THE ARCHAEOLOGY AT THE ROOSEVELT #2 SITE

by

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A thesis submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Arts in the Department of Anthropology

Chapel Hill
1968

Approved by:

Adviser
ACKNOWLEDGEMENTS

From its modest and seemingly insignificant beginning to its present conclusion, the archaeological research at the Roosevelt #2 site (24D4-50) represents the contributions, encouragement, and cooperation of a great many people. It is for this reason that I wish to express my appreciation and gratitude to everyone who has assisted me in this endeavor.

Specifically, I am indebted to Mr. Roosevelt Davis for permission to conduct the fieldwork upon his property. In addition, his assistance in plowing the site and the use of his tractor during the inclement spring weather of 1966 was most appreciated.

I would like to express my deepest gratitude to Mr. Jack E. Porter. It was Jack's expert flying skill that not only enabled me to obtain the valuable aerial photographs, but also returned us to the ground safely during several rain storms. Without his interest in low altitude aerial photography as an archaeological tool, that particular aspect of the project would have been entirely absent.

Perhaps foremost among the many is Dr. Melvin L. Fowler to whom I owe most of the encouragement that I received throughout the project. Dr. Fowler's guidance, criticisms, and personal interest not only provided a stimulus, but also resulted in a valuable learning experience for me. His help was instrumental in obtaining the necessary funds to support this fieldwork.
Finally, I would like to thank Dr. and Mrs. J. Charles Kelley for allowing me to bring the artifacts with me to North Carolina; the students who worked under adverse field conditions; and my wife, Judy, for making this manuscript possible. My thanks must also go to Dr. Joffre L. Coe and Dr. Donald L. Brockington for their advice and criticisms in the preparation of this manuscript.

This research was supported by the Southern Illinois University grant: Archaeological Technical Laboratories #20-45-2-07221.
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INTRODUCTION

During October of 1965, I located a previously unrecorded site in Pulaski County, Illinois. This new site was adjacent to an area that was being cleared and leveled in preparation for the construction of Section 77-2 of Federal Interstate Highway 57. At that time, the landowner--for whom the site was named--had just completed harvesting his final corn crop in the bottomlands of Briar Creek, a tributary of the Cache River.

After the corn had been harvested, a small terrace remnant 100 yards west of the construction area became clearly visible. An elevation of approximately twelve feet above the low marshy bottomlands was noted for the terrace remnant. Prior to the removal of the ground cover, the remnant appeared to be only a slight undulation among the corn plants. The marshy conditions of the bottomlands had prevented, until just recently (within eight to ten years), the cultivation of both the terrace and the bottomlands. An examination of the terrace surface revealed a profusion of prehistoric cultural materials. The site was recorded, assigned the Southern Illinois University Museum number 24D4-50 and an artifact sample was collected.

Although the site was not situated within the construction area, it was in the immediate vicinity of a proposed channel change for Briar Creek. Also, the soil comprising the terrace was suitable for fill purposes and, therefore, a likely location for a borrow pit. Because of
its close proximity to the channel change area and because of its suit-
ability as fill dirt, the entire terrace was threatened with destruc-
tion.

When considered *in toto*, the following favorable combination of
factors provided ample justification for conducting archaeological
fieldwork at the Roosevelt #2 site during the months of February, March
and April of 1966. This combination included:

1. The site was threatened with imminent destruction in connection
   with highway construction.

2. The site had not (to the knowledge of the landowner) been col-
   lected upon by either amateurs or professional archaeologists
   for the preceding forty years.

3. This site, because of its topographical location, had not suf-
   fered from extensive erosion characteristic of other sites in
   the general area.

4. This site provided an opportunity to test the validity and
   usefulness of the particular combination of field methods to
   be discussed in this text.
SITE LOCATION AND NATURAL SETTING

The clearly demarcated human occupation area designated as the Roosevelt #2 site includes an area of approximately one and one-third acres of land on the north bank of Briar Creek. This small roughly oval-shaped plot of land is topographically located in the NW¼ of the SE¼ of Section 36; Township 14 South; Range 1 West of the Cairo Quadrangle (USGS 15 Minute Series Map, 1933). However, to merely describe the location of the site with reference to a particular topographic map has little meaning, other than to assist in the subsequent relocation of the site. The significance of the location of the Roosevelt #2 site, or any site for that matter, to the original occupants (and therefore to the archaeologist) can only be found in the physiographical and ecological context of the site at the time of human occupancy.

For the above stated reason, an attempt will be made to place the Roosevelt #2 site in a physiographic and ecological perspective. It should be noted, however, that the following environmental reconstruction is based entirely upon regional ecological studies and not upon any data recovered from the Roosevelt #2 site. This reconstruction serves only as an indicator of what was available within the region to the occupants of the Roosevelt #2 site. Whether or not they took advantage of what the environment offered could not be determined.

The task of ecological reconstruction is no less difficult than the one of prehistoric cultural reconstruction. The difficulty arises because, in the interim beginning ca. 1600 A.D., over 99% of the
Temperate Deciduous Forest of the eastern United States has been destroyed or drastically altered. Consequently, the ecologists have, by necessity, been forced to rely upon early historical reports of the forest conditions and upon current studies of the few remaining virgin forest communities.

The general region of southern Illinois to be discussed in this biotic context is essentially the same as that covered by Voight and Mohlenbrock (1964: 3-7) in their ecological treatment of the plant communities of southern Illinois with the exception of the exclusion of the Mount Vernon Hills Section. The choice of one region and the exclusion of an adjacent one is somewhat arbitrary, but not without some justification. It is generally recognized that natural barriers restrict movements of people and act as isolating mechanisms. And although the exact range of any specific human population isolate four or more thousand years prior to European contact is unknown, surely certain natural barriers existed to limit and restrict the range of a given group of people. With this in mind, I submit the wide Mississippi River to the west, the Shawneetown Ridge of the rugged Shawnee Hills Section to the north, and the wide Ohio River to the east as reasonable natural boundaries within which a given small population isolate could be expected to range. These boundaries enclose a roughly wedge-shaped area that measures approximately 60 miles (north-south) and 90 miles (east-west) and contains approximately 2800 square miles.

Within these arbitrary boundaries, all or the major parts of three physiographic divisions are recognized (Leighton et al., 1948: 16-33). These divisions are the Shawnee Hills Section of the Interior Low
Plateau Province, the Salem Plateau Section of the Ozark Plateau Province, and the Coastal Plain Province of the Cache, Mississippi, and Ohio river floodplains.

The Salem Plateau Section—or western boundary zone—is characterized by rough and broken terrain. Along the eastern edge of the Mississippi floodplain is a more or less continuous series of massive bluffs. These bluffs, running essentially north-south, are composed of Mississippian, Devonian, and Ordovician limestones interspersed with layers of sandstone and shale. Individual bluffs are one to two miles in length and vary from one hundred to three hundred feet at their highest point above the floodplain. At some places, these bluffs form a continuous escarpment two or three miles long. Typically, they terminate in narrow wooded valleys which are succeeded by other ridges to the east. Surface streams are rare in this area except for intermittent runoff streams in the valleys. The bluffs, themselves, are regularly indented by shallow runoff channels. Throughout most of the year, the sun strikes the bluff faces directly during the better part of the day and produces locally high temperatures. The prevailing west winds sweep across the broad floodplain and overtop the bluffs creating a drying force. These conditions are probably responsible for maintenance of formerly extensive prairie areas here, over 200 miles south of the major prairie region of Illinois (Ozment, 1967: 135-138).

Associated with these bluffs are five distinct biotic communities of which many undisturbed remnants still exist. These communities are usually in a climax stage of succession and attest to the extent and variety of the original communities at the time of European settlement.
These biotic communities include the following: (taken from Ozment, 1967: 138-143)

1. **Mesic Slope and Ledge Community.** This type occurs on the slopes at either end of the bluffs or below the rock face. The predominant trees are sugar maple, chinquapin oak, and basswood. The shrubs are represented by gooseberry, hydrangea, and bladdernut. Where a dense overstory doesn't produce extensive shade, false nettle, wood nettle, and clearweed are characteristic.

2. **Talus Slope Community.** The talus slope is transitional between the rock face and the mesic slopes. It offers drier conditions with unshaded areas between the scattered trees and shrubs. A wider variety of trees are available; among these are chinquapin oak, false buckthorn, redbud, Kentucky coffee tree, and honey locust. A common shrub is dogwood along with the vine, Carolina moonseed. The herb layer is represented by larkspur, miami-mist and spiderwort.

3. **Bare Rock Face and Slope.** Several species of trees and shrubs grow among the rocks and crevices where they are exposed to the xeric conditions that prevail there. In addition to most of the species present in the preceding communities, red cedar, ground cherry, chinaberry, sumach, and blue ash may occur.

4. **Hill Prairie Community.** This community occurs on the loess slopes above the edge of the bluff. These prairies may be several acres in size or confined to a narrow band along the edge of the bluff. It is often best developed on the southwestern slopes of the loess and is characterized by the dominant grasses: broomsedges, Indian grass, and side-cats grama.

5. **Upland Woods Community.** The upland woods are found on the bluff tops and inland hills of the region. They are part of the dry oak-hickory forest. Various species of oak and hickory occur as well as yellow pine locally as tree dominants. Blueberry and farkleberry are conspicuous shrubs. Bittersweet and grapes are prevalent vines along the edges of this community. Pinxter flower, an excellent browse for deer, occurs primarily among the stands of yellow pine.

Some of the animals of importance to man as food sources and as possible predators that were noted by Ozment (1967: 147-148) as well as Voight and Mohlenbrock (1964: 152) are particularly well adapted to these environments. Of the species that can be considered as possible food sources, the six-lined racerunner (a lizard), cotton-tail rabbits,
quail, fox and gray squirrels, white-tailed deer, and groundhogs are evident. The possible predators are poisonous snakes of which the timber rattlesnakes, copperhead, and cottonmouth moccasin are prevalent.

Frequently found at the base of these bluffs are spring-fed swamps such as the Pine Hills Swamp which, in addition to providing a water source, provides a suitable environment for the red-eared turtle, beaver, raccoon, mink, muskrat, blue heron, American egret, the wood duck, and at least twenty-two species of fish. According to Lewis and Gunning (1955: 552), this area "... represents a natural undisturbed swamp area which probably contains much of its original flora and fauna" with the notable exception of the species of carp which is a modern introduction to North America. For a detailed analysis of the species composition of the fishes found in this swamp, see Table 1.

The Shawnee Hills--or northern boundary zone--stretch from the limestone bluffs along the Mississippi River on the west across the southern part of Illinois to the physiographically similar but less prominent limestone bluffs along the Ohio River to the east. These hills are predominately worn and rounded sandstone undulations of Pennsylvanian antiquity. At the heart of these sandstone hills is the Shawneetown Ridge--the arbitrary human range limit in this text. This sandstone escarpment has, in some places, a total relief of as much as 850 feet (Voight and Mohlenbrock, 1964: 5) and forms a watershed divide across southern Illinois. Specifically, Bay Creek and the Cache River flow southward whereas the Big Muddy and Saline Rivers flow northward. In their undisturbed remnants, the Shawnee Hills support biotic communities that predate the Pleistocene glaciers since no ice actually reached that far south to destroy the local environment.
<table>
<thead>
<tr>
<th>Common Name</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pirate Perch</td>
<td>35.7</td>
</tr>
<tr>
<td>Mudminnow</td>
<td>17.2</td>
</tr>
<tr>
<td>Starhead Topminnow</td>
<td>14.2</td>
</tr>
<tr>
<td>Spring Cave-Fish</td>
<td>7.8</td>
</tr>
<tr>
<td>Pigmy Sunfish</td>
<td>7.1</td>
</tr>
<tr>
<td>Small Sunfish</td>
<td>5.0</td>
</tr>
<tr>
<td>Mud Pickerel</td>
<td>2.1</td>
</tr>
<tr>
<td>Round Sunfish</td>
<td>1.8</td>
</tr>
<tr>
<td>Creek Chubsucker</td>
<td>1.4</td>
</tr>
<tr>
<td>Carp*</td>
<td>1.4</td>
</tr>
<tr>
<td>Largemouth Bass</td>
<td>1.4</td>
</tr>
<tr>
<td>Mosquito Fish</td>
<td>1.1</td>
</tr>
<tr>
<td>Bluegill</td>
<td>1.0</td>
</tr>
<tr>
<td>Warmouth</td>
<td>1.0</td>
</tr>
<tr>
<td>Swamp Darter</td>
<td>1.0</td>
</tr>
<tr>
<td>Yellow Bullhead</td>
<td>0.4</td>
</tr>
<tr>
<td>Green Sunfish</td>
<td>0.1</td>
</tr>
<tr>
<td>Orangespotted Sunfish</td>
<td>0.1</td>
</tr>
<tr>
<td>Pumpkinseed</td>
<td>0.1</td>
</tr>
<tr>
<td>Black Crappie</td>
<td>0.1</td>
</tr>
<tr>
<td>Golden Shiner</td>
<td>0.1</td>
</tr>
<tr>
<td>Brown Bullhead</td>
<td>0.1</td>
</tr>
<tr>
<td>Bowfin</td>
<td>0.1</td>
</tr>
</tbody>
</table>

*Species not native to North America; introduced in modern times.*
The Shawnee Ridge is a sandstone escarpment with a particular biotic community. In places, little vegetation is present on the bare rock or thin layer of topsoil. Usually however, it supports a scrubby xerophytic forest near its summit. The dominant trees are post and blackjack oaks, red cedar, and to a lesser extent, winged elm. Farkleberry occurs as the conspicuous shrub. Bordering the frequent bare exposures along the crest are the grasses: poverty oat grass, fescue, and little bluestem.

Elsewhere among the Shawnee Hills, diverse physical conditions have produced a multitude of micro-environments which have selectively produced distinct biotic communities. However, three major communities stand out as being representative of the area and show a wide distribution. Included among these are the lowland, midslope, and upland communities. This is not to say that bluff overhang, hill prairie, and other restricted types are not present and of great importance locally. But for the sake of brevity, these minor types will not be discussed at this time.

The lowland community of the Shawnee Hills is found in ravine bottoms and on the lowest north-facing slopes. Because of this habitat, moisture and shade have combined to produce conditions favorable to luxuriant growth that is reflected in the size and variety of trees, shrubs, and ground cover. Characteristic dominant trees are beech, sugar maple, tulip, white oak, and red oak. Dogwood, redbud, pawpaw, blue beech, persimmon, and dwarf red buckeye are frequent in the shrub layer. Poison ivy, virginia creeper, and bittersweet characterize the ground layer. A detailed analysis of the dominant tree species for this community as well as the midslope and upland communities can be found in Table 2.
### TABLE 2
**DOMINANT TREE ASSOCIATIONS IN SHAWNEE HILLS**

#### Lowland Community: Composition of 20 Communities

<table>
<thead>
<tr>
<th>Species</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beech</td>
<td>31.1</td>
</tr>
<tr>
<td>Sugar Maple</td>
<td>23.1</td>
</tr>
<tr>
<td>Tulip</td>
<td>13.4</td>
</tr>
<tr>
<td>Red Oak</td>
<td>11.3</td>
</tr>
<tr>
<td>White Oak</td>
<td>10.4</td>
</tr>
<tr>
<td>Black Oak</td>
<td>3.6</td>
</tr>
<tr>
<td>Sweet Gum</td>
<td>2.5</td>
</tr>
<tr>
<td>Shagbark Hickory</td>
<td>2.0</td>
</tr>
<tr>
<td>Pignut Hickory</td>
<td>1.4</td>
</tr>
<tr>
<td>Elm</td>
<td>1.2</td>
</tr>
</tbody>
</table>

#### Midalope Community: Composition of 19 Communities

<table>
<thead>
<tr>
<th>Species</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Oak</td>
<td>42.1</td>
</tr>
<tr>
<td>Black Oak</td>
<td>25.8</td>
</tr>
<tr>
<td>Red Oak</td>
<td>16.5</td>
</tr>
<tr>
<td>Pignut Hickory</td>
<td>5.5</td>
</tr>
<tr>
<td>Shagbark Hickory</td>
<td>4.5</td>
</tr>
<tr>
<td>Beech</td>
<td>3.7</td>
</tr>
<tr>
<td>Shumard's Oak</td>
<td>1.0</td>
</tr>
<tr>
<td>Tulip</td>
<td>0.9</td>
</tr>
</tbody>
</table>

#### Upland Community: Composition of 20 Communities

<table>
<thead>
<tr>
<th>Species</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pin Oak</td>
<td>45.8</td>
</tr>
<tr>
<td>White Oak</td>
<td>22.3</td>
</tr>
<tr>
<td>Black Oak</td>
<td>11.7</td>
</tr>
<tr>
<td>Blackjack Oak</td>
<td>7.3</td>
</tr>
<tr>
<td>Juniper</td>
<td>5.9</td>
</tr>
<tr>
<td>Pignut Hickory</td>
<td>3.7</td>
</tr>
<tr>
<td>Red Oak</td>
<td>2.8</td>
</tr>
</tbody>
</table>

*Based on Table 32, Voight and Mohlenbrock, 1964: 170-171.*
The midslope community is, to the casual observer, indistinguishable from the lowland community. This is perhaps because of the gradual transition from the beech, maple, and tulip dominants to primarily oaks as the soil moisture decreases with slope gradient increase. In addition to changes in tree dominants, the following changes appear in the shrub layer: hop hornbeam, bladdernut, aromatic sumac, wild rose, New Jersey tea, and rhododendron. Tickclover, stone mint, and violets are conspicuous as ground cover on these wooded slopes.

The upland community is found near or on the top of the sandstone hills. Here, dense shade, plentiful moisture, and rich soils are replaced by greater light, high summer temperatures, and low humidity. Because of these habitat conditions, often only one or two tree dominants are present and seldom more than four or five. Red cedar, winged elm, and scrub oaks are hardy enough to withstand these adverse conditions. Also, stands of yellow pine and Buckley's hickory occur locally in scattered areas. The shrub layer is composed mainly of bladdernut, farkleberry, and blueberry. Poverty oat grass, broomsedges, and reindeer lichen are present as conspicuous ground cover.

Because of the drastic reduction of the virgin forests, many of the animals of particular importance to man are no longer present in the areas studied in southern Illinois by the various ecologists. For this reason, it is difficult to state without some reservations what animals were present in the Shawnee Hills prior to European settlement. Some insights into this problem can be gained from Shelford's analysis (1963: 26-59) of the animal composition of the general Temperate
Deciduous Forest Biome. His analysis is based upon early reports and upon data gathered from Illinois, Ohio, Pennsylvania, and North Carolina. A summary of this data is found in Table 3.

**TABLE 3**

SELECTED ANIMAL SPECIES OF THE TEMPERATE DECIDUOUS FOREST

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Density/10 Square Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bison</td>
<td>No Data</td>
</tr>
<tr>
<td>Deer</td>
<td>400 (optimal)</td>
</tr>
<tr>
<td>Wapiti</td>
<td>No Data</td>
</tr>
<tr>
<td>Black Bear</td>
<td>5</td>
</tr>
<tr>
<td>Gray Fox</td>
<td>30</td>
</tr>
<tr>
<td>Mountain Lion</td>
<td>2-3</td>
</tr>
<tr>
<td>Gray Wolf</td>
<td>1-3</td>
</tr>
<tr>
<td>Fox Squirrel</td>
<td>10-20,000</td>
</tr>
<tr>
<td>Gray Squirrel</td>
<td>10-20,000</td>
</tr>
<tr>
<td>Raccoon</td>
<td>60-90</td>
</tr>
<tr>
<td>Striped Skunk</td>
<td>20</td>
</tr>
<tr>
<td>Opposum</td>
<td>30</td>
</tr>
<tr>
<td>Turkey</td>
<td>200</td>
</tr>
<tr>
<td>Small Nesting Birds</td>
<td>7680</td>
</tr>
<tr>
<td>Bobcat</td>
<td>42</td>
</tr>
</tbody>
</table>

Because of the general suitability of the local environments in the Shawnee Hills, it is reasonable to assume that most if not all of these animals were at least represented here. However, the density of the various populations of these animals probably differed widely from one local environment to another. For instance, Shelford (1963: 59) notes that the turkey which feeds extensively upon certain acorns and dogwood exhibited a population density of only 5/square mile in Missouri prior to settlement by Europeans.

Between the limestone bluffs bordering the Ohio and Mississippi Rivers and south of the Shawnee Hills is a low central depression. The
entire depression area is characterized by poor drainage where inundations are frequent. Low ridges, isolated terrace remnants, and swells occur among the swampy sloughs and backwater pools. It is through this lowland region that the Cache River flows. Prior to northern glaciation, the Cache River channel was an outlet for the Ohio River to the Mississippi River across southern Illinois (Voight and Mohlenbrock, 1964: 7).

Occasionally, the Cache River may still drain the Ohio to the Mississippi during times of flood, but generally it is a widely meandering, low, and sluggish stream. This region, along with the low floodplains near the confluence of the Ohio and Mississippi Rivers comprises the third major physiographic region of southern Illinois. It is within this region that the greatest variety of both flora and fauna occur. With regard to the biotic communities, scattered wooded hills with upland affinities are prevalent along with deep swamps, transition forests, and bottomland forests.

In perpetually inundated areas, the water level varies from an inch or two in the summer to several feet in the winter. Often, the summer pool level is as much as five feet deep (Voight and Mohlenbrock, 1964: 86). In this type of environment, bald cypress, tupelo, water hickory, boxelder, planertree, pumpkin ash, water locust, and red maple are numerous dominants in the tree layer. Black walnut, elm, and ash trees occupy the partially inundated borders of the swamps and represent the dominant species of the transition forests. The shrub layer of the swamps and transition forests consists of swamp rose, buttonbush, and rarely, water willow. Pondweed, coontail, and naiad are abundant deep water plants. In shallower parts of the swamps, water lotus, water lily, bur-reed, and several species of sedges occur. Along the water's
edge, numerous sedges appear in great profusion as well as dense stands of cut-grass, munro-grass, and creeping bent-grass. Also to be found in the transition forests, growing right up to the water's edge, are dense stands of cane, ten to twelve feet tall.

The bottomland forests, as they occur on the floodplains and immediate low terraces along the rivers and streams, are distinctly different in regard to their biotic communities. The tree layer is represented by black willow, mulberry, pecan, black walnut, cottonwood, swamp cottonwood, red maple, boxelder, slippery elm, American elm, and honey locust. The great variety of shrubs include grey dogwood, swamp privit, hawthorn, Virginia willow, paw paw, red mulberry, sassafras, redbud, persimmon, wild plum, and black haw. Numerous vines occur among which green briars, Virginia creeper, bittersweet, grapes, blackberries, raspberries, gooseberries, and dew berries are notable. Many grasses and sedges occur throughout the forest in unshaded areas.

With regard to the animals that were both important to man and known to be present in the swamp and bottomland environments, the archaeological record from the Modoc rock shelter provides excellent documentation. This rock shelter is located in a similar environment along the base of the bluffs bordering the Mississippi floodplain. The remains of a wide variety of animals were recovered during the excavations of the several strata at Modoc (Fowler and Parmalee, 1959: 109-119). Vertical distribution of the 92,504 animal bones represented the trash accumulation of human occupation ranging from 8,000 B.C. to 2,000 B.C.

Whitetail deer, wapiti, raccoon, squirrel, oppossum, and eastern cottontail rabbit were the primary mammal remains recovered. A total
of fifty-six species of birds were found in the accumulation of which various species of ducks, geese, and swans were most prevalent. Also present were remains of the turkey, passenger pigeon, bobwhite quail, prairie chicken, and various waterfowl such as coots, cranes, rails, and grebes. Included among the four species of turtle recovered were the pond terrapin, painted turtle, box turtle, and the soft-shelled turtle. The majority of the thirty-six species of fresh water mussels were those of the large river species although other normally found in shallow ponds and sloughs were also represented. Many aquatic snails were present indicating that they were probably being exploited as a food source. The remains of ten species of fish, both river and backwater species, were found. These include the drum, catfish, gar, buffalo, suckers, and bullheads. Identified remains from this rock shelter represent only one archaeological sampling which does not necessarily indicate that these particular animals were the only ones being utilized. However, this sampling does indicate an extensive utilization of the natural biotic resources of this area.

In light of the fact that only one unidentifiable animal bone was recovered from the Roosevelt #2 site, the reader may be wondering at this point about the relevance of the about discussion. In many instances, little or no detailed information is available on the past ecology of a particular area of archaeological interest. Therefore, the archaeologist has been forced to make ecological inferences based on rather meager data. Here in southern Illinois however, a great wealth of information is available and provides an opportunity to present the natural setting in more complete detail. And, although I cannot say whether or not any specific plant or animal was utilized at the
Roosevelt #2 site, it can be stated that the many diverse plants and animals discussed were present in the immediate vicinity and available for human utilization.
FIELD METHODS

Often stated as highly desirable, but frequently ignored or slighted in the published reports are detailed descriptions of the field methods employed at a given site. Such statements are deemed helpful in evaluating any cultural reconstructions attempted and necessary in evaluating the worth of the field methods themselves. Because a cultural reconstruction is the ultimate objective of this report and because the author is especially interested in evaluating the particular combination of field methods employed, this entire section will be devoted to the discussion of the field methods employed at the Roosevelt #2 site.

In simple outline, the field methods used were:

1. The entire surface of the terrace was plowed to a depth of six inches and then disced.
2. Low altitude aerial photographs were then taken of the prepared site.
3. A datum point was established and a grid system of convenient units was surveyed and staked.
4. A controlled surface collection of each grid unit was made.
5. The contour and relief of the site was recorded and mapped.
6. Based upon the information obtained from the aerial photographs and the controlled surface collection, a total of thirteen two-meter squares were excavated employing arbitrary ten cm. levels.

In large part, the reasons why this particular combination of methods
was used is directly related to and, in a sense, dictated by the general situation confronting the investigator. This can best be illustrated by a review of that field situation.

As previously indicated, the Roosevelt #2 site was situated on a terrace remnant that was surrounded by the low, marshy bottomlands of Briar Creek. The artifacts and other cultural remains were generally restricted to the crest and talus slopes of this remnant. These cultural remains were present in such great profusion that attempting to detect surface concentrations of materials as possible indicators of subsurface features proved fruitless. How then could the presumed subsurface features be located? One method that could have been used is the time-honored method of exploratory trenches. But as anyone who has worked in southern Illinois knows, the months of February, March, and April are not months during which one can profitably conduct hand excavations because of the generally muddy conditions. In addition to being forced to conduct the field work during this period because of the threatened destruction of the site, it was necessary to employ a small crew due to limited funds. These conditions made extensive hand excavations unfeasible at the Roosevelt #2 site. In order to obtain the most information possible under these conditions, it was necessary to implement alternative field methods. The most promising alternative methods in terms of possible information obtainable with resources at hand were the ones outlined above.

A brief respite from cold, wet weather came during the first week of February. After several days of the unusually warm and dry weather, the soil had been sufficiently dried out by surface winds that the landowner was able to plow the terrace remnant. He plowed the soil to a
depth of six inches and then disced the area. The purpose of plowing the site was twofold. First, turning the previously disturbed soil over brought to the surface a fresh array of cultural material that had not been sampled. This step was necessary because a general surface collection had been made when the site was first located. The sample thus collected was biased in that principally only artifacts were removed selectively. Secondly, plowing served to prepare the site for taking aerial photographs. By removing the last vestiges of the previous corn crop, nothing remained to obscure the ground surface itself. It was hoped that a clear view of the terrace surface would show differences in soil coloration and/or subtle differences in relief that could not be seen while standing on the surface itself.

Commonly, fields in this region are plowed to a depth of eight or ten inches in late fall or early spring. The fields then have a chance to readily absorb needed moisture. Oftentimes the spring rains are not gentle showers. Hard downpours occur and erode some of the topsoil from elevated landforms. Then the following year, the fields are again plowed to the same depth. This procedure initiates a cycle of each year cutting a bit deeper into the undisturbed subsoil. Unfortunately for fields containing archaeological sites, this plowing-erosion cycle spells the doom for subsurface features. The final result is a ten inch plow zone containing a mixture of cultural remains from what once may have been a stratified site containing features. For the Roosevelt #2 site, plowing had only occurred for eight to ten years--and not the usual one hundred--so it was possible that at least some subsurface features were still present. In order to prevent further damage to any existing features, the
The site was only plowed to a depth of six inches. Also to prevent further erosion, the site was plowed following the contours of the terrace. After plowing, care was exercised to not walk across the terrace to prevent packing the soil. Such packed areas could distort interpretation of the aerial photographs.

A change in weather prevented further work until February 18, 1966. With the forecasted good weather for that date, a plane was scheduled for noon. We arrived over the site at approximately 1:00 P.M. Immediately noticeable were distinct soil discolorations. Deep brown, grey, and black areas stood out against the uniform background of red-brown. Even if no photographs had been taken, just seeing these differences and noting their relative positions would have been extremely valuable. However, by skillful maneuvering of the plane at 1800 feet, it was possible to take vertical, high oblique, and low oblique photographs through the open window. Black and white, color, and high speed infra-red photographs were taken.

These photographs served not only as a permanent record of what the site looked like in its entirety, but also recorded the internal soil discolorations. In addition, the spatial relationship of the Roosevelt #2 site with other sites in the immediate vicinity was preserved. Because middens areas frequently contain large amounts of organic residues which blacken the soil, it was assumed that the discolorations represented midden concentrations.

On February 25, 1966, the author and three students attempted to reach the site to establish a datum point and to survey a grid system. Because of the muddy conditions, it was necessary to walk the last mile into the site as the four-wheel drive jeep was stuck. Eventually, a
grid system was established over the entire surface of the terrace by the end of the day. Ten meter squares seemed to be a convenient and workable size for the grid units. No further work was attempted at that time because of darkness.

On March 20, 1966, the author and crew of three students began the long awaited surface collection of the Roosevelt #2 site. The site had not been visited or disturbed during the interim beginning February 25, 1966. All material was picked up and bagged according to the unit in which it was found. In addition, recognized artifacts were plotted on individual grid sheets to record horizontal distribution. Within each unit, everything visible was picked up and since there had been many rains after the site had been plowed, visibility was excellent. I rechecked most of the grid units to determine whether any material was being missed. Those units still containing materials were recollected. The surface collection was completed in two days. One day was spent in mapping the contours and relief of the terrace. A transit and stadia rod were used for this purpose.

The next two days were spent washing and sorting seventy-three bags of materials recovered. The materials were then examined by unit to determine which, if any, of the units yielded relatively greater numbers of artifacts. This preliminary inspection revealed a correlation between the units within the dark areas on the aerial photographs and those yielding a relatively greater number of artifacts.

Because of the correlation discussed above, test excavations were begun on March 26, 1966. It was hoped that those grid units within the dark areas and yielding relatively more artifacts would also produce
subsurface features. Since the entire site had been previously surveyed in ten meter units, it was easy to mark off two meter squares as excavation units using triangulation procedures. A total of thirteen squares were marked off in this manner. Three areas of the site were chosen for testing. These areas were within the presumed midden concentrations.

The actual procedure of excavating the two meter test squares utilized shoveling and troweling techniques. The plow zone was removed as one unit by shoveling down to within one or two centimeters of the undisturbed subsoil. The soil was carefully examined for artifacts and cultural debris, and then discarded. Screening would have speeded up this process, but screens were not available. The final one or two centimeters of the plow zone were removed by troweling. Care was taken to clean the old plow scars. This cleaning resulted in a rather uneven surface, but avoided mistaking the plow scars for possible aboriginal features.

With regard to features, all soil discolorations or disturbances intrusive into the undisturbed subsoil were tentatively classified as features upon first encounter. All such tentative features were recorded. However, only those that were the product of human activities were assigned feature numbers. Those receiving feature numbers include rock concentrations, postmolds, and pits. Calling all of these features is perhaps stretching the usual connotation of the term "feature," but because it is rare that anything is found in open sites in southern Illinois it was felt justifiable in this case.

All discolorations initially deemed postmolds were cross-sectioned to determine whether they were actually postmolds or in fact roots or rodent burrows. Because of their small size, it was necessary to
excavate a small slit-trench through one-half of the disturbance. This trench facilitated recording the vertical profile of the disturbance. All soil from these disturbances was carefully examined for artifacts and other cultural remains before discarding it.

Possible pits were also cross-sectioned, but the slit-trench technique was not used in order to preserve integrity of the feature limits. Cross-sectioning served to again provide a profile of the disturbance. Also, it provided an opportunity to observe whether the fill was homogeneous or layered. Artifacts and other large remains were left in situ until the entire disturbance had been cleaned and recorded. Soil from these disturbances was retained for floatation.

Rock concentrations were merely cleaned and recorded upon first encounter. The rocks were then individually removed and the soil among them carefully examined for cultural remains. The rocks were retained until they could be cleaned, examined carefully for evidence of use, and weighed. The unworked specimens were eventually discarded.

Finally, during the first week of April, two return trips were made to the site. The open pits were backfilled and leveled. The grid system stakes were removed and, as a last gesture, a brief general surface collection was made since it had rained several days before. These activities completed the fieldwork at the Roosevelt #2 site.
PLATE I

Fig. 1 Roosevelt 2 Grid System

Fig. 2 Roosevelt 2 Contour Map

- Limit of Flowing
- Gray Iron Sines

Contour interval one meter north
ANALYSIS OF RECOVERED MATERIALS

Before actually beginning the analysis, an explanation of what form this analysis will follow and why this form was chosen is necessary. As nearly as possible, the analysis will follow a functional approach rather than a strictly stylistic approach. The more conventional approach has been that of form alone and has produced elaborate and formidable descriptive typologies. To ignore these descriptive typologies would be impractical if not impossible. Therefore, an attempt will be made to integrate form and function into a useful classification system.

The choice of a combined approach is based upon the concept that a given object (in this case an artifact) was made for a purpose, whether this be for cutting wood or symbolizing an abstract idea. The object reflects the activity for which it was made. Certainly, the activity or use to which the object is put directly affects the final form of that object. But all of the subtle distinctions between both form and method of manufacture do not alter the fact that a projectile point is still just that—a projectile point with a specific primary function. The over-abundant descriptive typologies attest to the creative imaginations of the archaeologists and not necessarily to those of the aboriginal makers.

Other non-physical aspects of culture are also functional. The implication of function is clearly evident in the statement by Caldwell (1958: 3) that "... any culturally transmitted pattern of action seen
through time is a tradition with or without an archaeologically pre-
served product, or it may be action with no material product at all." If patterns of action served no function, then what would be the prob-
ability of their being established as a tradition? Therefore if the
archaeologists is to remain an anthropologist, he must record the re-
results of all activities producing observable products and not just
artifactual products.

To analyze a body of archaeological data, one must have some means
at his disposal for ordering and summarizing that data. A structured
system of classifying the data enables the archaeologist to both order
and summarize his data. How he views the data, which is a consequence
of the classification system used, will directly affect the conclusions
he draws from that data. In keeping with the concept of function, the
analysis will attempt to classify artifacts and other remains according
to their original function—as far as can be determined. Granted, one
cannot ask a long-dead Indian what the specific function of a given
object was, but as Fowler states (1959: 29), "... it is very probable
that many artifacts had multiple use. The general inference of primary
use, however, is probably in broad terms correct."

In this paper, the cultural remains from the Roosevelt #2 site
will be viewed as belonging to inferred functional categories. Such
categories can be defined as "... those reflecting an activity in
which the people were engaged and for which the artifact was manufac-
tured." (Fowler, 1959: 29) Because the archaeologist is interested in
cultural reconstructions, it would seem more logical to view the recov-
ered data in terms of cultural activities or patterned behavior rather
than simply by form of the artifacts alone.
The functional categories for consideration are outlined below. The major categories reflect the activities, whereas the sub-units are based upon descriptive forms. This integrated system spans both a broad temporal range and a wide spatial distribution. And though incomplete, it attempts to include at least enough to indicate how this system could be expanded for use in analyzing materials from a variety of sites. Also it should be noted that where one finds, for instance, the sub-unit projectile point, one should further subdivide that unit into the appropriate descriptive types.

I. General Utility Tools for Miscellaneous Activities

A. Knives

1. Type I

a. Summary description: This knife type is a relatively long, narrow, and thick blade. Some specimens exhibit a short hafting stem that is delimited by a single shoulder. The edges are parallel tapering to a point.

b. Form: Lanceolate in general outline, biconvex in cross-section.

c. Size:
   (1) Length--range, ? ; average, ?
   (2) Width--range, 18-25 mm.; average, 23 mm.
   (3) Thickness--range, 8-10 mm.; average, 9 mm.

d. Material: Cobden, Kaolin, and grey-banded flint.

e. Method of manufacture: Large shallow percussion flakes were removed bifacially to shape the blade. Small, regular secondary flakes were removed to finish the edges. On the hafted specimens, the finely chipped edges of the stem were ground smooth.

f. Comments: A total of six specimens were recovered. All specimens were broken, but distal ends and bases were recovered.

g. Cultural affiliations: Knives of similar form were recovered from the Roach site in western Kentucky in an archaic context. (Rolingson and Schwartz, 1966: 50)
2. Type II

a. Summary description: A small thin rectangular blade with a straight base and rounded distal end. Frequently called a lamellar blade. The edges are parallel.

b. Form: Usually rectangular in outline and rhomboid in cross-section.

c. Size:
   (1) Length--?
   (2) Width--16 mm.
   (3) Thickness--4 mm.

d. Material: A brown-banded flint similar to Cobden flint.

e. Method of manufacture: A percussion flake was struck from a prepared platform. Small secondary flakes were removed bifacially along the cutting edges.

f. Comments: Only one specimen was recovered and it was broken. The distal end was missing.

g. Cultural affiliations: Flake knives of this type are usually found in a Woodland context, particularly with Hopewell materials. (McGregor, 1964: 25)

3. Type III

a. Summary description: This type is a large, thick rectangular blade. Some specimens approach a square form. Edges are usually straight but may be slightly excurva-te.

b. Form: Generally rectangular, but may be almost square in outline. This type is biconvex in cross-section. Edges are straight or slightly convex.

c. Size:
   (1) Length--range, 38-51 mm.; average, 48 mm.
   (2) Width--range, 29-42 mm.; average, 35 mm.
   (3) Thickness--range, 7-15 mm.; average, 9 mm.

d. Material: Cobden, Grand Chain, and Mill Creek flint. Two specimens were of unidentified flint.

e. Method of Manufacture: Large, thick flakes were shaped by percussion. Secondary horizontal transverse flakes were then removed to finish the cutting edges.

f. Comments: A total of twenty-four specimens were recovered.
3. **Type III--Continued**

g. Cultural affiliations: Knives of this type are illustrated from the Morris site in Kentucky where they were recovered from an archaic context. (Rolingson and Schwartz, 1966: 106)

4. **Type IV**

a. Summary description: This type is a large, heavy oval shaped blade. It is very similar to a commonly found quarry blank except that the cutting edges were finished.

b. Form: Oval in outline, biconvex in cross-section.

c. Size:
   (1) Length--range, 69-82 mm.; average, 75 mm.
   (2) Width--range, 35-52 mm.; average, 50 mm.
   (3) Thickness--range, 10-21 mm.; average, 17 mm.

d. Material: Cobden, Grand Chain, and Mill Creek flint is the usual material. However, one specimen was manufactured from quartzite.

e. Method of manufacture: Large flakes struck from cores were further shaped by percussion and finished along the cutting edges by removing small secondary flakes. The large percussion flakes were removed alternately from opposite faces which resulted in a wavy cutting edge.

f. Comments: A total of ten specimens were recovered. Five of these were complete.

g. Cultural affiliations: Again, this type is illustrated from the Morris site in Kentucky where it was recovered from an archaic context. (Rolingson and Schwartz, 1966: 106)

5. **Type V**

a. Summary description: Type V is a small, thin, triangular blade. Edges are straight or curvate.

b. Form: Triangular in outline and either biconvex or plano-convex in cross-section. Edges are straight or convex.

c. Size:
   (1) Length--range, 50-63 mm.; average, 59 mm.
   (2) Width--range, 31-40 mm.; average, 37 mm.
   (3) Thickness--range, 8-14 mm.; average, 10 mm.
5. Type V--Continued

d. Material: Dongola and Cobden flint.

e. Method of manufacture: Large percussion flakes were further shaped by irregular percussion flaking. The three edges were then finished by pressure flaking.

f. Comments: A total of thirteen specimens were recovered.

g. Cultural affiliations: This type is also illustrated from the Morris site in Kentucky where it was recovered from an archaic context. (Rolinson and Schwartz, 1966: 106)

6. Type VI

a. Summary description: This type is a broad, thin blade with a short parallel-sided hafting stem. Shoulders were rounded with sides of stem edges ground smooth.

b. Form: Blade edges are excursive--outline probably oval or triangular. It is biconvex, but flattened in cross-section.

c. Size:

(1) Length--?
(2) Width--49 mm.
(3) Thickness--7 mm.

d. Material: Dongola flint.

e. Method of manufacture: A large flake was shaped by percussion. It was then thinned by removing regular, horizontal transverse flakes over the entire surface. The edges were finished by removing small even flakes.

f. Comments: Only the basal one-half of one specimen was recovered.

g. Cultural affiliations: Unassigned.

B. Scrapers

1. Type I (End Scraper)

a. Summary description: A thick, heavy end scraper with ridge or "keel" opposite plane surface. End and sides were steeply beveled. Edges are sharp.

b. Form: Triangular in outline and triangular in cross-section. Edges were chipped either straight or slightly convex.
1. Type I--Continued

c. Size:
   (1) Length--range, 48-85 mm.; average, 67 mm.
   (2) Width--range, 43-60 mm.; average, 52 mm.
   (3) Thickness--range, 22-40 mm.; average, 33 mm.

d. Material: Cobden, Grand Chain, and one unidentified flint type.

e. Method of manufacture: Cores or very large flakes were utilized in making this type. A plane surface was formed by striking off a large flake. Percussion flaking was used to shape the outline and bevel the edges. The finished product was heavy with steeply beveled edges.

f. Comments: A total of seven specimens were recovered from the site.

g. Cultural affiliations: Scrapers of this type are reported from Paleo-Indian and early archaic sites from a broad geographical area.

2. Type II (End Scraper)

a. Summary description: This type is similar to Type I, but is smaller and more finely chipped over the entire artifact (except on plane surface). Edges are sometimes dulled.

b. Form: Varies from oval to triangular in outline and plano-convex in cross-section.

c. Size:
   (1) Length--range, 53-71 mm.; average, 63 mm.
   (2) Width--range, 30-37 mm.; average, 33 mm.
   (3) Thickness--range, 9-23 mm.; average, 15 mm.

d. Material: Cobden and Dongola flint. One specimen was manufactured from quartzite.

e. Method of manufacture: Large flakes were shaped by percussion to form steeply beveled edges. All surfaces except plane surface were finished by secondary flaking.

f. Comments: A total of seven specimens were recovered.

g. Cultural affiliations: Scrapers of this type are also reported from a wide geographical area and found in Paleo-Indian or archaic contexts.
3. Type III (Oval Scraper)
   
a. Summary description: This type is smaller and more finely made than Type I. It has two plane surfaces only one of which was utilized. Edges are dulled on most specimens.
   
b. Form: Generally oval in outline and rhomboid in cross-section.
   
c. Size:
   (1) Length--range, 40-60 mm.; average, 51 mm.
   (2) Width--range, 35-52 mm.; average, 45 mm.
   (3) Thickness--range, 14-15 mm.; average, 15 mm.
   
d. Material: Cobden and Grand Chain flint.
   
e. Method of manufacture: Large percussion flakes were shaped by percussion to form a beveled edge except at the bulb of percussion. The plane surface resulted from striking off the original flake. One specimen was further chipped to form a graving point opposite the bulb of percussion.
   
f. Comments: A total of nine specimens were recovered.
   
g. Cultural affiliations: Resemble those reported by Coe (1959: 79) from the Hardaway site in a Hardaway context.

4. Type IV (End Scraper)
   
a. Summary description: A small variable shaped hafted scraper. This type is generally thin and exhibits a minimum of effort in manufacture. Scraping edge is usually dulled.
   
b. Form: Irregular in outline and plano-convex in cross-section. The stem is usually short and varies in shape.
   
c. Size:
   (1) Length--range, 30-35 mm.; average, 32 mm.
   (2) Width--range, 20-25 mm.; average, 24 mm.
   (3) Thickness--range, 4-5 mm.; average, 5 mm.
   
d. Material: Dongola flint.
   
e. Method of manufacture: Irregular flakes were utilized. One edge was chipped to form a straight scraping edge. Opposite this straight edge, an area was shaped to form a stemmed hafting area.
4. Type IV--Continued
   f. Comments: A total of seven specimens were recovered.
   g. Cultural affiliations: Unassigned.

5. Type V (End Scraper)
   a. Summary description: A broken projectile point base was reworked into a scraper. The scraping edge is usually convex. The hafting stem was generally unaltered from the form of the original projectile point and therefore variable. Edges are frequently sharp.
   b. Form: An oval blade with a variable stem in outline. In cross-section, the form also varied according to the form of the original artifact. The scraping edges are usually steeply beveled.
   c. Size:
      (1) Length--range, 44-51 mm.; average, 47 mm.
      (2) Width--range, 29-37 mm.; average, 33 mm.
      (3) Thickness--range, 7-10 mm.; average, 9 mm.
   d. Material: Dongola flint.
   e. Method of manufacture: Broken projectile point bases were reworked to form an oval blade. Edges were steeply beveled to form a generalized unifacial scraper.
   f. Comments: A total of two specimens were recovered.
   g. Cultural affiliations: This type has been found in archaic contexts as well as in later Woodland and Mississippian contexts.

6. Type VI (Side Scraper)
   a. Summary description: A long, narrow, thin flake with one or both of the long edges finished. Size and shape is variable. Edges are sharp.
   b. Form: Somewhat irregular in outline and either rhomboid or triangular in cross-section.
   c. Size:
      (1) Length--range, 46-72 mm.; average, 69 mm.
      (2) Width--range, 23-35 mm.; average, 27 mm.
      (3) Thickness--range, 5-12 mm.; average, 9 mm.
   d. Material: Dongola, Cobden, and Grand Chain flint.
6. Type VI--Continued

e. Method of manufacture: Random flakes were selected for use and small regular flakes were removed from one or more edges to form a scraping edge.

f. Comments: A total of thirty-three specimens of this type were recovered.

g. Cultural affiliations: This type has been found in Archaic, Woodland, and Mississippian contexts.

C. Hammerstones

1. Type I

a. Summary description: A water-worn pebble that was utilized without alteration.

b. Form: Variable, but often globular or spheroid.

c. Size:
   (1) Length--range, 50-130 mm.; average, 95 mm.
   (2) Width--range, 40-80 mm.; average, 63 mm.
   (3) Thickness--range, 28-51 mm.; average, 45 mm.

d. Material: Igneous basalt, flint, and one specimen of compact conglomerate.

e. Method of manufacture: Pebbles were used in unaltered form. Ends became battered through use.

f. Comments: A total of eighteen specimens were recovered.

g. Cultural affiliations: Hammerstones of this type were recovered from an Archaic context from the Ferry site and the Modoc Rock Shelter. (Fowler, 1956: personal communication)

2. Type II

a. Summary description: This type is similar to Type I except that one or more surfaces exhibit shallow, concave pits.

b. Form: See Type I above.

c. Size: Within ranges as given for Type I above.

d. Material: Igneous basalt.

e. Method of manufacture: Shallow pits were pecked into one or more surfaces. Battered edges resulted from use.
2. Type II--Continued

f. Comments: A total of twenty-three specimens were recovered.

g. Cultural affiliations: See Type I above.

D. Choppers

1. Type I

a. Summary description: Large ovoid blades that were shaped by percussion. Edges were often finished by secondary flaking.

b. Form: Varies from oval to triangular in outline with edges convex. Specimens are biconvex in cross-section.

c. Size:
   (1) Length--range, 90-145 mm.; average, 123 mm.
   (2) Width--range, 71-82 mm.; average, 76 mm.
   (3) Thickness--range, 28-44 mm.; average, 37 mm.

d. Material: Cobden and Mill Creek flint.

e. Method of manufacture: Cobbles or tabular pieces of flint were shaped by direct percussion. Edges were made by alternately removing large flakes from the two surfaces. This bifacial chipping resulted in a wavy cutting edge that was frequently finished by removing secondary flakes.

f. Comments: A total of ten specimens were recovered.

g. Cultural affiliations: Early and middle Archaic associations. (Winters, 1966: personal communication)

E. Celts

1. Type I

a. Summary description: A chipped stone celt with a hafting area that has been ground smooth.

b. Form: Triangular or rectangular in outline and biconvex in cross-section. Cutting edge is convex.

c. Size:
   (1) Length--range, 120-141 mm.; average, 127 mm.
   (2) Width--range, 58-63 mm.; average, 61 mm.
   (3) Thickness--range, 23-31 mm.; average, 25 mm.

d. Material: Mill Creek and Kaolin flint.
1. Type I—Continued

e. Method of manufacture: Tabular pieces of flint were shaped by percussion. Large shallow flakes were removed from the edges at the approximate mid-point of the blade. These areas were then ground smooth for hafting. Secondary flakes were removed from cutting edge.

f. Comments: Five specimens were recovered.

g. Cultural affiliations: Unassigned.

F. Mauls

1. Type I

a. Summary description: A large, heavy pounding tool with hafting notches. The pounding surface is thick, convex, and battered.

b. Form: Ovoid in outline and rectangular in cross-section.

c. Size:
   (1) Length—140 mm.
   (2) Width—91 mm.
   (3) Thickness—51 mm.

d. Material: Unidentified flint.

e. Method of manufacture: A large cobble was shaped by percussion. Hafting notches were chipped approximately two-thirds the length from the pounding surface. The chipped notches were ground smooth.

f. Comments: Only one specimen was recovered.

g. Cultural affiliations: Mauls have been reported from the Morris site in Kentucky in an archaic context. (Relingson and Schwartz, 1966: 114)

C. Worked Flakes

1. Type I

a. Summary description: Random flakes were worked along one or more edges. These implements were used for cutting and/or scraping.

b. Form: Irregular in outline and either plano-convex or triangular in cross-section.

c. Size: Highly variable.
1. Type I--Continued

d. Material: Cobden, Dongola, Grand Chain, and Mill Creek flint. Some specimens were made from flint types found in the Illinois River Valley.

e. Method of manufacture: Random flakes were selected for utilization. One or more edges were regularly chipped to form cutting or scraping edges.

f. Comments: A total of fifty-four specimens were recovered.

g. Cultural affiliations: Because this category of artifacts is so variable in attributes and shows a minimum of alteration, it cannot be assigned to any cultural group.

II. Weapons for Hunting and Defense

A. Projectile Points

1. Type I (Unfluted Clovis)

a. Summary description: A medium sized lanceolate point with an incurvate base. Basal hafting area was thinned and ground smooth.

b. Form: Lanceolate in outline and biconvex in cross-section.

c. Size:
   (1) Length*--range, 60-68 mm.; average, 64 mm.
   (2) Width--range, 26-30 mm.; average, 28 mm.
   (3) Thickness--range, 5-7 mm.; average, 6 mm.

*Measurements from reconstructions.

d. Material: Dongola flint and a white flint from unknown source.

e. Method of manufacture: Collateral and random flaking was employed to shape the blade. Several broad shallow flakes were removed to thin the base. Regular secondary flakes were removed to finish the edges. The sides and base of the hafting area was ground smooth.

f. Comments: Two basal fragments were recovered.

g. Cultural affiliations: This projectile point is characteristic of Paleo-Indian occupations with a probable age of 8,000-10,000 B.C. (Cambron and Hulse, 1965: A-19-a)
2. Type II (Clovis Fluted)
   a. Summary description: A medium to large sized lanceolate projectile point with an incurvate base. This type is bifacially fluted approximately one-third of the total length. The basal hafting area was ground smooth.
   
   b. Form: Lanceolate in outline, fluted in cross-section.
   
   c. Size:
      (1) Length**--75 mm.
      (2) Width**--28 mm.
      (3) Thickness**--9 mm.
      
      *Measurement from reconstruction.
   
   d. Material: Resembles a flint type from the Illinois River Valley.
   
   e. Method of manufacture: Horizontal transverse flakes were removed to shape the blade. Edges were beveled by secondary flaking. Method of removing flutes cannot be determined.
   
   f. Comments: One fragment of this type was recovered.
   
   g. Cultural affiliations: Same as for Type I above. (Cambron and Hulse, 1965: A-19-b; and Bell, 1958: 16)

3. Type III (Folsom)
   a. Summary description: A small lanceolate, fluted projectile point with beveled edges. Sides of hafting area were ground smooth.
   
   b. Form: Lanceolate in outline; fluted in cross-section.
   
   c. Size:
      (1) Length**--49 mm.
      (2) Width**--25 mm.
      (3) Thickness**--3 mm.
      
      *Measurements from reconstruction.
   
   d. Material: A red flint from unknown source.
   
   e. Method of manufacture: Indeterminant.
   
   f. Comments: One fragment representing a part of the mid-section was recovered.
   
   g. Cultural affiliations: This type is characteristic of a late Paleo-Indian culture with an approximate age of 8,000 B.C. (Bell, 1958: 26)
4. Type IV (Dalton)

a. Summary description: A projectile point with a triangular blade and a clearly demarcated hafting area. Blade edges are straight and serrated.

b. Form: Pentagonal in outline and biconvex in cross-section.

c. Size:
   (1) Length--?
   (2) Width--24 mm.
   (3) Thickness--5 mm.

d. Material: Brown-banded flint; resembles flint from Kaskaskia River Valley.

e. Method of manufacture: Horizontal transverse flakes were removed to shape blade. Deep thick flakes were removed to form serrated edges.

f. Comments: One blade fragment was recovered that probably represents a Dalton type.

g. Cultural affiliations: From Modoc Rock Shelter (Fowler, 1966: personal communication) Dalton points were found in a context that suggests a Paleo-Indian or early Archaic occupation. This type also resembles Coe's Kirk Stemmed which also is an early archaic type. (Coe, 1959: 122)

5. Type V (LeCroy)

a. Summary description: This type is a medium sized point with finely serrated edges and a bifurcated stem.

b. Form: A triangular blade with slightly expanding stem in outline and biconvex in cross-section.

c. Size:
   (1) Length--35 mm.
   (2) Width--30 mm.
   (3) Thickness--7 mm.

d. Material: Dongola flint.

e. Method of manufacture: Random flakes were removed to shape point. Large flakes were removed to form expanding stem and bifurcated base. Secondary flakes were removed to finish the edges. Basal edges were not ground smooth.
5. Type V--Continued

f. Comments: Only one specimen was recovered. Extreme distal end was absent.

g. Cultural affiliations: An early Archaic association is indicated by Cambron and Pulse (1965: A-52) for this projectile point type.

6. Type VI (Benton Stemmed)

a. Summary description: A large stemmed projectile point with excursive edges.

b. Form: Triangular in outline with straight sided stem and base. Biconvex in cross-section.

c. Size:
   (1) Length--138 mm.
   (2) Width--57 mm.
   (3) Thickness--12 mm.

*Measurement from reconstruction.

d. Material: A mottled white and grey flint resembling some flint types from the Illinois River Valley.

e. Method of manufacture: Large, broad, shallow flakes were removed to shape the blade. These flakes were removed at an oblique angle to the long axis of the point. Shoulders and stem were formed by the removal of short thick flakes. Base of stem was ground smooth. Blade edges were beveled by removing secondary flakes.

f. Comments: Only one specimen of this type was recovered. The distal end and part of the base were missing. The reconstructed length is greater than the maximum given by Cambron and Pulse (1965: A-9) but in all other attributes, this specimen conforms to their description.

g. Cultural affiliations: According to Cambron and Pulse (1965: A-9) "... a strict Archaic association dating from about 4,000 B.C. to 2,000 B.C. is suggested."

7. Type VII (Big Sandy Point)

a. Summary description: A medium sized side-notched point with wide shallow notches for hafting. Blade edges are excursive. Basal thinning and grinding are present.

b. Form: Triangular in outline, with straight, convex, or slightly incurvate base. Specimens are biconvex in cross-section.
7. Type VII--Continued

c. Size:
(1) Length--range, 37-48 mm.; average, 43 mm.
(2) Width--range, 20-24 mm.; average, 23 mm.
(3) Thickness--range, 6-8 mm.; average, 7 mm.

d. Material: Dongola and Cobden flint. One specimen of unidentified flint.

e. Method of manufacture: Horizontal transverse flaking was used to shape point. Broad thin flakes were removed to thin basal area and to form notches. Edges were then beveled slightly. Bases and side-notches were ground.

f. Comments: A total of six specimens were recovered.

g. Cultural affiliations: According to Bell (1960: 8) the Big Sandy point type appears ca. 5,000 B.C., but is most prevalent between 3,350-1,200 B.C.

8. Type VIII (Mud Creek)

a. Summary description: This type is a medium sized expanding stem point. The blade edges are excursive and the distal end is sharply acute.

b. Form: Triangular in outline, with slightly expanding straight based stem. It is biconvex in cross-section.

c. Size:
(1) Length--61 mm.
(2) Width--26 mm.
(3) Thickness--10 mm.

d. Material: Cobden flint.

e. Method of manufacture: The point was shaped by random flaking. The stem was formed by removing shallow small flakes. This resulted in rounded shoulders and a thinned basal edge. Blade edges were retouched to finish. No basal grinding is apparent.

f. Comments: Only one specimen was recovered.

g. Cultural affiliations: Cambron and Hulse (1965: A-62) suggest a "... strong late Archaic type that existed into Woodland times."
9. Type IX (Gary)

a. Summary description: This point exhibits a triangular blade with excruciate edges and horizontal shoulders. The hafting area is a contracting stem with an excruciate base.

b. Form: Triangular blade and rounded contracting stem. Specimen is biconvex in cross-section.

c. Size:
   (1) Length--57 mm.
   (2) Width--31 mm.
   (3) Thickness--9 mm.

d. Material: Dongola flint.

e. Method of manufacture: Random flakes were removed to shape the point. The edges were finished by secondary chipping.

f. Comments: Only one specimen was recovered.

g. Cultural affiliations: Bell (1958: 28) suggests and Archaic association with a temporal range of 2,000 B.C. to 1,000 A.D.

10. Type X (Hidden Valley)

a. Summary description: A medium to large projectile point with a triangular blade and contracting sided, straight based stem.

b. Form: Triangular blade, contracting straight sided stem with straight base. Biconvex in cross-section.

c. Size:
   (1) Length--46 mm.
   (2) Width--28 mm.
   (3) Thickness--12 mm.

d. Material: Flint from unknown source.

e. Method of manufacture: Collateral flaking shaped the blade. Edges were beveled. Specimen appears to have been resharpened.

f. Comments: Only one specimen was recovered.

g. Cultural affiliations: Fowler (1959: 36) suggests an early and middle Archaic association.
11. Type XI (Plevna)

a. Summary description: A medium sized corner-notched point with steeply beveled alternate faces and an excurvate thinned base which has been ground smooth.

b. Form: Triangular in outline and rhomboid in cross-section.

c. Size:
   (1) Length - 74 mm.
   (2) Width - 34 mm.
   (3) Thickness - 9 mm.

   *Measurement from reconstruction.

d. Material: Dongola flint.

e. Method of manufacture: Broad random flakes were removed to shape the point. The basal area was thinned by removing broad, shallow, secondary flakes. Deep notches were formed diagonally to long axis by removing deep flakes. The base was ground smooth. Opposite faces were steeply beveled to finish edges.

f. Comments: Only one specimen was recovered. The distal end was absent.

g. Cultural affiliations: Cambron and Hulse (1965: A-72) suggest an Archaic context sometime prior to 5,000 B.C.

12. Type XII (Marcos)

a. Summary description: A medium sized corner-notched point. The shoulders are barbed and the base is straight or convex. Blade edges are straight.

b. Form: Triangular in outline with corner-notches. Specimens are biconvex in cross-section.

c. Size:
   (1) Length - range, 45-60 mm.; average, 50 mm.
   (2) Width - range, 21-35 mm.; average, 28 mm.
   (3) Thickness - range, 7-9 mm.; average, 8 mm.

d. Material: One specimen was manufactured from Mill Creek flint; others from unidentified exotic flint.

e. Method of manufacture: Broad, shallow, random flakes were removed to shape blade. Blade edges were finished by removing small regular flakes. Notches were formed by removing broad, deep flakes. Notches were further worked by removing secondary flakes. Bases were usually thinned and excurvate.
12. Type XII--Continued

f. Comments: A total of five specimens were recovered.

g. Cultural affiliations: These points resembles those described by Bell (1958: 42) as Marcos points. Bell suggests a late Archaic association for this type with a possible age of 2,000 B.C. to 1,000 A.D.

13. Type XIII (Motley)

a. Summary description: This type is a medium sized point with an expanding stem. The blade edges are straight.

b. Form: Triangular in outline with side or corner-notches removed. Cross-section is biconvex.

c. Size:
   (1) Length--range, 52-61 mm.; average, 59 mm.
   (2) Width--range, 28-38 mm.; average, 35 mm.
   (3) Thickness--range, 6-7 mm.; average, 7 mm.

d. Material: All specimens were made from Grand Chain flint.

e. Method of manufacture: Shallow random flaking was used to shape the point. The blade edges were finished by removing short deep flakes. Large deep flakes were removed to form notches. Notches were finished by secondary flaking. The bases were thinned and ground smooth on two specimens.

f. Comments: A total of three specimens were recovered.

g. Cultural affiliations: Cambron and Hulse (1965: A-109) suggest an early Woodland association with a beginning in Archaic times.

14. Type XIV (Swan Lake)

a. Summary description: This type is a small, thick point with an unfinished base and shallow side-notches.

b. Form: Triangular in outline and biconvex in cross-section.

c. Size:
   (1) Length--range, 30-40 mm.; average, 35 mm.
   (2) Width--range, 19-21 mm.; average, 20 mm.
   (3) Thickness--range, 9-10 mm.; average, 9.5 mm.

d. Material: Grand Chain flint and flint from unidentified source.
14. Type XIV--Continued

e. Method of manufacture: Random flakes were removed to shape blade and stem. Secondary flaking finished edges. Basal edges are unfinished.

f. Comments: Two specimens were recovered.

g. Cultural affiliations: Cambron and Hulse (1965: A-8) suggest a late Archaic introduction for this type. This type persisted into Woodland associations.

15. Provisional Type XV (Ullin Side-Notched)

a. Summary description: This type is a medium sized, side-notched projectile point. It has broad, shallow notches and a straight, thinned base. Blade edges are excursive. No basal grinding is apparent.

b. Form: Triangular blade with excursive edges. Cross-section is biconvex.

c. Size:
   (1) Total length--range, 37-55 mm.; average, 47 mm.
   (2) Total width--range, 28-33 mm.; average, 29 mm.
   (3) Total thickness--range, 9-11 mm.; average, 10 mm.
   (4) Notch width--range, 5-8 mm.; average, 7 mm.
   (5) Notch depth--range, 3-4 mm.; average, 4 mm.

d. Material: Dongola, Grand Chain, Cobden, and Mill Creek flint.

e. Method of manufacture: Random shallow flakes were removed to shape point. Small regular flakes were removed to finish blade edges. Broad shallow flakes were removed to thin base and form notches. Base and notches were finished by removing small shallow flakes.

f. Comments: A total of seven specimens of this type were recovered.

g. Cultural affiliations: Undefined at this time. Several of these points were recovered from the lower levels at the Duran Rock Shelter (Wolf, 1966: unpublished manuscript). Additionally, several hundred of these specimens have been found on the surfaces of many sites in the Cache River drainage. Most often they are found with Archaic materials. This type is similar to the Big Sandy points but is smaller in length and differs in base form.
16. Provisional Type XVI (Karnak-Stemmed)

a. Summary description: This type is a medium sized point with slightly excursive edges, rounded shoulders, and a straight sided, straight based stem.

b. Form: Lanceolate in outline with straight stem and biconvex in cross-section.

c. Size:
   (1) Total length--range, 56-81 mm.; average, 68 mm.
   (2) Total width--range, 24-27 mm.; average, 25 mm.
   (3) Total thickness--range, 8 mm.; average, 8 mm.
   (4) Stem length--range, 14-15 mm.; average, 15 mm.
   (5) Stem width--range, 21-22 mm.; average, 21.5 mm.
   (6) Stem thickness--range, 8 mm.; average, 8 mm.

d. Material: Dongola flint.

e. Method of manufacture: The point was shaped by removing broad, shallow, horizontal transverse flakes. Edges were finished by removing small secondary flakes. The stem was formed during the process of finishing the edges by removing slightly deeper flakes. The base was ground smooth. The thickness of the point is a uniform eight millimeters with no significant variation. Stem size seems to be uniform also.

f. Comments: Three specimens of this type were recovered.

g. Cultural affiliations: Undetermined. Several hundred points have been recovered from the surface of Archaic sites in the Cache River drainage. This type does not resemble any published types that I can locate.

17. Provisional Type XVII (Cache Diagonal-Notched)

a. Summary description: This type is a medium to large diagonally-notched projectile point. The blade edges are straight, excursive, or slightly incurvate. Edges are steeply beveled on alternate faces and serrated. Shoulders are rounded. Notches are deep and at an obtuse angle to the long axis of the point. Bases are straight or slightly excursive.

b. Form: Triangular blade with corner-notches; rhomboid in cross-section.

c. Size:
   (1) Total length--range, 51-74 mm.; average, 65 mm.
   (2) Total width--range, 27-40 mm.; average, 36 mm.
   (3) Total thickness--range, 9-10 mm.; average, 10 mm.
   (4) Corner-notch width--range, 8-10 mm.; average, 9 mm.
   (5) Corner-notch depth--range, 5-10 mm.; average, 7 mm.
17. Provisional Type XVII--Continued

d. Material: Cobden and Dongola flint.

e. Method of manufacture: Random flakes were removed to shape blade. Alternate faces were steeply beveled to finish edges. Broad, deep flakes were removed to form corner-notches. Base was thinned and ground smooth.

f. Comments: A total of three specimens were recovered.

g. Cultural affiliations: Undefined at present. Approximately 300 specimens of this type have been recovered from the Cache River drainage. They resemble very closely the Plevna type except that the base is straight or only slightly excursive. Also, the edges are more steeply beveled than those on the Plevna type. This type is probably contemporaneous with the Plevna type.

B. Atlatl Weights

1. Type I

a. Summary description: This type of atlatl weight is rectangular in outline with a hole drilled parallel to the long axis. A tapered section of the base was removed to coincide with the emerging bore.

b. Form: Rectangular in general outline and biconvex in cross-section.

c. Size:
   (1) Length--88 mm.
   (2) Width*--71 mm.
   (3) Thickness--19 mm.
   (4) Diameter of hole--12 mm.

   *Measurement from reconstruction.

d. Material: Grey-banded slate.

e. Method of manufacture: Rectangular form shaped by grinding. Method of drilling hole cannot be determined. Entire surface was polished.

f. Comments: A longitudinal fragment (slightly more than one-half the total size) was recovered.

g. Cultural affiliations: This type is illustrated from the Archaic assemblage recovered at the Parrish site in Kentucky. (Rolingson and Schwartz, 1966: 139)
2. Type II

a. Summary description: A rectangular bar atlatl weight with a cylindrical hole drilled parallel to the axis.

b. Form: Rectangular in outline; rectangular in cross-section. All surfaces are slightly excursive.

c. Size:
   (1) Length -- 56 mm.
   (2) Width*--61 mm.
   (3) Thickness*--27 mm.
   (4) Diameter of hole--12 mm.

*Measurements from reconstruction.

d. Material: Red slate.

e. Method of manufacture: Bar form shaped by grinding. Method of drilling hole cannot be determined. Entire surface was polished.

f. Comments: Three fragments of one specimen were recovered.

g. Cultural affiliations: Although this particular form of atlatl weight was not reported from the Ferry site (Fowler, 1957: 15-21), this artifact category is generally associated with an Archaic context in Illinois.

III. Implements for Domestic Use

A. Fire Drill Weights

1. Type I

a. Summary description: A rounded cobble of dense sandstone with conical depressions drilled in one or both flattened surfaces.

b. Form: Oval in outline and oval in cross-section.

c. Size:
   (1) Length--range, 90-168 mm.; average, 151 mm.
   (2) Width--range, 80-130 mm.; average, 110 mm.
   (3) Thickness--range, 38-65 mm.; average, 53 mm.
   (4) Diameter of depressions--range, 5-15 mm.; average, 7 mm.
   (5) Depth of depressions--range, 12-20 mm.; average, 18 mm.

d. Material: Dense sandstone and basalt.
1. Type I--Continued

e. Method of manufacture: Cobbles were selected by criterion of being small enough to be held in one hand. Small pits were started into surface by drilling. These pits were subsequently enlarged through use.

f. Comments: A total of four specimens were recovered.

g. Cultural affiliations: Undefined because specimens were not in undisturbed context, but probably they are associated with Archaic occupations.

B. Milling Stones

1. Type I (Manos)

a. Summary description: A small hand milling stone. Wear patterns suggest these stones were used for grinding in a circular fashion. They may have shallow concave pits on grinding surfaces.

b. Form: Oval in outline and rectangular with rounded corners in cross-section.

c. Size:
   (1) Length--range, 75-98 mm.; average, 92 mm.
   (2) Width--range, 63-81 mm.; average, 71 mm.
   (3) Thickness--range, 29-40 mm.; average, 37 mm.

d. Material: Igneous basalts.

e. Method of manufacture: Unaltered cobbles were utilized. Pits probably resulted from using stone as hammer to crush material which was then ground with the same implement.

f. Comments: A total of forty-six specimens were recovered.

g. Cultural affiliations: Fowler (1957: 7-8) records implements of this type in an Archaic association from the Ferry site.

2. Type II (Metates)

a. Summary description: Large tabular pieces of dense sandstone or basalt with circular, wide shallow depressions.

b. Form: Irregular in outline, roughly rectangular in cross-section.
2. Type II--Continued

c. Size:
   (1) Length--range, 318-421 mm.; average, 370 mm.
   (2) Width--range, 225-371 mm.; average, 298 mm.
   (3) Thickness--range, 90-120 mm.; average, 105 mm.
   (4) Diameter of depression--range, 180-205 mm.;
       average, 193 mm.
   (5) Depth of depression--range, 20-23 mm.;
       average, 22.5 mm.

d. Material: Dense sandstone and igneous basalts.

e. Method of manufacture: Unaltered slab was utilized.
   Depression resulted from use.

f. Comments: Large fragments of seven specimens were
   recovered.

g. Cultural affiliations: Fowler (1959: 34) notes the
   presence of similar implements at a depth of nineteen
   to twenty feet at the Modoc Rock Shelter. This sup-
   ports an early Archaic association.

3. Type III (Multiple-Pitted Nutting Stones)

a. Summary description: Large flattened stones with
   concave depressions into one or more surfaces.

b. Form: Irregular in outline, generally somewhat
   rectangular in cross-section.

c. Size:
   (1) Length--range, 93-162 mm.; average, 143 mm.
   (2) Width--range, 85-137 mm.; average, 113 mm.
   (3) Thickness--range, 38-66 mm.; average, 54 mm.
   (4) Diameter of depressions--range, 11-15 mm.;
       average, 12 mm.
   (5) Depth of depressions--range, 9-14 mm.;
       average, 11 mm.

d. Material: Dense sandstone and igneous basalts.

e. Method of manufacture: Pits were battered into sur-
   face resulting in concave form. Otherwise, the im-
  plemment was not altered. Pits are evenly spaced over
   the surface.

f. Comments: A total of three specimens were recovered.

g. Cultural affiliations: Same as for Type II above.
C. Pottery Vessels

1. Type I (Crab Orchard Jars)

a. Summary description: Fired clay vessels used for storage and cooking purposes. Surface may be decorated with fabric impressions or may be plain.

b. Form: Indeterminant, but probably a conoidal jar.

c. Size:
   (1) Length--?
   (2) Width--?
   (3) Thickness--range, 5-8 mm.; average, 6 mm.

d. Material: Local clay and tempering material (crushed quartz and conglomerate).

e. Method of manufacture: Undetermined from sample.

f. Comments: Four, small badly eroded sherds were recovered. These sherds probably represent Crab Orchard pottery. (Maxwell, 1951: 274, 276)

g. Cultural affiliations: Crab Orchard pottery was an early Woodland type that is found throughout the Cache River Valley. (Winters, 1966: personal communication)

IV. Fabricating Tools and Products

A. Abrading Stones

1. Type I

a. Summary description: An irregular piece of sandstone with grooves into one or more facets.

b. Form: Irregular.

c. Size:
   (1) Length--range, 9-14 mm.; average, 12 mm.
   (2) Width--range, 7-9 mm.; average, 8 mm.
   (3) Thickness--range, 4-5 mm.; average, 4.5 mm.

d. Material: Sandstone.

e. Method of manufacture: Specimens were utilized unaltered. Grooves resulted from use.

f. Comments: Two specimens were recovered.

g. Cultural affiliations: Unassigned.
2. Type II

a. Summary description: A small irregular pebble with one or more facets worn on the surfaces.

b. Form: Irregular rounded pebbles.

c. Size:
   (1) Length--range, 7-23 mm.; average, 17 mm.
   (2) Width--range, 6-23 mm.; average, 14 mm.
   (3) Thickness--range, 6-23 mm.; average, 14 mm.

d. Material: Sandstone and igneous basalts.

e. Method of manufacture: Pebbles were utilized unaltered. Facets resulted from use.

f. Comments: Five specimens were recovered.

g. Cultural affiliations: Unassigned.

B. Gravers

1. Type I

a. Summary description: Irregular shaped flakes with a narrow pointed projection. The graving tip is uni-facially worked.

b. Form: Flake shape is irregular in outline and plano-convex or biconvex in cross-section.

c. Size:
   (1) Total length--range, 21-45 mm.; average, 26 mm.
   (2) Total width--range, 18-23 mm.; average, 19 mm.
   (3) Total thickness--range, 4-8 mm.; average, 5 mm.
   (4) Graving tip length--range, 5-7 mm.; average, 6 mm.
   (5) Graving tip width--range, 4-5 mm.; average, 5 mm.
   (6) Graving tip thickness--range, 2-3 mm.; average, 3 mm.

d. Material: Dongola and Grand Chain flint.

e. Method of manufacture: Random flakes were utilized. A graving tip was flaked by removing small thin flakes at some convenient location on the flake edge.

f. Comments: A total of six specimens were recovered.

g. Cultural affiliations: Gravers of this type have been found in Paleo-Indian contexts but have not been demonstrated as definitely a part of an Archaic component. (Rolingston and Schwartz, 1966: 120)
C. Drills

1. Type I

   a. Summary description: A drill with an expanding hafting area and a deeply incurve basal edge. The sides and base of hafting area are ground smooth.

   b. Form: Cylindrical with flattened expanding base. Cross-section is oval.

   c. Size:
      (1) Total length--?
      (2) Width of base--28 mm.
      (3) Thickness of base--7 mm.
      (4) Width of shank--10 mm.
      (5) Thickness of shank--7 mm.

   d. Material: Grand Chain flint.

   e. Method of manufacture: Implement shaped by random flaking. Basal indentation formed by removing broad, thick flakes. All edges were finished by removing small, thin flakes. Hafting area was ground smooth.

   f. Comments: A basal portion of this type was recovered.

   g. Cultural affiliations: Unassigned.

2. Type II

   a. Summary description: An expanding stem, straight based drill with no grinding present on hafting area.

   b. Form: T-shaped in outline and oval in cross-section.

   c. Size:
      (1) Total length--?
      (2) Width of base--38 mm.
      (3) Thickness of base--8 mm.
      (4) Width of shank--13 mm.
      (5) Thickness of shank--8 mm.

   d. Material: Dongola flint.

   e. Method of manufacture: Same as for Type I above.

   f. Comments: Only one identifiable specimen was recovered. The distal end of which was absent.

   g. Cultural affiliations: Fowler (1957: 24) illustrates this type from the Archaic assemblage recovered from the Ferry site.
D. Spokeshaves

1. Type I

   a. Summary description: An implement with a concave cutting or scraping edge.

   b. Form: Irregular or variable in outline and plano-convex in cross-section.

   c. Size: Highly variable.

   d. Material: Cobden, Dongola, and Grand Chain flint.

   e. Method of manufacture: The cutting edge was formed by removing flakes from one surface to form a beveled edge. The edge was shaped to form a concavity. Implements were manufactured from random flakes or other broken implements.

   f. Comments: A total of nine specimens were recovered.

   g. Cultural affiliations: Implements called "concave-edged scrapers" are reported as a part of the Archaic assemblage from the Parrish site in Kentucky. (Rulingson and Schwartz, 1966: 134)

E. Chisels

1. Type I

   a. Summary description: A rectangular implement with a thick battered end and a steeply beveled, convex edge opposite the striking platform.

   b. Form: Rectangular in outline and plano-convex in cross-section.

   c. Size:

      (1) Length--range, 43-61 mm.; average, 52 mm.
      (2) Width--range, 28-33 mm.; average, 29 mm.
      (3) Thickness--range, 17-19 mm.; average, 18 mm.

   d. Material: Kaolin, Dongola, Grand Chain and Mill Creek flint.

   e. Method of manufacture: The implement was shaped by removing large random flakes. The cutting edge was finished by unifacially removing broad thick flakes.

   f. Comments: A total of five specimens were recovered.

   g. Cultural affiliations: Unassigned.
F. Adzes

1. Type I

a. Summary description: A large rectangular implement with a unifacial beveled edge. The cutting edge is slightly convex.

b. Form: Rectangular in outline, plano-convex in cross-section.

c. Size:  
   (1) Length--87 mm.  
   (2) Width--38 mm.  
   (3) Thickness--25 mm.

d. Material: Grand Chain flint.

e. Method of manufacture: Large, broad, thick flakes were removed to form a plane surface. The end was beveled by removing large flakes. The sides were finished by removing secondary flakes. Opposite the cutting end, the side-edges were ground smooth for a length of twenty-one millimeters.

f. Comments: Only one specimen was recovered.

g. Cultural affiliations: Fowler (1959: 50) suggests that this implement was common between 4,000 B.C. and 2,000 B.C. in Archaic contexts.

G. Anvils

1. Type I

a. Summary description: A large stone of variable shape with a small battered concave pit.

b. Form: Variable in outline and cross-section.

c. Size:  
   (1) Length--range, 126-161 mm.; average, 143 mm.  
   (2) Width--range, 90-115 mm.; average, 104 mm.  
   (3) Thickness--range, 45-96 mm.; average, 79 mm.  
   (4) Width of depression--range, 28-40 mm.; average, 33 mm.  
   (5) Depth of depression--range, 7-10 mm.; average, 8 mm.

d. Material: Igneous basalts.

e. Method of manufacture: A convenient cobble was utilized unaltered. The pit resulted from use.
1. Type I -- Continued

f. Comments: A total of nine specimens were recovered.

g. Cultural affiliations: Fowler (1959: 59) reports a similar implement from the Modoc Rock Shelter at a depth of fourteen feet in an Archaic association.

H. Quarry Blanks

1. Type I

a. Summary description: An unfinished implement of variable size and shape.

b. Form: Rectangular, oval or triangular in outline and biconvex in cross-section.

c. Size: Highly variable.

d. Material: Dongola, Cobden, Mill Creek, and Grand Chain flint.

e. Method of manufacture: The blank was formed by percussion flaking to the desired size and shape.

f. Comments: A total of eighteen specimens were recovered.

g. Cultural affiliations: Unassigned.

I. Cores

1. Type I

a. Summary description: Irregular shaped pieces of flint exhibiting worked areas where large flakes had been removed. Some specimens exhibit prepared striking platforms.

b. Form: Irregular, nodular or tabular pieces of flint.

c. Size: Highly variable.

d. Material: Dongola, Cobden, Grand Chain, Kaolin, Mill Creek and several unidentified flint types.

e. Method of manufacture: Pebbles or flat tabular pieces of flint were chipped by percussion.

f. Comments: A total of forty-one cores were recovered.

g. Cultural affiliations: Unassigned.
V. Ornaments

A. Plummetts

1. Type I

a. Summary description: A tear-drop shaped stone with a groove encircling the stone near the small end.

b. Form: Tear-drop shaped in outline and oval in cross-section.

c. Size:
   (1) Length--44 mm.
   (2) Width--27 mm.
   (3) Thickness--22 mm.

d. Material: Igneous basalt.

e. Method of manufacture: A pebble was shaped by grinding. The groove was cut with a sharp implement. The entire surface was then smoothed.

f. Comments: Only one specimen was recovered.

g. Cultural affiliations: Fowler (1959: 50) suggests that this type of artifact was present in Archaic associations from 8,000 B.C. until 2,000 B.C.

B. Pigments

1. Type I


b. Form: Irregular

c. Size:
   (1) Length--range, 28-35 mm.; average, 31 mm.
   (2) Width--range, 11-24 mm.; average, 17 mm.
   (3) Thickness--range, 5-16 mm.; average, 8 mm.

d. Material: Iron oxides (red and yellow).

e. Method of manufacture: One surface was ground to produce powder.

f. Comments: Three specimens (two red and one yellow) were recovered.

g. Cultural affiliations: Unassigned.
VI. Horticultural Implements

A. Hoes

1. Type I

   a. Summary description: A chipped stone implement used for digging purposes. Through use, it acquires a highly polished surface.

   b. Form: Undetermined.

   c. Size: Undetermined.

   d. Material: Mill Creek flint.

   e. Method of manufacture: Undetermined.

   f. Comments: One soil polished chip was recovered.

   g. Cultural affiliations: This chip was of Mill Creek flint which was characteristically utilized for manufacturing hoes during Woodland and Mississippian periods.

VII. Internal Features

A. Rock Concentrations

1. Type I

   a. Summary description: A group of natural stones that were concentrated in a small area.

   b. Form: Irregular in outline and cross-section.

   c. Size:
      (1) Length--60 cm.
      (2) Width--40 cm.
      (3) Thickness--10 cm.

   d. Material: Sandstone, basalt, and limestone.

   e. Method of manufacture: Unaltered rocks were simply tossed into a pile.

   f. Comments: Only one feature of this type was found.

   g. Cultural affiliations: Because a Big Sandy point was associated with the concentration, it can be considered as a middle Archaic feature.
B. Pits

1. Type I


b. Form: Oval in outline and concave in cross-section.

c. Size:
   (1) Length--58 cm.
   (2) Width--45 cm.
   (3) Thickness--11 cm.

d. Material: Not applicable.

e. Method of manufacture: A pit was dug into the surface. The implement used in digging could not be determined.

f. Comments: Only one feature of this type was found.

g. Cultural affiliations: Since no diagnostic artifacts were found in association with the pit, cultural affiliation will not be assigned.

C. Random Postmolds

1. Type I

a. Summary description: Roughly circular holes with rounded bases dug into the soil to support posts.

b. Form: Circular in outline. Sides were straight with rounded bottoms.

c. Size:
   (1) Diameter--range, 10-24 cm.; average, 11 cm.
   (2) Depth--range, 12-21 cm.; average, 18 cm.

d. Material: Not applicable.

e. Method of manufacture: Small circular holes were dug into the subsoil. Posts were set into holes and dirt packed around the posts.

f. Comments: Seven postmolds were found intruding into the subsoil.

g. Cultural affiliations: Postmolds were found throughout the deposit at Modoc Rock Shelter. (Fowler, 1959: 214) For this reason no cultural affiliation will be assigned.
D. Hearths

1. Type I

a. Summary description: Roughly circular pits dug into the surface. The pits were lined with stone and contain ash, charcoal and small amounts of bone. Clay on sides of pits shows evidence of firing.

b. Form: Oval in outline; basin-shaped in cross-section.

c. Size:
   (1) Length--range, 69 cm.; average, 69 cm.
   (2) Width--range, 56-59 cm.; average, 57 cm.
   (3) Depth--range, 9-10 cm.; average, 9.5 cm.

d. Material: Not applicable.

e. Method of manufacture: Pits were dug into the surface and lined with river rocks.

f. Comments: Two features of this type were recorded.

g. Cultural affiliations: Hearths of similar form have been reported from North Carolina in an Archaic context. (Dickens, 1968: personal communication)

VIII. Raw Materials

A. Stone

1. Type I, Flint
2. Type II, Quartzite
3. Type III, Sandstone
4. Type IV, Basalt
5. Type V, Limestone
6. Type VI, Conglomerate

IX. Debris

A. Stone

1. Type I, Flint
2. Type II, Quartzite
3. Type III, Sandstone
4. Type IV, Basalt
5. Type V, Limestone
6. Type VI, Conglomerate

B. Bone (Unidentifiable)

C. Fired Clay (Amorphous Lumps)

D. Charcoal (Unidentifiable)
### TABLE 4

CULTURAL MATERIALS RECOVERED

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| Categories                      | Provenience |              |              |       |
|                                 | Number | Number | Number |       |
| Excavations                     |         |        | 15     | 56    |
| Total                           |         |        | 102    | 102   |


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<td>1. Flint</td>
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Notes:

*Artifact totals include whole and fragmentary specimens. Small fragments of charcoal were weighed.*

Some of these major categories contain sub-units which may be argued belong within another category. However, the inferences that were made in order to place any sub-unit within a major category are based upon a consensus of opinion obtained from a review of pertinent literature. Irrespective of any theoretical viewpoint, the total cultural information is recorded above.
Fig. 4 Horizontal Distribution of Artifacts from Controlled Surface Collection

- Excavations
- Limits of Plowing

North
Fig. 5 Horizontal Distribution of General Utility Tools from Controlled Surface Collection

- Excavations
- Limits of Plowing
- North
Fig. 6 Horizontal Distribution of Weapons from Controlled Surface Collection

[Diagram showing horizontal distribution with grid and labeled areas indicating excavations and limits of plowing]
Fig. 7 Horizontal Distribution of Implements For Domestic Use from Controlled Surface Collection

- Excavations
- Limits of Plowing

North
Fig. 8 Horizontal Distribution of Fabricating Implements and Products from Controlled Surface Collection (Except Flint Cores)
Fig. 9 Horizontal Distribution of Flint Cores from Controlled Surface Collection

---

Excavations

- Limits of Plowing

North
Fig. 10 Horizontal Distribution of Waste Flakes from Controlled Surface Collection

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- Excavations
- Limits of Plowing

Scale: 10 m

North
Fig. 11 Horizontal Distribution of Miscellaneous Artifacts and Materials from Controlled Surface Collection
PLATE II

GENERAL UTILITY TOOLS: KNIVES

Row 1. a, b, c -- Type I
Row 2. d, e, f, g -- Type III
Row 3. h, i, j -- Type IV
Row 4. k, l, m, n -- Type V
Row 5. o -- Type II; p -- Type VI
# Table 5

## Identifiable Knives

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### Plate III

**General Utility Tools: Scrapers**

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<td>Row 2.</td>
<td>e, f -- Type III; g -- Type II; h -- Type VI</td>
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<td>Row 3.</td>
<td>i, j, k, l -- Type VI</td>
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<td>Row 4.</td>
<td>m -- Type IV; n -- Type V</td>
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PLATE IV

GENERAL UTILITY TOOLS: HAMMERSTONES

Row 1.  a -- Type I, Flint; b -- Type II, Basalt

Row 2.  c -- Type II, Basalt; d -- Type I, Basalt

Row 3.  e -- Type I, Conglomerate
PLATE V

GENERAL UTILITY TOOLS: CHOPPERS, MAULS AND CELTS

Row 1.  a -- Type I, Chopper; b -- Type I, Maul

Row 2.  c, d, e -- Type I, Celts
<table>
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<tr>
<th>Row 1.</th>
<th>a -- Type I, Atlatl Weight; b -- Type II, Atlatl Weight</th>
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</thead>
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<tr>
<td>Row 2.</td>
<td>c -- Type I, Pigment</td>
</tr>
<tr>
<td>Row 3.</td>
<td>d -- Polished Stone Fragment</td>
</tr>
<tr>
<td>Row 4.</td>
<td>e -- Type I, Plummet</td>
</tr>
</tbody>
</table>
PLATE VI
Fig. 12 Atlatl Weight Reconstructions

Scale: Actual Size
PLATE VII

WEAPONS: PROJECTILE POINTS FROM GENERAL SURFACE COLLECTION

Row 1.  
   a -- Dalton or Kirk Blade Fragment  
   b -- Clovis Fragment

Row 2.  
   c and f -- Big Sandy  
   d and e -- Ullin Side-Notched

Row 3.  
   g -- Motley; h -- Marcos

Row 4.  
   i -- Mud Creek; j -- Karnak-Stemmed; k -- Gary
PLATE VIII

WEAPONS: PROJECTILE POINTS FROM CONTROLLED SURFACE COLLECTION

Row 1. a and b -- Big Sandy
c -- Unidentified Base
d -- Swan Lake
e -- Unidentified Base

Row 2. f, g, and i -- Ullin Side-Notched
h -- Unidentified Base
j -- Big Sandy

Row 3. k and m -- Cache Diagonal-Notched
l -- Plevna
n and o -- Motley

Row 4. p -- Benton
q -- Karnak-Stemmed
r and s -- Unidentified Bases
PLATE VIII
PLATE IX

WEAPONS: PROJECTILE POINTS FROM EXCAVATIONS

Row 1. a and b -- Unfluted Clovis

Row 2. c -- Hidden Valley; d -- LeCroy

Row 3. e, f, and g -- Big Sandy

Row 4. h and i -- Ullin Side-Notched
PLATE X

WEAPONS: LANCEOLATE PROJECTILE POINTS

Row 1. a and b -- Unfluted Clovis

Row 2. c -- Probable Clovis Fluted Fragment
d -- Probable Folsom Fragment
Fig. 13 Projectile Point Reconstructions

Limits of Basal Grinding

Scale: Actual Size
| Provenience          | Clovis Unfluted | Clovis Polson | Dalton LeCroy | Benton Big Sandy | Mad Creek Gary | Hidden Valley Plevna | Marcos Motley Swan Lake Ullin Side-Notched Karnak-Stemmed Cache Diagonal-Notched |
|---------------------|----------------|---------------|----------------|------------------|-----------------|----------------------|-----------------------|--------------------------------------------------|
| General Surface     | - 1 1 1 1 1 1 1 1 1 1 1 2 1 1 1 |               |                |                  |                 |                      |                       |                                                  |
| Controlled Surface  |                |               |                |                  |                 |                      |                       |                                                  |
| 20L10               |                |               |                |                  |                 |                      |                       |                                                  |
| 20L30               |                |               |                |                  |                 |                      |                       |                                                  |
| 20L40               |                |               |                |                  |                 |                      |                       |                                                  |
| 40L10               |                |               |                |                  |                 |                      |                       |                                                  |
| 40L40               |                |               |                |                  |                 |                      |                       |                                                  |
| 50L10               |                |               |                |                  |                 |                      |                       |                                                  |
| 50L20               |                |               |                |                  |                 |                      |                       |                                                  |
| 50L30               |                |               |                |                  |                 |                      |                       |                                                  |
| 50L40               |                |               |                |                  |                 |                      |                       |                                                  |
| 60L10               |                |               |                |                  |                 |                      |                       |                                                  |
| 70L10               |                |               |                |                  |                 |                      |                       |                                                  |
| 70L40               |                |               |                |                  |                 |                      |                       |                                                  |
| 80L20               |                |               |                |                  |                 |                      |                       |                                                  |
| 80L50               |                |               |                |                  |                 |                      |                       |                                                  |
| 90L20               |                |               |                |                  |                 |                      |                       |                                                  |
| Excavations         |                |               |                |                  |                 |                      |                       |                                                  |
| 38L14               |                |               |                |                  |                 |                      |                       |                                                  |
| 38L40               |                |               |                |                  |                 |                      |                       |                                                  |
| 50L18               | 1              |               |                |                  |                 |                      |                       |                                                  |
| 52L18               |                | 1              |                |                  |                 |                      |                       |                                                  |
| 56L18               |                | 1              |                |                  |                 |                      |                       |                                                  |
| 58L20               |                |                | 1              |                  |                 |                      |                       |                                                  |
| Total               | 2 1 1 1 1 1 1 1 1 1 1 1 5 3 2 6 3 3 |               |                |                  |                 |                      |                       |                                                  |
PLATE XI

IMPLEMENTS FOR DOMESTIC USE: MANOS

Row 1.  a -- Type I, Mano

Row 2.  b -- Type I, Mano
With regard to the category of Implements for Domestic Use, I would like to offer a hypothesis about fire-making during the Archaic period and discuss the evidence supporting this hypothesis. I have examined approximately three or four thousand artifacts commonly called "multiple-pitted nutting stones." These artifacts have been recovered from a large number of archeaic sites in southern Illinois. The thing that is immediately noticeable about this class of artifacts is that they can be divided into two groups based upon the shape of the pits. Many of the pits are concave in cross-section. Others, particularly those on rocks of dense sandstone, are conical and appear to have been drilled. The large majority of those with conical pits are roughly spheroid in shape and are small enough to be held in one hand. Often times, the conical pits are too close together to accommodate nuts in all of the pits at one time. And since the pits may occur on several surfaces of the same artifact, they cannot be considered to be very efficient for cracking nuts.

I was intrigued with the thought that these rocks with the conical pits may have been more useful as balancing and pressure devices in manipulating a bow drill. Several of these artifacts recovered from the Roosevelt #2 site were of dense sandstone and had conical pits. One of these was selected for an experiment. A simple bow was constructed from a flexible limb and some string. A dry hardwood shaft and a piece of dry maple were gathered from a nearby woods. By manipulating this simple device in the manner illustrated in figure 13, I was able to start a fire in about five minutes. I could not even get the shaft warm without using the stone because I could not apply any pressure to the end.
of the shaft. The procedure was tried again, this time a new pit was started on the artifact. The wear pattern in the new pit was identical to the wear patterns in the aboriginal pits. An attempt was also made to use a rock with a concave pit as the weight, but the drill was difficult to manipulate because the shaft kept slipping out of the pit.

Based upon the above experiment, it seems reasonable to conclude that the artifacts with conical pits function more efficiently as drill weights than as nutting stones. Also, those artifacts with the concave pits may well actually be nutting stones. This is not to imply, however, that the weights could not have been used for drilling purposes other than fire-making, but because they function so well in that capacity this may very well have been their primary function.
Fig. 14  Fire Making Employing Drill and Weight
PLATE XII

IMPLEMENT FOR DOMESTIC USE: FIRE DRILL WEIGHTS

Row 1.  a -- Conical Pitted Weight

Row 2.  b -- Concave and Conical Pitted Implement
PLATE XIII

FABRICATING TOOLS: DRILLS, CHISELS, SPOKESHAVES AND GRAVERS

Row 1.  
  a -- Type I, Drill  
  b -- Type II, Drill  
  c, d, e and f -- Unidentifiable Drill Fragments

Row 2.  
  g, h, i and j -- Chisels

Row 3.  
  k, l and m -- Spokeshaves

Row 4.  
  n, o, p and q -- Gravers
PLATE XIV

FABRICATING TOOLS AND PRODUCTS: BLANKS, CORES, CHISELS AND ADZES

Row 1. a, b, c and d -- Quarry Blanks
Row 2. e, f and g -- Worked Cores
Row 3. h -- Chisel
i -- Adz
PLATE XIV
PLATE XV

FABRICATING TOOLS: ANVILS

Row 1. a -- Tabular Anvil

Row 2. b -- Nodular Anvil
## TABLE 8

**CERAMIC MATERIALS**

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<th>Provenience</th>
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<td>Grey</td>
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</table>

**Note:**

All sherds were badly eroded, but can be tentatively identified as representing Crab Orchard wares on the basis of paste, probable surface treatment, and thickness.
PIATE XVI

MISCELLANEOUS ARTIFACTS AND MATERIALS

Row 1.  a and b -- Pigment

Row 2.  c -- Soil Polished Hoe Chip
d -- Type I, Abraiding Stone
e -- Type II, Abraiding Stone

Row 3.  f -- Crab Orchard Plain Sherd
g, h and i -- Crab Orchard Fabric-Marked Sherds
PICTURE XVII

MISCELLANEOUS ARTIFACTS AND MATERIALS

Row 1.  
   a -- Cut Bone
   b -- Plummet

Row 2.  
   c and d -- Polished Stone Fragments
Fig. 15 Horizontal Distribution of Features in Area B

Limits of Excavations

Feature 1

50 cm

Plow Zone
Pit Fill
Sterile Subsoil

North
Fig. 16 Horizontal Distribution of Features in Area B

- Postmolds
- Pit Outline
- Rocks

Feature 1

Feature 2

Feature 3

Cross-Section

0 50 cm

North
Fig. 17 Horizontal Distribution of Features in Area F

Limits of Excavations

Feature 5

Feature 7

Feature 6

Cross-Section

Feature 5

Postmolds

Pit Outline

Rocks

Feature 7

Cross-Section

Feature 6

Cross-Section

0 50 cm

North
TABLE 9

FEATURE CONTENTS

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<tr>
<th>Features</th>
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<th>Flint Chips</th>
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Regardless of whether they are considered according to form or function, artifacts do not inherently indicate time. And since a time perspective is vital in making cultural reconstructions, one must employ some means for defining time limits. Stratigraphic analysis and radiocarbon dating are two such methods for defining time that are widely used with success. Unfortunately, neither of these methods can be directly applied at the Roosevelt #2 site because no stratigraphy was observable and no suitable carbon samples were recovered. Nevertheless, a time perspective can be indirectly defined by these methods through a comparison of the Roosevelt #2 artifacts with those from sites that have been dated by stratigraphy or radiocarbon dating or both.

The most diagnostic artifact from the Roosevelt #2 site for such comparisons are projectile point types. Within the area of southern Illinois, certain trends in projectile point changes through time have been noted by previous work at the Modoc Rock Shelter (Fowler, 1959: 36). These trends were based upon stratigraphic and radiocarbon evidence. The major trends are:

1. Lanceolate points are common at 6,000 B.C. and were probably more popular earlier. They disappear after 3,000 B.C.

2. Hidden Valley forms (contracting-stemmed) are popular early and disappear after 3,000 B.C.

3. The side-notched types are most popular ca. 4,000 B.C.

4. Expanding-stem and corner-notched varieties are most popular ca. 2,500 B.C.

5. Straight-stemmed types are most popular ca. 2,000 B.C. They do not appear before 5,000 B.C.

On the basis of these established trends, at least four different occupations at the Roosevelt #2 site can be postulated. The first
occupation probably occurred between 10-6,000 B.C. Evidence for such an early occupation is found in the Clovis and Folsom projectile point fragments. Also, the unifacial gravers and scraper forms tend to strengthen this postulation. A second occupation probably occurred ca. 6,000 B.C. The Dalton-Kirk fragment, LaCroy, Hidden Valley, Plevna and possibly the Cache Diagonal-Notched types support an occupation at this time. A third occupation can be postulated for the period 4-3000 B.C. The Benton, Big Sandy and typologically similar Ullin Side-Notched types suggest that an occupation during this period is reasonable. The Mud Creek, Gary, Marcos, Motley, and Svan Lake projectile point types suggest a late Archaic occupation ca. 2,000 B.C.

Though suggestive, this evidence based upon form alone is not conclusive. Such evidence merely assists in establishing a time perspective and reasonable subdivisions within this perspective. Tentatively then, the range of occupation for the Roosevelt #2 site begins perhaps as early as 3,000 B.C. and ends shortly after 1,500 B.C. Support for this terminal date comes from the Crab Orchard fabric-marked and plain pottery. Maxwell (1952: 183) contends that the early Crab Orchard pottery (from Zone III at the Crab Orchard site) bears a close relationship to Baumer material. Further, he adds "The Baumer focus is early. In my opinion, the people are the direct descendants of the 'shell mound' people of the Pickwick Aspect, probably stemming from some Archaic or early ceramic group along the lower valley of the Tennessee River." Willey (1966: 251) places Baumer material at 1,000 B.C.
CONCLUSIONS AND RECONSTRUCTIONS

Core drillings into the terrace by the Illinois Highway Department (Reeder, 1966: personal communication) had established that the terrace was composed of various clays with a mixture of clay and fine gravel at lower levels. Therefore, it was assumed that everything present at the Roosevelt #2 site, except the dirt itself, had been brought there by man. Furthermore, since there was no evidence of historic occupations, it was assumed that all material had been brought there during prehistoric times. Three methods were used to obtain samples of the prehistoric materials found there. One, the general surface collection, was a biased method because primarily only artifacts were selectively picked up. The other two methods, the controlled surface collection and excavations, were not biased in this manner—everything observable was recovered. Because the site was sampled in three different ways, two of which were not selective, I feel that a representative sample of the cultural material present there in 1966 was obtained.

The crest of the terrace is oriented in an east-west direction and divides the terrace into approximately equal halves. The aerial photographs reveal two dark areas in the northern half and a dark bank parallel to the crest in the southern half. As was mentioned earlier, it was assumed that these dark areas were three midden areas. In this text, the term midden refers to "A refuse heap marking a former human
habitation area. Midden debris usually contains decayed organic material, bone-scrap, artifacts (broken and whole), and miscellaneous detritus." (Willey, 1966: 482) The controlled surface collection tends to substantiate this assumption (see Figure 17). A total of six areas of concentrated artifacts and cultural detritus were plotted. Three such areas were plotted in the northern half of the terrace. Only two of these areas (A and B) correspond with soil discolorations on the aerial photograph. Area C does not have a corresponding dark area on the photograph which may indicate that the occupation was too brief or sporadic to allow any midden to accumulate in sufficient quantities to discolor the soil. Three other areas of concentrated cultural remains (D, E, and F) were detected in the southern half of the site by the controlled surface collection. Here however, the three areas all lie within the dark band appearing on the photograph. Plow scattering of the midden may have caused the three formerly distinct areas to blend into a more or less continuous band. In spite of these minor discrepancies, the aerial photographs and the controlled surface collection did provide evidence of distinct areas of occupation--two of which produced subsurface features upon excavation. Without these procedures, these areas would not have been detected.

After all of the material from the controlled surface collection had been washed, analyzed, and tabulated, the same pattern of six occupation areas was still apparent. In addition, the following were noted from the tabulations:

1. General utility tools were present over the entire surface of the site, but were somewhat concentrated in each of the six occupation areas.
2. Weapons were almost exclusively restricted to the six occupation areas.

3. Domestic implements, though somewhat more dispersed, were present in five of the areas. Only Area B lacked this functional category.

4. Fabricating implements and products were abundant in all areas except Area E.

5. Flint cores were represented in all areas except Area D.

6. Waste materials were scattered over the entire surface of the site, but some concentrations occurred in the occupation areas.

7. The highest concentration of waste flakes occurred in Areas A, B, and F.

Area A

On the basis of the projectile point types and the presence of pottery, two utilizations of Area A can be reconstructed. The first occupation occurred sometime between 6-4,000 B.C. as evidenced by the Hidden Valley and Ullin Side-Notched points. A second occupation probably occurred sometime around 1,500 B.C. The Marcos point and Crab Orchard sherd tend to support this late occupation date. A wide variety of activities were being conducted within this localized area. Implements for domestic activities, fabricating tools and products, weapons, general utility tools, pigment, plummet, and polished hoe chip suggest that this area was utilized as an extended camping site. A large number of waste flakes suggest that considerable manufacturing of tools was being conducted. Unfortunately though, the lack of sufficient dating of artifacts other than projectile points and pottery makes it impossible to determine what activities were being conducted during each of the two occupations of Area A.
Fig. 18 Areas of Concentrated Artifacts and Materials Plotted During the Controlled Surface Collection

- Excavations
- Limits of Plowing
- Limits of Concentration
Area B

Area B was probably utilized at least three times. An early occupation occurred sometime prior to 6,000 B.C. Two Clovis, a probable Folsom, and the LeCroy points indicate a Paleo-Indian occupation. Unifacial gravers and end scrapers (Types I and II) resembling those found in Paleo-Indian contexts certainly tend to substantiate an early occupation. The three Big Sandy points indicate a utilization of this area ca. 3,500 B.C. A later or final utilization of Area B can be postulated on the basis of the Motley, Marcos, and Swan Lake points. A suggested date for this final occupation is ca. 1,500 B.C. The relatively small number of implements associated with domestic activities suggests that the processing of vegetal materials was not a major activity in Area B. On the other hand, large numbers of fabricating tools and products, raw materials, and waste flakes seem to indicate that this area was primarily utilized as a chipping station. The pit and postmolds suggest that Area B also functioned as a temporary habitation area.

Area C

A Plevna projectile point and a Crab Orchard sherd would suggest two occupations for Area C—one ca. 5,000 B.C. and the other at ca. 1,500 B.C. However, the typologically similar Cache Diagonal-Notched point recovered is, I feel, both contemporaneous with the Plevna type and that both types are late (ca. 2,000-1,000 B.C.) in southern Illinois. Further work on dating these point types is necessary. If indeed these two projectile points are late, then only one occupation can be construed for Area C. Because of the lack of a midden accumulation and corresponding soil discoloration on the aerial photograph, the meager
evidence favors only one occupation for Area C. The presence of weapons, general utility tools, fabricating tools, raw materials, implements for domestic use, and waste flakes suggest a utilization of Area C as a camp site. The lack of an accumulation of materials indicates a brief occupation.

Area D

One Marcos and one Motley point recovered from Area D indicate a late usage of this area. A 1,500 ± 500 years B.C. date appears to be a reasonable one for the utilization of this area. Implements for domestic use, fabricating tools, weapons and a slight concentration of waste materials suggest that a brief habitation occurred here.

Area E

This area produced a Big Sandy projectile point which indicates an occupation ca. 3,500 B.C. In addition, eight general utility tools, one implement for domestic use, one fabricating tool, two cores, and a small concentration of waste flakes were recovered. This material suggests a camp site occupied for a brief period. A dark area on the aerial photograph, however, supports an interpretation of enough organic material present to stain the soil. The time required for such a build up of organic material contradicts a brief occupation. I think that this discrepancy can be resolved if Area E is considered as connected with Area F.

Area F

Examples of the Benton, Big Sandy, Karnak-Stemmed, Cache Diagonal-Notched, and Ullin Side-Notched points were recovered from Area F. Because established dates are available for the Benton and Big Sandy types
only one occupation can be construed for this area. This occupation occurred ca. 3,500 B.C. Support for this date comes from Feature #7 which contained a Big Sandy point in an undisturbed context. The presence of general utility tools, weapons, implements for domestic use, fabricating tools and products, raw materials, cores, and a large concentration of waste flakes supports the interpretation of an intensively utilized camp site. The presence of the two hearths and a rock concentration is consistent with this interpretation. Further information on dating the Cache Diagonal-Notched, Ullin Side-Notched, and Karnak-Stemmed projectile point types may necessitate a reinterpretation of the utilization of Area F.

In summary then, the evidence provided by the particular field methods employed strongly supports the reconstruction of an early Paleo-Indian occupation as the first utilization of the Roosevelt #2 site. This was followed by two early Archaic occupations between 4-6,000 B.C. Two occupations followed during the middle Archaic. Four occupations occurred during the final phase of the Archaic. No evidence was recovered to demonstrate whether or not any of the occupations during the same general time period were contemporaneous. Primarily, this terrace remnant was utilized as a camping or semi-permanent habitation area. At least one localized area of the site was utilized as a chipping or manufacturing station. Whether this chipping area was being used when one of the camp areas was occupied could not be determined.

Finally, I would like to add a brief evaluation of the field methods employed to gather the data. They were generally rewarding and provided the type of data that they were expected to provide. Specifically, the aerial photographs recorded what the site looked like in its
entirety and its relationship to other sites in the area. Because the soil was saturated with moisture at the time the photographs were taken, no differential moisture content could be ascertained for any areas within the site. Also, there was no indication that organic material had been deposited at the site as a result of recent fire or water deposition. Finally, because there was an 83% correlation between material concentrations recorded via the controlled surface collection and soil discolorations appearing on the aerial photographs, I feel that it is reasonable to conclude that the soil discolorations did represent shallow midden concentrations. The presence of small quantities of bone and charcoal indicate the presence of some organic residues.

The controlled surface collection provided standardized units for comparing areas within the site. Because each unit was collected carefully, the sample obtained by this procedure was large and, I feel, representative. By plotting the horizontal distribution of artifacts during the controlled surface collection, concentrations of these materials were detected that would otherwise have not been recorded. Prior to conducting the fieldwork, critics predicted that because the site had been plowed, extreme displacement of materials from their original positions had occurred. The mere fact that concentrations were detected negates this criticism especially since these concentrations of materials can also be correlated with soil discolorations on the aerial photographs. Granted, some displacement did occur but not to the extent that it had been predicted.

Another important consideration that should not be overlooked is the cost of implementing these field procedures. In terms of actual time spent for the amount of materials and information recovered, these
procedures cost less than it would have cost to recover the same amount of data by employing hand trenching techniques alone. Therefore, if one encounters a similar field situation, these methods might prove to be very beneficial and should be considered as possible alternatives.
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