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ARCHAEOLOGICAL RECONNAISSANCE IN THE HEADWATERS OF THE CANEY FORK RIVER IN MIDDLE TENNESSEE

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ABSTRACT

A semi-intensive survey was conducted along portions of the two principal streams in the Caney Fork headwaters; the Collins and the Calfkiller. A total of 156 previously unrecorded sites was located. The data obtained enabled a brief, tentative cultural history of the region to be reconstructed. This cultural history appears to be similar to other neighboring headwater areas in Middle Tennessee, specifically the upper Elk and Duck rivers. The survey was also successful in delineating settlement patterns through time and in determining how select environmental resources were exploited.

This survey encompassed the headwater drainages of the Caney Fork above Center Hill Reservoir, a large area that includes portions of five Middle Tennessee counties: Putnam, White, Warren, Van Buren, and Grundy (FIGURE 1). Physiographically, this region could be considered a transitional zone between the Eastern Highland Rim and the western escarpment of the Cumberland Plateau. The topography of the Highland Rim is characterized by a slightly undulating plateau surface with the eastern section being much more dissected and having a more level terrain than the western section (Miller 1974:5). The western escarpment of the Cumberland Plateau is steep and irregular. Another feature of the Highland Rim is karst topography which is prominent in the survey area between McMinnville and Sparta.

The transition between the Cumberland Plateau and the Eastern Highland Rim is also marked by a transition between the Mixed Mesophytic Forest and the Western Mesophytic Forest (Braun 1950:39,123). Such a transitional zone has a greater variety and density of flora and fauna (Odum 1965:287). The research area also lies within the limits of the Carolinian Biotic Province (Dice 1943:16-17) which is characterized by a rich and diverse floral and faunal assemblage.

The headwater drainage of the Caney Fork includes such primary streams as the Caney Fork, Collins, and Calfkiller along with streams of lesser magnitude--the Barren Fork, Rocky River, Hickory Creek, Cherry Creek, and Cane Creek. The stream systems present in this region can be divided basically into the North

Caney Fork headwaters or the Calfkiller drainage and the South Caney Fork headwaters or the Collins drainage. The Collins River proper possesses a much wider valley floor with a more extensive floodplain and alluvial terrace system than the Calfkiller. Although each individual tributary possesses distinctive characteristics, a major dichotomy exists between those drainages that dissect the Cumberland Plateau and those that flow along its edge. Those that dissect the Cumberland Plateau possess a sheltered, narrow valley floor with numerous protective coves and hollows while those that flow along the edge of the Plateau possess a less restrictive and protected environment. Major differences in the distribution of settlements through time can be observed between these two drainage systems.

Considering the magnitude of the area to be surveyed and the time limitations placed upon the survey, it was decided to concentrate the survey efforts in the most productive manner possible. An overall sampling design was formulated to cover as extensively as possible a section of the principal stream in the South Caney Fork area, the Collins, and a section of the principal stream in the North Caney Fork area, the Calfkiller, while a brief reconnaissance was designed for the remainder of the area. A research design based upon arbitrary transects, formulated before any preliminary field reconnaissance, was intuitively considered by the author to be unrealistic and inefficient, a conclusion that has been recently validated by researchers utilizing this technique (Jefferies 1976:16). The most desirable sampling design for site surveying is to stratify the sampling universe in accordance with the various physiographic zones in a manner that is both practical to survey circumstances and productive in the discovery of sites. It was initially thought that an efficient manner of sampling would entail the random selection of areas in the field, so as to assure favorable surveying conditions, while at the same time making sure that an even investigation of the various physiographic zones was being conducted. A survey of this nature, maintaining a record of the exact areas covered, will allow the quantification of area covered and computation of site densities for each physiographic zone. This survey method was implemented initially with success, but was modified once reliable collector data became available. Local collectors proved to be very cooperative and informative and aided immensely in the productivity of the survey.

Collector interviews were conducted in order to locate sites and to make pertinent observations on the collections already accumulated from this region. Collectors also aided in the validation of the survey sample by answering more specific questions concerning the occurrence of diagnostic artifacts at various sites. Several of the collectors are outdoorsmen who were knowledgeable of small, inaccessible sites and of sites in a variety of locales and physiographic zones. Although a bias towards collector-known sites is present, it is not substantial. The collecting habits of the local collectors do not appear to be biased toward any particular physiographic zone, and the number of sites recorded due to collector information was less than the number that was recorded independent of such information.

The relative lack of previous archaeological research in this area was the major factor involved in selecting this area for survey. Accounts of archaeological sites in this region date back to the early part of the 19th century (Haywood 1823, Featherstonhaugh 1844); however, it was not until the early portion of the 20th century that a listing of prominent sites was compiled with

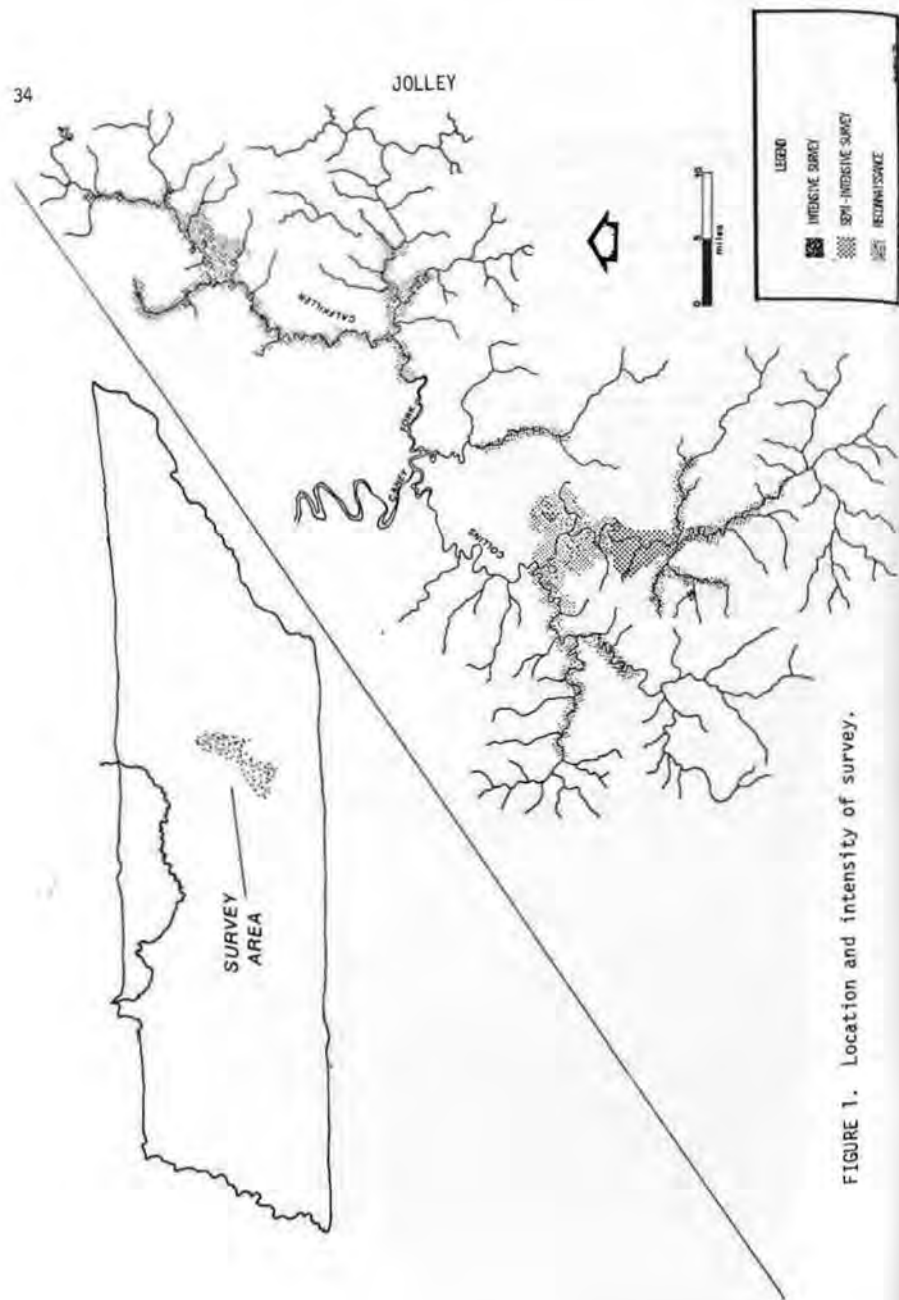


FIGURE 1. Location and intensity of survey.

any reliable information (Myer n.d.). Modern-day scientific research in the Eastern Highland Rim and Cumberland Plateau has taken place on only a very small scale and has consisted predominately of small scale surveys concerned with environmental impact assessments (Dickson 1973, Schroedl and Wallace 1975, and Kleinhans 1976).

A total of 156 previously unrecorded sites was recorded in the survey. These sites yielded a total of 515 distinguishable components and 2,296 diagnostic artifacts. Tables 1 and 2 provide tabulations concerning the nature of these components, and their distribution is plotted in Figures 2, 3, 5, 6, 10 and 11.

The combined data obtained from the survey sample and from collector information are sufficient to make a preliminary assessment on the cultural history of this region. The Paleo-Indian time period is represented by a small number of projectile points from the survey sample and from local collections. No fluted projectile points are present in the survey sample, but collector data along with one other previously published reference (Dickson 1973:22) document the presence of fluted projectile points on a minimum of four sites. Late Paleo-Indian projectile points (Beaver Lake, Quad, Greenbrier, and Lanceolate) occur on six sites from the survey sample. Collectors have reported several late Paleo-Indian sites, some of which have yielded several late Paleo projectile points. A sparse population for the Paleo-Indian period with a highly dispersed settlement pattern is evidenced by the small number of sites with sparse amounts of Paleo-Indian material. A population increase and perhaps a less transitory way of life is evidenced by a larger number of sites with more numerous artifacts during the late Paleo-Indian period. Although sites of this time period do occur on floodplains and alluvial terraces of stream systems that run along the edge of the Cumberland Plateau, there is a tendency for the sites to cluster in coves and uplands that are situated in sheltered stream valleys that dissect the Cumberland Plateau.

The Early Archaic in this region consists predominately of corner-notched points (Kirk, Palmer, Decatur) with only a minor occurrence of bifurcate base material (FIGURE 4, a-c). Keeled endscrapers (FIGURE 8, h), endscrapers on blades and blades are present on sites of this time period as demonstrated by their co-occurrence with other Early Archaic materials, but it is quite possible that some of these tools may be affiliated with earlier materials. During this period, sites become more numerous with intensity of occupation evidenced at a minimum of six sites. Intensity of occupation is indicated by the occurrence of numerous diagnostic artifacts and medium-dense debris densities. The majority of sites are represented by isolated and dual finds, suggesting the continuance of a generally dispersed settlement pattern. Sites are distributed in all the major physiographic zones with a tendency for the intensively occupied sites to occur in coves and uplands. Recent research in the Little Tennessee Valley has led Chapman (1976:271-272) to speculate that Early Archaic settlement systems may be centered upon a centralized base camp, many of which may lie deeply buried in alluvial terraces. It is quite possible that this proposed settlement system is present in this region, but without a subsurface testing program, the evidence remains inconclusive.

Middle Archaic sites are evidenced by the occurrence of White Springs/Sykes, Benton/Buzzard Roost Creek, Eva, Morrow Mountain I, Morrow Mountain Rounded Base, Stanley-like and Indented Base projectile points/knives (FIGURE 4, d-j)

TABLE 1
COLLINS RIVER REGION

Cultural Types	Number of Components	Diagnostic Elements
Paleo/Transitional Paleo		
Early Archaic	34	(70) 25 Early Archaic corner notched, (Kirk, Palmer, and Decatur), 6 Kirk stemmed, 5 Big Sandy I, 9 Lost Lake, 3 Lecroy, 2 Kanawha, 12 biface fragments, 7 keeled endscrapers, 1 endscraper on a blade
Middle Archaic	33	(86) 60 White Springs/Sykes, 3 Morrow Mountain I, 3 Morrow Mountain rounded base, 2 Eva, 11 Benton, 5 Stanley-like, 2 indented base
Late Archaic	44	(225) 225 undifferentiated stemmed (Kays, Ledbetter, Pickwick, Elora, and untyped stemmed points)
Indeterminate Archaic	18	(29) 13 Big Sandy II, 14 miscellaneous projective points, 2 grooved axe fragments
Terminal Archaic/ Early Woodland	28	(61) 31 Wade Type Cluster, 10 Adena ovate base, 12 Morhiss, 6 Cotaco Creek-like, 2 Motley
McFarland Phase	38	(252) 252 McFarland/Copena points
Owl Hollow Phase	11	(26) 26 Spike Cluster points
Other Middle Woodland	29	(91) 28 Bakers Creek, 5 blade cores, 42 bladelets, 16 celt fragments
Woodland Ceramics	16	(402) 353 limestone, 48 siliceous and 1 sand tempered sherd
Middle-Late Woodland	5	(13) 13 medium sized triangular points
Late Woodland	5	(11) 4 Jack's Reef corner notched, 7 Hamilton triangular
Late Woodland/ Mississippian	11	(24) 24 small straight based triangular points
Early Mississippian	4	(31) 31 mixed shell/limestone tempered sherds
Mississippian	6	(63) 58 shell tempered sherds and 5 mixed shell/clay tempered sherds
Total	282	(1384)

TABLE 2
CALFKILLER RIVER REGION

Cultural Types	Number of Components	Diagnostic Elements
Paleo/Transitional Paleo	6	(6) 2 Quad, 1 Greenbriar, 1 Beaver Lake, 2 lanceolate
Early Archaic	36	(79) 25 Early Archaic corner notched, (Palmer, Kirk, and Decatur), 4 Kirk stemmed, 6 Big Sandy I, 5 Lost Lake, 4 Plevna, 4 Kanawha, 1 Lecroy, 10 biface fragments, 8 keeled endscrapers, 5 endscrapers on blades, 7 blades
Middle Archaic	16	(30) 9 White Springs/Sykes, 1 Eva, 5 Stanley-like, 6 Benton, 4 Morrow Mountain I, 2 Morrow Mountain rounded base, 3 indented base
Late Archaic	29	(137) 137 undifferentiated stemmed (Kays, Ledbetter, Pickwick, Elora, and untyped stemmed)
Indeterminate Archaic	17	(42) 7 Big Sandy II, 35 miscellaneous projectile points
Terminal Archaic/Early Woodland	30	(91) 43 Adena ovate base, 8 Motley, 13 Wade, 20 Morhiss, 5 Cotaco Creek-like, 2 Steatite bowl fragments
McFarland Phase	35	(110) 110 McFarland/Copena points
Owl Hollow Phase	9	(32) 32 Spike Cluster points
Other Middle Woodland	23	(41) 2 Bakers Creek, 2 blade cores, 28 bladelets, 9 celt fragments
Woodland Ceramics	10	(302) 291 limestone, 9 siliceous and 2 sand tempered sherds
Middle-Late Woodland	4	(6) 6 medium-size triangular points
Late Woodland	1	(1) 1 Jack's Reef corner notched point
Late Woodland/Mississippian	9	(15) 15 straight based triangular points
Early Mississippian	2	(10) 10 mixed limestone/shell tempered sherds
Mississippian	6	(10) 10 shell tempered sherds
Total	233	(912)

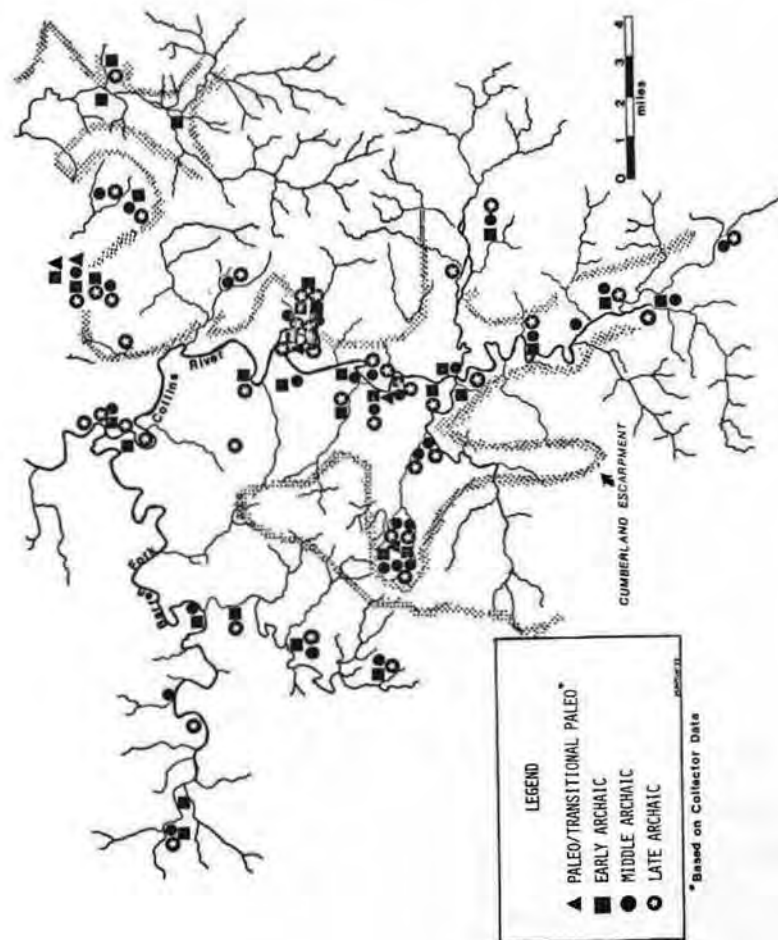


FIGURE 2. Collins River region: distribution of Paleo-Late Archaic sites.

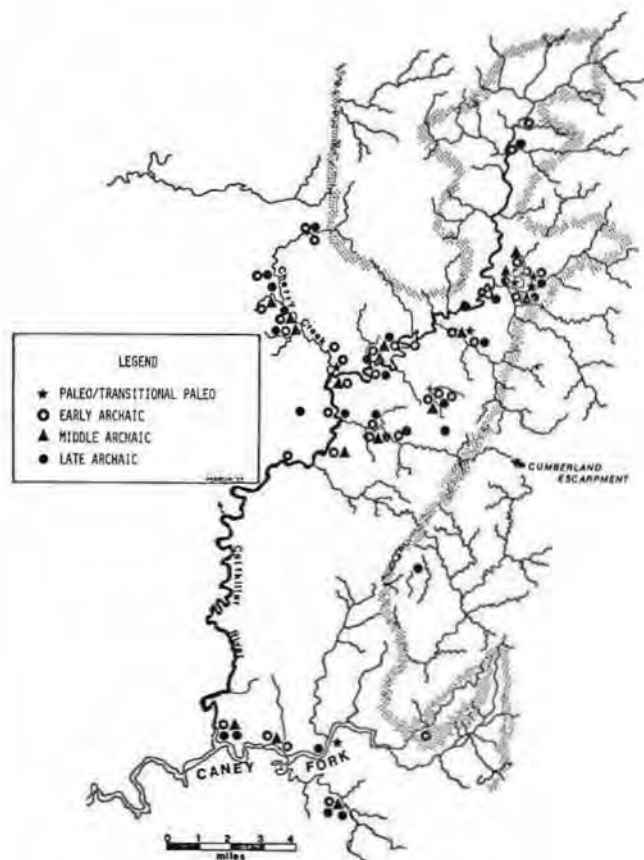


FIGURE 3. Calfkiller River region: distribution of Paleo-Late Archaic sites.

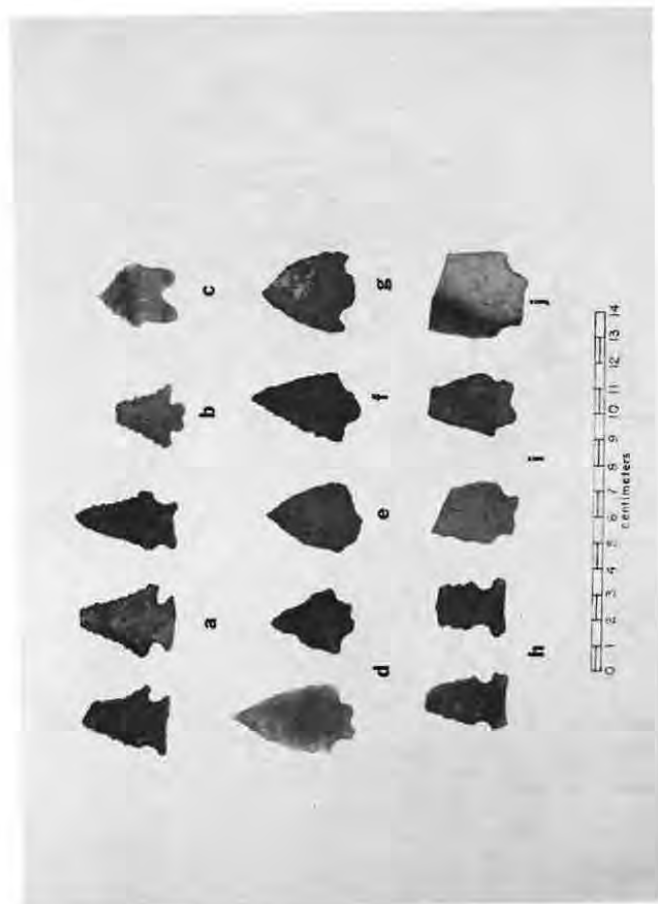


FIGURE 4. Early-Middle Archaic projectile points. a) Kirk Corner Notched; b) Kanawha; c) Lecroy; d) Stanly-like; e) Morrow Mountain Rounded Base; f) Morrow Mountain I; g) Eva; h) Big Sandy I; i) White Springs/Sykes; j) Benton.

on sixteen sites in the Calfkiller drainage and thirty-three sites in the Collins drainage. In the Collins drainage, Middle Archaic sites are just as numerous as Early Archaic sites, with some sites showing signs of intensive occupation. Middle Archaic sites in the Calfkiller drainage appear to be reduced in number and intensity. In the Collins River area, the Middle Archaic is manifested by the predominant occurrence of White Springs/Sykes projectile points while no one artifact type is predominant in the Calfkiller region. A trend towards the location of Middle Archaic settlements in bottomland locales has been documented for the Cumberland Plateau (Pace and Kline 1976:100) and in the upper Duck Valley (Faulkner and McCollough 1973:418). The occurrence of the majority of Middle Archaic sites and the only three intensively occupied sites in the Collins drainage is most probably related to the presence of a developed alluvial terrace and floodplain system in the Collins drainage and the lack of such a system in the Calfkiller drainage. It has been speculated that this trend in settlement location may have been an adaptation to Altitheal conditions (Pace and Kline 1976:90-100); however, the exact climatic conditions during the Altitheal in the Southeast remain unclear (Faulkner and McCollough 1974:185-186).

Late Archaic period sites are evidenced by the presence of straight stemmed projectile points/knives (FIGURE 7, a); however, the persistence of these artifacts into the Early Woodland time period has been previously noted (Butler 1971:64, Faulkner and McCollough 1974:576). The Late Archaic of both the Collins and the Calfkiller drainages is evidenced by a marked increase in the number of sites and in the number of intensively occupied sites. A rise in population along with the occurrence of intensively occupied settlements in all the major physiographic zones indicates that population groups during this time period were well adapted to the region. In the Collins River area there is a certain tendency for intensively occupied sites to occur in the floodplain or alluvial terraces of major waterways while no set pattern can be determined for the Calfkiller region. The general lack of an extensive floodplain and alluvial terrace system in the Calfkiller drainage may explain the absence of Late Archaic period sites in bottom locales. Winters (1969:137) has postulated an intricate settlement system based upon the maximal exploitation of concentrated natural resources for the Late Archaic in the central Wabash Valley. Preliminary indications suggest that a basically similar system may exist for this region; however, only combined settlement and subsistence data from an excavated context can validate this hypothesis.

Terminal Archaic/Early Woodland sites in the Calfkiller River area show a basic continuum with Late Archaic sites as evidenced by the occurrence of intensively occupied Late Archaic components on the same sites as intensively occupied Terminal Archaic/Early Woodland components. Not only is such a continuum absent in the Collins River region, but there is a general trend for a lesser amount of material to occur on a lesser number of sites. In the latter area there is only one site showing any signs of intensive occupation. From the survey sample, there is a disproportionate number of Adena ovate base projectile points/knives (FIGURE 7, e) from the Calfkiller River area and a disproportionate amount of Wade Cluster projectile point/knives (FIGURE 7, d) from the Collins River region. The differential frequencies of these diagnostic artifacts are probably not the result of a sampling bias for collector data tends to substantiate the survey sample. These disparities are most probably the reflection of differences in

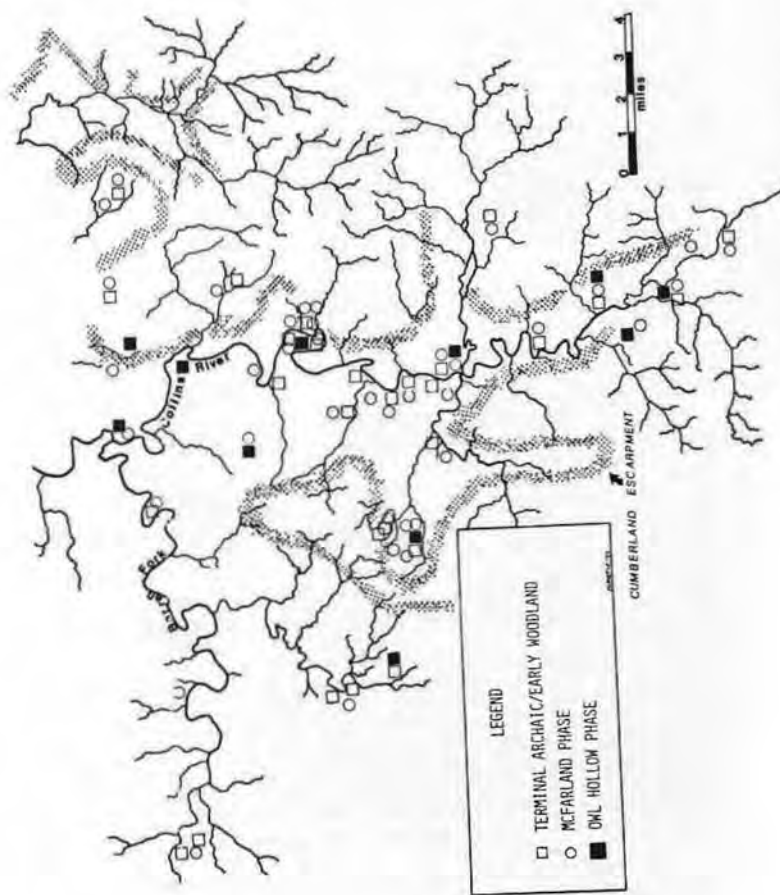


FIGURE 5. Collins River region: distribution of Terminal Archaic/Early Woodland and Middle Woodland sites.

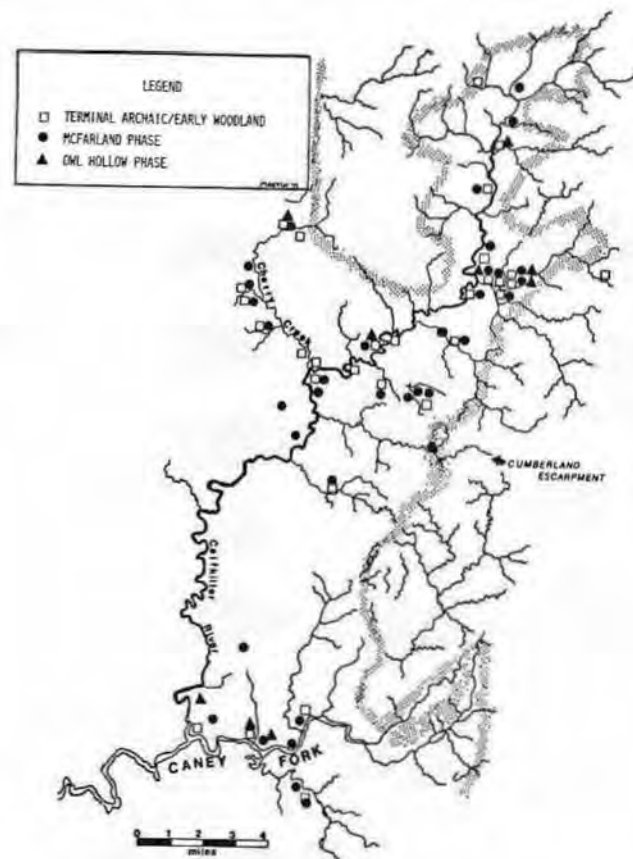


FIGURE 6. Calfkiller River region: distribution of Terminal Archaic/Early Woodland and Middle Woodland sites.

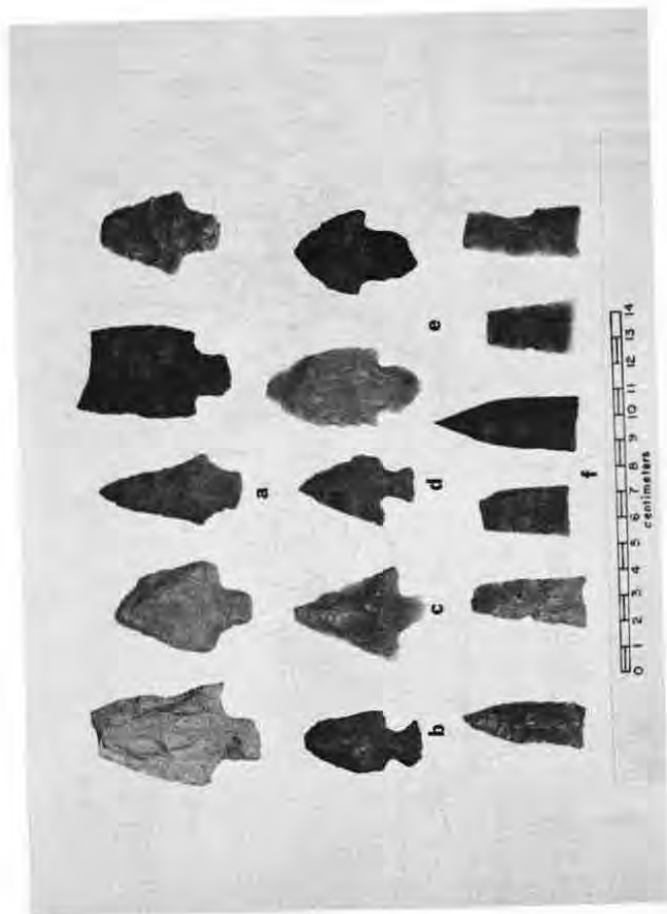


FIGURE 7. Late Archaic-Middle Woodland projectile points. a) Late Archaic Stemmed; b) Motley; c) Cotaco Creek; d) Wade; e) Adena; f) McFarland/Copena.

the regional expression of this time period. The procurement of exotic raw material from a distant locale, the South Appalachian Mountains, is evidenced by the recovery of two steatite bowl fragments from the Calfkiller region.

Middle Woodland period sites of the McFarland phase, marked by the occurrence of McFarland/Copena projectile points/knives, are represented in both regions by a high number of diagnostic items and components. The projectile points/knives from the survey sample conform in the vast majority of instances to the McFarland point type (FIGURE 7, f). The Collins River area has a large number of sites with evidence for intensive occupation. The occurrence of intensively occupied Late Archaic and Terminal Archaic/Early Woodland components at the same sites suggest the absence of any significant change within the subsistence and settlement systems throughout these time periods. Evidence from the upper Duck River Valley indicates a similar trend during these same time periods, that is, the intensification of site usage through time without significant changes in the subsistence and settlement pattern (Faulkner and McCollough 1974:576-577). The large number of McFarland components present along with the occurrence of intensively occupied sites in all the major physiographic zones indicates the presence of a large population aggregate that is well adapted to the surrounding environment. A tendency for intensively occupied sites to occur along the floodplains or alluvial terraces is present, but is not as marked as during the Late Archaic period.

Middle Woodland period sites of the Owl Hollow phase, attested by the presence of Spike Cluster points (FIGURE 8, b), exhibit a noticeably different settlement distribution. A general reduction in the number of sites and the number of intensively occupied sites can be readily observed. Diffuse settlements predominate, and are indicated by the occurrence of single Spike Cluster points from eleven of the twenty sites while evidence for intensive occupation is known for only three from the survey sample and one from collector's information. The three intensively occupied sites have intensive McFarland phase occupations and are situated along streams that flow along the edge of the Cumberland Plateau or along the lowermost portions of streams that dissect the Cumberland Plateau. Evidence for change in Owl Hollow subsistence and settlement systems due to a possible incipient horticulture base has been suggested by research conducted in the upper Duck River Valley (Faulkner and McCollough 1974:584). A nucleated settlement model for the Middle Woodland time period in the Highland Rim has been postulated (Faulkner 1973:44). This settlement model is now thought to be present during the Owl Hollow phase in the upper Duck River Valley (Faulkner and McCollough 1974:578). The occurrence of known intensively occupied settlements outside of the narrow sheltered stream valleys that dissect the Cumberland Plateau may aid in substantiating the hypothesis of an Owl Hollow settlement system based upon village base camps established in ecologically optimal areas (Cobb 1977:5).

Middle Woodland occupation in this region is also evidenced by Bakers Creek projectile points/knives (FIGURE 8, a), greenstone celts and prismatic bladework, all of which were placed into a generalized Middle Woodland category. A small sample of ceramics consisting of fabric-impressed (FIGURE 9, a), check stamped (FIGURE 9, b), simple stamped, cord-marked (FIGURE 9, c) and plain limestone-tempered types of possible Middle Woodland affiliation were placed into a Woodland ceramics category, along with siliceous and sand-tempered ceramics. These Middle Woodland period artifacts frequently occur on sites with Owl Hollow or

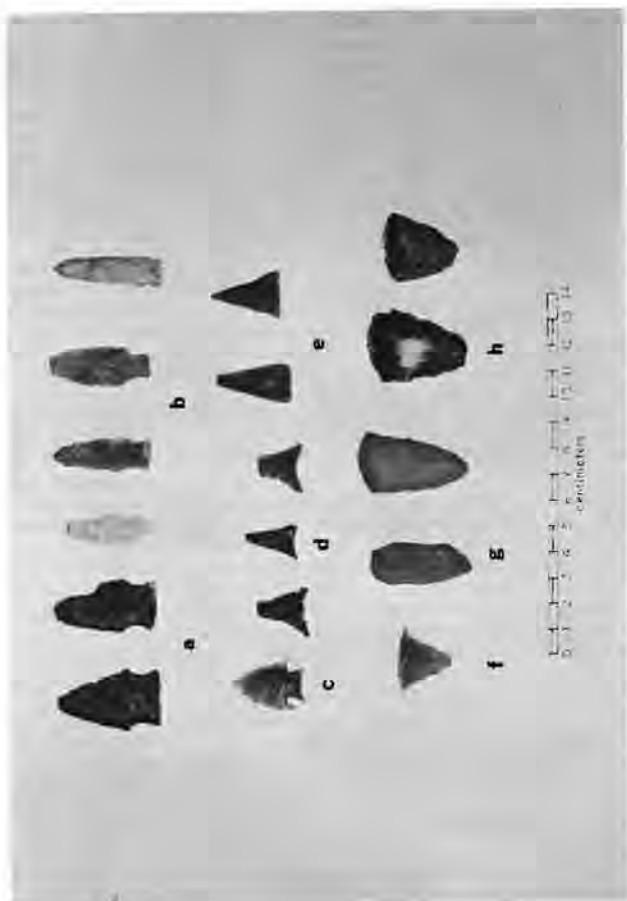


FIGURE 8. Middle Woodland-Late Woodland/Mississippian projectile points; bladelets and bladelet core; endscrapers. a) Bakers Creek; b) Bradley/Flint River Spike; c) Jacks Reef Corner Notched; d) Hamilton Triangular; e) Madison; f) Middle Woodland bladelet core; g) Middle Woodland bladelet; h) keeled endscraper.

McFarland phase components, but their exclusive affiliation with any particular known Middle Woodland phase can not be demonstrated. Recent excavations in the Normandy Reservoir (Faulkner and McCollough 1977:163-169) and at the Yearwood site (Butler 1977) have suggested the presence of a Middle Woodland phase occurring between the McFarland and Owl Hollow Phases. The high percentage of recurvate Copena projectile points, fine cord-marked limestone-tempered ceramics and prismatic bladework at the Yearwood site may be diagnostic markers for this potential phase. It is significant to note that two of these artifact types, the projectile points and the ceramics, are virtually absent from the survey sample.

Demonstrable Late Woodland sites are few in number and exhibit low artifact densities. A population decrease during this time period is indicated, a trend which has also been suggested for the upper Duck River Valley (Faulkner 1976:87). On the other hand, major problems exist in isolating Late Woodland components, since medium sized triangular points may be either Middle or Late Woodland and small straight based triangular points may be either Late Woodland or Mississippian. Additional difficulties exist due to the small ceramic samples obtained from several sites that can not be temporally differentiated. Late Woodland diagnostics, as defined by this survey, consist of Jack's Reef Corner Notched (FIGURE 8, c) and Pentagonal projectile points, Hamilton projectile points (FIGURE 8, d), and Elk River series ceramics. When possible Late Woodland sites are considered, the trend towards non-intensive site occupation coupled with a general population decrease still stands.

Four of the six demonstrable Late Woodland sites are rockshelters (FIGURE 12). There are four other rockshelters with a small sample of Woodland ceramics that may be attributable to the Late Woodland time period. Of the two open habitation sites, both of which are situated at the base of the Cumberland escarpment, one is small with sparse debris while the other has yielded evidence for possible intensive occupation and is associated with a bulldozed conical burial mound. Survey data strongly indicate that rockshelters were extensively utilized during this time period, but the extent of this usage may only represent one segment of the Late Woodland settlement system. The isolated and infrequent occurrences of demonstrable Late Woodland artifacts and of Middle Woodland/Late Woodland and Late Woodland/Mississippian artifacts on open habitation sites suggests a general dispersion of settlements.

Although only one sherd of Elk River knot-roughened and net-impressed pottery was recovered by the survey (FIGURE 9, d), two additional sherds were noted in private collections. Several of the siliceous-tempered sherds recovered by the survey may belong to the Elk River series, but the smallness of these sherds precludes the possibility of a positive identification. Elk River series ceramics have previously been identified from within the limits of the survey area at the Ducks Nest site along the Barren Fork River (Kline 1977:42). Elk River knot-roughened and net-impressed ceramics were absent from the Calfkiller drainage, but this may be the result of sampling error. Of considerable interest is one rockshelter site along the Calfkiller drainage that yielded over 200 sherds that appear to be Late Woodland. The lack of refinement exhibited by these sherds is manifested by the excess amount of coarse limestone temper, the poor firing and the tendency for breakage along coil lines. Surface treatment of these sherds is primarily plain, although cord marking does occur. The exact relationships of these ceramics to the Woodland ceramics recovered at the Hoover Beeson Rock Shelter (Butler 1971:16-21), Elk River series ceramics (Faulkner 1968:61-70),



FIGURE 9. Woodland ceramics. a) Limestone-tempered Fabric Impressed; b) Limestone-tempered Check Stamped; c) Limestone-tempered Cord-marked; d) Elk River Knot Roughened and Net Impressed.

and East Tennessee Hamilton ceramics (Lewis and Kneberg 1946:83-84), remains uncertain. Besides the obvious difference of geographic location, temporal factors or several cultural factors may account for these differences.

Only one Woodland period burial mound was located by the survey. Although this mound has been bulldozed, the owner and several local informants recall that it was conical in shape and contained only one burial. An associated Late Woodland habitation site suggests that this was a Late Woodland period mound. Myer (n.d.) mentions the presence of two additional conical mounds within the survey area that may have been either Middle or Late Woodland in age. These mounds were not relocatable by the survey and have probably been destroyed.

An Early or "Emergent" Mississippian phase is suggested by the presence of mixed limestone/shell-tempered ceramics from six sites. Although this is a very uncommon ceramic type in the Southeast, its presence has been previously documented within the survey region (Kline 1977:53) and in Eastern Tennessee (Griffin 1938:294-295; Salo 1969:104-105). It has been suggested that this ceramic type is indicative of a Late Woodland/Mississippian transitional phase (Kline 1977:53) or an Emergent Mississippian phase (Salo 1969:105). The association of this artifact type with the only two Mississippian mounds situated in atypical locales, one on a mountaintop and one three miles upstream on a small tributary stream, suggests an Early Mississippian affiliation. Although sample size is small, the occurrence of sites in uplands, coves and rockshelters away from the major waterways, suggests a basic continuation of the Late Woodland settlement pattern.

The mixed limestone/shell-tempered ceramics from this region consist of a sample of 41 sherds. These sherds are characterized by a medium textured paste with approximately equal proportions of limestone and shell. The surface treatment is consistently plain.

The initial spread of the Mississippian lifeway may be the result of an intrusive population, the diffusion of cultural traits and ideas, or a combination of the two. A recent synthesis of data from the upper Tennessee Valley has led Faulkner (1975:27) to believe that this transition was primarily of internal cultural change. The presence of mixed limestone/shell-tempered ceramics and the persistence of Late Woodland settlement patterns into the Mississippian period suggest that a certain degree of cultural conservatism was exercised during the Late Woodland-Mississippian transition.

Mississippian period sites are identified by the presence of shell-tempered ceramics, small rounded sandstone discs, and by the occurrence of two discoids in private collections. Of the twelve sites possessing Mississippian occupations, all except one are located in upland and cove areas or in caves or rockshelters. Other possible Mississippian period occupations are evidenced by the Late Woodland/Mississippian small straight based triangular points which have a similar distribution pattern. Isolated occurrences of small straight based triangular points and small quantities of shell-tempered ceramics suggest a dispersed settlement pattern of small habitation sites. A similar pattern exists for a segment of the Mississippian period in the upper Duck River Valley (Faulkner 1976:90). Such trends in settlement location and settlement type differ substantially from the Mississippian settlement patterns evident along such major waterways as the Cumberland River.

Settlement location for Mississippian period sites rely upon a complexity of factors (Lewis 1974; Cottier 1975), one of which is the soil associations.

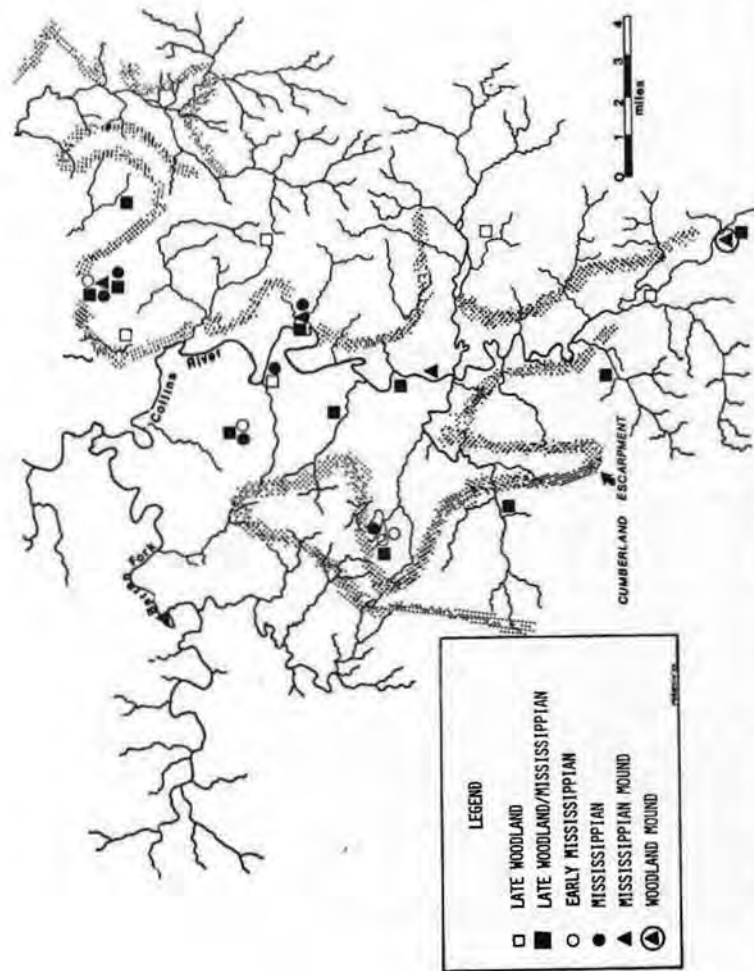


FIGURE 10. Collins River region: distribution of Late Woodland and Mississippian sites.

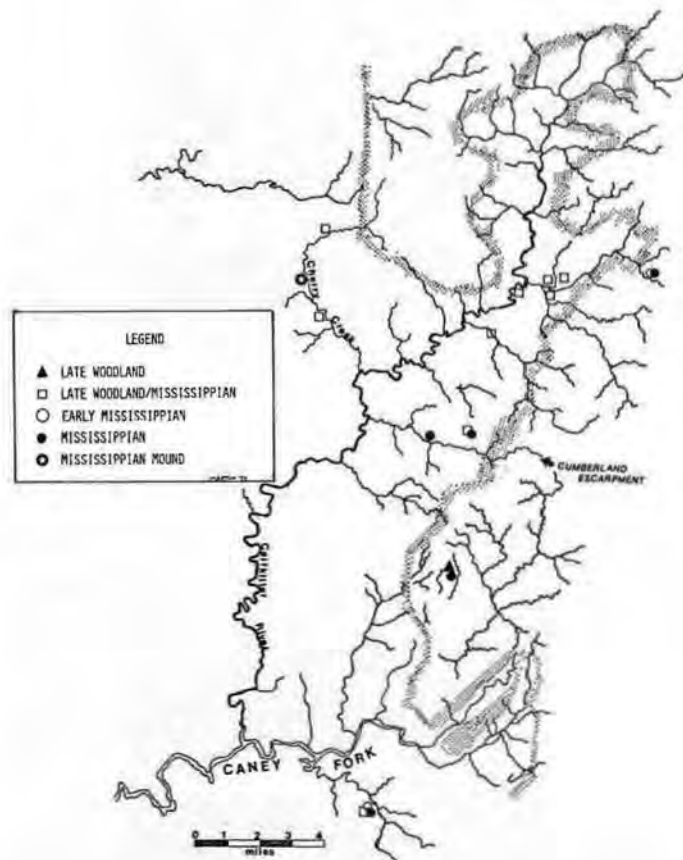


FIGURE 11. Calfkiller River region: distribution of Late Woodland and Mississippian sites.

That Mississippian habitation sites along major riverine corridors should be associated with agriculturally productive soils has been a long held logical assumption. The actual documentation of this assumption has only recently been suggested by intensive survey work (Cottier 1975:160; Butler 1976:5). The locations of Mississippian sites noted in this survey were examined to see if a similar relationship held true for this headwater area. In order to determine the significance of this one variable, the only soil survey information from this area, the Warren County Soil Survey (Jackson, et. al 1967) was consulted. Difficulties lie in assessing the exact soil associations for a site due to the fact that one site may extend over two or three different soil associations. Additionally, the significance of such an assessment is questionable since the soil association given for the extent of the prehistoric occupation may not correspond to the area adjacent to the site that was utilized for prehistoric cultivation. In this study, all the soil associations within the limits of the site area are considered, many of which are the same or similar to the adjacent surrounding soils. When Mississippian period sites are compared to Middle and Late Woodland period sites, a shift to a more consistent selection of soil associations with a concentration on higher capability units and silt loams is evident. Such a trend suggests that soil associations played a role in the selection of Mississippian site locales in this particular region.

Although survey data revealed no information concerning Mississippian mortuary practices, Featherstonhaugh (1844:48-49) cites the occurrence of numerous stone box graves from the Calkiller area. Myer (n.d.) also mentions several locales in the Calkiller area where stone box cemeteries have been reported. No instances of stone box cemeteries have been reported from the Collins River area, indicating that their known distribution is confined to the Calkiller region. It is also apparent that the incidence of stone box burials increases along the Caney Fork as one proceeds downstream (see Myer n.d.; Willey 1947).

A large number of platform mounds are now known to occur along the Caney Fork and its headwaters (FIGURE 13). A minimum of three platform mounds was recorded along the Caney Fork prior to the construction of Center Hill Reservoir (Willey 1947), while five platform mounds were recorded by this survey. At least one other platform mound has been historically documented within the survey area (Featherstonhaugh 1844; Myer n.d.) that is now destroyed. Middle Woodland platform mounds are known to occur in the Southeast (Dickens 1975:33-34), but their known distribution does not include the Cumberland River drainage. Thus, it is assumed that all these platform mounds are Mississippian in age. Various sets of data, including prior descriptions (Haywood 1823:135,142; Nash 1947:45; Womack 1960:10; Myer n.d.), collector reports and survey data tend to substantiate this contention.

The presence of these ceremonial centers implies a degree of social cohesiveness that is not evident in the diffuse settlement pattern suggested for the habitation sites. Two of the four mound sites in the Collins River drainage, the Irving College and Barren Fork mounds, are strategically located at or near the confluences of important tributary streams of the Collins. The settlement location of these mounds differs from the pattern established by the habitation sites.



FIGURE 12. Late Woodland rock shelter.



FIGURE 13. Mississippian platform mound.

The spacing of three Mississippian platform mounds within eight miles of one another along the Collins River is unusual. Such a tight spacing of Mississippian platform mounds does not occur along any other section of the Cumberland or its tributaries. Given the presence of a dispersed Mississippian settlement pattern and the lack of an intensive Mississippian occupation in this region, it is highly unlikely that these three mounds are contemporaneous. The Cardwell Mountain mound which is located on an isolated mountaintop and is associated with mixed limestone/shell-tempered ceramics is most likely Early Mississippian. The large mound size and strategic location of the Irving College mound suggests that it may have been constructed at a later time period than the two mounds lying downstream from it, the Myers and Cardwell Mountain mounds. Thus, a trend through time for mound centers to be located upriver on the Collins and in more strategic positioning in relationship to local waterways can be hypothesized.

A typology of system environments has been utilized to explain contrasts in the location and structure of Mississippian sites (Clay 1976). This typology, when applied to the survey, indicates that elements of the placid randomnized and placid clustered environmental type appear simultaneously. The location, debris densities and relative number of Mississippian habitation sites suggests a tactical environmental response while the presence of the ceremonial centers indicates a strategic environmental response. Such an example, where two environmental responses appear to occur simultaneously, was not encountered by Clay. Clay was always able to successfully account for differing environmental responses in a region by temporal differences. However, Clay's typology, which was formulated around Mississippian sites located primarily along major riverine corridors, does not take into consideration Mississippian adaptations to remote headwaters regions. Thus, Mississippian adaptations in hinterland areas cannot be expected to comfortably conform to the typology established by Clay.

A correlation between historic Indian trails and the location of ceremonial sites dating back to the Middle Woodland time period has been previously noted (Myer 1928; Walthall 1973:598). The location of the five platform mounds in the survey are next to or in close proximity to historic Indian trails that connect the upper Tennessee Valley with the Middle Cumberland region (see Myer 1928).

All four of the Mississippian platform mounds in the South Caney Fork headwaters are located on the east side of the Barren Fork or Collins River. It is conceivable that this consistent riverbank location is intentional. A geographical study by Burghardt (1959), which was concerned with the study of why river towns are located on a particular riverbank, contains premises which Flannery (1976:173-180) believes are applicable to prehistoric studies. In his study, Burghardt found that the side of a river chosen by a town may depend upon where its distant sustaining hinterland is located. When this premise is applied to the survey, it suggests that the distant sustaining hinterland during the Mississippian period was located toward the Cumberland Plateau.

The Cherry Creek mound, situated in the North Caney Fork headwaters, is the only Mississippian mound located on the west bank of a stream. The location of this mound may be explained by other factors. Myer (1928) clearly states that a historic trail crossed by this mound. It may also be relevant to note that extensive salt deposits are located along the west bank of the Calfkiller River in close proximity to this mound (Haywood 1823:354). A convincing argument,

based upon archaeological and ethnographic data has been made that salt was an important trade item during Mississippian times (Kelsin 1964). Additionally, the unusual location of an Early Mississippian site in East Tennessee has been interpreted as being the result of its close proximity to an adjacent salt spring and historic trail (Hood 1975). Although specific data from the Cherry Creek mound neither supports nor contradicts a similar interpretation, it can be suggested that these may represent, in part, plausible explanations for the unusual location of this mound.

In summary, the cultural history of this region is in many ways comparable to other headwater drainage areas in Middle Tennessee, specifically the upper Duck and Elk rivers (c.f. Faulkner 1968; Faulkner and McCollough 1973, 1974, and 1977). A major difference between these areas can be observed in the Mississippian occupation, which may be due to the fact that the Caney Fork is a tributary of the Cumberland while the Elk and Duck rivers are tributaries of the Tennessee. Internal differences within the limits of the survey area between the Collins and Calfkiller drainages during different cultural periods are also evident.

The lack of shingle and gravel bars along these fast running tributary streams have prevented the development of extensive mussel shoals. No evidence for extensive mussel or gastropod exploitation was in evidence on any of the 156 sites visited in this region. Mussel shell was present on only four sites, all of which were disturbed rockshelters. The species represented in this small sample are indicative of headwater drainage species. . . *Pleurobema* sp. or *Fusconia* sp., *Elliptio dilatatus* and *Ambelma plicata* (Emanuel Brifetburg, personal communication). The small size of these mussel species and the difficulty involved in gathering sizable amounts strongly suggest that this food resource was only minimally exploited.

The importance of nut harvesting in this region is demonstrated by the presence of numerous cupstones and pitted hammerstones in both survey and amateur collections. It has been speculated that pitted hammerstones may actually have functioned as anvils for bipolar flaking (Chapman 1973:104). Scientific replication has determined that cracking both nuts and smooth cobbles will produce a U shaped pit while cracking angular cobbles will produce a V shaped pit (Spears 1975:105). The presence of predominately shallow U shaped pits and the usage of several of these artifacts as manos tends to indicate that these were food processing implements. The predominate association of these assumed domestic implements with female burials in the Green River Archaic of Kentucky (Winters 1968:205) aids in substantiating this contention. The majority of these implements are manufactured from Pennsylvanian sandstone, which is known to outcrop in the Cumberland Plateau (Miller 1974:32).

An exhaustive study of the raw material resources available was beyond the scope of the survey, but attempts were made, when possible, to collect pertinent raw materials from their source area or area of natural redeposition. The region is abundant in flint/chert resources, which are known to outcrop in several areas and occur as water worn cobbles in stream beds. A cursory examination of the flint/chert resources present in the survey area was conducted. In comparing those raw material types to those present in the Normandy Reservoir region (Faulkner and McCollough 1973:52-62; Penny and McCollough 1976:141-194), it was

TABLE 3
COLLINS RIVER REGION

DISTRIBUTION OF SITE COMPONENTS IN THE
PHYSIOGRAPHIC ZONES AND SELECTED GEOLOGICAL FEATURES

CULTURAL TYPES	Sample Size	Floodplain	Alluvial Terrace	Cove/Hollow	Uplands*	Uplands**	Rockshelter	Cave
Paleo/Transitional Paleo								
Early Archaic	(34)	8	11	8	6	1		
Middle Archaic	(33)	9	8	8	5	3		
Late Archaic	(44)	10	14	9	4	5	2	
Indeterminate Archaic	(18)	5	3	4	3	2	1	
Terminal Archaic/ Early Woodland	(28)	6	8	7	5	1	1	
McFarland Phase	(38)	11	8	11	4	4		
Owl Hollow Phase	(11)	3	3	2	1	1	1	
Other Middle Woodland	(29)	5	7	9	5	2	1	
Woodland Ceramics	(16)	2	3	2	1	2	5	1
Middle-Late Woodland	(5)	1		1	2		1	
Late Woodland	(5)			1	1		3	
Late Woodland/Mississippian	(11)	2	1	4	1	2	1	
Early Mississippian	(4)			2		2		
Mississippian	(6)		1	1		2	2	
Total	(282)	62	67	69	38	27	18	1

*Less than one-half mile from running stream

**More than one-half mile from running stream

TABLE 4
CALFKILLER RIVER REGION

DISTRIBUTION OF SITE COMPONENTS IN THE
PHYSIOGRAPHIC ZONES AND SELECTED GEOLOGICAL FEATURES

CULTURAL TYPES	Sample Size	Floodplain	Alluvial Terrace	Cove/Hollow	Uplands*	Uplands**	Rockshelter	Cave
Paleo/Transitional Paleo	(6)			4	2			
Early Archaic	(36)	1	6	15	13	1		
Middle Archaic	(16)		2	6	7	1		
Late Archaic	(29)		7	11	7	2	2	
Indeterminate Archaic	(17)		3	6	7	1		
Terminal Archaic/Early Woodland	(30)		6	14	8	1	1	
McFarland Phase	(35)	1	4	17	9	3	1	
Owl Hollow Phase	(9)		2	4	3			
Other Middle Woodland	(23)		4	10	6	2	1	
Woodland Ceramics	(10)			2	2	1	4	1
Middle-Late Woodland	(4)			2	1	1		
Late Woodland	(1)						1	
Late Woodland/Mississippian	(9)		2	5	1		1	
Early Mississippian	(2)				1		1	
Mississippian	(6)			1	1		3	1
Total	(233)	2	36	97	68	13	15	2

*Less than one-half mile from running stream

**More than one-half mile from running stream

observed that the following Normandy types were present: blue-green nodular chert, vein quartz and chalcedony, blue-gray and tan chert and horse mountain agate (Victor Hood, personal communication). Gray banded chert and fossiliferous chert were also present, but they are not readily comparable to the same name types defined for the Normandy area. Three workshop or lithic procurement sites of chalcedony and blue-green nodular chert were located.

Hematite occurred on several sites in both worked and unworked forms. The collector report of an uninvestigated outcrop of this raw material and its occurrence in an unworked form at several sites tends to support the hypothesis that hematite occurs in local outcrops along the Cumberland escarpment (Penny and McCollough 1976:141). Warsaw limestone along with metamorphic and igneous materials were utilized in the manufacture of grooved axes and celts. Greenstone was the most commonly utilized raw material for the manufacture of celts. The usage of this raw material appears to be restricted to the Middle Woodland time period. The source area for the metamorphic and igneous materials is most probably in the Southern Appalachians.

A random sample of lithic debitage was collected and examined from each site, but no extensive classification was attempted. No pièce esquillees were noted in the large sample of lithic debitage obtained. The absence of this highly specialized core technique is most probably the result of a ready abundance of large chert cobbles and nodules.

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