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Cover

United States Department of the Interior
National Park Service

National Register of Historic Places
Multiple Property Documentation Form

This form is used for documenting multiple property groups relating to one or several historic contexts. See instructions in How to Complete the Multiple Property Documentation Form (National Register Bulletin 16B). Complete each item by entering the requested information. For additional space, use continuation sheets (Form 10-900-a). Use a typewriter, word processor, or computer to complete all items.

X **New Submission** ____ **Amended Submission**

A. Name of Multiple Property Listing

Archaeological Sites of Starved Rock State Park (9,000 - 150 B.P.)

B. Associated Historic Contexts

(Name each associated historic context, identifying theme, geographical area, and chronological period for each.)

1. Settlement and Subsistence Patterns by Hunters & Gatherers of the early and middle Holocene (i.e., Early Archaic, Middle Archaic) (9,000-4,500 B.P.) in the upper Midwestern United States.
2. Settlement and Subsistence Patterns by Hunters and Horticulturalists of the late Holocene (Late Archaic-historic contact) (4,500-150 B.P.) in the upper Midwestern United States.

C. Form Prepared by

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D. Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this documentation form meets the National Register documentation standards and sets forth requirements for the listing of related properties consistent with the National Register criteria. This submission meets the procedural and professional requirements set forth in 36 CFR Part 60 and the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation.

(___ See continuation sheet for additional comments.)

William L. Wheeler /SHPO — 4-23-98
Signature and title of certifying official — Date

Illinois Historic Preservation Agency
State or Federal agency and bureau

I hereby certify that this multiple property documentation form has been approved by the National Register as a basis for evaluating related properties for listing in the National Register.

by Barbara J. Little — 6/18/98
Signature of the Keeper — Date

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Archeological Sites of Starved Rock State Park (9,000 - 150 B.P.)
Name of Multiple Property Listing

Section number: E Page: 1 State: IL County: La Salle

E. Statement of Historic Contexts

INTRODUCTION

The Illinois Department of Natural Resources (IDNR) Starved Rock State Park consists of a 1065.3 hectare (2632.4 acre) area parallel to the left bank of the Illinois River. The park is located between the towns of La Salle and Ottawa, in La Salle County, and runs from river miles 226.7 to 234.0. Park width varies from 0.26 km (0.2 mile) near the western end of the Nature Preserve, to 2.3 km (1.4 miles) near the Starved Rock formation. The park area offers an environment that attracted continuous human use over the last 9,000 years.

Within this deeply dissected and variable environment, a host of archeological sites have been recorded. Four sites which characterize this locale and which, together, offer components that span the occupation history of Starved Rock State Park are presented in this Multiple Properties nomination. Each of these sites offers intact, undisturbed deposits, good preservation of floral and faunal materials as well as diagnostic artifacts, and can offer invaluable data suitable to add significantly to our understanding of the past in the upper Midwest.

In this section, the Starved Rock State Park environment is discussed, followed by a presentation of climatic events that conditioned the environmental settings and human adaptations throughout the Midwest, focused on the occupations at Starved Rock State Park. Environmental factors are directly pertinent to the associated historic contexts selected. Climatic events affect floral and faunal availability and topographic factors affect the relative tenacity of specific floral and faunal communities, all of which directly affect and direct the settlement and subsistence patterns of groups of people evolving over the past 9,000 years. In response to climatic changes, villages and campsites were established in the most advantageous topographic locations available and each group exploited their environment by the best means available to them. These 'best means' are technological. The camp and village locations and the tools employed by past groups are used to identify and date the times of occupation as well as the patterns of exploitation that were being practiced at the time.

ENVIRONMENT, STARVED ROCK STATE PARK

The bedrock of Starved Rock State Park is an important contributor to its modern appearance. The surface geology of the park region is quite variable, with generally older materials occurring closer to the surface as one moves north and east (Willman et al. 1975:24-25). For example, St. Peter sandstone outcrops on the south side (left

bank) of the Illinois River in Starved Rock State Park, but does not outcrop on the north side (right bank) immediately across the river. St. Peter sandstone is soft and easily eroded, providing the material out of which the deep box canyons that characterize the park were carved.

Several glacial episodes have contributed to park topography. The Illinoian glacial episode, which occurred more than 125,000 years ago (McKenna and Follmer 1985), was extensive and affected the entire project area. However, the later Wisconsinan glacial episode, which traversed the area a number of times between 75,000 and 10,000 years B.P., buried all traces of the Illinoian advance here. The Woodfordian advance of the Wisconsinan episode (21,000 years B.P.) and its subsequent retreat also left its imprint on north-central Illinois (Willman and Frye 1970).

When glaciers advanced, they flattened the ground surface by planing off hill tops and filling bedrock valleys with outwash and till. Debris (rock and sediment, often encased in ice) was pushed along by the outer margin of advancing ice, and when glaciers melted and retreated this debris marked the former position of the ice front with a long, narrow ridge of till (end moraine). In north-central Illinois, there were numerous advances and retreats of Wisconsinan ice fronts driven by the Lake Michigan lobe of the Laurentide ice sheet. The repeated processes of advance and retreat created a concentric series of hilly end moraines separated from one another by flatter areas with thinner till deposits (ground moraines).

One end moraine (Farm Ridge) and two ground moraines (Farm Ridge and Mt. Palatine) are found in the park area (Willman and Frye 1970). All were deposited by late Wisconsinan (Woodfordian) glaciations between about 18,000 and 17,000 years B.P. (Mickelson et al. 1983). The highest elevations in the park are associated with the Farm Ridge end moraine at 182.9 m (660 ft.) above mean sea level (AMSL).

Glacial retreat was accompanied by shedding large blocks of ice, which were often partially or completely buried by outwash deposits. The buried ice blocks later melted, forming cavities or closed depressions in the ground surface (kettles). Kettles have occasionally survived into historic times as ponds, small lakes, or as patches of marshy soil. In the uplands of the park, three probable kettles have been located. All are associated with the Farm Ridge end moraine. They are detectable either topographically as closed depressions or pedologically as units of closed-depression soil. Nineteen areas of closed-depression soil are mapped in the park uplands, including the Bryce, Drummer, Rantoul, Streator, and Traer soil series (Alexander and Paschke 1972), while nine areas of swamp grass and/or depressional soils are mapped in the flood plain, including the Calco, Hesch, and Millington soil series.

As the Woodfordian glacier retreated, it stopped at times, forming end moraines that later acted as dams. These natural dams then functioned to contain meltwater from later episodes of glacial retreat. Between 16,000 and 15,000 years B.P., meltwater overwhelmed several end moraines, causing the catastrophic flooding known as the

Kankakee Torrent (Ekblaw and Athy 1925; Hajic 1990). It was during this time that the Illinois River, fueled by the power of the Kankakee Torrent, cut into the glacial till and bedrock, helped form the box canyons in the park, and formed the Starved Rock itself. This catastrophic flooding event, acting upon the soft St. Peter sandstone bedrock, created the features that lend the park its unusual physical characteristics.

The Illinois River incised deeply into the terrain. Today in the park the bluffs average a height of approximately 36.6 m (120 ft.), ranging from a low at their base of 143.3 m (470 ft.) AMSL to a high of 185.9 m (610 ft) AMSL. The flood plain above the Starved Rock Lock and Dam is today mostly under water; however, below the dam the elevation is approximately 137.2 m (450 ft.) AMSL.

Starved Rock State Park offers a variable environment consisting of a series of econiches suitable to preserve and support large numbers of varied floral and faunal species. The ready availability of plants and animals to exploit appears to have made the Starved Rock region attractive to humans from the late Pleistocene forward. That this region was unique can be seen in the evidence for bison hunting, perhaps very near or within the confines of the park, at or very near the Euro-American contact period. Comparable evidence for bison hunting and butchering at this period in time is not known at any other site east of the Mississippi River. The prehistoric sites at Starved Rock State Park offer excellent and varied opportunities to study the evolution of environmental exploitation coupled with social adaptation and interaction from the perspective of a very special environment.

HISTORIC CONTEXTS

The historic contexts used for the Multiple Property Listing "Archaeological Sites of Starved Rock State Park" are organized using two separate but important aspects of the natural and cultural environments--climatic change and technological adaptation, both of which clearly functioned in Starved Rock State Park.

Historic Context No. 1 is Settlement and Subsistence Patterns by Hunters and Gatherers of the early and middle Holocene (i.e., Early Archaic, Middle Archaic) (9,000-4,500 B.P.) in the upper Midwestern United States.

Historic Context No. 2 is Settlement and Subsistence Patterns of the late Holocene (Late Archaic-historic contact, 4,500-150 B.P.) Hunters and Horticulturalists in the upper Midwestern United States.

The following discussion of historic contexts is organized using climatic change and technological adaptation to trace changes in settlement and subsistence practices through the millennia.

ENVIRONMENTAL CHANGE

To fully understand the dynamic interaction of humans with their continually changing environment, some understanding of the general trends of climatic change and its effects on the natural environment through the

Holocene epoch is required. The Holocene is the name given to the last 10,000 years, beginning at the end of the last glacial episode. Many scientists divide the Holocene into three broad time periods that correspond to environmental trends: early (10,000-8,000 B.P.), middle (8,000-4,500 B.P.), and late (4,500-150 B.P.).

The narrative begins before the Holocene epoch, during the end of the Pleistocene (ca. 15,000 years ago), or Ice Age, and involves immense climatic changes in the Prairie Peninsula. When late-Pleistocene temperatures rose and the long process of glacial melting accelerated, boreal plants and animals migrated north or became extinct, and were replaced by more diverse and temperate forms (Graham and Mead 1987). Early stages of this transition were well underway in western Missouri by 12,000 years ago (King 1973), and change was also occurring at this time in northwest Iowa and central Illinois (King 1981; Van Zant 1979). Between 12,000 and 10,000 years ago, when the earliest confirmed traces of human activity appear in the archaeological record of the Midwest, many parts of the southern midcontinent were blanketed by a closed-canopy deciduous forest dominated by species of oak, elm, ash, and hickory (Jacobson et al. 1987). Faunal communities included (1) a variety of modern forms well within their historical ranges, such as white-tailed deer (*Odocoileus virginianus*), woodchuck (*Marmota monax*), and plains pocket gopher (*Geomys bursarius*), (2) a few modern extralimital species, such as the meadow vole (*Microtus pennsylvanicus*), and (3) several taxa facing imminent extinction, such as the American mastodon (*Mammut americanum*), Harlan's ground sloth (*Glossotherium harlani*), and long-nosed peccary (*Mylohyus nasutus*) (Purdue and Styles 1987). This period of comparatively rapid warming and drying culminated in formation of the Prairie Peninsula.

During the Holocene epoch, the Midwest experienced a period of elevated temperatures and decreased precipitation that persisted through the middle Holocene from about 8,000 to 4,000 years B.P., the Hypsithermal climatic episode (Deevey and Flint 1957). The Hypsithermal episode was caused by a series of interrelated factors (Kutzbach 1987; Wright 1992; Hughes 1987; Webb et al. 1987, 1993) which need not be detailed here.

The climatic effects of these changes, which were evident at 9,000 and 6,000 B.P., included temperatures about 2°C higher than present, decreased summer rainfall, and increased rates of evaporation (Kutzbach 1987; Webb et al. 1993). Lake levels hit a Holocene all-time low at 6,000 B.P. (Webb et al. 1993). The resulting droughtiness caused a deterioration of upland forests in the Midwest, and drought-tolerant prairie grasses expanded eastward from the central Great Plains to take their place. These prairies formed the ancestral Prairie Peninsula, which was a broad wedge of grassland that separated the forests of the Great Lakes from those of the southeastern United States. The leading edge of the wedge passed through north-central Illinois about 8,000 B.P. (Webb et al. 1983). Grasses probably took control of drying upland flats in the region, while forests shrank toward relatively moist positions along stream courses and sloping valley sides. These changes had a variety of environmental consequences, including increased rates of hillslope erosion (Ahler 1973), territorial expansions of grassland mammals (McMillan 1976), changes in the body size of certain mammals (Purdue 1980, 1989), and decreases in stream discharge and

lake levels (Brugman 1980; Klippel et al. 1978; Winkler 1988; Winkler et al. 1986). Together, these patterns indicate that the middle Holocene was a period of severe and recurrent drought in the Prairie Peninsula.

At the end of the Hypsithermal, about 4,000-5,000 B.P., there was a decrease in summer temperatures and an increase in precipitation in the Midwest (Kutzbach 1987; Webb et al. 1993). Prairies retreated westward, animals shifted toward their modern sizes and distributions, upland soils became more stable, and many streams, lakes, and springs were rejuvenated (Webb et al. 1993). However, moisture levels during the past 5,000 years never matched those of the early Holocene (King 1981; Webb et al. 1993). Prairie grasses probably dominated the upland flats of central Illinois throughout this later time period, while forests prospered only along stream courses and on valley sides. This pattern prevailed into the historic period.

The late Holocene was relatively stable in comparison with earlier climatic regimes, but subtle changes have been traced (Baerreis, Bryson and Kutzbach 1976) that were probably important to the Starved Rock locale.

A long history of environmental variability marks the Prairie Peninsula (Transeau 1935) with a strong influence on the human lifeways in this area for thousands of years. Starved Rock State Park is located in the eastern third of the Prairie Peninsula.

CULTURAL CHANGE

The following summary of prehistoric and historic sequences is focused upon the Prairie Peninsula with data drawn from the central and upper Mississippi River basin as well as the Upper Illinois Valley. The discussion orders cultural phenomena within a series of three temporal periods that correspond to major post-Pleistocene climatic events in the Midwest.

Late Pleistocene

The Late Pleistocene is literally the end of the last glacial epoch, the Wisconsinan. This was a period of warming, characterized by the retreat of the glaciers northward and immense changes in the floral and faunal communities. It is also a period of extinction for some glacial-edge and tundra-adapted species, specifically, the mammoth and mastodon, the camel, horse, dire wolf and ground sloth. Judging from the archeological evidence available at this time, the extinction of the mammoth and mastodon had the greatest effect on the Paleo-Indian hunters.

Paleo-Indian. Archaeologists have defined a culture known as the Paleo-Indian that corresponds with the climatic events of the late Pleistocene. The Paleo-Indian period in the Midwest dates from 12,000-10,000 B.P. and is characterized by the use of fluted (a large flake was driven off from the base toward the tip, usually on both opposing surfaces, producing the "flute") spear points such as the Clovis and Folsom types. Sites containing Clovis points, the earlier type, have been found across much of North America. Snub-nosed end scrapers and some bone

and ivory tools are also found in Clovis assemblages. Humans were organized into nomadic family bands that subsisted in part by following now-extinct late-Pleistocene megafauna mammoth, mastodon and, later (when the Folsom and a few other projectile point types were employed), bison. The collection of wild plant foods also contributed to the diet. Because comparatively few archaeological Paleo-Indian sites have been excavated, especially in the Midwest, not enough is known about these nomadic hunters and gatherers.

No Paleo-Indian sites have been excavated in north-central Illinois, and only very few have been tentatively identified from surface remains. As a result, little is known about the settlement patterns or subsistence activities of these groups. A total of nine Paleo-Indian sites are tentatively identified in the region, including two sites from Starved Rock State Park. The Hotel Plaza site (11LS61) and the Starved Rock site (11LS12) (Schnell 1974; Starved Rock collections at the Illinois State Museum) have each produced one fluted projectile point from the surface. Typologically, these points could be derived from Early Archaic contexts rather than Paleo-Indian. The hypothesized Paleo-Indian occupations at Starved Rock State Park should be regarded with caution.

The Paleo-Indian hunting and gathering lifeway was the cultural antecedent of the Early and Middle Archaic cultural manifestations, which are both associated with Historic Context No. 1: Settlement and Subsistence by Hunters and Gatherers of the early and middle Holocene in the upper Midwestern United States.

Early Holocene

Despite the increase in temperature that began prior to 9,000 B.P. (Webb et al. 1993), large tracts of boreal forest still existed in Illinois. In these areas, and those which contained a patchwork of timber and grassland, both forest and forest-edge taxa became important sources of food. Due to the prior extinction of the late-Pleistocene megafauna, smaller game such as white-tailed deer, rabbit, raccoon, squirrel, opossum, beaver, muskrat, and turkey apparently increased in numbers and were exploited. Deer were the principal game, an excellent source of meat and hides.

Early Archaic. The climatic events of the early Holocene were synchronous with the Early Archaic cultural manifestation, which dates between 9,000 and 8,000 years ago. It is characterized by a diversification of projectile-point styles that include Agate Basin, Palmer corner notched, Pine Tree corner notched, Kirk cluster, Pulaski corner notched, Thebes cluster, St. Charles corner notched, Hardin barbed, and bifurcate-based points. There is also evidence for diverse activities including hide working, wood working, tool maintenance and plant food processing. These early Holocene hunters-and-gatherers were very mobile and appear to have been organized in small familial groups, just like their late Pleistocene ancestors, but were far more numerous. There is overwhelming evidence for early Holocene occupations at Starved Rock State Park.

To exploit seasonally available resources more efficiently, seasonal rounds (going to the resources when and

where they are available: nuts collected in forests during the fall, hunting migratory water birds in upland marshes during spring and fall, fishing in rivers and streams during warm weather, etc.) were established, as suggested by the location of sites in a variety of environmental contexts. Many early Archaic sites appear in upland contexts in areas dominated historically by grasses. The sites occur near ephemeral streams (Ferguson and Warren 1991; Klippel and Maddox 1977), near upland closed depressions (Carmichael 1977; Warren 1992), and on ridged drift (Carmichael 1977; Ferguson and Warren 1991). Other Early Archaic sites are found in rockshelters (Fowler 1959; Klippel 1971; Logan 1952; Wood and McMillan 1976), abandoned terraces of major streams (Joyer and Roper 1980), or in fan deposits of major rivers (Stafford 1985; Wiant et al. 1983). Early Archaic sites have a fairly even distribution across the landscape (Ahler et al. 1994; Ferguson and Warren 1991; Klippel and Maddox 1977; Warren 1982, 1992; Wiant et al. 1993).

The Starved Rock site has one of the earliest Archaic (i.e., pre-pottery) components documented in the archaeological literature in northern Illinois (Mayer-Oakes 1949, 1951). Mayer-Oakes presents information suggesting that the Starved Rock lanceolate point (a willow leaf-shaped chipped stone projectile point), is more similar to the Early Archaic projectile points of the Plains than to those of the southeast or northeastern woodlands (Mayer-Oakes 1951). He also illustrates points that resemble a variety of the Thebes type, as well as Stanly stemmed and Hardin barbed specimens (Mayer-Oakes 1951: Figure 101), points that suggest central Mississippi River valley origins. While all are tied to the Early Archaic, the presence of the Plains-like points suggests that Starved Rock State Park drew hunters and gatherers from both near and far.

A total of 42 regional sites offer Early Archaic diagnostic tools. Eight of the sites are in bluff-crest locations, one is at the base of a bluff, one is in the flood plain, and the remainder are in the uplands, well away from a bluff. Four of these sites are located in Starved Rock State Park: 11LS377, 11LS422, 11LS492, the Simonson site (11LS15), and Starved Rock (11LS12).

Middle Holocene

The Middle Holocene corresponds to the Hypsithermal climatic episode which dates from 8,000 to about 4,500 years ago. The onset of the Hypsithermal climatic episode increased the size of the Prairie Peninsula into the Midwest, creating conditions that apparently caused most groups of Middle Archaic hunters to restrict their activities to river valleys in most localities (Warren 1982). Droughty conditions appear to have been less severe in the eastern third of the Prairie Peninsula, as documented in Illinois where the uplands were not completely abandoned during the Middle Archaic. Here, Middle Archaic sites occur near streams, closed depressions, and ridged drift (Ferguson and Warren 1991; Warren 1992), suggesting that the Hypsithermal was less severe in Illinois than in places farther west. Despite the less severe effect of the Hypsithermal on human settlement in the eastern third of the Prairie Peninsula, settlement was always clustered near water (Ferguson and Warren 1991; Warren 1982, 1992; Wiant et al. 1993).

Middle Archaic. Most information about the Middle Archaic (8,000 - 4,500 B.P.) comes from excavated sites located in the flood plains of major rivers, and from rockshelters and caves. Far too little is known about the Middle Archaic; there is even controversy concerning the point styles that are diagnostic of it. As a result, the positive identification of Middle Archaic sites has made settlement and subsistence studies very difficult. Data from sites at Starved Rock State Park could be used to clarify much about the Middle Archaic.

In spite of climatic trends toward droughtiness and subsequent changes in the vegetation, we know that the Middle Archaic population grew and became more sedentary. Middle Archaic groups continued to rely heavily on white-tailed deer, supplemented by fish and fresh-water mussels, small mammals and birds. A broader spectrum of fauna was exploited, along with high-yield nut resources and some wild seeds (e.g., *Iva* spp) (Ford 1977). Grinding stones represent a significant component of the artifact assemblages, suggesting greater reliance on vegetal foods. Consistent with the exploitation of more localized resources and increased sedentism are the remains of permanent habitation structures at the Koster site, located in the lower Illinois River valley (Brown and Vierra 1983).

There is a slight decrease in the number of regional sites that have Middle Archaic components. There are 33 Middle Archaic sites in the region, five of which are in floodplain settings, while the remainder are in the uplands. Five sites occur in Starved Rock State Park, including 11LS180, 11LS361 (located near a kettle), 11LS416, 11LS420, the Simonson site, and the Starved Rock site. Many of the principal Middle Archaic projectile point types were found at the Starved Rock site, including the Godar, Raddatz, and Matanzas side-notched types, and Campbell Hollow points (Mayer-Oakes 1951: Figure 101).

The Middle Archaic population in the Starved Rock region was probably greater than in surrounding areas if only because of the availability of water from the Illinois River, its tributaries and the kettles. The shelter afforded by the deeply dissected topography and the trees which undoubtedly grew in the valleys and the game in the locale were undoubtedly attractive as well. This was a period of environmental stress over much of the Prairie Peninsula, making this sheltered and well-watered region a very attractive place to live.

Late Holocene

At the close of the mid-Holocene dry period, the climatic regime began to ameliorate toward more modern conditions (Baker et al. 1992; King 1981; Webb et al. 1993), including a rise in the water table that appears to have been continuous throughout the late Holocene (King 1981; Warren 1992; Webb et al. 1993; Winkler 1988; Winkler et al. 1986; Wright 1992). The late Holocene climatic episode includes several cultural traditions, ranging from the Late Archaic through the Woodland, Middle Mississippian, Upper Mississippian, and into the Historic. The cultural traditions are grouped together in the Late Holocene because (a) generally similar climatic regimes existed throughout this 4,500 year time period; and (b) with the increasing use of garden products and several other

technological advances, human adaptations and economies followed a different trajectory from that followed by the hunters and gatherers of the early and middle Holocene.

The Late Archaic cultural manifestation, sites of the Woodland, Middle Mississippian and Upper Mississippian cultural traditions, and some historically-documented tribal villages are all associated with Historic Context No. 2: Settlement and Subsistence Patterns of late Holocene Hunters and Horticulturalists (Late Archaic-historic contact) (4,500-150 years ago) in the upper midwestern United States.

Late Archaic. The Late Archaic is an early phase of these developments dating from 4500 to 2550 B.P. During this period, the numbers of sites and frequencies of diagnostic artifacts suggest increasing population densities, and in some areas the increases appear to have been substantial. The lithic assemblages are characterized by the regionalization of stemmed and corner-notched point styles. Throughout the Midwest, evidence for interregional trade includes such items as copper (Great Lakes), marine shell (Gulf Coast), and exotic (introduced from a considerable distance) lithic raw materials.

For the first time, large numbers of burial mounds were constructed and graves often contained artifacts which were placed with some, but not all, individuals. This suggests that differences in social status may have been recognized. Status differentiation could have been the impetus behind the establishment of trade networks for exchanging exotic goods. In the lower Illinois and central Mississippi valleys, mounds may have served as territorial markers (Charles and Buikstra 1983). Increased sedentism is suggested not only by burial mound construction, but also by sites with permanent houses, storage pits, and deep middens (Winters 1969). Subsistence activities were organized into a two-part seasonal round of warm-season residential sites and winter encampments. Middle Archaic subsistence practices were continued and intensified. Deer remains dominate faunal assemblages from Late Archaic period sites, but nuts, native cultigens, fish, and freshwater mussels appear to have increased in importance. During the Late Archaic, the tropical seeds of squash and gourd appear for the first time in southwestern Missouri (Chomko and Crawford 1978; Kay et al. 1980).

Sites from this time period occur in both upland and bottomland settings; however, upland use generally is restricted to settings near major streams (i.e., near the bluff) (Ahler et al. 1994; Ferguson and Warren 1991; Warren 1982, 1992; Wiant et al. 1993). Sites consist of both surface scatters and extensive midden deposits situated in a variety of environmental settings.

The decrease in sites noted during the previous period continues into the Late Archaic. Only 12 Late Archaic sites have been identified in the region. Seven of the sites occur in the flood plain or along a bluff base; the remaining sites are in the uplands. One flood plain site (11LS190) occurs in the Park, along the Illinois River in the Nature Preserve, while a second site (11LS408) occurs at the base of the bluff in the Park. Given the paucity

of Late Archaic sites in the region, the Starved Rock State Park site is potentially significant as a locale with sites from a poorly represented cultural manifestation. On the other hand, further detailed study in here may reveal that many Late Archaic sites were subsequently occupied by Early and Middle Woodland groups, partially obscuring the prior occupations. The adaptive patterns of all three were markedly similar; changes that identify each are technological in nature (the addition of pottery, new projectile point styles, tool manufacturing methods, for instance) which were applied to similar settlement systems and exploitive patterns.

Early Woodland. Increasing evidence suggests that the only readily-identified distinction between the Early Woodland (2550-2150 B.P.) and the preceding Late Archaic cultural manifestation is the presence of pottery vessels in Early Woodland site assemblages. Most of the Early Woodland material culture resembles that of the Late Archaic; social organization and structure were probably unchanged as well. Patterns of environmental exploitation were essentially identical to those of the Late Archaic, although cultigens such as sumpweed (*Iva annua* var. *macrocarpa*) occur in the archaeological record with greater frequency.

Nearly coincident with the appearance of pottery in the central Mississippi River valley is a postulated shift in settlement pattern. Documented Early Woodland sites are relatively rare in upland contexts (Ahler et al. 1994; Ferguson and Warren 1991; Warren 1982, 1992; Wiant et al. 1993), but are fairly common on levees and terrace margins near some major streams (Asch et al. 1979). Most of the information concerning this period comes from the excavation of village and mound sites located in the flood plain, on terraces, and bluff tops above rivers.

After the widespread adoption of pottery in the Midwest, nearly a millennium of population growth and environmental exploitation followed. While both social and technological distinctions among cultural complexes are clearly visible, a commonality exits in the exploitation of subsistence resources and in the trajectory of economic change.

The Early Woodland manifestation is not well represented in the region, with only seven sites, five of which are in Starved Rock State Park. The Hotel Plaza site contains Early Woodland materials (Bluhm 1949a:24; Schnell 1974) and the French Canyon West site (11LS56) also is reported to have Early Woodland sherds (Bluhm 1949a). Early Woodland components are also identified at 11LS59, 11LS411, and 11LS420. While there are fewer sites in the region and in the park, we must remember that the Early Woodland spans only 400 years.

Middle Woodland. During the Middle Woodland (2,150-1,550 B.P.), a series of distinctive cultural complexes developed that had widespread contacts and influence. Cultures from a number of regions in the Midwest participated in an extensive trade network that was named by Caldwell (1964) the *Hopewellian Interaction Sphere*. Evidence of interregional contacts offers some insight to the breadth of this interaction sphere. For instance, grizzly bear teeth, obsidian, copper, and Knife River chalcedony came from the Plains and Rocky Mountains, copper and

silver from the Lake Superior region, mica and steatite from the Appalachians, while marine shell, shark teeth, and barracuda mandibles came from the southern Atlantic and Gulf coasts. Artifact assemblages were characterized by a diversity of items, including trade items such as exotic copper ear spools and panpipes. Lithic assemblages consist of a diversity of specialized tool forms and a few dominant projectile point types, including Snyders, Steuben, Manker, and Gibson. Ceramic assemblages consist of plain, impressed, embossed, stamped, or cord-marked vessels, as well as clay figurines and pipes. Some vessels are very elaborately decorated and probably represent non-utilitarian wares.

In some regions, the population appears to have swelled, but may have been drawn in part from elsewhere. Middle Woodland settlement patterns changed noticeably from the previous Late Archaic and Early Woodland periods. Middle Woodland sites are rare in the uplands, most are located either near minor tributary streams or located near major stream valleys (Ahler et al. 1994; Warren 1982, 1992; Wiant et al. 1993). Settlements in the Illinois River valley are of four types, including 1) large regional centers on the flood plain with earthworks, mounds, and dense middens; 2) villages or basecamps at bases of bluffs near tributary streams that enter the valley; 3) seasonal or special use sites on bottomlands; and 4) burial mounds on bluff tops bordering the valley (Struever 1968). Some form of personal status differentiation was observed, based on the analysis of burial goods and the plan of regional centers. Whether age, sex, and personal ability conditioned prestige is not clear (Braun 1979, 1981). Perhaps a rigid hierarchy of ascribed hereditary ranks was the basis of status (Tainter 1977, 1981).

Subsistence practices during the early Middle Woodland phases are consistent with an egalitarian model. Stable resource catchments are implied by a regular spacing of sedentary flood-plain villages along major streams and by skeletal studies that suggest local genetic continuity but interlocal isolation of populations (Buikstra 1976). Economies appear to reflect an intensification of earlier hunting-and-gathering lifeways (Ford 1979). The major source of protein was animal, while additional calories were provided by hickory and other nuts. The cultivation of a number of wild plants became important, including two kinds of cucurbits (squash and gourd), three starchy seeds (chenopod, maygrass, and knotweed), and two types of oily seeds (*Iva* and sunflower) (Asch et al. 1979).

A fairly large body of information about the Middle Woodland manifestation has been gained from the excavation of mounds, village sites, and small sites situated on bluff tops, terraces, and in the flood plains of rivers. In the later Middle Woodland phases, increasing population densities and the continued use of cultivated plants may have placed some stress on the natural resources of bottomland territories, stimulating the need for new ways to obtain food.

Middle Woodland sites are numerous in the region, with 40 sites, nine of which are in the Park. With few exceptions, Middle Woodland sites here all occur in the bottoms or along the bluff top. The sites include the Utica Mounds site (11LS1), across the Illinois River from the park (Baker et al. 1941); 11LS21, located along the

Vermilion River south of the park; and 11PM1, which is below the Illinois River bluffs in the southwest quadrant of the region. The mound group south of the river is part of the Simonson site (11LS15), located in the park. In the park, there are eight additional Middle Woodland sites (11LS5, 56, 61, 186, 190, 227, 326, 420).

Bluhm excavated at the Simonson site (11LS15) in 1949 with the University of Chicago and found a number of Middle Woodland (Hopewell) sherds (Bluhm 1949b). This site encompassed the Box Elder Mound which contained predominantly Middle Woodland ceramics (Griffin 1945) and is no longer extant. The Spark Plug site (11LS326) also is now considered a part of Simonson (Wiant 1993). A fifth site in the park, Corbin Farm (11LS5), is reported to have a Middle Woodland component (Orr 1949). There also are Middle Woodland materials from the French Canyon West site (11LS56) and the French Canyon East site (11LS227) (Bluhm 1949a). The four remaining sites yielded Middle Woodland diagnostic artifacts (projectile points and pottery) during the ISMS survey in 1992.

Late Woodland. The population increase continued through the Late Woodland (1550-1050 B.P.). The efficiency of hunting large game was increased by adoption of the bow and arrow which may have contributed to a decline in the number of deer available. As the population grew, new groups were forced to settle in less suitable areas for a diffuse hunting-and-gathering lifeway, including the uplands. Many villages were very small hamlets consisting of one or a few houses, probably occupied by extended families. A more intensive subsistence regime was favored for survival; maize quickly became a major component of the Late Woodland diet. Hunting, fishing, and gathering continued to provide important protein and calorie sources, but nut collecting declined (Asch, et al. 1979).

During the Late Woodland much of the cultural elaboration associated with the material culture of the preceding period ended. Late Woodland ceramics consist of conical and round-based vessels with grit and/or grog temper and smoothed or cord-marked surfaces. Steuben stemmed and Lowe flared projectile points are common diagnostics of the Late Woodland. During the latter half of the period, small side notched and corner notched points prevail, signaling the introduction of the bow and arrow. The kinds and numbers of exotic goods traded also declined. The presence of some *Anculosa* and *Marginella* shell beads in sites dating to the Late Woodland period suggest that long-distance exchanges persisted, but differed significantly from the past.

A slight increase in the number Late Woodland sites is apparent here. A total of 49 sites are located in or near the major river valleys. Thirteen sites recorded in the park have Late Woodland components (11LS5, 12, 15, 56, 61, 190, 227, 326, 401, 435, 444, 449, 493), and one of these, the Corbin Farm site (11LS5) is one of the three Late Woodland sites in the region with mounds. Other sites in the park with Late Woodland components are the French Canyon West site (Bluhm 1949a), possibly the French Canyon East site (Bluhm 1949a), the Hotel Plaza site (11LS61) (Bluhm 1949a; Schnell 1974), and the Simonson site (Bluhm 1949a).

Middle Mississippian. In the Midwest, trends including population pressure, horticultural intensification, and territorial conflict culminated in the evolution of large, complex societies during the Middle Mississippian tradition (1050-350 B.P.).

The hallmarks of Middle Mississippian societies included (1) the introduction of distinctive new lithic and ceramic classes as well as new decorative styles in existing artifact classes; (2) palisaded (fortified) permanent villages; (3) the probable presence of regional and interregional exchange and/or trade networks; (4) either a ranked or stratified society; and (5) the occurrence of hierarchical settlement systems with civic-ceremonial centers, satellite villages, farmsteads, and collecting stations. Middle Mississippian sites are often characterized by large, flat-topped rectangular mounds which served as substructures for ceremonial structures. These mounds are sufficiently large that they are readily visible and immediately identified as Middle Mississippian.

It is interesting to note that no Middle Mississippian villages or mounds have been located at Starved Rock State Park, which is further evidence for the well-known discontinuous nature of Middle Mississippian sites.

Upper Mississippian. The Upper Mississippian tradition appears to have developed and flourished in the more marginal parts of the Prairie Peninsula, but persisted into the historic period. The remaining late prehistoric sites in the Starved Rock State Park region are all part of the Upper Mississippian tradition (ca. 900-300 years B.P.) that incorporated societies stretching from the Ft. Ancient and Madisonville areas of Ohio to the Oneota of the upper Mississippi River valley (Griffin 1943).

Upper Mississippian components are found in 62 sites in the region surrounding Starved Rock State Park. Sixteen sites with Upper Mississippian components are recorded for the park (11LS5, 12, 15, 61, 101F, 190, 206, 363, 375, 401, 402, 421, 447, 492, 493, 462), and several occur near the park, including the Gentleman Farm (11LS27), Palmer (11LS28), and Zimmerman (11LS13) sites.

Participants in the Upper Mississippian tradition lived in recently glaciated regions that have fairly immature river valleys and drainage networks. The Upper Mississippian Langford tradition groups relied on horticulture, hunting, and mixed foraging that employed prairie, forest, and riverine resources (Brown 1994; Gibbon 1972; Goldstein 1991; Goldstein and Richards 1991; Jeske 1989, 1990; Moffat 1979; Overstreet 1978, 1981; Peske 1971; Riley and Freimuth 1979; Riley et al. 1981; Sasso 1989; Yerkes 1981). In contrast with this pattern and more similar to the Middle Mississippian tradition, are the later regional Oneota groups (e.g., Fisher-Huber) that exploited riverine resources from major flood plains (Asch and Sidell 1990; Brown 1990; Cremin 1983).

With the onset of a somewhat dryer climatic regime about 800 B.P. (Baerreis, Bryson and Klutzbach 1976), herds of bison began moving eastward from the Plains into the Prairie Peninsula, providing a new source of protein

for the diet. Although bison were seen in some numbers east of the Mississippi River by early explorers, their bones other than those used for tools (especially the scapula, which was employed as a hoe or shovel blade) are virtually absent from all prehistoric and protohistoric sites east of the Mississippi. This suggests that bison movements toward the east and across the Mississippi River were a late phenomenon and that the numbers were very limited. The sole exception in Illinois is in the Starved Rock region where bison bone in great quantity and a broad range of elements has been recovered from the Zimmerman village site, located just across the Illinois River from Starved Rock State Park.

A greater diversity of environmental contexts is suggested by Upper Mississippian site distributions. Sites are located on the river bottomlands and terraces above and adjacent to both major and minor streams and, occasionally, on high hill tops well away from large bodies of water.

Historic Native American. The Early Historic dates from the time of first European contact with Native American groups and ends with the forced removal of native peoples from the state. Starved Rock State Park figured heavily in the Early Historic period from 1673, the date of the first trip of Marquette and Joliet. Not directly pertinent to this Multiple Property nomination and thus not detailed here, the record affords a rich account of Native American and Euro-American interaction in the region (Thwaites 1896-1901, LIX:161; Bauxar 1953; Brown 1961, 1975; Temple 1958). Most regional Historic Native American sites occur in or near the park. While the number of sites is distinctly fewer, we know that at times these villages were occupied by over several thousand people. Eight historic Native American sites are located in the park, including 11LS19, 61, 190, 206 (Newell Fort), 212, 379, as well as Starved Rock (Hagen 1950; Keller 1949; McGregor and Orr 1948; Morgan 1948:274-275, 1949:249; Orr 1949) and Simonson (Bluhm 1949b). The Hotel Plaza site (Schnell 1974) may also have an historic component. The Starved Rock area was the center of a great deal of historic Native American activity.

Summary, Prehistoric Settlement Patterns, Starved Rock State Park

Although it is difficult to interpret these changes in the environmental contexts of riverine and near-riverine settlement, it seems clear that the settlement behavior of early-middle Holocene people (Early and Middle Archaic) was much different from that of later groups. First, early-middle Holocene occupations are relatively sparse in the park, but not in nearby areas that have also been studied intensively (viz., Illinois-Michigan Canal, Kankakee River, also I-39). Second, the distributions of early and middle Holocene components are clustered geographically in the park. The Hypsithermal apparently had a noticeable effect on middle Holocene settlement patterns in that the sites attributed to this period are usually found where ponded or flowing water was readily available.

The well trained archeologist 'sees' how people dealt with the natural environment they occupied by study of their site locations and the technologies (i.e., their tools, weapons, houses and storage facilities) they employed

to exploit and manipulate that environment. During the late Holocene, there were some noticeable shifts in village and campsite locations. This was at first due in part to the availability of a broad range of resources. Later, the introduction and subsequent importance of horticultural pursuits altered the settlement patterns significantly. Also, while not so intensive as the Hypsithermal, there were subtle but important climatic changes that directly affected the relative availability of resources, the capacity for horticultural success and the locations suitable for villages and campsites. It should also be noted that while horticulture was known from the Late Archaic, it generally increased in its relative importance into the historic period, with obvious effects on village and campsite locations. Demographic factors also enter in. Generally, the population in the Midwest was growing and, as the named traditions evolved and waned, population centers were established, then either vacated entirely or occupied less intensively. These patterns had a decided effect on settlement patterning, including the use of locales that previously had not been settled. We are thus faced with a combination of several and more causal factors which had to be evaluated and dealt with by prehistoric peoples.

In the Starved Rock region during the late Holocene, we can expect to find Late Archaic sites in both upland and bottom land settings near flowing water. Some preference for second terraces might be expected; often the second terraces were preferred by later groups, creating multi-component sites.

Early Woodland sites are often found in locations comparable to those of the Late Archaic, again creating multi-component sites.

Middle Woodland village sites are often found on the flood plain in locations that today are regularly flooded, but might be located on second terraces as well. Middle Woodland mounds are found on the flood plain, on second terraces and on bluff top locations as well.

Late Woodland village sites are often found on second terraces along both major and minor streams and, occasionally, in the uplands. Only rarely are they found on the flood plain. Late Woodland mounds are often found on bluff top locations, sometimes on second terraces.

Middle Mississippian villages were established on broad second terraces that are rarely flooded today; major sites were planned to encompass mounds within the confines of the village.

Upper Mississippian villages were generally established on second terraces that are rarely flooded today; occasionally, camp sites and villages were built on hilltops and other easily-defended locations. Gardens were developed on lower ground, sometimes on the flood plain.

Starved Rock State Park and the region immediately adjacent to it offers immensely varied topography,

available riverine resources and land suitable for horticultural pursuits. The varied topography affords a series of tension zones between prairie and forested conditions, creating and maintaining environments suitable for a broad range of flora and fauna. These combinations of conditions have obviously produced an environment that was attractive to prehistoric people for at least the past 9,000 years.

RESEARCH QUESTIONS

The four sites included in this multiple property nomination were selected for their known qualities and their potential to produce data useable in bringing a number of research questions to solution. Our primary questions are those which can be answered using available information. The secondary questions are those which could be answered if further investigations are conducted. Both levels of questioning address the importance and interrelatedness of these sites to the multiple property nomination.

Site location data indicate there are significant differences among the environmental contexts of the prehistoric sites at Starved Rock State Park. Additionally, the artifact assemblages from those sites indicate there are significant differences in the technologies employed throughout the Holocene. The available data have yielded important insights into prehistoric site location and assemblage composition variations for north-central Illinois. However, site location data alone are not sufficient to answer questions concerning the structure of and changes in prehistoric settlement patterns. Settlement patterns must be defined from information on the location, time of occupation, cultural identification and function of archaeological sites.

Primary Questions

Topics that may be addressed using data collected from Starved Rock State Park can concern the structure and change of prehistoric settlement patterns. Questions related to these topics can be answered using data that can be found in the park. Information that comes under the heading of readily available data concerns those things that have the greatest potential for preservation in a site; probably, the best example is lithic materials.

Five basic types of information are available for most of the sites in the park. They are site location, environmental setting (including topography, geomorphology and soils data and contemporary floral and faunal assemblages), diagnostic lithic artifacts, lithic artifact assemblages, and lithic raw material sources. The lithic data depends upon the productiveness of the site during surface inspection or the number and productiveness of subsurface tests made. Using these types of information it is possible to answer questions about site-location dynamics and cultural content as well as to address some questions related to site function--all necessary to an understanding of prehistoric settlement patterns. Other materials (pottery, faunal and floral remains and feature data are usually obtained through subsurface testing) can be used to address these questions when they are available.

Site Cultural Identification. This is a basic concern in archeological research and should be addressed even

though it is not specified in the two historic contexts. Artifacts recovered from an archeological site serve to identify the cultures which used that site. Artifact morphological characteristics often serve as cultural identifiers if only because general changes in technologies employed and the materials used have been identified and traced through time. By analyzing artifact assemblages from a site, the trained archeologist can often determine the relative time of occupation, the archeologically-defined culture that occupied it and how that site functioned (i.e., campsite, village, chipping station). Many sites at Starved Rock State Park are multi-component sites, which offer evidence for occupation by more than one group through time. Often, the components on these sites are identified and one component is selected (often, on the basis of the greatest number of culturally identifiable artifacts) as the principal occupation. Cultural identification of the occupations of any site are best determined through formal excavation. Excavations, some very limited, have been conducted at Corbin Form, Hotel Plaza, Shaky Shelter, Simonson and Starved Rock. That data is drawn upon where available.

Q. Can the past occupants of Starved Rock State Park archeological sites be properly identified?
A. Generally, yes. However, many sites have evidence for repeated occupation by members of several cultural traditions. The cultural identification and percentage of occupation by each group can only be determined by further excavation in most instances.

Q. Can site data from Starved Rock State Park archeological sites contribute to the problems of identification of Middle Archaic cultural content that trouble archeologists throughout the Midwest?
A. Probably, but only through very careful formal excavation and analysis of data. However, data collected from the surface can assist the investigators in determining which sites to excavate.

Settlement Patterning. Archaeological survey, site location and environmental data, as well as diagnostic artifacts, have been obtained over the past century for many sites in Starved Rock State Park. Background information concerning Holocene dynamics has also been investigated, providing a stage upon which to view site location dynamics (i.e., why sites are located where they are). The following questions and summary responses are appropriate for these data under both historic contexts presented in this multiple property listing:

Q. Are sites randomly distributed, or can cultural/temporal patterns of site location be defined?
A. Cultural/temporal patterns of site distribution can be defined at Starved Rock State Park. Site distribution patterning is discussed under Summary: Prehistoric Settlement Patterns, Starved Rock State Park, above.

Q. How old are the sites?
A. The Native American sites at Starved Rock State Park date from 9000 - 150 B.P.

Q. Are there any associations between environmental contexts and site locations?
A. Yes. These are summarized under Summary of Prehistoric Settlement Patterns, Starved Rock State Park, above.

Q. Do the environmental settings of sites change through time?
A. Yes. Site placement depends upon climatic and physiographic conditions, which changed through time, and upon cultural factors including subsistence requirements and the technologies available.

Q. What environmental processes, or constraining factors, might be used to explain the settlement patterns observable through time and across space?
A. Climatic events have been defined and can serve our needs for explaining such things as village locations. For instance, the droughty Hypsithermal of the middle Holocene offers an explanation for the clustering of Middle Archaic sites around permanent sources of water.

Secondary Questions

The following questions are not secondary in an hierarchical sense, but can be best addressed following additional subsurface investigations employing modern techniques for recovery and analysis. The questions are designed to address problems pertinent to settlement and subsistence patterning that are appropriate to sites at Starved Rock State Park. Brief responses will address sites included in the multiple property nomination and their potential for providing necessary data.

Subsistence. Given the preservation of botanical and faunal remains at sites in the park, it should be possible to address problems related to Native American subsistence and resource utilization. Given the ecology of the park and its immediate environs, very special questions unique to the Midwest can be addressed. This is an especially resource-rich locale with deer and smaller mammals, fish, birds and collectible plants readily available for over 10,000 years. Of especial interest is the presence of large numbers of bison in the early historic period; animals that apparently did not appear here until then. The presence of bison is unique at this time in Illinois, suggesting that the environment here was uniquely adaptable to those animals.

Q. What resources were used for food and fuel?
A. All of the four sites included under the multiple listing can be expected to offer sufficient preservation in undisturbed deposits for application to this question. The Hotel Plaza site offers evidence for occupation by all identified groups known to inhabit the area; Shaky Shelter offers Upper Mississippian; Little Beaver offers Early and Middle Woodland; Corbin Farm offers principally Late Woodland and Upper Mississippian components. Preservation of floral and faunal materials is good at all of these sites and others at Starved Rock State Park.

Q. Are there any correlations between the taxa exploited and the prehistoric environmental settings that surrounded particular sites?
A. Yes. These correlations can be made more precise given additional data from sites that exhibit good preservation and little disturbance.

Q. Is there any evidence for the seasonal use of sites?
A. Yes

Q. If so, are there any relationships between the season of use and the environmental setting?
A. Very likely

Q. Do these relationships change through time?
A. Probably. The data is available at the four sites listed to address the three questions listed immediately above. The principal occupations at Shaky Shelter, Little Beaver and Corbin Farm differ from one another, allowing good data to address the last question.

Q. A series of related questions: Were there changes through time in the taxa exploited? If so, did the changes include ever-increasing use of resources that were less used by prior cultural manifestations? Do the changes reflect environmental change, changes in the technology employed in resource collection, or changes in culturally-defined food preferences?
A. Judging from excavations and analyses at other Midwestern sites, changes in the taxa exploited through time can be documented here. Those changes will probably reflect environmental change, changes in technology and changes in food preferences, all questions that can be addressed employing data from the sites recommended for multiple listing and from other sites at Starved Rock State Park. The question about ever-increasing use of all available resources is difficult, but can be addressed employing data from park sites.

Q. Is there any evidence for the use of horticulture in the park? If so, when did the use of horticulture begin? What cultigens were used?
A. There is good evidence for the use of horticulture at Corbin Farm, Hotel Plaza, Shaky Shelter and, probably, at the Little Beaver site. Horticulture of indigenous plants was practiced by Middle Woodland and some Late Archaic groups, leading toward the expectation that such data can be isolated at Little Beaver, Hotel Plaza and, perhaps, at Corbin Farm. Late Wooodland, Middle Mississippian and Upper Mississippian groups routinely practiced horticulture, growing maize, squash and indigenous plants. Beans were used by Upper Mississippian groups. We can expect to find cultigen remains in any of these later sites.

Q. When did bison hunting begin in the park locale?
A. This locality is unique in Illinois with the presence of large numbers of bison bone in very late (early historic) contexts. None of the sites occupied by groups dating prior to c. A.D. 1500 offer other than specialized elements of bison bone. The minimal excavations at Shaky Shelter suggest that bison were not available during the Upper Mississippian occupations by Fisher phase groups, whose occupations here date perhaps as late as the 16th century. Thus, the archeological record suggests that no bison were readily available in the region prior to A.D. 1500. On the other hand, we know that the historic Zimmerman site, located directly across the Illinois River, offers consistent evidence that bison were readily available to the occupants. The available data suggests that bison became readily available in the locale at about the time the Zimmerman site was occupied by members of the Illini Confederation. Further examination of Shaky Shelter coupled with a suite of radiocarbon dates from the site could bracket the time of bison arrival here quite precisely, especially if a component comparable to the Zimmerman materials is found. Floral and faunal materials associated with the dated materials should also provide climate-sensitive data that will allow understanding of the climatic conditions which attracted bison to this locale.

Settlement Systems. The park encompasses great physiographic variability that has attracted human use throughout the Holocene. Site location dynamics were conditioned, in part, by this variability. The establishment of "good" sites was also conditioned by changing climatic conditions.

A series of concise, tentatively-drawn statements about settlement patterning were offered under Summary Prehistoric Settlement Patterns, Starved Rock State Park. These statements should be evaluated and tested as any further scientific investigations are undertaken in the park. The results of these tests and evaluations can be applied to development of hypothetical settlement systems which prevailed at specific points in time, leading to a more sophisticated understanding of site function and the interactions between contemporaneous sites in this locale.

Q. What effects did the seasonal availability of resources have on the scheduling of upland and bottomland use?
A. We can be certain that seasonal availability of resources had an effect on prehistoric populations here, but have not procured sufficient data of the quality needed to pursue this question. Excavations conducted on any of the four sites offered in the multiple listing can contribute positively to answering this question.

Q. Generally, the prehistoric population in the Midwest tended to increase through time, but in the Starved Rock State Park locale the numbers of sites appears to fluctuate rather than steadily increasing through time. Why?
A. This very general question requires demographic analysis of the sites in the park, including those in the locality, then comparing those analyses with comparable work done outside our defined locale. Population

data is surely available in the sites recommended in our multiple listing, if only in density and intensity of occupation by specific groups at specific points in time.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Archeological Sites of Starved Rock State Park (9,000 - 150 B.P.)
Name of Multiple Property Listing

Section number: F Page: 22 State: IL County: La Salle

F. Associated Property Types

Three property types are offered in this multiple property nomination; Village and Mound Sites, Open Air Village Sites, and Rockshelters. These are presented by property type, site locations and descriptions are offered and the research potential for each is summarized. The sites nominated in this multiple property listing are presented as examples of such properties within the boundaries of Starved Rock State Park. Other properties may be added following further research.

I. Name of Property Type: Village and Mound Sites

II. Description: This property type consists of historic properties that are associated with Native American villages that have mounds. To qualify for listing, a site must retain sufficient integrity to allow a determination of the nature of its original land form and the environmental context of the deposits. Archaeological sites must have a Native American component, or occupation, that contains undisturbed midden or features(i.e., storage pits, post molds, fireplaces, rock piles), or stratified deposits and be directly associated with a mound. Most of these sites will either be in the flood plain, on terraces or bedrock remnants, or along the bluff crest. They probably are late Holocene in age.

At least three archaeological sites belonging to this site type are found in the park, including the Simonson site (11LS15), the Corbin Farm Site (11LS5), and the Little Beaver Site (11LS186). The Simonson Site has been subjected to considerable destruction and alteration and needs to be re-evaluated before it can be nominated. Thus, it is not included in this nomination. Corbin Farm and Little Beaver still offer intact deposits and are included in our multiple property nomination.

The Corbin Farm Site (11LS5). [redacted] The Corbin Farm Site, also known as the Salt Well site, is a village site with a mound, a historic farmstead (circa 1870-1940), and a salt well used at least in the 1870s. The site also has a picnic pavilion on it as part of Starved Rock State Park. This site is situated in the flood plain on a peninsula of land located between the Illinois River and Illinois Canyon Creek. The nearest natural water supply is the Illinois River, located approximately 10 m north of the site. The site occurs on soil that formed under swamp and prairie grass (Hesch fine sandy loam, gray subsoil variant) as well as on soils that formed under transitional prairie-forest vegetation (Lawson silt loam) (Alexander and Paschke 1972). Corbin Farm has an estimated dimension of 500 m east-west by 175 m north-south and an estimated area of 68,722 m^2.

The original site form lists the site as a village that has both Late Woodland and Upper Mississippian

components. The site was reported to have four mounds, although only one was located during fieldwork in the park. Previous archaeological work has been conducted at the site by the University of Chicago, the University of Illinois and the Illinois State Museum.

Phase I investigations were conducted at Corbin Farm by the Illinois State Museum Society in 1992 and 1994. Based on the pottery analysis, the presence of a Late Woodland component has been confirmed and apparently constitutes the principal occupation of the site. The subsurface tests suggest that at least part of the site is covered by over 30 cm of Euro-American trash and soil, thus protecting the prehistoric deposits.

At the time of the surveys, the Corbin Farm Site was in lawn and woods. According to the original Illinois Archaeological Survey (IAS) site form, several of the original four mounds at the site were located south of Highway 71. Both road construction and ditching activities for agriculture may have adversely impacted the site and mounds in the past, especially at its southeastern end. Currently a paved road runs through the center of the site and a parking lot is located near its northwestern end. North of the parking lot is a boat landing. There also are picnic tables, a picnic shelter, and a pit toilet on the site. One of the picnic tables is located within 50 m north to northwest of the mound. The previous archaeological work at the site probably has been obliterated by erosion of the shoreline by the Illinois River.

The Little Beaver Site (11LS186). [redacted] The Little Beaver Site is a Middle Woodland village with mounds, which is situated on a bedrock erosional residual that looks like a terrace, and the site overlooks the Illinois River flood plain located to the north. At the west end of the site, several marshy areas are visible below the erosional residual. At the north-central and east ends of the site, borrow-pit activities have disturbed the flood plain, but not the site. Joliet Creek flows near the east side of the site and Potawatomi Creek flows near the west side. A marsh is located near the south-central portion of the site. The nearest natural water supply is Potawatomi Canyon Creek, located next to the west side of the site. Despite the fact that Little Beaver is located in forest today, according to the soil series data, it is in former prairie (Dickinson and Ridgeville fine sandy loams) and some forest (Boone loamy fine sand) native vegetation (Alexander and Paschke 1972). The estimated dimensions of the site are 555 m east-west by 225 m north-south, and site area is estimated at 98,077 m^2.

Little Beaver is a multi-component site with evidence for Archaic, Early Woodland, Middle Woodland and Upper Mississippian occupations. The principal occupation, judging from the relative numbers of culturally-identifiable artifacts, is Middle Woodland.

The site has two groups of mounds, one at the northwestern corner of the site and the other near the north-

central and northeastern portion of the site. The mound groups are located near the edge of the bedrock erosional residual and they are previously unreported. Most exhibit pot holes; however, they do not appear to have been identified by professional archeologists until the survey in 1992 (Ferguson 1995). Most of the mounds were cored, using a bucket auger, and the sediment descriptions described.

The western-most mound group includes eight mounds (A-H) that occur in an area measuring approximately 80 m east-west by 65 m north-south. A small creek forms the western boundary of the group, while the northern boundary is formed by the edge of the bedrock residual where it overlooks the Illinois River flood plain. Mound A is a 45-cm tall round mound with a diameter of approximately 12 m, located near the edge of the bedrock residual. No pot holes are apparent in the mound. Mound B is a more compact, 50-cm tall conical mound with a deep pot hole. The mound has a diameter of approximately 12 m. It sits very near Mound C, which is a saddle-shaped mound with two peaks. The higher of the two peaks is 60 cm tall, while the lower peak is about 40 cm. The mound is 14 m long and 10 m wide. A small pot hole is located near the top of the highest peak. The fourth mound (D) is one of the smallest of the group, having a height of only about 20 cm and a diameter of about 9.5 m. This round mound sits west of Mound A and is located along the margin of the bedrock residual. Mound E is a low, rounded, 30-cm high mound with a diameter of 8 m. It is located south of Mound C and has a small pot hole located near its top. Mound F is intermediate in height, being about 40 cm tall. The base is spread out, having a length of 15 m and a width of 11 m. A pot hole is located near the northern end, at the mound's highest elevation. A vertical metal pipe is at the southern end of Mound F. The age or function of this item is unknown. During mapping, readings were made to it. The last two mounds in this group (G and H) are located on the western edge of the bedrock residual, overlooking an ephemeral stream that flows into the Illinois River flood plain. Mound G is 60 cm tall, has a diameter of 14 m, and is conical-shaped. A pot hole intrudes into the top. Mound H is 30 cm tall and oblong. It measures 13 m north-south by 10.5 m east-west, with the long axis parallel to the creek.

The eastern mound group contains five mounds (I-M). Mound I is a 1.0-m tall conical mound with a diameter of 13 m. The mound sits along the edge of the bedrock residual, overlooking the Illinois River flood plain to the northwest, and a low area in the bedrock residual to the west and southwest. A trail cuts through the very southern edge of the mound. Mound J is located on a high point of the bedrock residual and along its margin, overlooking the Illinois River flood plain. It is about 45 cm tall and is oblong. It measures 21 m east-west by 14 m north-south, with the long axis parallel to the Illinois Valley. A trail passes about 5 m to the south. The last three mounds (K, L, M) are very small, and may not actually be prehistoric mounds. They were not going to be designated as mounds during the original fieldwork assignments; however, it was decided that they should be included because they seemed too large to be the results of tree-fall, considering the size of the trees in this portion of the park, which historically was in prairie (Alexander and Paschke 1972). Since transit readings were made near sundown, it was not possible to obtain photographs, so these are not presented. Mounds K and L are low, 20-cm high mounds that are slightly longer than they are wide. The longest measurement is about 4 m. Mound M is 10

cm high, 4 m long and 2 m wide. All three mounds sit near, but not on, the edge of the bedrock residual.

Some of the mounds on the Little Beaver Site are obviously problematical. Verification was attempted in the summer of 1997 (letter, Karen A. Atwell to Dale Henning, dated July 2, 1997) with results that differed in some instances, perhaps because of locational problems in full foliage. For purposes of this nomination, however, there are verifiable mounds on the site which allows inclusion in this property type.

Impacts to the site include clearing the original prairie and forest vegetation, building park trails through it, non-professional in the mounds, and there appears to be an old road bed associated with a bulldozer hole dug at the northwest end of the site.

III. Significance: The Village and Mound site type is significant under Associated Historic Context Number 2 "Settlement and Subsistence Patterns by Hunters and Horticulturalists of the late Holocene (Late Archaic-historic contact) (4,500 - 150 B.P.). The Village and Mound site type can yield important information with regard to research questions related to paleoclimatic studies, site function, subsistence patterns practiced by the occupants, and can contribute to solution of the questions related to site-location dynamics and settlement systems.

The data needed to answer questions requiring site location data, environmental variables, time diagnostic artifacts, and different cultural components from different time periods are all available at the two sites listed and, perhaps, others at Starved Rock State Park. Both sites listed offer mounds within the site boundaries, the deposits are sufficiently intact and the preservation of floral and faunal materials is good. The potential for isolating storage features, fireplaces and house outlines that can be identified with occupations by specific groups is very good.

IV. Registration Requirements: To be eligible as a member of this property type, a historic property may qualify under Criterion D: *Property has yielded, or is likely to yield, information important in prehistory or history.*

- Each property has demonstrable affiliation with at least one prehistoric or historic cultural period (e.g., Middle Woodland, Late Woodland, etc.) making it possible to place the site and its associated mound(s) into appropriate cultural and diachronic context. The Area of Significance for each property is *Archaeology, prehistoric*. Both sites have one or more mounds, qualifying them under Criteria Consideration D: *a cemetery*.

- Village and mound sites are eligible under Criterion D if they have any of the following: (1) a mound or remains thereof, and any other features; and/or (2) for a single component site, a sheet midden; and/or (3) for a multiple component site, stratified, sealed deposits, or sheet middens.

- "For properties eligible under Criterion D, integrity is based upon the property's potential to yield specific data that addresses important research questions" (National Park Service 1991:46), such as those listed under Research Questions, above. At the very least a site must contain sufficient integrity to allow a determination of the nature of its original land form and environmental settings, as well as the criteria listed in the preceding point.

I. Name of Property Type: Open-Air Occupation Site

II. Description: This property type consists of archaeological sites that occur in an open area, as opposed to a rockshelter. The property type does not contain mounds. Historic properties designated open-air occupations were used throughout the Holocene (i.e., date to any time period from 12,000 B.P.) and may have multiple components (definably different occupations). These sites functioned as resource extraction and/or processing localities; short-term encampments, where people lived for one night to several days or weeks; base camps; or permanently occupied villages. Such sites occur in a variety of environmental settings, ranging from the flood plain to the uplands. There are 21 such sites in the park, of which the subsurface deposits of four have been examined.

The sites that have been professionally excavated are the National Register Starved Rock Site (11LS12), Simonson (11LS15), Hotel Plaza (11LS61), and Devil's Nose (11LS492). Following further archeological investigations at Starved Rock State Park, more Open-Air Occupation sites may be declared eligible for nomination. The Hotel Plaza site is included in this multiple properties nomination and is discussed below.

The Hotel Plaza Site (11LS61). [redacted] The Hotel Plaza Site offers prehistoric and historic components and is situated in the flood plain and the Ottawa Terrace, a bedrock erosional residual located on the lower western flank of Starved Rock. The nearest natural water supply is the Illinois River, located approximately 75 m north of the site. According to the soil series data, the site is located in an area of former native forest (Boone loamy fine sand), native prairie (Hesch loamy sand), and former marsh and prairie grass (Millington loam) (Alexander and Paschke 1972). At the time of the survey, Hotel Plaza was planted as a lawn.

The Hotel Plaza Site was the location of excavations during the late 1940s by joint expeditions of the Illinois State Museum and University of Chicago (Schnell 1974). During these excavations Paleo-Indian through Historic Native American materials were recovered and numerous features, including burials, were excavated (Schnell 1974). The site also is the location of the old historic hotel at Starved Rock State Park. Hotel Plaza was revisited by Savini in 1976. On his IAS site revisit form he mentions that there are numerous benches and walkways across the site. In the 1990s, a portion of the site was excavated to mitigate the impact of building a new visitors's center for the park (Wolforth 1994), locating stratified Archaic and Woodland period deposits in an alluvial fan. While

some portions of the areas that were tested have been determined eligible for inclusion on the National Register, other areas are deemed ineligible for nomination because of erosion and modern disturbances such as building, parking lot, and driveway construction.

At the time of the ISMS survey conducted in 1992, the Hotel Plaza Site was in a lawn with scattered trees. Field techniques at the site consisted of tractor auguring, pedestrian survey, and expanded test pits. Based on the data from this and prior investigations, Hotel Plaza (11LS61) is described as a multiple component site that includes prehistoric camps, a Woodland period village, a historic hotel, and an extant historic recreational site. The historic component has various recreational functions dating from at least the 1890s, including a hotel site, and an extant recreational structure. The site has estimated dimensions of 212 m north-south by 162 m east-west and an estimated area of 26,973.7 m^2. It has endured numerous impacts, ranging from historic building and razing activities, to archaeological excavation, to the placement of walkways, trails, park benches, monuments, and twentieth-century buildings. In spite of the impacts, much of the site remains intact and offers information about occupations of all the major traditions known in the region, including the historic Illini tribe.

The site offers cultural stratigraphy, intact features (including storage pits, fireplaces and possible postmolds) and good preservation of floral and faunal materials.

II. Significance: The Hotel Plaza Site, an Open-Air Occupation site type, is significant under Associated Historic Context Numbers 1 and 2 and can yield important information with regard to settlement patterning site function, subsistence patterns, and can contribute datable climatic data as well. Following further research at Starved Rock State Park, several other sites can also be nominated as Open-Air Occupation site types. There is evidence at Hotel Plaza for Early, Middle and Late Archaic occupations, intense use by Early and Middle Woodland groups, and some use by both Middle Mississippian and Upper Mississippian groups. In addition, Hotel Plaza is probably the site of the large Indian village that supported the French in the Upper Illinois Valley during the seventeenth and eighteenth centuries. The types of artifacts recovered from suggest regional interaction between Native peoples of the Upper Illinois Valley and peoples in the Great Plains during the early Holocene, throughout the Prairie Peninsula during the middle Holocene, and into the Eastern Woodlands and Great Plains throughout the late Holocene.

IV. Registration Requirements: For a historic property to be a member of this property type, it may qualify under Criterion D: *Property has yielded, or is likely to yield, information important in prehistory or history.*

- The property has demonstrable affiliation with at least one prehistoric or historic cultural period (e.g., Middle Woodland, Late Woodland, etc.) to place the site into a cultural and diachronic context. Criteria Considerations which characterize the site include C: *a birthplace or a grave*. While there is no evidence for a cemetery, per se., some human burials have been found at the site.

- Analysis of human remains previously recovered from the site can be performed, along with their associated funerary objects, to determine important information concerning diet and health as well as cultural affiliation and evidence for trade.

- Open-air occupation sites are eligible under Criterion D if they have any of the following: (1) features other than mounds; and/or (2) for a single component site, a sheet midden; and/or (3) for a multiple component site, stratified, sealed deposits, or sheet middens. The Area of Significance is *prehistoric archaeology.*

- "For properties eligible under Criterion D, integrity is based upon the property's potential to yield specific data that addresses important research questions" (National Park Service 1991:46), such as those offered under Research Questions, above. At the very least a site must contain sufficient integrity to allow a determination of the nature of its original land form and environmental settings, as well as the criteria listed in the preceding point.

I. Name of Property Type: Rockshelter

II. Description: This property type consists of Native American archaeological sites that occur in rockshelters, or rock overhangs, that provide a moderate amount of protection for the inhabitants. At least 14 occupied rockshelters have been identified in the park and several have been tested. Following further archeological investigations of rockshelters at Starved Rock State Park, others may be declared eligible for nomination. Currently, only Shaky Shelter has yielded firm evidence for undisturbed features. Thus, it is offered as an eligible example of the Rockshelter property type in this Multiple Property nomination.

The Shaky Shelter Site (11LS402). [redacted]

The site is situated at the sandstone bluff base in Kaskaskia Canyon. The nearest natural water supply is a stream in Kaskaskia Canyon, located approximately 23 m northwest of the site.

Subsurface tests were made by the Illinois State Museum Society in 1991. At the time of the survey, Shaky Shelter had a bare, sandy floor. Field methods employed were shovel testing and use of a bucket auger. The shelter midden deposit is at least 154 cm deep. One of the shovel tests was expanded into a 1x1 meter test unit. Artifacts recovered suggest that only Upper Mississippian groups utilized the shelter. No remains of other cultural traditions were encountered.

Based on this evidence, Shaky Shelter is described as a single component (Upper Mississippian tradition) site which measures 33.8 m north-south by an average width 6.9 m east-west with an estimated area of 183.2 m^2.

Beyond the excavations, it is unknown what other impacts have occurred at the site.

III. Significance: Rockshelters can be significant under associated historic contexts 1 and 2, depending upon the times of occupation, and can yield important information with regard to research questions related to past environmental conditions, settlement and subsistence patterning. The Shaky shelter is of especial importance because of its relatively undisturbed deposits and the quality of preservation of floral and faunal materials. If it proves to be a single component site, its importance rises if only because the mixing of cultural remains from different occupations and times is not a problem. Rockshelters in this region may have functioned very differently from open air sites; comparison of information obtained from the Shaky site with other Upper Mississippian tradition sites could yield important site function data.

Shaky Shelter is fully eligible under Area of Significance *prehistoric archaeology,* Criterion D as a Rockshelter property type. Deposits in the rockshelter offer demonstrable affiliation with groups that were part of the Upper Mississippian tradition, Fisher-Huber and Langford. The de posits investigated at Shaky Shelter suggest that they are undisturbed and offer excellent data about a short period of time. Questions about the Upper Mississippian tradition such as the relationship between the Fisher-Huber and Langford cultural manifestations as well as a host of questions about the past environment and methods used during the Late Prehistoric period to exploit that environment can be answered here and probably at other rockshelter sites in Starved Rock State Park as well.

While Shaky Shelter is the only site recommended under this property type, there are at least 14 additional rockshelters with evidence for prehistoric human occupation in them. Following future testing, more rockshelters may be deemed eligible for listing in the National Register of Historic Places.

IV. Registration Requirements: To be a member of this property type, a historic property may qualify under Criterion D: *Property has yielded, or is likely to yield, information important in prehistory or history.*

- The property must be located in a rockshelter.
- The property must have demonstrable affiliation with at least one prehistoric or historic cultural period (e.g., Middle Woodland, Late Woodland, etc.) to place the site occupations into the appropriate cultural and diachronic context with Area of Significance *prehistoric archaeology.*
- Rockshelters are eligible under Criterion D if they have any of the following: (1) occur in a rockshelter; (2) have features; and/or (3) for a single component site, a sheet midden; and/or (4) for a multiple component site, stratified, sealed deposits, or sheet middens.

- "For properties eligible under Criterion D, integrity is based upon the property's potential to yield specific data that addresses important research questions" (National Park Service 1991:46), such as those offered in Research Questions, above. At the very least a site must contain sufficient integrity to allow a determination of the nature of its original land form and environmental settings, as well as the criteria listed in the preceding point.

G. Geographical Data

[redacted]

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Archeological Sites of Starved Rock State Park (9,000 - 150 B.P.)
Name of Multiple Property Listing

Section number: H Page: 31 State: IL County: La Salle

H. Summary of Identification and Evaluation Methods

In the selection of sites offered for National Register Multiple Property nomination, our research encompassed archeological, historical and geological investigations conducted over the past century. Topographically and culturally, Starved Rock (later, State Park) has functioned as a high profile location for at least the past 9,000 years. We gathered the appropriate geological and geomorphological information in order to present a brief account of the factors that created this unique landscape. Then, references to the archeology of Starved Rock State Park and its immediate environs were collected and distilled for presentation in the foregoing pages. Many sites have been investigated by persons with little or no training in archeological investigations; their records usually consist only of unfilled holes in mounds and mixed deposits in the open sites. On the other hand, professional archeologists have been reporting on their investigations here for almost a century; very adequate reporting began to appear in the 1930s and collections were made following some intensive archeological work following the termination of WW II. We have perused these reports, studied the available collections, researched the IAS site files and made great use of the ISMS investigations of sites that were conducted since 1990. Historical accounts of Euro-American and Native American interactions in the Starved Rock area have provided the stuff of ethnographic analogy that, while not always made explicit in the preceding accounts, was important to many of our conclusions.

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