NPS CPSU - Technical Report



National Park Service Cooperative Unit
Institute of Ecology
The University of Georgia
Athens, Georgia 30602

A VEGETATION HISTORY OF OCMULGEE NATIONAL MONUMENT, MACON, GEORGIA

CPSU Technical Report No. 51

Peggy Froeschauer
School of Environmental Design
University of Georgia
Athens, GA 30602

January 1989

U.S. National Park Service
Cooperative Studies Unit
Institute of Ecology
University of Georgia
Athens, GA 30602

A VEGETATION HISTORY OF OCMULGEE NATIONAL MONUMENT, MACON, GEORGIA

CPSU Technical Report No. 51

Peggy Froeschauer
School of Environmental Design
University of Georgia
Athens, GA 30602

January 1989

U.S. National Park Service
Cooperative Studies Unit
Institute of Ecology
University of Georgia
Athens, GA 30602

Purpose and Content of the Report Series

The U.S. National Park Service Cooperative Park Studies Unit at the Institute of Ecology (University of Georgia) produces *CPSU Technical Reports*. The purpose of the series is to make information related to U.S. national parks and park-related problems easily and quickly available to interested scientists and park staff. Each contribution to the series is issued in limited quantities and as a single number. Contributions are from various sources, not all federally funded, and represent data matrices, bibliographies, review papers, and scientific project reports. They may supply scientific information or describe resources management activities. They are not intended to determine park policy, although management recommendations may be provided.

CPSU Technical Reports are subject to technical editing and review for scientific accuracy by Institute staff. They are reviewed by at least two technical reviewers for scientific accuracy and appropriate use of investigative techniques but are not evaluated with regard to importance to the scientific community at large.

This project was supported by a cooperative agreement between the National Park Service and the Institute of Ecology, University of Georgia; #10-21-RR271-213 USDI RF NPS #22 BRATTON and was conducted for a graduate course credit as a special research project in the School of Environmental Design, University of Georgia. The project was under the supervision of Ian Firth and Susan P. Bratton.

Froeschauer, P. 1988. A vegetation history of Ocmulgee National Monument Macon, Georgia, *School of Environmental Design, NPS-CPSU Technical Report No. 51.*

ABSTRACT

The purpose of the project was to document past land uses within the 638 acre tract of the Ocmulgee National Monument (excluding the 40 acre Lamar site) and assess the known or probable effects of the various uses on the surrounding vegetation. The project entailed recording contemporary vegetation patterns within the study area and reviewing available data including written accounts, historic maps, period photographs, aerial photographs, field notes, and personal interviews to document and map previous vegetation patterns according to specific time periods.

During the historic period (1540 to present), the vegetation within the study area was altered by activities which included: clearing and subsequent abandonment of agricultural fields; woodland grazing in areas unsuitable for farming; clearing for railroad lines; clay mining for brick manufacturing; and extensive archaeological excavations. The various land uses are described according to the time period within which they occurred, the resulting effects on vegetation patterns are interpreted. The report then describes contemporary vegetation patterns as they relate to historic land uses.

Introduction

On December 23, 1936, the Ocmulgee National Monument was established by Presidential Proclamation and placed under the supervision of the National Park Service (U.S. Dept. of the Interior). The monument is located east of the city of Macon, Georgia, and encompasses two detached tracts of land which total 678 acres. The smaller tract, containing 40 acres, is known as the Lamar site and will not be included in this study.

Within the 638 acre study area, there are mixed pine/hardwood forests, pine stands, bottomland hardwoods, hardwood forests, wetlands, and cleared areas maintained by mowing. However, the existing vegetation patterns are quite different from the patterns a visitor to the site might have seen 50 years ago. The vegetation of the study area has been influenced by human activities for as long as 10,000 years, beginning with the Paleo-Indians and continuing through time to the present day with the National Park Service. From as far back as the Paleo-Indian period, vegetation alterations may have occurred as a result of activities such as clearing of forests for firewood and building materials; clearing of land for village construction and agricultural fields; burning of forests to increase berry production and attract game; and the excavation of borrow areas for mound construction. Due to the present unavailability of data or models which could be used to determine the populations of prehistoric villages, firewood consumption rates and demand for food production (i.e., minimum number of acres needed for agricultural uses) this study focuses on the human activities that have influenced vegetation changes during historic times, 1540 to the present. These activities include logging of cedar, pine, and select hardwoods, establishment of farmsteads, row farming, livestock grazing, construction of railroads, mining of clay, and excavations of archaeological sites.

The goal of this study is to describe the development of the present landscape by relating the existing vegetation patterns to earlier human activities.

The objectives of this study were to:

1) collect written accounts, photographic and cartographic documentation concerning the land use history of the study area;

2) describe changes in vegetation patterns as they relate to various land use activities.

Methods

Research on the subject began with a preliminary site visit during which known and probable locations of biotic and abiotic cultural features were noted.

Following the first site visit, archival research was begun. This involved reviewing the following sources and recording data involving general history, land-use within the area, any site-specific events/activities, etc.:

1) general histories of Macon and Bibb County;

2) historic maps which included the study area;

3) aerial photographs;

4) deed records;

5) early journals, diaries, cemetery records, wills, personal correspondences, essays, family scrapbooks;

6) industrial and agricultural histories;

7) photograph collections (also post cards and sterograph photos);

8) Civil War Atlas and Civil War histories;

9) city and park guides and brochures;

10) oral histories (interviews with three CCC workers);

11) Fire Department (Sanborn) maps;

12) newspaper accounts;

13) archaeological reports;

14) CCC documentation;

15) recent survey of vegetation within study area, conducted by Soil Conservation Service, October, 1987 (copy obtained courtesy of Mr. Lewis Justice).

Several visits to the study area were made during fall and winter 1987 and 1988 in order to visually define and comprehend changes in vegetation as shown through maps and photographs. At this time, a survey of existing vegetation was made and several photographs were taken. When possible, photos were taken from the same location and angle as earlier photos to aid in the comparison of vegetation patterns through time.

All of the compiled data was then reviewed and all features that might be identified in the field (or still existing on the site) were noted. These included individual trees, roads, structures, field boundaries/hedge rows, property lines, and tree lines. During the final site visit I attempted to locate some of the noted cultural features in the field. Several maps were then compiled to represent significant changes in the vegetation patterns within the study area and these are arranged chronologically.

Results

Geographical/Physiological

The Ocmulgee National Monument is located in Bibb County, Georgia, east of the city of Macon, and is bounded on the southwest by the Ocmulgee River (Figures 1 and 2).

According to soil survey data, Bibb County is characterized by rolling uplands, locally hilly with narrow valleys in the Piedmont and relatively wide valleys in the Coastal Plain (USDA 1922). The chosen study area includes both Piedmont and Coastal Plain qualities due to the fact that it is located along a physio-geographical fall line which serves as a transitional zone between the Piedmont and Coastal Plain regions (Figure 3). In the areas between the larger creeks, near the Ocmulgee River, there are deep valleys with steep hillsides. The bottomlands along the Ocmulgee and its tributaries are frequently flooded during winter and early spring (USDA 1979) and because the flood water drains off slowly, the soils remain wet for long periods.

Climate

The climate of Bibb County is characterized by short, mild winters and long, hot summers. The mean annual temperature is 64.2 F, with the winter mean at 47.5 F and the summer mean at 88 F. The average growing season is 229 days, and certain vegetable crops such as cabbage, turnips, collards, and onions can be grown throughout the year. The grazing season averages about nine months. The average annual rainfall of about 45 inches is well distributed throughout the year, being heaviest in March and lightest in October (USDA 1922).

Existing Vegetation

A cursory survey of the study area was conducted in November of 1987. This field data, as well as recent site photographs, aerial photographs, and a vegetation survey of the monument

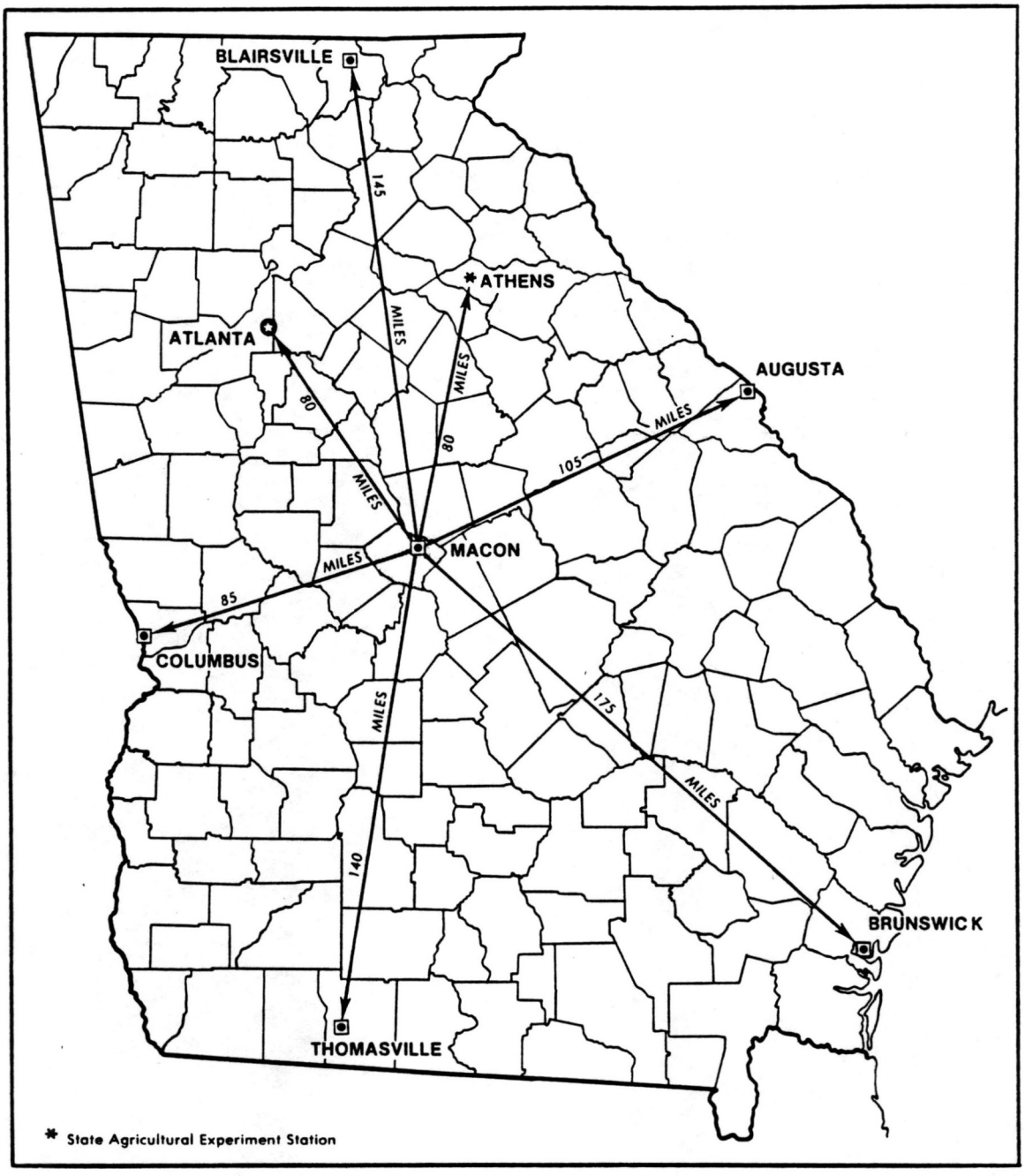


Figure 1. Taken from Soil Conservation Soil Survey of Bibb County, Georgia.

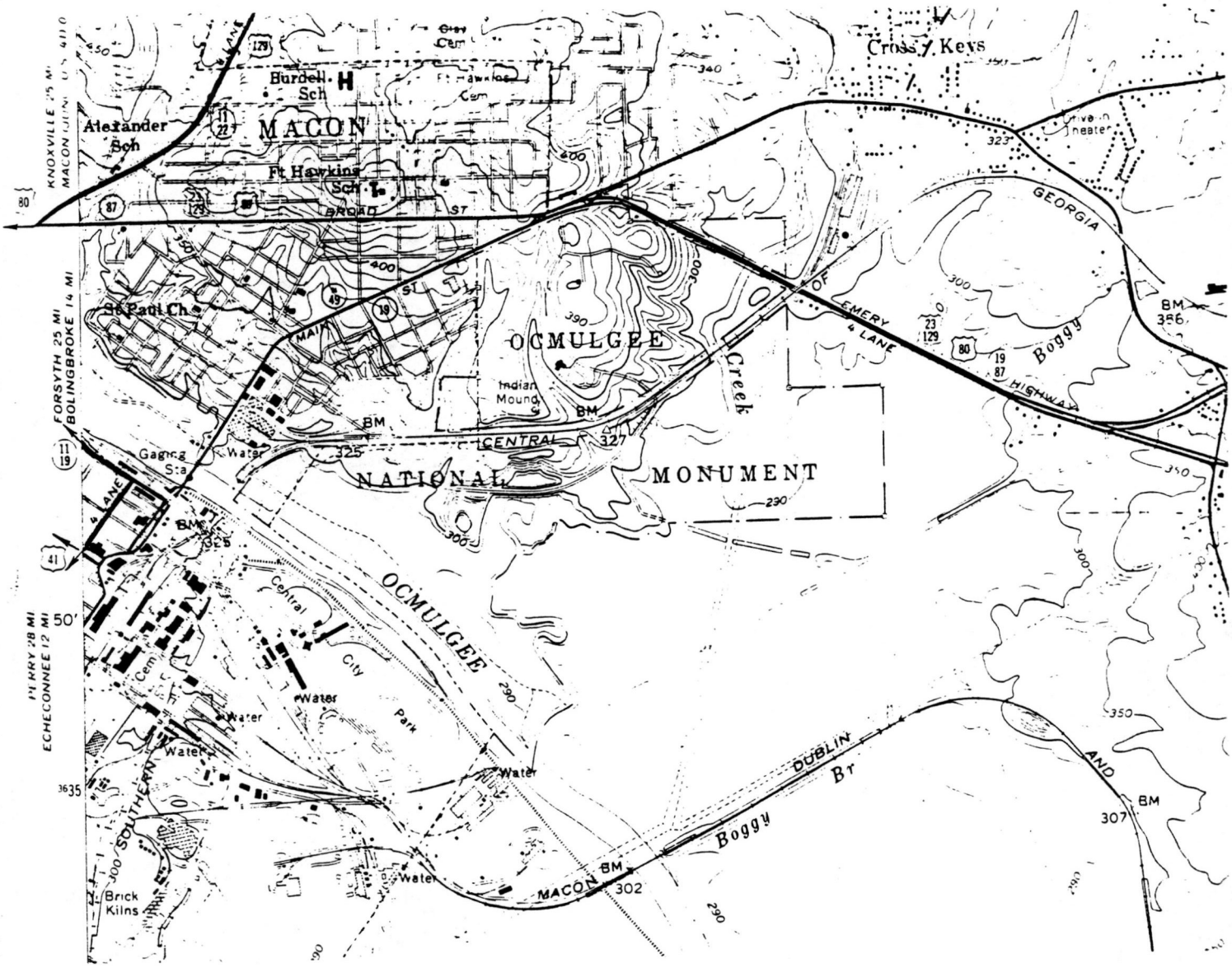


Figure 2. Ocmulgee National Monument (taken from USGS 1972 topographic map).

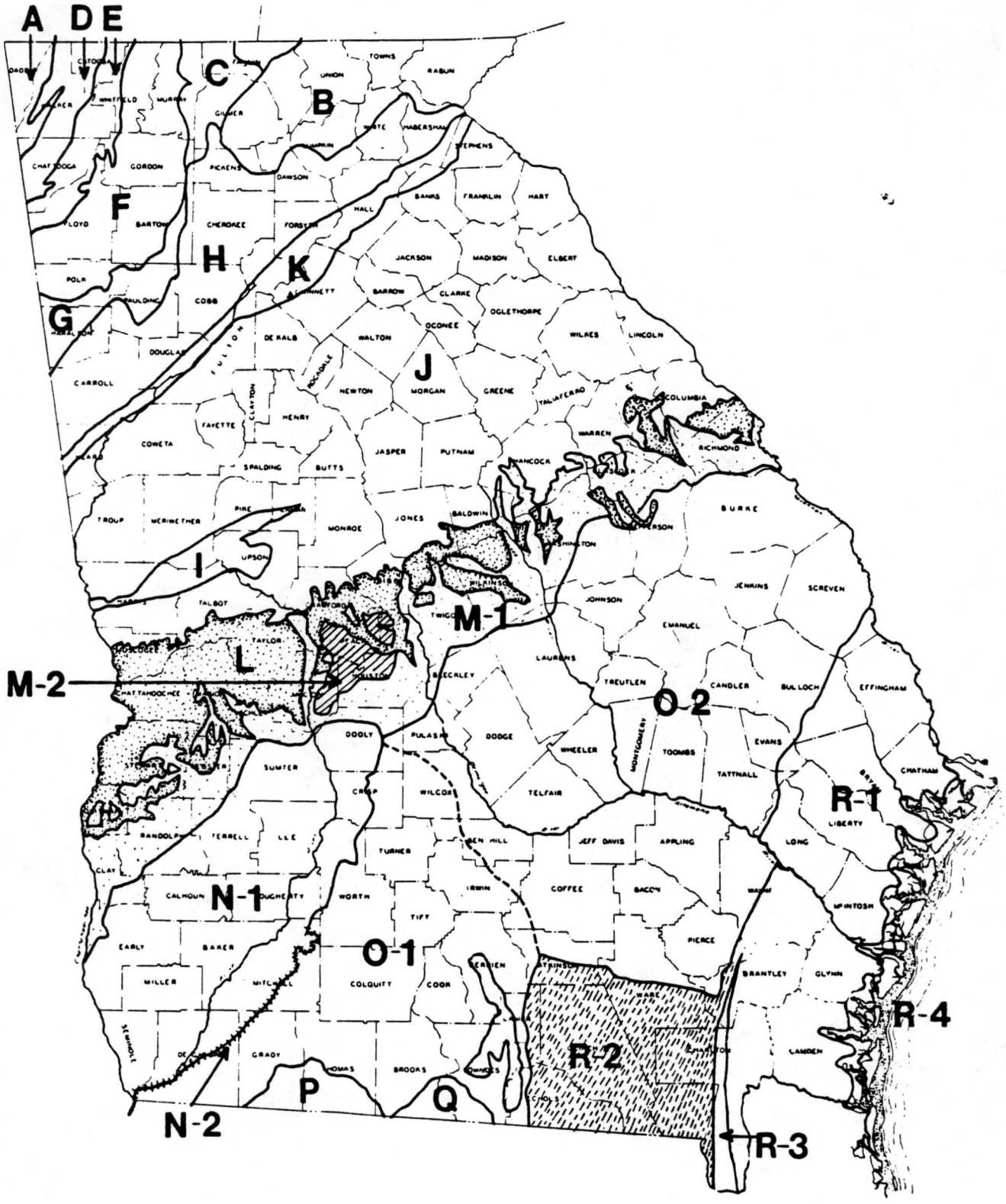


Figure 3. Physiographic Map of Georgia (taken from Wharton 1978).

area (conducted in October 1987 by the Soil Conservation Survey), was used to develop a generalized map showing existing vegetation.

The major vegetation types found in the study area are: mixed pine/hardwood, upland hardwood, bottomland hardwood, pine forest, mowed grass areas (predominately Bermuda Grass). The vegetation map shows approximate boundaries for each vegetation type noted (Figure 4) and a general description of each follows.

Mixed Pine and Hardwoods. These stands are characterized by Loblolly and Shortleaf Pines along with Scrub Oak, Black Jack Oak, Southern Red Oak, Red Oak, Sassafras, Hackberry, Hawthorne, Sweet Gum, Elm, Southern Magnolia, Black Cherry, Dogwood, Sparkleberry, Buckeye, Possumhaw and Dwarf Paw Paw.

Upland Hardwood. These stands are generally characterized by numerous oak species, including Scrub Oak, Black Jack Oak and White Oak, Hickory species, Elm, Sweet Gum, Chestnut, Hackberry, Hawthorne, Sassafras, Beech, Red Maple, and Black Cherry, Sourwood, Dogwood, and Sparkleberry.

Bottomland Hardwood. These stands consist of Sweet Gum, Chestnut, Beech, Birch, Hickory species, various Oak species including Water and Willow Oaks, Yellow Poplar, Florida Maple, Green Ash, Hackberry, Musclewood, Holly, Sycamore, Cane, Privet, Serviceberry, Fringe Tree, and Dwarf Paw Paw.

Loblolly-Shortleaf Pine Forest. These stands are "apparently a product of secondary succession following destruction of the original forest" (Wharton 1978). They are characterized by Loblolly and Shortleaf Pines, Sparkleberry, Blueberry, Persimmon, Flowering Spurge, and Muscadine and Yellow Jessamine.

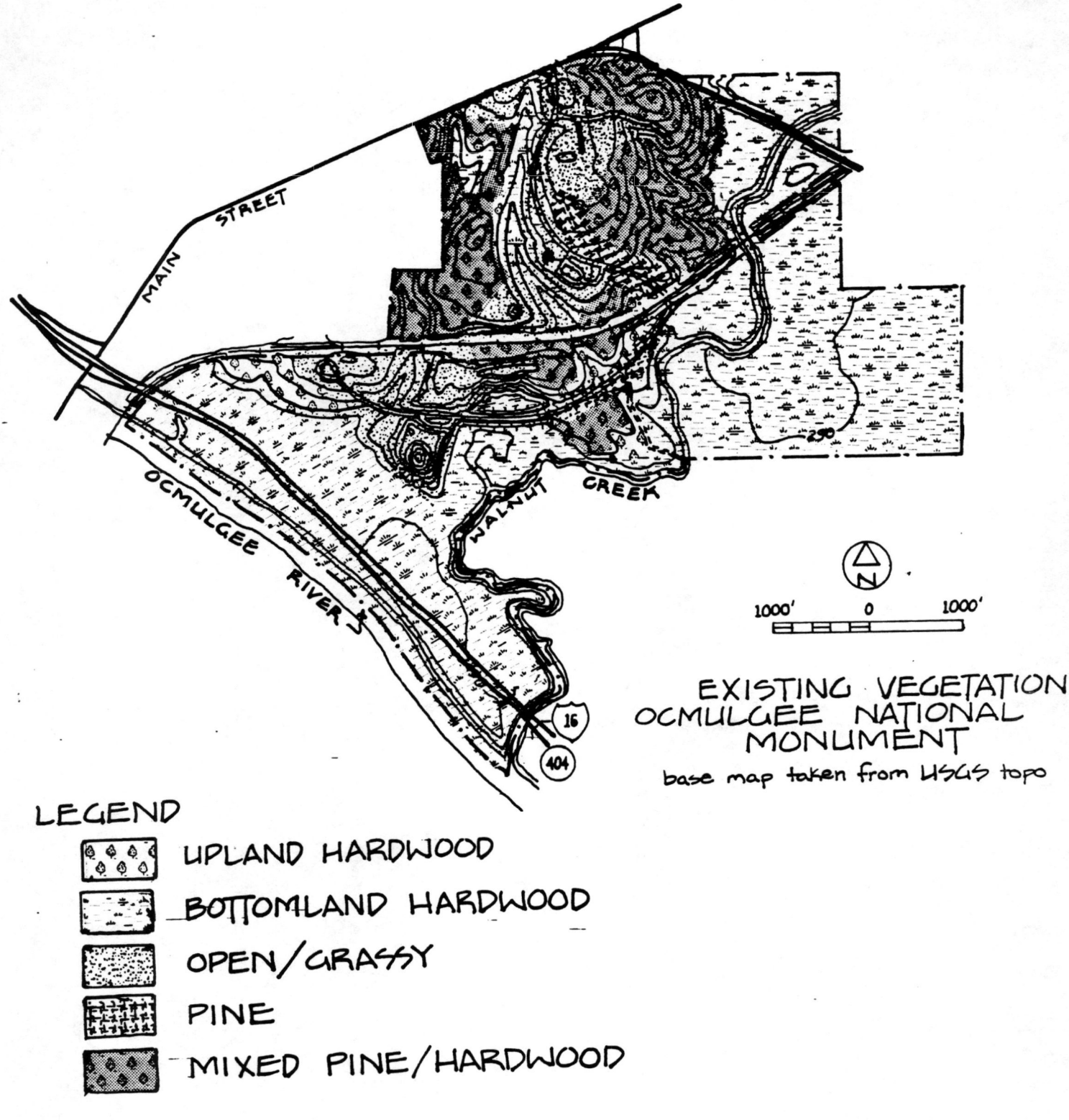


Figure 4. Map of Existing Vegetation.

Previously Recorded Cultural Resources

Within the study area there are several readily identifiable cultural features. These include: seven earthen Indian mounds, prehistoric trench lines, a reconstructed earth lodge, a late 17th/early 18th century trading post site, a renovated antebellum residence, and a Civil War period gun emplacement (Figure 5).

Area History

The research for this project excluded the prehistoric period and focused upon the historic period, which in itself covers a period of about 450 years and has been divided into the following sections:

A) 1540 to 1800
B) 1800 to 1821
C) 1821 to 1861
D) 1861 to 1865
E) 1865 to 1900
F) 1900 to 1936
G) 1936 to present

Section A: 1540-1800

Much of the information concerning the study area from the earliest 16th century chronicles to about 1800 is secondary in nature and widespread in scope. The concluding remarks describing the vegetation patterns from this period have been inferred from these accounts and a very few specific references. No maps were available from this period. This period covers the time that the site was being occupied intermittently by the Indian people of the area, namely the Creeks, and briefly describes some of their land use practices prior to influences by the incoming white settlers.

At present, the earliest known written accounts that describe or refer to central Georgia and the vicinity of the project area date from Spanish explorer Hernando de Soto's expedition

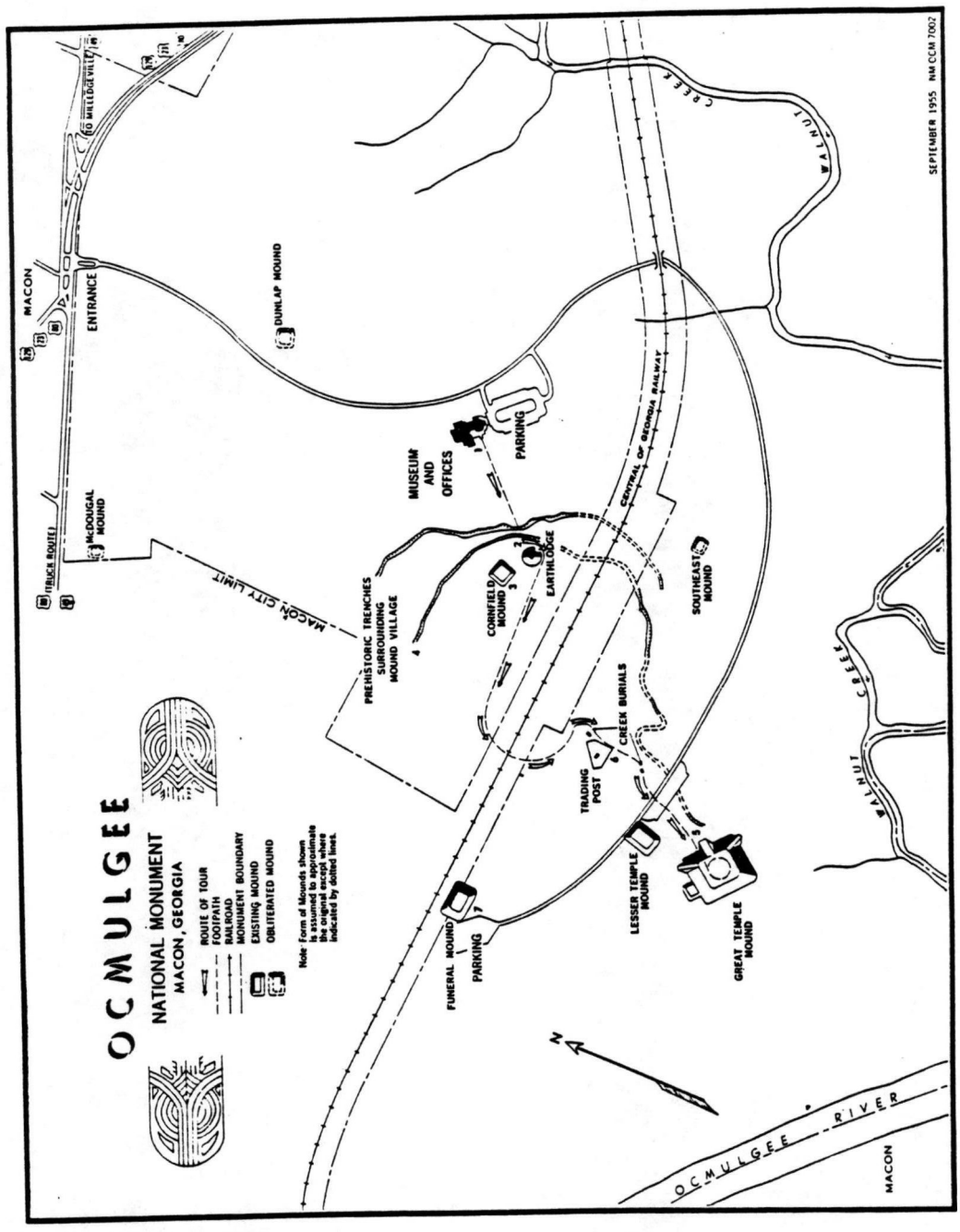


Figure 5. Ocmulgee National Monument (taken from NPS Ocmulgee National Monument brochure, 1967; does not show Dunlap residence or gun emplacement).

through the southeastern U.S. in 1539-1540. Although de Soto did not visit and describe the site of the "Ocmulgee Old Fields", he did make reference to an area along the Ocmulgee River--approximately 35 miles south of Macon (NPS brochure)--and he and his chronicler have provided us with several accounts that describe the daily life and land use practices of the Creek Indians during the mid-16th century. In Peterson's discussions of these early accounts, he states that the Creeks of the 1540's are described as "sedentary, agricultural peoples, living in fixed habitations, in large communities, with fields extending for many leagues along the valleys in the vicinity of their towns" (Peterson 1902). Peterson also states that the Spanish writers of these accounts spent four years--1539 to 1543--among the Creeks and several other Southeastern tribes; therefore, they had "abundant time to learn much of their mode of life" (Peterson 1902). The following quote provides us a glimpse of early land use practices as described by the Spanish.

> In clearing their fields they left standing the native fruit trees, such as the mulberry, plum, persimmon, walnut, shell bark hickory and pecan. Along the highways between their towns and in the woodland surrounding their fields, they also destroyed all undesirable forest growth, and left the native orchards and groves of fruit and nut-bearing trees standing. (Peterson 1902)

The "undesirable forest growth" was probably removed by the use of fire, as Hudson (1976) states that the Indians of the Piedmont used fire to remove forest understory during the harvest of roasted acorns, hickory nuts, and chestnuts. Burning would also have served to "increase legume, grass and berry yields during the next season and draw bear, turkeys and small game into the area" (Davison and Bratton 1986).

Although de Soto encountered people of the Lamar culture, possibly at the Lamar site (Figure 6) (NPS 1978) the nearby Ocmulgee Old Fields (also known as the Macon Plateau site) was abandoned by that time. In the approximately 150 years following de Soto's expedition, very few

accounts exist which describe this area of Georgia. By around 1690 the Indians, known as Lower Creeks, moved east to occupy the site and establish trade relations with the English. About this same time or possibly a few years earlier in 1686, English traders constructed a large fortified stockade and trading post within the "Old Field". The outline of this structure is still visible and the site is presently interpreted by the park. The Creeks occupied the Macon Plateau Site until about 1720 when they returned to the Chattahoochee area. However, they did continue to frequent the Macon Plateau Site until they ceded the land to the U.S. government in 1821.

Around 1739 a ranger traveling with General Oglethorpe made reference to the Indians they encountered living near the Ocmulgee River and stated that "their Houses or Hutts are built with Stakes and plaistered with Clay mixed with Moss which makes them very warm and Tite" (Mereness 1916). This ranger also described the Macon Plateau Site as he tells of their travels:

> July 31st. We travelled over many Hills from which we had a very Pleasant Prospect of the Valleys which abounded with fine green Trees and abundance of Grape and other Fruits,but which were not Ripe....We encamped at Occomy [Oconee] River where we found a Horse belonging to one of the Spaniards; we crossed the River and killed two Buffaloes of which there are abundance, we Seeing Several Herds of sixty of upwards in a Herd. We camped at Ocmulgas [Ocmulgee] River where there are three Mounts raised by the Indians over three of their Great Kings who were killed in the Wars. (Mereness 1916)

The next reference to the site is made by William Bartram, the English botanist who travelled through the Carolinas, Florida, and Georgia in 1773-74. Bartram provides several descriptions of the general area of central Georgia as well as of the study area itself. He describes the landscape between the Oconee and the Ocmulgee as follows:

> After XX the Ocone by fording it, which is about 250 yds. over, we travelled about 20 miles and came to camp in the evening; passed over a pleasant territory presenting varying scenes of gentle, swelling hills & levels, affording sublime forests, contrasted by expansive illumined green fields, native meadows and canebreaks; the vegetables, trees, shrubs & plants the same as already noticed without any material variation. (Bartram 1791)

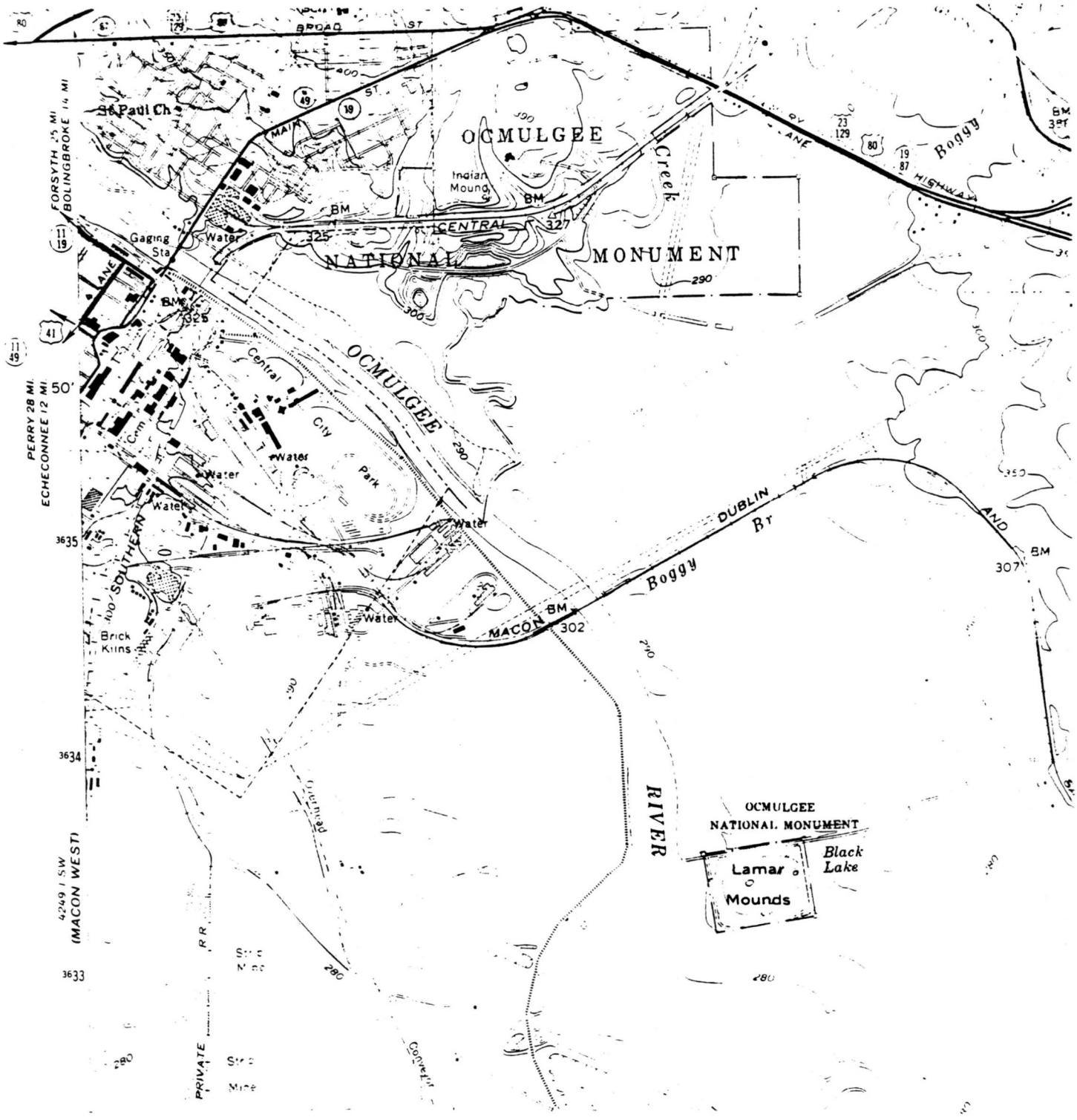


Figure 6. USGS Topographic Map - Macon East. Showing location of Ocmulgee Old Fields in relation to the Lamar site.

These plants included forest trees "consisting of Oak, Ash, Mulberry, Hiccory, Black Walnut, Elm, Sassafras, Gleditsia" as well as "*Pinus lutea*, *Pinus taeda*, or *herbaceae*, Solidago, Eupatorium, Sylphium, Rudbeckia, Gerardia, Asclepias, Eryngium, Thapsia. Euphorbia, Polymnia, & c". (Bartram 1791)

Bartram makes several references to the Macon Plateau Site and provides a few detailed descriptions. The first description of the site occurs as he is discussing one of the trading paths he discovered:

> about 70 or 80 miles from confluence of Oakmulge & Oconee, the trading path, from Augusta to the Creek nation, crosses these fine rivers which are there 40 mi apart. On east banks of Oakmulgee, this trading road runs nearly 2 mi through ancient Indian fields which are called the Oakmulge fields: they are the rich low lands of the river. On the heights of these lowlands are yet visible monuments or traces of an ancient town...their old fields and planting land extend up and down the river, 15 or 20 miles from this site. (Bartram 1791)

He later adds:

> on the East Bank of the river [Ocmulgee] lie the famous Oakmulge fields which are yet conspicuous very wonderful remains of the power and grandeur of the ancients of this part of America, in the ruins of a capitol town and settlement, as vast artificial hills, terraces, etc. (Bartram 1791)

Bartram then gives us a glimpse of these abandoned townsites by providing a general description:

> We passed frequently over old Indian settlements, now deserted. These [settlements] are always on or near the banks of rivers or great swamps, the artificial mounts and terraces elevating them above the surrounding groves. I observed in the ancient cultivated fields persimmon, honey locust, wild plum, red mulberry, shell-bark hickory and black walnut, which inform us that these trees were cultivated by the ancients, on account of their fruit, thrive better and are more fruitful in cultivated plantations, and the fruit is in great estimation w/the present generation of Indians, particularly the shell-barked hickory. The Creek store up the last in their towns. I have seen above an hundred bushels of these nuts belonging to one family. (Bartram in Peterson 1902)

In a brief discussion of the Creeks as farmers (prior to European influences), Bryan states that

> their farming and gardening were carried on in an interesting manner. A town-field or plot was laid out and different families assigned separate plots of ground. No fence separated the several family areas and each family tended its own particular plot. Their principal crops were corn, beans, squash, pumpkins and tobacco. (Bryan 1940)

In 1799 Benjamin Hawkins, Indian Agent, journeyed through the Indian territory and described the vegetation of the area as follows:

> Feb. 23, 1799. Continue on over an open waving pine forest 2 1/2 miles to the path which crosses the Ocmulgee ford; the path here intersects with the direct path to the Uchee village that crosses Tobosaufkee one mile below the junction with Stoney Creek. Continue on 1 1/2 miles to the Ocmulgee, the lands poor and piney the whole way till we enter the flats on the river, which are pretty good, the timber small within half a mile, the old fields included; here I saw one mound about 60 feet at the base, 6 feet high, and one lower. The fields extend down the river for a mile; I rode through them. I saw in two places the hills where corn had been planted, the whole grown up with old field pine, some of them a foot and an half diameter, thinly scattered; I saw some red haws and large patches of small winter cane (cohaumothlauku); I breakfasted in these fields on the river bank, and then X the river below the mouth of Oakchuncoolgau, a large creek which empties itself into the river on the E. Side....The land where I landed is a high bluff seldom if ever overflowed. We traveled 2 miles on this flat land N., sometimes within sight of the creek, the sail pretty good, tho' in some places sloshy, and the whole way covered with small winter cane about 4 feet high. (Letters of B. Hawkins)

The creek which Hawkins refers to (in the above quote) as the Oakchuncoolgau is the same as Walnut Creek. The Indian name of Oakchuncoolgau was used as late as 1817 as it appears on a map of that date (not located); however, a map dated 1827 uses the name Walnut Creek (Palaver Club Papers).

Hawkins again describes the area in 1800 and states:

> The mouth of the creek, Oakchuncoolgau, or Walnut, is the point of beginning for reserve contemplated in the late agreement with the Indians and this course

> comes through it. There is a narrow flat of cane break on the river and thence the lands rise into high waving land, the growth mostly oak, the Ocmulgee Old Fields are below adjoining the creek and river. (Hawkins in Forts Committee 1967)

Conclusions. At the time de Soto passed through the area (1539-40), the site of the Macon Plateau was temporarily abandoned; however, the Spanish explorers did provide some general information concerning land use practices of Indians in the area-including the Creeks.

Around 1690 the Creeks moved eastward and settled on the site and around the general area. It is assumed that they cleared the fields abandoned earlier and established their community plots as described by Bryan (1940). As stated earlier, rates for firewood consumption have not been determined, but based on the available data it is probable that some selective cutting was practiced to retain desired species such as fruit and nut trees and that fire was used for several purposes such as to facilitate the gathering of and increase production of various food sources, to remove undesirable shrubby growth, and to aid in the clearing of fields and village areas.

The trading post, which was established on the site around this same time, probably had little effect on the surrounding vegetation except in that it required the harvesting of building materials, (numerous large posts were needed for the stockade alone) and it attracted many more European settlers to the area.

Following the Creeks involvement in the Yamasee War, they moved west to the Chattahoochee area (ca. 1720), yet continued to frequent the site until ca. 1821. The account given by the ranger with Oglethorpe (1739-40) is interesting in that it not only provides us with specific construction materials used for the dwellings of the Indians, it also gives us a general view of the area; and the reference to buffalo herds is significant in that it means there must have been some vast meadow lands within which these grazers could roam. Bartram tends to support the accounts of the early Spanish explorers as he describes in general his observations in several of these abandoned

townsites. He, too, notes that within the ancient cultivated fields there are several species of native fruit and nut trees "which inform us that these trees were cultivated by the ancients" (Bartram in Peterson 1902).

Bartram also described the landscape noting the contrast between forested areas, green fields, native meadows, and numerous canebreaks. Benjamin Hawkins' descriptions of the area in 1799-1800 are very similar to those of Bartram, as he mentions the canebreaks along the river and the oak growing on the high waving land above the Ocmulgee Old Fields.

Section B: 1800 to 1821

This period begins with the Creek Indians' introduction to a new manner of living and to agricultural techniques as practiced by the early white settlers, and concludes with the 1821 Treaty of Indian Springs, in which the Creeks relinquished all of their lands east of the Flint River to the government and moved west. The following discussion has been documented using several primary as well as secondary sources. No maps were located from this period.

As early as 1801, the Indian Agent Co. Benjamin Hawkins reported on the agricultural improvements of the Creeks following the introduction of new farm tools such as the plow and hoe, new crops which included "cotton, flax, wheat, barley, rye, oats, apples, grapes, raspberries, and all kinds of vegetables" and livestock which included cattle and sheep (Pound 1929).

As the number of white settlers increased in the surrounding area, so did the pressures on the Indians to convert to a "more civilized" way of life and eventually to relinquish their lands. "In 1802, by a treaty held at Fort Wilkinson, on the Oconee, part of the land between the Ocmulgee and the Oconee was obtained" (Butler 1879). According to Butler, this treaty was "preliminary to the one of 1805" in which the Creeks ceded to the government all their lands between the Oconee and Ocmulgee Rivers "except a portion of the Old Ocmulgee Fields to be used as a trading post between



Photo 1. Benjamin Hawkins, Indian Agent (courtesy of Georgia Department of History and Archives, Atlanta).

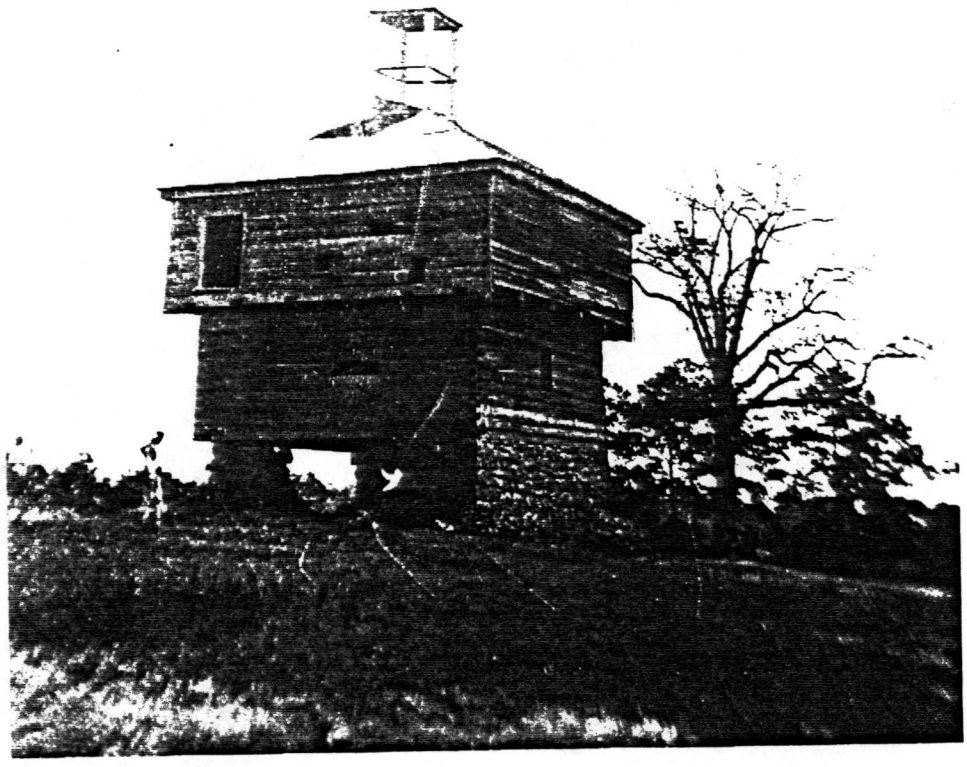


Photo 2. Fort Hawkins Blockhouse Photo Taken ca. 1876, Macon, Georgia. (Courtesy of Georgia Department of Archives and History, Atlanta

the whites and the Indians" (Butler 1879). the reserved land consisted of a "track of land five miles along the river and 3 miles in breadth on a portion of the Old Ocmulgee Field, to the Creeks" (Butler 1879) and the land was reserved because Hopoie Micco, spokesman for the Creeks, insisted that "the tract of land at Oakmulgee old fields is ours; we have reserved it to meet and trade with our white friends" (WPA 1932). Mr. Butler states that

> upon the recommedation of Col. Hawkins to the war department in 1802, Mr. Jefferson (president) insisted, in all the treaties, upon the privilege of establishing a fort and trading post on the Old Ocmulgee Fields. (Butler 1879)

With the right being obtained in the treaty of 1805, Col. Benjamin Hawkins "selected the site on the commanding eminence near the river" (Butler 1879) and by 1806 construction of Fort Hawkins hadbegun (Photo 1 and Figure 7).

Butler provides a thorough description of the fort's layout and design, as well as creating a picture of the surrounding landscape (Appendix 1). With regard to the landscape, he states

> The ninety-six acres surrounding the stockade were pretty much cleared of undergrowth and large trees except a few near the fort, which were left for a shade to the soldiers when not on duty. The object of clearing the grounds was, in case of attack, the Indians would not find a protection within gunshot, behind the trees. (Butler 1879)

The stockade which surrounded the fort enclosed an area of 14 acres and Butler states that the posts used in its construction were fourteen feet long and fourteen inches thick (Butler 1879).

In a letter to the Secretary of War Dearborn, dated July, 1806, Jonathan Halsted, factor at Fort Wilkinson, requested information concerning the provision of supplies for troops at the Ocmulgee Old Fields. He wrote:

> In the place of the Garrison forwarded to Captain Boote I observe that the factory is not taken into view. I should be informed whether it is to be within the Garrison or not and also whether I am at liberty to put up a temporary one with

> what assistance I can get from Captain Boote will not cost more than fifty or sixty dollars. (Records of the Creek Agency in Forts Committee 1967)

By September 1806 Halsted again wrote to Dearborn and stated that he had "immediately commenced erecting buildings at Ocmulgee Old Fields for the reception of public property" (Records of the Creek Agency in Forts Committee 1967). The new trading post was conducting business in the Old Fields by October 24, 1806. It remains unclear as to how long the business operated at the "Old Field" location and it should be noted that its exact location has not been verified, to date. It has been stated that the distance from the trading post to the Fort was about one mile (Records of the Creek Agency in Forts Committee 1967).

The establishment of the trading post on the Old Fields increased the availablity of new farming implements as well as other merchandise to the Indians in the area. Evidence of the changes in the Indians' way of life is provided in a letter from Col. Hawkins to Secretary of War Dearborn dated Jan. 22, 1808:

> The public shop of the Lower Creeks has been crowded the last two months by applicants for axes, grubing hoes, wedges, and ploughs. And with few exceptions they [are] beginning to be reconciled to the sale of Ocmulgee Fork, as well as determined to settle out into villages, to fence their fields and to conform to the advice of the agent. (Letters of Benjamin Hawkins)

In a discussion on agriculture, Hawkins states that the improvements are progressive and that the Indians have "very generally moved out of their old towns and settled on the margins of the rivers and creeks, where the land was fresh and good"; he then includes that the "articles of general culture are corn, sweet potatoes, ground peas, beans, watermellons, muskmellons, and pumpkins" and those of "partial culture are cotton, wheat, rice, squashes, Irish potatoes, tobacco, field peas, garden peas, turnips, colwarts, and flax". (Letters of Benjamin Hawkins)

During this time (1808-1809), the Creeks were also exerting themselves to acquire cattle, hogs, goats, sheep, and horses. Hawkins writes, "the country is a free range for them winter and

summer." He then goes on to state that "since, by the new husbandry corn is made sufficient in quantity to spare some for hogs and the fields being fenced they can run at large, their number is greatly increased." (Letters of Benjamin Hawkins)

It seems probable that the reserved land within the Old Fields was at this time being used by the Indians for meetings, hunting, and range for their stock. However, others were also noting the value of these lands and in 1807 Hawkins wrote to Dearborn to tell him that several Chiefs of the lower towns had complained to him

> that intrusions had commenced as usual on their hunting grounds by their neighbours of Georgia who were fire hunting on the Indian side of the Ocmulgee and had put over their stocks of cattle, hogs and horses to range theire, had cut salt logs for their stock and cedar from their lands; that as the Indians on Flint river (only 30 miles from Ocmulgee) all had stocks of cattle, hogs and horses it was to be apprehended they would arrive and bring about some ill blood between them. (Letters of Benjamin Hawkins)

Included in the letters of Benjamin Hawkins and the Records of the Creek Agency there are numerous accounts relating to the fort and its various uses. However, because the fort site does not fall within the project area, these will not be discussed.

Several brief descriptions of the land around the project area were provided by Peter Remsen as he journeyed across Georgia in 1817-1818. On December 26th, 1817, he wrote:

> The country from M. [Milledgeville] to Ft. Hawkins is better than what it was back of M. Swelling lands with streams for mills and much thicker inhabites (Hesseltine and Gara 1953)

He then added on January 1st, 1818, "the soil from F[ort] H[awkins] to F[ort] M[itchell?] is chiefly sandy, gently swelling. Timber almost all pine and I think a poor country." (Hesseltine and Gara 1953)

The next reference to the project area dates from Adam Hodgson's journey through the area in March of 1820. He stated:

> We left Milledgeville at eight o'clock on the 21st and arrived at Fort Hawkins, 32 miles distant, at 4 o'clock in the afternoon.... Fort Hawkins is a small quadrangle of wooden buildings, supposed, during the late war, to be of some importance in intimidating the Lower Creek Indians, some of whom took part with the British. The whole tract cleared for the fort and a house of entertainment for travellers, is perhaps half a mile square; and from the fort the eye looks down on an unbroken mass of pine woods, which lose themselves on every side in the horizon about 20 miles distant. (Hodgson 1824)

This period of site history is concluded by the Treaty of Indian Springs dated January 1821. In this treaty, the Creeks ceded to the state of Georgia all their lands lying between the Ocmulgee and Flint Rivers. It also provided "that the reserve at Fort Hawkins should revert to the state whenever the Federal government should relinquish it" (Kappler in Forts Committee 1967). An article about Fort Hawkins stated that "despite the fact that this land had been reserved to the Indians, a number of white people had already settled within the reserve itself" (Forts Committee).[41] This was further explained in a letter from Secretary of War John C. Calhoun to Governor Early dated April 26, 1821, which discussed the settlement of the reserve areas as follows:

> Upon the representation of Genl. Gaines that several persons were desirous of leasing lots on the public reservation, about Ft. Hawkins, and believing that the measure would give facility and encouragement to trade upon the Oakmulgee river, he was instructed in Oct. 1818 to lease out such portions of the reservation as were not used for military purposes, which was accordingly done. (Forts Committee)

Following the signing of the treaty of 1821, the flow of white settlers into the area increased and the Indians "except from fifty to one hundred removed to the West" (Butler 1879).

Conclusions. Following the ratification of the treaty of 1805, the vegetation of the reserved land was influenced by the Creeks, the military, and the encroaching white settlers. It remains unclear as to whether or not many Creeks were residing in the area. However, they were using the lands for hunting purposes and possibly as range for their grazing stock. The influences

on the land that resulted from the military occupation of Fort Hawkins have been inferred from a variety of sources.

The construction of the fort required the total clearing of at least 120 acres in the immediate area, as well as the procurement of specifically sized timber for stockade and building construction. It is quite probable that some of the building timbers and firewood stores were obtained from the lands within the study area.

Activities of white settlers which altered vegetation in the surrounding area included cutting of firewood, harvesting of cedar, and other timber, and ranging of cattle, hogs, and horses. According to numerous accounts, the project area was dominated by pines which were most likely a successional result of earlier land use activities. By 1818 much of the reserved land was being leased to incoming white settlers who probably proceeded to clear away the forested areas to provide for agricultural production. And by 1821 the Indians relinquised the remainder of their lands and moved west.

SECTION C: 1821 - 1861

The number of white settlers entering the Fort Hawkins area rapidly increased as the Indians moved west of the Flint River. This period of 1821-1861 began with the growth and development of the Bibb County and Macon area and concluded with the outbreak of the Civil War. Numerous primary as well as secondary sources of information were used to document activities occurring during this period, including early deed records and the original land survey map dated 1827.

With the Indians now living west of the Flint River and Fort Hawkins no longer needed as a military outpost, the old reserve lands including the Ocmulgee Old Fields were leased to white settlers.

In May of 1821, the Georgia General Assembly passed an act which created Jones County and, although the reserve lands were included within the county lines, they were not surveyed and divided along with the rest of the area (Forts Committee). However, in the accounts of journeyman John Melish, he describes his visit to the land office located in Louisville, then the state capitol of Georgia. There he saw a

> map of the newly acquired territory...situated between the Oakmulgee and Oconee Rivers. The land is said to be rich and valuable: and it is very extensive consisting of about 100 tracts of 12 miles by 8. It is to be disposed of by lottery, in which every citizen of the United States who has resided three years in Georgia is entitled to a draw for 200 acres (Melish 1818)

The population continued to increase in the area surrounding the Ocmulgee River, and in December 1822 the Georgia General Assembly responded by creating Bibb County--the area being formed from parts of Jones, Twiggs, Houston, and Monroe Counties (Bibb County Board of Commissioners n.d.). The seat for this new county was to be located on an unoccupied plateau on the west bank of the river (Anderson 1979). On December 8, 1823, the City of Macon was incorporated and by 1826 its population was approximately 750 and there were 32 stores in operation (Anderson 1979). With increase in the population came an increased demand for more land; therefore, an act of legislature dated December 22, 1827, provided for the "Ft. Hawkins reserve (east and west of the river) to be surveyed and laid off into lots" (Forts Committee 1967) (Figure 7). "These lands went into private ownership at public sale which ended Oct. 27, 1828" and "from this date until Feb. 13, 1922 the land was used for agricultural purposes" (Anonymous n.d.).

Some of the early land holders within the study area were S.P.P. Fay who was granted Lot 62 in 1832, R. McCall with Lot 73, Samuel Howard Fay with Lots 74 and 75, and Anson Kimberly who was granted Lot 60 in 1830 (Margold 1935). Farming and related occupations were

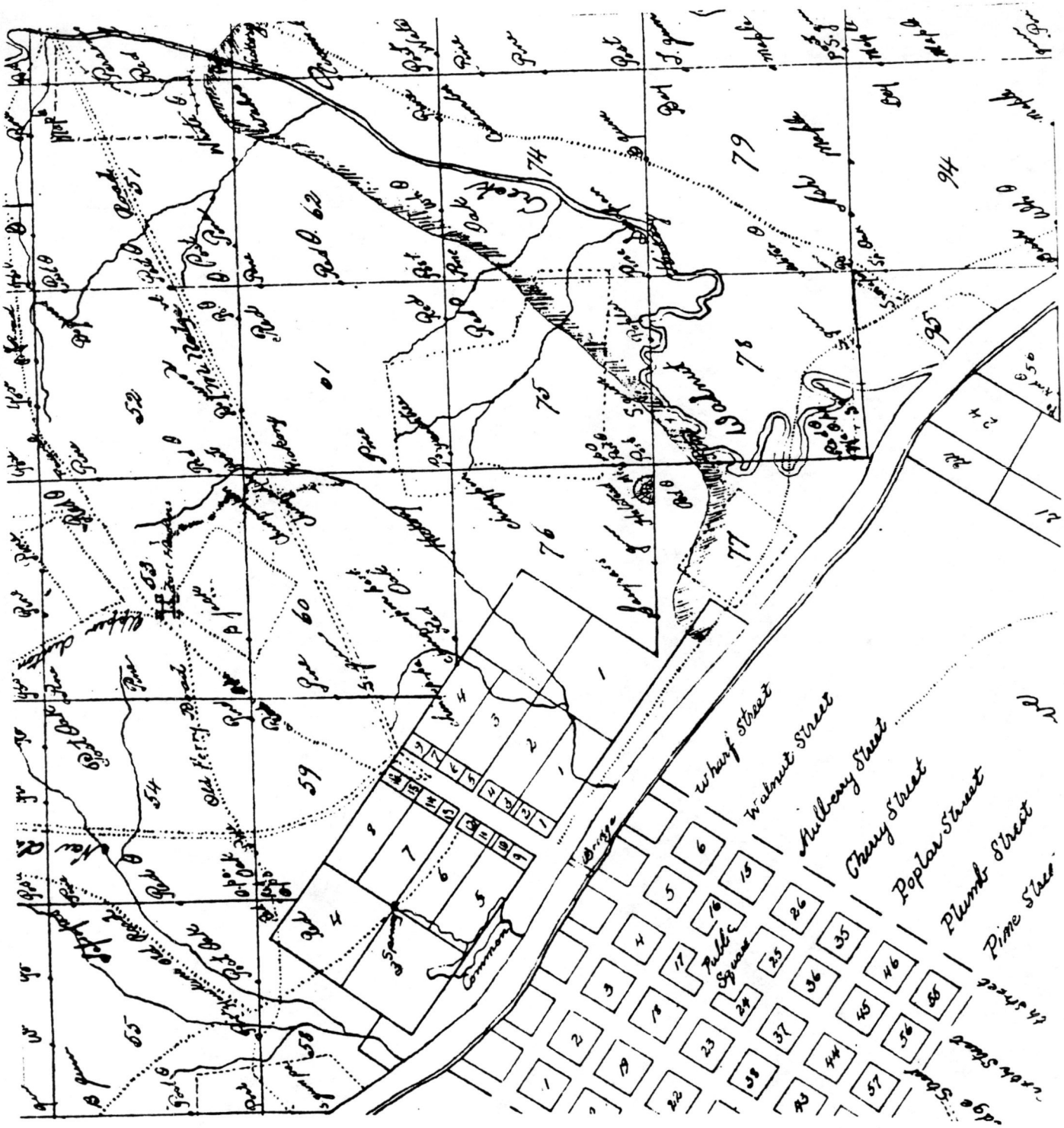


Figure 7. Map of the Public Reserves on Both Sides of the Ocmulgee River at Macon, dated 1827 (Georgia Department of Archives and History, Atlanta).

probably the principal occupations of these early settlers. It has been stated that the agricultural advantages of this area "have been more important than any other factors in developing the economic life of Macon" (WPA 1939); however, it was several years before the early settlers came to recognize the high quality of their lands.

In discussing this general lack of knowledge, Calloway stated that "the mistrust of the pine land was an understandable result of such ignorance" and then refers to a letter written by Adam Hodgson in 1824 which reads, "It is a common opinion in many parts of America that these pine lands are incapable of cultivation and are destined to continue forever in native condition" (Calloway 1948).

Hodgson's evaluation of these lands was incorrect because much of the pine land in the Macon area proved to be very fertile when properly farmed.

It is believed that pine lands made up a great deal of the study area during the early 19th century and that this land was soon cleared and used for agricultural purposes. At present, no information has been located which identifies the particular agricultural land uses for specific areas within the study area; therefore, the following is inferred from general information concerning agricultural practices in the area, unless otherwise specified.

By 1836 the first market house stalls were being rented in Macon. This information tells us that agriculture had by this time spread from home consumption into commerce. Crops being grown at this time probably included corn, tomatoes, beans, sweet potatoes, turnips, and watermelons. However, cotton is listed as being "the crop of paramount importance" to the city of Macon from as early as 1819, and all land that could be converted to fields for row crops was cleared. The growing of this staple brought about the replacement of the small farmer by the planter and the rise of plantations maintained by slave labor" (WPA 1939).

In 1860, the year before secession, Bibb County had about ten plantations with as much as 1,000 cleared acres each. In checking the 1860 Slave Schedule Census, it was noted that possibly three of the land holders within the study area were listed as slave owners, these were Samuel Dunlap owning 16 slaves, John W. Burge* with 19 slaves, and Thomas Woolfolk with 64 slaves (U.S. Census 1860). According to the 1860 Population Census, Samuel S. Dunlap and John Burge are listed as having the occupation of "Planter" (U.S. Census 1860). Based on this information, it is assumed that all tillable lands were kept under cultivation from the moment the land came into the hands of the first white settlers up to the time of the Civil War. The land within the study area that was not suitable for row crops, including the swampy bottomland hardwoods and steep sloping hillsides, was most likely used as pasture or range land for stock. However, farming was not the only activity occurring within the study area during this period of time. A pen picture of the mounds circa 1829 has been provided by Myron Bartlett, editor of The Macon Telegraph. Mr. Bartlett states that the "mounds were reached by a smooth carriage road, and they attracted excursions by 'the village fashionables'" (The Macon Telegraph 1934). He also describes the appearance of the big mound and said "once it was tended as a flower garden". He then refers to McDougald's Mound, stating that Capt. Robert McDougald died in 1908 and was buried in the mound and "on the palings surrounding the grave many visitors have left their 'writ'" (The Macon Telegraph 1934). In 1821 Capt. McDougald's brother was buried at his side. The article concludes by stating that

> *note: the Deed History (Margold 1935) refers to a John L. Burge as a previous owner of land within the monument area and although the census refers to a John W. Burge, it was determined pertinent information based on the order of name listings in the census. The census taker usually goes house to house (neighbor to neighbor) and in this case were listed as Dunlap, Burge, Woolfolk.

> Bartlett thought that as private owners had come into control of the lands in 1828 fine homes and rich gardens would be developed on them, in spite of the early superstitions when the white man first beheld them in the present civilization.

> Unearthly voices and frightful spectres haunted the grounds at one time, according to common report, but at the time of which Mr. Bartlett writes the only fairies were decently, even beautifully clad, and were of real flesh and blood. They were not less romantic or mysterious, but they were far more delightful to know. (The Macon Telegraph 1934)

In 1843, the Georgia Central Railroad built a line which transected the study area and resulted in severe alterations of Mound B (Figure 8). A description of the area a few years later is provided by Butler as he stated:

> The mounds around Macon were also covered with large oaks. They were cut away for timber about 1846 or 1847. There was up to that time fine walks on one of them and many roses and other flowers which had been planted there by the officers stationed at Fort Hawkins. (Butler 1879)

Shortly after this, in 1856, the Dunlap House was constructed for Samuel S. Dunlap (this house is still existing on the site and now serves as the area superintendent's residence).

Conclusions. It is assumed that soon after the lands in the Macon Reserve East were made available to white settlers, much of the existing pine forest cover was cleared and a new era of agricultural land misuse began. With cotton being the principal crop of the area, it is highly probable that the tillable lands on the Macon Plateau were used for cotton production, while the lower bottomlands along the river may have been used for corn. In discussing the settlement of the cotton belt, Calloway stated that "the wearing out of the cotton land in Georgia did not become a really noticeable factor" until the late 1830's. He references an article from the Augusta Constitutionalist dated 1839 that read

> The farmers of Georgia could not have pursued a more fatal course than they have done for the last thirty years. The growing of cotton on broken lands is the most ready way that can be adapted to destroy them. Hence, we have thousands of acres that were once fertile and richly repaid labor, now worthless to the last degree--nothing but sterile red clay full of gullies. (Calloway 1948)

However, G.W. Featherstonehaugh wrote of his travels from Macon to Milledgeville during this same year and stated that although "it was the old part of Georgia and the timber was scarce, 'the

red earth is still good for cotton"' (Featherstonehaugh in Calloway 1948).

In addition to the leaching of nutrients from the tillable lands, the vegetation of the swampy bottomland and hillsides was being altered as a result of grazers including sheep, cattle, and horses. The use of these forested lands as range for stock most likely resulted in the loss of a majority of the ground cover species and a reduction in understory vegetation densities creating an open forest (Photo 3). The combination of these land-use practices also resulted in severe erosion problems and the consequent sediment load increase of the area's water bodies (Walnut Creek and the Ocmulgee River). This increase in silt run-off possibly resulted in the widening of the swampy floodplain area along both the creek and the river. It is assumed that farming activities were greatly reduced or possibly even discontinued during the period of the Civil War as many of the able-bodied men had enlisted with the Confederate forces.

SECTION D: 1861-1865

The Civil War resulted in drastic changes in the southern landscape as well as changes in agricultural practices and the economic markets of the South. Although war-related alterations within the study area were minimal, the changes in agriculture and the economy were significant. The only primary source data that was located for this period of site history was a map dated circa 1863 was located in the public library collections in Macon (Figure 9).

The only battles fought at Macon occurred on the farm of Samuel Dunlap (Georgia Historic Marker) (Figure 10). A fairly thorough account of the first Federal assault has been located and will be discussed below; however, no data could be located describing the second assault on the area.

In July of 1864, Union Major General William Sherman devised plans for a cavalry attack on 5 miles of the Macon Railroad line located south of Atlanta. This rail was Atlanta's only supply

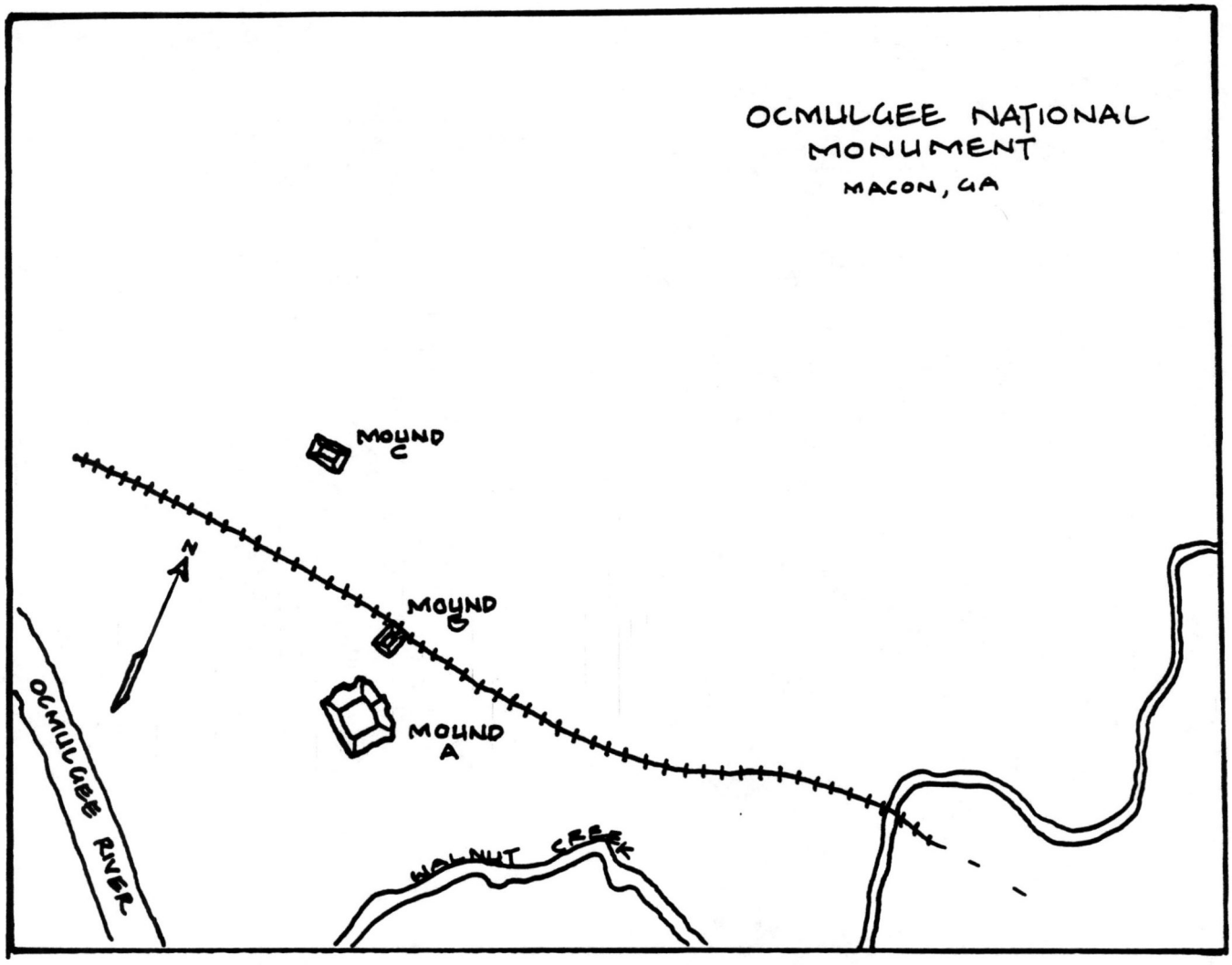


Figure 8. Map Showing Location of Railroad to Mound B.

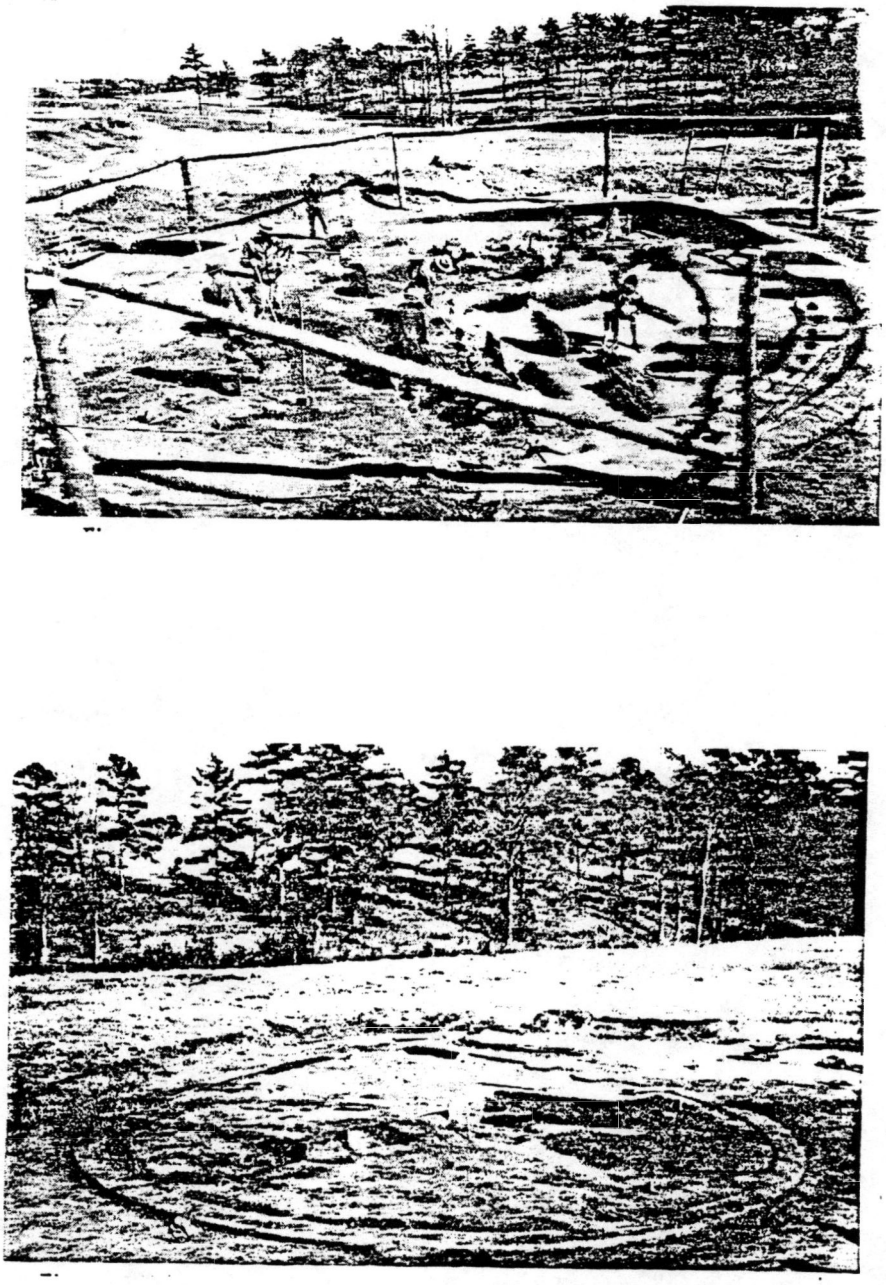


Photo 3. Excavation of Earth Lodge; top view NW, bottom view ENE - showing open forest (photos courtesy of Macon Telegraph).

line. If the attack on the rail line proved successful, Atlanta would be evacuated by the Confederate troops under the command of General John Bell Hood, thereby placing Hood's army between the Federal forces in Atlanta and the over 30,000 imprisoned Union soldiers being held at prisons in Macon and Andersonville. With this in mind, along with the fact that hundreds of men were perishing each month inside these prisons, Union Major General George Stoneman became preoccupied with freeing the Federal captives (Bragg 1985). After moving his men south of Atlanta, he decided to "ignore the railway and press on to the prisons" (Bragg 1985). Stoneman commanded a well armed cavalry corps of 2,050 men, comprised of three brigades with a two-gun battery section (Ibid).[65] As this force pushed through central Georgia, they left a trail of vandalism and arson to mark their track (Figure 11).

On the morning of July 30th, Stoneman and his troops moved to take the City of Macon and Camp Oglethorpe (the prison, refer to Figure 9). The ensuing battle has been described as follows:

> At about 7:00 a.m. Federals swept forward across the stream, scattering Confederate pickets along the creek bottom. Rushing up the slopes beyond, they took the high ground on Captain Sam Dunlap's farm, left of the road. There, in the farmhouse yard, Stoneman's artillerists untimbered while other troops erected breastworks with the lumber from a dismantled stable. To their right front, two blockhouses projected above the skyline....Along a low ridge to their immediate front, astride the road was a long line of infantry, part of the hastily gathered 'army' commanded by Cobb. (Bragg 1985)

Major General Howell Cobb, commander of the Confederate Reserve Force had managed to assemble a defense force of 2,500 men to hold the town. According to Bragg, "the day dragged on in stalemate" and "by 3:00, unable either to gain ground or check the fire from the fort, Stoneman determined to withdraw" (Bragg 1985). The battle had ended.

A second attack on Macon was made from the Dunlap farm on November 20, 1864, by Union cavalry forces under the command of Kilpatrick (Georgia Historical Marker). This assault was repulsed by Col. Colmes' army; however, no detailed account of this battle has been located.

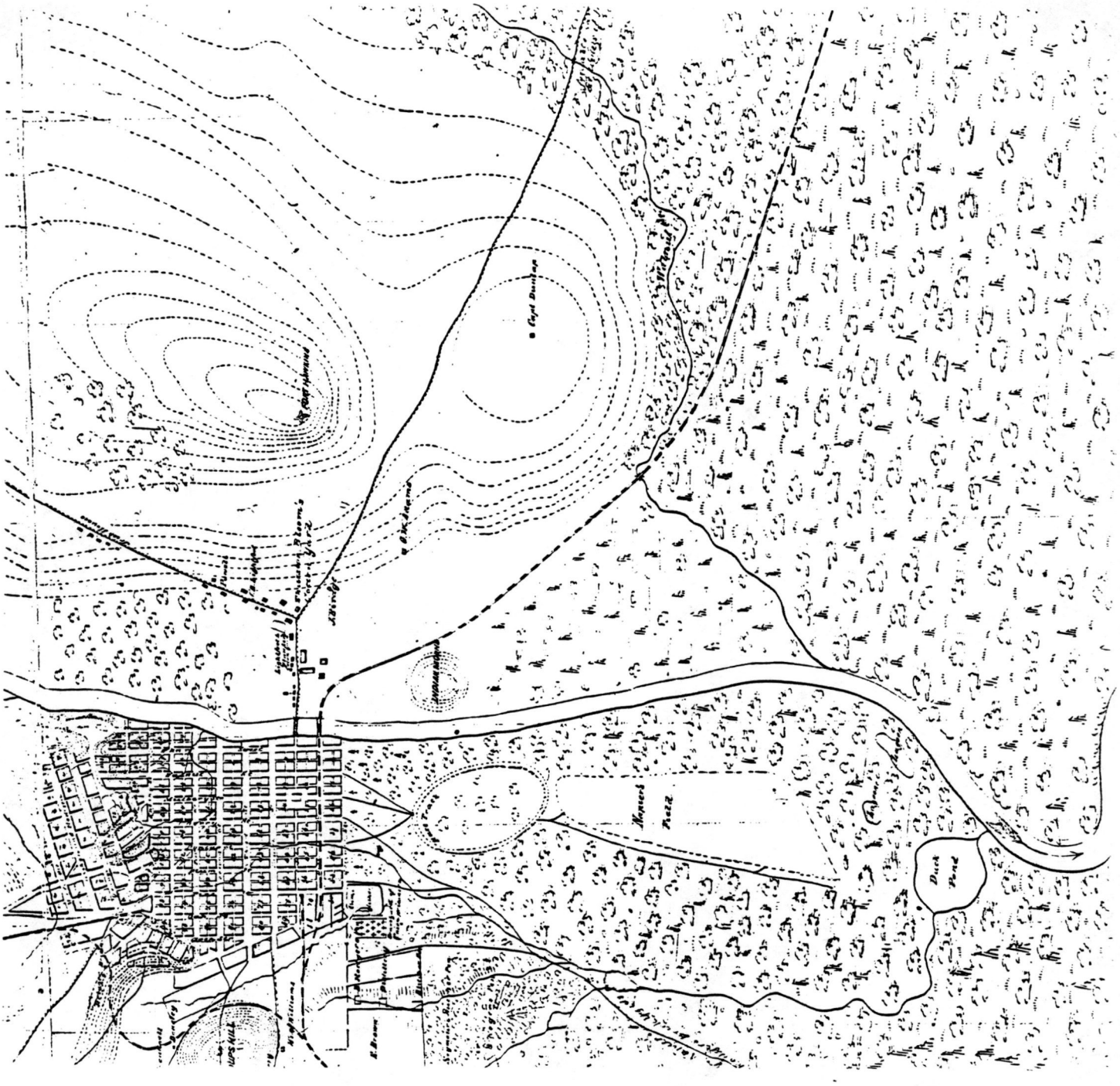


Figure 9. Map of Macon Area, ca. 1863 (possibly drawn by Union spy; Washington Public Library, Macon, Georgia).

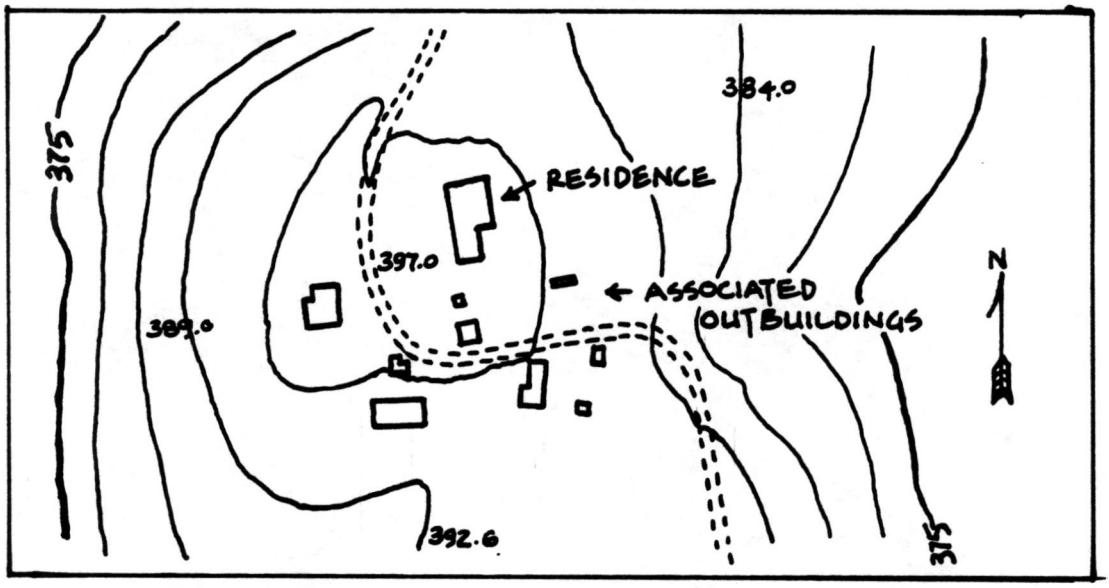
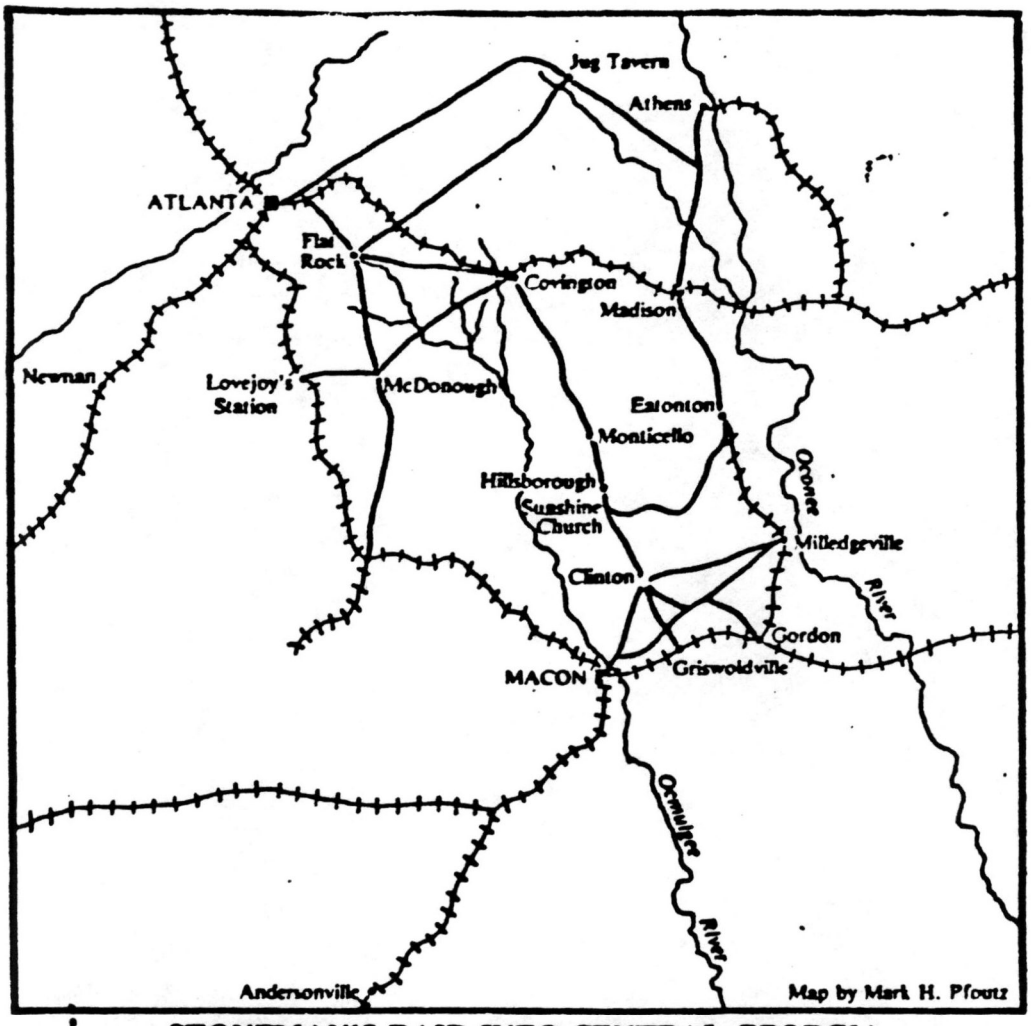


Figure 10. Map Showing Dunlap Residence. (Taken from 1935 NPS topographic map of Ocmulgee National Monument.)



STONEMAN'S RAID INTO CENTRAL GEORGIA
JULY 1864

Figure 11. Map taken from Bragg, 1985.

Conclusions. As stated earlier, it is assumed that most, if not all, farming activity within the project area had ceased during the period of the Civil War due to lack of available work force. This is supported by a reference in the Macon Telegraph, Augusta, 1886, which states

> At the time [latter part of 1864], every available man who could carry a musket was in the service of the Confederacy, and about the only ones encountered on Macon streets were either grey-haired, blind, or crippled. An able-bodied man was a very rare sight because if he ran the gauntlet of the conscription officers, public opinion would give no rest. (Young, Gholson and Hargrave 1950)

The 1863 map shows three vegetation types within the boundaries of the study area, including swamp lands, deciduous hardwood forest, and cleared land.

If the fields had indeed been abandoned during this time, they would most likely have been in an early successional oldfield stage (1 to 3 years) when the Union troops occupied the Dunlap farm. The two battles within the study area resulted in very little site disturbance, with the exception of the construction of a gun emplacement located southeast of the Dunlap residence (Figure 12), and possible entrenchment lines along the Milledgeville Road. The Confederate rifle pits mentioned in the account of Stoneman's assault were most likely located just outside of the study area, as the 1863 map shows a fordable site for Walnut Creek at its junction with the Milledgeville Road. It should be noted here that the gun emplacement (earth enbankment) was reshaped by NPS personnel ca. 1963-64 and is presently maintained with a cover of Bermuda grass which is kept mowed.

SECTION E: 1865-1900

This period dates from the conclusion of the Civil War up to the turn of the century. The land use activities during this period were extensive; however, very little primary or secondary source data has been located to describe these activities. Two 'period' photographs taken within the

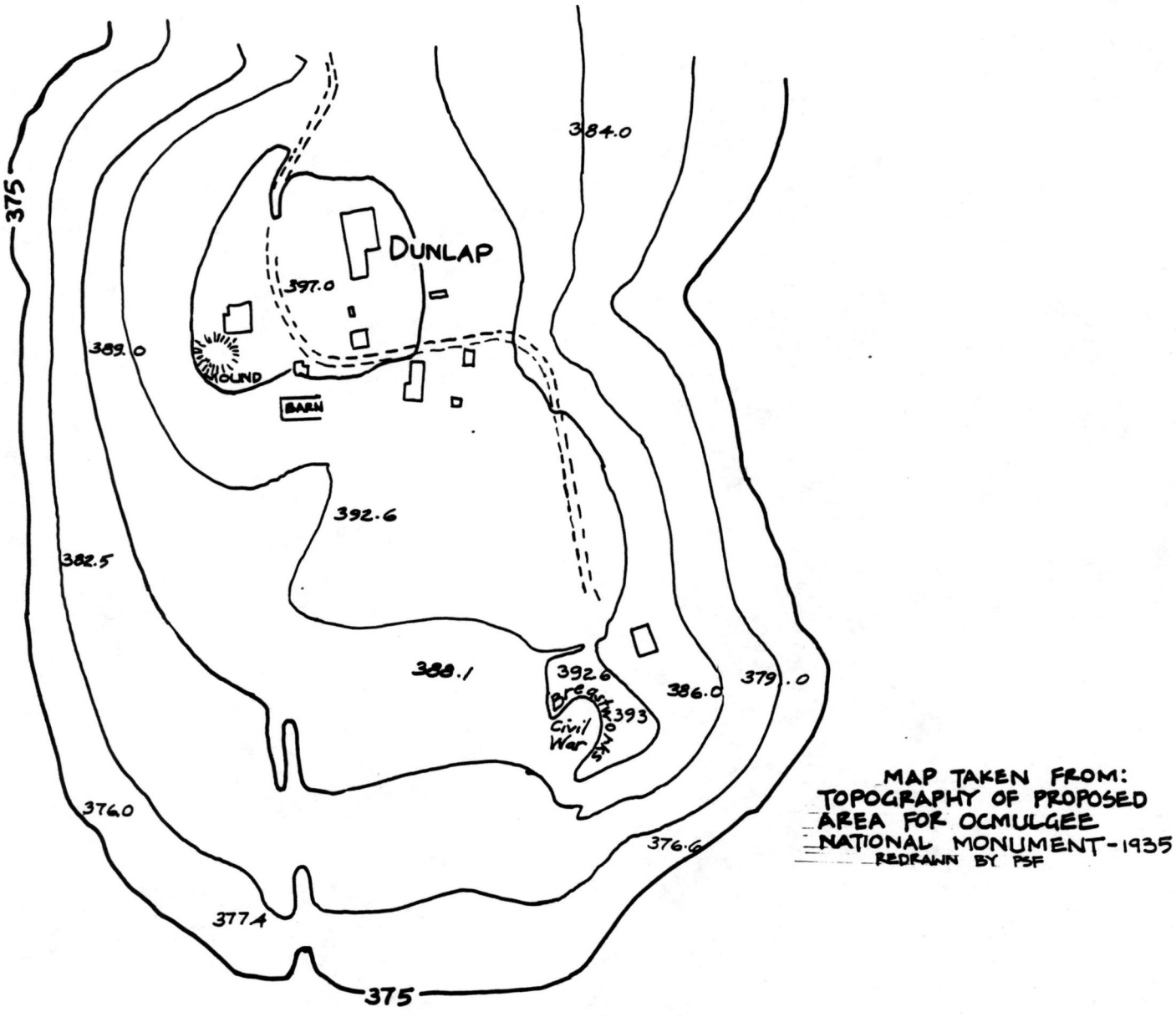


Figure 12. Map Taken From: Topography of Proposed Area for Ocmulgee National Monument--1935 (redrawn by PSF).

study area have been located and are included in this section. Two maps dated 1869 and 1897 were also located and reproduced here.

According to Orser and Holland (1984), the conclusion of the Civil War saw the re-establishment of plantation agricultural operations, prompted by exceptionally high cotton prices (Orser and Holland 1984). It is unclear as to when the fields within the study area were returned to cultivation, but it is assumed that cotton and possibly corn were again the crops of major importance, in addition to pasture land maintained for stock. During this period, there were several changes in the agricultural crops available to the farmers in the Macon area. Peanuts were introduced to the area shortly after the war by Confederate soldiers returning home from eastern Virginia. Although peaches had been introduced to the Creek Indians as early as 1800, and by 1858 were being shipped from Macon to other markets, it was not until the Rumph family experiments of the 1870's that fine quality fruit was produced and the market demands increased. Pecans were also introduced to the area as an experimental crop in the 1870's and by the turn of the century a growers' association had been formed in Macon.

In addition to the changes in agricultural practices, there was an increase in industrial development with a new railroad line and industrial sites within the study area, including a brick factory, clay pit mines, and a fertilizer factory. The number and location of houses within the study area other than the Dunlop residence is presently unknown.

In 1874, the Central of Georgia Railroad relocated their rail line to the north of the earlier (1841) line and, in doing so, severely impacted Mound C (Photo 4). In an 1870's description of the "tumuli" near Macon, Charles Jones states that the outline of Mound C had been eroded and "its northern slope carried away by the excavation for the new track of the Central Railway" (Jones 1873) (Figures 14 and 15). He continues: "It is still about forty feet high and is conical in form--its mean summit-diameter being about eighty-two feet. On its top is the decayed stump of a tree, more

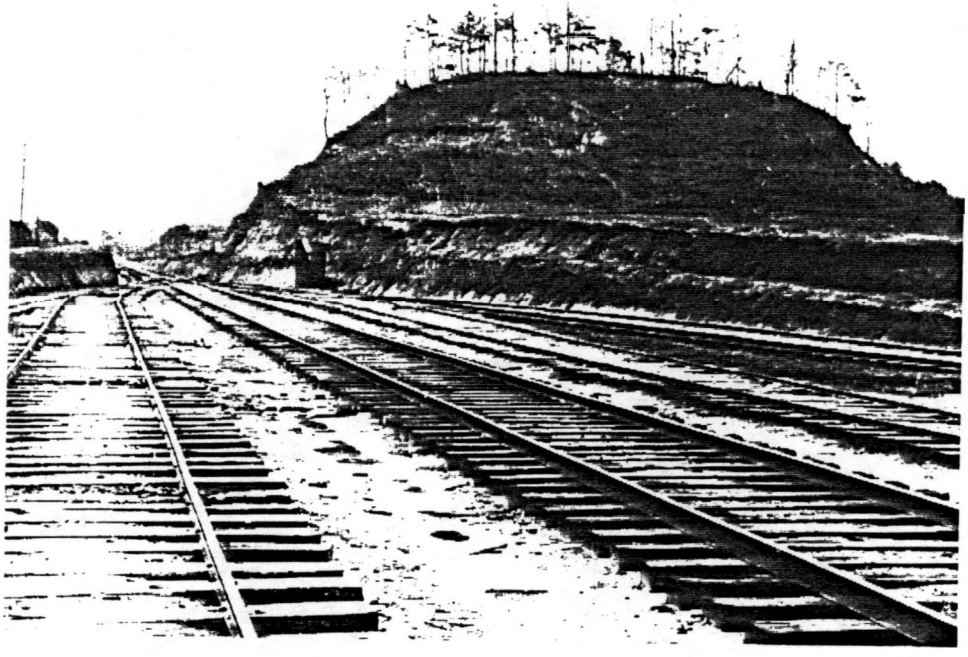


Photo 4. Central of Georgia Railroad Line, Ocmulgee National Monument, Macon, Georgia. (Photo taken 1876; courtesy Georgia Department of Archives and History, Atlanta).

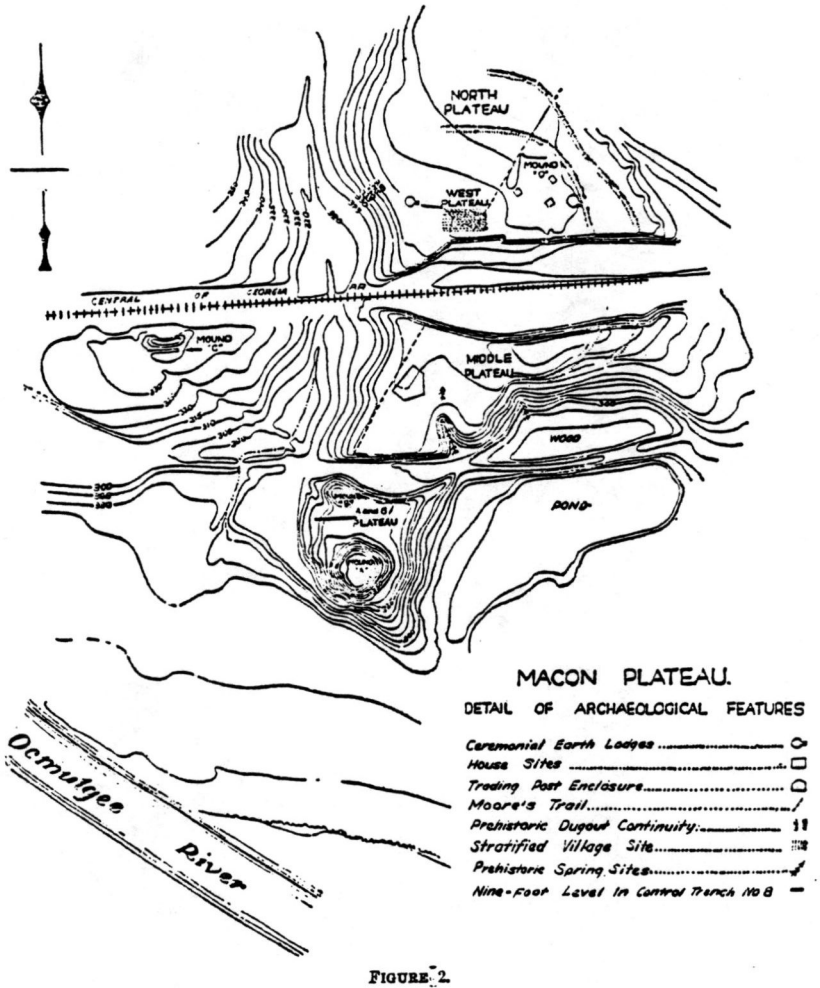


FIGURE 2.

Figure 14. Topographic Map Showing Relation of Central of Georgia Rail Line to Mound C (taken from BAE Anthropological Papers, Bulletin 119, No. 1.)

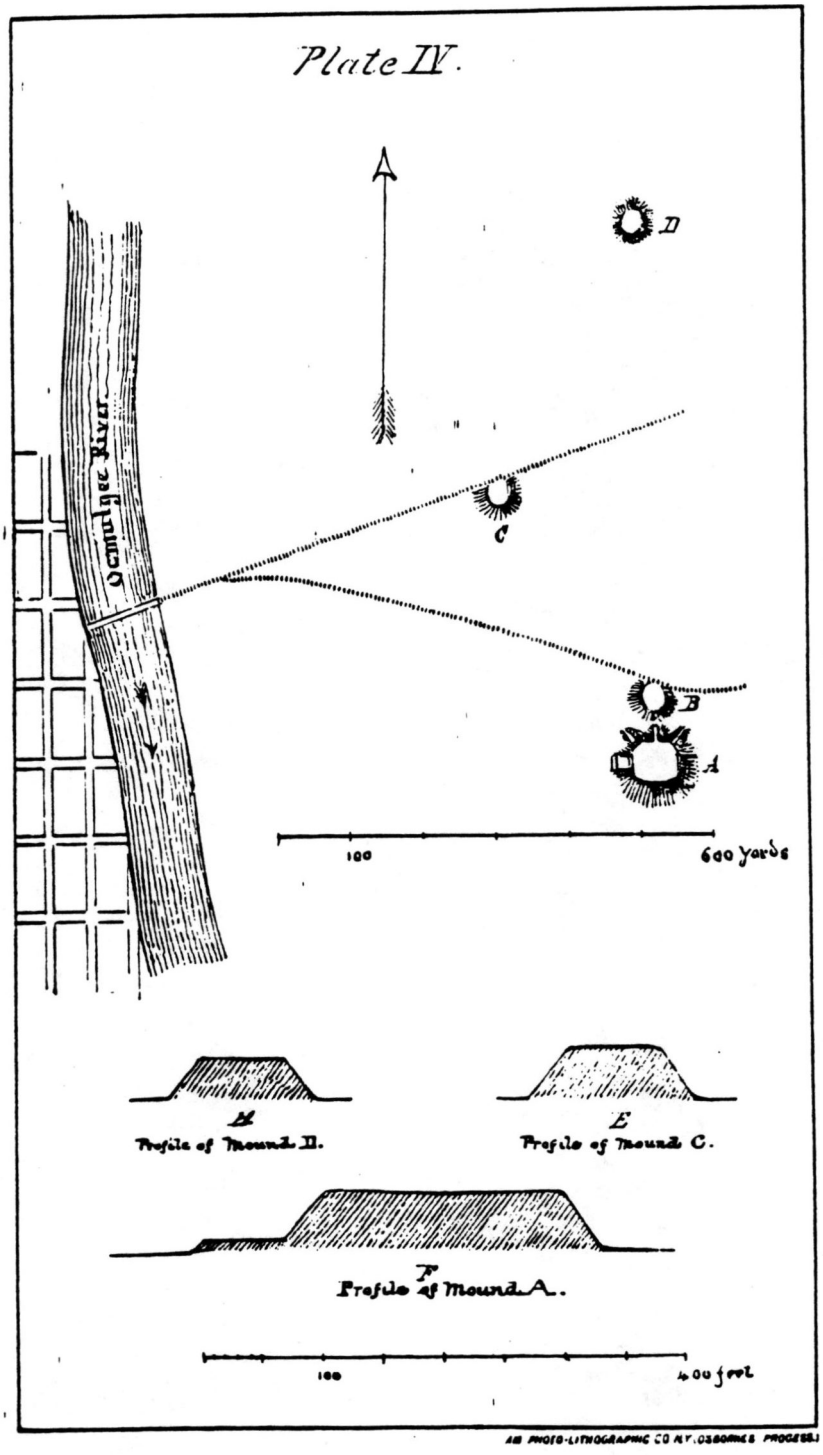


Figure 15. Map of Tumuli near Macon, Georgia Showing Relation of Rail Lines to Mounds B and C (taken from Jones 1878, Antiquities of the Southern Indians.)

than five feet thick" (Jones 1873).

It is assumed that the narrow, brick-lined railroad underpass located within the study area was also built during this time; however, it probably only served a small farm/field road, as the present road was not constructed until 1937 (Alfred Coleman, personal communication). According to park personnel, a railroad roundhouse was also included along this new line and was located southwest of Mound C (also known as the Funeral Mound). The date of construction for the roundhouse is assumed to be ca. 1874; however, no data could be found concerning the design, construction, specific location, or demolition of this structure.

Other activities occuring during this time period included the establishment of various industrial operations. Data concerning the industrial development within the study area is at this time somewhat limited; however, the following information has been obtained.

Several references describing cultural resources within the study area mention that a brick factory and a few other industries were, at one time, located in the area, yet most of these references are vague and fail to provide locational information or names for the various operations. The Land History of the national monument lands does make reference to several of these operations and provides the following names: "Knights Brick Yard," "Evans Brickyard or Fay Place", and "Ashepoo Fertilizer Company" (NPS 1973).

The specific information concerning each of these references is as follows:

> 11 Sept. 1862--Adams of Chatham Co., Ga. buys from John L. Burge for $10,000 the lots 76, 77, 78, 79, all of 74...75 south of CRR, lot 2 of 20 acres save for 1/8 acre of CRR land at SE corner, lot 1 of 20 acres save for 3 acres (called Knights Brick Yard) and the CRR line. Total of 350 acres (NPS 1973)

> Ashepoo Fertilizer Co.--Bibb Co. Records 129-159, 29 Sept. 1904. Hannahan, J. Ross of Charleston, S.C. gave for $8,000 parts of lots 74, 75, 76, 78, 79. For wagon road thru land of Hannie F. Hatcher, M. Felton Hatcher, Mrs. Mamie Clark (NPS 1973)

Evan's Brick yard (NPS 1973) or Fay Place (John R. Evans) plat Map IJ-552-3.

In an effort to locate additional information concerning these industrial operations, Georgia State Gazetteers and Macon City Directories were examined. Shole's Directory of the City of Macon, 1878, has listed under the heading Brickyards four operations, one of which was W.F. Anderson. Due to the fact that land within the study area was once owned by a W.F. Anderson, it was assumed that this is the name of the brick yard within the area (Shole 1878). No fertilizer operations were listed. Shole's Georgia State Gazetteer and Business Directory for 1879-1880 was examined; however, it listed no brick or fertilizer operations for the Macon area (Shole 1880). The 1881-1882 Georgia State Gazetteer and Business Directory also contained no listings for brick or fertilizer manufacturers in the Macon area. According to the 1886 state gazetteer, Macon had seven brick manufacturers, one of which was W.F. Anderson, and three fertilizer manufacturers and dealers which were: A.M. Huger, Macon Oil and Fertilizer Co., and Rodgers, Worsham and Co. (Anonymous 1886). It is presently unknown as to which, if any, of these fertilizer companies might have operated within the study area. By 1901-1902, Macon had five fertilizer operations: Adams, Heard, Mayer and Watts, Napier Bros., and Virginia-Carolina Chemical Company, and the list of brick manufacturers included "Anderson, W.F. - C of Ga Ry, E of Macon" (Cherry 1902). The last directory reviewed was R.L. Polk and Company's Macon City Directory of 1917 and no brick or fertilizer operations were listed as being in or near the project area.

Conclusions. Fields that were left fallow during the years of the Civil War were probably once again under cultivation by the late 1860's. Although new crops were being developed in the region, it is assumed that the principal crops grown within the study area were cotton and corn. Non-tillable lands such as the steep-sloped ridges and the swampy bottomlands were probably left forested, excluding the removal of any merchandizable timber, and used as pasture/range for livestock. Based on the period photographs available, much of the study area was used for crop



Photo 5. 1899 Photo, Looking Toward Mound C from Mound A and B, Ocmulgee National Monument, Macon, Georgia (Courtesy Harvard Peabody Museum).

cultivation, yet it appears that the mounds were left partially forested (Photo 5).

Although farming during this period was probably quite extensive, its resultant impacts on the land were not any more severe than the impacts resulting from the industrial development within the area. The increased availability of fertilizers during the 1880's reduced the impacts resulting from extensive cultivation of the land by enabling the planter to replace many of the nutrients that had been depleted from the soils; however, soil erosion continued to be a problem.

The industrial development within the area resulted in vegetation changes through the processes of clearing, flooding, and possibly changes in soil composition/structure. Due to the fact that rail lines are generally laid along land having shallow slopes, the 1874 line probably claimed existing farm land for its right-of-way, thereby making it unnecessary to clear much woodland. The construction of the line did, however, slice away a sizeable portion of Mound C, causing an increase in erosion. A large amount of fill was required for the section of line containing the underpass and, although it has not been documented, it is possible that some of this fill was obtained from Mound C, the slough area located just east of the underpass, and the obliterated Southeast Mound shown in Figure 5. No information was located to provide the date of the destruction of this mound. It should be noted that the above mentioned slough may be a result of borrow activities; however, it might also be a result of increased silt run-off into Walnut Creek caused by poor farming practices.

Further south, along Walnut Creek, is a large pond created as a result of clay mining activities associated with the brick factory [this area might also have served as a borrow pit during mound construction (A.D. 900-1200)]. Running along the perimeter of clay mining area was a narrow guage rail line which was used to transport the excavated clay to the brick factory. The elevated beam which supported the track is still evident and is used by the park as part of their trail

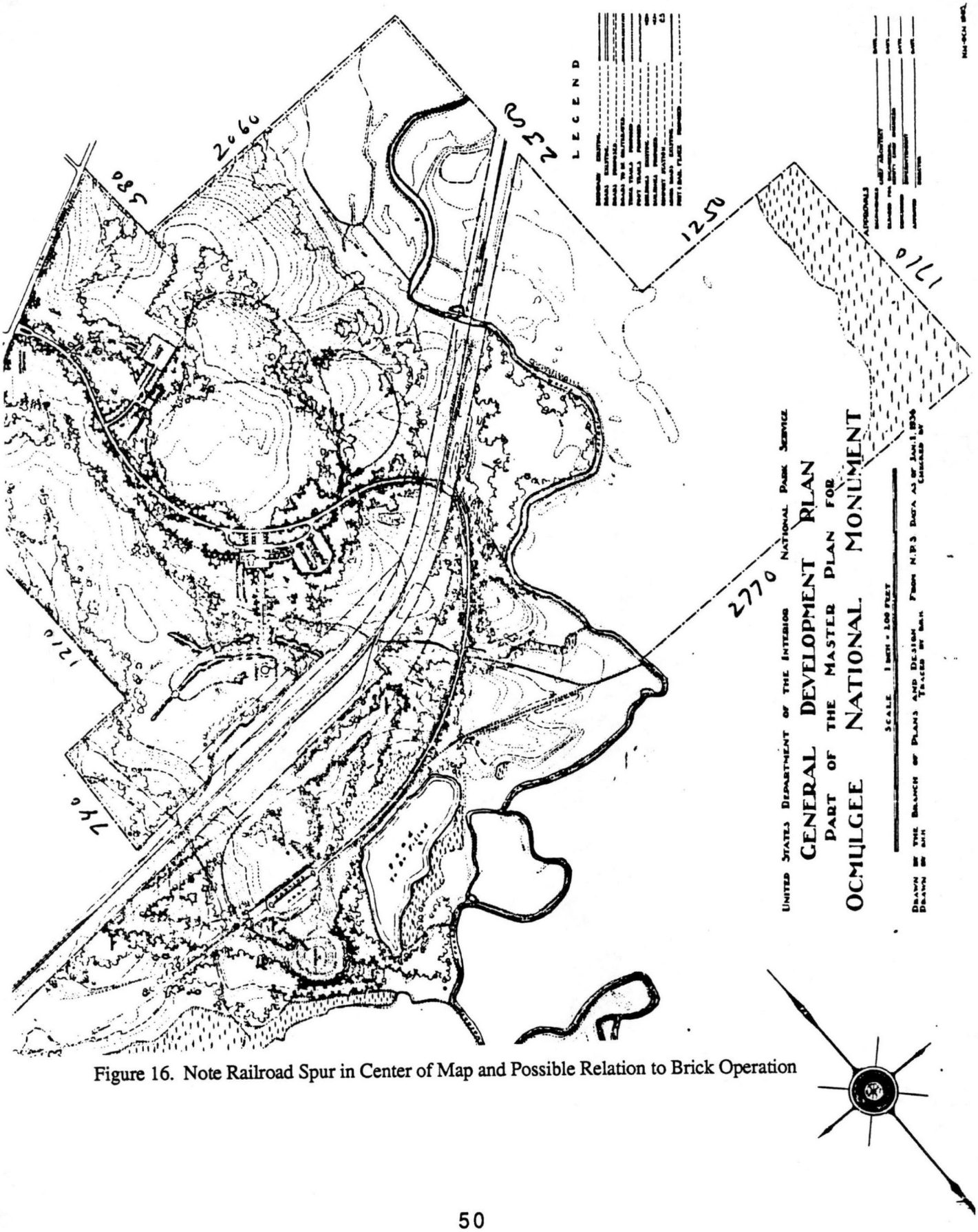


Figure 16. Note Railroad Spur in Center of Map and Possible Relation to Brick Operation

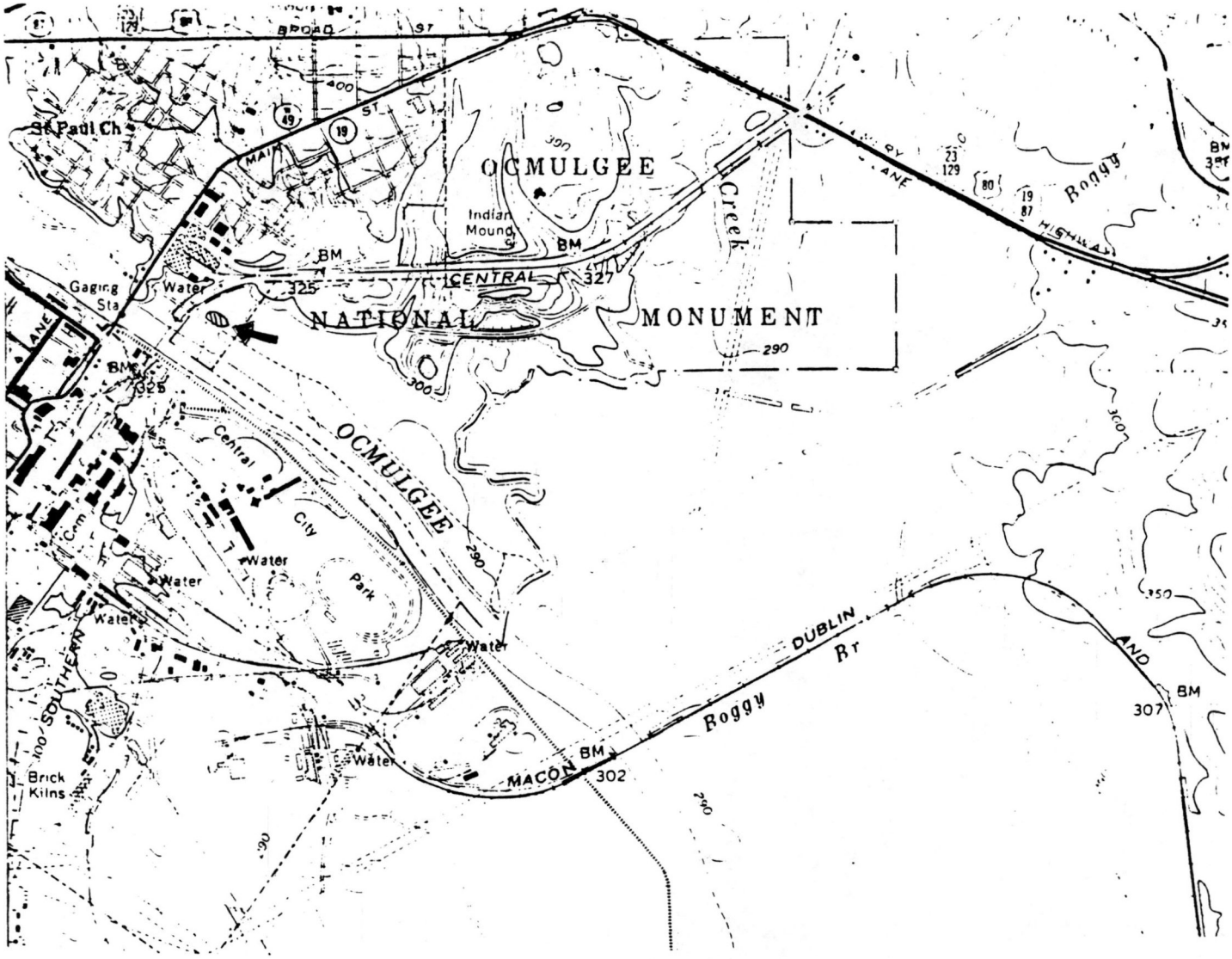


Figure 17. Map Showing Location of Brick Concentration.

system through the swampy bottomlands.

Although the locations for the brick and fertilizer operations have not been firmly established, it is assumed that the vegetation of these areas was severely altered. No dates have been established for the fertilizer company, with the exception of a secondary reference from 1904. The spatial requirements for this type of operation are presently unknown by the author.

The brick factory appears to have been in operation from at least 1878 to 1902 with operation during the years 1879 to 1882 being questionable. There is some conflict concerning the general location of the brick factory. Information obtained from deed records states that the brick factory comprised 3 acres within lot #1 of lot 75 (refer to Figure 7), whereas information obtained from park personnel places the factory somewhere to the west of Mound A (between Mounds A and C). There is a railroad spur off of the 1874 Central of Georgia line which might have served the factory had it been located within lot 75 (Figure 16). The factory operations would have required an office area, large sheds for producing and drying the unfired brick, a large kiln for firing the brick, and storage areas to keep the finished product prior to distribution. No traces of this operation were located in the field in the area near the Central of Georgia line (lot 75) or in the area between Mounds A and C; however, an area containing a high concentration of brick and brick rubble was located (Figure 17). The site is presently covered by a very dense growth of common privet (*Ligustrum vulgare*) which makes entrance possible only by crawling, and this made it difficult to evaluate what the site function might have been. The site consisted of numerous mounds of brick, ranging in height from 1 to 3 feet and covering an area of approximately 150' x 300'. The function of the site is currently unknown; however, it is possible that it was associated with the brick factory, perhaps the kiln site. No information concerning this has been located.

SECTION F: 1900-1936

This period marks the final years that the lands within the study area were held in private ownership. The opening date of 1900 was selected due to the nature of some of the data available for the years 1900-1901. The closing date for this period was chosen because, in December of 1936, Ocmulgee National Monument was established by Presidential Proclamation. Several primary and secondary information sources were located for this period, including deed records, histories, newspaper accounts, and soil survey data. Several maps and photographs from this period were also located, including a very detailed topographic map of the study area (scale 1" = 200').

According to Stevens and Wright (1901), the crops being grown in Bibb county along the Ocmulgee River included seed cotton, corn, wheat, oats, barley, rye, crab grass hay, sugar cane, field peas, ground peas, sweet potatoes, and Irish potatoes. In the bottomlands, corn, Bermuda hay, and German millet were most common (Stevens and Wright 1901). They add that also within this area "timber products are small, consisting mostly of oak, hickory, cherry, walnut, etc... and a little yellow pine is still left" (Stevens and Wright 1901).

Dairy farms were also common in the county with Bermuda grass being used for summer pasturage and clover, Texas bluegrass, barley, rye, oats, and wheat being used for winter pasturage (Stevens and Wright 1901). The Dunlap farm apparently operated as a dairy farm during this period; however, no additional information concerning this operation was located (NPS 1978).

Farmers of the Georgia Piedmont continued to grow cotton as their principal cash crop with food crops raised in abundance" (WPA 1939).

The 1922 Soil Survey of Bibb County was reviewed and found to provide a wealth of information concerning which crops were grown on the various soils and forest composition for the soils (if applicable), as well as providing a map of the area which locates residences, etc. (USDA

1922). The soils map shows eight structures (including the Dunlap residence) within the study area (Figure 18).

In addition to the farming and development activities within the study area, there were some particularly destructive activities occurring during this period. These actions included partial destruction of the McDougal Mound when it was "used for fill dirt during the construction of east Macon" (NPS 1978), and damage to several of the mounds, particularly Mound A, resulting from motorcycle races. According to Mrs. Ralph Johnson (personal communication), motorcycle races were commonly held on Sunday afternoons and involved contestants racing to the summit of Mound A. Damage to this mound is clearly visible in aerial photographs taken in the late 1930's (Photo 6).

A few of Macon's citizens were aware of the potential significance of the Ocmulgee Old Fields Sites and they realized that if these destructive practices were allowed to continue, the mounds would be lost. As early as 1922, General Walter Harris contacted the Bureau of American Ethnology (BAE) and expressed interest in acquiring and preserving the site (NPS 1978). Nothing resulted from this initial contact, so in 1929 Harris again wrote the BAE and suggested that the city of Macon would provide funds for the Smithsonian to conduct an archaeological excavation of the Old Fields Site (NPS 1978). Within a month of receiving the second letter, the Bureau Chief visited the site and recommended that the mounds be investigated archaeologically. By 1933, General Harris, Dr. Charles C. Harrold, and Linton Solomon had persuaded the Macon Junior Chamber of Commerce to work with the newly created Society for Georgia Archaeology and the Macon Historical Society in acquiring the necessary lands (NPS 1978). The first purchase was in December of 1933 and included Mound A and the Lamar Mounds. Archaeological excavations were initiated the same month and continued until 1941. The first stage of work was funded by the

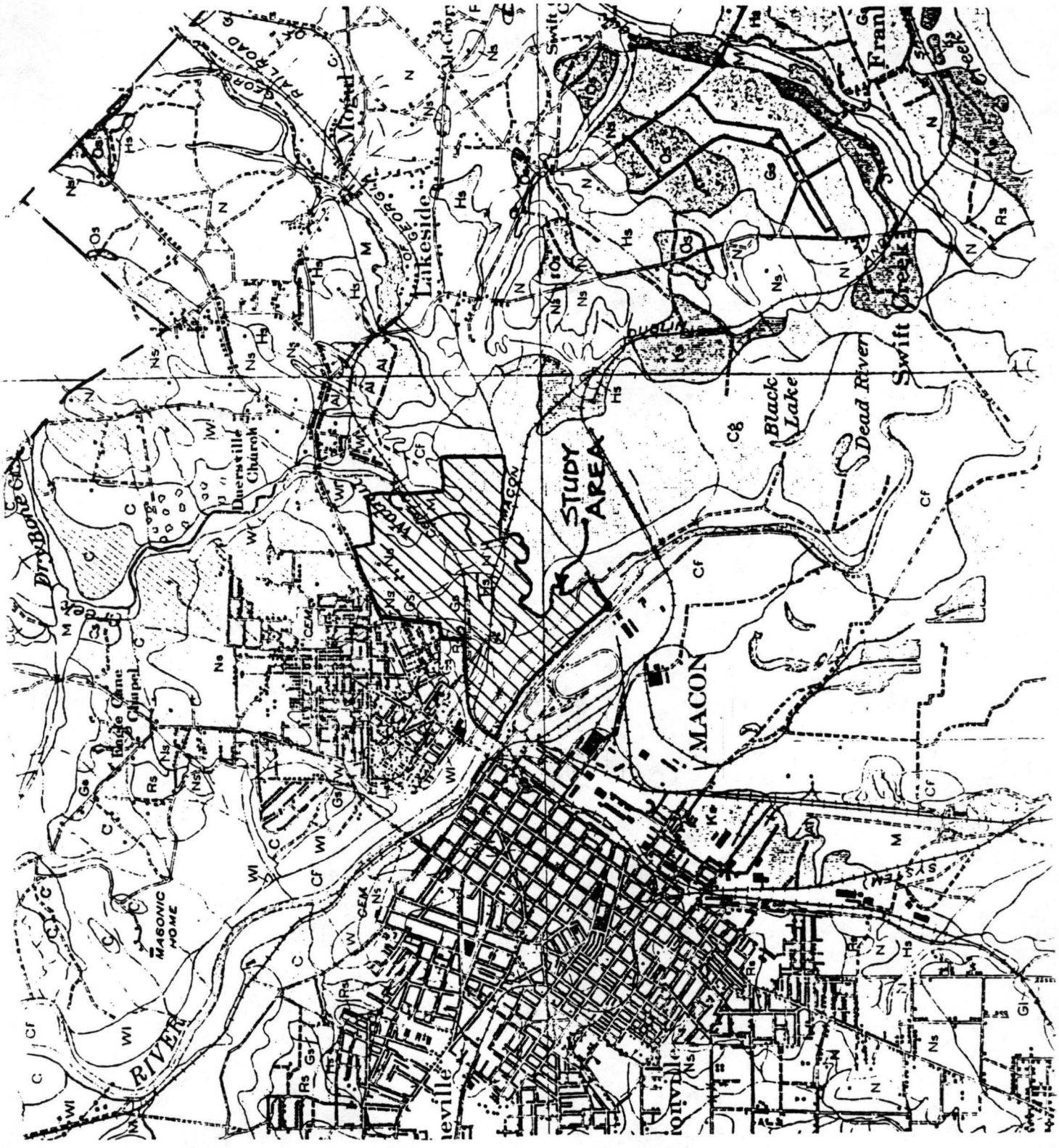


Figure 18. Taken from 1922 Soil Survey of Bibb Co., Georgia (USDA, 1922).



Photo 6. Aerial of Mound A Area, Ocmulgee National Monument, Macon, Georgia. (Note motorcycle trails, especially up the south side of mound.)

Civil Works Administration (CWA) and then in April of 1934 the responsibility was transferred to the Federal Emergency Relief Administration (FERA). This area was depicted on December of 1933 and included Mound A and the Lamar Mounds. Archaeological excavations were initiated the same month and continued until 1941. The first stage of work was funded by the Civil Works Administration (CWA) and then in April of 1934 the responsibility was transferred to the Federal Emergency Relief Administration (FERA).

Much of the land required for the park was initially purchased by either the Junior Chamber of Commerce or the Macon Historical Society and then donated to the United States. A deed history dated July 1935 was compiled by the Solicitor's Office, Department of the Interior, and includes about one-half of the land acquired for the park (Margold 1935). By November of 1936, the required land had been purchased (Figures 19 and 20) and on December 23, 1936, the Ocmulgee National Monument was established by Presidential Proclamation and placed under the supervision of the National Park Service.

Conclusions. Agricultural practices around the turn of the century were probably very similar of those of the previous period. However, when the boll weevil moved eastward, the farm systems that were supported by cotton (which comprised the majority of farms in the Macon area) temporarily collapsed and had to be restructured. The growing of diversified crops most likely proved beneficial, not only to the farmers, but also to the land itself. Although area-specific information is not available to relate what crops were being grown within the study area, the 1935 topographic map does show old field locations and, by using the soil survey data and the available aerial photographs from the period, a composite land use map has been compiled (Figure 21). Although there were several residences and other sites containing built structures within the study area, very few existing features (biotic and abiotic) from this period were noted in the field.

As stated earlier, the Dunlap house is currently maintained as the area superintendent's residence. Behind the Dunlap house, adjacent to the gun emplacement are the foundation stones of a structure that is shown on the 1935 topographic map (Figure 22). This building site is now enclosed by woods. Another farmstead site that was vaguely recognizable in the field is located west of Mound C. This site is shown on the 1922 SCS map and is also included on the 1935 topo. Although no structural features were located at this site, there are several large Oak, Elm, and Osage Orange trees that possibly served as shade trees around the house. This area was depicted on the 1935 map as being clear for cultivation and is still somewhat cleared with expanses of Andropogon, although numerous small Hawthorns, Pines, Winged Elms and *Rubus* spp. are becoming established. It should be noted that very near this site is a small brick-lined culvert and a larger stone and brick-lined drainage channel with masonry overpass, both remnants of the earlier 1841 rail line.

Whenever possible, old field boundaries have been mapped and will be searched for during a final site visit--yet to be made. Any additional information concerning these and other observed features will be addressed in a summary (Appendix 2).

The archaeological excavations that were conducted on the site throughout the 1930's resulted in extensive vegetation alterations. A 1933 pre-excavation description of the ceremonial earth lodge area states that "except for a slight elevation there was no surface indication of a building on this knoll. It was covered with weeds and stumps but had been extensively plowed around the edges" (Young, Gholson and Hargrave 1950). A majority of, if not all, the trees, shrubs, etc. that were on the mounds presumably were removed at this time (Figures 22 and 23).

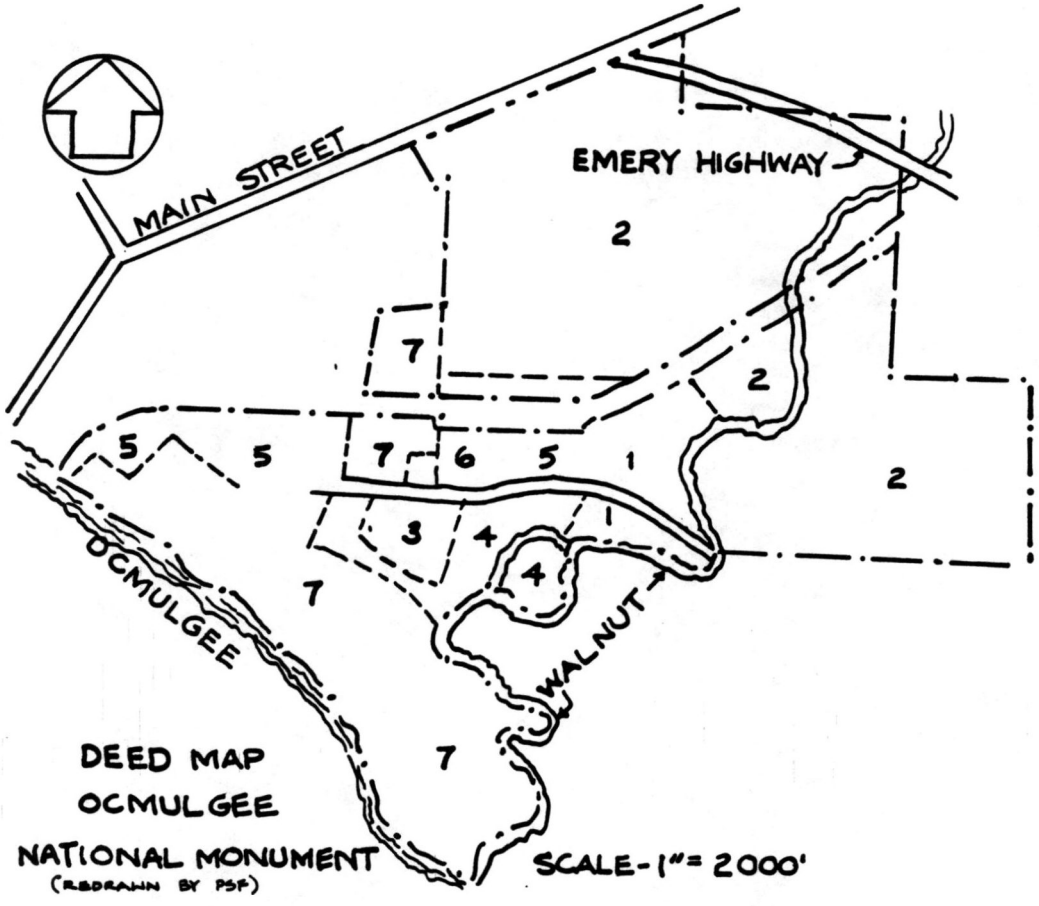

MAIN STREET
EMERY HIGHWAY
2
7
2
5
5
7
6
5
1
2
3
4
1
4
7
OCMULGEE
WALNUT
7
DEED MAP
OCMULGEE
NATIONAL MONUMENT
(REDRAWN BY PSF)
SCALE-1"= 2000'

Figure 19.

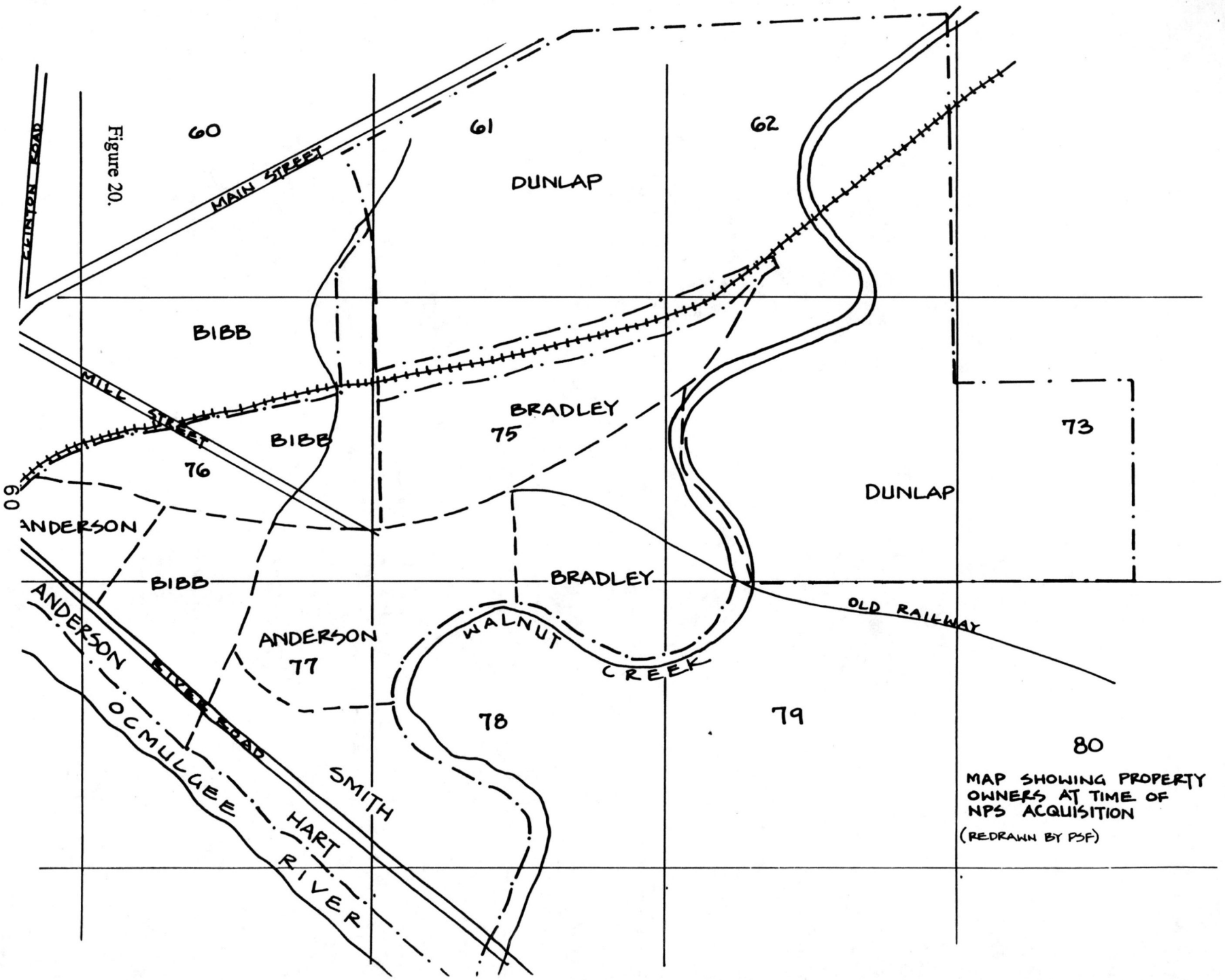

60
61
62
DUNLAP
MAIN STREET
BIBB
MILL STREET
BRADLEY
75
BIBB
76
73
DUNLAP
ANDERSON
BIBB
BRADLEY
OLD RAILWAY
ANDERSON
77
WALNUT
CREEK
ANDERSON MILL ROAD
OCMULGEE
78
79
80
SMITH
HART
RIVER
MAP SHOWING PROPERTY OWNERS AT TIME OF NPS ACQUISITION
(REDRAWN BY PSF)

Figure 20.

Figure 21. Composite Map.

SECTION G: 1936 to Present

No research has been conducted for this period, per se. However, as miscellaneous information from the period was encountered, notes were made and the following piecemeal assemblage was derived from these.

Following the FERA involvement with archaeological excavations on the Ocmulgee Old Fields site came the Works Progress Administration (WPA). In March of 1937 the WPA work force of 200 men was cut down to 65 due to decreased appropriations for the archaeological work. However, by April of the same year the Civilians Conservation Corps men were to work in the area. The quarters needed to house approximately 250 men were incorporated in a large CCC camp located on the monument grounds in the area to the northeast of the Dunlap residence (Figure 24). The camp included a mess hall, recreation building, bath house and office quarters as well as barracks for the workers. It is assumed that the camp was dismantled around 1941 after work in the park ceased. During the field survey of this area two concrete-lined rectangular depressions were noted in the woods behind the Chief Ranger's residence. With the exception of some old road beds running throughout the area, no other remnants of the camp were located. The parks maintenance area is presently located in the approximate location of the old camp.

The CCC workers were responsible for the reconstruction of the mounds, the building of roads and other structures throughout the site and the planting of numerous trees--the majority being pines--along the newly constructed road.

It was during this time (1938) that a large wooden structure was erected on top of Mound C to provide visitors a way to view excavated burials within the mound. This structure was removed in 1954.

Very little else has been documented concerning this period and the National Park Service management practices for the area although the period 1936 to the present day would provide for an

interesting comparative study.

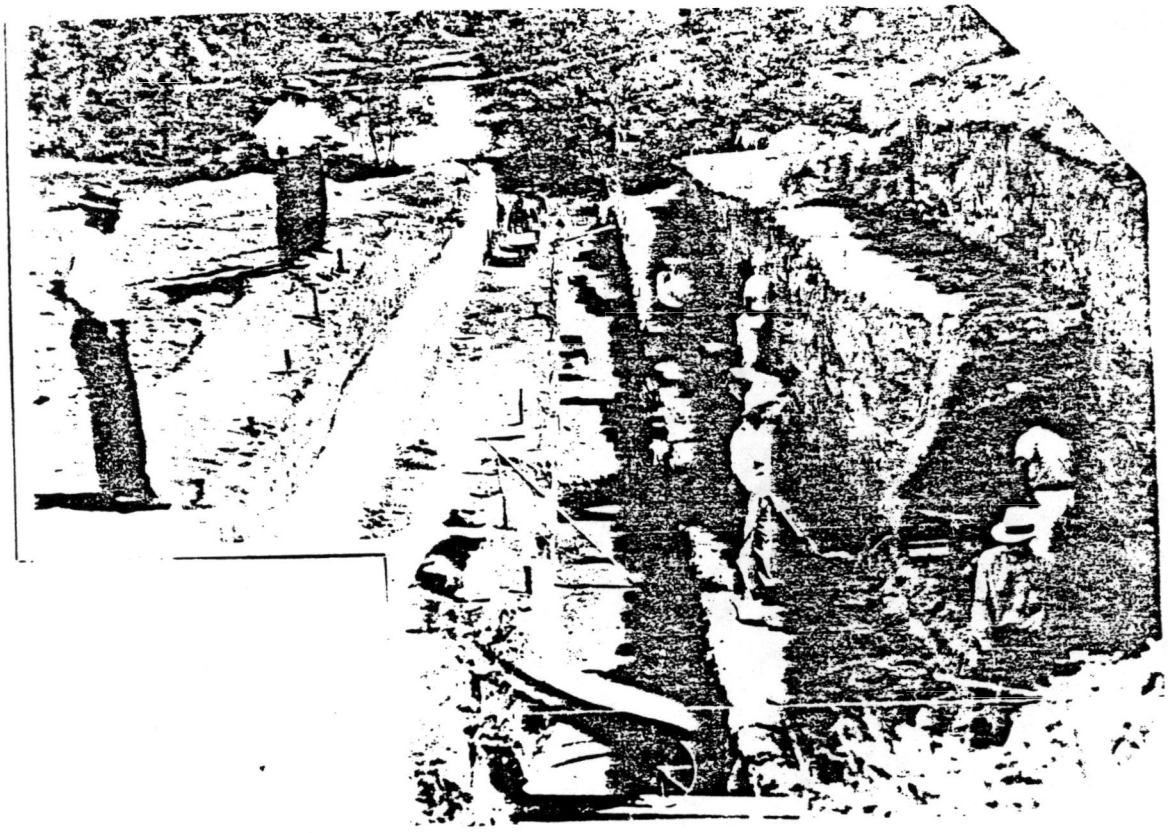
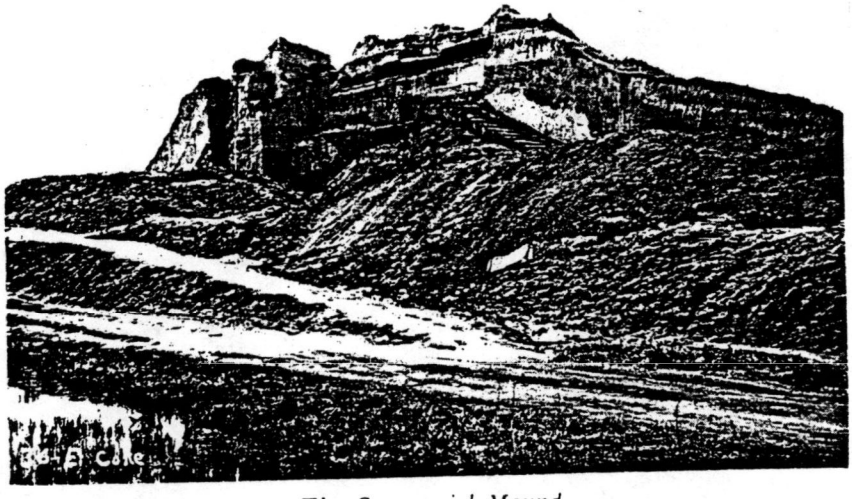


Figure 22. Taken from Macon Telegraph, October 13, 1935.



The Ceremonial Mound
Courtesy National Park Service.

Figure 23. Taken from A History of Macon Georgia, Young, Gholson and Hargrave, 1950.

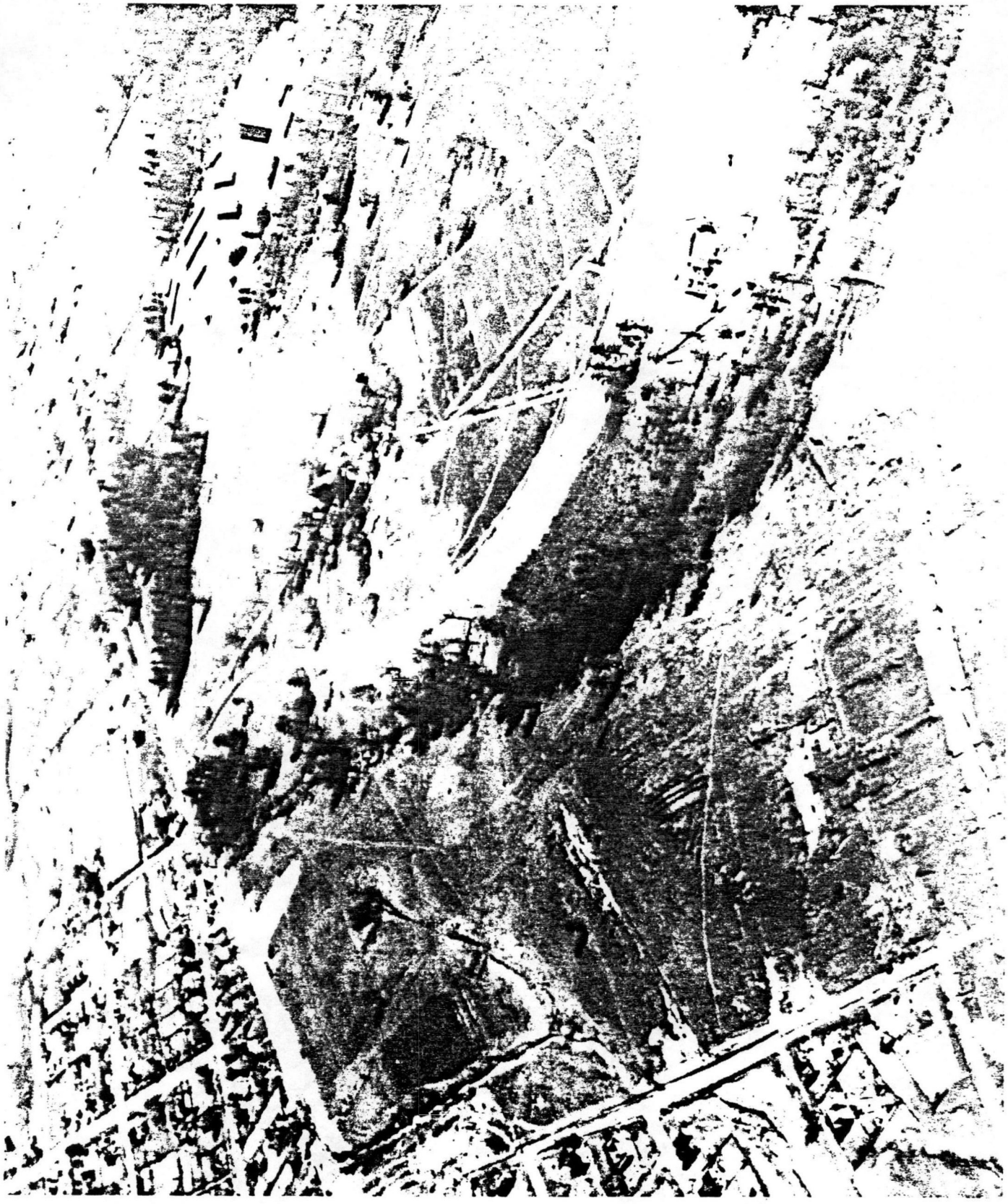


Figure 24. Aerial View showing CCC Camp, Ocmulgee National Monument, Macon, Georgia.

ACKNOWLEDGEMENTS

This report was completed with the assistance of several individuals. I wish to thank the staff at Ocmulgee National Monument for their assistance and cooperation, especially Sylvia Flowers and Karen Gustin. John Froeschauer and Haynes Currie provided welcomed assistance during field investigations. Robert Wilson with the National Park Service Southeastern Archaeological Center is thanked for providing much needed maps (on very short notice). The staffs at the Georgia Department of History and Archives, Atlanta and the Washington Public Library, Macon are thanked for their assistance in accessing their collections. Jean Spencer and Robbie Etheridge are thanked for their typing and editorial comments on the first draft. Thanks also to Ian Firth and Susan Bratton for editing comments and Terri Mobley for typing and formatting. Finally, special thanks are extended to my family and friends who provided encouragement and support throughout.

This project was supported by a cooperative agreement between the National Park Service and the Institute of Ecology, University of Georgia; #10-21-RR271-213 USDI RF NPS #22 BRATTON and was conducted for a graduate course credit as a special research project in the School of Environmental Design, University of Georgia. The project was under the supervision of Ian Firth and Susan P. Bratton.

Appendix 1. Description of Fort Hawkins, taken from Historical Record of Macon and Central Florida, John C. Butler, 1879.

> The blockhouse which now remains, occupied the south-eastern corner of the stockade, and the other one, the last relics of which were blown down several years ago, was located diagonally from the other, at the north-western corner. The blockhouses were similarly constructed--about twenty-eight feet square, two stories and a basement; thirty-four feet high, surmounted with watch-towers. The basement was built of blocks of stone eighteen inches thick, ten feet high; the first story was of hewn logs, twelve inches thick, with portholds for cannon and musketry, and twelve feet high. Over the first story the second projected, on all sides three feet, with holes in the floors of the part projecting, so that if the Indians reached the house and attempted to scale the stone basement, in order to set fire to the wooden work, they could be shot down from the projecting floors. The second story was also twelve feet high, and the towers about eight feet. There were four long houses, one in the centre of each side of the stockade, their fronts forming part of the stockade to the width of each house, about twenty feet. These houses were used for soldier's quarters, provisions, and for the factory goods to be sold to the Indians, and peltries received in return. In the centre, surrounded by oaks, were the officers' quarters.

Appendix 2. Summary of Field Investigations.

Field investigations were conducted using reconnaissance level survey methods. All identified cultural landscape features were noted with the majority of these reflecting the extensive land use activities dating from the late 19th and early 20th centuries and only a few features representing the area's earlier land use practices. The results of the survey are discussed below in chronological order.

The most prominent cultural landscape features within the Ocmulgee National Monument are the prehistoric earthen mounds which rise above the relatively flat topography of the site. Three of the site's eight mounds have been somewhat obliterated above ground surface; however, they still received feature numbers (these include features 1, 2, and 4). All of the mounds are shown on the 'cultural landscape resources' map as features 1 through 7 and the prehistoric trench lines which once enclosed much of the village are listed as feature 8. These features have not been discussed in any detail in this report due to their prehistoric origin.

Feature 9, the corn field mound, also dates from the prehistoric period. This ancient corn field was identified during the archaeological excavations conducted during the 1930s. Other prehistoric period agricultural fields and possible evidence of early crops may be present within the study area but will require archaeological and palynological investigations to locate additional features.

The earliest 'historic period' landscape feature located during field investigations is feature 10, earthworks from a late 17th century trading post. The outline of the structure is easily visible due to the existing earthworks which follow the foundation lines and are currently maintained with a cover of Bermuda grass which is kept mowed. Also associated with feature 10 is a remnant of the old trading path along which the trading post was located.

Throughout the lowlands along Walnut Creek and the Ocmulgee River there continue to be patches of cane similar to those described by Bartram and Hawkins. While it is unlikely that these canebreaks date to the late 18th/early 19th centuries, their continued presence may reflect a consistent lack of use for these low lands.

No visible signs of early to mid 19th century agricultural fields were located. Again, archaeological investigations may provide additional information concerning agricultural practices in the study area (i.e., whether fields were fenced for protection from free-ranging livestock, whether irrigation or drainage ditches were required in the river bottom lands, etc.).

Feature 11 consists of traces of the 1843 rail line. The existing park road has been built upon part of the old right of way for the 1843 rail line, however a remnant of the line is clearly visible in the southwesternmost corner of the study area. This area, described as feature 11a, contains the remnants of a stone lined drainage channel and railroad overpass/bridge. The stone appears to be rough or quarry-hewn granite blocks and the channel was built using the dry laid method of construction. Another visible feature which reflects the early impacts of railroad construction on the landscape is the peculiar 'cut off' appearance of Mound B (feature 6).

Feature 12 is comprised of the Dunlap house and its associated outbuildings, yard and gardens (if any). This site could provide interesting data concerning changes in farmstead operations and the resulting changes in farmstead design and layout. The library in the park's museum contains information on the various renovation projects performed on the house; however, little time was spent in search of data concerning the design and layout of the farmstead.

Feature 13 is the easily visible earthwork constructed to serve as a gun emplacement during the Civil War. This horse-shoe shaped feature was re-formed by the NPS in 1963-64 and is presently maintained with a cover of Bermuda grass that is kept mowed.

The Central of Georgia rail line that bisects the study area was constructed in 1874 and is recorded as feature 14. This rail line continues to be in operation.

Feature 15 includes the brick factory and its associated areas. Although the location of the factory was not discovered through archival or field investigations, three areas associated with the factory's operations were located. Feature 15a represents the clay pit pond which resulted from the excavation of clay for the manufacture of the bricks. Feature 15b represents the remnants of the narrow gauge rail line berm which was used to haul the freshly mined clay to the sheds, and feature 15c represents a large concentration of brick rubble, function presently unknown.

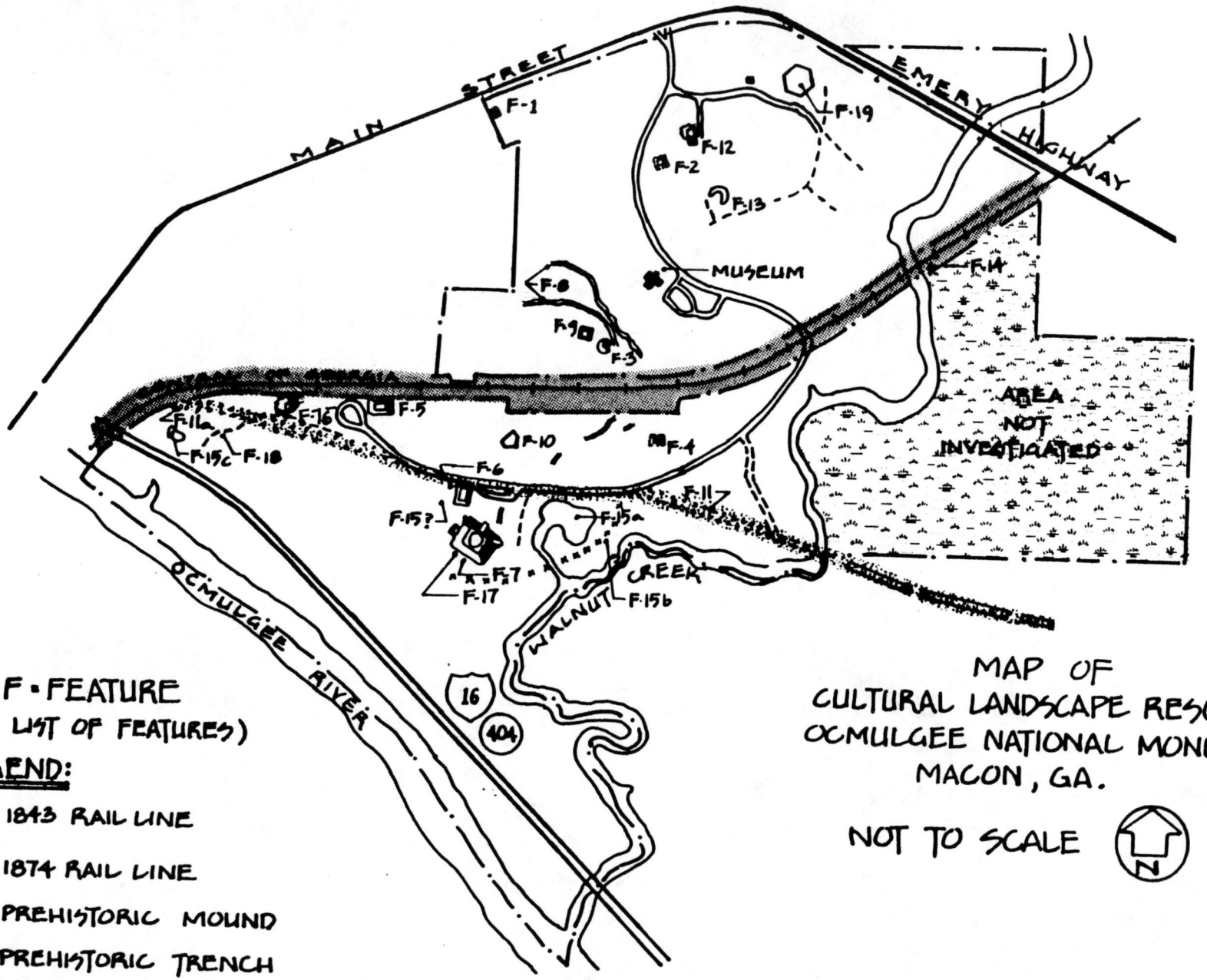
Although the 1922 soil survey map shows seven structures located within the study area (excluding the Dunlap residence), only one of these sites contains visible landscape features. This site is presumably an early 20th century farmstead, recorded as feature 16. It consists of two large elm trees and one possible apple tree located in the clearing once occupied by the residence. The elms probably served as shade trees for the house.

Feature 17 consists of the motorcycle trails that persist along the southern slope of Mound A (feature 7). These trails reflect the careless use and lasting impacts created by the area residents who raced their motorcycles up the mounds for Sunday pleasure during the 1920s.

Feature 18 is comprised of the numerous abandoned road beds which were found

scattered over the study area. The mapping of these remnants is not complete. Feature 18a represents a small brick lined drainage culvert constructed under a section of old roadway. The culvert was entered from the northern end and investigated using a flashlight and was found to be an arched brick tunnel approximately 2 1/2' in height. The southern end of the tunnel was blocked up and could not be examined.

Feature 19 represents the general location of the CCC camp of the late 1930s. The site is presently partially occupied by the park's maintenance compound and the remainder of the area is covered by a successional mixed pine/hardwood forest. Two rectangular concrete lined depression areas were located in the woods northeast of the chief ranger's residence and possibly served as latrines.



F • FEATURE
(SEE LIST OF FEATURES)

LEGEND:

- 1843 RAIL LINE
- 1874 RAIL LINE
- PREHISTORIC MOUND
- PREHISTORIC TRENCH
- TRADING POST
- RESIDENTIAL PLANTINGS
- CIVIL WAR EARTHWORKS
- CCC CAMP
- EARTHLODGE
- ROAD BED
- BERM

MAP OF
CULTURAL LANDSCAPE RESOURCES
OCMULGEE NATIONAL MONUMENT
MACON, GA.

NOT TO SCALE

N

REFERENCES

American State Papers
n.d. Indian Affairs, Vols. I and II, Washington, D.C.

Anderson, Nancy
1979 Macon, a Pictorial History. Middle Georgia Historical Society. Donning Company, Virginia Beach, Virginia.

Anonymous
n.d. Notes and Sketches on the Development of Ocumlgee National Monument and the Lamar Site. Manuscript on file, Ocmulgee National Monument, Macon, Georgia.

Bartram, William
1791 Travels Through North and South Carolina, Georgia, East and West Florida. Reprinted by Beehive Press, Savannah, Georgia.

Bibb County, Georgia,
Deed Records
Board of Commissioners Information Handbook

Bibb Manufacturing Co.
n.d. The Story of Cotton

Bragg, William Harris
1985 The Union General Lost in Georgia. Civil War Times 24(4):16-23.

Bryan, B.L.
1940 Guide Manual for Ocmulgee National Monument. U.S. Department of Interior, National Park Service.

Bryant, Pat
1983 Georgia Counties: Their Changing Boundaries. Georgia Department of Archives and History, Atlanta.

Butler, John C.
1879 Historical Record of Macon and Central Georgia. J.W. Burke and Co., Macon, Georgia.

Callaway, James Etheridge
1948 The Early Settlement of Georgia. University of Georgia Press, Athens.

Chappell, A.H.
1874 Miscellanis of Georgia, Historical and Biographical. Part II. J.F. Meegan, Atlanta.

Coleman, Alfred
1987 Personal communication.

Dockstader, Mary Ralls
1928 Early Georgia Revealed in the Pages of Old Diaries. Georgia Historical Quarterly 12.

Forts Committee
1967 Georgia Forts--Fort Hawkins, 7th of a Series. Georgia Magazine 10:14-15. Georgia Department of History and Archives, Atlanta.

Georgia Historical Marker
???? Highway 80, Macon, Georgia.

Hall, Captain Basil
1829 Travels in North American in the Years 1827 and 1828. Volume I.

Harris, Walter A.
n.d. Essays and Addresses: Old Ocmulgee Fields. Folder 8, Washington Memorial Library, Macon, Georgia.

n.d. Heart Throbs: A History of Early Macon. Folder 6, Washington Memorial Library, Macon, Georgia.

Hawkins, Benjamin
1848 A Sketch of a Creek Country in the years 1798-1799. Manuscript on file, Georgia Historical Society, Vol III, Part I.

Hesseltine, William B., and Larry Gara, editors
1953 Across Georgia and Into Alabama, 1817-1818. Georgia Historical Quarterly 37(4)>

Holtzclaw, Mary M.
1967 Benjamin Hawkins, Beloved Man of Four Nations. Georgia Magazine 10:14-15.

Hudson, Charles
1976 The Southeastern Indians. University of Tennessee Press, Knoxville, Tennessee.

Jones, Charles C., Jr.
1878 Antiquities of the Southern Indians. D. Appleton, New York.

Letters of Benjamin Hawkins
1796-1806 Letters of Benjamin Hawkins, U.S. Agent for Indian Affairs. Collection of Georgia Historical Society, Vol. IX.

Macon Telegraph, Macon, Georgia

Margold, Nathan R.
1935 Deed History for Lands to be Included in the Ocmulgee National Monument, Macon, Georgia.

McKay
1972 A Guide to Macon's Architectural and Historical Heritage. Middle Georgia Historical Society, Macon, Georgia.

Melish, John
1818 Travels Through the United States of America in the Years 1806 and 1807, and 1809, 1810 and 1811. Philadelphia.

Mereness, Newton D.
1916 Travels in the American Colonies. Macmillan, New York.

National Park Service
1967 Ocmulgee National Monument Brochure. U.S. Government Printing Office.

1978 A Resource Management Plan for Ocmulgee National Monument.

Orser, Charles E., Jr. and Claudia C. Holland
1984 Let us Praise Famous Men, Accurately: Toward a More Complete Understanding of Postbellum Southern Agricultural Practices. Southeastern Archaeology 3(2).

Palaver Club Papers
n.d. Macon Scrapbook Items. Folder 5, Washington Memorial Library, Macon, Georgia.

Peterson, C.A.
1902 "The Mound Building Age in North America." Read before Missouri Historical Society, St. Louis, Mo. February 13, 1902. Printed by Missouri Historical Society.

Pound, Merritt B.
1929 Benjamin Hawkins, Indian Agent.

Pope, G.D., Jr.
1956 Ocmulgee National Monument, Georgia. National Park Service Handbook Series No. 24. Washington, D.C.

Records of the Creek Agency East
1795-1816 Trading House Letterbook. Original in the National Archives. Microfilm copy in the Georgia Department of Archives and History, Atlanta.

Stevens, O.B. and R.F. Wright
1901 Georgia Historical and Industrial. Georgia Department of Agriculture, Atlanta.

U.S. Department of Agriculture
1922 Soil Survey. Soil Conservation Service.

1979 Soil Survey of Bibb County, Georgia. Soil Conservation Service.

U.S. Census Bureau
1860 Slave Schedules and Population Schedule, Bibb County. U.S. Government Printing Office, Washington, D.C.

Wharton, Charles H.
1978 The Natural Environments of Georgia. Office of Planning and Research, Georgia Department of Natural Resources, Atlanta.

Willingham, Jean Saunders and Berthenia C. Smith
1961 Bibb County, Georgia: Early Wills and Cemetary Records. DAR Publications.

WPA Writers Program
1939 The Macon Guide and Ocmulgee National Monument. Macon Junior Chamber of Commerce. J.W. Burke Co., Macon, Georgia.

Young, Ida, Julius Gholson and Clara Nell Hargrave
1950 History of Macon, Georgia [1823-1949]. Lyon, Marchal and Brooks, Macon, Georgia.