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**A CULTURAL RESOURCES SURVEY OF
CASTOR RIVER ITEM NO. 2, PARCEL 1
CHANNEL CLEARING AND CLEANOUT
STODDARD COUNTY, MISSOURI**

by

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and

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30 January 1990

Prepared by: Mid-Continental Research Associates, Inc., P. O. Box 728,
Springdale, Arkansas 72765

Prepared for: Memphis District Corps of Engineers
under Contract DACW66-89-D-0053
Delivery Order # 8
MCRA Report 90-2

Watershed: Lower St. Francis
USGS Quadrangle: Bloomfield 7.5'

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ABSTRACT

On January 13, 1990 Mid-Continental Research Associates, Inc. surveyed 31 acres in the Castor River Enlargement Project. A previously recorded site, 23SO481 was located. No new sites were found.

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INTRODUCTION

In January 1990, Mid-Continental Research Associates, Inc. was issued Delivery Order # 8 by the Memphis District Corps of Engineers to investigate thirty one acres in the Castor River Enlargement Project. The research included an updated background and literature search, and an intensive pedestrian style-survey. No work was required on a previously recorded site, 23SO481.

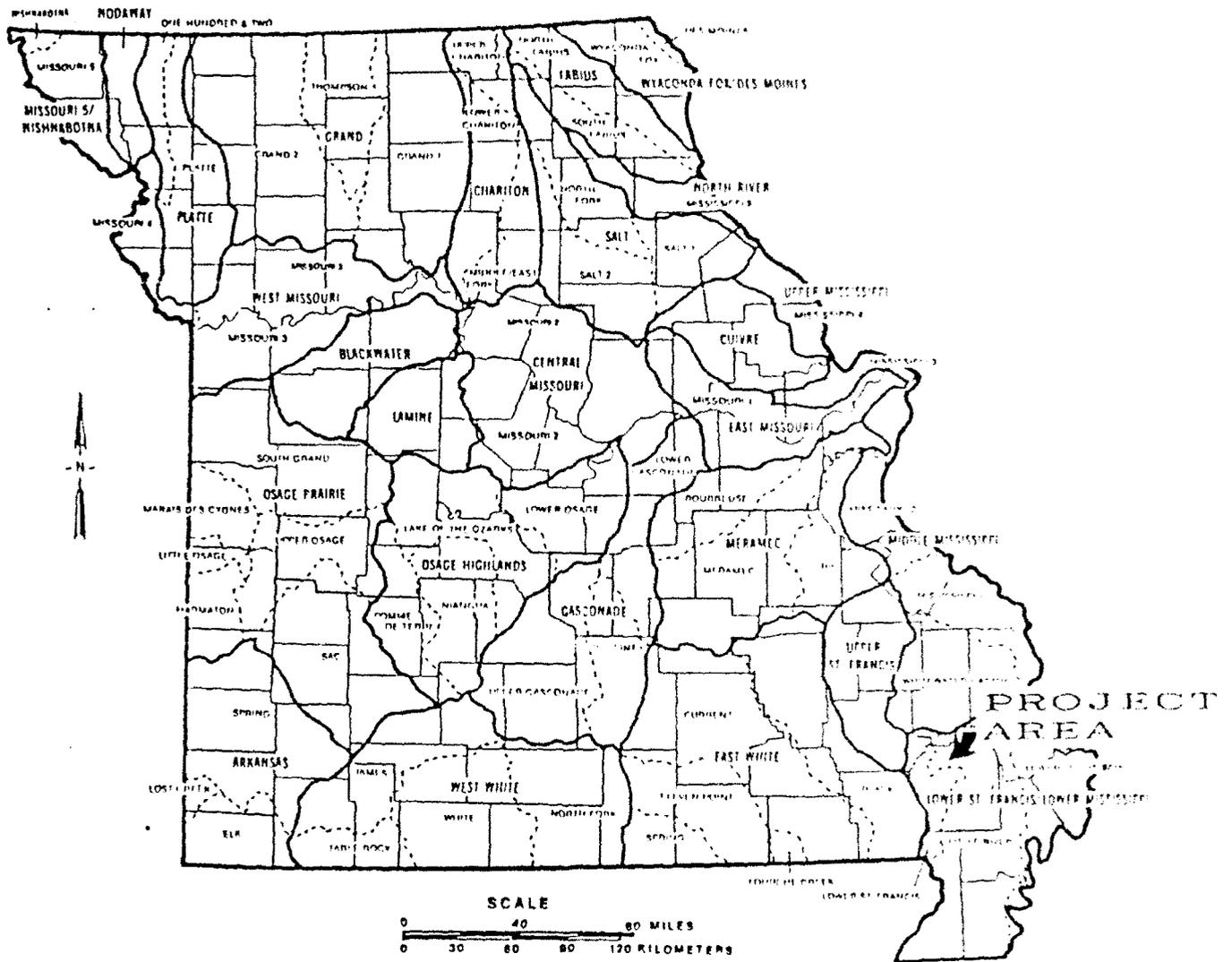
The Castor River Enlargement Project involves cleaning and contouring the Castor River to improve drainage. Potential impacts to archeological sites can be anticipated from the tracking equipment used during construction. This study places the COE in compliance with federal laws and regulations designed to protect these fragile and often subtle resources. These laws and regulations include: National Historic Preservation Act of 1966 (P. L. 89-665); The National Environment Policy Act of 1969; Executive Order 11593, "Protection and Enhancement of the Cultural Environment," (Federal Register 1971:3921); Preservation of Historic and Archeological Data, 1974 (P.L. 93-291); and the President's Advisory Council on Historic Preservation's "Procedures for the Protection of Historic and Cultural Properties (36 CFR 8, Part 800 Federal Register 1976). Missouri (Weichman 1978, 1979; Weston and Weichman 1987) mandates that archeological and historic properties be identified and tested before any federally-funded project is developed.

Carol Kretzman and Tracy Oates surveyed the project area on January 13, 1990.

PROJECT LOCATION

The Castor River Enlargement Project is located in the center of Stoddard County, Missouri (Figure 1). At this location the Castor River has cut through Crowley's Ridge to join the Western and Eastern Lowlands of the Mississippi River. Crowley's Ridge has been an important land transportation route for access to the Central Mississippi Valley (Lafferty et al. 1985; Dekin et al. 1978), and is an important source of lithics for adjacent lowlands. The Castor River Gap, on the other hand, is one of only three places where river channels have cut Crowley's Ridge. The next closest is the St. Francis ca. thirty miles to the south on the Arkansas-Missouri border, and the third is the L'Anguille River at the south end of the ridge. These and other related factors make the project area an important transportation juncture with cultural and ecological borders present at different times.

A total of approximately 31 acres was surveyed on the north and south banks of the Castor River.



Study Units and Watersheds

- PRINCIPAL DRAINAGE BASINS
- - - - WATERSHEDS

Figure 1. Project area location.

ENVIRONMENT

The Castor River Enlargement Project is located in the Castor River Gap, incised into Crowley's Ridge. The Castor River is the northernmost river of the three that join the Western and Eastern Lowland physiographic region, part of the St. Francis Basin of the Central Mississippi River Valley. The St. Francis River cuts through Crowley's Ridge near the Arkansas-Missouri border. The L'Anquille River cuts through Crowley's Ridge northwest of Helena, Arkansas before emptying into the Mississippi. This portion of the Mississippian Embayment is a deeply incised canyon, which has alluviated since the beginning of the Holocene. The Mississippi Valley, 80 miles wide at the project area, is divided about in half by Sikeston Ridge (Medford 1972:69). Crowley's Ridge separates the western quarter of the valley and defines the old Mississippi River course. The Castor Gap is one to two miles wide and cuts 15 miles through Crowley's Ridge. The Castor River has its headwaters in the St. Francis Mountains 45 miles to the northwest.

The Mississippi River has formed the structure of the environment, originally by carving this great valley, and more recently by depositing nearly a mile of fine-grained alluvium within its confining rock walls. The alluvium is largely free of rock and stone with the largest common sediment size being sands deposited in the alluvial levees. This has resulted in the formation of some of the world's best and most extensive agricultural land, which has virtually no hard rocks or minerals. Prehistorically, and even today, rocks and minerals had to be imported from the surrounding regions, especially Crowley's Ridge.

Crowley's Ridge was laid down in Tertiary and Cretaceous times as terraces of the Mississippi River and the Ohio River. At that time the Ohio River had not been captured by the Mississippi and it occupied the Eastern Lowlands while the Mississippi occupied the Western Lowlands. The modern topography is a product of glacial meltwater during the Pleistocene. These complex changes are not completely understood, dated, or even agreed upon. The events of the Nebraskan, Kansan, and Illinoian glaciations and Interglaciers are especially obscure in the Bootheel region, having been dissected and/or masked by the Wisconsin age events or sediments, respectively (Lafferty et al. 1990).

To date, a soils manual has not been completed for Stoddard County, so soils descriptions were obtained from the Dunklin County soils manual (Gurley 1979). Two soils series were identified within the project area, Loring silt loam and Falaya silt loam.

Loring series soils, on the right or southern bank of the project area, consist of moderately well drained upland and terrace soils formed in loess and underlain by a fragipan at about 28 inches below the surface. Slope ranges from 0 to 20 percent.

Topographically, Falaya silt loam association is located adjacent to the St. Francis River and in narrow bands along Crowley's Ridge (Gurley 1979: 5-6). In the project area, it is located on the level floodplains extending from the north or left river bank. The soil formed in alluviation from loess. It is somewhat poorly drained with slow surface runoff.

The relationship of biota to riverine features in the Lower Mississippi Valley is well known (Lewis 1974; Lafferty 1977; Butler 1978; Morse 1981). This has been a rich environment for a long period of time. The project area resembled, at different times, all of the major environments found in the Lower Mississippi Valley from upland levees to aquatic communities as well as the ecotones between. Crowley's Ridge possesses unique plant communities in the mid continent (Arkansas Natural Plan 1978). It is the western limit for certain eastern species such as the tulip poplar (*Liriodendron tulipifera*) and Beech (*Fagus grandifolia*) (Harlow and Harrar 1968:284,365). The tulip poplar was a preferred wood among the southeastern Indians for making the largest canoes (Lafferty 1977), and it would have been in high demand by the peoples of the Eastern and Western Lowlands where it did not grow. Prehistorically this valley must have seemed like an upland heaven to the water-logged lowlanders. Here there were lithics from which cutting edges could be made and a great diversity of plants and animals seldom found in the swamps.

There is considerable evidence that the environment has undergone substantial changes through the past 10,000 years (cf. Delcourt et al. 1980). Major changes involve the general warming with the retreat of the Wisconsin glaciers, a long period of desiccation during the Middle Archaic period and since then a wetter climate similar to the present. Morse and Morse (1983) have detailed these changes in the region.

Today the Castor River Valley is on the edge of one of the great agricultural areas of the world - the Mississippi River flood plain. The flat parts of the valleys have large fields of row crops growing on the white clays of the relict braided surface. These abruptly abut the orange upland soils of Crowley's Ridge at the edges of the valley. This flat surface is broken by the Castor River supporting an edge forest of cypress, sycamore (*Platanus occidentalis*), white oak (*Quercus alba*), black oak (*Quercus velutina*), and poison ivy (*Rhus radicans*). There are still a few hundred acres of flatland forest. The upland areas still support large amounts of forest interspersed with pastures which support cattle (*Bos sp.*).

Thus, the diversity in resources, both physical and biological, made the Castor Gap a rare kind of environment particularly suited to prehistoric and historic exploitation .

PREVIOUS RESEARCH

Archeological research has been carried out in Stoddard and adjacent counties for nearly a century. As with much of the Mississippi Valley the earliest work was done by the Smithsonian Mound Exploration Project (Thomas 1894) which recorded the first site in Stoddard County - the Rich Woods site, 23SO1. Since that time a great deal of work has been done in the Bootheel region of the Central Mississippi Valley area (cf. Willey and Phillips 1958 for definitions of technical terms) which has resulted in several extensive syntheses of the region's prehistory (Morse and Morse 1983; Chapman 1975, 1980). In this section we summarize the archeological research which has taken place, what is known of the prehistory of the region, and the limits in these data as they apply to the Castor River Gap locality.

The earliest professional archeological work in the region was the work carried out by the Smithsonian Institute mound exploration project (Table 1). Thomas (1894:172-183) and his associates excavated at three sites near the project area: Richwood, Lakeville, and County Line. These Mississippi period sites were located outside the project area. The work identified the American Indians as the authors of the great earthworks of the eastern United States and is still the best description of many sites.

Most of the early work was concerned with specimen collection for museums (e.g., Potter 1880; Moore 1910; Fowke 1910). Some data were used to define the great ceramic traditions, including the Mississippian tradition, in the eastern United States (Holmes 1903). Many of these original conceptualizations remain the basis upon which our current chronologies are structured (e.g. Ford and Willey 1941; Griffin 1952; Chapman 1952, 1980).

Table 1. Previous Archeological Investigation in Northeast Arkansas and Southeast Missouri

<u>Investigator</u>	<u>Location and Contribution</u>
Potter 1880	Archeological investigations in southeast Missouri.
Evers 1880	Study of pottery of southeast Missouri.
Thomas 1894	Mound exploration in many of the large mound sites in southeast Missouri and northeast Arkansas.
Fowke 1910	Mound excavation in the Morehouse Lowlands.
Moore 1910, 1911 1916	Excavation of large sites along the Mississippi, St. Francis, White, and Black Rivers.
Adams and Walker 1942	Survey of New Madrid County.
Walker and Adams 1946	Excavation of houses and palisade at the Mathews site.
Phillips, Ford, and Griffin 1951; Phillips 1970	Mapping and sampling of selected sites in southeast Missouri, and northeast Arkansas, Lower Mississippi Valley Survey (LMVS), proposed ceramic chronology.
S. Williams 1954	Survey and excavation at several major sites in southeast Missouri, original definition of several Woodland and Mississippi phases.
Chapman and Anderson 1955	Excavation at the Campbell site, a large Late Mississippian Village in southeast Missouri.
Moselage 1962	Excavation at the Lawhorn site, a large Middle Mississippian Village in northeast Arkansas.
J. Williams 1964	Synthesis of fortified Indian villages in southeast Missouri.
Marshall 1965	Survey along I55 route, located and tested many sites north of the project area.
Morse 1968	Initial testing of Zebree and Buckeye Landing Sites.
J. Williams 1968	Salvage of sites in connection with land leveling, Little River Lowlands.
Redfield 1971	Dalton survey in Arkansas and Missouri Morehouse Lowlands.

Table 1 (continued). Previous Archeological Investigations.

<u>Investigator</u>	<u>Location and Contribution</u>
Schiffer & House 1975	Cache River survey.
Price et al. 1975	Little Black River survey.
Morse and Morse 1976	Preliminary report on Zebree excavations.
Chapman et al. 1977	Investigations at Lilbourn, Sikeston Ridge.
Harris 1977	Survey along Ditch 19, Dunklin County, Missouri.
Klinger and Mathis 1978	St. Francis II cultural resource survey in Craighead and Poinsett Counties, Arkansas.
LeeDecker 1978	Cultural resources survey, Wappapello to Crowley's Ridge.
Padgett 1978	Initial cultural resource survey of the Arkansas Power and Light Company transmission line from Keo to Dell, Arkansas.
I. R. I. 1978	Cultural resources survey and testing, Castor River enlargement project.
Dekin et al. 1978	Cultural resources overview and predictive model, St. Francis Basin.
LeeDecker 1979	Cultural resources survey, Ditch 29, Dunklin County, Missouri.
Morse 1979	Cultural resource survey inside Big Lake National Wildlife Refuge.
LeeDecker 1980a	Cultural resource survey, Ditch 81 control structure repairs.
LeeDecker 1980b	Cultural resources survey, Upper Buffalo Creek Ditch, Dunklin County, Missouri, and Mississippi County, Arkansas.
Morse and Morse 1980	Final report to COE on Zebree project.
J.Price 1980	Archeological investigations at 23DU244, limited activity Barnes site, Dunklin County, Missouri.

Table 1 (continued). Previous Archeological Investigations.

<u>Investigator</u>	<u>Location and Contribution</u>
Price and Price 1980	A predictive model of archeological site frequency, transmission line, Dunklin County, Missouri.
Lafferty 1981	Cultural resource survey of route changes in AP&L Keo-Dell transmission line.
Klinger 1982	Mitigation of Mangrum site.
Santeford 1982	Testing of 3CG713.
Bennett and Higginbotham 1983	Mitigation at 23DU227, Late Archaic through Mississippi period site.
Keller 1983	Cultural resources survey and literature review of Belle Fountain Ditch and tributaries.
Price and Price 1984	Testing Shell Lake Site, Lake Wappapello.
Chapman 1975, 1980	Synthesis of Archeology of Missouri.
Morse and Morse 1983	Synthesis of Central Mississippi Valley prehistory.
Lafferty et al. 1984, 1985	Cultural resource survey, testing and predictive model, Tyronza Watershed, Mississippi County, Arkansas.
Lafferty & Sierzchula 1986	Cultural Resources Survey and Record Check, Belle Fountain Ditch, Pemiscot and Dunklin Counties, Missouri.
Lafferty et al. 1987	Cultural resources survey and testing, pollen cores and geomorphic reconstruction, Ditch 29, Mississippi County, Arkansas.
Teltser 1988	Controlled surface collections on three sites, Stoddard and Dunklin Counties, Missouri.
Lafferty and Cande 1989	Cultural resources survey and testing Eaker Air Force Base Mississippi County, Arkansas.
Wadleigh and Thompson 1989	Proton Magnetometer survey, 3MS105, Eaker Air Force Base, Mississippi County, Arkansas.

There was a hiatus in the region's archeological work until the 1940s when Adams and Walker began the first modern archeological work for the University of Missouri (Adams and Walker 1942; Walker and Adams 1946). Beginning in 1939 the Lower Mississippi Valley Survey (LMVS) conducted a number of test excavations at many of the large sites in the region (Phillips, Ford, and Griffin 1951; S. Williams 1954). This work has continued to date in different parts of the valley (e.g., Phillips 1970; S. Williams 1984). The LMVS has produced definitions for numerous ceramic types in the Lower Mississippi Valley area and produced the first phase definitions for many of the archeological manifestations known in the latter part of the archeological record, particularly the Barnes, Baytown, and Mississippian traditions of the north (S. Williams 1954).

In the 1960s the tempo and scope of archeological work in the region increased. Numerous survey and testing projects were carried out for proposed federally funded projects (Marshall 1965; Williams 1968; Hopgood 1969; Krakker 1977; Gilmore 1979; IRI 1978; Dekin et al. 1978; Lafferty 1981; Morse and Morse 1976, 1980; Morse 1979; Klinger and Mathis 1978; Klinger 1982; Padgett 1978; C. Price 1976, 1979, 1980; J. Price 1976a, 1976b, 1978; Greer 1978; LeeDecker 1979; Price, Morrow and Price 1978; Price and Price 1980; Santeford 1982; Sjoberg 1976; McNeil 1982, 1984; Klinger et al. 1981). Generally referred to as cultural resources management studies, these projects have greatly expanded the number of known sites from all periods of time and accumulated an extensive body of data on the variation present on a range of different sites.

As well as small-scale archeological projects, the large-scale excavation projects were continued in the region. Major excavations at the Campbell site (Chapman and Anderson 1955), Lawhorn (Moselage 1962), Snodgrass site (Price 1973; Price and Griffin 1979), Lilbourn (Chapman et al. 1977; Cottier 1977a, 1977b; Cottier and Southard 1977), and Zebree (Morse and Morse 1976, 1980) have greatly expanded our understanding of the Mississippian cultures. This understanding has resulted in the definition of the temporal/spatial borders between different Woodland and Mississippian manifestations and has resulted in definitions of assemblages. Several major syntheses have resulted (Chapman 1975, 1980; Morse 1982a, 1982b; Morse and Morse 1983) which provide up-to-date summaries and interpretations of the region's archeological work.

Investigations at nearby sites include the total excavation of the Snodgrass site, located some 40 km southwest of the Castor River in the western lowlands, which defined the mid 12th century Powers phase. Forty kilometers to the east of the project area major excavations have been conducted at Lilbourn (Chapman et al. 1977), Towosahgy, and a number of Woodland sites (Williams 1974). These works have resulted in the preliminary definitions of Baytown and Mississippian phases in the Cairo Lowlands. More recently, Teltser (1988) has conducted a controlled surface collection at the County Line site on the Malden Plain, 30 km south of the project area. This work is the major characterization of Mississippian assemblages on the Malden Plain and relates most directly to the project area.

Archeological work in the Castor River Gap has only been conducted during the past two decades. In 1978, Iroquois Research Institute conducted an archeological survey of the Castor River Enlargement Project (IRI 1978). In 1981 Historic Preservation Associates conducted survey on one segment of the Castor River, downstream from Castor River Gap, and tested the one site discovered (Klinger et al. 1981). MCRA conducted testing on six sites discovered by IRI and determined that two were significant in terms of the NRHP criteria. A controlled surface collection was made by MCRA in 1988 to mitigate the impact of equipment tracking across one of the sites (Lafferty and Sierzchula 1990). This work indicates that the Castor River Gap was an important source for chert cobbles for cutting edges. Additional survey of the segment immediately downstream from the current project, conducted in 1985, resulted in no additional sites.

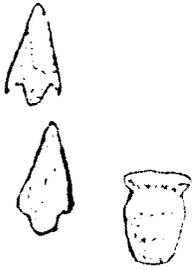
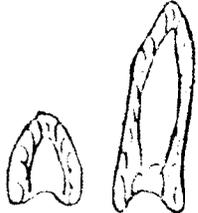
TIME SCALE	CULTURAL STAGES	CULTURES & PHASES	ASSOCIATED ARTIFACTS & TRAITS
1541	Historic	American European Historic Indian	Wide spread trade, machine produced artifacts, glass, glazed pottery, widespread use of metals, 
1000	Mississippian	Nodena Parkin Cherry Valley Lawhorn Pig Lake	Palisaded villages with temple mounds, and satellite hamlets & farmsteads, arrow points, intensive farming, shell tempered pottery, wide spread riverine trade, food storage, stone hoes, rectangular celts. 
AD 0 BC 500	Woodland	Barres Baytown Marksville Tchula	Beginning of agriculture, pottery making (sand and grog tempered), dart points, celts, 
8000	Archaic	Poverty Point Late Archaic Early Archaic Dalton	Seasonal use of different sites, hunting, fishing and foraging economy, dart points, grooved axes and a variety of stone tools (which persist in time), poverty point objects, adzes. 
10,000 +?	Paleo-Indian		Fluted points, Big game hunting. 

Figure 2. Time line of Central Mississippi Valley.

REGIONAL PREHISTORY

The studies described above and work in adjacent regions have resulted in the definition of the broad pattern of cultural history and prehistory in the region (Figure 2). However, knowledge of the region is still sketchy with few Archaic and Woodland period sites having been excavated. This status has seriously constrained our understanding of settlement systems. Therefore, while this region may be fairly well known with respect to the Mississippi period, much more work needs to be done before the basic contents and definitions of many archeological units in space and time are adequate (cf. Morse 1982a). Currently we have a few key diagnostic types associated with some cultural units, but the range of artifact assemblage variation across chronological and spatial boundaries is not yet defined. Nor are the ranges of site types known for any of the defined units. The adequate definition and resolution of these fundamental questions and problems are necessary before we can begin to reconstruct and use the data for understanding more abstract cultural processes as is possible in better known archeological areas such as the American Southwest.

The Paleo-Indian period (10,000-8,500 B.C.) is known in the region from scattered projectile point finds over most of the area. These include nine Clovis and Clovis-like points from the Bootheel of Missouri (Chapman 1975:93). No intact sites have yet been identified from this period, and the basal deposits of the major bluff shelters thus far excavated in the nearby Ozark Mountains have contained Dalton period assemblages. Lanceolate points are known from bluff shelters and high terraces (Sabo et al. 1982:54), which may represent different kinds of activities or extractive sites, as they have been shown to have been in other parts of the country. For the present any Paleo-Indian site in the region is probably significant.

The Dalton period (8,500-7,500 B.C.) is fairly well known in the Lower Mississippi Valley which has produced some of the better known Dalton components and sites in the central continent. These include the Sloan site (Morse 1973) and the Brand site (Goodyear 1974). These and other more limited or specialized excavations and analyses have resulted in the identification of a number of important Dalton tools (i.e., Dalton points with a number of resharpening stages, a distinctive adze, spokeshaves, several varieties of unifacial scrapers, stone abraders, bone awls and needles, mortars, grinding stones, and pestles). At least three different site types have been excavated: the bluff shelters, which were seasonal habitation sites, a butchering station (the Brand site), and a cemetery (the Sloan site). We do not have the other part(s) of the seasonal pattern which should be present in the region; nor have any other specialized activity sites been excavated. Dalton sites are known in a number of locations, especially on the edge of the relict braided surface, on Crowley's Ridge and the edge of the Ozark Escarpment. Given the present resource base, a number of important questions have been posed concerning the early widespread adaptation to this environment (Price and Krakker 1975; Morse 1982a, 1976). Adjacent areas of the Ozarks have had modern controlled excavations from Rogers, Albertson, Tom's Brook, and Breckenridge shelters (McMillan 1971; Kay 1980; Dickson 1982; Logan 1952; Bartlett 1963, 1964; Wood 1963; Thomas 1969).

The Early to Middle Archaic periods (7,500 - 3,000 B.C.) are best known from bluff shelter excavations in the Ozarks (Rogers, Jakie's, Calf Creek, Albertson, Breckenridge and Tom's Brook shelters). During this long period a large number of different projectile point types were produced (i.e., Rice Lobed, Big Sandy, Graham Cave, Kirk Corner Notched, White River Archaic, Hidden Valley Stemmed, Hardin Barbed, Searcy, Rice Lanceolate, Jakie Stemmed, and Johnson). Five Early Archaic points were recovered at 23SO496. No controlled excavations have been done at any Early or Middle Archaic site in southeast Missouri or northeast Arkansas (Chapman 1975:152). There are no radiocarbon dates for any of the Archaic period from southeast Missouri (Dekin et al. 1978:78-79; Chapman 1980:234-238). The Middle Archaic archeological components are rare to absent in the Central Mississippi Valley leading the Morses to propose that the region was abandoned during this dry period (Morse and Morse 1983). Therefore, much of what we know of the archeological manifestations of this period is based upon work in other regions that has been extrapolated to the Mississippi Valley. At present, phases have not been defined.

The Late Archaic period (3,000 B.C. - ~ 500 B.C.) appears to be a continuing adaptation to the wetter conditions following the dry Hypsithermal. This corresponds to the sub-Boreal climatic episode (Sabo et al. 1982). The lithic technologies appear to run without interruption through these periods, with ceramics added at about the beginning of the present era. Major excavations of these components have taken place at Poverty Point and Jaketown in Louisiana and Mississippi (Ford, Phillips and Haag 1955; Webb 1968). A fairly large number of Late Archaic sites are known in eastern Arkansas and Missouri (Chapman 1975:177-179,224; Morse and Morse 1983:114-135). Major point types include Big Creek, Delhi, Pandale, Gary and Uvalde points. Other tools include triangular bifaces, manos, grinding basins, grooved axes, atlatl parts and a variety of tools carried over from the earlier periods such as scrapers, perforators, drills, knives, and spokeshaves. Excavations at the Phillips Spring site have documented the presence of tropical cultigens (squash and gourd) by ~ 2,200 B.C. (Kay et al. 1980). The assemblages recovered in the bluff shelters from this time period indicate there was a change in the use from general occupation to specialized hunting/butchering stations (Sabo et al. 1982:63). There are some indications of increasing sedentariness in this period; however, the range of site types have not been defined. Late Archaic artifacts are well known from the region, with artifacts usually present on any large multicomponent site. Our understanding of this period is limited to excavations from a few sites (Morse and Morse 1983; Lafferty 1981). At present we do not know the spatial limits of any phases which have not been defined, nor do we have any control over variation in site types and assemblages.

The Early Woodland period (500 B.C.(?) - 150 B.C.) saw the lithic traditions from the previous period continue and pottery begun. As with the Archaic period, this is a little understood archeological period with no radiocarbon dates for the early portions of the sequence. The beginning of the period is not firmly established, and its termination is based on the appearance of Middle Woodland ceramics dated at the Burkett site (Williams 1974:21). The original definition of the Tchula period was made by Phillips, Ford, and Griffin (1951:431-436). In the intervening time a fair amount of work has been done on Woodland sites. Chapman concludes that we are not yet able to separate the Early Woodland assemblages from the components preceding and following. At present there is considerable question if there is an Early Woodland period in southeast Missouri (Chapman 1980:16-18). Recent work in northeast Arkansas, however, has identified ceramics which appear stylistically to be from this time period (Morse and Morse 1983; Lafferty et al. 1985 a). J. Price (personal communication) has identified a similar series of artifacts in the southeast Missouri Bootheel. Artifacts include biconical Poverty Point objects, cordmarked pottery with noded rims similar to Crab Orchard pottery in southern Illinois and the Alexander series pottery in the Lower Tennessee Valley, and Hickory Ridge points. MCRA has recently tested several sites (3MS21, 3MS119, 3MS199 and 3MS471) near the current survey area that contain Early Woodland components.

Middle and Late Woodland periods (150 B.C.- A.D. 850) were a time of change. Participation in the "Hopewell Interaction Sphere" (dentate and zone-stamped pottery, exotic shell; Ford 1963) and an increase in horticulture (corn, hoe chips, and farmsteads) become evident. Mound construction, notably the Helena mounds at the south end of Crowley's Ridge (Ford 1963) indicates greater social complexity. Typical artifacts include Snyder, Steuben, Dickson, and Waubesa projectile points and an increasing number of pottery types (cf. Rolingson 1984; Phillips 1970; Morse and Morse 1983). In the Late Woodland period there is an apparent population explosion as evidenced by a great number of sites with plain grog-tempered pottery in the east and Barnes sand-tempered pottery in the west of the Central Valley (Morse and Morse 1983: 180; Chapman 1980). In this period there is some evidence of architecture (cf. Morse and Morse 1983; Spears 1978) as well as mound center construction (Rolingson 1984). A number of large open sites have not been excavated, so the spectacular mound centers appear to shape what we know about this important period. A great deal is not understood about the cultural sequence and changes that occurred then. The Late Woodland period in this area has been suggested as the underlying precursor to the Mississippi period, which came crashing into the area with the introduction (invention?: cf. Price and Price 1981) of shell-tempered pottery and the bow and arrow around A.D. 850.

The Mississippi period (A.D. 850-1673) is known from the earliest investigations in the region (Thomas 1894; Holmes 1903; Moore 1916). It has been the most intensively investigated portion of the

prehistoric record in northeast Arkansas and southeast Missouri (Chapman 1980; Morse and Morse 1983; Morse 1982 b; Morse 1981; House 1982). Enough work has been done to define the spatial limits of phases (cf. Chapman 1980; Morse and Morse 1983; Morse 1981). During this period the native societies reached their height of development with fortified towns, organized warfare, more highly developed social organization, corn, bean, and squash agriculture, and extensive trade networks. The bow and arrow was common and there was a highly developed ceramic technology (cf. Lafferty 1977; Morse and Morse 1980; Smith 1978). This effervescence was abruptly terminated by the De Soto entrada in the mid-16th century (Hudson 1984, 1985; Morse and Morse 1983) which probably passed through the project area.

PROTOHISTORIC PERIOD

The De Soto entrada resulted in the first recorded descriptions of Mississippi County, Arkansas, and the Mississippian Climax (Varner and Varner 1951; Hernandez de Biedma 1851; Elvas 1851:). The interpretation of places herein follows those of Morse (1981) and Hudson (1985). In the summer of 1541 De Soto was allied with the Casquians in a military expedition against the province of Pacaha. According to Morse:

The large swamp up the Tyronza [between Tyronza Junction and Victoria in the southwest corner of the county] is a suitable candidate for the boundary between Casqui and Pacaha. Pecan Point, a Nodena phase village near the Mississippi River [southeast of Wilson], could probably be the location of the capital of Pacaha. It was an impressive site producing numerous fine pottery specimens, and is located an appropriate distance from Parkin. An expedition left Pacaha for an area '40 leagues distance' to get salt and yellow metal (Varner and Varner 1951:449). The only area where both salt and copper occur together in large amounts is in southeast Missouri, within easy reach of the Nodena phase [which occupied most of Mississippi County east of Big Lake]. Mountains also occur here as observed by the Spanish (Morse 1981:68).

There is some evidence that this exploratory expedition traveled north from Pacaha through the Missouri Bootheel. The Campbell site, a large Nodena site located 1 km east of the project area is reported to have produced 16th century European artifacts. An expedition of 25 Spaniards traveled north and back in about a month and reported that the lands of the bootheel were scraggly blasted old fields with few people.

Historic Period (1673-present). Following the De Soto expedition the area was not visited until the French opened the Mississippi Valley in the last quarter of the 17th century. The Indian societies were a mere skeleton of their former glory and the population a fraction of that described in the De Soto chronicles. Marquette, in his rediscovery of the Mississippi for the French, did not encounter any Indians between the Ohio and the Arkansas Rivers. He described this section of his journey south of the Ohio River as follows:

Here we Began to see Canes, or large reeds, which grow on the banks of the river; their color is a very pleasing green; all the nodes are marked by a Crown of Lung, narrow, pointed leaves. They are very high, and grow so thickly that The wild cattle have some difficulty in forcing their way through them.

Hitherto, we had not suffered any inconvenience from the mosquitoes; but we were entering their home, as it were. . .

We thus push forward, and no longer see so many prairies, because both shores of The river are bordered with lofty trees. The cottonwood, elm, and basswood trees there are admirable for Their height and thickness. The great numbers of wild cattle, which we heard bellowing, lead us to believe that The Prairies are near. We also saw Quail on the water's edge. We killed a little parroquet, one half of whose head was red, The other half and The Neck was yellow, and The whole body green (Marquette 1954:360-361, strange capitalization in the French original).

During the French occupation most of the settlements were restricted to the major river courses with trappers and hunters living isolated lives in the headwaters of the many smaller creeks and rivers. The St. Francis River was one of the earliest explored tributaries of the Mississippi River in the Lower Mississippi Valley and appears on some of the earliest French maps.

EARLY AMERICAN SETTLEMENT

In 1803, the French sold the Louisiana Territory, which included today's Missouri, to the United States. The territory was administered from the territorial capital in St. Louis.

The Euro-American occupation proceeded overland down Crowley's Ridge, spreading out from the rivers. In 1835, ports were established at Piggott, on the high ground of Crowley's Ridge in the St. Francis Gap. Piggott was located on the Helena-Wittsburg road which ran down Crowley's Ridge (Dekin et al. 1978:358) and crossed the Castor River one mile upstream from the project area. This is across the narrowest part of the flood plain and the only place where there are well drained soils all the way across the flood plain. All settlements in the 1830s, between Piggott and Helena in the St. Francis Basin, were either along rivers or on Crowley's Ridge. Bloomfield, on Crowley's Ridge, was founded in 1824, while Malden, on the plain, was founded in 1877. Towns continued to be established in these environments into the early 1900s. Settlements away from the rivers and along overland roads began in the 1850s. They greatly accelerated with the construction of the railroads, levees and drainage ditches in the late 19th century.

The passage of the stern-wheel steamboat, "Orleans", from Pittsburgh to New Orleans in 1812 presaged great changes for the Louisiana Territory. This boat and the many others to follow used wood to power their steam engines and thus created a demand for cordwood. The early settlers, who tended to live in cabins in clearing along the river, met this need by chopping and selling wood to the boats (Edrington 1962: 49). Perhaps more importantly, the steamboat made two-way transportation on the great river roads in the nation's heart much faster and more reliable - when the rivers were up.

METHODS AND RESULTS

The survey was conducted in accordance with the specifications of Delivery Order # 8 (Appendix A). The project right-of-way began 15 meters behind each top bank extending 30 meters landward and traversed some 234 meters. One exception was noted where, on the left descending bank, the right-of-way began at the top bank and extended 30 meters landward. The left and right bank were each subjected to a pedestrian-style survey by MCRA personnel. The survey was supplemented by shovel test in areas of high probability or low visibility.

No new sites were observed during the survey of the project area. Visibility on the left (north) bank was 75%-100%. The fields were generally cleared of growth and debris. The ascending right top bank was pasture. Visibility was more restricted, 50%-75%.

A previously recorded site, 23SO481, was located. Flakes and fire-cracked rock were sparsely scattered on the surface. The area was in pasture, and artifacts were more frequently noted along the extreme edge of the field. There was initially some confusion as to the exact location of this site. The Northwest Ordinance grid placed the site 400 meters south of the river, the UTM grid placed it 200 meters south of the river and the site description placed it adjacent to the river. Cultural materials were found that appeared to be outside of these site dimensions. Surface artifacts trailed 400 meters east of the original site description limits. After reconciling the differences in the reported locations of the site and taking into account the linear nature of the original site dimensions, it was decided that the entire

area constituted 23SO481. Before this decision was made, six shovel test were excavated to depth of 30 centimeters. The soils were dark brown (10 YR3/3) fading to brown (10YR4/3) at the base of the plow zone. No cultural materials were found.

No artifacts were collected.

RECOMMENDATIONS

There were no new sites observed during the investigations of 31 acres on the Castor River. No further work was required on relocated site 23SO481. We recommend that archeological clearance be approved for the proposed channel clearing and clean-out.

SUMMARY

Mid-Continental Research Associates was contracted to conduct a cultural resources survey of 31 acres along the Castor River. The area was part of the proposed channel clearing and clean-out project undertaken by the Memphis District Corps of Engineers. Archeological clearance is recommended for the area as no previously unrecorded sites were observed.

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APPENDIX A

Delivery Order Number 8
Mid-Continental Research Associates
Contract No. DACW66-89-D-0053

SCOPE OF WORK

Castor River Item No. 2, Parcel 1 Channel Clearing and Cleanout Intensive Survey, Site Testing and Report of the Project Right-of-Way.

1. General. Work to be undertaken under this Delivery Order consists of an updated background and literature search, and an intensive survey. Site surface evaluation and subsurface testing/evaluation will be conducted if cultural resources are encountered. Work will be conducted along a portion of the Castor River, Stoddard County, Missouri.

2. Specific Tasks

a. The Contractor shall familiarize himself with all available literature related to the project areas.

b. A prehistoric archeological site, 23S0481, exists on the right descending bank between stations 70+00 and 80+00. No work will be required on this site.

c. The Contractor shall conduct a 100% intensive survey of the project area. Encountered prehistoric or historic cultural resources will be located on a 7.5 minute topographic map and on engineering blue lines (enclosed). A surface boundary for each resource shall be determined. A subsurface evaluation and a subsurface testing/evaluation (i.e. 1 x 1 meter test unit) shall be conducted for each cultural resource discovered.

d. The project area is as follows:

1. The project is located on the Bloomfield, MO, 7.5 minute topographic map beginning at T27N/R11E Section 30 NW $\frac{1}{4}$ of the SW $\frac{1}{4}$, and extends through Section 28 SW $\frac{1}{4}$ of the SW $\frac{1}{4}$. On the engineering blue lines, the project begins at Station 20+00 and ends at Station 87+00, a length of approximately 6,700 feet (234 meters). The right-of-way begins 50 feet (15 meters) behind each top bank and extends 100 feet (30 meters) landward on each side. Between stations 28+00 and 33+00 the right-of-way, on the left descending bank, will begin at top bank and extend 100 feet (30 meters) landward.

2. A total of approximately 31 acres will be surveyed in this project area.

e. All work under this Delivery Order shall be undertaken in strict compliance with basic Contract No. DACW66-89-D-0053.

3. Schedule. All work under this delivery order shall be completed within the following schedule:

a. Work Required

From Receipt of Delivery Order No. 2

Field Work Begins	9 days
Field Work Completion	13 days
Summary Report Submitted	16 days
Artifact Analysis	26 days
Draft Report Submittal	36 days
Final Report Submittal	56 days

b. Completion time may be extended on a day to day basis, at no extra cost to the Government, at the Contracting Officer's discretion.

c. The summary report shall contain a breakdown, by person hours and tasks, of the actual time used for items: 0001, 0003, 0005, 0007, 0008, 0009, 0010, 0011, 0012, 0013.

d. Should hours listed in attached DD Form 1155 be greater than those necessary to complete tasks described in this Delivery Order, the Delivery Order will be modified.