3	0	2	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
51/71	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
12/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/77	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
8/81	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

code	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102
7/81	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	1	3	3	0	1	0	1	0	0	0	3	6	0	9	0	1	1	3	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4
20/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/82	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
22/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	1	1	2	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
32/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/72	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
19/72	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
20/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
25e/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
25w/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
14/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
29/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/74	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	2	0	3	2	0	2	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/74	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/74	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
16/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	2	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
22/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/76a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/76a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/76a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/87	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	5	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
no. 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
no. 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
?/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/75	0	0	0	1	2	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
23/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24/75	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	1	0	5	0	2	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
6n/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6a/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/79	0	0	0	1	1	1	0	0	0	0	0	1	0	0	0	0	0	1	3	1	0	0	1	1	0	0	0	2	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	2
4/79	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	1
17/79	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	2	0	2	0	1	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
11/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
no. 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34/71	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	2	0	0	0
38/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

code	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102
39n/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41/71	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	1	0	3	0	0	0	2	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	4
42/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
13/72	0	0	0	0	1	0	0	0	0	1	0	0	0	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
4/81	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
2/87a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39a/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
63/71	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
64/71	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	2	0	1	0	0	0	0	0	0	0	2	1	1	0	1	0	0	0	1	0	0	0	6	0	0	0	0	0	0	0	0	0	0	2
65/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
67/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68/71	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
27/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21/80	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	1	0	1	0	0	0	1	1	0	0	0	0	1	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
23/80	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	2	0	1	0	0	1	0	0	1	2	0	4	0	0	0	4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
6/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/81	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2	0	0	1	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
2/84	0	0	0	0	3	2	0	0	0	0	0	1	0	0	0	0	0	0	6	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
5/85	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/72a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/72a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3/88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	5	0	1	0	0	6	0	5	0	2	1	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
4/72a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/88-89	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	4	0	2	0	2	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	1
69/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/88	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

attribute	ant. proj. pt. (pref.)	cut/snap debris	bone bead	bone bead (pref.)	bone disc (dr.)	effigy (elk tooth)	bone pend.	other tooth pend.	phalange (drilled)	barrel bead	shell bead	shell disc	gorget (turtle)	notched bone	worked bone	cut shell	notched shell	plain (neck)	neg. pt. (neck)	crosshatched (neck)	herringbone (neck)	indet. (neck)	single slash (neck)	curv. gul. (neck)	curv./rect. gul. (neck)	rect. gul. (neck)
code	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128
22/73	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	1	0	1
23n/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	3	0	3
23a/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	0	6	0	4
25/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	14	1	6	2	9
27/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	7	0	5	0	0
4/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	6	0	2	1	2
6/74	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	8	0	3	0	41	0	18	0	24
7/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
8/74	0	3	3	0	0	0	0	0	1	0	0	0	0	0	0	0	1	6	0	1	0	18	0	9	0	8
17/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	7	0	0	0	5
3/82	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/85	0	2	1	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
1/86-87	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/86-87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/73	0	3	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	14	0	0	0	18	0	13	0	14
16/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	10	1	5	0	4
17/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/73	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2	0	0	0	4	0	6	0	6
19/73	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5	1	3	0	4
20/73	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0
21/73	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4	2	2	0	0
23/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	9	0	7	1	6
7/82	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2	14	0	7	0	11
1/83	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	24	2	23	1	8
2/83	0	1	2	0	0	0	0	6	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/83	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	8	0	5	0	1
4/83	0	1	1	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/83	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/85	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/73	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	10	0	6	0	7
11/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	11	0	14	0	8
12/73	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	0	0	0	2	0	3	0	6

attribute	other gul. (neck)	line-filled tri. A (neck)	line-filled tri. B (neck)	line-filled tri. C (neck)	line-filled tri. D (neck)	line-filled tri. E (neck)	line-filled tri. F (neck)	line-filled tri. indet. (neck)	other scroll (neck)	curv. scroll (neck)	curv./rect. scroll (neck)	rect. scroll (neck)	castellated (rim)	crosshatched (rim)	curv. scroll (rim)	indet. (rim)	line-filled tri. A (rim)	line-filled tri. E (rim)	line-filled tri. F (rim)	lunar impressed (rim)	multi-slash (rim)	oval cord. (rim)	oval incised (rim)	other scroll (rim)	punctates (rim)	punch-and-drag (rim)
code	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154
22/73	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0
23n/73	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	8	0	0	0	0	1	0	0	0	0	0
23a/73	4	2	0	0	0	0	1	4	0	0	0	0	0	0	0	17	0	0	2	0	2	0	0	0	1	0
25/73	10	2	1	0	0	0	0	8	0	0	0	0	1	0	0	28	0	0	0	0	1	0	0	0	7	8
27/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/74	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
3/74	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	12	0	0	1	0	0	0	0	0	0	0
4/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/74	6	0	0	0	0	0	0	7	0	0	0	0	0	0	0	17	0	0	1	0	0	0	0	0	0	3
6/74	19	3	0	0	0	0'	4	28	0	0	0	1	0	0	0	83	0	0	1	0	2	0	1	0	0	8
7/74	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
8/74	11	0	0	0	0	0	3	13	0	0	0	2	0	0	0	45	0	0	2	0	0	0	0	0	1	3
17/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/74	3	0	0	0	0	0	0	4	0	0	0	0	0	0	0	12	0	0	0	0	1	0	0	0	0	0
3/82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/86-87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/86-87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/73	12	0	0	0	0	0	2	14	0	0	0	0	0	0	0	48	0	0	1	0	2	0	1	0	1	3
16/73	8	3	0	0	0	0	3	14	0	0	0	0	0	0	0	21	0	0	0	0	5	0	2	0	0	1
17/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/73	11	1	0	0	0	0	0	5	0	0	0	0	0	0	0	23	0	0	0	0	2	0	1	0	1	2
19/73	4	0	0	0	0	0	0	3	0	0	0	0	0	0	0	9	0	0	0	0	2	0	0	0	0	0
20/73	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	0	0	0
21/73	2	0	0	0	0	0	0	2	0	0	0	1	0	0	0	6	0	0	0	0	0	0	0	0	0	0
23/76	2	2	0	0	0	0	0	8	0	0	0	0	0	0	0	26	0	0	0	0	1	0	1	0	0	0
7/82	11	4	0	0	0	0	2	10	0	0	0	0	0	0	0	36	0	0	0	0	0	0	2	0	2	2
1/83	26	1	0	0	0	0	0	21	0	0	0	0	0	0	0	72	0	0	0	0	3	0	4	0	0	0
2/83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/83	5	1	0	0	0	0	2	6	0	0	0	0	0	0	0	19	0	0	0	0	1	0	0	0	0	1
4/83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/73	2	2	0	0	0	0	2	12	0	0	0	0	0	0	0	27	0	0	0	0	1	0	0	0	1	0
11/73	4	6	0	0	0	0	0	14	0	0	0	0	0	0	0	36	0	0	0	0	0	0	0	0	0	1
12/73	4	0	0	0	0	0	0	1	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	1	2

code	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154
1/78	0	7	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	26	0	0	0	30	1	12	2	11	20	3	0	0	0	0	1	23	0	0	0	0	0	0	0	80	0	0	1	0	3	0	0	0	1	3
2a/78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	7	1	2	0	4	3	1	0	0	0	0	0	3	0	0	0	0	0	0	0	14	0	0	0	0	2	0	0	0	1	0
2n/78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	3	0	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0
3/78	0	17	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	7	0	0	0	24	5	12	1	9	24	9	0	0	0	0	0	27	0	0	0	1	0	0	0	86	0	0	1	0	0	0	2	0	1	1
4/78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	6	0	13	1	12	14	8	0	0	0	1	1	13	0	0	0	0	0	0	0	48	0	0	2	0	0	0	2	0	1	0
23/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	1	1	2	0	0	0	0	0	5	0	0	0	0	0	0	0	12	1	0	0	0	0	0	0	0	0	0
1/73	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0
2/73	0	0	0	0	0	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0
3/73	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	23	3	9	1	9	8	1	0	0	0	0	2	8	0	0	0	0	1	0	0	27	0	0	0	0	6	0	0	0	0	5
4/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	6	0	6	2	3	6	1	0	0	0	0	3	3	0	0	0	0	0	0	0	21	0	0	0	0	2	0	3	0	0	1
5/73	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	3	0	3	0	1	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	7	0	0	0	0	1	0	0	0	0	0
6/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0	3	0	2	6	0	0	0	0	0	0	1	0	0	0	0	1	0	0	10	0	0	0	0	0	0	0	0	1	1
7/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	3	1	2	2	0	0	0	0	0	1	3	0	0	0	0	0	0	0	12	0	0	0	0	1	0	0	0	0	0
8/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	9	0	5	0	5	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	15	0	0	0	0	1	0	0	0	0	0
15a/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	6	0	3	0	3	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	5	0	0	0	0	1	0	0	0	0	0
15e/73	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	10	0	6	1	7	10	1	0	1	0	0	0	13	0	0	0	0	0	0	0	33	0	0	0	0	3	0	1	0	1	1
15w/73	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	8	1	4	0	8	3	2	0	0	0	0	1	4	0	0	0	1	0	0	0	18	0	0	2	0	0	0	0	0	0	1
21/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	7	0	5	3	3	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	6	1
22/72	0	3	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	5	1	9	0	3	8	0	0	0	0	0	0	4	0	0	0	0	0	0	0	16	0	0	0	0	2	0	0	0	1	0
24/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
10/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3	6	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0
13/75	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	5	0	6	2	5	18	1	0	0	0	0	0	6	0	0	0	0	0	0	0	30	0	0	1	0	2	0	1	0	0	2
14/75	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	10	0	16	0	7	23	4	0	0	0	0	1	3	0	0	0	0	0	0	0	50	0	0	0	0	3	0	0	0	1	6
12/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	13	0	3	0	3	10	2	0	0	0	0	0	4	0	0	0	0	0	0	0	26	0	0	0	0	1	0	0	0	0	1
13/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/80	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	5	0	0	0	1	7	0	0	0	0	0	1	8	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0	1	0
2a/75	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	0	3	0	11	11	2	0	0	0	0	0	6	0	0	0	0	0	0	0	31	0	0	0	0	0	0	1	0	0	0
2n/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	11	0	5	0	7	11	1	0	0	0	0	0	9	0	0	0	0	0	0	0	30	0	0	1	0	1	0	0	0	1	3
12/74	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	13	0	5	0	2	10	0	0	0	0	0	2	4	0	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	3
13/74	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	3	0	1	3	0	0	0	0	0	0	3	0	0	0	1	0	0	0	9	0	0	1	0	0	0	0	0	0	0
14/74	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
19a/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	11	0	6	1	5	8	1	0	0	0	0	0	6	0	0	0	0	0	0	0	26	0	0	0	0	1	0	0	0	0	0
19c/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	1	3	0	24	0	11	0	17	18	0	0	0	0	0	0	14	0	0	0	1	0	0	0	69	2	0	0	0	2	0	1	0	1	0
19ww/74	0	6	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	63	0	0	2	63	3	24	1	28	55	4	1	2	1	2	6	39	0	0	0	2	0	0	0	188	0	0	0	0	4	0	0	0	0	1
20/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	2	0	29	3	2	0	12	28	0	0	0	0	0	7	29	0	0	0	0	0	0	0	80	1	0	0	0	1	0	3	0	5	4
26/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5	0	1	0	0	12	0	0	0	0	0	0	2	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	1
28/74	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0	0	0	16	0	2	0	3	7	0	0	0	0	0	0	4	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	2
29/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Q	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
31/74	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	14	0	0	1	15	0	11	1	7	24	2	0	0	0	0	2	17	0	0	0	0	0	0	0	60	0	1	0	0	3	0	0	0	1	0
1/76	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	9	0	2	0	1	2	0	0	2	0	0	0	1	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0
2/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	15	1	6	1	1	2	0	0	0	0	0	0	4	0	0	0	0	0	0	0	5	0	0	2	0	5	0	1	0	1	2
3w/76	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	4	0	6	0	19	0	3	0	4	2	0	0	1	0	0	0	6	0	0	0	0	0	0	0	16	1	0	0	0	0	1	3	0	2	6
3e/76	0	4	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	13	1	0	0	16	3	4	3	5	11	1	0	0	0	0	0	4	0	0	1	1	0	0	1	10	1	0	0	0	1	0	1	0	0	7

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4/76	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	1	0	12	3	9	2	4	0	0	0	0	0	0	0	4	0	0	1	0	0	0	0	10	0	0	1	0	3	0	0	0	1	1
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5w/76	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	1	0	14	0	5	2	9	2	0	0	0	0	0	0	5	0	0	0	1	0	0	0	11	0	0	0	0	0	0	1	0	0	1
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16/76	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	2
5/79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	7	5	0	0	0	0	0	0	10	0	0	0	1	0	0	0	21	0	0	0	0	0	0	0	0	0	0
6/79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	9	0	3	0	0	3	0	0	0	0	0	2	6	0	0	0	0	0	0	0	14	0	0	0	0	1	0	1	0	0	0
7/79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
8/79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	1	0	0	1
1/75	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	13	0	7	0	10	16	1	0	0	0	0	0	14	0	0	0	0	0	0	0	37	0	0	1	0	4	0	2	0	2	0
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20/75	0	4	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	24	0	0	0	15	0	5	0	4	15	1	0	1	0	0	0	6	0	0	0	0	0	0	0	45	0	0	1	0	2	0	0	0	0	0
25/75	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
20/76	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	11	1	5	0	7	6	1	0	0	0	0	0	16	0	0	0	0	0	0	0	29	0	0	0	0	1	0	0	0	0	2
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1/79	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	7	0	0	0	16	1	3	0	2	8	1	0	0	0	0	0	7	0	0	0	0	0	0	0	28	0	0	0	0	1	0	5	0	0	0
2/79	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	1	0	20	2	10	0	3	13	2	0	0	0	0	0	10	0	0	0	0	0	0	0	50	0	0	0	0	1	0	1	0	1	0
4/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
9/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	1	0	15	0	6	0	10	20	1	0	0	0	0	0	9	0	0	0	0	0	0	0	46	0	0	0	0	4	0	0	0	0	0
10/80	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0	0	0	12	0	1	0	2	6	0	0	0	0	0	0	7	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0	0	1	1
1/85-86	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
17/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	9	0	3	8	0	0	0	0	0	0	17	0	0	0	0	0	0	0	27	1	0	1	0	1	0	0	0	1	1
16/75	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	0	0	0	5	0	4	0	2	8	1	0	0	0	0	0	3	0	0	0	0	0	0	0	17	0	0	0	0	0	0	1	0	1	1
12/79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	0	7	0	2	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0	0	1	0	3	0	0	0
13/79	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	3	0	2	1	3	23	5	0	0	1	0	0	11	0	0	0	0	0	0	0	43	0	0	0	0	0	0	0	0	0	0
14/79	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	14	0	3	1	8	12	0	0	0	0	0	0	7	0	0	0	0	0	0	0	35	0	0	0	0	1	0	1	1	4	1
15/79	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	20	0	4	3	5	22	0	0	0	0	0	0	8	0	0	0	0	0	0	0	43	0	0	0	0	0	0	0	0	5	5
16n/79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16a/79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	1	0	1	6	0	0	0	0	0	0	4	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	1	0
2/80	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	12	0	7	1	10	12	2	0	0	0	0	1	24	0	0	0	0	0	0	0	54	0	0	0	0	1	0	0	0	2	0
3/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4	1	0	0	4	6	0	0	0	0	0	0	1	0	0	0	0	0	0	0	11	0	0	1	0	0	0	0	0	2	1
5/80	0	1	0	0	0	0	0	4	0	0	0	0	0	0	0	1	0	12	0	0	0	15	0	6	0	13	22	1	0	0	0	0	0	14	0	0	0	0	0	0	0	63	0	0	0	0	1	0	0	0	0	1
6/80	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	14	0	5	0	2	7	3	0	0	0	0	0	8	0	0	0	0	0	0	0	31	0	0	0	0	0	0	0	0	2	2
7/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0
8/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	1	0	0	5	1	0	0	0	0	0	1	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0
14e/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0	7	1	5	5	2	0	0	0	0	0	7	0	0	0	0	0	0	0	24	0	0	0	0	1	0	0	0	1	0

code	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128
14w/80	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	5	0	0	0	15	0	4	0	11
5/78	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	16	0	2	0	54	0	20	3	31
6a/78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	1	0	9	0	4	1	2
6sw/78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	3	0	0	0	1
6c/78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	8	0	3	0	2
6cw/78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	6	0	6	0	4
6w/78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0	0	1
7/78	0	1	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	4	0	0	0	5	3	4	0	3
8/78	0	1	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	16	0	1	0	22	0	5	0	10
9/78	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	0	3	0	2
13e/78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4	0	0	0	3
13w/78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	2	0	3
2/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
3/72	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	10	0	6
4/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	11	0	0	0	16	0	9	1	8
5/72	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	22	0	24	2	8
6/72	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	9	0	2	0	4
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8/72	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	10	0	18	1	10
9/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	1	0	0
11s/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	11	0	12	0	12
11n/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	1	0	11	1	5
12/72	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	10	0	19	1	1
17/81	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	6	0	0	0	3
1/82	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0
24/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	2	0	8	0	0	0	0
26/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	20	1	3	0	4
10/81	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	10	0	0	0	23	1	5	0	0
10e/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/81	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
13/81	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	6	0	0	0	3
15/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/77	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	14	0	11	1	9
19c/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	1	0	0
19n/80	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	38	0	10	2	6
19s/80	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	11	0	4	0	0
20/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	6	0	2	0	0
25/80	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
25n/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0
25s/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	17	0	1	0	1
1/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4	0	3	0	1

code	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154
14w/80	20	1	0	0	0	0	0	14	0	0	0	0	0	0	0	49	1	0	0	0	4	0	0	0	1	1
5/78	58	3	0	1	0	0	6	21	0	0	0	0	0	0	0	132	0	0	0	0	1	0	0	0	4	2
6a/78	10	1	0	0	0	0	1	6	0	0	0	0	0	0	0	23	0	0	1	0	2	0	1	0	0	0
6sw/78	5	2	0	0	0	0	0	4	0	0	0	0	0	0	0	14	0	0	1	0	0	0	0	0	0	0
6c/78	7	0	0	0	0	0	0	5	0	0	0	0	0	0	0	21	0	0	1	0	1	0	0	0	1	0
6cw/78	6	0	0	0	0	0	0	5	0	0	1	0	0	0	0	24	0	0	0	0	1	0	0	0	0	0
6w/78	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
7/78	6	0	0	0	0	0	0	7	0	0	0	0	0	0	0	18	0	0	0	0	1	0	0	0	0	1
8/78	19	5	0	2	0	0	0	20	0	0	0	0	0	0	0	61	0	0	1	0	4	0	0	0	1	7
9/78	6	1	0	0	0	0	0	7	0	0	0	0	0	0	0	23	0	0	0	0	0	0	0	0	0	0
13e/78	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	8	0	0	0	0	1	0	0	0	0	1
13w/78	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0
2/72	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
3/72	0	3	0	0	0	0	1	17	0	0	0	0	0	0	0	25	0	0	0	0	1	1	1	0	0	2
4/72	9	5	0	0	0	0	3	30	0	0	0	0	0	0	0	53	0	0	4	0	4	0	0	0	1	1
5/72	14	1	0	0	0	0	0	8	0	0	0	0	0	0	0	63	0	0	0	0	5	0	0	0	2	2
6/72	6	0	0	0	0	0	1	4	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	3
7/72	17	0	0	0	0	0	0	2	0	0	0	0	0	0	0	30	0	0	1	0	0	0	2	0	0	2
8/72	11	0	0	0	0	0	0	24	0	0	0	2	0	0	0	59	0	0	0	0	3	0	0	0	0	3
9/72	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
11s/72	12	1	0	0	0	0	1	6	0	0	0	0	0	0	0	35	0	0	1	0	1	0	0	0	3	5
11n/72	4	0	0	0	0	0	0	3	0	0	0	0	0	0	0	29	0	0	0	0	0	0	0	0	0	0
12/72	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0	0	0	0
17/81	8	0	0	0	0	0	0	2	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	2	0
1/82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/72	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	3	0	0	0	0	1	0	0	0	0	0
24/80	7	1	0	0	0	0	0	1	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	3
26/80	10	0	0	0	0	0	0	6	0	0	0	0	0	0	0	30	0	0	0	0	0	0	0	0	0	1
10/81	11	3	0	0	0	0	1	9	0	0	0	0	0	0	0	33	0	0	2	0	0	0	0	0	0	1
10e/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/81	6	2	0	0	0	0	0	2	0	0	0	0	0	0	0	11	0	0	0	0	1	0	1	0	0	0
15/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/77	18	5	0	3	0	0	1	23	0	0	0	0	0	0	0	57	0	0	1	0	0	0	7	0	6	3
19c/80	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0
19n/80	23	0	0	0	0	0	0	16	0	0	0	0	0	0	0	76	0	0	1	0	3	0	0	0	3	1
19s/80	10	0	0	0	0	0	1	3	0	0	0	0	0	0	0	18	0	0	0	0	3	0	0	0	0	0
20/80	3	1	0	0	0	0	0	2	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	1
25/80	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0
25n/80	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0
25s/80	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	15	0	0	0	0	0	0	1	0	0	0
1/81	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0

code	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128
18/76	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	12	0	4	0	6
19/76	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	32	0	13	0	5
22/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	15	0	5	0	9
24/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	10	1	1	0	2
5/77	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	5	1	1	0	3
6n/77	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	34	0	0	0	36	0	4	0	14
6s/77	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
7/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	6	0	5	0	6
9/77	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	36	0	0	0	38	1	17	3	14
9/79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0
1e/84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
1w/84	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	0	2	0	4
10w/76	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	13	0	3	0	0
10e/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	7	0	5	0	8
11/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	8	0	5	0	3
12/76	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6	0	0	0	34	2	19	8	29
14/76	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	0	0	1
15/76	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	12	0	4	0	7
17/76	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
2/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	2
3/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
4/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	1
24/71	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	5	1	13	1	11
25/71	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	5	0	5	0	4
26/71	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	10	0	1	1	4
27/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	7	0	0	0	2
28/71	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	6	0	0	0	14	0	1	0	7
31/71	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	8	2	3	0	4
2/81	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	17	0	7	0	20
3/71	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1
6/71	0	6	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	1	0	2	0	0
7/71	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	8	0	0	0	6	2	6	0	10
8/71	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	4	0	5	0	7
9/71	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	2	0	10	0	7	1	5
10/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	1
11/71	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	3	0	8	1	8
13/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1
15/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	7	0	4	0	3
17/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
18/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	1	2

code	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154
18/76	3	3	0	0	0	0	0	2	0	0	0	0	0	0	0	17	2	0	1	0	0	0	0	0	0	2
19/76	7	5	0	0	0	0	0	12	0	0	0	0	0	0	0	44	0	0	0	0	3	0	1	0	1	4
22/76	3	1	0	0	0	0	0	8	0	0	0	0	0	0	0	14	0	0	0	0	1	0	0	0	6	5
24/76	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
5/77	6	1	0	0	0	0	1	6	0	0	0	0	0	0	0	18	0	0	0	0	1	0	0	0	1	0
6n/77	8	0	0	0	0	0	1	14	0	0	0	0	0	0	0	61	0	0	0	0	1	0	0	0	0	3
6s/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8/77	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	1	0	0	0	0	1
9/77	40	5	0	0	0	1	0	22	0	0	0	0	0	0	0	114	0	0	0	0	1	0	3	0	2	6
9/79	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
1e/84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1w/84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/76	2	0	0	0	0	0	0	2	0	0	0	0	0	1	0	6	0	0	1	0	1	0	0	0	1	0
10w/76	0	0	0	1	0	0	0	6	0	0	0	0	0	0	0	3	0	0	0	0	2	0	0	0	1	0
10e/76	7	0	0	0	0	0	0	3	0	0	0	0	0	0	0	21	0	0	0	0	0	0	1	0	0	3
11/76	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	11	0	0	0	1	0	0	0	0	0	0
12/76	6	2	0	0	0	3	0	13	1	0	0	1	0	0	0	56	0	0	7	0	2	0	0	0	1	7
14/76	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0
15/76	4	0	0	0	0	0	0	2	0	0	0	0	0	0	0	13	0	0	1	0	1	0	0	0	0	4
17/76	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
2/77	4	0	0	0	0	0	0	2	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0
3/77	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
4/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
24/71	6	0	0	0	0	0	1	7	0	0	0	0	0	0	0	29	0	0	0	0	2	0	0	0	0	3
25/71	4	0	0	0	0	0	0	1	0	0	0	0	0	0	0	12	0	0	0	0	3	0	0	0	0	1
26/71	6	0	1	0	0	0	2	9	0	0	0	0	0	0	0	23	0	0	0	0	1	0	0	0	1	1
27/71	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	7	0	0	1	0	0	0	1	0	0	0
28/71	2	1	0	0	0	0	4	15	0	0	0	0	0	0	0	20	0	0	0	0	0	0	3	0	0	1
31/71	2	0	0	0	0	0	1	5	0	0	0	1	0	0	0	14	0	0	0	0	0	0	0	0	0	0
2/81	23	0	0	0	0	0	0	3	0	0	0	0	0	0	0	51	0	0	0	0	4	0	0	0	0	0
3/71	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	1	0
6/71	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0
7/71	8	1	0	0	0	0	0	5	0	0	0	0	0	0	0	27	0	0	0	0	0	0	1	0	0	1
8/71	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0
9/71	8	0	0	0	0	0	1	5	0	0	0	0	0	0	0	30	0	0	0	0	0	0	1	0	0	1
10/71	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
11/71	3	1	0	0	0	0	0	5	0	0	0	0	0	0	0	16	0	0	0	0	0	0	1	0	0	2
13/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
15/71	3	1	0	0	0	0	0	6	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	4
17/71	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
18/71	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0

code	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128
19/71	0	3	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	12	0	1	0	17	1	14	0	9
20/71	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	10	0	3	1	8
21a/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
21b/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/71	0	4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0	1	1	3
16/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	1
33/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
12/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29/71	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	12	0	4	0	4
30/71	2	3	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	6	1	0	0	4	0	6	1	3
32/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	6	0	3	0	3
35/71	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	9	2	9	1	2
36/71	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	4
44/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	14	1	11	2	10
49/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37a/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37b/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37c/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37d/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46a/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	4	0	2
46n/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	4	2	3	0	3
47/71	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	8	0	4	0	2
50/71	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	6	0	10	1	4
53/71	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	10	0	6	0	3
54/71	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	0	0	0	6	0	3	1	4
55/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	7	0	2	0	3
56/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	7	0	0	0	0
57/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0	2	0	4
59/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1
60/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1
61n/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	2
61s/71	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	1
1/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0	10	1	7
3/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	16	0	9	0	8
51/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/71	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	2	0	11	0	12	1	5
11/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	9	0	0	0	0
12/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5	0	6	0	0
13/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/77	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	4	0	0	0	6	0	6	0	3
8/81	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	14	0	4	0	1

code	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154
19/71	3	1	0	0	0	0	2	11	0	0	0	0	0	0	0	27	0	0	0	0	0	0	2	0	1	5
20/71	2	1	0	0	0	0	1	4	0	0	0	0	0	0	0	15	0	0	0	0	1	0	0	0	0	0
21a/71	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21b/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/71	1	0	0	0	0	0	2	6	0	0	0	1	0	0	0	11	0	0	1	0	0	0	0	0	0	0
16/80	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
33/71	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
12/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29/71	4	0	0	0	0	0	1	2	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	1	0
30/71	0	1	0	0	0	0	0	5	0	0	0	0	0	0	0	9	0	0	0	0	0	0	1	0	0	0
32/71	2	1	0	0	0	0	0	2	0	0	0	0	0	0	0	11	0	0	0	0	1	0	2	0	0	1
35/71	5	1	0	0	0	0	0	7	0	0	0	0	0	0	0	17	0	0	0	0	0	0	1	0	1	1
36/71	3	0	0	0	0	0	1	1	0	0	0	0	0	0	0	6	0	0	0	0	2	0	0	0	0	0
44/71	5	0	0	0	0	0	0	3	0	1	0	0	0	0	0	30	0	0	0	0	1	0	0	0	0	0
49/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37a/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37b/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37c/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37d/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46a/71	1	0	0	0	0	0	0	5	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	1
46n/71	3	0	0	0	0	0	0	7	0	0	0	0	0	0	0	14	0	0	0	0	0	0	2	0	0	1
47/71	2	0	0	0	0	0	0	5	0	0	0	1	0	0	0	13	0	0	0	0	0	0	0	0	0	2
50/71	5	1	0	0	0	0	0	3	0	0	0	2	0	0	0	20	0	0	0	0	0	0	0	0	1	0
53/71	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	2
54/71	0	1	0	0	0	0	0	6	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	2
55/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	1	0	0	0	0	2
56/71	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
57/71	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	1
59/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
60/71	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
61n/71	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	5	0	0	1	0	0	0	0	0	0	0
61s/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/72	7	0	0	0	0	0	0	2	0	0	0	0	0	0	0	21	0	0	0	0	0	0	1	0	0	0
3/81	24	1	0	0	0	0	0	15	0	1	0	2	0	0	0	47	0	0	0	0	2	0	0	0	0	10
51/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/71	4	2	1	0	0	0	1	12	0	0	0	0	0	0	0	24	0	0	3	0	6	0	0	0	0	0
11/77	3	0	0	0	0	0	0	3	0	0	2	0	0	0	0	10	0	0	0	0	1	0	0	0	0	0
12/77	4	0	0	0	0	0	0	1	0	0	0	0	0	0	0	11	0	0	0	0	1	0	0	0	0	0
13/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/77	11	0	0	0	0	0	0	2	0	0	0	0	0	0	0	20	0	0	1	0	0	0	0	0	0	0
8/81	12	1	0	1	0	0	0	5	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	1

code	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128
7/81	0	3	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	5	0	1	0	33	0	10	1	12
20/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	1	0	2
2/82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	9	0	0	0	0
32/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/72	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	9	0	18	1	2
19/72	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	7	0	1	2	2
20/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
25e/72	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3	0	0	0	6	1	5	0	1
25w/72	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	15	0	1	0	2
14/73	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	1
26/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	1	0	11	0	3	0	3
29/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
1/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	1	1	7
10/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1
11/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	3
15/74	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	12	0	0	0	33	1	14	1	18
16/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	14	0	5	1	8
22/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/76a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/76a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/76a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
no. 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
no. 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
?/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/75	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	3	0	15	1	17	0	15
23/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
24/75	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	12	0	5	1	8
6n/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	2	0	0
6s/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5	1	0	0	0
3/79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	15	0	0	0	23	0	9	1	14
4/79	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	9	0	8	1	4
17/79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	21	0	11	0	9
11/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	13	0	6	1	0
no. 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34/71	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	6	0	1	1	3
38/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	4	0	1

code	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154
7/81	22	1	0	1	0	0	1	13	0	0	0	2	0	0	0	56	0	0	2	0	1	0	0	0	0	3
20/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21/81	3	0	0	0	0	0	0	2	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0
2/82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/81	2	0	0	0	0	0	0	6	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0
32/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/72	5	0	1	1	0	0	0	12	0	0	0	0	1	0	0	31	0	0	0	0	1	0	0	0	2	0
19/72	4	0	0	0	0	0	0	6	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	1
20/72	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
25e/72	2	0	0	0	0	0	0	2	0	0	0	1	0	0	0	8	0	0	0	0	0	0	0	0	0	0
25w/72	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
14/73	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
26/73	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	2	0	2	0
29/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/74	3	1	0	0	0	0	0	4	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	1
10/74	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
11/74	4	0	0	0	0	0	0	2	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0
15/74	33	1	0	1	0	0	2	23	0	0	0	0	0	0	0	90	0	0	1	0	0	1	2	1	1	0
16/74	9	0	0	0	0	0	0	8	0	0	0	0	0	0	0	27	0	0	0	0	0	0	1	0	3	4
22/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/76a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/76a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/76a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
no. 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
no. 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
?/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22/75	31	3	2	0	0	0	1	34	0	0	0	0	0	0	0	96	0	0	1	0	2	0	0	1	1	1
23/75	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
24/75	18	1	0	0	0	1	0	9	0	0	0	0	0	0	0	38	0	0	3	0	3	0	0	0	0	1
6n/76	2	1	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	1
6s/76	2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2
3/79	16	3	0	0	0	0	1	11	0	0	0	0	0	0	0	54	0	0	1	0	1	0	1	0	0	3
4/79	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0	0	2	0	0	0	0	1
17/79	10	2	0	0	0	0	0	14	0	0	0	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0
11/80	7	3	0	0	0	0	0	5	0	0	0	0	0	0	0	27	0	0	1	0	1	0	0	0	0	1
no. 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34/71	3	1	0	0	0	0	0	1	1	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	2
38/71	4	1	0	0	0	0	0	5	0	0	0	0	0	0	0	10	0	0	0	0	1	0	0	0	0	0

code	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154
39n/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	17	0	3	1	3	3	0	0	0	0	0	1	7	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	1
41/71	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	12	2	21	1	13	4	4	0	0	0	0	1	15	0	0	0	0	0	0	0	41	0	0	3	0	1	0	0	0	1	6
42/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	5	0	0	4	1	0	0	0	0	0	4	0	0	0	0	0	0	0	10	0	0	0	0	3	0	0	0	0	0
13/72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	7	0	7	0	5	4	1	0	0	0	0	0	3	0	0	0	0	1	0	0	14	0	0	0	0	1	0	0	0	0	4
4/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/87a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39a/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58/71	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	10	0	5	1	4	1	1	0	0	0	0	0	4	0	0	0	0	0	0	0	9	0	0	0	0	1	0	1	0	0	2
63/71	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	7	0	2	0	14	8	0	0	0	0	0	0	4	0	0	0	0	0	0	2	28	0	0	0	0	0	0	1	0	0	1
64/71	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	6	0	0	0	11	0	3	1	2	1	0	0	1	0	0	0	3	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	1
65/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0
66/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	8	0	6	0	6	2	1	0	0	0	0	1	11	0	0	0	0	0	0	0	24	1	0	0	0	0	0	0	0	0	0
67/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	8	0	8	0	1	1	1	0	0	0	0	0	15	0	0	0	0	0	0	0	28	0	0	0	0	1	0	1	0	0	0
68/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	2	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
27/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	6	0	4	0	0	4	0	0	0	0	0	1	1	0	0	0	2	0	0	0	11	0	0	1	0	0	0	0	0	0	0
12/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	1	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
4/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
10/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
14/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21/80	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	1	0
22/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	7	0	0	0	1	4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0
23/80	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	4	0	0	0	4	0	4	0	3	1	2	0	0	0	0	0	9	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0
6/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/81	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	15	0	10	0	8	22	2	0	0	0	0	0	19	1	0	0	0	0	0	0	52	0	0	1	0	6	0	0	0	1	0
2/84	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	20	0	12	1	5	6	2	0	0	0	0	0	3	0	0	0	0	0	0	0	21	0	0	2	0	0	0	0	0	0	1
5/85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/72a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/72a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/84	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/88	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/72a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/88-89	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
69/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

attribute	plain (rim)	rect. scroll (rim)	single slash (rim)	castillated (lip)	curv. scroll (lip)	indet. (lip)	line-filled tri. F (lip)	oval cord. (lip)	oval incised (lip)	other scroll (lip)	punctates (lip)	punch-and-drag (lip)	plain (lip)	single slash (lip)	indet. (int.)	oval cord. (int.)	other scroll (int.)	punctates (int.)	plain (int.)	single slash (int.)	rim sherd frequency	sand temper	grit temper	mica temper	shell temper	quartzite temper	grit/shell temper	grit/grog temper	limestone temper	limestone/grit temper	effigy appendage	lug appendage	indet. appendage	strap appendage	jar (coiled)	jar (pinch pot)	bowl (pinch pot)	bowl (coiled)	pan (coiled)	minimum diameter (cm)	maximum diameter (cm)	mean diameter (cm)
code	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196
22/73	0	0	0	0	0	5	0	0	0	0	0	0	1	0	4	0	0	0	2	0	6	0	5	1	0	0	0	0	0	0	0	2	0	0	6	0	0	0	0	0	0	0.0
23n/73	3	1	0	0	0	8	0	0	0	0	0	0	5	0	8	0	0	0	5	0	13	0	11	0	0	0	2	0	0	0	0	0	0	0	13	0	0	0	0	14	24	20.0
23s/73	9	0	0	0	0	16	0	0	0	0	0	0	15	0	17	0	0	0	14	0	31	0	25	4	0	0	2	0	0	0	0	1	0	2	29	2	0	0	0	10	32	21.4
25/73	11	1	1	0	0	30	0	0	0	0	0	0	27	1	28	0	0	0	30	0	56	0	55	0	0	0	3	0	0	0	0	3	2	3	56	0	0	0	0	16	26	22.0
27/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
28/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2/74	1	0	0	0	0	2	0	0	0	0	0	0	1	0	2	0	0	0	1	0	3	0	3	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	26	26	26.0
3/74	6	1	0	0	0	12	0	0	0	0	0	0	8	0	12	0	0	0	8	0	20	0	18	1	1	0	0	0	0	0	0	2	0	0	20	0	0	0	0	8	26	16.8
4/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
5/74	5	1	0	0	0	16	0	1	0	0	0	0	10	0	16	0	0	0	11	0	27	0	25	2	0	0	0	0	0	0	0	3	0	0	26	1	0	0	0	10	26	21.0
6/74	37	8	9	0	0	85	1	7	1	0	0	0	55	0	81	0	0	0	67	1	149	0	142	2	1	0	4	0	0	0	0	11	1	1	149	0	0	0	0	4	28	20.9
7/74	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	1	0	2	0	2	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	16	16	16.0
8/74	16	3	1	0	0	44	0	0	0	0	0	0	26	1	42	0	0	0	29	0	71	0	64	6	0	0	1	0	0	0	0	7	1	0	70	1	0	0	0	16	32	24.6
17/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
18/74	6	1	0	0	0	13	0	0	0	0	0	0	7	0	13	0	0	0	7	0	20	0	18	0	1	0	1	0	0	0	0	1	0	3	20	0	0	0	0	18	26	22.5
3/82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3/85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1/86-87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2/87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3/86-87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
13/73	25	3	3	0	0	49	0	0	5	0	0	0	32	1	46	0	0	0	40	1	87	1	68	7	0	0	11	0	0	0	0	8	1	2	87	0	0	0	0	16	36	23.1
16/73	14	3	5	0	0	22	0	1	3	0	0	0	26	0	21	0	0	0	31	0	52	1	46	3	0	0	2	0	0	0	0	3	1	2	51	0	1	0	0	16	30	22.9
17/73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
18/73	5	0	1	0	0	23	0	0	0	0	0	0	11	1	22	0	0	0	13	0	35	0	25	5	0	0	5	0	0	0	0	3	0	1	34	1	0	0	0	12	30	22.8
19/73	7	2	1	0	0	9	0	1	0	0	0	0	11	0	9	0	0	0	11	1	21	0	20	0	0	0	1	0	0	0	0	2	0	1	21	0	0	0	0	14	32	23.7
20/73	2	0	0	0	0	4	0	0	1	0	0	0	2	0	4	0	0	0	3	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	14	14	14.0
21/73	6	2	1	0	0	6	0	0	0	0	0	0	9	0	6	0	0	0	9	0	15	0	15	0	0	0	0	0	0	0	0	2	0	1	15	0	0	0	0	16	26	20.0
23/76	15	2	0	0	0	25	0	0	1	0	0	0	19	0	25	0	0	0	20	0	45	0	40	0	1	0	4	0	0	0	0	1	0	3	45	0	0	0	0	14	32	25.3
7/82	13	2	5	0	0	36	0	0	3	0	0	0	22	1	35	0	0	0	27	0	62	0	61	0	0	0	1	0	0	0	0	0	0	0	62	0	0	0	0	12	28	21.5
1/83	22	6	4	0	0	72	2	0	0	0	0	0	36	1	71	0	0	0	40	0	111	0	104	0	1	0	6	0	0	0	0	1	2	3	111	0	0	0	0	12	28	20.4
2/83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3/83	6	0	3	0	0	16	0	0	1	0	0	0	10	1	17	0	0	0	13	0	30	0	27	3	0	0	0	0	0	0	0	2	0	0	30	0	0	0	0	8	28	20.4
4/83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
5/83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
4/85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
9/73	14	5	1	0	0	27	0	1	1	0	0	0	20	0	26	1	0	0	22	0	49	0	44	1	0	0	4	0	0	0	0	2	1	1	49	0	0	0	0	4	30	21.4
11/73	24	2	0	0	1	36	0	0	0	0	0	0	24	2	36	0	0	0	25	2	63	4	48	1	0	1	9	0	0	0	0	5	1	1	63	0	0	0	0	6	32	21.5
12/73	7	0	1	0	0	9	0	0	2	0	0	0	9	0	8	0	0	0	12	0	20	0	16	0	0	0	4	0	0	0	0	3	1	0	20	0	0	0	0	14	24	19.5

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1/78	28	8	5	0	0	82	0	0	0	0	0	0	46	1	77	0	0	0	52	0	129	0	110	8	0	0	11	0	0	0	0	9	0	1	129	0	0	0	0	14	38	22.9
2a/78	6	1	0	0	0	14	0	0	0	0	0	0	9	1	12	0	0	0	12	0	24	0	21	1	0	0	1	0	0	1	0	2	1	2	24	0	0	0	0	20	26	24.0
2n/78	3	0	0	0	0	14	0	0	0	0	0	0	3	0	14	0	0	0	3	0	17	0	15	2	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	28	28	28.0
3/78	24	3	1	0	0	86	2	0	0	0	0	0	28	3	82	0	0	0	33	4	119	0	105	0	0	0	14	0	0	0	0	7	2	2	119	0	0	0	0	14	30	23.2
4/78	20	3	1	0	0	47	0	0	1	0	0	0	28	1	46	0	0	0	30	1	77	0	61	2	0	0	14	0	0	0	0	4	1	1	77	0	0	0	0	10	28	21.5
23/72	3	0	1	0	0	11	0	0	0	0	0	0	6	0	12	0	0	0	4	1	17	0	17	0	0	0	0	0	0	0	0	1	1	1	17	0	0	0	0	30	30	30.0
1/73	0	0	0	0	0	6	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6	0	6	0	0	0	0	0	0	0	0	1	0	0	6	0	0	0	0	0	0	0.0
2/73	0	1	0	0	0	2	0	0	0	0	0	0	3	0	2	0	0	0	3	0	5	0	4	0	0	0	1	0	0	0	0	0	0	0	4	0	0	1	0	16	16	16.0
3/73	26	3	1	0	0	27	0	0	0	0	0	0	41	1	26	1	0	0	41	1	69	0	63	2	0	0	4	0	0	0	0	11	2	0	69	0	0	0	0	16	34	22.9
4/73	3	1	1	0	0	19	0	0	0	0	0	0	12	1	19	0	0	1	12	0	32	0	22	9	1	0	0	0	0	0	0	1	1	1	32	0	0	0	0	12	32	24.4
5/73	2	0	2	0	0	7	0	1	0	0	0	0	4	0	7	0	0	0	5	0	12	0	10	1	0	0	1	0	0	0	0	1	0	0	11	0	0	1	0	24	30	26.0
6/73	3	1	1	0	0	11	0	0	0	0	0	0	7	0	10	0	0	0	8	0	18	0	17	0	0	0	1	0	0	0	0	1	0	0	18	0	0	0	0	16	32	25.0
7/73	2	1	0	0	0	12	0	0	0	0	0	0	4	0	13	0	0	0	3	0	16	0	15	1	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	20	30	25.0
8/73	9	2	0	0	0	16	0	0	0	0	0	0	11	0	14	0	0	0	13	0	27	0	24	3	0	0	0	0	0	0	0	1	0	1	26	0	1	0	0	8	32	22.3
15a/73	12	1	0	0	0	5	0	0	0	0	0	0	14	0	4	0	0	0	15	0	19	1	14	0	0	0	4	0	0	0	0	1	1	0	14	5	0	0	0	3	36	19.0
15e/73	14	3	0	0	0	33	0	0	0	0	0	0	23	0	33	0	0	0	23	0	56	0	51	3	0	0	2	0	0	0	0	1	3	2	54	2	0	0	0	10	26	18.7
15w/73	14	0	2	0	0	18	0	1	0	0	0	0	17	1	18	0	0	0	19	0	37	0	23	1	0	0	13	0	0	0	1	1	0	3	35	1	0	1	0	6	30	19.3
21/72	7	0	4	0	0	14	0	1	1	0	0	0	15	0	14	0	0	0	17	0	31	1	26	0	0	0	4	0	0	0	0	3	0	0	30	1	0	0	0	20	34	25.8
22/72	9	2	1	0	0	16	0	0	0	0	0	0	16	0	16	0	0	1	15	0	32	0	30	1	0	0	1	0	0	0	0	3	0	1	32	0	0	0	0	12	36	24.8
24/72	0	0	0	0	0	5	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0.0
10/75	1	0	0	0	0	10	0	0	0	0	0	0	0	0	9	0	0	0	1	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0.0
13/75	5	3	1	0	0	29	0	0	0	0	0	0	16	0	30	0	0	0	15	0	45	0	38	3	2	0	2	0	0	0	0	2	1	0	45	0	0	0	0	20	30	25.3
14/75	7	1	0	0	0	51	0	0	0	0	0	0	16	1	50	0	0	0	18	0	68	1	66	1	0	0	0	0	0	0	0	2	0	0	68	0	0	0	0	14	30	23.9
12/80	8	1	3	0	0	29	0	2	1	0	0	0	8	0	25	0	0	0	15	0	40	0	37	1	0	0	2	0	0	0	0	4	0	0	40	0	0	0	0	16	28	23.3
13/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
15/80	5	1	0	0	0	19	0	0	0	0	0	0	7	0	21	0	0	0	5	0	26	0	20	3	2	0	1	0	0	0	0	1	0	0	26	0	0	0	0	14	28	22.8
2a/75	14	1	0	0	0	32	0	0	0	0	0	0	13	2	30	0	0	0	17	0	47	0	46	0	1	0	0	0	0	0	0	3	0	1	47	0	0	0	0	18	32	23.8
2n/75	8	4	3	0	0	31	0	0	0	0	0	0	19	1	32	0	0	0	19	0	51	0	35	8	4	0	4	0	0	0	0	4	0	1	50	0	1	0	0	8	30	21.6
12/74	11	1	1	0	0	31	0	0	0	0	0	0	15	0	31	0	0	0	15	0	46	0	35	8	2	0	1	0	0	0	0	3	0	2	46	0	0	0	0	10	26	18.7
13/74	5	1	0	0	0	8	0	0	0	0	0	0	7	1	8	0	0	0	8	0	16	0	14	0	2	0	0	0	0	0	0	1	0	0	16	0	0	0	0	10	24	18.8
14/74	3	1	0	0	0	3	0	0	0	0	0	0	4	0	3	0	0	0	4	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	14	20	17.0
19e/74	5	6	3	0	0	25	0	0	0	0	0	0	15	1	25	0	0	0	16	0	41	0	40	1	0	0	0	0	0	0	0	3	0	0	40	0	1	0	0	8	26	20.0
19c/74	20	0	4	0	0	66	0	1	0	0	0	0	31	1	65	0	0	0	33	1	99	0	94	2	2	0	1	0	0	0	0	5	0	2	98	1	0	0	0	6	30	21.4
19ww/74	80	17	6	0	0	187	0	1	0	0	0	0	107	1	187	0	0	0	109	0	296	0	277	2	14	0	3	0	0	0	0	11	2	10	293	0	0	3	0	8	32	22.6
20/74	27	3	3	1	2	81	0	0	0	0	0	0	40	3	79	0	0	0	48	0	127	0	122	2	0	1	2	0	0	0	0	6	0	1	127	0	0	0	0	10	30	22.4
26/74	4	0	0	0	0	18	0	0	0	0	0	0	4	0	17	0	0	0	5	0	22	0	15	6	1	0	0	0	0	0	0	0	0	0	22	0	0	0	0	24	24	24.0
28/74	17	0	0	1	0	14	0	0	0	0	0	0	15	5	15	0	0	0	20	0	35	0	31	1	2	0	1	0	0	0	0	1	0	0	35	0	0	0	0	14	28	22.3
29/74	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.0
31/74	18	6	5	0	0	59	0	3	2	0	0	0	26	4	57	0	0	0	37	0	94	0	93	0	1	0	0	0	0	0	0	5	1	0	94	0	0	0	0	10	30	21.9
1/76	11	1	1	0	0	4	0	1	0	0	0	0	14	0	4	0	0	0	15	0	19	0	17	0	2	0	0	0	0	0	0	2	0	1	19	0	0	0	0	1	26	17.9
2/76	16	2	3	0	0	6	0	2	0	0	0	0	29	0	6	0	0	0	31	0	37	0	30	3	0	2	2	0	0	0	0	3	0	1	37	0	0	0	0	16	36	26.0
3w/76	13	0	3	0	0	16	0	1	2	0	0	0	24	2	12	0	0	0	33	0	45	2	42	1	0	0	0	0	0	0	0	5	0	2	45	0	0	0	0	14	30	18.7
3e/76	33	3	6	0	0	8	0	0	2	0	0	0	51	2	7	0	0	0	54	2	63	1	50	0	0	2	10	0	0	0	0	8	0	4	61	2	0	0	0	6	34	21.7

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4/76	24	1	2	0	0	10	0	0	0	0	0	0	32	1	11	0	0	0	30	2	43	0	37	3	0	2	1	0	0	0	0	7	0	0	41	2	0	0	0	10	28	19.5
5e/76	9	1	2	0	0	8	0	0	0	0	0	0	14	0	9	0	0	0	11	0	20	0	17	2	1	0	0	0	0	0	0	4	0	2	20	0	0	0	0	20	24	23.0
5w/76	21	6	5	0	0	12	0	2	0	0	0	0	31	0	11	0	0	0	34	0	45	1	42	1	0	1	0	0	0	0	0	4	0	1	44	1	0	0	0	8	30	21.9
5c/76	4	0	0	0	0	4	0	0	0	0	0	0	4	0	4	0	0	0	4	0	8	0	8	0	0	0	0	0	0	0	0	1	0	0	8	0	0	0	0	0	0	0.0
16/76	2	0	0	0	0	3	0	0	0	0	0	0	5	0	2	0	0	0	6	0	8	0	6	1	1	0	0	0	0	0	0	1	0	0	8	0	0	0	0	24	26	25.0
5/79	4	1	0	0	0	21	0	0	0	0	0	0	5	0	21	0	0	0	5	0	26	0	26	0	0	0	0	0	0	0	0	0	0	0	26	0	0	0	0	22	28	25.0
6/79	9	1	2	0	0	18	0	0	0	0	0	0	10	0	14	0	0	0	14	0	28	3	22	3	0	0	0	0	0	0	0	1	0	0	28	0	0	0	0	12	28	21.3
7/79	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0.0
8/79	0	0	1	0	0	2	0	0	1	0	0	0	3	0	2	0	0	0	4	0	6	0	5	0	0	0	1	0	0	0	0	1	0	0	6	0	0	0	0	0	0	0.0
1/75	13	2	5	0	0	37	0	0	1	0	0	0	27	1	39	0	0	0	27	0	66	0	66	0	0	0	0	0	0	0	0	2	1	2	66	0	0	0	0	12	32	23.1
3/75	6	8	1	0	0	32	0	0	0	0	0	0	20	0	31	0	0	0	20	1	52	0	49	1	0	0	2	0	0	0	0	4	3	1	52	0	0	0	0	16	30	24.6
4/75	10	4	1	0	0	13	0	0	1	0	0	0	16	1	13	0	0	0	18	0	31	0	28	1	0	0	2	0	0	0	0	4	2	0	31	0	0	0	0	16	30	23.3
5/75	9	2	1	0	0	19	1	0	0	0	0	0	13	1	21	0	0	0	13	0	34	0	29	3	1	0	1	0	0	0	0	2	0	1	34	0	0	0	0	12	32	22.9
6/75	17	5	0	0	0	44	0	0	1	0	0	0	22	1	41	0	0	0	27	0	68	0	65	1	0	0	2	0	0	0	0	2	3	1	67	1	0	0	0	18	44	24.9
7/75	9	2	0	0	0	20	0	0	0	0	0	0	13	0	19	0	0	0	14	0	33	0	30	3	0	0	0	0	0	0	0	1	0	0	33	0	0	0	0	18	26	22.8
8/75	18	4	4	0	0	55	0	0	0	0	0	0	32	3	53	0	0	0	37	0	90	0	66	7	2	0	15	0	0	0	0	8	2	2	88	0	0	2	0	14	30	23.8
18/75	15	2	5	0	0	48	0	0	0	0	0	0	27	0	49	0	0	0	26	0	75	0	69	5	0	0	1	0	0	0	0	3	0	2	75	0	0	0	0	10	28	19.6
20/75	22	1	0	0	0	43	0	0	1	0	0	0	26	1	43	0	0	0	28	0	71	0	68	3	0	0	0	0	0	0	0	4	0	1	70	0	0	1	0	16	30	22.7
25/75	1	1	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	0	4	0	4	0	0	0	0	0	0	0	0	2	0	0	4	0	0	0	0	24	28	25.3
20/76	16	2	2	0	0	28	0	0	0	0	0	0	24	0	26	0	0	0	26	0	52	0	48	1	1	1	1	0	0	0	0	5	0	1	52	0	0	0	0	12	32	23.2
25/76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1/79	10	0	1	0	0	29	0	0	0	0	0	0	16	0	29	0	0	0	16	0	45	0	40	5	0	0	0	0	0	0	0	1	0	2	44	0	0	1	0	10	30	21.8
2/79	18	1	1	0	0	52	0	0	2	0	0	0	19	0	47	0	0	0	26	0	73	1	65	5	0	1	1	0	0	0	0	4	1	3	72	1	0	0	0	10	32	22.4
4/80	4	0	0	0	0	5	0	0	0	0	0	0	4	0	5	0	0	0	4	0	9	0	9	0	0	0	0	0	0	0	0	0	1	0	9	0	0	0	0	6	18	12.0
9/80	14	0	4	0	0	47	0	1	0	0	0	0	19	1	45	0	0	0	23	0	68	0	61	6	0	0	1	0	0	0	0	4	1	2	68	0	0	0	0	10	30	22.1
10/80	4	1	1	0	0	22	0	0	0	0	0	0	7	1	22	0	0	0	8	0	30	0	27	0	1	0	2	0	0	0	0	2	0	2	30	0	0	0	0	8	24	17.4
1/85-86	0	3	0	0	0	2	0	0	0	0	0	0	0	3	2	0	0	0	3	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	26	26	26.0
17/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
15/75	12	1	3	0	0	27	0	3	2	1	0	0	14	1	27	0	0	0	21	0	48	0	46	2	0	0	0	0	0	0	0	2	0	0	48	0	0	0	0	14	30	24.2
16/75	4	0	1	0	0	16	0	0	0	0	0	0	8	1	14	0	0	0	11	0	25	0	24	0	1	0	0	0	0	0	0	2	1	2	25	0	0	0	0	24	32	27.3
12/79	5	1	0	0	0	24	0	1	0	0	0	0	8	1	24	0	0	0	10	0	34	0	24	10	0	0	0	0	0	0	0	0	0	3	34	0	0	0	0	20	26	23.3
13/79	12	0	0	0	0	45	0	0	0	0	0	0	10	0	44	0	0	0	11	0	55	0	45	0	1	0	9	0	0	0	0	1	0	0	55	0	0	0	0	16	26	22.5
14/79	6	1	3	0	0	36	0	0	0	0	0	0	17	0	34	0	0	0	19	0	53	0	48	0	1	1	3	0	0	0	0	4	1	1	53	0	0	0	0	14	26	19.8
15/79	9	5	1	0	0	46	0	1	0	0	0	0	20	1	45	0	0	0	23	0	68	1	64	2	0	0	1	0	0	0	0	3	0	0	67	1	0	0	0	20	24	22.5
16n/79	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	26	26	26.0
16s/79	1	1	0	0	0	15	0	0	0	0	0	0	2	0	14	0	0	0	3	0	17	0	15	0	1	0	1	0	0	0	0	1	1	0	17	0	0	0	0	20	28	24.0
2/80	6	3	8	0	0	54	0	1	0	0	0	0	16	1	51	0	0	0	19	2	72	0	67	4	0	0	1	0	0	0	0	1	0	5	72	0	0	0	0	12	30	20.5
3/80	3	1	0	0	0	12	0	0	0	0	0	0	7	0	13	0	0	0	5	1	19	0	16	0	1	0	2	0	0	0	0	1	1	0	19	0	0	0	0	22	26	24.0
5/80	12	0	6	0	0	63	0	1	1	0	0	0	18	0	63	0	0	0	20	0	83	0	80	2	0	0	1	0	0	0	0	0	0	3	83	0	0	0	0	8	26	19.9
6/80	7	4	1	0	0	31	0	1	0	0	0	0	15	0	30	0	0	0	17	0	47	0	43	4	0	0	0	0	0	0	0	4	0	0	47	0	0	0	0	10	26	17.2
7/80	2	0	1	0	0	6	0	0	0	0	0	0	3	0	7	0	0	0	2	0	9	0	9	0	0	0	0	0	0	0	0	1	0	0	9	0	0	0	0	24	24	24.0
8/80	2	1	1	0	0	11	0	0	0	0	0	0	3	0	10	0	0	0	4	0	14	0	14	0	0	0	0	0	0	0	0	0	1	1	14	0	0	0	0	8	22	15.0
14e/80	3	2	2	0	0	25	0	1	0	0	0	0	7	0	23	0	0	0	10	0	33	0	31	2	0	0	0	0	0	0	0	1	0	2	33	0	0	0	0	8	26	22.7

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14w/80	10	2	2	0	0	50	0	1	0	0	0	0	19	0	50	0	0	0	19	1	70	0	65	2	2	0	1	0	0	0	0	2	0	0	70	0	0	0	0	18	28	22.6
5/78	43	22	11	0	0	130	2	0	0	0	1	0	81	1	128	0	0	0	87	0	215	0	197	10	6	0	2	0	0	0	0	13	7	7	215	0	0	0	0	8	36	22.5
6a/78	11	1	1	0	0	24	0	0	0	0	0	0	16	0	24	0	0	0	16	0	40	0	35	3	2	0	0	0	0	0	0	3	1	1	39	1	0	0	0	5	32	21.2
6ew/78	5	0	0	0	0	14	0	0	0	0	0	0	6	0	14	0	0	0	4	2	20	0	18	2	0	0	0	0	0	0	0	1	0	2	20	0	0	0	0	10	22	16.7
6c/78	4	0	1	0	0	21	0	0	0	0	0	0	8	0	22	0	0	0	7	0	29	0	28	0	0	0	0	0	0	1	0	2	0	0	29	0	0	0	0	20	26	23.0
6cw/78	10	2	1	0	0	24	0	0	0	0	0	0	14	0	24	0	0	0	14	0	38	0	38	0	0	0	0	0	0	0	0	0	0	0	36	0	0	2	0	16	24	19.4
6w/78	1	2	1	0	0	6	0	0	0	0	0	0	1	2	5	0	0	0	4	0	9	0	8	1	0	0	0	0	0	0	0	1	0	0	9	0	0	0	0	24	30	27.3
7/78	9	0	3	0	0	16	0	0	0	0	0	0	16	0	15	0	0	0	16	1	32	0	32	0	0	0	0	0	0	0	0	1	2	2	32	0	0	0	0	18	26	21.0
8/78	20	0	6	0	0	65	0	0	0	0	0	0	35	0	64	0	0	0	35	1	100	0	98	1	1	0	0	0	0	0	0	3	0	1	100	0	0	0	0	5	28	19.7
9/78	10	0	4	0	0	23	0	0	0	0	0	0	14	0	22	0	0	0	15	0	37	0	30	2	3	0	2	0	0	0	0	1	2	1	37	0	0	0	0	12	32	21.3
13e/78	2	0	0	0	0	8	0	1	0	0	0	0	3	0	7	0	0	0	5	0	12	0	11	1	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	22	28	24.7
13w/78	2	0	0	0	0	15	0	0	0	0	0	0	1	0	14	0	0	0	2	0	16	0	13	2	0	0	1	0	0	0	0	0	0	0	16	0	0	0	0	26	26	26.0
2/72	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	3	0	2	0	0	1	0	0	0	0	0	1	0	0	3	0	0	0	0	16	20	18.0
3/72	8	2	0	0	0	24	0	2	0	0	0	1	13	0	24	1	0	0	15	0	40	0	40	0	0	0	0	0	0	0	0	2	1	0	40	0	0	0	0	16	28	21.7
4/72	23	2	4	0	0	54	0	0	3	0	0	0	34	1	51	0	1	0	39	1	92	0	85	4	1	1	1	0	0	0	0	6	2	3	92	0	0	0	0	12	36	25.7
5/72	21	2	4	0	0	63	0	0	3	0	0	0	30	3	61	0	0	0	37	1	99	0	89	1	4	0	5	0	0	0	0	9	1	0	99	0	0	0	0	16	34	24.2
6/72	9	0	1	0	0	18	0	0	0	0	0	0	12	0	17	0	0	0	13	0	30	0	23	4	0	2	1	0	0	0	0	2	1	0	30	0	0	0	0	12	30	19.7
7/72	12	5	3	0	0	30	0	0	0	0	0	0	23	2	28	0	0	0	27	0	55	0	47	6	1	0	1	0	0	0	0	5	1	0	54	0	0	1	0	14	34	24.8
8/72	14	6	3	0	0	60	0	3	0	0	0	0	25	0	58	0	1	0	29	0	88	0	76	8	0	0	3	0	1	0	0	5	0	4	88	0	0	0	0	10	32	23.2
9/72	5	0	1	0	0	3	0	0	0	0	0	0	4	1	2	0	0	0	6	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	16	26	21.6
11a/72	6	1	4	0	0	36	0	2	0	0	0	0	17	1	35	1	0	0	20	0	56	0	53	0	1	0	2	0	0	0	0	0	2	2	56	0	0	0	0	12	32	23.1
11n/72	1	0	0	0	0	28	0	0	0	0	0	0	2	0	27	0	0	0	3	0	30	0	29	0	0	1	0	0	0	0	0	0	0	0	30	0	0	0	0	16	16	16.0
12/72	12	0	1	0	0	18	0	1	1	0	0	0	15	0	18	0	0	0	17	0	35	0	33	1	0	1	0	0	0	0	0	5	0	1	35	0	0	0	0	10	32	23.9
17/81	6	1	0	0	0	13	0	1	0	0	0	0	7	0	13	1	0	0	6	1	21	0	18	0	0	0	2	0	0	1	0	0	1	0	21	0	0	0	0	16	24	19.2
1/82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
10/72	3	0	0	0	0	3	0	0	0	0	0	0	4	0	4	0	0	0	3	0	7	0	6	0	0	0	1	0	0	0	0	0	0	0	7	0	0	0	0	22	30	24.7
24/80	8	1	0	0	0	14	0	0	0	0	0	0	11	1	13	0	0	0	13	0	26	0	16	9	0	0	0	0	1	0	0	2	0	1	26	0	0	0	0	6	30	22.0
26/80	15	1	3	0	0	31	0	1	0	0	0	1	17	0	31	0	0	0	19	0	50	0	35	13	0	0	2	0	0	0	0	3	0	1	50	0	0	0	0	12	30	22.0
10/81	19	6	2	0	0	34	0	0	0	0	0	0	27	2	33	0	0	0	30	0	63	0	59	3	0	0	0	0	0	1	0	5	0	0	63	0	0	0	0	12	30	19.3
10e/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
12/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
13/81	6	3	0	0	0	13	0	0	0	0	0	0	9	0	12	0	0	0	10	0	22	0	18	0	0	0	4	0	0	0	0	3	0	1	22	0	0	0	0	12	30	24.0
15/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
19/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1/77	22	0	3	0	0	57	0	0	0	0	0	0	42	0	56	0	0	0	43	0	99	0	68	2	1	0	28	0	0	0	0	4	2	4	99	0	0	0	0	12	28	21.0
19c/80	3	0	0	0	0	8	0	0	0	0	0	0	3	0	8	0	0	0	3	0	11	0	9	1	0	0	0	0	1	0	0	0	1	0	11	0	0	0	0	18	28	22.7
19n/80	23	2	2	0	0	74	0	0	0	0	0	0	36	1	72	0	0	0	39	0	111	0	101	3	1	0	6	0	0	0	0	7	4	3	111	0	0	0	0	5	28	19.2
19s/80	11	1	3	0	0	18	0	1	0	0	0	0	17	0	18	0	0	0	18	0	36	0	32	2	0	0	2	0	0	0	0	2	0	0	36	0	0	0	0	12	28	20.7
20/80	6	0	0	0	0	9	0	0	0	0	0	0	5	2	9	0	0	0	7	0	16	0	13	2	0	0	1	0	0	0	0	0	0	0	16	0	0	0	0	16	30	23.0
25/80	2	0	0	0	0	7	0	0	0	0	0	0	2	0	7	0	0	0	2	0	9	0	6	1	0	0	2	0	0	0	0	0	0	0	9	0	0	0	0	26	26	26.0
25n/80	2	0	0	0	0	8	0	0	0	0	1	0	1	0	8	0	0	0	2	0	10	0	8	0	0	2	0	0	0	0	0	0	0	1	10	0	0	0	0	14	14	14.0
25s/80	9	1	3	0	0	14	0	0	0	0	0	0	13	2	15	0	0	0	14	0	29	2	24	2	0	0	1	0	0	0	0	1	0	0	29	0	0	0	0	10	20	15.7
1/81	1	2	0	0	0	9	0	0	0	0	0	0	3	0	9	0	0	0	3	0	12	0	11	1	0	0	0	0	0	0	0	1	0	0	12	0	0	0	0	20	32	26.0

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18/76	8	2	0	0	0	16	0	1	0	0	0	0	15	0	15	0	0	1	13	3	32	0	27	3	0	2	0	0	0	0	0	2	0	0	32	0	0	0	0	10	30	23.0
19/76	23	2	3	0	0	40	0	0	2	0	0	0	36	3	42	0	0	0	37	2	81	0	75	3	1	1	1	0	0	0	0	4	1	3	81	0	0	0	0	10	32	21.1
22/76	16	1	3	0	0	15	0	0	0	0	0	0	31	0	12	0	0	0	32	2	46	0	45	1	0	0	0	0	0	0	0	4	1	1	46	0	0	0	0	12	28	20.9
24/76	14	0	0	0	0	4	0	0	0	0	0	0	12	2	3	0	0	0	13	2	18	0	17	0	0	0	1	0	0	0	0	0	1	0	17	1	0	0	0	10	24	18.0
5/77	5	0	2	0	0	19	0	1	0	0	0	0	6	1	18	0	0	0	9	0	27	0	25	1	0	0	1	0	0	0	0	0	0	0	27	0	0	0	0	16	24	21.0
6n/77	40	4	2	0	0	62	2	0	1	0	0	0	29	17	60	0	0	0	51	0	111	0	101	7	0	0	3	0	0	0	0	10	1	1	110	0	0	1	0	10	28	21.6
6s/77	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	20	26	23.0
7/77	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.0
8/77	7	0	2	0	0	14	0	0	0	0	0	0	8	1	12	0	0	0	11	0	23	0	18	3	2	0	0	0	0	0	0	1	0	1	23	0	0	0	0	14	30	22.0
9/77	31	14	6	0	0	119	0	1	0	0	0	0	56	1	111	0	0	0	65	1	177	0	136	38	2	0	1	0	0	0	0	9	0	2	177	0	0	0	0	10	28	20.8
9/79	2	1	0	0	0	2	0	0	0	0	0	0	3	0	1	0	0	0	4	0	5	0	4	0	1	0	0	0	0	0	0	0	0	0	5	0	0	0	0	22	24	23.0
1e/84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1w/84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
9/76	8	2	0	0	0	5	0	0	0	0	0	0	15	0	4	0	0	0	16	0	20	0	19	1	0	0	0	0	0	0	0	3	0	0	20	0	0	0	0	18	30	26.2
10w/76	15	3	2	0	0	4	0	1	0	0	0	0	21	0	6	0	0	0	20	0	26	3	23	0	0	0	0	0	0	0	0	2	0	1	26	0	0	0	0	4	30	20.9
10e/76	6	0	1	0	0	21	0	0	0	0	0	0	10	1	21	0	0	0	11	0	32	0	32	0	0	0	0	0	0	0	0	1	1	0	32	0	0	0	0	14	28	21.5
11/76	4	1	3	0	0	9	0	0	0	0	0	0	10	1	8	0	0	0	12	0	20	2	14	0	0	0	4	0	0	0	0	1	0	4	20	0	0	0	0	12	24	16.8
12/76	30	10	11	0	0	52	0	2	1	0	0	0	67	2	51	0	0	0	68	5	124	6	111	1	1	0	2	2	1	0	0	11	0	6	124	0	0	0	0	12	34	23.8
14/76	0	0	1	0	0	10	0	0	0	0	0	0	1	0	10	0	0	0	1	0	11	1	9	0	0	1	0	0	0	0	0	0	0	1	11	0	0	0	0	0	0	0.0
15/76	9	1	2	0	0	13	0	2	1	0	0	0	15	0	12	0	0	0	19	0	31	0	26	1	1	0	0	2	1	0	0	2	0	1	31	0	0	0	0	12	30	21.6
17/76	2	0	0	0	0	2	0	0	0	0	0	0	2	0	1	0	0	0	2	1	4	0	4	0	0	0	0	0	0	0	0	1	0	0	4	0	0	0	0	0	0	0.0
2/77	2	0	1	0	0	9	0	0	0	0	0	0	2	0	8	0	0	0	3	0	11	0	7	0	3	0	1	0	0	0	0	0	0	0	11	0	0	0	0	18	18	18.0
3/77	1	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	1	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	22	22	22.0
4/71	3	0	0	0	0	1	0	0	0	0	0	0	3	0	1	0	0	0	3	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	16	26	21.0
24/71	7	7	1	0	0	28	0	1	0	0	0	0	20	0	24	0	0	0	25	0	49	0	45	2	1	0	1	0	0	0	0	6	1	2	49	0	0	0	0	20	36	26.8
25/71	4	1	4	0	0	13	0	0	0	0	0	0	12	0	12	0	0	0	13	0	25	0	22	2	0	0	1	0	0	0	0	0	1	0	25	0	0	0	0	12	28	23.1
26/71	7	2	2	0	0	24	0	0	0	0	0	0	13	0	18	0	0	0	19	0	37	0	29	5	2	0	1	0	0	0	0	0	0	1	37	0	0	0	0	20	30	24.0
27/71	9	3	0	0	0	6	0	6	0	0	0	0	9	0	6	0	0	0	15	0	21	0	20	0	1	0	0	0	0	0	0	3	0	2	21	0	0	0	0	14	26	18.4
28/71	20	4	2	1	0	18	0	0	0	0	0	0	29	2	17	0	0	0	33	0	50	0	46	4	0	0	0	0	0	0	0	5	1	0	50	0	0	0	0	16	28	20.9
31/71	18	4	1	0	0	15	0	0	0	0	0	0	20	2	8	0	0	0	29	0	37	0	32	4	0	0	1	0	0	0	0	5	0	1	36	0	0	1	0	18	32	24.7
2/81	12	5	0	0	0	49	0	0	0	0	0	0	21	2	48	0	0	0	24	0	72	0	60	11	0	0	1	0	0	0	0	3	0	1	72	0	0	0	0	12	30	21.4
3/71	1	1	0	0	0	4	0	1	0	0	0	0	2	0	4	0	0	0	3	0	7	0	6	0	0	0	1	0	0	0	0	0	0	1	7	0	0	0	0	12	28	21.3
6/71	3	1	0	0	0	4	0	1	0	0	0	0	3	0	2	0	0	0	6	0	8	1	5	1	0	0	1	0	0	0	0	2	0	0	7	0	1	0	0	8	30	21.3
7/71	11	5	1	0	0	27	0	0	0	0	0	0	19	0	26	0	0	0	20	0	46	0	39	3	0	0	4	0	0	0	0	3	1	3	46	0	0	0	0	14	34	24.1
8/71	7	0	0	0	0	13	0	0	1	0	0	0	6	1	12	0	0	0	8	1	21	1	18	1	0	0	1	0	0	0	0	2	0	0	21	0	0	0	0	6	34	23.3
9/71	11	2	2	0	0	29	0	0	0	0	0	0	18	0	29	0	0	0	18	0	47	0	43	4	0	0	0	0	0	0	0	2	1	2	47	0	0	0	0	20	28	24.7
10/71	2	1	0	0	0	3	0	1	0	0	0	0	2	0	3	0	0	0	3	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	28	28	28.0
11/71	11	1	2	0	0	16	0	0	0	0	0	0	15	2	16	0	0	0	17	0	33	0	31	1	0	1	0	0	0	0	0	0	0	1	33	0	0	0	0	10	28	22.2
13/71	1	0	1	0	0	1	0	0	0	0	0	0	2	0	1	0	0	0	2	0	3	0	2	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0.0
15/71	5	3	1	0	0	12	0	0	1	0	0	0	11	1	10	0	0	0	14	1	25	1	22	1	0	0	1	0	0	0	0	2	0	1	24	1	0	0	0	6	26	20.6
17/71	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	24	24	24.0
18/71	2	1	0	0	0	7	0	0	0	0	0	0	3	0	7	0	0	0	2	1	10	0	10	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	28	28	28.0

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19/71	28	4	4	0	0	27	0	0	2	0	0	0	40	2	24	0	0	0	45	2	71	0	66	2	1	0	2	0	0	0	0	9	1	2	71	0	0	0	0	3	36	23.1
20/71	10	3	2	0	0	14	0	1	0	0	0	0	15	1	12	0	0	0	19	0	31	0	31	0	0	0	0	0	0	0	0	2	0	2	31	0	0	0	0	20	32	24.5
21a/71	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	2	0	2	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	14	26	20.0
21b/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
22/71	8	1	1	0	0	12	0	0	0	0	0	0	8	2	9	0	0	0	13	0	22	0	20	2	0	0	0	0	0	0	0	3	0	2	22	0	0	0	0	12	30	21.0
16/80	2	0	0	0	0	5	0	0	0	0	0	0	2	0	5	0	0	0	2	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0.0
33/71	1	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	1	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0.0
12/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
14/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
16/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
29/71	18	1	0	0	0	12	0	0	0	0	0	0	22	0	13	0	0	0	21	0	34	2	29	2	1	0	0	0	0	0	0	5	1	1	32	1	1	0	0	6	36	24.4
30/71	14	1	2	0	0	9	0	0	0	0	0	0	18	0	8	0	0	0	19	0	27	0	24	3	0	0	0	0	0	0	0	1	0	0	27	0	0	0	0	16	32	24.4
32/71	6	0	1	0	0	11	0	0	0	0	0	0	11	0	11	0	0	0	11	0	22	0	19	0	0	2	1	0	0	0	0	2	0	0	22	0	0	0	0	14	30	24.4
35/71	12	4	3	0	0	16	0	1	0	0	0	0	22	0	17	0	0	0	22	0	39	0	36	2	0	0	1	0	0	0	0	1	0	0	39	0	0	0	0	16	32	25.8
36/71	4	1	1	0	0	6	0	0	0	0	0	0	8	0	7	0	0	0	7	0	14	0	12	0	0	0	2	0	0	0	0	0	0	1	14	0	0	0	0	26	30	28.5
44/71	14	2	7	0	0	28	0	2	1	0	0	0	23	0	26	0	0	0	28	0	54	0	43	2	0	0	9	0	0	0	0	4	0	2	52	0	2	0	0	8	36	23.6
49/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
37a/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
37b/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
37c/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
37d/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
43/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
46a/71	6	1	1	0	0	8	0	0	0	0	0	0	9	0	6	0	0	0	11	0	17	0	17	0	0	0	0	0	0	0	0	2	0	0	17	0	0	0	0	26	26	26.0
46n/71	8	1	1	0	0	14	0	0	0	0	0	0	13	0	12	0	0	0	15	0	27	4	23	0	0	0	0	0	0	0	0	2	1	0	22	3	1	1	0	6	30	20.0
47/71	12	1	0	0	0	12	0	0	2	0	0	0	14	0	12	0	0	0	16	0	28	0	25	1	1	0	1	0	0	0	0	3	1	0	28	0	0	0	0	14	32	27.3
50/71	7	3	4	0	0	20	0	0	0	0	0	0	13	2	19	0	0	0	16	0	35	0	34	0	0	0	1	0	0	0	0	1	1	2	35	0	0	0	0	20	30	24.5
53/71	7	2	3	0	0	10	0	1	0	0	0	0	14	0	10	0	0	0	15	0	25	0	20	4	0	0	1	0	0	0	0	3	0	2	25	0	0	0	0	14	30	22.8
54/71	5	3	0	0	0	13	0	0	1	0	0	0	11	0	13	0	0	0	12	0	25	0	23	0	0	1	1	0	0	0	0	3	0	1	25	0	0	0	0	22	30	26.7
55/71	3	0	1	0	0	7	0	0	0	0	0	0	7	0	7	0	0	0	7	0	14	0	12	0	0	0	2	0	0	0	0	0	0	2	14	0	0	0	0	12	30	19.3
56/71	9	1	1	0	0	0	0	0	0	0	0	0	13	1	1	0	0	0	13	0	14	0	14	0	0	0	0	0	0	0	0	1	0	0	11	2	0	1	0	6	32	19.6
57/71	5	0	1	0	0	6	0	0	0	0	0	0	9	0	5	0	0	0	10	0	15	0	14	1	0	0	0	0	0	0	0	2	1	0	15	0	0	0	0	18	26	22.0
59/71	2	0	0	0	0	1	0	0	0	0	0	0	2	0	1	0	0	0	2	0	3	0	3	0	0	0	0	0	0	0	0	1	0	0	3	0	0	0	0	14	14	14.0
60/71	2	0	0	0	0	3	0	0	0	0	0	0	2	0	3	0	0	0	2	0	5	0	4	0	1	0	0	0	0	0	0	0	0	0	5	0	0	0	0	26	26	26.0
61n/71	3	0	0	0	0	5	0	0	0	0	0	0	4	0	5	0	0	0	4	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	14	26	22.5
61s/71	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	3	0	2	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	26	26	26.0
1/72	10	1	1	0	0	21	0	0	0	0	0	0	13	0	21	0	0	0	12	1	34	0	33	0	0	0	1	0	0	0	0	0	0	0	33	0	0	1	0	14	32	24.0
3/81	12	4	7	0	0	50	0	1	1	0	0	0	30	0	46	0	0	0	35	1	82	0	70	7	1	0	4	0	0	0	0	4	3	0	82	0	0	0	0	10	30	22.3
51/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
52/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
6/83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
5/71	17	3	1	0	0	23	0	1	0	0	0	0	29	1	22	0	0	0	24	8	54	0	52	1	0	0	1	0	0	0	0	5	0	0	54	0	0	0	0	14	30	20.8
11/77	8	3	0	0	0	10	0	0	0	0	0	0	12	0	11	0	0	0	11	0	22	0	22	0	0	0	0	0	0	0	0	2	2	1	22	0	0	0	0	18	24	20.8
12/77	4	0	1	0	0	12	0	0	0	0	0	0	5	0	11	0	0	0	6	0	17	0	11	0	0	0	6	0	0	0	0	2	0	3	17	0	0	0	0	20	28	24.0
13/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
15/77	8	2	1	0	0	20	0	0	0	0	0	0	12	0	21	0	0	1	10	0	32	0	29	0	2	0	0	0	1	0	0	1	1	1	32	0	0	0	0	14	28	23.6
8/61	14	0	0	0	0	25	0	0	0	1	0	0	15	0	24	0	0	0	16	1	41	0	38	0	0	0	2	0	1	0	0	2	0	0	41	0	0	0	0	10	26	18.5

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7/81	30	7	3	0	0	59	0	0	0	0	0	1	37	5	58	0	0	0	44	0	102	4	96	0	0	0	2	0	0	0	0	7	3	4	100	2	0	0	0	4	34	18.1
20/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
21/81	4	1	0	0	0	8	0	0	0	0	0	0	5	0	8	0	0	0	5	0	13	0	11	0	0	0	2	0	0	0	0	2	0	0	13	0	0	0	0	18	24	21.3
2/82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
22/81	4	1	0	0	0	13	0	0	0	0	0	0	5	1	12	0	0	0	7	0	19	0	18	0	0	0	1	0	0	0	0	0	0	1	19	0	0	0	0	18	26	21.3
32/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
17/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
18/72	11	3	3	0	0	31	1	1	0	0	0	0	19	0	31	1	0	0	20	0	52	0	47	2	1	2	0	0	0	0	0	4	0	0	51	1	0	0	0	6	34	22.0
19/72	5	0	3	0	0	18	0	0	0	0	0	0	10	0	17	0	0	0	11	0	28	0	28	0	0	0	0	0	0	0	0	1	0	0	28	0	0	0	0	22	38	29.6
20/72	1	0	0	0	0	2	0	0	0	0	0	0	1	0	2	0	0	0	1	0	3	0	3	0	0	0	0	0	0	0	0	1	0	0	3	0	0	0	0	36	36	36.0
25e/72	10	1	2	0	0	9	0	1	0	0	0	0	10	1	8	0	0	0	13	0	21	0	21	0	0	0	0	0	0	0	0	1	1	0	21	0	0	0	0	10	26	21.8
25w/72	16	0	2	0	0	4	0	0	0	0	0	0	19	0	3	0	0	0	20	0	23	0	22	1	0	0	0	0	0	0	0	1	0	2	23	0	0	0	0	10	30	20.4
14/73	3	2	0	0	0	3	0	0	0	0	0	0	5	0	3	0	0	0	5	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	24	28	25.3
26/73	8	0	5	0	0	13	0	0	1	0	0	0	15	1	14	0	0	0	16	0	30	2	20	6	0	0	2	0	0	0	0	4	1	2	28	0	2	0	0	12	30	21.5
29/73	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	16	16	16.0
1/74	10	1	1	0	0	13	0	0	2	0	0	0	10	0	13	0	0	0	12	0	25	0	25	0	0	0	0	0	0	0	0	1	0	0	25	0	0	0	0	16	26	21.8
10/74	1	0	0	0	0	3	0	0	0	0	0	0	1	0	4	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	18	18	18.0
11/74	3	0	1	0	0	10	0	0	0	0	0	0	4	0	10	0	0	0	4	0	14	0	12	1	0	0	1	0	0	0	0	1	0	0	14	0	0	0	0	3	3	3.0
15/74	39	3	1	0	0	90	0	2	0	0	0	0	38	9	89	0	0	0	50	0	139	3	134	0	1	0	1	0	0	0	0	3	0	4	136	3	0	0	0	6	32	20.0
16/74	10	2	3	0	0	27	0	0	1	0	0	0	22	0	26	0	0	0	24	0	50	0	48	2	0	0	0	0	0	0	0	1	1	2	50	0	0	0	0	10	30	22.3
22/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
24/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
9/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
10/76a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
11/76a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
12/76a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
21/74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3/87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
no. 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
no. 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
?/75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
22/75	25	4	4	0	0	92	0	4	1	0	0	0	36	2	90	0	0	0	45	0	135	0	120	1	2	0	12	0	0	0	0	10	1	2	134	0	0	1	0	10	32	23.2
23/75	0	0	0	0	0	4	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0.0
24/75	10	2	2	0	0	38	2	2	0	0	0	0	17	0	35	0	0	0	24	0	59	0	51	1	0	0	7	0	0	0	0	7	2	1	59	0	0	0	0	10	26	21.0
6n/76	5	1	0	0	0	3	0	0	0	0	0	0	5	2	2	0	0	0	8	0	10	0	9	0	0	0	0	0	0	1	0	1	0	1	10	0	0	0	0	14	30	23.0
6s/76	5	1	2	0	0	1	0	0	0	0	0	0	10	1	1	0	0	0	11	0	12	0	11	1	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	12	28	22.0
3/79	31	2	0	0	0	55	2	0	0	0	0	0	35	1	53	0	0	0	37	3	93	0	87	1	3	0	2	0	0	0	0	7	0	1	92	0	0	1	0	12	28	21.0
4/79	12	0	2	0	0	26	0	0	0	0	0	0	15	0	24	0	0	0	17	0	41	0	34	1	1	0	5	0	0	0	0	1	0	1	41	0	0	0	0	6	32	21.5
17/79	30	1	2	0	0	45	0	1	0	0	0	0	22	5	43	0	0	0	29	1	73	0	66	0	2	0	5	0	0	0	0	2	3	1	73	0	0	0	0	8	28	19.2
11/80	13	0	1	0	0	28	0	1	1	0	0	0	14	0	27	0	0	0	17	0	44	0	43	1	0	0	0	0	0	0	0	1	1	1	44	0	0	0	0	10	26	19.6
no. 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
34/71	10	2	2	0	0	5	0	0	0	0	0	0	17	0	4	0	0	0	18	0	22	0	21	1	0	0	0	0	0	0	0	2	0	0	22	0	0	0	0	16	30	24.0
38/71	6	3	0	0	0	9	0	0	0	0	0	0	11	0	9	0	0	0	11	0	20	0	19	0	0	0	1	0	0	0	0	2	0	3	20	0	0	0	0	14	28	22.3

code	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196
39n/71	23	0	1	0	0	18	0	0	1	0	0	0	24	0	16	0	0	0	24	3	43	0	38	1	2	1	1	0	0	0	0	4	1	0	43	0	0	0	0	18	30	25.0
41/71	27	3	3	0	0	41	0	1	1	0	0	0	40	2	37	0	0	0	46	2	85	0	78	2	0	0	5	0	0	0	0	6	2	2	82	3	0	0	0	6	36	23.2
42/71	3	0	0	0	0	10	0	0	1	0	0	0	5	0	11	0	0	0	5	0	16	0	16	0	0	0	0	0	0	0	0	1	0	1	15	1	0	0	0	6	30	20.7
13/72	6	0	3	0	0	14	0	0	0	0	0	0	15	0	14	0	0	0	15	0	29	0	21	6	0	1	1	0	0	0	0	3	1	0	29	0	0	0	0	12	30	24.3
4/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
5/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2/87a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
39a/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
58/71	13	2	2	0	0	8	0	0	0	0	0	0	22	0	8	0	0	0	22	0	30	0	27	1	1	0	1	0	0	0	0	4	0	0	30	0	0	0	0	12	32	20.9
63/71	6	0	2	0	0	29	0	0	0	0	0	0	11	0	28	0	0	0	12	0	40	0	34	0	0	3	3	0	0	0	0	0	0	3	40	0	0	0	0	4	40	25.8
64/71	14	1	1	0	0	12	0	0	0	0	0	0	15	1	12	0	0	0	16	0	28	0	24	0	1	0	3	0	0	0	0	3	0	2	28	0	0	0	0	3	30	21.0
65/71	1	0	0	0	0	6	0	0	0	0	0	0	1	0	6	0	0	0	1	0	7	0	4	0	0	0	3	0	0	0	0	0	0	2	7	0	0	0	0	24	24	24.0
66/71	12	3	1	0	0	22	0	0	0	0	0	0	19	0	21	0	0	0	20	0	41	0	35	3	0	0	3	0	0	0	0	3	0	0	41	0	0	0	0	22	30	26.0
67/71	4	1	2	0	0	25	0	0	0	0	0	0	10	2	24	0	0	0	13	0	37	0	34	3	0	0	0	0	0	0	0	4	0	1	37	0	0	0	0	10	34	25.1
68/71	4	0	1	0	0	5	0	2	0	0	0	0	2	1	5	0	0	0	5	0	10	0	9	1	0	0	0	0	0	0	0	1	0	0	10	0	0	0	0	28	30	28.7
27/74	10	0	0	0	0	11	0	0	0	0	0	0	11	0	11	0	0	0	10	1	22	0	16	5	1	0	0	0	0	0	0	1	0	1	22	0	0	0	0	14	28	22.6
12/75	0	1	0	0	0	4	0	0	0	0	0	0	2	0	5	0	0	0	1	0	6	0	6	0	0	0	0	0	0	0	0	1	0	1	6	0	0	0	0	22	22	22.0
4/77	1	1	0	0	0	1	0	0	0	0	0	0	2	0	2	0	0	0	1	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	24	24	24.0
10/77	1	0	0	0	0	3	0	0	0	0	0	0	1	0	2	0	0	0	2	0	4	0	4	0	0	0	0	0	0	0	0	1	0	0	4	0	0	0	0	28	28	28.0
14/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
16/77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
21/80	4	0	0	0	0	4	0	0	0	0	0	0	5	0	4	0	0	0	5	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	5	0	0	4	0	10	18	13.2
22/80	11	0	1	0	0	9	0	0	0	0	0	0	9	1	7	0	0	0	12	0	19	0	16	3	0	0	0	0	0	0	0	2	0	1	18	0	0	1	0	12	30	23.8
23/80	7	2	0	0	0	17	0	0	0	0	0	0	9	1	17	0	0	0	10	0	27	0	27	0	0	0	0	0	0	0	0	2	0	0	26	0	0	1	0	8	24	18.6
6/81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
9/81	19	1	1	0	0	53	0	0	0	0	0	0	28	0	53	0	0	0	28	0	81	0	60	0	0	1	20	0	0	0	0	3	0	4	81	0	0	0	0	10	32	21.0
2/84	24	2	4	0	0	20	0	0	0	0	0	0	32	2	20	0	0	0	34	0	54	0	46	5	1	1	1	0	0	0	0	5	2	3	54	0	0	0	0	12	30	20.4
5/85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1/72a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1/88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
1/89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2/88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
2/89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3/72a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3/84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
3/88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
4/72a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
5/88-89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
69/71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
8/88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
4/88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
18/80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0

APPENDIX B

Mortuary Data

Key

Sex:	1	indeterminate (child)
	2	female
	3	male
Leg Position:	1	fully flexed
	2	semi flexed
	3	disarticulated
	4	extended
	5	secondary
	6	unknown
Covering:	0	absent
	3	limestone slabs
	4	hide
	5	log impressions
	6	cedar bark
Artifacts:	0	absent
	1	present

Burial No.	group	cluster	ring	sex	age	leg position	covering	marginella shell	whelk shell	tri. shell pend.	tubular shell bead	disc bead	barrel bead	turtle shell	shell spoon	shell disc	shell pend.	bobcat teeth	wolf teeth	dog teeth	other teeth	fish teeth	wolf mandible	deer sesamoids	deer phalanges	antler flaker	bone pin	bone awl	antler proj. pt.	pipe	hammer stone	lithic proj. pt.	chunky stone	pottery	burnt corn	burnt stone	ochre	slate pend.	beamer
2/74	1	1	2	1	fetal	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5a/74	1	1	2	1	0.25	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5b/74	1	1	2	1	0.25	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/74	1	2	2	1	0.75	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/74	1	2	2	3	41.00	4	3	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0
11/74	1	2	2	1	0.50	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/73	2	3	2	1	1.50	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/73	2	3	2	1	0.50	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/73	2	4	1	3	-	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
14/73	2	2	1	2	36.00	4	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
3/74	2	4	1	1	2.50	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/74	2	3	1	2	19.00	4	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/86	2	2	2	1	0.50	4	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/74	2	1	2	1	0.25	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/74	2	3	1	2	26.00	4	3	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/73	2	1	2	1	2.00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/73	2	1	2	1	0.75	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/73	2	1	2	1	0.75	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/73	2	1	2	1	0.75	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10a/73	2	1	1	3	20.00	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10b/73	2	1	1	3	26.00	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/81	2	3	1	1	15.50	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/73	3	1	2	1	0.25	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4a/73	3	2	2	1	0.50	4	0	1	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/73	3	1	2	1	fetal	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2a/76	3	3	1	2	36.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2b/76	3	1	1	1	0.50	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/76	3	1	1	1	0.33	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/78	3	1	2	1	0.33	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4b/73	3	1	2	1	8.00	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3a/76	3	3	1	2	24.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3b/76	3	3	1	2	39.00	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15a/73	3	1	2	1	fetal	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15b/73	3	1	2	1	0.25	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/76	3	3	1	3	47.00	2	3	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
1/73	3	1	2	2	40.00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Burial No.	group	cluster	ring	sex	age	leg position	covering	marginella shell	whelk shell	tri. shell pend.	tubular shell bead	disc bead	barrel bead	turtle shell	shell spoon	shell disc	shell pend.	bobcat teeth	wolf teeth	dog teeth	other teeth	fish teeth	wolf mandible	deer sesmoids	deer phalanges	antler flaker	bone pin	bone awl	antler proj. pt.	pipe	hammer stone	lithic proj. pt.	chunky stone	pottery	burnt corn	burnt stone	ochre	slate pend.	beamer
2/73	3	1	2	1	7.50	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24/73 (empty)	3	1	2	-	-	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/72	4	1	1	3	32.00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12.1/72	4	3	1	2	-	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12.2/72	4	3	1	2	34.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12.3/72	4	4	1	3	34.00	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/72	4	4	1	1	5.00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/75	4	4	1	3	41.00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/75	4	4	1	2	33.00	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/75	4	3	1	1	17.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/79	4	1	1	1	0.33	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
5/79	4	4	2	2	35.00	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
4/80	4	1	2	1	0.50	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/75	4	3	2	3	46.00	1	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
5/80	4	4	1	3	30.00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
16/74	5	1	1	1	0.25	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/74	5	1	1	1	0.75	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14/74	5	3	1	1	2.50	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/75	5	1	2	1	0.50	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/75	5	3	1	1	1.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/77	6	4	2	1	1.50	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
empty 2	6	-	1	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/72	6	4	1	3	32.00	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/76	6	3	2	1	0.50	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/76	6	1	2	1	0.25	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/76	6	2	2	1	0.92	4	3	1	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/76	6	4	2	3	47.00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/76	6	4	2	1	1.85	2	3	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/78	6	4	1	3	48.00	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/78	6	2	2	3	32.00	4	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
4/78	6	2	1	3	29.00	4	3	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0
5/78	6	2	2	3	35.00	4	3	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	1	1	0	1	1	0	0	0	0	0	0	0
1/79	6	1	1	1	0.33	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4a/79	6	4	1	3	31.00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4b/79	6	3	1	1	0.42	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/76	6	2	2	1	1.00	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Burial No.	group	cluster	ring	sex	age	leg position	covering	marginella shell	whelk shell	tn. shell pend.	tubular shell bead	disc bead	barrel bead	turtle shell	shell spoon	shell disc	shell pend.	bobcat teeth	wolf teeth	dog teeth	other teeth	fish teeth	wolf mandible	deer sesmoids	deer phalanges	antler flaker	bone pin	bone awl	antler proj. pt.	pipe	hammer stone	lithic proj. pt.	chunky stone	pottery	burnt corn	burnt stone	ochre	slate pend.	beamer
3/77	6	4	2	1	fetal	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/78	6	4	2	1	0.75	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
8/78	6	4	2	3	44.00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/72	7	2	2	1	1.50	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/72	7	3	1	3	36.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/80	7	3	2	1	0.50	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1a/72	7	3	1	2	47.00	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1b/72	7	4	1	3	43.00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/72	7	3	1	1	0.75	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/72	7	3	1	1	0.50	4	3	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/72	7	1	1	1	fetal	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/72	7	1	1	1	0.25	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/72	7	3	1	1	fetal	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11b/80	7	1	2	1	fetal	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/81	7	1	2	1	0.25	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11a/80	7	1	2	1	fetal	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/76	7	3	2	2	34.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/71	8	1	2	1	0.04	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/77	8	2	1	1	0.83	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/77	8	1	1	3	44.00	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0
3/71	8	4	1	3	41.00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4a/71	8	1	2	1	0.04	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4b/71	8	1	2	1	fetal	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/79	8	3	1	2	20.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/80	8	4	1	2	39.00	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/80	8	1	1	1	fetal	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/81	8	1	2	1	0.25	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/74	8	2	1	1	10.50	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17/74	8	2	1	1	1.25	4	3	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/75	8	4	1	2	46.00	2	3	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
7/71	8	2	2	1	0.75	4	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/74	9	4	1	2	27.00	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/75	9	3	1	3	32.00	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	1	1	0	0	0	0
6b/80	9	3	1	1	2.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
7/80	9	3	1	1	7.00	4	3	0	0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
8/80	9	2	1	3	41.00	1	3	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Burial No.	group	cluster	ring	sex	age	leg position	covering	marginella shell	whelk shell	tri. shell pend.	tubular shell bead	disc bead	barrel bead	turtle shell	shell spoon	shell disc	shell pend.	bobcat teeth	wolf teeth	dog teeth	other teeth	fish teeth	wolf mandible	deer sesmoids	deer phalanges	antler flaker	bone pin	bone awl	antler proj. pt.	pipe	hammer stone	lithic proj. pt.	chunky stone	pottery	burnt corn	burnt stone	ochre	slate pend.	beamer
9/80	9	3	1	1	0.75	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/80	9	2	1	1	2.50	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/81	9	1	1	1	12.00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/82	9	1	1	1	0.83	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6a/80	9	1	1	1	17.00	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/81	10	3	1	1	15.00	2	3	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/81	10	1	1	1	0.25	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/81	10	1	1	1	0.25	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/84	10	3	1	1	0.83	4	3	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/84	10	4	2	2	44.00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/84	10	3	2	1	0.50	4	3	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/88	10	4	2	1	0.50	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A11	11	3	2	1	3.50	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/77	11	4	1	3	58.00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/77	11	1	1	3	38.00	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/77	11	3	1	1	15.00	4	3	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A4	11	3	1	1	1.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A5	11	4	1	2	40.00	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A6	11	3	1	3	30.00	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A7	11	4	1	3	30.00	2	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A8	11	3	1	3	16.50	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A9	11	3	1	2	30.00	4	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A12	11	3	1	1	4.50	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
A13	11	4	1	2	35.00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A14	11	3	1	1	11.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A15	11	4	1	2	40.00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A16	11	3	1	3	35.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A17	11	4	1	3	35.00	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
A18	11	4	1	3	35.00	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A19	11	4	1	2	30.00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A20	11	3	1	2	12.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A21	11	4	1	2	25.00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A22	11	3	1	3	30.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A23	11	3	1	1	1.00	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A24	11	3	1	1	2.50	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Burial No.	group	cluster	ring	sex	age	leg position	covering	marginella shell	whelk shell	tri. shell pend.	tubular shell bead	disc bead	barrel bead	turtle shell	shell spoon	shell disc	shell pend.	bobcat teeth	wolf teeth	dog teeth	other teeth	fish teeth	wolf mandible	deer seismoids	deer phalanges	antler flaker	bone pin	bone awl	antler proj. pt.	pipe	hammer stone	lithic proj. pt.	chunky stone	pottery	burnt corn	burnt stone	ochre	slate pend.	beamer
A25	11	3	1	1	1.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A26	11	3	1	1	1.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A27	11	4	1	2	35.00	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20a/77	11	1	1	-	-	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A28	11	3	1	2	37.50	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A29	11	2	1	2	32.50	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A30	11	1	1	3	35.00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
A31	11	4	1	2	37.50	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A32	11	4	2	3	35.00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
A33	11	3	2	2	37.50	4	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A34	11	3	2	3	17.50	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A35	11	3	2	1	1.00	4	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A36	11	2	2	1	1.00	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/71	12	2	1	3	33.00	1	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/71	12	2	1	3	36.00	2	3	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
16/72	12	3	1	3	35.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
1/74	12	4	1	1	1.00	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/83	12	3	1	3	35.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/75	13	1	3	1	0.25	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13/75	13	2	2	1	0.42	4	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
empty 1	13	1	3	-	0.00	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/80	14	1	2	1	10.50	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/84	14	1	3	1	1.83	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/84	14	1	3	1	0.25	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/84	14	1	3	-	-	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A1	15	4	3	1	3.50	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A2	15	4	3	1	1.50	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A3	15	4	3	1	1.00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
A10	15	3	3	3	20.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
17b/72	-	1	3	3	41.00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
3/75	-	2	3	1	0.33	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/82	-	4	3	2	42.00	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/75	-	1	3	1	0.25	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4/77	-	4	3	2	20.00	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1a/87	-	1	3	2	34.00	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
1b/87	-	1	3	1	0.50	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Burial No.	group	cluster	ring	sex	age	leg position	covering	marginella shell	whelk shell	tri. shell pend.	tubular shell bead	disc bead	barrel bead	turtle shell	shell spoon	shell disc	shell pend.	bobcat teeth	wolf teeth	dog teeth	other teeth	fish teeth	wolf mandible	deer seismoids	deer phalanges	antler flaker	bone pin	bone awl	antler proj. pt.	pipe	hammer stone	lithic proj. pt.	chunky stone	pottery	burnt corn	burnt stone	ochre	slate pend.	beamer
7/72	-	1	3	1	0.67	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/71	-	4	2	1	4.00	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14a/72	-	3	3	1	3.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14b/72	-	3	3	1	fetal	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15/72	-	3	3	1	1.00	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/77	-	4	3	2	36.00	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17a/72	-	1	3	1	-	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX C

Radiocarbon Assays

Sample	Provenience	Material	Age	Error	Sigma	Ranges	(lower)	(upper)	Rel Prob.	(lower)	(upper)	Rel. Prob.	(lower)	(upper)	Rel Prob.	(lower)	(upper)	Rel. Prob.	(lower)	(upper)	Rel Prob	Med. Prob
B-184242	H. 2/78	wood	520	60	1	2	1326	1348	0.23	1392	1443	0.77										1406
	post hole				2	2	1301	1372	0.33	1379	1477	0.67										1406
B-184243	H. 2/71	wood	850	40	1	1	1160	1252	1.00													1192
	post hole				2	3	1042	1092	0.13	1118	1140	0.07	1154	1276	0.80							1192
B-184244	H. 1/87	wood	620	40	1	3	1301	1328	0.41	1344	1371	0.39	1380	1394	0.20							1349
	post hole				2	1	1295	1404	1.00													1349
B-184245	H. 2/87	wood	800	40	1	1	1218	1274	1.00													1237
	hearth				2	2	1163	1173	0.03	1178	1285	0.97										1237
I-7087	F. 11/71	corn	395	80	1	2	1438	1523	0.61	1566	1628	0.39										1520
	bell shaped				2	1	1406	1655	1.00													1520
OWU-448	avoc. house	wood	555	100	1	2	1302	1370	0.54	1380	1437	0.46										1382
	post				2	2	1263	1522	0.96	1578	1626	0.04										1382
M-1965	avoc. fea. 6/8	wood	640	100	1	1	1285	1402	1.00													1339
	deep flat				2	2	1165	1166	0.00	1187	1452	1.00										1339
B-20401	F. 1/79	wood	660	60	1	2	1286	1324	0.47	1349	1390	0.53										1339
	bell shaped				2	1	1263	1409	1.00													1339
B-20402	F. 41/71	wood	780	60	1	2	1194	1196	0.01	1210	1288	0.99										1240
	bell shaped				2	5	1045	1051	0.01	1056	1087	0.03	1121	1138	0.02	1156	1303	0.932	1368	1383	0.015	1240
B-20403	F. 58/71	wood	560	90	1	2	1303	1368	0.56	1384	1431	0.44										1375
	bell shaped				2	3	1271	1495	0.98	1498	1511	0.01	1600	1614	0.01							1375
CWR-140	F. 10/73	wood	820	110	1	3	1045	1088	0.19	1121	1139	0.08	1156	1285	0.74							1188
	center pole				2	3	1003	1010	0.01	1016	1325	0.95	1349	1391	0.04							1188
CWR-141	F. 11a/72	wood	800	190	1	2	1025	1306	0.92	1355	1387	0.08										1189
	bell shaped				2	3	782	791	0.00	809	845	0.01	850	1473	0.99							1189
CWR-145	H. 2/72	wood	820	115	1	3	1044	1090	0.19	1120	1139	0.09	1155	1286	0.72							1187
	hearth				2	2	1000	1327	0.95	1346	1393	0.05										1187
CWR-148	F. 18/72	wood	900	160	1	2	1002	1011	0.02	1016	1275	0.98										1115
	bell shaped				2	3	782	791	0.01	808	1328	0.96	1345	1394	0.03							1115
CWR-151	F. 11/73	wood	890	100	1	2	1036	1144	0.59	1147	1219	0.41										1134
	bell shaped				2	1	978	1294	1.00													1134
CWR-153	F. 3/73	wood	830	130	1	3	1040	1099	0.24	1116	1141	0.11	1152	1284	0.65							1176
	bell shaped				2	1	978	1401	1.00													1176
CWR-156	H. 1/73	wood	770	320	1	1	894	1469	1.00													1206
	post hole				2	4	642	1694	0.97	1726	1813	0.02	1849	1865	0.00	1918	1949	0.007				1206

APPENDIX D

Principal Components Analysis Results

Pottery Temper

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.534	21.119	21.119	2.534	21.119	21.119
2	1.669	13.905	35.023	1.669	13.905	35.023
3	1.289	10.741	45.765	1.289	10.741	45.765
4	1.184	9.865	55.629	1.184	9.865	55.629
5	1.043	8.688	64.318	1.043	8.688	64.318
6	.903	7.524	71.842			
7	.867	7.221	79.063			
8	.788	6.567	85.630			
9	.762	6.346	91.976			
10	.422	3.518	95.495			
11	.307	2.555	98.050			
12	.234	1.950	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component				
	1	2	3	4	5
bell shaped	.726	-.122	-.373	-.351	.149
deep flat bottom	-.168	1.434E-02	.918	4.782E-02	-5.42E-02
shallow flat bottom	-.441	.119	-.372	.447	-.201
sand temper	.273	.529	.104	-.248	-.188
grit temper	.864	-.118	9.477E-02	.213	-2.22E-02
mica temper	.537	-.155	-6.07E-02	.249	8.857E-02
shell temper	.524	-.138	.253	.611	-2.88E-02
quartzite	.170	-.118	.198	-.495	-.467
grit/shell temper	.513	-.179	3.554E-02	-.111	-.198
grit/grog temper	.253	.830	6.297E-03	-2.15E-03	3.312E-02
limestone temper	.209	.753	7.807E-04	.130	8.765E-02
limestone/grit temper	-1.69E-02	-4.24E-02	.201	-.204	.816

Extraction Method: Principal Component Analysis.

a. 5 components extracted.

Pottery Vessel Form

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.929	27.552	27.552	1.929	27.552	27.552
2	1.374	19.622	47.174	1.374	19.622	47.174
3	1.009	14.414	61.588	1.009	14.414	61.588
4	.970	13.859	75.447			
5	.816	11.661	87.107			
6	.621	8.872	95.980			
7	.281	4.020	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component		
	1	2	3
bell shaped	.862	-.150	-.215
deep flat bottom	-.352	.786	-7.70E-02
shallow flat bottom	-.519	-.492	.509
jar (coiled)	.764	.154	9.600E-02
jar (pinch pot)	.286	.187	.472
bowl (pinch pot)	-5.67E-02	.856	.220
bowl (coiled)	.350	4.826E-02	.646

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Pottery Appendages

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.429	34.701	34.701	2.429	34.701	34.701
2	1.231	17.581	52.282	1.231	17.581	52.282
3	1.035	14.782	67.064	1.035	14.782	67.064
4	.970	13.857	80.922			
5	.574	8.200	89.122			
6	.470	6.715	95.837			
7	.291	4.163	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component		
	1	2	3
bell shaped	.743	-.337	.202
deep flat bottom	-.209	.926	3.944E-02
shallow flat bottom	-.445	-.450	-.412
effigy appendage	7.295E-02	-.116	.830
lug appendage	.778	.174	-.201
other appendage	.692	6.564E-02	-.304
strap appendange	.738	9.726E-02	-2.48E-02

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Pottery Design (neck)

Total Variance Explained

Component	Initial Eigenvalues Total	% of Variance	Cumulative %	Extraction Sums of Squared Loadings Total	% of Variance	Cumulative %
1	4.873	27.071	27.071	4.873	27.071	27.071
2	1.613	8.963	36.034	1.613	8.963	36.034
3	1.497	8.319	44.353	1.497	8.319	44.353
4	1.315	7.305	51.658	1.315	7.305	51.658
5	1.151	6.396	58.053	1.151	6.396	58.053
6	.965	5.361	63.414			
7	.896	4.978	68.392			
8	.869	4.830	73.222			
9	.775	4.306	77.528			
10	.731	4.059	81.587			
11	.640	3.558	85.145			
12	.593	3.293	88.438			
13	.510	2.831	91.269			
14	.430	2.389	93.658			
15	.360	2.001	95.660			
16	.287	1.594	97.254			
17	.285	1.583	98.837			
18	.209	1.163	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component 1	2	3	4	5
bell shaped	.543	-.339	-.515	-.261	-1.21E-02
deep flat bottom	-9.46E-02	-3.84E-02	.548	.455	-.562
shallow flat bottom	-.307	.389	8.128E-02	-7.09E-02	.650
plain (neck)	.805	.127	5.938E-04	7.608E-02	-6.53E-02
negative painting (neck)	9.815E-02	-.218	.532	.290	.210
scroll (neck)	.395	-4.51E-03	.446	-.132	.330
crosshatched (neck)	.294	-.278	-.116	.608	.378
herringbone (neck)	.458	.624	-1.82E-02	3.313E-02	-9.49E-02
single slash (neck)	.480	-9.89E-02	.214	-6.47E-02	.145
curvilinear guilloche (neck)	.801	-.283	-3.34E-02	1.609E-02	-3.64E-02
curv. guil./rect. guil. (neck)	.556	-.267	.398	-.329	-1.17E-02
rectilinear guilloche (neck)	.832	-.208	-1.89E-02	5.050E-02	4.453E-02
line-filled tri.-A (neck)	.630	-.109	-.185	-5.97E-02	-.149
line-filled tri.-B (neck)	.359	.206	-9.07E-02	.352	7.453E-02
line-filled tri.-C (neck)	.390	.256	-.181	.213	-.116
line-filled tri.-D (neck)	.440	.640	4.006E-02	-1.88E-02	-.118
line-filled tri.-E (neck)	.553	.224	.340	-.428	-1.28E-02
line-filled tri.-F (neck)	.560	.180	-.173	.292	.155

Extraction Method: Principal Component Analysis.

a. 5 components extracted.

Pottery Design (rim)

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.014	17.732	17.732	3.014	17.732	17.732
2	1.451	8.537	26.270	1.451	8.537	26.270
3	1.301	7.652	33.922	1.301	7.652	33.922
4	1.133	6.664	40.586	1.133	6.664	40.586
5	1.106	6.506	47.092	1.106	6.506	47.092
6	1.044	6.141	53.233	1.044	6.141	53.233
7	1.029	6.050	59.284	1.029	6.050	59.284
8	.992	5.833	65.116			
9	.939	5.523	70.639			
10	.916	5.391	76.030			
11	.885	5.204	81.234			
12	.740	4.352	85.586			
13	.678	3.989	89.575			
14	.591	3.479	93.054			
15	.506	2.979	96.033			
16	.392	2.306	98.339			
17	.282	1.661	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component						
	1	2	3	4	5	6	7
bell shaped	.709	-.346	.241	-.105	-4.73E-02	.219	-6.37E-02
deep flat bottom	-.148	.526	-.538	-7.30E-02	-.473	-.202	-6.07E-02
shallow flat bottom	-.430	-8.30E-02	.191	.238	.587	-.175	.172
castillated (rim)	.181	1.987E-02	-.482	.553	7.918E-02	.296	-2.98E-02
crosshatched (rim)	4.315E-02	-.149	7.661E-02	-6.57E-03	-.120	-.209	-.504
curvilinear scroll (rim)	7.709E-02	.193	-.129	-.538	.311	.136	-2.70E-02
line-filled tri.-A (rim)	.211	.333	-4.23E-03	-.392	.321	5.862E-02	4.541E-02
line-filled tri.-E (rim)	7.529E-02	-.161	2.583E-02	-8.74E-02	-.292	.175	.741
line-filled tri.-F (rim)	.479	-.287	3.826E-02	-1.01E-02	1.230E-03	-.440	-.169
lunar impressed (rim)	-1.53E-02	-8.96E-02	.107	-.117	-.137	.693	-.353
multi-slash (rim)	.617	-.312	-.111	-6.11E-02	-.158	-.126	.154
oval cordmarked (rim)	.204	.577	.441	.123	-7.95E-02	-5.24E-02	1.570E-02
oval incised (rim)	.435	.438	.115	-.121	7.089E-02	1.224E-02	4.017E-02
other scroll (rim)	.183	.291	.578	.314	-.227	9.871E-03	-6.51E-03
punctates (rim)	.536	.208	-.115	.362	.179	.159	2.796E-02
punch-and-drag (rim)	.665	.102	-.285	.131	.297	-1.08E-02	-3.40E-02
plain (rim)	.781	6.172E-03	-2.40E-02	-9.44E-02	-4.46E-02	-.149	5.477E-02

Extraction Method: Principal Component Analysis.

a. 7 components extracted.

Pottery Design (lip)

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.476	19.044	19.044	2.476	19.044	19.044
2	1.554	11.953	30.997	1.554	11.953	30.997
3	1.340	10.305	41.302	1.340	10.305	41.302
4	1.252	9.631	50.933	1.252	9.631	50.933
5	1.049	8.073	59.006	1.049	8.073	59.006
6	.984	7.572	66.577			
7	.962	7.397	73.974			
8	.843	6.486	80.460			
9	.793	6.101	86.561			
10	.536	4.125	90.687			
11	.481	3.698	94.385			
12	.452	3.476	97.861			
13	.278	2.139	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component				
	1	2	3	4	5
bell shaped	.723	-.156	-.399	-.121	-.124
deep flat bottom	-.163	.125	.708	.522	-.203
shallow flat bottom	-.468	7.135E-02	-.144	-.349	.463
castillated (lip)	.228	.823	-6.40E-02	8.591E-02	4.912E-02
curvilinear scroll (lip)	.230	.790	-.158	3.904E-02	7.570E-02
line-filled tri.-F (lip)	.444	-8.19E-02	.413	-.516	.153
oval cordmarked (lip)	.464	-.306	-.155	.206	7.057E-02
oval incised (lip)	.373	-.186	.136	.506	.323
other scroll (lip)	.125	-.158	-.181	.284	.523
punctates (lip)	.160	-3.44E-02	.551	-.419	8.492E-02
punch-and-drag (lip)	.157	-7.84E-02	-.202	-6.13E-02	-.595
single slash (lip)	.590	.196	.146	-9.56E-02	3.567E-02
plain (lip)	.799	-4.10E-02	.132	2.822E-02	2.057E-02

Extraction Method: Principal Component Analysis.

a. 5 components extracted.

Pottery Design (interior)

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.974	24.670	24.670	1.974	24.670	24.670
2	1.227	15.339	40.009	1.227	15.339	40.009
3	1.035	12.934	52.943	1.035	12.934	52.943
4	1.006	12.573	65.516	1.006	12.573	65.516
5	.956	11.944	77.460			
6	.934	11.676	89.137			
7	.592	7.394	96.531			
8	.278	3.469	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component			
	1	2	3	4
bell shaped	.842	-.232	-5.74E-02	-7.01E-02
deep flat bottom	-.283	.888	5.114E-05	.142
shallow flat bottom	-.536	-.565	.156	-2.00E-02
oval cordmarked (int.)	.146	.127	-.482	-.581
other scroll (int.)	.201	-7.68E-02	-.145	.774
punctates (int.)	.110	.152	.784	-.194
single slash (int.)	.484	3.264E-02	.370	-3.68E-02
plain (int.)	.768	.141	-4.40E-02	7.421E-02

Extraction Method: Principal Component Analysis.

a. 4 components extracted.

Triangular Projectile Points

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.090	17.415	17.415	2.090	17.415	17.415
2	1.349	11.243	28.659	1.349	11.243	28.659
3	1.290	10.749	39.407	1.290	10.749	39.407
4	1.095	9.122	48.530	1.095	9.122	48.530
5	1.047	8.728	57.258	1.047	8.728	57.258
6	1.014	8.447	65.705	1.014	8.447	65.705
7	.969	8.073	73.778			
8	.864	7.203	80.980			
9	.793	6.607	87.587			
10	.730	6.086	93.673			
11	.445	3.707	97.380			
12	.314	2.620	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component					
	1	2	3	4	5	6
bell shaped	.736	-.358	-.260	-7.80E-02	-.175	-.190
deep flat bottom	-.245	.284	.790	.139	-.224	2.234E-02
shallow flat bottom	-.457	.154	-.426	7.776E-02	.535	.362
concave/straight	.267	-.468	.265	-.126	.392	.309
concave/excurvate	7.013E-02	.163	.163	-.657	-.150	7.135E-02
concave/incurvate	.105	-4.20E-02	-.105	.361	-.494	.623
straight/straight	.513	3.239E-02	-.272	-3.56E-02	-.184	-3.33E-02
straight/excurvate	.496	.652	2.209E-02	-.176	.209	9.438E-02
straight/incurvate	.613	.525	4.723E-03	8.033E-02	.106	.223
convex/straight	.326	-3.16E-02	.125	.556	8.536E-02	1.659E-02
convex/excurvate	.311	7.350E-03	.237	.325	.353	-.413
convex/incurvate	.323	-.408	.402	-.177	.197	.355

Extraction Method: Principal Component Analysis.

a. 6 components extracted.

Note: left hand column lists base/side attributes for triangular points.

Triangular Projectile Points

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.053	29.329	29.329	2.053	29.329	29.329
2	1.228	17.537	46.866	1.228	17.537	46.866
3	1.045	14.935	61.801	1.045	14.935	61.801
4	.876	12.508	74.309			
5	.832	11.893	86.202			
6	.654	9.336	95.537			
7	.312	4.463	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component		
	1	2	3
bell shaped	.784	-.314	-.314
deep flat bottom	-.280	.890	-8.37E-02
shallow flat bottom	-.475	-.464	.611
straight base tri. pt.	.629	.118	.173
convex base tri. pt.	.661	.109	.153
concave base tri. pt.	.481	.108	.263
side-notched tri. pt.	.266	.291	.666

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Earlier Projectile Points

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.611	16.112	16.112	1.611	16.112	16.112
2	1.352	13.518	29.629	1.352	13.518	29.629
3	1.255	12.549	42.178	1.255	12.549	42.178
4	1.123	11.228	53.406	1.123	11.228	53.406
5	1.008	10.081	63.487	1.008	10.081	63.487
6	.969	9.689	73.177			
7	.920	9.196	82.373			
8	.750	7.502	89.875			
9	.678	6.779	96.655			
10	.335	3.345	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component				
	1	2	3	4	5
bell shaped	.846	-5.25E-02	-.169	-.268	1.889E-02
deep flat bottom	-.432	.513	.591	-5.26E-02	8.733E-03
shallow flat bottom	-.526	-.370	-.366	.442	-4.71E-02
Paleoindian	.103	-5.19E-02	-7.84E-02	-.282	.620
E. Archaic	.110	6.881E-02	.285	-.286	-.617
M. Archaic	.363	-6.15E-02	.304	.639	.134
L. Archaic	.489	1.629E-02	.387	.457	-1.58E-02
L. Archaic/E. Woodland	.110	.662	-.418	.124	-1.41E-02
M. Woodland	-.152	.179	.338	-.102	.470
L. Woodland	5.540E-02	.684	-.355	.219	-1.85E-02

Extraction Method: Principal Component Analysis.

a. 5 components extracted.

Chipped Stone Tools

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.358	14.738	14.738	2.358	14.738	14.738
2	1.555	9.721	24.459	1.555	9.721	24.459
3	1.382	8.637	33.096	1.382	8.637	33.096
4	1.206	7.538	40.634	1.206	7.538	40.634
5	1.174	7.335	47.969	1.174	7.335	47.969
6	1.143	7.147	55.115	1.143	7.147	55.115
7	1.023	6.392	61.507	1.023	6.392	61.507
8	.985	6.155	67.663			
9	.913	5.703	73.366			
10	.855	5.346	78.712			
11	.762	4.761	83.473			
12	.681	4.259	87.732			
13	.606	3.789	91.520			
14	.582	3.635	95.155			
15	.464	2.902	98.057			
16	.311	1.943	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component						
	1	2	3	4	5	6	7
bell shaped	.681	-.430	.124	.105	-.123	-.179	-.238
deep flat bottom	-.300	.358	.117	-.728	-9.57E-02	-5.08E-02	9.363E-02
shallow flat bottom	-.344	.110	-.200	.583	.290	.409	.296
triangular drill	.335	-.186	.268	.228	3.137E-02	-.320	.268
bipointed drill	4.515E-02	-.206	.140	.102	-.212	-.312	-9.06E-02
corner-notched drill	-1.44E-02	.548	.414	.216	-.447	5.588E-02	-.162
endscraper	.352	-.186	.319	-.141	-.165	.324	.387
sidescraper	.442	.195	-.157	-.260	7.388E-02	.291	-1.80E-02
Fort Ancient knife	.186	-9.27E-02	-.237	-3.29E-02	-.168	.518	-.462
large triangular knife	.266	-6.19E-02	.515	-6.31E-02	.475	.313	-.177
leaf shaped knife	.274	.634	.386	.289	-.160	6.309E-02	-4.61E-03
lanceolate knife	.284	.260	.149	-7.07E-02	.661	-.211	-.247
flake knife	.600	.125	-.409	-2.63E-02	-.177	3.560E-02	.190
spokeshave	.455	.412	-.265	-4.33E-02	.184	-.225	.352
blade	.250	-.297	.289	-.167	-3.33E-02	.286	.358
retouched flake	.601	.158	-.331	6.561E-02	-5.88E-02	-2.11E-04	-.140

Extraction Method: Principal Component Analysis.

a. 7 components extracted.

Chipped Stone Debitage

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.669	46.688	46.688	4.669	46.688	46.688
2	1.223	12.231	58.919	1.223	12.231	58.919
3	1.096	10.961	69.880	1.096	10.961	69.880
4	.877	8.769	78.649			
5	.619	6.187	84.836			
6	.505	5.050	89.886			
7	.351	3.513	93.399			
8	.328	3.279	96.678			
9	.244	2.444	99.122			
10	8.777E-02	.878	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component		
	1	2	3
bell shaped	.623	-.341	-.580
deep flat bottom	-.183	.925	.137
shallow flat bottom	-.292	-.456	.792
cores	.783	6.888E-02	9.885E-02
wedges	.664	-3.40E-02	.202
shatter	.844	.106	6.850E-02
total decortication	.927	9.590E-02	.146
total secondary	.893	7.199E-02	.160
triangular preforms	.674	-8.70E-02	2.650E-02
other preforms	.534	6.376E-02	9.766E-02

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Ground Stone

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.948	24.566	24.566	2.948	24.566	24.566
2	1.453	12.108	36.674	1.453	12.108	36.674
3	1.284	10.700	47.375	1.284	10.700	47.375
4	1.183	9.862	57.236	1.183	9.862	57.236
5	.985	8.212	65.449			
6	.905	7.546	72.995			
7	.821	6.844	79.839			
8	.647	5.394	85.232			
9	.544	4.532	89.764			
10	.534	4.453	94.218			
11	.403	3.357	97.575			
12	.291	2.425	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component			
	1	2	3	4
bell shaped	.547	-.490	-.460	-.125
deep flat bottom	-.182	.548	.290	-.627
shallow flat bottom	-.265	7.126E-02	.345	.811
hammer stone	.750	-.156	.281	-8.94E-02
pitted stone	.703	-.116	.254	1.507E-02
mano	.705	-8.11E-02	.265	3.801E-02
metate	.444	.462	8.971E-02	-3.08E-02
celt	.404	-.318	7.830E-02	-2.87E-02
slate disc	.155	.165	-.535	-7.72E-03
banner stone	.343	.476	-.413	.194
circular stone	.429	.375	-.363	.238
abrader	.552	.392	.232	.102

Extraction Method: Principal Component Analysis.

a. 4 components extracted.

Bone and Shell Tools

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.627	29.188	29.188	2.627	29.188	29.188
2	1.265	14.058	43.246	1.265	14.058	43.246
3	1.078	11.977	55.223	1.078	11.977	55.223
4	1.036	11.516	66.739	1.036	11.516	66.739
5	.817	9.075	75.814			
6	.710	7.885	83.699			
7	.621	6.896	90.596			
8	.550	6.115	96.710			
9	.296	3.290	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component			
	1	2	3	4
bell shaped	.722	-.390	-.368	-.137
deep flat bottom	-.162	.926	8.806E-02	-7.50E-02
shallow flat bottom	-.441	-.392	.598	.269
flaker	.418	-.134	.563	-.358
fish hook	.685	1.841E-02	.213	.182
pin	.692	.190	.136	-3.21E-02
beamer	.603	.204	.366	.195
shell hoe	.573	5.862E-02	-.189	-.156
bowl (turtle shell)	.265	5.395E-02	-.163	.846

Extraction Method: Principal Component Analysis.

a. 4 components extracted.

Awls

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.041	25.515	25.515	2.041	25.515	25.515
2	1.300	16.251	41.766	1.300	16.251	41.766
3	1.101	13.762	55.528	1.101	13.762	55.528
4	.975	12.189	67.717			
5	.969	12.118	79.835			
6	.723	9.042	88.877			
7	.578	7.229	96.106			
8	.312	3.894	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component		
	1	2	3
bell shaped	.761	-.396	-.282
deep flat bottom	-.221	.859	-5.57E-02
shallow flat bottom	-.494	-.316	.597
awl (ulna)	.205	-.224	.521
awl (scapula)	.499	.353	.312
awl (rib)	1.785E-02	-.156	-.474
awl (leg)	.565	.324	.156
awl (splinter)	.748	3.274E-02	.207

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Bone and Shell Pendants

Total Variance Explained

Component	Initial Eigenvalues Total	Initial Eigenvalues % of Variance	Initial Eigenvalues Cumulative %	Extraction Sums of Squared Loadings Total	Extraction Sums of Squared Loadings % of Variance	Extraction Sums of Squared Loadings Cumulative %
1	1.687	15.337	15.337	1.687	15.337	15.337
2	1.477	13.431	28.767	1.477	13.431	28.767
3	1.168	10.617	39.384	1.168	10.617	39.384
4	1.123	10.206	49.591	1.123	10.206	49.591
5	1.009	9.174	58.764	1.009	9.174	58.764
6	1.006	9.141	67.906	1.006	9.141	67.906
7	.984	8.942	76.848			
8	.906	8.236	85.084			
9	.778	7.075	92.159			
10	.534	4.855	97.015			
11	.328	2.985	100.000			

Extraction Method: Principal Component Analysis.

Component Matrix[a]

	Component 1	2	3	4	5	6
bell shaped	.786	-.379	3.114E-02	-.198	6.475E-03	1.023E-03
deep flat bottom	-.295	.598	-.612	-6.73E-02	1.396E-03	-2.18E-04
shallow flat bottom	-.528	-6.85E-02	.588	.392	-1.40E-02	-1.67E-03
pendant (bear tooth)	.421	.445	.495	7.632E-02	5.020E-03	2.351E-04
pendant (elk tooth)	9.773E-02	-.125	2.733E-02	-.298	.354	.744
pendant (claw)	.239	-9.60E-02	-.275	.638	.300	1.307E-02
wolf mandible	.104	.426	-1.32E-02	-.230	-1.85E-02	-8.68E-04
pendant (shell)	.497	3.838E-02	-.236	.515	1.029E-03	-8.03E-04
barrel bead	.103	-.132	2.892E-02	-.316	.442	-.671
shell bead	.211	-.183	-8.75E-02	-7.25E-02	-.773	-3.74E-02
shell disc	.383	.718	.246	7.296E-03	-4.72E-03	-4.68E-04

Extraction Method: Principal Component Analysis.

a. 6 components extracted.

APPENDIX E

Petrographic Analysis Data
(compiled by Lane Fargher)

Thin-section #	Feature	Temper	Paste Birefringence	Iron stains	Quartz	Microcline	Plagioclase	Biotite	Muscovite	Chert	Opaques	Epidote	Amphibole (hornblende)	Pyroxene	Calcite	Caliche	Altered Plagioclase	Isotropic (garnet?)	Unknown	Grog	Matrix	Silt	Fine Sand	Medium Sand	Coarse Sand 1
1	1/79	grit	no	no	x	x	x		x			x	x	x		x					100	7	2	3	12
2	11/71	grit	no	no	x	x	x	x	x		x	x	x	x	x						90	3	12	10	15
3	5c/76	shell	yes	yes	x	x	x								x						100	6	5	3	3
6	19ww/74	grit	no	no	x	x	x					x	x	x	x		x		x		100	2	9	10	9
7	19ww/74	shell	yes	yes	x		x								?						101	10	4	2	7
8	18/72	grit	yes	yes	x	x	x			x	x	x	x	x				x		?	100	9	13	13	7
9	18/72	shell	yes	yes	x										x	x					104	9	3	6	1
10	46/71	grit	yes	yes	x	x	x			x	x	x	x	x			x	x		x	90	3	9	7	7
11	3E/76	grit/shell	yes	yes	x	x	x	?		x	x	x	x	x	x		x				59	7	10	17	18
13	5/74	grit	no	yes	x	x	x				x	x	x	x		x					60	17	14	4	6
14	5/74	grit	no	yes	x	x	x	x	?	x		x	x	x				x		?	100	0	10	11	8
15	11/71	grit	no	yes	x	x	x			x	x	x	x	x			x	x			100	5	10	6	11
16	11/71	shell	yes	yes	x										x						100	8	4	4	9
18	7/77	grit	no	yes	x	x	x	?			x	x	x	x			x			?	95	11	15	2	2
19	7/77	grit	yes	yes	x	x	x			x		x	x	x		x	x				100	7	12	5	6
20	12/76	shell	yes	yes	x		x								?				x		100	15	3	4	4
21	12/76	grit	yes	yes	x	x	x			x	x	x	x	x			x	x			75	6	15	18	8

Thin-section #	Feature	Coarse Sand 2	Multi-count	Gravel	Multi-count	Voids	Total	Total-Voids	Total-voids-multiple counts	Matrix/Voids	Quartz/Plag-mono	Quartz/Plag-poly	Altered Plage	Microcline	Horblende	Metamorphic grain	Epidote	Calcite	Isotropic	Caliche	Chert	Grog	Shell	Perthite	Pyroxene?	?
1	1/79	20	0	13	9	11	178	167	158	111	27	7	0	0	11	4	1	0	0	2	0	0	0	0	0	0
2	11/71	13	4	2	1	5	157	152	147	95	36	6	0	1	7	0	1	0	1	0	0	0	0	0	0	0
3	5c/76	7	0	10	7	9	153	144	137	109	5	0	0	0	0	0	0	0	0	0	0	0	26	0	0	0
6	19ww/74	5	1	0	0	7	149	142	141	107	27	1	1	2	1	0	0	1	0	0	1	0	0	0	0	0
7	19ww/74	10	0	1	0	16	158	142	142	117	11	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
8	18/72	1	0	0	0	7	158	151	151	107	30	7	0	1	0	0	1	0	0	0	2	0	0	1	0	0
9	18/72	6	0	2	1	19	160	141	140	123	14	0	0	0	0	0	0	0	0	7	0	0	11	0	0	0
10	46/71	12	3	11	7	22	181	159	149	112	17	7	2	0	0	0	1	0	2	0	10	9	0	0	0	0
11	3E/76	10	1	2	0	13	148	135	134	72	31	2	6	0	1	2	0	0	0	0	3	0	20	0	0	0
13	5/74	2	0	0	0	11	127	116	116	71	40	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0
14	5/74	14	2	4	3	4	170	166	161	104	21	15	0	1	1	0	0	0	0	0	3	6	0	0	0	0
15	11/71	4	0	6	4	4	165	161	157	104	27	0	1	1	0	0	0	0	1	0	10	0	0	0	0	0
16	11/71	17	6	7	5	17	193	176	165	117	8	0	0	0	0	0	0	0	0	0	0	0	41	0	0	0
18	7/77	2	0	2	1	2	150	148	147	97	23	2	3	0	1	0	0	0	0	0	0	2	0	0	1	0
19	7/77	1	0	5	3	8	166	158	155	108	23	4	4	0	1	0	0	0	0	3	1	0	0	0	0	0
20	12/76	5	1	8	4	11	175	164	159	111	15	0	0	0	0	0	0	2	0	0	0	0	21	0	0	2
21	12/76	6	0	4	2	4	159	155	153	79	33	6	5	0	2	0	1	6	1	0	2	0	0	0	0	0

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