Mapping the Moundville Community: A GIS Analysis of the Moundville Roadway

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Introduction

The Moundville site is a large, early-mississippian ceremonial center in the Black Warrior Valley of west-central Alabama. Over a century of archaeological research in the region has advanced our understanding of Moundville’s culture history and the moundbuilding tradition in which the site is embedded. However, the last comprehensive summary of research on Moundville appeared in the 1970s. This paper is part of a larger project to update our understanding of Moundville through a GIS-based analysis of the Moundville Roadway excavations.

Excavation and Mapping of the Moundville Roadway

The 1939 and 1940 Civilian Conservation Corps excavations of the Moundville Roadway were a substantial body of information about Moundville’s residential community (Peebles 1973). These excavations provided an opportunity to study the Moundville Roadway in detail. The Roadway excavations were divided into 147 50 x 50-ft square blocks. Each block was subdivided into ten 5 x 50-ft blocks. In several areas where archaeological remains revealed by these excavations were especially dense, work crews moved to smaller 5 x 50-ft blocks. Three-view drawings were made for various topographic and photogrammetric surveys at Moundville, and these were used to construct the overall topographic map of the roadway.

Creating a Geographical Information System (GIS) for Moundville

The construction of a GIS map for the 1939-1940 Roadway excavation is part of a larger project to create a geographical information system for Moundville. This system is being developed using ESRI ArcView, a software package which allows the integration of geographical data and vector information (e.g., topographic maps, excavation plans, aerial photographs, satellite imagery, etc.) with tabular data. The rationale for developing such a system lies in several well-recognized advantages for organizing the results of nearly 60 years of research at the site. (1) It provides a common framework for organizing the results of Moundville’s many surveys and excavations. (2) It allows the identification and quantification of relationships among excavations. (3) It allows land use patterns to be examined and interpreted. (4) Different kinds of data can be combined (e.g., vegetation patterns, topographic maps, archaeological excavation plans) and visualized more effectively with GIS methods. Several GIS maps include the GIS map of the Moundville Roadway featuring the 1939 and 1940 roadway excavations is providing answers to these questions.

Acknowledgements

We would like to thank Eugene Tarr for providing access to the original maps and field data used in producing the GIS map of the Moundville Roadway. Acknowledgments for the data used in producing the GIS map include: A.J. Breugelmans, C. T. Brooks, J. Finley, and H. Sugihara, who provided the aerial photographs for the GIS map of Moundville; M. P. Fike, S. R. Mize, and J. Alan Williams, who assisted in producing the GIS map of Moundville; J. W. L. Stovall, who assisted in producing the GIS map of Moundville; and the National Science Foundation, Grant #0003295.

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