Crossing Boundaries Along the Cumberland

Tanya M. Peres¹, Dave Baluha², Aaron Deter-Wolf³, Joey Keasler¹, Niki Mills², Inna Moore², Ryan Robinson⁴

1 – Middle Tennessee State University; 2 – Brockington and Associates, Inc.; 3 – Tennessee Division of Archaeology; 4 – MCPA Geomorphologist

History and Goals of the Middle Cumberland Archaeology Project (MCAP)

Since 2003, archaeologists with Middle Tennessee State University and the Tennessee Division of Archaeology (TDA) have worked together to identify and assess shell-bearing sites in the Middle Cumberland River Valley. We have conducted field investigations, inform inter-studies, examination of old collections, and assessment of the State Site File Record. Our work is funded by the National Science Foundation (Award #1034505), the Tennessee Historical Commission, and our respective institutions.

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The long-term goals of MCAP include investigating shell-bearing sites along the Cumberland River (1) defining the spatial and chronological extent and nature of human occupation in this river valley; (2) examining ancient floodings along the Middle Cumberland River; (3) reconstructing the location and nature of ancient riverine paleochannels, (4) placing the site into the regional context of shell-bearing sites across the Southeast; (5) in the next generation of archaeologists through an integrated hands-on, lab-centered and university teaching program.

In 2013, we surveyed the Middle Cumberland River Valley (MCAP Site #18597) as part of the MTSU Archeological Field School. Our initial goals were to: determine site boundaries, determine depth of deposits, and inscribe the edge of the shell deposits. Through the use of bucket auger surveys, Ground Penetrating Radar, excavation units, and coach samples, we aim to meet these goals.

MCAP Field Methods and Results

Bucket Auger Survey – We surveyed the site area on a north/south and east/west grid using carbon steel/bucket augers with 4-inch diameter buckets. With an effective diameter, each core could reach a depth of over 8 meters. We excavated a total of 20 bucket auger tests (BATs) to a minimum of 2 m deep. Ten BATs were excavated to over 3 m in depth, with one to 3.7 m. All soils were screened, soil descriptions were recorded, and all changes in soil texture/color and artifact inclusionality were noted (including depths). We were able to map the extent of the shell deposits and their average depth. The data gained from the BATs were useful in the placement of excavation units.

Excavation Units and Column Samples – A total of eight 2 x 2 m units were excavated to determine extent and density of the shell deposits. The two most northern units (Units I and II) did not contain any significant shell deposits. The southernmost unit (Unit 17) was placed closest to the confluence of the Cumberland River and White Creek. As this unit was located at a lower elevation than the other site, they were excavated. The northern end deposits, diagnostic artifacts, and human burials were also excavated at this unit. Unit 2 was located at an elevation of 1.5 m. The final 55 cm was used to identify the soil and deposits.

Two units (Units 1 and 4) were placed to capture the northerm end (back) of the shell deposits. Unit 1 was initially excavated as a 2 x 2 m. The first 100 cm revealed shell middens deposits consisting of artifacts, and pebbles were found in the same area. Shell deposits were excavated at over 100 cm. At this point, excavation continued as a 2 x 2 m in the northeast corner of the unit. Shell deposits (mottled gray) were excavated at 5, 10, 15, and 20 cm. The final 55 cm was used to identify the soil and deposits.

Unit 4 was placed at the highest elevation on the site. Measurement was taken at a 2 x 2 m. The first 100 cm revealed shell middens deposits consisting of artifacts, and pebbles were found in the same area. Shell deposits were excavated at over 100 cm. At this point, excavation continued as a 2 x 2 m in the northeast corner of the unit. Shell deposits (mottled gray) were excavated at 5, 10, 15, and 20 cm. The final 55 cm was used to identify the soil and deposits.

Unit 6 was placed at the highest elevation on the site. Measurement was taken at a 2 x 2 m. The first 100 cm revealed shell middens deposits consisting of artifacts, and pebbles were found in the same area. Shell deposits were excavated at over 100 cm. At this point, excavation continued as a 2 x 2 m in the northeast corner of the unit. Shell deposits (mottled gray) were excavated at 5, 10, 15, and 20 cm. The final 55 cm was used to identify the soil and deposits.

Unit 5 was placed at the highest elevation on the site. Measurement was taken at a 2 x 2 m. The first 100 cm revealed shell middens deposits consisting of artifacts, and pebbles were found in the same area. Shell deposits were excavated at over 100 cm. At this point, excavation continued as a 2 x 2 m in the northeast corner of the unit. Shell deposits (mottled gray) were excavated at 5, 10, 15, and 20 cm. The final 55 cm was used to identify the soil and deposits.

Unit 8 was placed at the highest elevation on the site. Measurement was taken at a 2 x 2 m. The first 100 cm revealed shell middens deposits consisting of artifacts, and pebbles were found in the same area. Shell deposits were excavated at over 100 cm. At this point, excavation continued as a 2 x 2 m in the northeast corner of the unit. Shell deposits (mottled gray) were excavated at 5, 10, 15, and 20 cm. The final 55 cm was used to identify the soil and deposits.

Ground Penetrating Radar Survey – Archaeologists with Brockington conducted the GPR surveys using a MALA Geosciences RAMM XCM system with a 500 MHz antenna and GPR Scan “ViewScan 7.5.” The field school students helped to set up the 500 MHz antennas and operate the equipment. The GPR data is still undergoing analysis, but the preliminary findings indicate the table of results and indicate the accuracy of the GPR surveys. A total of 500 MHz was used to create the surveys. The surveys were taken in the field and were converted to digital images. The GPR surveys were analyzed to determine the extent and density of the shell deposits. The surveys were converted to 3D images and were used to identify the shell deposits.