TEST EXCAVATIONS AT SITE 40RE129 IN THE CLINCH RIVER BREEDER REACTOR PLANT AREA

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Introduction

While conducting archaeological reconnaissance of selected portions of the Oak Ridge National Laboratories Reservation, Mr. George Fielder, Research Associate, Department of Anthropology, University of Tennessee, Knoxville was informed of the presence of a possible prehistoric mound in the CRBRP area (cf. Fielder 1974). Mr. Fielder visited the site and contacted Dr. Gerald F. Schroedl, Principal Investigator for salvage archaeology in the CRBRP area. Dr. Schroedl and Mr. Fielder examined the site on 18 April 1974 and in a letter dated 22 April 1974 Dr. Schroedl informed Mr. Corydon W. Bell Jr., Assistant to the Director of Water Control Planning, Tennessee Valley Authority about the mound and suggested that test excavations should be conducted at the site. The site was designated 40RE129 and test excavations were conducted on 23 May 1974. The purpose of these investigations was to determine (1) the origin and age of the mound, (2) the presence of distinct construction stages, (3) the presence of cultural features within the mound and the occurrence of prehistoric occupation, if any, protected by the mound, and (4) to ascertain the condition of the mound and the affect that plowing, erosion, and the activities of relic collectors might have had on it.

Summary of Investigations

Site 40RE129 is an earthern mound [Exempted from Disclosure by Statute] and is situated less than [Exempted from Disclosure by Statute] of site 40RE108. Area 2 which was excavated during the fall of 1973 (cf. Schroedl 1973 abc, 1974) (Fig. 1). The mound is rhomboid in plan view with steep sides and is approximately 60 ft long by 40 ft wide rising 10 ft above the present ground surface. The base of the west slope has been removed by a bulldozer and at least two large relic collector's pits occur near the mound summit on the southeast slope. A heavy mantle of shrubs, vines, slash, and windfall obscure the mound surface.

When site 40RE108 was first recorded during archaeological survey of the Watts Bar Reservoir in 1941, the surrounding area was an open field, but no associated mound was reported at that time (University of Tennessee n.d.). Relocation of previously recorded sites conducted during the initial CRBRP site survey thus did not anticipate a mound in the vicinity of site 40RE108 (Schroedl 1972). Following land acquisition in the Watts Bar Reservoir and the subsequent development of the Oak Ridge National Laboratories, the CRBRP area was planted in pine trees and a heavy understory permitted to grow. As a result, at the time of the 1972 survey the mound was virtually impossible to detect, and even after the area was timbered during the fall of 1973 the mound could still be easily mistaken for

a dense thicket or slash pile (Figs. 2 and 3).

Cyrus Thomas, who investigated numerous mounds in East Tennessee [Exempted from Disclosure by Statute], in the 1880's does not mention any mounds in the [Exempted from Disclosure by Statute] vicinity of site 40RE108 (Thomas 1894:358-366). Thomas missed sighting few mounds, especially those in open fields [Exempted from Disclosure by Statute]. Charles Nash conducted the 1941 archaeological survey of the Watts Bar Reservoir. Although Nash's survey was confined for the most part [Exempted from Disclosure by Statute] Clinch River, the available records indicate that he made a thorough reconnaissance and it is extremely unlikely that he would have ignored the site had he suspected that the mound was an aboriginal feature (University of Tennessee n.d. and Fielder 1974:14, 53, 62). Since the mound would have been obvious before 1941 yet was not reported, it was hypothesized that the mound was constructed after 1941, possibly in conjunction with right-of-way clearing for a TVA 500KV powerline [Exempted from Disclosure by Statute] (Fig. 2). Air photographs taken in 1942, however, clearly show the mound in a plowed field and [Exempted from Disclosure by Statute] had not been erected at that time (George Fielder, personal communication, 1974). Together, Thomas' report, the 1942 air photographs, and the 1941 Watts Bar archaeological survey suggest that the mound is an historic Anglo-American feature built after the 1880's but before 1942.

The portion of the mound exposed by a bulldozer cut along one side was examined on 18 April 1974. Although cultural material (cf. Appendix) was recovered eroding from this profile, no distinct stratigraphy or evidence of basket loading characteristic of many prehistoric American Indian mounds was observed. To investigate the mound further and possibly determine its origin test excavations were conducted on the mound's west slope. Using the 40RE108 excavation grid for horizontal control, a 1 m by 6 m trench divided into 3, 1 m by 2 m units was established with grid co-ordinates 251-252S/2-8E. An additional 1 m by 1 m square was placed approximately 10 m from the east slope, but was not included in the established grid (Fig. 1). This square was excavated in arbitrary 20 cm levels to a depth of 60 cm. Test units on the west mound slope were excavated in arbitrary 20 cm. levels parallel with the mound contour. Units 252-252S/2-4E and 251-252S/6-8E were excavated to a depth of 60 cm while unit 251-252S/4-6E was excavated 80 cm deep. In addition, a 1 m by 1 m area from 251-252S/4-5E and a 1 m by 1 m area from 251-252S/2-3E were spaded out an additional 40-50 cm in order to find the premound surface (Fig. 4). These excavations, however, did not reach the premound surface.

Like the bulldozer cut along the east side of the mound, the profile along the test trench showed no distinct stratigraphic breaks. The fill consists of brown to dark brown silty loam and silty clay loam with several areas containing abundant light brown sandy clay mottles. These areas have a marbled appearance. The fill, as shown by the test excavations, contains moderate amounts of firecracked and

broken cobbles, and small amounts of cryptocrystalline silica chipping debris and lithic artifacts (cf. Appendix). One grit tempered ceramic sherd also was recovered and one badly corroded nail or rod iron fragment was recovered 50 cm below the mound surface. The test trench produced no burials or other occupational features. Fill associated with the 1 m by 1 m test pit immediately east of the mound consisted of light brown sandy loam and sandy clay loam identical to the mottles in the test trench and produced little cultural material. There was no evidence to suggest the presence of a midden deposit like that investigated at 40RE108.

The character of the moundfill, the recovery of a nail well within it, and previous surveys by Charles Nash and Cyrus Thomas as well as 1942 air photographs of the CRBRP area strongly suggests that the mound is an historic Anglo-American feature probably dating from the first half of the 20th century. The prehistoric cultural remains contained in the mound are similar to those recovered from 40RE108 and their presence in the fill suggests that portions of local midden deposits were used to build the mound. The precise origin of the mound and the reason for its construction, however, are undetermined. There is no apparent explanation why soil was piled at this particular location. Since additional backhoe test excavations are planned for sites 40RE107 and 40RE108 during the fall of 1974 to locate possible undisturbed midden areas, it is anticipated that at least one backhoe cut will be made into the mound to expose a complete stratigraphic profile. This work should conclusively determine if any portion of 40RE129 represents a prehistoric American Indian feature.

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Fig. 1.-- Location of Site 40RE129 showing test excavations and relationship to Site 40RE108, Area 2 (adapted from TVA Liquid Hetal. Fast Breeder Reactor 2 foot contour map 90-MS-461 Q501-105 R.I.)

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Fig. 2. -- Low oblique aerial view of site 40RE129 before timbering, area at lower right has been cleared, view to southwest (photograph courtesy of TVA, Negative AV-3307-7)

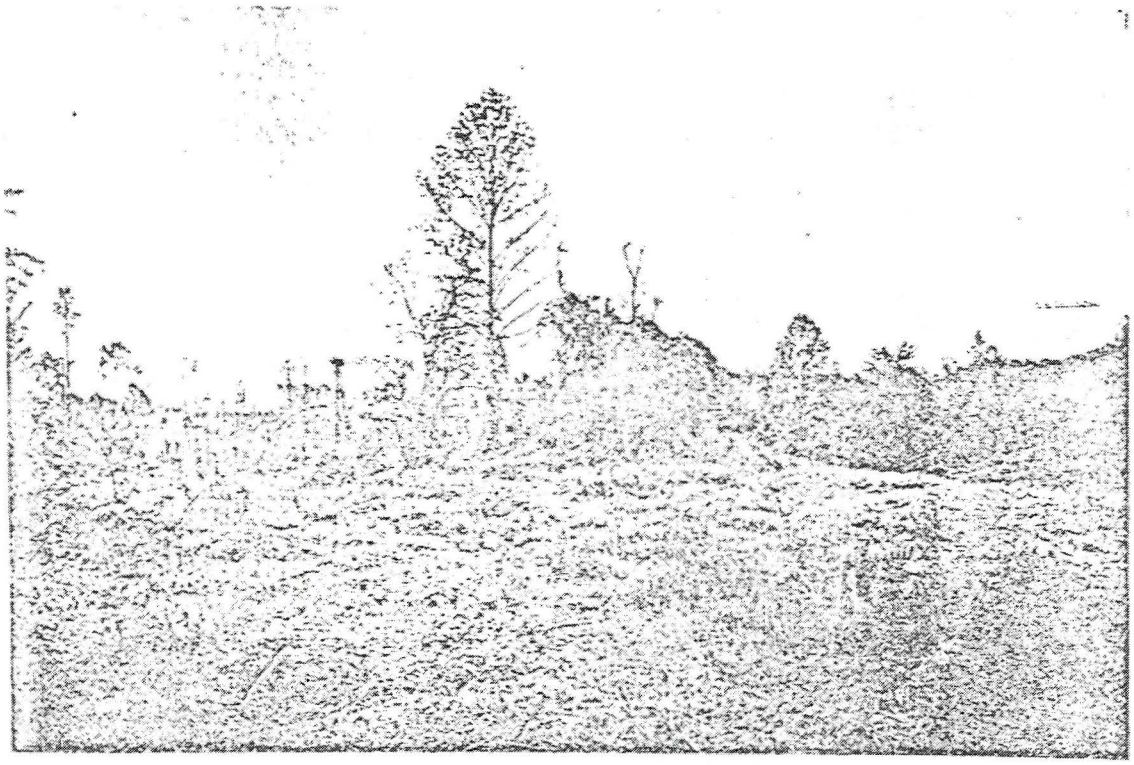

Fig. 3. -- Site 40RE129 following timbering by AEC subcontractors' view to southwest

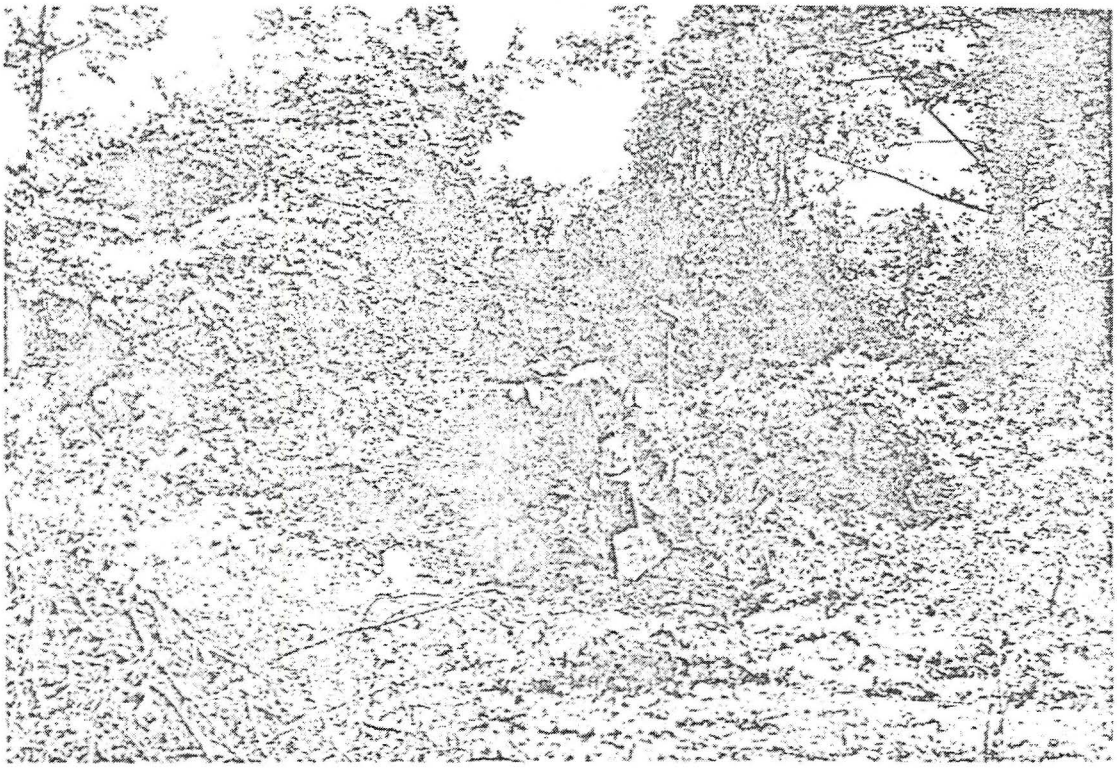

Fig. 4. -- Site 40RE129 test excavations, view to east

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University of Tennessee

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Appendix

Tabulation of Material Recovered from Test Excavations at 40RE129

Test unit 1, 251-252S/2-4E:

Level 1, 0-20 cm.
- 11 cryptocrystalline silica angular cobbles
- 7 water rolled cobble fragments (material undetermined)
- 1 cryptocrystalline silica chipping debris

Level 2, 20-40 cm.
- 7 cryptocrystalline silica angular cobbles
- 1 badly weathered quartzite pebble
- 1 cryptocrystalline silica water rolled pebble
- 1 cinder
- 1 firecracked quartzite cobble
- 2 cryptocrystalline silica chipping debris
- 1 basal section, cryptocrystalline silica, corner notched projectile point

Level 3, 40-60 cm.
- 18 cryptocrystalline silica angular pebbles
- 3 water rolled cobble fragments (material undetermined)
- 1 quartzite pebble
- 1 badly weathered quartzite cobble
- 1 firecracked quartzite cobble
- 3 cryptocrystalline silica chipping debris

Test unit 2, 251-252S/4-6E:

Level 1, 0-20 cm.
- 32 cryptocrystalline silica angular cobbles and pebbles
- 5 water rolled cobble fragments (material undetermined)
- 2 water rolled pebbles (material undetermined)
- 2 cryptocrystalline silica chipping debris
- 1 residual plain grit tempered body sherd

Level 2, 20-40 cm.
- 24 cryptocrystalline silica angular cobbles and pebbles
- 5 sandstone water rolled cobble fragments

Level 3, 40-60 cm.
- 5 cryptocrystalline silica angular cobbles
- 2 sandstone water rolled cobble fragments
- 1 cryptocrystalline silica water rolled pebble
- 1 cryptocrystalline silica chipping debris
- 1 badly corroded iron nail or rod, length 87 mm (recovered at ca. 50 cm below surface)

Level 4, 60-80 cm.
- 8 cryptocrystalline silica angular cobbles and pebbles
- 1 badly weathered quartzite pebble

Test unit 3, 251-252S/6-8E:

Level 1, 0-20 cm.
- 7 cryptocrystalline silica angular cobbles and pebbles
- 4 quartzite water rolled cobble fragments
- 1 sandstone water rolled cobble
- 6 cryptocrystalline silica chipping debris
- 1 cryptocrysatlline silica knife or projectile point preform (length 42 mm, width 30 mm)

Level 2, 20-40 cm.
- 6 cryptocrystalline silica angular cobbles and pebbles
- 1 sandstone pebble
- 1 angular cobble fragment (material undetermined)

Level 3, 40-60 cm.
- 2 cryptocrystalline silica angular pebbles
- 4 sandstone cobble fragments
- 1 angular cobble fragment (material undetermined)
- 3 cryptocrystalline silica chipping debris

Test unit 4, no grid co-ordinates:

Level 1, 0-20 cm.
- 10 cryptocrystalline silica angular pebbles
- 1 quartzite chipping debris

Level 2, 20-40 cm.
- 1 cryptocrystalline silica pebble

Level 3, 40-60 cm.
- 1 cryptocrystalline silica angular cobble

Material collected from bulldozer cut on east side of the mound:

- 1 cryptocrystalline silica pebble
- 4 cryptocrystalline silica chipping debris
- 1 cryptocrystalline silica knife or projectile point preform fragment (length 39 mm, width 40 mm)