

## Chapter 6

### BASKETMAKER III (A.D. 500-750)

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#### GENERAL INTRODUCTION TO BASKETMAKER III RESEARCH

Basketmaker remains were well recognized early in Southwestern archaeological research (see Lipe, Chapter 3), but defining the divide between Basketmaker and Pueblo was difficult for early researchers. Sites belonging to the "Post-Basketmaker" and "Pre-Pueblo" periods were the focus of many excavations in the 1920s, and by the time of the initial Pecos Conference, Kidder (1927) had devised a classification that marked the end of Basketmaker developments with a stage termed "Basketmaker III." This cultural stage was characterized by residential sites with pithouses but no contiguous or substantial surface structures; the widespread use of domesticated crops such as corn; the presence of tools such as plain pottery and the bow and arrow; and a population that did not practice cranial deformation. Though Kidder's definition of Basketmaker III and Pueblo I gave archaeologists a more well defined framework of cultural change, the fact that many key researchers, including Earl Morris, Frank Roberts, Paul Martin, and J. O. Brew, focused their attention on Basketmaker III and Pueblo I sites immediately after 1927, emphasizes how little was known.

No less a luminary than Earl Morris (1939:19) noted that Basketmaker III was "by far the most important of the entire series [of the Pecos Classification]." Southwestern archaeologists such as Morris were intrigued by the widespread use of early pottery and the appearance of the first real aggregates of population, such as at Shabik'eshchee (Roberts 1929). However, after several early attempts to explain these changes through the diffusion of cultural traits or the migration of different populations (e.g., Morris 1939:19-29), there have been few syntheses of Basketmaker III focused on population movement, increasing population, or the changing settlement patterns of this period which is "by far the most important. . . ." The synthesis that follows is an attempt to bring together disparate data and to begin to make sense of the trajectories of change in this period. The emphasis necessarily will be more on sites and settlement patterns than on artifacts and technological change.

A number of important excavations in the study area have focused on sites that were largely Basketmaker III (Morris 1939; O'Bryan 1950; Lancaster and Watson 1954; Wheat 1955a; Rohn 1974, 1975; Birkedal 1976; Gooding 1980; Breternitz 1986; Brisbin 1986a; Brisbin and Varien 1986; Kuckelman 1988b, 1988d; Morris 1991). These investigations centered on fine-tuning our understanding of Basketmaker III chronology and technological change, but by the time of Birkedal's dissertation work, the social organization of settlements had become a more central issue. Although no one has had an archaeological situation comparable to Birkedal's (i.e., a number of well-dated pit structures which may have been part of a single Basketmaker community), his work did at least spur more thinking about settlement patterns and social changes which have been the focus of most recent synthetic work (Fetterman and Honeycutt 1987; Fuller 1988d; Kane 1986b; Morris 1991). A total of 1,902 sites with Basketmaker III components has been recorded in the context area. These sites account for 14 percent of the total number of prehistoric sites in the area.

Though much literature is available on Basketmaker III sites, there is still a limited understanding of how Basketmaker III is tied to the dramatic developments in Basketmaker II, which precedes it, or contributes to the rapid population rise and village formation, which follow in Pueblo I. These questions are implicit in much of the present synthesis and account for the focus on tracing population and social changes throughout this period. The core of this synthesis concentrates on describing Basketmaker III as a distinct period with particular subsistence strategies, settlement patterns, community organization, and cultural ties to other areas. Chronological control is central to any archaeological investigation and so the discussion begins by characterizing the key means of dating changes in this period.

## **CHRONOLOGICAL CHANGE AND CHARACTERIZATION OF THE RECORD**

Basketmaker III sites have a fairly distinct signature of architectural styles, ceramic types, and other cultural materials that have been recognized since the first Pecos Conference (Kidder 1927; Morris 1939; Roberts 1935). Though these materials readily place a site to the Basketmaker III period, and sometimes to even early or late in the period, it is often difficult to recognize a Basketmaker III site in a surface reconnaissance of an area. These sites do not have large trash middens, as do later pueblo sites, and much of the architecture is subsurface. Consequently, much of the following evidence on chronological change is heavily dependent on fully excavated and well-dated sites.

### **Broad Trends in Basketmaker III Sites**

Very few Basketmaker III sites are dated prior to the late sixth century A.D. Breternitz (1986) reported two sites that date to A.D. 460-480 and has suggested that there may be more late Basketmaker II/early Basketmaker III sites in buried and as yet undetected contexts. However, these two sites remain exceptional; currently, all well-dated Basketmaker III habitations postdate A.D. 580 or 590. Some researchers have suggested that early Basketmaker III populations may have their origins in Mogollon sources (Berry 1982; Lucius 1983; see Wilson 1988), but this research question has not yet been fully addressed. Until the search for these early sites is more comprehensive and until more examples of early Basketmaker III sites are encountered, it is unlikely that a set of defining criteria for these very early Basketmaker III sites or the origins of their past inhabitants can be offered.

At present it does appear that there is a significant decline in the human occupation of the study area between A.D. 375 and 575. This is a research issue discussed by Matson et al. (1988) in their review of occupational discontinuities in the Cedar Mesa area in southeastern Utah, but it is an issue that so far has defied explanation (see Berry 1982). Given that population rises and falls precipitously several times in the centuries thereafter, the problem of population movement—such as the potential immigration of people to the study area in the mid-sixth century—has taken on a new importance in area research. A key question is whether there are reservoirs for Basketmaker populations such as the Chuskas or nearby mountain areas, or whether one needs to range as far as the Mogollon Highlands to account for immigrants (Berry 1982). Population is evident in the area again sometime between A.D. 575 and 590.

The majority of the excavated Basketmaker III sites are habitations that date between A.D. 590-720 (Table 6-1). Architectural variation in pit structures and their surrounding facilities is fairly straightforward and has been researched for some time (Bullard 1962; Hewitt et al. 1983; Morris 1991; Wilshusen 1988b). Though it is difficult to make precise chronological assignments

based on pithouse construction styles and associated features, it is possible to distinguish early from late pithouses. Some of the most obvious chronologically sensitive features are discussed later in this chapter.

**Table 6-1. Notable Tree-ring Dated Sites in the Context Area with Basketmaker III Construction Dates.**

Site Number and Reference	Type of Site	Drainage Unit	Probable Date (A.D.)
5MT2344 (Breternitz 1986)	hamlet	Mesa Verde-Mancos	470-480s
5MT2389 (Breternitz 1986)	hamlet	Mesa Verde-Mancos	460s?
MV118, Earthlodge A; and MV117, Earthlodge B (possibly just one site) (Lancaster and Watson 1943)	large hamlet	Mesa Verde-Mancos	580-590s
5MT4545, Tres Bobos site (Brisbin and Varien 1986)	hamlet	Dolores	early 600s?
5MT3994 (Hammack 1984)	hamlet	Monument-McElmo	early 600s?
Site 1060 (Hayes and Lancaster 1968)	hamlet	Mesa Verde-Mancos	early 600s
5MT3 (Mobley-Tanaka 1997b)	large hamlet?	Monument-McElmo	late 500s-630s??
5MT12516, Payne site (Rohn 1974)	large hamlet	Monument-McElmo	600-610s?
MV1285, Step House Cave (Nusbaum 1981, Robinson and Harrill 1974)	large hamlet	Mesa Verde-Mancos	610-620s, 630s?
MV283, Pithouse C (Douglass 1938; Lancaster and Watson 1943)	hamlet	Mesa Verde-Mancos	610s
5MT2525 Knobby Knee Stockade (Morris 1991)	large hamlet	Monument-McElmo	610s-640s
MV1824 (Breternitz 1973)	hamlet	Mesa Verde-Mancos	620s
MV1937, Mini-Train Village (Birkedal 1976)	large hamlet	Mesa Verde-Mancos	620s
MV1938 (Birkedal 1976)	hamlet	Mesa Verde-Mancos	620s
5MT1, Stevenson site (Robinson and Harrill 1974; Wheat 1955a)	large hamlet	Monument-McElmo	620s? and 660-670s
5MT9168, Rabbit site (Chenault 1998b)	large hamlet?	Monument-McElmo	630s

5LP1434, North Shelter (Carlson 1963)	????	Animas	mid-600s? (one date)
5MT2198, Sagehill Hamlet (Hewitt 1983)	hamlet	Dolores	mid-600s? (vv dates)
5MT11861 (Chenault 1998a)	large hamlet?	Monument-McElmo	640s?, 680s
5MT8938 (Errickson 1995)	hamlet	Mesa Verde-Mancos	640s, early 700s
MV1200, Long House (Breternitz 1973)	hamlet	Monument-McElmo	650s
MV1644, Pithouses A & B (Hayes and Lancaster 1975)	hamlet	Mesa Verde-Mancos	650-660s
5MT8937 (Errickson 1995)	hamlet	Mesa Verde-Mancos	650-690s
5MT12517, Gilliland site (Rohn 1975)	large hamlet	Monument-McElmo	650s-early 700s
MV145 (O'Bryan 1950)	large hamlet	Mesa Verde-Mancos	660s
5MT9360, Weevil House (Morris 1991)	field house?	Monument-McElmo	660s?
5DL310 (Adams 1982)	hamlet	Monument-McElmo	670s
MV354 (Lancaster 1968; O'Bryan 1950)	hamlet	Mesa Verde-Mancos	670s
MV101, Twin Trees (Lancaster and Watson 1954)	large hamlet	Mesa Verde-Mancos	670s
5MT4684 (Tucker 1983)	hamlet	Dolores	670s?
5MT5834 (Reed et al. 1981)	hamlet	Dolores	680s
5MT8822, Shallow House (Kuckelman 1988d)	hamlet	Monument-McElmo	680s
5MT9343, Crooked Man Hamlet (Motsinger and Chenault 1998)	large hamlet?	Monument-McElmo	680s
5DL121B, Cloud Blower Stockade (McNamee et al. 1992)	large hamlet	Monument-McElmo	680-690s
5DL1138, Vinger Hamlet (McNamee 1992)	hamlet	Monument-McElmo	680s?-690
5DL297 (Lux-Harriman 1982)	hamlet	Monument-McElmo	690s

MV59, also called MV405, and Pit Structure 1 (O'Bryan 1950; Robinson and Harrill 1974)	hamlet	Mesa Verde-Mancos	690-early 700s
5DL112, Palote Azul (McNamee and Hammack 1992)	large hamlet	Monument-McElmo	690-early 700s
MV1554 (Breternitz 1973, Birkedal 1976)	hamlet	Mesa Verde-Mancos	early 700s
MV1940 (Birkedal 1976)	hamlet	Mesa Verde-Mancos	early 700s
MV1990 (Hallisy 1972; Robinson and Harrill 1974)	hamlet	Mesa Verde-Mancos	720s
MV4 (Robinson and Harrill 1974)	hamlet	Mesa Verde-Mancos	720s

There is considerable variety in Basketmaker III settlements, with examples ranging from very small structures (e.g., site 5MT9360, which is probably a seasonally used field house) to hamlets with up to six and possibly nine pithouses (e.g., MV1200, Step House). In spite of this variety, the vast majority of sites are one- or two-household habitations (Figure 6-1), a pattern that appears to remain unchanged through the whole period. As a consequence, settlement patterning does not appear to be particularly chronologically sensitive for distinguishing early and late settlements at this point. However, it is possible that there are drainage-specific settlement histories which may be evident in future research.

Finally, there are distinctly different ceramic traditions that emerge in and around the context area by the middle of the Basketmaker III period, and that point to potentially distinct cultural identities during this period. So, ceramic types may be not only chronologically sensitive markers of change, but also important indicators of differentiation at the regional or drainage unit level. Much of the data used to characterize Basketmaker III ceramic change—as well as temporal variability in buildings and settlements—is derived from a sample of intensively investigated sites which are fairly well dated with dendrochronological samples.

#### **Well-dated Basketmaker III Sites: A Baseline for Future Work**

Because Basketmaker changes are most readily accessible at the site level, it is important to briefly review the sites in the context area that have been fairly accurately and precisely dated with tree-ring dating of construction timbers. These are some of the most well documented sites, but some of the site reports are still poorly known because of limited distribution or because they represent early excavations. Clearly there are inherent biases in a sample of tree-ring dated sites (Ahlstrom 1997), but given the precision of the dates, and given that information from other sites is added later in the chapter when larger issues of regional cultural dynamics and settlement shifts are discussed, these data should not unduly skew the view of the period.

In Table 6-1, sites are reported that appear to have construction dates between the mid-fifth and mid-eighth centuries A.D. In some cases there are only a few “vv” dates in a general cluster or some question about the dates, and in these cases the probable date of construction is followed by a question mark. In many cases, though, the date is derived from a good cluster of



Figure 6-1. Artist's reconstruction of the second component of occupation at Tres Bobos Hamlet (site 5MT4545). Note pit structure with antechamber, small storage rooms, and outdoor work areas (after Brisbin and Varien 1986:Figure 3.44).

cutting dates that support the probable date of construction and occupation. For the comparative purposes of this overview, site construction is placed only in a decade rather than in a specific year.

Though the above sample is biased in terms of sites with preserved tree-ring samples, it is actually a good sample in terms of spatial and temporal coverage. There have been many reports of Basketmaker III sites in the Upper San Juan-Piedra (Eddy et al. 1984), Animas (Carlson 1963; Gooding 1980; Winter et al. 1986), and La Plata (Morris 1939) drainage units, but in reality almost all of these sites post date A.D. 740 or 750 and appear to be early Pueblo I sites (see next chapter). As a consequence, when one examines the above list of sites and recognizes the focus on the Mesa Verde-Mancos, Monument-McElmo, and Dolores drainage units, the skewed representation of the western portion of the study area is not so much a sampling bias caused by tree-ring dating as possibly a real settlement pattern for the majority of Basketmaker III. It is only in late Basketmaker III and early Pueblo I that settlement rapidly increases in the eastern half of the study area (Fuller 1988a; Hannaford 1993). Though the almost exclusive representation of residential or habitation sites is striking, it should not be surprising given that this site type has received the most attention and produced the most datable timbers in past work. It should be noted that the high percentage of habitations compares well with the high proportion of Basketmaker III habitations to nonhabitations in the reconnaissance records for this area (e.g., Fetterman and Honeycutt 1987:36; Fuller 1988c:105; Rohn 1977:10).

A total of 87 percent of the tree-ring dated sites are constructed between the early 600s and early 700s, or an interval that encompasses only 40 percent of the total Basketmaker III period (A.D. 500-750). This limited sample may be a result of insufficient discovery of earlier buried pit structures or possibly some confusion of late Basketmaker III sites with Pueblo I sites, but it is also a pattern seen in the occupational discontinuities along Recapture Creek and White Mesa in Utah (Davis 1985; Firor et al. 1998), where tree-ring dated habitation sites range between A.D. 625 and 700, and at Cedar Mesa in Utah where habitation sites date between A.D. 650 and 725 (Matson et al. 1988).

Finally, though the above sites represent only those sites with tree-ring dated construction timbers, they represent about 40 percent of the well-documented Basketmaker III sites in the area. Though more than a hundred habitation sites of this period have been excavated by archaeologists over the last 80 years, the majority of these sites have not been sufficiently reported to have adequate site maps or information on associated cultural materials. Strangely enough, the 42 sites in Table 6-1 actually represent some of the best information on the Basketmaker III period in this area. The materials associated with these sites also suggest that changes in ceramic styles and architectural layouts may be useful chronological tools for future work.

### **Ceramic Chronology**

The sherds at the earliest Basketmaker III sites in the northern San Juan are typically brown wares, or ceramic wares that are often brown, but more importantly are constructed from self-tempered alluvial clays. Sambrito Brown is a ceramic type first recognized in the Navajo Reservoir excavations (Dittert et al. 1963; Eddy 1966) or just below the Colorado-New Mexico border and associated with the Upper San Juan-Piedra drainage unit. The type has been recently redescribed and renamed Sambrito Utility by Wilson and Blinman (1993), based on a reexamination of original materials from the Navajo Reservoir project as well as comparable ceramic assemblages from the nearby La Plata Highway project (Wilson 1996). The type has also

been recovered in early Basketmaker III assemblages from the Mesa Verde-Mancos drainage unit (O'Bryan 1950 [Twin Trees Gray]; Breternitz 1986; Wilson and Blinman 1994). It appears to date to approximately A.D. 400-700, but there is still considerable controversy about its exact temporal range.

The similarity between potentially contemporary Mogollon brown wares and Sambrito Utility ware led Dittert et al. (1963) to conclude that the presence of this ceramic type in the upper San Juan drainage basin might indicate the immigration of Mogollon peoples from farther south in New Mexico or Arizona. Wilson and Blinman (1993) have argued that some of the similarities are due to the nature of the alluvial clay of each ware, and that the similarities do not necessarily support Mogollon migration to the southern part of the study area. Essentially there are broad similarities between most early brown wares, whether they be Obelisk Gray of the Prayer Rock District (Morris 1980), brown ware from the Zuni area (Fowler 1988), Alma Plain from the Mogollon region (Haury 1936b), Adamana Brown from the Petrified Forest National Park (Wendorf 1953), or Sambrito Utility sherds from the context area (Wilson and Blinman 1993). Although much remains to be done with clarifying the beginnings of pottery-making in late Basketmaker II and early Basketmaker III periods, to address this issue will require many more sites and the careful analysis of much more early pottery.

By the late sixth century both early gray wares and white wares are evident in the western and central portions of the study area. Gray ware is distinguished from the earlier brown wares by its generally grayish color when fired and its construction from geologic clays and added tempers. Earlier brown wares or utility wares were constructed from self-tempered alluvial clays, so that little or no temper was added in constructing the pottery. In the core of the study area, the most common types are Chapin Gray and Chapin Black-on-white. In some southern portions of the San Juan drainage basin, the gray ware is sometimes called Lino Gray, and the white wares are called Lino Black-on-white or La Plata Black-on-white. All share common basic construction and firing technologies and design styles, but differ in clays, tempers, and pigments. White wares are distinguished from gray wares by the fact that they are polished and painted with usually a mineral-based pigment. The white ware is not slipped and designs usually cover less than 40 percent of the vessel (Blinman 1986a; Breternitz et al. 1974). Gray ware is commonly used for utility or storage vessels or water ollas, and white ware is commonly found as bowls or special forms.

In most of the study area, gray ware body sherds comprise about 90 percent of total Basketmaker III site ceramic assemblages, with an additional 5 percent of sherds being identifiable as Chapin Gray because they are plain rim sherds. The final 4-5 percent of the ceramic assemblage is white ware, with only a limited amount of this being identifiable as Chapin Black-on-white or other types. Until the introduction or advent of red ware at approximately A.D. 725 or 740 (Blinman 1986a, 1988b; Hegmon et al. 1997), there is not much to distinguish ceramic assemblages of the early A.D. 600s from those of the early 700s. By approximately A.D. 750, there are a number of changes that distinguish the Pueblo I ceramic assemblages from Basketmaker III assemblages.

In addition to temporal changes, there also is spatial variability in Basketmaker III pottery. East of the La Plata drainage it is possible that gray wares are not common until approximately A.D. 700 or 725. Sambrito Utility is the primary ceramic type for the Upper San Juan until that time. However, there are no convincing examples in the archaeological record that clarify exactly when the shift from brown ware to gray ware occurs. Among the earliest tree-ring dated sites with

Rosa Gray are the sites excavated by Hall (1944a) in the Gobernador District, which date to the late eighth century and early 800s, and sites with similar dates just to the south of Navajo Reservoir on Frances Mesa (Wilshusen et al. 1998). Eddy (1966:455-456) has proposed that the shift from Sambrito Utility to Rosa Gray must occur between A.D. 700 and 750, but as noted above there is a need for more ceramic assemblages from sites with absolute dates to confirm this.

### **Architectural and Settlement Changes as Means of Dating Basketmaker III Sites**

At one point it seemed that a seriation of pithouse architecture for the Basketmaker III period might produce a chronology with 50-year-resolution dating of architectural style changes (Hewitt et al. 1983), but this kind of precision has yet to be achieved using only architecture and site layout to estimate a site's date. There are broad changes in pit structure layout, depth, roof construction, and interior features that distinguish pit structures of the early sixth, seventh, and eighth centuries, but no one has carried out the large program of comparing pit structure features that would be required to refine architectural changes past the century level.

The earliest Basketmaker III sites in Mancos Canyon were shallow, circular pit structures (Breternitz 1986). Because one of the structures had been substantially destroyed by road work, it is difficult to characterize early pit structures with these two examples.

By the late sixth century or early seventh century, there are sufficient cases to characterize general trends and variability. Pit structures appear to have many common features, a similar layout, and similar roof construction from the early A.D. 600s to the early 700s. Pit structures were the primary domestic structures with associated outside features such as storage cists, small domed storage structures, and hearths. Interior features typically include a formal central hearth, slab deflectors, and oftentimes wingwalls or slab-lined storage bins in the south of the main chamber. There is usually a smaller southern "antechamber" connected to the main chamber by a short passageway. Both antechambers and main chambers are circular to subrectangular in plan. Structures were typically excavated about one meter below prehistoric ground surface and had roofs that must have projected a meter above ground primarily supported by four posts in the main chamber and secondary supports placed in a three-quarter bench around the edge of the structure. Though pit structures are about 20-30 cm deeper on average by the early A.D. 700s than in the early A.D. 600s, there is little else to distinguish an early pit structure from a later one.

It is not until about A.D. 725 that antechambers become much less frequent, pit structures get significantly deeper, and associated surface structures are more substantial. There are so few well-dated sites between A.D. 720 and 750 that there is a real question of whether there is a population decline or settlement realignment in the study area. These late Basketmaker III sites are most often defined by the presence of large ventilators, but not antechambers, and by the addition of early red wares to the ceramic assemblage.

### **SITE TYPES**

Until recently there has been very little work on the variability in Basketmaker III sites and their possible types. The vast majority of site reports and syntheses focus on either single-household habitations (or one- to two-household hamlets) or multi-household habitations (large hamlets of at least two, and possibly three to seven households). Though Basketmaker III public architecture is known for the southern half of the San Juan River drainage basin (Cove Mesa, Broken Flute Cave, Shabik'eshchee, and Juniper Cove), great kivas with clear Basketmaker III

associations have not yet been noted for the study area. Residential sites with oversized pit structures may have served some of the same functions as sites with great kivas, but the oversized pit structures at these sites are smaller than great kivas and appear to have functioned primarily as residences, even though they are up to twice as large as a normal pithouse. There are some “limited activity loci” and “seasonal activity loci” Basketmaker III sites in the literature and in the site files, but other than for recent discussions by Fuller (1988d) and Morris (1991:648-652), there has been little investigation or debate about the use of these nonhabitation sites. The focus on habitation sites may have as much to do with Basketmaker III settlement strategies as it does with an archaeologist’s interest or ability to discover nonhabitation Basketmaker III sites on archaeological reconnaissances.

For the purpose of this discussion, six different Basketmaker III site types are defined: 1) single-residence sites (small hamlets), 2) multiple-residence sites (large hamlets), 3) petroglyph panels, shrines, and other landscape features, 4) field houses, which are seasonally used sites close to probable field settings and which have limited processing and residential features, 5) nonresidential sites, which are artifact scatters with features, and 6) nonresidential sites characterized by artifact scatters with no apparent features other than artifact concentrations. The last two site types are purposefully descriptive types, given that it is still difficult to understand the range of functions represented by these nonresidential sites. The gloss of “limited activity sites” effectively disguises how little researchers understand their prehistoric uses, so the more descriptive terms are offered in this summary. These sites represent an important part of the archaeological record and deserve to be much better understood.

It is possible that public architecture, such as roofed or open great kivas, may be defined as a site type recognized in southwestern Colorado, but at present there are no Basketmaker III examples in the immediate area. The closest Basketmaker III great kivas are 75 km (47 mi) southeast of Mesa Verde at the edge of the Carrizo Mountains (Morris 1980) or more than 100 km (62 mi) to the south above Chaco Wash (Roberts 1929; Wills and Windes 1989).

### **Hamlets: Single- and Multiple-residence Sites**

The most common type of late Basketmaker site is the hamlet, or residential site. They account for 1,301 (68 percent) of the 1,902 Basketmaker III sites in the context area. Multiple-residence sites, or large hamlets, typically have evidence of two to seven households, and single-household sites have one to two households. Pit structures for this temporal period typically have the features and debris associated with a single household, but in some cases there is evidence of two distinct households, especially when the antechamber has been converted into a second domestic area.

Multiple-residence sites, or large hamlets of two or more potentially contemporary pit structures, are represented by a number of sites in the context area: Step House Cave, Grass Mesa, Knobby Knee Stockade (Figure 6-2), and others. There are also several Basketmaker III communities within 100 km (62 mi) of the context area that may represent villages, or sites with at least 10 contemporary pit structures (Wills and Windes 1989). Step House at Mesa Verde has six pithouses, which are potentially contemporary with one another and date between A.D. 590 and 630. Three pithouses were excavated by Nusbaum in 1926 (1981) and three additional pit structures were excavated by Nichols in the early 1960s (Nichols and Harlan 1967). Though there is a need for much more information on this site, the close clustering of the tree-ring dates and the spatial proximity of the pit structures (Birkedal 1976:484-489) suggest a single community of at

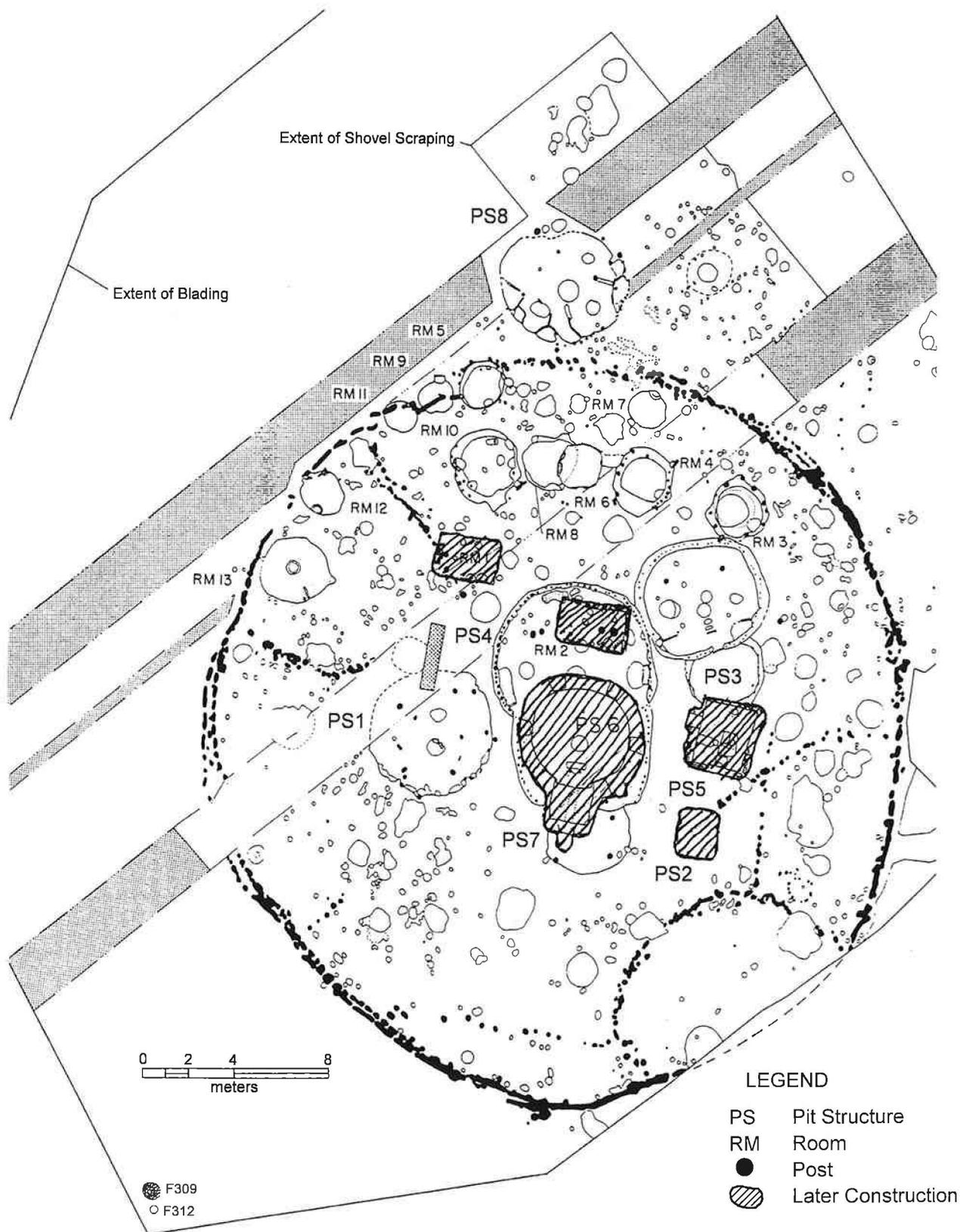


Figure 6-2. Major Basketmaker III cultural units at Knobby Knee Stockade (site 5MT2525). Basketmaker III structures represent at least two, and possibly three, elements of construction dating to the first half of the seventh century A.D. The stockade is associated with the Basketmaker occupation of the site. Shaded areas represent structures from a Pueblo II occupation of the site (after Morris 1991:Figure 3.7).

least four to six contemporary habitations. Grass Mesa has at least 12 pit structures that were used sometime between A.D. 700 and 780, but it appears that the majority of these structures date to A.D. 750-780 (Lipe, Kohler et al. 1988:1214). There is also a great kiva at Grass Mesa, but it clearly postdates Basketmaker III. Thus, Grass Mesa provides a possible, but equivocal, case for a large Basketmaker III hamlet. There are a number of examples of sites with at least two potentially contemporary pit structures—Knobby Knee Stockade (Morris 1991), Palote Azul (McNamee and Hammack 1992), Cloud Blower Stockade (McNamee et al. 1992), Gilliland (Rohn 1975), Payne (Rohn 1974), Stevenson (Wheat 1981), MV145 (O'Bryan 1950), MV1937 (Birkedal 1976), Twin Trees (Lancaster and Watson 1954)—to name but a few.

Outside the context area, large Basketmaker III hamlets, possibly even small villages, have been documented (Morris 1980; Roberts 1929; Wills and Windes 1989). These sites are much more complicated and much larger than anything so far documented for this temporal period in the study area. Though both Shabik'eshchee and Broken Flute Cave were excavated almost 70 years ago and have limited documentation, it is clear that both sites may have had up to 15 contemporary pit structures and an associated great kiva. The size and complexity of the residences and their associated features, as well as the presence of public architecture, sets these sites apart from others to the north. The large hamlets of Step House in the Mesa Verde-Mancos drainage unit and Grass Mesa in the Dolores drainage unit are small versions of these larger villages to the south, but there is no site comparable to Shabik'eshchee in the context area. However, given the size of the Basketmaker III population in this area by the mid-seventh century, a Basketmaker III village certainly must be considered a possibility.

By far the most common site type is the one- or two-household residence, or a small hamlet. There is considerable variability in the location, layout, and architectural details of Basketmaker III hamlets, but there is very little difference in the basic structures, features, and settlement density associated with these smaller hamlets. The key features associated with a hamlet include a pit structure with a subrectangular main chamber, storage features that are either covered cists or small, partly above ground storage rooms, activity areas associated with the general site, and a midden area. There is variability in the presence of a site-enclosing stockade or fence, and of an antechamber, in the size of the pit structure main chambers (which range from 8 m<sup>2</sup> to 64 m<sup>2</sup>), in the presence and elaborateness of the surface rooms, and in the relative length of occupation of the site.

As noted earlier in this discussion, pit structure design changes gradually through the Basketmaker III period, but other than for the disappearance of antechambered designs late in the sequence and the gradual deepening of the excavation of the pit structure floor, the basic design of the structure varies little from site to site. Gilman (1983, 1987), Wills (1995), Schlanger (1998), and others have presented ethnographic data or adaptational models that help to explain the usefulness of pit structures for early farmers such as the Basketmaker III peoples of the northern Southwest. Pit structures are relatively cost-effective and quick to construct, fairly easy to maintain, convenient for maintaining a relatively constant temperature, and somewhat expandable by changing the function of the antechamber. The features, artifacts, and layout of almost all pit structures of this period reinforce the interpretation that they served as the primary area for domestic activities like food preparation, cooking, and eating, as well as provided protection for people and their belongings from the elements (Birkedal 1976; Bullard 1962; Morris 1939:24-27).

One of the most striking differences evident when Basketmaker III pit structures are compared is in the size of the main chamber. There are sites with tiny pit structures such as

Shallow House (Kuckelman 1988d), which though they have interior chambers of less than 10 m<sup>2</sup>, have the layout, the features, and the artifacts one would expect for a normal Basketmaker III hamlet. There are contemporary pit structures with immense main chambers larger than 50 m<sup>2</sup> (5DL297, described by Lux-Harriman 1982; site 101 described by Lancaster and Watson 1954; and 5MT1 described by Wheat 1981), but these large-chambered structures are as rare as the small pit structures. At present, it is possible that the small pit structures represent small farmsteads and that the very large pit structures represent multihousehold or community structures, but no one has offered a means to differentiate these sites into discrete categories. Though the largest and smallest pit structures may simply represent expected variability within hamlets, they also may represent sites with significantly different uses than regular hamlets. Average size of the main chamber is about 20-25 m<sup>2</sup> (Birkedal 1976:442; Wilshusen 1988b:615), but there is considerable variability in the amount of this space devoted to benches, wall cists, and other architectural features for the approximately 50 Basketmaker III pit structures for which measurements are available. The average excavated depth for these structures is about 1 m below prehistoric ground surface.

In the vast majority of cases, pit structures had antechambers that may have served as temporary storage, and that in at least 10 percent of the cases served as a second location for domestic activities (e.g., Birkedal 1976:84; Brisbin 1986a:876-877; Montgomery 1986:235-238; O'Bryan 1950:58). Though the roofed area of the antechamber is typically one-third of the main chamber area, it still provides sufficient space in many cases for a second hearth, a second mealing area, and other domestic features. Brisbin (1986a) and others have proposed that as a household's children grew to adulthood, the antechamber could be modified to provide a place for a secondary and smaller household. This proposal has been supported by construction sequences where antechambers are remodeled and storage rooms added late in a site's development (Figure 6-3), and by situations where structures that were previously antechambers are actually remodeled to be the main chamber of a new pithouse (Hayes and Lancaster 1975:8-12). However, in the majority of cases, antechambers lack the features and artifacts that characterize domiciles and appear to be "empty" structural space. They could have either functioned as areas for temporary food storage or simply been unroofed ventilators (e.g., Morris 1939:64). Few Basketmaker III architectural features are as expected as antechambers, but as poorly understood.

Though most pit structures of this period have antechambers, it is not a hard and fast rule, since there are at least four or five examples of pit structures without antechambers. These pit structures include Pit Structures 1 and 8 at Knobby Knee Stockade (Morris 1991), Pithouse B at the Payne site (Rohn 1974), and Room 4 at Vinger Hamlet (McNamee 1992). All of these structures are relatively shallowly excavated (10-35 cm), but have the form, features, size, and layout of a regular main chamber. All are interpreted as domiciles. However, none of these structures had evidence of roof fall; both Morris (1991:645-646) and Rohn (1974:51) propose that the structures had wood and brush roofs that did not have a layer of earth on top of this.

Hamlets consistently have features that are interpreted primarily as long-term storage chambers for foodstuffs such as corn. Early in the Basketmaker III period, these features may be akin to the bell-shaped storage cists described by Morris (1939:18) for Basketmaker II, but by the early seventh century it is common to find small, circular to subrectangular pit rooms with evidence of timber-and-earth domed or tepee-shaped roofs. These storage rooms average about 3.4 m<sup>2</sup> in area, based on summary statistics for 40 examples presented by Birkedal (1976:464), Morris (1991:648), and Wilshusen (1988b:615) for Basketmaker III sites respectively in the Mesa Verde-Mancos, Monument-McElmo, and Dolores drainage units. Though pitrooms or storage cists have not been found at all sites, it has not been common in the past to strip wide areas around pit

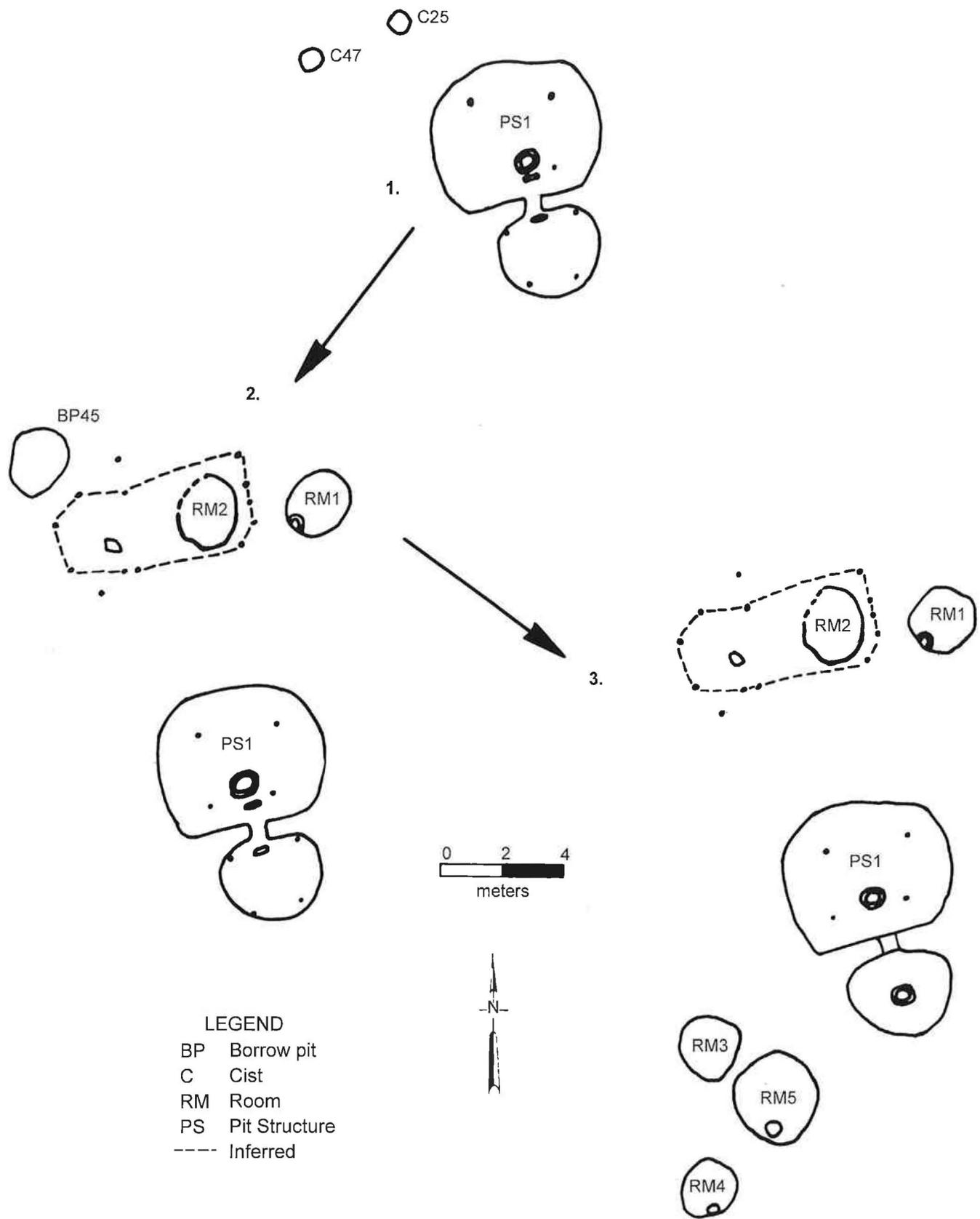


Figure 6-3. Building sequence at Poco Tiempo Hamlet (site 5MT2378). Note addition of storage rooms and hearth in antechamber later in the sequence (after Brisbin 1986a:Figure 9.40).

structures to ensure that these kinds of features would be found. At those sites where storage rooms have been detected, the number of rooms per pit structure averages between one and five, with a great deal of variation in this average. The number of storage rooms per household at a site ranges from one to 14, but at the sites with much higher numbers of rooms it appears that only two to seven rooms were actively in use at any one time.

Finally, there are pitrooms that appear to be small, secondary habitation areas at some sites. These range from very small but substantial rooms with hearths, metates, and other features, to roofed areas with less substantial walls, which may have served as domestic activity areas in mild weather (see Morris 1991:646-648 for a detailed description). These are not miniature pit structures as have been discussed before; instead they are pitrooms similar to the storage rooms in size and shape but with some of the features and artifacts of a domicile. Examples include Rooms 3, 4, and 10 at Knobby Knee Stockade (Morris 1991), Room 5 at Poco Tiempo (Brisbin 1986a), and Rooms 3 and 10 at Dos Bobos (Kuckelman 1988b). Less substantial structures are possibly ramadas with associated hearths. An example of this latter type is Nonstructural Area 1 at Tres Bobos (Brisbin and Varien 1986).

Stockades, or encircling features of upright posts, are a more common feature than was thought even a decade ago (see Figure 6-2). There are now at least seven sites where stockaded Basketmaker III hamlets have been documented: Knobby Knee Stockade, 5MT2525 (Morris 1991); Payne, 5MT12516 (Rohn 1974); Gilliland, 5MT12517 (Rohn 1975); Palote Azul, 5DL112 (McNamee and Hammack 1992); Cloud Blower, 5DL121B (McNamee et al. 1992); Crooked Man, 5MT9343, (Motsinger and Chenault 1998); and Rabbit, 5MT9168 (Chenault 1998b). These sites are striking in that they are all in the Monument-McElmo drainage area and are all large hamlets. Each large hamlet was enclosed by a stockade 30-40 m in diameter. After the first stockades in this area were encountered by archaeologists, Rohn (1975:117) suggested that many of the Basketmaker and early Pueblo habitations probably had been surrounded by stockades; however, over the last several decades, a variety of extensive and careful excavations have failed to uncover stockades at more than about 10 percent of the Basketmaker III sites, and even proportionately less at Pueblo I and Pueblo II sites (see summary in Morris 1991:643-644).

It appears that these stockades were made of about 450-600 posts set into the ground at intervals between 10 to 30 cm. The posts range between 6 and 20 cm in diameter and were set into the ground in postholes or trenches, which were sometimes up to 30 cm deep. Based on later burned stockades in the Gobernador area (Hall 1944a:28), it appears that the posts were at least 2 to 3 m tall and interlaced with smaller branches and brush to create a brush wall. The stockades typically encircle at least two pit structures with associated pitrooms as well as the site's midden, so they are substantial. It is reasonable to assume that the primary function was to exclude unwanted people or animals from the habitation area. Clearly, they would protect kitchen gardens and other materials from easy predation, but the substantial amount of effort required to construct such a feature suggests that they probably served as small forts or redoubts. Their place in the settlement scheme is discussed later in this chapter. Stockaded settlements are found at sites dating throughout the seventh century, and later examples date to the ninth and eleventh centuries, so it does not appear that they are exclusively associated with a particular temporal period.

### **Rock Art Panels, Shrines, and Other Landscape Features**

Basketmaker II rock art sites are possibly more common and certainly more distinct than Basketmaker III petroglyph and pictograph sites, but the latter have distinct attributes that allow

them to be identified as such. Some of the best examples of Basketmaker III rock art in the context area are in the canyons of McElmo Creek, the Mancos River, and the Dolores River (Figure 6-4). Cole (1990:130) notes that late Basketmaker-style rock art typically includes broad-shouldered and more slender anthropomorphs with a variety of body shapes (rectangular and trapezoidal, as well as the triangular shapes of Basketmaker II) and headdresses (bird shapes, ray-like shapes and other unidentifiable headdresses). Later styles also include rows of linked figures, thin flute players, dot patterns, bighorn sheep and various other quadrupeds, birds, snakes, paw prints, and possible bird tracks.

It is likely that petroglyph sites represent traditionally known sites or markers of particular spots. As is the case for Basketmaker II petroglyph sites, there is almost always a multiplicity of images and styles at Basketmaker III rock art sites that span hundreds of years. For example, some of the Mancos Canyon rock art sites have more than a thousand years of different styles and cultural affiliations. This suggests that these sites remain traditionally important across many generations of time.

Rock art sites are just one kind of site that “mark” the larger cultural landscape. Other possible examples include Basketmaker III shrines, isolated great kivas, or similar sites. Though none of these site types are presently known in the context area, they certainly are possibilities, and these kinds of sites should be recognizable and likely components of late Basketmaker landscapes. As researchers begin to better understand cultural differences within Basketmaker III peoples and the particular histories of the different areas, it may be possible to better predict where these sites might be.

### **Farmsteads/Field Houses**

Field houses, or seasonally used sites that are close to probable field settings and that have limited processing and residential features, have not been typically recognized for Basketmaker III. In fact, they defy some of the “logic” of when one might expect to see such facilities on a landscape (Kohler 1992a). However, over the last decade, at least one example of a field house dating to approximately A.D. 660-700 has been documented (Morris 1991). The structure is a small, round, roofed structure with a small, interior storage pit and a shallowly excavated floor. Several extramural hearths are close to the structure. It is located in a favorable setting for an agricultural plot. It is similar in layout, features, and artifact assemblage to the more extensively documented Pueblo I field houses that date 100 to 200 years later.

In the past, some scholars have proposed that field houses are possible at the earliest in Pueblo I (Kohler 1992a), given the assumption that field houses represent an intensification of both land use and land tenure in an increasingly competitive landscape (e.g., Preucel 1988; Wilcox 1978). Basketmaker III populations and agricultural intensification have not been perceived to be sufficient to demand the kind of settlement system that would incorporate field houses as a regular agricultural strategy. However, few scholars have addressed the effects of Basketmaker III immigration on the settlement systems in the northern San Juan area, even though this immigration has been recognized for some time (Birkedal 1976:511; Berry 1982; see Glassow 1972). Scholars of frontier agricultural systems (e.g., Stone 1996:83-87) have noted that pioneer plots are often far enough from established residences to require field houses that were only occupied seasonally, even though population pressure was low. Only when pressure on agricultural lands increased with rising population were these field houses replaced by year-round residences. This is akin to the settlement system model proposed by Fuller (1988d) in that it

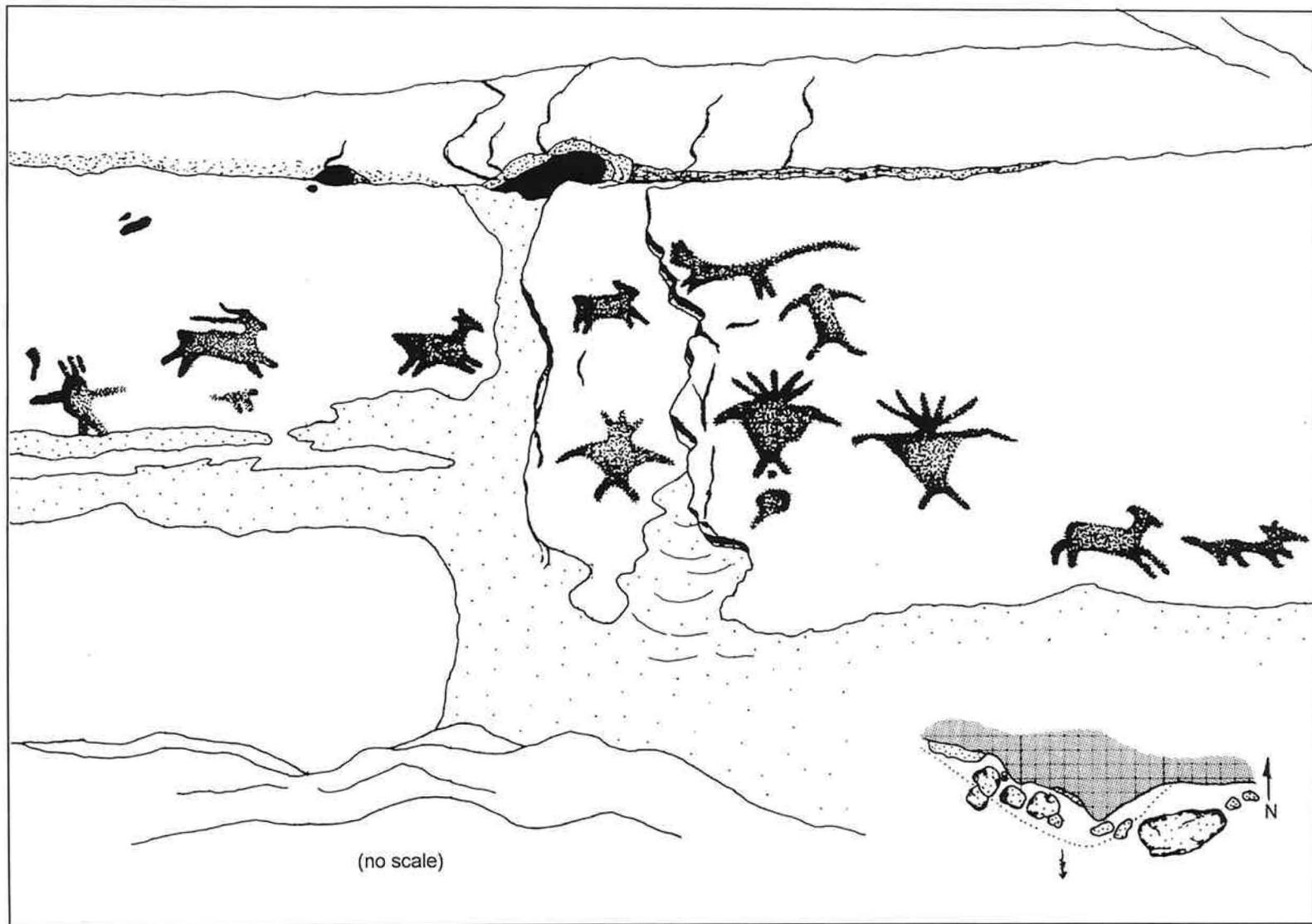


Figure 6-4. San Juan Basketmaker-style petroglyphs at site 5MT4554, Dolores River Canyon. Rock art dates to Basketmaker III or Pueblo I (after Ives 1986:Figure 8E.48).

recognizes a need for field-tending sites well before the time that villages are common. This issue is raised again in the section on subsistence.

### **Nonresidential Sites: Artifact Scatters with Features**

Although the possibility exists for Basketmaker III sites that are other than habitations and field-tending sites, there are many difficulties for creating an archaeologically obtainable record of Basketmaker III nonhabitation use of the study area. A total of 601 (32 percent) of the 1,902 Basketmaker III sites in the context area are broadly categorized as nonhabitations, or artifact scatters, scatters with features, field houses, or rock art. Fuller (1988d) has most fully described the difficulties of documenting nonhabitation sites and his description deserves to be quoted at length.

The greatest challenge for understanding the Basketmaker III settlement system lies in the nonhabitation portion of the system. Nonhabitation sites would be expected to include field-tending sites, gathering sites, and hunting sites. The latter two types are likely to fall below the threshold of archaeological visibility, to be in remote resource zones not covered by this study area [within the Monument-McElmo drainage], or to be undatable. Although Basketmaker III populations can be assumed to have pursued these subsistence activities, their reflection in the archaeological record, if present, is not relevant to this study. Sebastian (1983) suggests that gathering camps are not recognizable due to low ceramic frequencies (or no ceramics) and a lack of structural remains. Ellis (1978) suggests that pinyon-gathering camps are only identifiable by vegetative association. Cultivation of lands in southwest Colorado has probably exacerbated the problem [Fuller 1988d:15].

So, given the problems noted above, it is likely that many of the sites classified as artifact scatters with features that are dated to Basketmaker III actually are habitations or field houses altered by modern farming practices, or are impossible to define functionally within a settlement system model. In addition, it is likely that a majority of the Basketmaker III nonhabitation sites will be presently undatable with any precision to this period and will only be placed in a more general category such as the Anasazi tradition. Clearly it is a problem that deserves more attention at the regional or landscape level, and it is hoped that more meaningful site functions can be assigned in the near future. Researchers need a truly testable settlement system model to begin to better assign these descriptive site types to specific temporal periods and uses.

### **Nonresidential Sites: Artifact Scatters**

Basketmaker III artifact scatters or artifact scatters with features typically comprise only 15 to 20 percent of the total Basketmaker III sites in reconnaissance samples for the large surveys in the study area (e.g., Fetterman and Honeycutt 1987:36; Fuller 1988c:105; see Chenault, ed. 1996:204, 211 for higher percentages of nonhabitation sites). The same problems in making sense of the artifact scatters with features apply to the sites typed as artifact scatters. It is not currently clear how to extract more information from the site records, given the variety of functional site types and the possible disturbance to most sites that might be grouped as Basketmaker III artifact scatters.

### Isolated Finds

Isolated finds can rarely be assigned to the Basketmaker III period, given that there are very few artifact types exclusively diagnostic of this temporal period. As a consequence, it is unlikely that there will ever be a truly meaningful data set derived from Basketmaker III isolated finds. These data represent more the distributional exception than the rule.

### REGIONAL SITE DISTRIBUTION

Two basic data groups offer hints about the regional distribution of Basketmaker III sites. The first is the SHPO site file and the second is the list of excavated and well-dated Basketmaker III sites in the area (Table 6-1).

The SHPO files on late Basketmaker sites were divided by drainage unit groups to ascertain whether there are significant differences in Basketmaker III population and site types across the context area (Table 6-2). For the Basketmaker III period, it is often difficult to ascertain precise dates on surveyed sites and there is no particular uniformity in the application of the temporal classification, so some of these general distributions are good only for recognizing the broadest of patterns. At present, it appears that there is limited Basketmaker III occupation east of the La Plata drainage unit. The only exception to this pattern in Table 6-2 is the Animas drainage unit, with 246 Basketmaker III components. However, all of these sites are also classified as having Pueblo I components, so part of this higher than expected number of Basketmaker III sites in the Animas drainage unit is due to sites being classified as Basketmaker III-Pueblo I in the site files. In every case where these sites have been excavated, they have postdated A.D. 750.

**Table 6-2. Distribution of Basketmaker III Sites in the Context Area by Drainage Unit.**

	USJ - Piedra	Animas	La Plata	Mesa Verde- Mancos	Ute	Monument- McElmo	Dolores
<b>Habitations</b>	47	164	27	272	54	531	206
<b>Nonhabitations</b>	52	82	25	45	29	205	163
<b>Total BMIII site components</b>	99	246	52	317	83	736	369

The problematic temporal assignments for the eastern drainage units appear to be traceable back to one of the inherent weaknesses of the Pecos Classification. Originally, Basketmaker III was defined as a cultural *stage* characterized by certain common cultural traits, but with various dates in different parts of the Southwest. In the last fifty years, Basketmaker III has increasingly been used as a specific *period* dating to approximately A.D. 500-750. When the temporal assignments are examined for the Upper San Juan-Piedra, Animas, and La Plata drainage units, the majority of the Basketmaker III sites are dated more specifically to the Rosa phase (dated A.D. 700-850 in Eddy [1966:484]; and A.D. 750-850 in Adams [1975:6]). Though these Rosa sites have the layout and settlement patterns associated with late Basketmaker III sites, they consistently postdate A.D. 750, or in what we now would call the Pueblo I period.

This relative lack of Basketmaker III occupation in the eastern half of the context area is surprising, since this is an area where Basketmaker II settlement is particularly well represented. In a similar fashion, the distribution of Basketmaker III settlement in the far western portion of the San Juan drainage basin—in the Grand Gulch and Cedar Mesa area—is also weakly represented even though Basketmaker II developments are robust in this area as well.

This sense that Basketmaker III settlement is centered diagonally from the middle of the Mesa Verde-Mancos area to the Monument-McElmo uplands is reinforced by the tree-ring dated sample of excavated sites (see Table 6-1). Of the 44 well-dated Basketmaker III sites, the vast majority of sites are in the Mesa Verde-Mancos or Monument-McElmo drainage units, with only a few excavated sites noted for the Dolores drainage unit. The tree-ring dated sample is necessarily biased in terms of sites where roofs have burned down or in which construction timbers have been preserved by a particularly dry setting; yet even when sites are dated by Basketmaker III ceramic types, there are few or no excavated examples of sites that appear to date between A.D. 500 and 750 in the Upper San Juan-Piedra or Animas drainage units. The data are less clear for the La Plata drainage unit, and it is likely that Basketmaker III sites are relatively common, but not well represented in the excavation sample.

It appears that Basketmaker III settlement has much the same format throughout the period. There possibly could be evidence for population movement or increases in general site distribution from the early 600s to the late 600s, but these patterns are not evident in the present excavation and survey data. Whether there is a regional population leveling or decline in the early 700s as has been suggested for the Dolores drainage unit by Schlanger and Wilshusen (1993) remains to be demonstrated. Certainly, the site densities along the western edge and eastern drainage units of the context area increase by the mid-700s.

Much of the Basketmaker III settlement format appears to be tied to very basic subsistence strategies, with sites located to control specific landscape resources—such as patches of good agricultural soil that are close to woodlands and an assured source of water. As is emphasized later, the main variability in settlement patterning appears to be in site densities, and this variability may be directly related to the potential carrying capacities of different parts of the study area.

## **SUBSISTENCE STRATEGIES**

Data suggesting primary strategies for Basketmaker III subsistence encompass a variety of disciplines. Some of the most direct evidence is in the botanical, faunal, and skeletal materials from sites. Yet, these materials often come from small or potentially biased samples, such that broad changes in settlement patterns, site function, storage features, and artifacts such as ceramic vessels, lithic tools, and other items may actually be better indicators of subsistence patterns and shifts. The most important changes which occur from early in Basketmaker III to late in Pueblo I appear to be an increased dependence on both ruderal (pioneer) and domesticated plant resources, an increase in long-term storage of food, and a decrease in hunted animal resources. Researchers have suggested previously that up to 50 percent of the diet during the Basketmaker III period was derived from agricultural foods such as corn (maize), beans, and squash (Birkedal 1976:411; Schiffer 1972; see also Matson 1991:90-101 for Basketmaker II). Increasing dependence on stored foods has also been pegged as a hallmark of this period (Glassow 1972). More recent research has, if anything, strengthened the idea that understanding the stored foods and storage technology of this period is essential to understanding Basketmaker III adaptations (Gross 1987; Wills and

Windes 1989). Though based on limited samples, both macrobotanical evidence from human coprolites (Stiger 1979) and isotopic evidence from bone (Decker and Tieszen 1989) suggest that maize was the most ubiquitous item in Basketmaker III diet and contributed between 50 and 80 percent of the annual dietary intake.

Basketmaker III subsistence differences should be evident at a landscape level larger than the drainage unit, but the fairly even distribution and potentially low density of Basketmaker III populations in the Monument-McElmo and Mesa Verde-Mancos drainage units, with more limited settlement in the Ute and Dolores drainage units, offer only hints about the variability in subsistence strategies during this temporal period. The distribution of Basketmaker III habitation sites appears to be tied to the presence of thick Pleistocene loess-derived soils, nearby permanent water, and pinyon-juniper woodlands (Birkedal 1976:412-416; Fetterman and Honeycutt 1987:47; Rohn 1963:454). All of these factors suggest that these sites are permanent or semipermanent residences located close to their agricultural fields. Well-developed trash middens with associated burials and substantial residential architecture both reinforce the proposal that people used these locales for much of the year. Though the population density in the western half of the context area was probably never over 1.3 people/mi<sup>2</sup> (0.5 people/km<sup>2</sup>), this density would probably be too high to sustain a year-round lifeway based on hunting and gathering.

Though it is difficult to ascertain exactly what the percentages of corn, beans, and squash were in the normal Basketmaker III diet, it is possible to argue that these domesticates, along with pioneer wild plants such as pigweed, goosefoot, sunflower, beeplant, and lambsquarter, made up the bulk of the Anasazi diet. Though seasonal fruits, nuts, and berries, along with meat from hunted animals or semidomesticated turkeys would have been vital to the diet, much of the present evidence supports the idea that stored foods could have supplied at least 50 percent of the diet and that this percentage probably increased during the temporal span of the Basketmaker III period. Between A.D. 600 and 880, increases in the ubiquity of corn in the archaeological record, the size of cooking jars, and the size of food storage facilities in the Dolores drainage unit all support the concept of an intensified agricultural economy (Blinman 1988a:53-54). An inverse relationship between evidence of faunal resources and human population change (Blinman 1988a:55-57) over this same period of time suggests that the quantity of meat in the diet decreased as dependence on cultigens increased.

Two of the above changes are particularly striking. First, the occurrence of corn in domestic features rises from about 60 percent of the fire-altered features for the A.D. 600-720 period to approximately 80 percent of the time for A.D. 720-800 features (Blinman 1988a:53-55). This increase is accompanied by the consistent presence of pioneer, weedy annuals, or exactly the kinds of plants one might expect to invade agricultural fields. Over a slightly longer period of time, architectural storage space for foodstuffs for a single household increases from an average of 3.54 m<sup>2</sup> (A.D. 600-700) of storage space to 5.98 m<sup>2</sup> (A.D. 860-880 [Gross 1987:96-106]). This is not only almost a doubling in about 250 years, but also implies that an average household might be able to store up to one year's worth of corn in the Basketmaker III period and possibly up to 1.75 year's worth of corn by the late Pueblo I period. The increasing rarity of large seed jars beginning in early Basketmaker III and through the late Basketmaker III and early Pueblo I periods, as well as the presence of concentrations of burned corn on the cob in numerous Basketmaker III and Pueblo I contexts, suggest that corn was no longer stored primarily as shelled kernels, but as dried corn on the cob which may have been stacked up to a meter deep (Gross 1987).

While stored foods, increasing agricultural dependence, and decreasing wild food availability all imply less flexibility in subsistence strategies, the relatively short use life of pit structures (Ahlstrom 1985; Cameron 1990; Schlanger 1985; Wilshusen 1988a) and relatively short use life of sites (see next section) both suggest that shifting one's residence was still a reasonable means of dealing with decreasing productivity, risks, or other unfavorable conditions in a particular area (also see Gilman 1987). However, the construction of stockades, field houses, and other facilities suggests that people's claim to agricultural land was worth considerable investment beyond just the bare necessities and that population density, albeit relatively low, was sufficient to necessitate strategies for intensification.

Overall, the Basketmaker III data relating to subsistence strategies offer a different picture of Basketmaker livelihood and stability than is evident in studies of Basketmaker sites in the Chaco (Wills and Windes 1989) or Black Mesa (Gilman 1987) areas. In contrast to these other areas, Basketmaker III sites in the northern San Juan appear to have much more evidence of long-term dependence on stored foodstuffs such as corn, substantial investment in fixed storage facilities, and potentially year-round use of pit structures or the activity areas around them. Strategies such as the construction of nearby field-tending facilities and defensive walls around residences offer a picture of occupations that may have only lasted a decade or two, but that made intensive and possibly year-round use of the local landscape.

#### **SETTLEMENT AND COMMUNITY: PERSISTENCE AND MOBILITY**

There are two main contrasts in the data, depending on whether one is focused on *settlement persistence* or *community continuity*. As with all of the Basketmaker III data, it is difficult to obtain chronological precision of more than about two decades, or one generation, and community patterning is necessarily difficult to define because of the dispersed settlement patterns in this period and the inability to date all the sites within a potential community cluster. Given these caveats, there are still some prominent patterns in the available settlement and community data.

The first contrast that can be noted is the difference between the relative length of settlement occupation for large hamlets such as Gilliland and Payne (Rohn 1974, 1975) and for single-household habitations, which are much more common. Based on the limited data in Table 6-1, it appears that multiple-residence hamlets may have use lives of 10-40 years and single residence hamlets may have use lives of 10-15 years. Though there are usually two to five pit structures at a large hamlet site, it is probable in most cases that only two household clusters were occupied at any one time. For example, at Knobby Knee Stockade, five different pithouses are occupied between the A.D. 610s and 640s. There are also several small rooms with hearths, which may have functioned as seasonal residences. Yet spatial overlap between three of the main pithouses precludes that more than one of them was occupied at any one time. The other two pithouses are much shallower structures, and may not have been occupied in the coldest part of the year. Large hamlets with only two pit structures appear to have use lives of 10-15 years, rather than the longer occupational range associated with hamlets with more than two pit structures.

When intensively surveyed areas are examined (e.g., Birkedal 1976:470-499; Fetterman and Honeycutt 1987:43-44), it appears that Basketmaker III communities form and function on relatively small spatial and temporal scales. Birkedal identified three Basketmaker III communities on the Mesa Verde with minimum population estimates of 27-36 individuals (or 5 to 7 households) per community and Fetterman and Honeycutt identified six similar communities on

Mockingbird Mesa with an average of 34 individuals (or 7 households) in each community. Whereas Mesa Verde community residences averaged only 18 m between one another, the Mockingbird Mesa residences within a community cluster were typically separated by closer to 100 m. The communities were clustered within spaces that ranged from 0.5 to 40 hectares (1.3 to 98.8 acres). The incredibly small spatial extent of the Step House Cave accounts for the low end of the range, with most residential communities typically covering 10 to 40 hectares (24.7 to 98.8 acres). Birkedal (1976:513-514) argued in his dissertation that the Basketmaker III community would have been similar in size to a band or a Navajo "camp."

In all communities noted above, with one exception, there was at least one and not more than two large hamlets within the community. In the case of Mockingbird Mesa, the ratio of Basketmaker III single-residence hamlets to large hamlets for the total survey area was about four small hamlets to each large hamlet. The ratio of single-residence hamlets to large hamlets is closer to three to one in the excavation data in Table 6-1, a fact biased because large hamlets provided much more obvious candidates for excavation in past research. It is possible, given the above relationships, that large hamlets potentially represent focal places for community organization or identity. This possibility is certainly reinforced by the layout of the large hamlets in the "beanfields" of the Great Sage Plain, or in the Monument-McElmo drainage unit, almost all of which are protected by stockades. In short, the stockade may protect not only a large hamlet, but also the center of a small community. These stockades may be small redoubts or strongholds similar to the small frontier forts erected by European settlers as they settled the Appalachians and the West.

Even though the data on Basketmaker III community organization and persistence are necessarily limited, it appears that communities may comprise five to nine households in a local unit, which may be centered on a large multihousehold site or which may be a tight general cluster of hamlets each within 100-300 m of one another. Basketmaker communities are much smaller than in succeeding periods, but they represent accurate reflections of the relatively low populations characteristic of most of Basketmaker III in this area.

## **REGIONAL POPULATION LEVELS AND DISTRIBUTION**

Population estimates by drainage units are offered at two points in the Basketmaker III period (A.D. 560 and A.D. 680, see Figure 6-5). It is likely that the population does not change significantly between A.D. 620 and 680, and unfortunately there are not sufficient archaeological data to estimate population for A.D. 740. Either there is a dramatic decrease in population between A.D. 720 and 750, or there is a significant sampling problem in identifying these late Basketmaker III sites. That population is definitely on the rise by A.D. 760 in many parts of the context area (see the following Pueblo I chapter) makes this gap in the archaeological record dating between A.D. 720 and 750 all the more perplexing.

There is considerable variability in the population densities for the drainage units. Based on present evidence it appears that the population for the Upper San Juan-Piedra and Animas drainage units are both so low in this period that the total population for either unit is below 250 people throughout the whole Basketmaker III period. For the remaining drainages there is sufficient evidence of occupation and sufficient survey coverage to estimate population densities for the two times noted above.

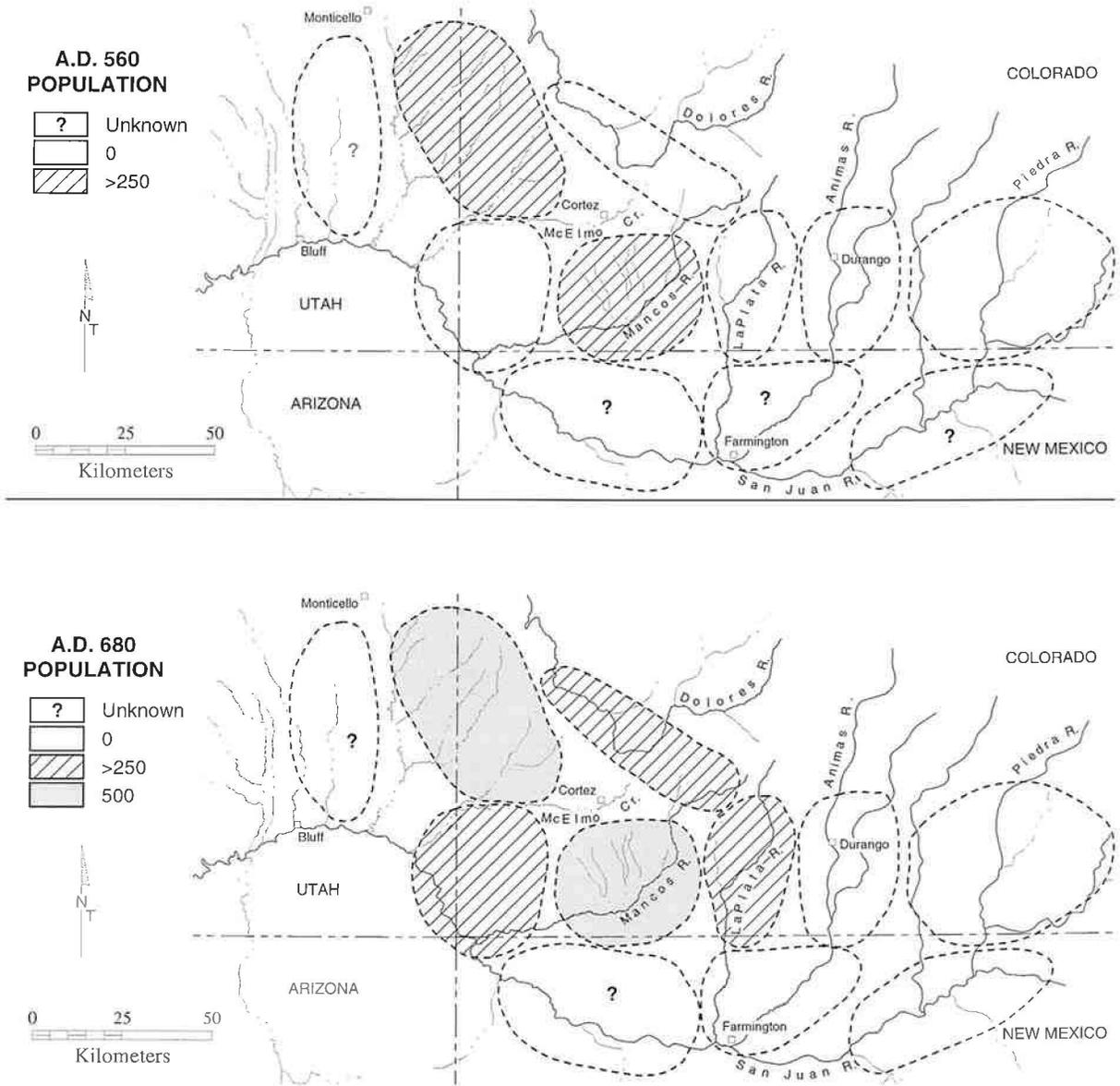


Figure 6-5. Population estimates by drainage units (with nearby areas) for A.D. 560 and 680. Population estimate for A.D. 620 is essentially the same as for A.D. 680. No estimate is currently possible for A.D. 740 given contradictory evidence in the archaeological data. (Reprinted with permission of Crow Canyon Archaeological Center.)

The densest Basketmaker III occupations are in the Monument-McElmo and the Mesa Verde-Mancos drainage units. Surveys of Mockingbird Mesa (Fetterman and Honeycutt 1987) and Wetherill and Chapin mesas (Hayes 1964; Rohn 1977) provide the best data for the density of these sites. It appears that the overall Basketmaker III population density for Mockingbird Mesa is 12.9 households per mi<sup>2</sup> (4.97 per km<sup>2</sup>). Though Fetterman and Honeycutt (1987) used a 275-year period (i.e., A.D. 450-725) to define the Basketmaker III period, there is limited probability of a Basketmaker pit structure predating A.D. 575 in this area, so the interval A.D. 575 to 725 (or 150 years) is used here. For Mesa Verde, the overall density varies between 1.4 households per mi<sup>2</sup> (0.55 per km<sup>2</sup>) for the 130-year period Hayes defines as the La Plata phase (i.e., A.D. 590-720) to approximately 6.7 households per mi<sup>2</sup> (2.6 per km<sup>2</sup>) for the 160-year period that Rohn uses (A.D. 590-750).

If pit structure use life is standardized at 12.5 years, then the above overall densities translate into averages of 0.41 households per km<sup>2</sup> on Mockingbird Mesa, 0.05 households per km<sup>2</sup> for Wetherill Mesa, and 0.2 per km<sup>2</sup> for Chapin Mesa. The relative similarity between these figures suggests that 0.2 households per km<sup>2</sup> during the last half of the Basketmaker III period is a very reasonable estimate of population density. The extremely low population density on the Wetherill Mesa survey by Hayes (1964) may be a result of the poor “visibility” of Basketmaker III sites in this setting. Given that both the Mockingbird Mesa and Chapin Mesa surveys covered primarily agriculturally “attractive” mesa-top settings and assuming that about half of the lands in both the Monument-McElmo and Mesa Verde-Mancos drainage units are usable for Basketmaker III purposes, one can estimate momentary population by multiplying the amount of usable land (50 percent of Monument-McElmo [1,798 km<sup>2</sup> total] and Mesa Verde-Mancos [1,244 km<sup>2</sup> total]) by the population density. This amounts to 900 people (1,798 km<sup>2</sup> x 0.5 x 0.2 households per km<sup>2</sup> x 5 people per household) for the Monument-McElmo unit and 620 for Mesa Verde-Mancos unit. These result in population densities comparable to those estimated for Basketmaker III sites in a similar area of Cedar Mesa by Matson et al. (1988), so they appear to be reasonable population estimates.

There clearly is a Basketmaker III occupation in the Dolores and Ute drainage units but generating drainage specific population densities is difficult. Present information suggests that both drainage units have measurable population, but that it is probably not above 250 people at any particular time. Currently, there is insufficient evidence of measurable Basketmaker III population in the Upper San Juan-Piedra and Animas drainage units. A fair number of sites are assigned to the Basketmaker III period in these areas, especially in the Animas unit (e.g., Carlson 1963; Gooding 1980; see also Table 6-2), but these sites postdate A.D. 750 in all cases so far investigated. It is difficult to accurately estimate Basketmaker III levels in the La Plata drainage unit, but given past and recent surveys of the area (Morris 1939; Chenault, ed. 1996), it appears that Basketmaker III population density is at least equivalent to that of the Ute drainage unit.

Regional population is likely negligible at A.D. 450, but by the mid-seventh century population is probably close to 1,000 people for the study area. The population estimate at A.D. 560 is truly a guess, and not an estimate, given that there are no excavated sites dating to this time (see Figure 6-5). However, since researchers can project that both the Mesa Verde-Mancos and Monument-McElmo drainage units have between 250 and 500 people by A.D. 620, it is reasonable to estimate up to 250 people in each of these drainage units by A.D. 560. It is likely that population increases gradually through time in the context area from A.D. 590 to 750, and that by spreading the population from survey estimates equally across 130-160 years, the population is overestimated at A.D. 560 and 620 and underestimated at A.D. 680 (again, see Figure 6-5). It is

possible that human population in the western half of the context area could have been as high as 2,000-3,000 people by the first quarter of the eighth century.

### **CULTURAL IDENTITY AND DIVERSITY: INTERCOMMUNITY AND INTERREGIONAL TIES**

It appears that much or all of the early Basketmaker III population in this area immigrated from other areas, given the scarcity of sites that date to A.D. 450-550. Areas to the southeast in the upper San Juan of New Mexico and from the Grand Gulch and Cedar Mesa areas to the west in Utah may provide some of the sources of early populations in the central Mesa Verde-Mancos and Monument-McElmo drainage units, but it is also likely that given the large hamlets or small villages evident in the Cove area and in the Chaco drainage in the late sixth century, these areas may be possible sources for the colonizing groups.

It should be possible to identify possible source areas for these southwestern Colorado Basketmaker III populations based on stylistic traditions in ceramic artifacts, architecture, and other material culture that might encode cultural information or values, but these studies simply have not been done. It also may be possible to see old or continuing ties in exotic goods or commodities, but again these data are not readily available and would require a specific search for exotic items listed in the existing excavation data.

### **BASKETMAKER III CULTURAL CHANGE**

The Basketmaker III period is a striking example of population expansion and consolidation in the study area. It is a period in which total population goes well over one thousand people for the first time in prehistory, and the first period in which one sees pottery, relatively long lived habitations, and communities across large expanses of the landscape. It certainly is the beginning of the cultural lifeway that will characterize the Pueblo I through Pueblo III periods; yet researchers still have very little understanding of the origins of Basketmaker III culture. The origins of the immigrant populations are not understood exactly, though the Mogollon highlands and the Chuska Mountains to the south and the canyon lands to the west and hilly areas to the southeast all may contribute population to the area in the early seventh century. Untangling the origins of these immigrants and understanding the relative scarcity of population for the two centuries before A.D. 575 are both important questions that have so far received only limited discussion.

Not only is it not known exactly where the populations came from, but it is not clear what the motivating forces were that might have pulled, or pushed, populations into this area. Certainly the climate for agriculture is good to excellent for much of the Basketmaker III period, but one would have to compare this with the climate of the immigrants' origin point to consider whether this was a draw for population. The period between A.D. 570 and 700 is one of the most consistently drought-free times in the Dolores and Mesa Verde areas between A.D. 500 and 1300 (Petersen 1987b, 1987c). In addition, the chance of significant killing frosts is low between A.D. 600 and 700 (Petersen 1987d). Certainly, the relative lack of population in the century or two before A.D. 575, with an increasingly good agricultural climate thereafter, must have made this an attractive area to agricultural colonists.

A big part of the dynamics of Basketmaker III must have to do with people moving into a relatively empty area and developing an agricultural landscape. Though Basketmaker II

occupations are significant in the Animas drainage unit and in the western portion of the San Juan River basin in Utah, there is insignificant Basketmaker II occupation in the Mesa Verde-Mancos, Monument-McElmo, and Dolores drainage units, which are the center of the Basketmaker III occupation in southwestern Colorado. How do people move into a frontier area, and what happens when people of different cultural backgrounds come into contact or conflict with one another?

A second series of changes must relate to subsistence strategy shifts that might be expected as regional and local populations increase and as the environment is altered by these populations. Slash-and-burn agriculture would be a reasonable strategy for early agriculturalists in the region, but given that it takes several hundred years for forests in this area to reclaim cleared land (Wyckoff 1977), this strategy becomes increasingly more constrained as population rises. Subsistence evidence suggests that stored foodstuffs such as corn become increasingly more important through the Basketmaker III period and that wild foods become many times scarcer. As there is an increase in dependence on stored foods, there necessarily should be a decrease in the use of residential mobility to reduce local risk. With decreasing residential mobility there should be a corresponding increase in logistical mobility to obtain resources not available in a residential locality.

The presence of stockades, clustered settlements that appear to be small communities, and field-tending sites that may be early field houses, all point to a landscape that is already being divided and defended by the mid-seventh century. In approximately 75 years, the regional population goes from nothing (if one accepts a regional population slump in the fifth and first half of the sixth centuries) to possibly up to 2,000 people spread over more than 5,000 km<sup>2</sup>. By the early Pueblo I period, this population will be 4,000 and growing.

#### **DATA NEEDS, BIG PICTURE PROBLEMS, AND BASKETMAKER III RESEARCH ISSUES**

In the 1984 context document (Eddy et al. 1984), the main questions posed for the Basketmaker III period were to investigate the origins of these early populations and to investigate potential differences between settlement in the core Basketmaker III areas such as the Monument-McElmo drainage unit and in more peripheral units such as Dolores. In large measure, Basketmaker III was defined somewhat differently for each of the drainage units, with many of the sites dating to the A.D. 760s and 770s in the Animas drainage unit classified as Basketmaker III sites. There has not been much focused or definitive work on Basketmaker III since the 1984 southwest Colorado context, but it appears that the ability to summarize the sites and to understand the settlement patterning has increased considerably. The question of the origins of the Basketmaker III populations remains largely unaddressed.

For future work, a number of important research topics must be addressed; they deal with understanding the cultural history, the potential cultural diversity, and the settlement strategies of the Basketmaker III inhabitants of this area. There is tremendous need to trace populations and developments regionally across the whole northern Southwest between A.D. 500 and 750. It is apparent that population growth, subsistence shifts, and the influences of cultural differences make for a complicated pattern of change, especially between A.D. 500 and 650. The origins of these changes and their historical roots may ultimately result in differences that will later characterize eastern and western Pueblo groups, so it is crucial to better understand this part of the Basketmaker III period.

### **Origins of Basketmaker III**

The first problem that must be confronted in Basketmaker III research is to unravel its origins and ties to the Basketmaker II period. Basketmaker II occupations are well recognized in the Animas drainage unit and west of the context area in Utah. These occupations are well documented through the third century A.D. (Dean 1975; Lister 1997; Matson 1991), but evidence for the occupation of the context area between approximately A.D. 375 and 575 is perplexingly scarce. Though there are rare instances of sites dating to this interval (e.g., Breternitz 1986), there certainly is nothing to suggest a widespread or well-established population. It is not until A.D. 580 or 590 that habitations are readily evident in the archaeological record of the western half of the context area, and soon thereafter there are literally hundreds of known sites that might date to the seventh century.

Though the gap between A.D. 375 and 575 was not originally recognized by investigators (Carlson 1963:51), most researchers accept it as a current problem to be addressed (Lister 1997:153-155). Although the possibility of sampling error or preservation problems must be considered as possible explanations for the lack of sites, the almost total lack of dated settlements in this interval—using any and all chronometric methods—suggests that there is a real decline in population from the late Basketmaker II to early Basketmaker III period. It appears that cooler climate in the fourth and fifth centuries A.D. may have made corn agriculture difficult in the areas of Basketmaker II occupation. If this is the case, it should be possible to estimate what other nearby areas might have been more favorable. It is also possible that some Basketmaker II peoples may have adopted a lifeway based more on hunting and gathering. Whatever the case, other elevations, new geomorphic settings, and unconventional site signatures need to be examined in first confirming the population decline and secondly in explaining it. Though this kind of study may be possible in contract archaeology settings, it is more likely to be accomplished through a special research study such as a dissertation or research grant.

### **Basketmaker III Immigration**

A second major research issue is verifying the source(s) of Basketmaker III immigrants. The rapid increase in the number of Basketmaker III sites in the late sixth century is generally accepted by most archaeologists, and it is clear that these sites in large measure represent the houses of immigrant families with new technologies for pottery, architecture, hunting, and agriculture from those of the earlier Basketmaker II inhabitants who inhabited parts of the context area until A.D. 350-400. It should be possible to trace the origins of these technologies and expose the identities of the immigrants. In the past it has been suggested that these early Basketmaker III peoples may have had origins in the Mogollon pithouse villages dating between A.D. 300 and 550. Though Mogollon ties remain a viable explanation, it is clear that there are also substantial early Basketmaker III populations in the Chaco Canyon, Cove Mesa, and Rainbow Plateau areas (Morris 1980; Reed 1998; Wills and Windes 1989) and that these areas may have provided population for northern migrants between A.D. 575 and 675.

### **Community Formation**

The issues of community origins, maintenance, and dissolution are all inherent in a third research issue: the formation of Basketmaker III communities and discernment of the social organization of these communities. Birkedal (1976) contributed to the knowledge about Basketmaker III household residential units, but there still is minimal understanding of how

communities were organized and how they functioned. Birkedal argued that communities, or residence groups, were equivalent in size and function to a primary subsistence band as defined by Steward (1969:289). However, the variety of community layouts, the social organization above the household level, and the ties to other communities are still practically unknown.

- Did stockaded sites serve as integrative and defensive centers of Basketmaker III communities in the Monument-McElmo drainage area?
- How similar or different culturally were the various members of a community?
- Could small residence groups survive outside a community's care and influence?
- How far apart are contemporary communities?

These are all fundamental questions which have not yet been addressed. Even though much Basketmaker III research will continue to be done at the site level, by reformulating this research to compare potentially contemporary sites in a locale and by increasing survey coverage, researchers increasingly should be able to detail the variability in these sites and to account for whether there are local or regional patterns in community layout, organization, and composition.

### **Landscape Use**

A fourth need for data centers on better understanding of the nonresidential Basketmaker III sites and better defining of Basketmaker III use of the landscape. Most of the present knowledge is derived from the excavation of residential sites. To test alternative models of Basketmaker subsistence and mobility, it is crucial to document and investigate more nonresidential sites. Although there is a great deal of evidence to suggest nearly year-round use of residential sites in the study area, many current models of Basketmaker land use in other nearby areas suggest a much more diversified and seasonal subsistence strategy (Gilman 1987; Wills and Windes 1989). It is important to glean as much data as possible about the range and variability in Basketmaker landscape use so that researchers can understand the roles of intensification and mobility in overall subsistence strategies.

### **Drivers of Lifeway Changes**

Finally, what are the prime forces which contribute to the radical changes in site organization, architecture, and community layout in the mid-eighth century? This fifth research issue is essentially the question of why the characteristic Basketmaker III lifeway begins to transform about A.D. 750. Clearly, the expansion of population, the mixing of potentially different cultural groups, and the intensification of subsistence that occurs throughout the Basketmaker III period must contribute to these changes. However, basic changes such as the shift to surface room pueblos and the increase in average site size from one or two households to consistently two or more households between A.D. 700 and A.D. 775 suggest that aspects of subsistence strategy, social organization, or even the understanding of landscape has changed in the interval between the two dates.

For specific recommendations, any or all of the following projects should be considered to increase understanding of the Basketmaker III occupation of this area. By no means are these a total list; they are simply suggestions of the types of projects that might propel the debate about key Basketmaker III issues.

At the level of artifact analysis, it would be fascinating to examine items in curated collections from the earliest Basketmaker III sites and see if any associations with outside areas could be established through tracing exotic materials used in lithic tools or ceramic items. For example, a well-thought-out program centered on refiring sherds, or careful examination of temper, or even neutron activation analysis might tie early pottery to locales outside the context area.

At the site level, researchers need a careful and thorough analysis of a Basketmaker III hamlet similar to the program carried out at the Duckfoot site for the Pueblo I period (Lightfoot 1994). Also needed is a well-dated and fairly well preserved site with a high percentage of the total artifact assemblage recovered so that issues such as site use life, seasonality of use, and household size and composition might be addressed. Most of the estimates of site use life are best guesses. Artifactual measures must be derived whereby actual estimators of length of use can be proposed for sites of this period.

The suggestions for research at the community and landscape level have been made earlier in this section. The key is to define a real community that can be well placed in time and space. This is going to be sheer luck to have a situation where a relatively well preserved community is evident. Another, cruder way of attacking this problem would be to have several survey reconnaissances similar to the Mockingbird Mesa survey (Fetterman and Honeycutt 1987), but with the Basketmaker III site recording focused on an attempt to recognize potential communities and utilization of limited excavations to obtain dating samples that would confirm or deny contemporaneity. There may be locales within certain areas that have been so covered by energy surveys or timber clearances that these survey data may exist already in large measure. If this is the case, then the main need will be to synthesize all these data into comprehensive archaeological summaries of these various locales. A minimum of several survey areas will be needed to cover the blank or underreported areas of the Mesa Verde-Mancos, Monument-McElmo, and La Plata drainage units.

The assessment by Morris that Basketmaker III was “by far the most important” still deserves consideration, but it is tempered by the realization that many of the most important questions for Basketmaker III are difficult to answer. Researchers need to work harder to understand cultural origins and differences and to measure population and environmental change for societies with relatively low population densities. One or two breakthrough works similar in scope and approach to Birkedal’s (1976) seminal work might reopen research in this area. Certainly the Basketmaker II and III periods are among the most promising arenas for new research in the context area.