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## ANTHROPOLOGY

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### ABSTRACTS

**A Shoreline Reconnaissance of Cecil M. Harden Lake, Parke County, Indiana.** C. MICHAEL ANSLINGER, Indiana State University Anthropology Laboratory, Terre Haute, Indiana 47809.——During the late fall and early winter of 1986 members of the Indiana State University Anthropology Laboratory conducted a shoreline reconnaissance of Cecil M. Harden Lake in Putnam County. Of the 170 archaeological sites documented, few contained deposits with contextual integrity. Instead, most sites were found on severely deflated surfaces. Nevertheless, results of an analysis of lithic tools and waste debris collected from these sites provides a basis for assessing the nature of prehistoric settlement and resource exploitation within the study area.

**Archaeological Excavations at the Middle-Late Archaic Bluegrass Site (12W162), Warrick County, Indiana.** C. MICHAEL ANSLINGER, Indiana State University Anthropology Laboratory, Terre Haute, Indiana 47809.——During the summer and fall of 1987 the Indiana State University Anthropology Laboratory conducted a "Data Recovery Phase" excavation at the Bluegrass Site (12W162), in Warrick County. Previous test excavations were made at the site by the Indiana State University Anthropology Laboratory in 1981-1983, making the Bluegrass Site one of the most thoroughly excavated Middle-Late Archaic "base-camps" in southern Indiana. The extensive samples of floral, faunal and lithic materials from the site, in conjunction with C-14 dates and human remains, provide an important data base. From it, a more comprehensive view of the Middle-Late Archaic way-of-life in southwestern Indiana and adjacent areas of the Midwest is anticipated.

**Archaeology in the Coal Fields: An Update.** RUTH A. BRINKER, Division of Reclamation, 201 W. Main St., Jasonville, Indiana 47438.——The interactions among archaeological interests, the Division of Reclamation, and the coal mining industry have generated an exciting and sometimes confusing year of meetings, conferences, agreements, and decisions. On the positive side, the Bluegrass Site was excavated, the Haug Sites were tested, on one coal area a sample survey was completed and effects to one site (the Drizzle Site) were mitigated, the Burger Site will be assessed and avoided by mining, one mine permit was sample surveyed, and one permit was conditioned to mitigate effects on the Kohlenlager Site. Despite efforts to encourage three companies to consider cultural resources on their mine areas, they were approved for mining without conditions. The one and only decision for an archaeological site to be declared unsuitable for mining, the Beehunter Site, was back in court. A Dubois County judge agreed that the site was important, but declaring it unsuitable was a constitutional "taking" and the State would have to pay. The decision will be appealed. Public participation in the permitting process has been very active. Eight informal conferences were held, and five led to positive results.

A petition for rule changes concerning cultural resources was approved. New rules are currently being written.

**A Preliminary Analysis of Chert Tools and Debitage Collected from Sites in the Glendale Data Center.** RAYMOND J. BUECHLER AND KIMBERLY A. WATKINS, Indiana State University Anthropology Laboratory, Terre Haute, Indiana 47809.——During May and June in 1987 members of the Indiana State University Anthropology Laboratory conducted a systematic survey of 1000 acres near Glendale in Daviess and Pike counties. A preliminary analysis of chert tools and debitage recovered from sites in the “data center” suggests culturally-temporally distinct patterns of chert usage occur.

**Toward a Model of Chert Usage in Southwestern Indiana: A Diachronic Perspective.** MARK CANTIN, Department of Anthropology, Indiana University, Bloomington, Indiana 47405.——This paper examines the differential use of cherts through time in the Wabash Lowlands Physiographic Province of southwestern Indiana. The data base consists of some 800 culturally-temporally sensitive projectile points collected from 12 “study centers” within the area. Results indicate a recurrent pattern in variability of the cultural-temporal selection of cherts, and suggest the observed variability is a reflection of an array of complex cultural systems.

**Variability within Middle-Late Archaic Projectile Point Morphology and Technology: Implications for the Cultural Chronology of Southwest Indiana.** MARK CANTIN, Department of Anthropology, Indiana University, Bloomington, Indiana 47405.——Projectile points characteristic of the Middle-Late Archaic in southwestern Indiana and adjacent areas of the Midwest incorporate a variety of side-notched and stemmed “types”. A preliminary technological, morphological and chert-type analysis of Middle-Late Archaic points from the Bluegrass Site (12W162) and culturally-temporally related sites and/or collections from a restricted area of southwest Indiana suggests a temporal distinction occurs between these point clusters. Consequently, it is suggested that an analysis of Middle-Late Archaic points from dated base-camps would be useful for refining the Middle-Late Archaic culture chronology of southwestern Indiana.

**An Earthwork Chronology for Mounds State Park: Implications for Early and Middle Woodland in East Central Indiana.** DONALD R. COCHRAN, Department of Anthropology, Ball State University, Muncie, Indiana 47306.——Archaeologists have previously assumed that earthworks at Mounds State Park and other earth enclosure sites in east central Indiana were constructed within a short period of time. An alternative hypothesis of sequential construction of earthworks at the site throughout the tenure of Early and Middle Woodland culture within the region is more defensible with the regional data. The hypothesis was tested during the 1987 BSU field school by sampling three enclosures to obtain radiocarbon dates.

**Rescue Excavations at the Heshel Site, A Late Woodland Cemetery in East Central Indiana.** DONALD R. COCHRAN, Department of Anthropology, Ball State University, Muncie, Indiana 47306.——The Heshel site, discovered during bridge construction in Henry County, Indiana, was partially excavated in July 1987. The site contained 38 prehistoric features including 12 human burials, two dog burials, two fire pits, eight empty pits, and 14 artifact caches. Artifacts from the site indicate connections with the nearby Commissary cemetery and the Van Nuys habitation site and with Albee culture sites in the White and Wabash drainage basins of Indiana. Differences between the Heshel and Commissary cemeteries suggest chronological and/or cultural divisions.

**Artificial Cranial Deformation at Angel Site, Vanderburgh County, Indiana.** SHERRI L. HILGEMAN, Glenn A. Black Laboratory of Archaeology, Indiana University, Bloomington, Indiana 47405.——Artificial cranial deformation is the alteration of the natural morphology of the vault by cultural practices. Analysis of a sample of crania from the Late Prehistoric Angel site in Vanderburgh County, Indiana shows that while the overall degree of artificial cranial deformation is slighter than that in other parts of the New World, it appears to be more prevalent than at other roughly contemporaneous sites studied in the Midwestern United States. Markers of nutritional stress, porotic hyperostosis and cribra orbitalia, also seem to be correlated with the degree of artificial cranial deformation.

**Archaeological Testing of the Van Duyan Site, Parke County, Indiana.** MISTY JACKSON AND C. MICHAEL ANSLINGER, Indiana State University Anthropology Laboratory, Terre Haute, Indiana 47809.——Tests of the Van Duyan Site in southwest Parke County identified a Riverton Culture food-processing area. An area of intensively burned surfaces with associated fire-cracked rock and charcoal was documented around a central deposit of mussel shells. Data from intensive surface recovery and test excavation indicate that the site served as a specialized camp as described by Winters (1969) settlement model. It is suggested that resources within the local region of the Shelbyville Moraine account for differences between settlement in this area and that of the lower Wabash Valley studied by Winters.

**The Archaeological Resources of the Maumee River Valley in Allen County, Indiana.** JAMES A. MOHOW, Archaeological Resources Management Service, Ball State University, Muncie, Indiana 47306.——The Archaeological Resources Management Service at Ball State University conducted a sampling survey of a seven mile section of the Maumee River Valley in Allen County, Indiana. In addition to the primary survey, the project conducted an experiment in resurveying previously surveyed sample units, interviewed local collectors, and analyzed and tabulated data from a local collection with site level provenience. The project also reevaluated data previously collected from an adjacent section of the river valley and tested four sites in the latter study area. The project recovered and synthesized a range of data essential to interpreting chronology and settlement patterns in the northeast Indiana region.

**Paleopathology of an Historic Indian Burial from the Angel Site.** BRIAN G. REDMOND, Glenn A. Black Laboratory of Archaeology, Indiana University, Bloomington, Indiana 47405.——In December 1940 an intrusive, historic Indian burial was uncovered in Mound F at the Middle-Mississippian Angel Site (12Vg1). A recent examination of the skeletal remains of this individual revealed evidence of a gunshot wound to the right femur. Signs of initial healing on fragments of the shattered femoral shaft indicated that the victim may have survived for a period of up to seven days after the injury occurred. Preserved fragments of cloth, bark, and wood stained with a red pigment were found in the grave and have been interpreted as the possible remains of splints used to treat the injured leg. Trace element analysis by Nelson Shaffer of the Indiana Geological Survey has identified the red pigment as mercuric oxide (HgS) or vermilion; a substance that was traded extensively during the historic period and appears to have had both symbolic and medicinal value.

**Chemical Dating of Bone.** MARK R. SCHURR, Glenn A. Black Laboratory of Archaeology, Indiana University, Bloomington, Indiana 47405.——Chemical methods for dating prehistoric bones can be used to determine the relative ages of burials or other archaeological features. The basic principles of chemical dating are reviewed and the applicability,

availability, and costs of nitrogen, fluoride, and trace element analyses are compared. Preliminary data testing the use of nitrogen and fluoride analyses for dating burials from the Angel Site (12Vg1) are presented to illustrate how techniques for chemical dating can be applied.

**Early Paleo-Indian Lithic Exploitation in Southern Indiana; A View from the Sites.** KENNETH B. TANKERSLEY, Glenn A. Black Laboratory of Archaeology, Indiana University, Bloomington, Indiana 47405.—Approximately 60 fluted points from three early Paleo-Indian sites and two site groups in southern Indiana have been petrologically examined. The geographic distribution of the lithic source areas was compared to the artifacts manufactured from those sources. The results of these analyses illustrate a pattern most closely associated with unrestricted lithic exploitation and highly mobile foraging.

**Plummer, Stanford, and Scipio Cherts: Descriptions, Sources, and Utilization in Sections of the White River Valley.** CURTIS H. TOMAK, Indiana Department of Highways, State Office Building, Indianapolis, Indiana 46204.—The original formal treatment of Plummer chert and Stanford chert appeared in my Masters thesis in 1970, and these cherts have been discussed in subsequent publications. Scipio is a recently defined chert type. Plummer is a blackish material which occurs naturally in the area from Spencer County north to Putnam County. Stanford chert is gray, and sources occur in Monroe and Lawrence counties. Scipio is basically a gray chert and is a noticeable constituent of collections from the Bartholomew-Decatur-Jackson-Jennings county area. Some natural chert locations have been found, and geological contexts have been at least fairly well determined. Workshop sites at which these cherts were processed have been surveyed. Indications of the differential prehistoric utilization of Plummer and Stanford cherts are provided in part by an analysis of a sample of over 2500 points from Greene County. Once noticeable association is that between Stanford chert and Riverton points. Scipio chert was frequently used for Late Archaic artifacts, including Riverton points, as indicated by collections from the valley of the East Fork.