Using GPS, GIS, and Computer Cartography to Improve Archaeological Site Mapping: A Case-Study from Southwestern Manitoba

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Abstract

The purpose of this paper is to present research involving the use of GPS, GIS, and computer cartography to improve archaeological site mapping. Currently, archaeological site mapping is a time-consuming and labor-intensive process. This research presents a method for the collection of topographic data using GPS and GIS. This method allows trained archaeologists in the field to create GIS-ready maps of their sites in a timely manner.

Purpose

This product is part of a larger interdisciplinary archaeological project entitled, "Changing Opportunities and Challenges: Local-Scale Human-Environment Interaction Within the Cretaceous Prairie Ecozone." Four locations across the prairie provinces will be under study. One of the main objectives is to develop a consistent GIS-based method that will allow the mapping of archaeological sites. The following study area is the Lauder Sandhills area, within which is located the Flintstone Hill Site.

GIS spatial databases must include mapped cultural and physical elements at the local and site-specific scale. A major component of the GIS spatial data set will be topographic and thematic maps of archaeological sites.

The purpose of this poster is to address the following research questions:

* How can detailed topographic maps of archaeological sites be presented in a manner that serves the needs of archaeologists in the field AND can be included in the unified GIS spatial database?

Conclusions

"Traditionally" prepared topographic maps of archaeological sites provide accurate field data. However, the process is time-consuming and labor-intensive. Additionally, the maps produced are not updated in a timely manner. Furthermore, future research could be hindered by the lack of these maps.

Recommendations

* We recommend GPS technology for the collection of field data.

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