SURVEY REPORT

HUDSON PARK MOUND GROUP

DAVE COUNTY

MADISON, WISCONSIN

by Prof. James P. Scherz
and Buck Trawicky
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Hudson Park is a very small park on the north shore of Lake Monona, in the Marquette neighborhood of the City of Madison, Dane Co., Wisconsin. (See Locator Map, Fig. 1)

This brief report describes a survey in 1990 of an Indian effigy mound in this park, and compares the results of this survey with maps made from the survey notes of T. H. Lewis, who surveyed mounds in this area in 1888. The notes of T. H. Lewis are preserved in the Minnesota State Archives.

THE MODERN SURVEY

Lewis surveyed or described 22 mounds near this spot in 1888. Only the remnant of one, a panther effigy, survives; it is preserved in Hudson Park. The mound is oriented in a general southward direction. The surveyor's initial field sketch from 1990 (Fig. 2) shows the approximate position of this mound in the park.

The mound, and a few features identifiable in aerial photos of the area, were surveyed by Buck Travicky in March 1990, using transit and stadia techniques. Fig. 3 is his resulting map.

Directional control for the map in Fig. 3 was by celestial observation on the star Sirius (done by Scherz). The state plane coordinates in Fig. 3 were obtained (at the time of the celestial observation) from observations of several radio towers. The coordinates of these towers had previously been determined, and it was an easy task to obtain the state plane coordinates of the instrument, using resection programs developed by Ahmad Al-Shaikh and Prof. Scherz of the University of Wisconsin, Madison. The probable uncertainty of the state plane coordinates of the instrument used in the star shot was one foot +/- . The probable uncertainty in normal stadia work is about 1-2 ft. +/- per typical shot. This matches the typical accuracy (1-2 ft) in locating and sketching the sloping edge of an Indian mound.

THE SURVEYS OF T. H. LEWIS

Many persons "mapped" or sketched Indian mounds in the Madison area (and throughout Wisconsin) in the late 1880s and early 1900s. We have compared the maps of these early surveyors (and those of recent surveyors as well) with our own more accurate mound maps, whenever possible.

We have concluded from analysis of numerous sites that only the work of T.H. Lewis is of high enough quality to be trusted for the accuracy we need. Lewis, after a career in the Army, surveyed thousands of mounds over a period of 15 years; reportedly he later became a professor of surveying. His body of work, contained in dozens of fieldbooks, is a trove of information which is quite unique, irreplaceable, and indispensable for mound study.

In 1888, Lewis surveyed 9 mounds in the Hudson Park area, and mentioned, but did not survey, numerous others.
Figure 1  Location of Hudson Park
Figure 2
Sketch of Mound in Hudson Park
From B. Trawicky's Field Notes (March 1996)
Figure 3  Results of Mapping Mound in Hudson Park with Stadia Techniques
Fig. 4 is a map of the mounds in this group, produced by reducing Lewis' field notes. This work was done in the Surveying Labs at the UW/Madison.

We have concluded that Lewis consistently used magnetic north as his reference meridian. Thus, if we know the magnetic declination at a site when Lewis surveyed, we can orient his maps on a true north-oriented grid. Previous work with Lewis surveys has shown that the magnetic declination at Madison when Lewis surveyed here was about 3.5 degrees East.

OVERLAY OF THE LEWIS MAP ON THE MODERN MAP

Fig. 5 is an overlay of the Lewis map on the modern map by Trawicky. Given the erosion over the years, the fit is good; Lewis is trustworthy, and it is safe to use his map for the entire group.

Since Indian mound groups in this area appear to have been laid out with definite geometry and orientation, some of the more obviously significant angles are also shown in Fig. 5, for future reference.

TOPOGRAPHIC MAP AND HISTORICAL DEVELOPMENT

Using photo-identifiable points surveyed by Trawicky, state plane coordinates from resection, and Autocad mapping software for map reduction, it was possible to produce a topographic map of the park area from aerial photos, and to accurately superimpose Lewis' map on top of this topographic map. The result (fig.6) shows the buildings and roads that have obliterated most of the mounds which Lewis surveyed in 1888.

CONCLUSION

Previous work on numerous other mound sites has shown that for his day T. H. Lewis was a very reliable surveyor. Like all surveyors, he made occasional blunders (on the average of once in about 200 shots). But in general, maps made from his field notes can be considered comparable to those produced by modern stadia methods.

Lewis surveyed many thousands of mounds, in Wisconsin, Minnesota, Michigan, Illinois, Iowa, the Dakotas, etc. His notes are preserved in the Minnesota State Archives. These notes have never been completely reduced. Until recently, the policy of the Minnesota Archives has been not to microfilm his data. The argument has been that microfilming would open his data to a wider public who might dig into the mounds. Qualified researchers who know of the existence of his notes are free to use them but such use is destroying his fragile, irreplaceable documents and some are already lost.

It is proposed that the complete notes of Lewis be microfilmed by the Winnebago Nation and that they decide who should have access to their microfilm. The notes of T. H. Lewis can also be used to help protect the mounds from destruction by land developers. And as can be seen from the maps in this report, the past policy of semi-censorship of the Lewis data has hardly prevented that.
Map Made from T.H. Lewis Notes of A Mound Group on the North Shore of Lake Monona
Locations: NE, NW, Sec 7, 10 and NW, NE, Sec 8
Surveyed August 9th, 1888

Other Mounds in the Group which were not surveyed by Lewis: (From Lewis Notes)
Elm one 5-room mound and 3 embankments belonging to this group. About 30 ft. above lake level. Sketched August 6th, 1888.

Note: No reference to linear mounds as embankments

Map Compiled March, 1889
at Dept. of Civil and Environmental Engineering
U. of Wisc., Madison

Map Sheet 150-149
Surveyed 18 March 1888

Figure 4
Legend

- Buildings
- Road
- 860 = Contour Line (MSL, ft)
- • = Destroyed Mound
- ♦ = Remaining Mound Remnant

Hudson Park
Mound Group

F.H. Lewis and Modern Survey data overlain on a topographic map produced from 1986 Aerial Photos

James P. Schuy March 1990