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## **THE PURDUE ARCHAEOLOGICAL SURVEY: FIRST ANNUAL REPORT (1987)**

The Purdue Archaeological Survey began operations in June, 1987. In view of the ambitious scale of the project, which will include full coverage surveys of several large areas of western north-central and northwestern Indiana, substantial attention in the initial phase of the project has been given to cultivating public awareness and landowner cooperation through university and commercial news media announcements. An evaluation of the predictive modelling potential of LANDSAT soil reconnaissance data also is under way. New higher resolution broader spectrum LANDSAT thematic mapping imagery may provide potentials beyond the rather limited archaeological utility of earlier generation satellite-based imagery. The Purdue Laboratory for Applications of Remote Sensing (LARS) has generously provided advice and data for this purpose. Using spectral signatures of known Late Prehistoric site soils in the Wildcat Creek Valley as a basis for predicting site locations in the Tippecanoe River area, Peregrine has identified 26 high probability loci which will be field-checked in upcoming months.

Although an early growing season severely shortened the spring survey season, more than 250 acres in the lower Tippecanoe River Valley have been surveyed, including a 150-acre section of bottomland. This relatively small area has been intensively surveyed under good conditions and provides a basis for preliminary comparison with the findings of earlier work, by Indiana University in 1976, conducted in an area of the Wildcat Valley six to nine miles to the southeast. Comparing bottom land only, the Tippecanoe sample was found to have a lower site density (.087 sites/acre) than that reported for the Wildcat (.151 sites/acre). The difference is probably attributable to the fact that the Wildcat survey was centered around the confluence of the north and middle forks of the creek and that site densities fell off with distance from the confluence floodplain. Since the Tippecanoe sample is located approximately three miles upstream from the confluence with the Wabash, these results probably do not represent significant differences in local occupation intensity.

Five of the thirteen sites in the Tippecanoe survey yielded diagnostic artifacts; two of the five were multiple component sites. Again by comparison to the Wildcat area, the breakdown of components per time period (25% Early or early Middle Archaic, 25% late Middle or Late Archaic, 12.5% Early or Middle Woodland, and 37.5% Late Woodland or Upper Mississippian) does not demonstrate a statistically significant difference from the components per time period ratios of the Wildcat (14% Early or early Middle Archaic, 36% late Middle or Late Archaic, 19% Early or Middle Woodland, and 30% Late Woodland or Upper Mississippian). From this preliminary comparison it appears that through time the patterns of bottomland utilization in these two areas were very similar, even though the Tippecanoe is a much larger stream which flows south from the prairie and marshland of northern Indiana whereas the smaller Wildcat flows west from the mixed deciduous forests typical of the regions to the east and south.

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