Baldia, Christel M.


Pretests on replicated materials were used to assess feasibility and efficacy of selected analytical methods: photography in different lighting conditions (simulated daylight, infrared and ultraviolet), optical and scanning electron microscopy with energy dispersive X-ray analysis (EDS), and inductively coupled mass spectrometry (ICP-MS) for elemental analysis. Differences in chemical signatures on painted replicas, otherwise invisible, were confirmed by forensic photography. While working with replicas, limitations of the analytical methods were discovered and addressed to adapt the methods for the use on archaeological materials. A specific sequence of modified methods, constituting the ideal protocol, was then applied to eleven textiles from the Hopewellian Seip Mound group. These were selected and divided into main colored groups: (1) yellow/brown, (2) turquoise/white, and (3) charred. Each group was sampled based on the results of the photography; the turquoise/white group showed patterns otherwise invisible. Optical microscopy illustrated that the yellow/brown textiles were made of dyed rabbit hair with colorant saturated yarns and patterns identical on both sides of the textiles. The two other groups were painted. EDS of the yellow/brown group showed no elemental composition differences between colors, but high organic and copper content as did the turquoise/white group. The charred group showed no significant differences between several colors. However, the red had higher calcium and lower iron concentrations. Two textiles were identified as composite.

Available online at:
http://www.ohiolink.edu/etd/view.cgi?acc_num=osu1122567876

Barrett, Christopher K.


The utility of fluctuating dental asymmetry as an indicator of developmental instability and stress was tested using human adult teeth from prehistoric and modern populations from the Ohio River valley area; eight Late Archaic (Kirian-Treglia, Davis, Stratton-Wallace, Boose, Duff, Clifford Williams, Muzzy Lake, Lakeview Height Farm), two Protohistoric (Pearson and Norma Grantham) and one modern dental sample. Fluctuating asymmetry was estimated from thirty-six buccolingual measurements and compared to an index value for linear enamel
hypoplasia (LEH). Some researchers have claimed that the transition to agriculture and maize diets caused a decline in health evident in the increased frequency of skeletal and dental stress indicators in the Late Prehistoric. Contrary to expectations, fluctuating asymmetry was different in only one of the measurements between periods, even though LEH varied significantly. The presence of strong leptokurtosis in the Protohistoric sample prevented many of the measurements from being used. The absence of other factors that explain leptokurtosis suggests that individuals in the Protohistoric were heterogeneous for the expression of fluctuating asymmetry. In addition, fluctuating asymmetry correlated positively with the LEH index in two measurements from the Protohistoric. Since fluctuating asymmetry cannot be estimated for non-normal distributions, the presence of leptokurtosis may be a better indicator of developmental instability than fluctuating asymmetry alone. This is supported by data from the Late Prehistoric site of Pearson Village. Despite similar levels of measurement error and fluctuating asymmetry, measurement distributions at Pearson Village remained relatively normal. This suggests that populations in the Protohistoric were under greater stress than other Late Prehistoric populations and that maize agriculture alone does not account for these differences. Available online at:
http://www.ohiolink.edu/etd/view.cgi?osu1118865152

Blatt, Samantha Heidi.


Scanning electron microscopy (SEM) identified bacteria, mineral crystals, phytoliths, starch grains, and cellulose fibers within the matrix of human dental calculus of teeth from two Late Prehistoric Ohio populations (Wegerzyn Site, 33-My-127, and Danbury Site, 33-Ot-16), permitting inferences about ancient oral health, diet, and long distance exchange. Phytoliths indicated the consumption of native grains, legumes, and dicots from both populations. The frequency of calculus, commonly associated with the amount protein in the diet, however, indicates slight differences in the amount of protein versus carbohydrates consumed between the two populations. This study has also revealed the first presence of cotton (Gossypium sp.) in prehistoric Ohio. The presence of immature cotton fibers from four individuals from northern Ohio is evidence for the exchange of exotic goods. Cotton is present prehistorically in the American Southwest and Caribbean Islands, but immature cotton becomes more common exceedingly north of the equator and is frequent in southwestern textiles, suggesting long distance trade and contact between the Southwest and northern Ohio during the Late Prehistoric. SEM analysis of calculus is limited by the disaggregation of debris and the lack of standardization of phytolith and starch grain classification. This
technique should be used in conjunction with other paleodietary and paelopathology analyses. Available at:
http://www.ohiolink.edu/etd/view.cgi?acc_num=osu1210100796

Brady-Rawlins, Kathleen L.  

Analysis of newly acquired data from the O.C. Voss site in Franklin County, Ohio and re-analysis of previous archaeological investigation conducted at the site more than forty years ago by the Ohio Historical Society suggests that the Voss site does not represent an incipient stage of the Fort Ancient Tradition of the Late Prehistoric period but rather a site utilized by Fort Ancient populations into the early 15th century. Fort Ancient occupation of the central Scioto River drainage and its tributaries was not confined to the period ca. A.D. 1000-1200 nor is a depopulation of the sub-region ca. A.D. 1350 supported. The original investigators placed the Voss site within the Late Woodland Cole Complex, but subsequent archaeologists questioned the classification of the Voss site as Late Woodland and suggested a Late Prehistoric Fort Ancient affiliation. Recent investigation of the site utilized geophysical survey in the form of magnetic survey as the paramount method of data recovery. Additional data recovery techniques included magnetic anomaly testing through removal of the plowzone, anomaly coring, limited feature excavation, and shovel testing to determine patterns of artifact density within the village site. An analysis of ceramic and lithic attributes on previously and recently excavated materials is presented and discussed in relation to established temporal indicators. A review and analysis of excavated and reasonably well-documented Fort Ancient mounds was undertaken to assess characteristics of the Voss Mound. Available online at:
http://www.ohiolink.edu/etd/view.cgi?acc_num=osu1180454140

Burks, Jarrod Daniel  
2004  Identifying household cluster and refuse disposal patterns at the Strait Site: a third century A.D. nucleated settlement in the Middle Ohio River Valley. Unpubl. Ph. D. dissert., Ohio State University.

A study of Middle-Late Woodland period community re-organization in the Middle Ohio Valley through an analysis of the Strait Site, third century A.D. archaeological deposit in central Ohio. Previous research in the region indicates that during a three-hundred-year period between A.D. 200 and A.D. 500 the organizational structure of settlements—the location and arrangement of households within communities—changed significantly through a process of household nucleation. Artifact patterning at the Strait
Site resulted from the secondary refuse disposal behaviors of contemporaneously occupied household areas. To evaluate this proposition, a working model of household trash disposal patterns is developed using principles of refuse disposal generated from ethnoarchaeological data. The expected pattern of refuse accumulation is then compared to the Strait site archaeological record through an analysis of debris collected during a shovel test survey. Artifact clusters are detected through a distributional analysis of four dimensions of artifact variability: size, function, density, and diversity. Strait Site artifact patterning is consistent with the secondary refuse disposal patterns predicted by the ethnographically derived model. The possible locations of five to six households at the Strait Site are identified. Two of these locations are further examined using geophysical survey and block excavation; the partial remains of structures are identified at both. Assuming that these possible household clusters are contemporaneous, the Strait Site is the earliest known nucleated settlement in the region. The presence of a nucleated community at Strait during the third century A.D. indicates that the transition from dispersed to nucleated communities began at the peak time of Hopewell earthwork construction and use—sometime before the Hopewell decline. By the time this process of community reorganization was widespread in the sixth century A.D., the Hopewell ceremonial centers had been abandoned. The new settlement data presented herein are an important example of early household nucleation in the Middle Ohio River Valley. These data also support the proposition that household nucleation began in locations peripheral to core Hopewell areas. Available online at:

Couper, Kelly A.

Carpenter's Run Pioneer Cemetery, in Blue Ash, Ohio provides a sociocultural history of the area in the 19th and 20th Centuries. By examining mortuary variation among 231 grave-markers using 23 variables, fieldwork illuminates whether mortuary variation displayed was a reflection of disease, death and burial on a societal or familial level. Utilizing recovered data, it was concluded that within this rural community, adherence to social norms was extremely pronounced, even during times of stress. The research and hypotheses gleaned from this cemetery can be applied to the region to determine routes of dissemination of thought, from the period of harsh views of death to the romanticized views of the Enlightenment. Available online at:
http://www.ohiolink.edu/etd/view.cgi?acc_num=ucin1218419403

DeAloia, Sara

SunWatch Indian Village/Archaeological Park presents possibilities for demonstrating how restoration ecology and archaeology can augment and inform each other by looking at both the site and the environmental restoration at the site from an historical ecology perspective. Major themes are the application of archaeological data to modern environmental issues and the importance of viewing landscapes as both natural and cultural phenomena which interact in a series of complex relationships throughout time. Paleothnobotanical data collected by previous researchers is presented in order to show how such archaeological data can be used to inform restoration work. Available online at:
http://www.ohiolink.edu/etd/view.cgi?acc_num=ohiou1102513904

Formica, Tracy H.

The Allen site is a multicomponent habitation site located along Margaret Creek, a tributary of the Hocking River. The most intense occupation at the Allen site occurred during the Late Woodland and Late Prehistoric periods. Locus 2 represents a fissioning of the main Allen site population during this time to accommodate population growth. Based on excavations conducted at Locus 2 by OhioUniversity archaeological summer field schools in 1994 and 1996, feature and artifactual analyses are presented, emphasizing the environmental setting, chronology, function, and the domestic economy of this economically interdependent household that is part of the greater Allen village community. It is concluded that a wide range of domestic economic functions were conducted on a daily basis within the Allen 2 household and occasionally as part of the greater Allen village community-level economy. Members of this Fort Ancient household were self-sufficient, managing their domestic economy around the availability and accessibility of a multitude of natural resources to meet the household’s basic needs. Available online at:
http://www.ohiolink.edu/etd/view.cgi?acc_num=ohiou1154636821

Geistweit, Barbara Ann

Discussion of artifacts from unnamed site in Columbiana Co.; Ryan Site,
Defiance Co.; Mixter Site, Erie Co.; William H. Davis Mound, Franklin Co.; Newman, Ohio Baptist, and Goldcamp sites, Lawrence Co.; Raisch Smith and McWhinney sites, Preble Co.; various Ross and Pike Co. Sites described by Prufer 1967); McKenzie’s (1968) Salt Creek survey; Shane and Murphy’s (1967) Hocking Valley survey; Hayport Site, Scioto Co.; McKibben Site, Trumbull Co.; John Quick Site, Vinton Co. Recognizes the early Archaic affiliation of points assigned to the Late Archaic Laurentian by McKenzie (1968) and Prufer and Sofsky (1965). The following point types are defined and accompanied by distribution maps for Ohio: Archaic Bevels, Archaic Straight Stemmed, Ashtabula, Brewerton Corner-notched, Brewerton Eared Notched, Brewerton Eared Triangle, Brewerton Side Notched, Cypress Creek I and II, Decatur (Fractured Base), Dovetail (St. Charles), Genessee, Kanawha Stemmed, Kirk Corner-notched, Kirk Serrated, Kirk Unserrated Stemmed, Lake Erie Bifurcate Base, Lamoka (Dustin), LeCroy Bifurcate Base, Pickwick Basin Types 7 and 13, MacCorkle Stemmed, McWhinney Heavy Stemmed, Ohio Bifurcate Base, St. Albans Side Notched, Steubenville Lanceolate, Steubenville Stemmed, Eva Basal Notched. Also illustrated are expanded stem stone pipe, deer bone atlatl handle, shell disc, and ground stone plummets from the William H. Davis Mound, Franklin Co. Available online at: http://www.ohiolink.edu/etd/view.cgi?acc_num=osu1187728681

Gosman, James Howard
2007 Patterns in Ontogeny of Human Trabecular Bone from SunWatch Village in the Prehistoric Ohio Valley. Unpubl. Ph. D. dissert., Ohio State University

Trabecular bone microarchitecture and the development and remodeling of normal trabecular structure is studied in a subadult archaeological skeletal sample from the Late Prehistoric Ohio Valley. Trabecular bone microarchitecture has a predictable relationship to functional and external loading patterns applied throughout ontogeny and maturity. Relatively little research has been directed toward the structure of and variation in trabecular bone during ontogeny, creating a deficiency in the foundation upon which trabecular bone adaptation can be used for bioarchaeological inferences. This research project tests hypotheses characterizing the temporal sequence and variation in trabecular bone volume fraction and degree of anisotropy as a reflection of growth and development, as associated with the timing and acquisition of normal functional activities (initial and maturation of bipedal gait), and as associated with changing body mass. A selected skeletal sample from the Late Prehistoric site (A.D. 1200-1300) of SunWatch Village consisted of 37 subadult and three young adult proximal tibiae. The sample was analyzed as a whole, and also as four maturity stage-related groups. Nondestructive microCT scanning of the proximal metaphyseal tibia visually demonstrated the microarchitectural trabecular structure, and quantitative 3-D structural
analyses measuring bone volume fraction, degree of anisotropy, trabecular thickness, and trabecular number. Bone volume fraction and degree of anisotropy are highest at birth, decreasing to a low value at one year of age, and then gradually increasing to the adult range around six to eight years of age. Trabecular number is highest at birth and lowest at skeletal maturity; trabecular thickness is lowest at birth and highest at skeletal maturity. The results of this study provide quantitative morphological and scan-image data on the ontogenetic patterned changes in human trabecular bone structure from birth to skeletal maturity, highlighting the dynamic sequential relationships between growth/development, general functional activities, and trabecular distribution/architecture. Trabecular bone analysis is situated within the broader framework of research in musculoskeletal biology with society-wide implications in the areas of skeletal adaptation in varying genetic and environmental settings, serious public health conditions (osteoarthritis and osteoporosis), and skeletal regenerative and implant investigations. Available online at:
http://www.ohiolink.edu/etd/view.cgi?acc_num=osu1194613389

Johnston, Cheryl Anne

All available skeletons recovered from the Hopewell Mound Group (33RO27) were examined and described. Eleven methods were used to produce age estimates from which a best estimate was calculated using principal components analysis. Sex estimates were based on seven pelvic and three cranial indicators of sex as well as seriation of cranial robusticity, diameters of humeral and femoral heads, and discriminant functions calculated using dental metrics. Three hypotheses regarding the role of culturally modified human remains in Hopewell culture were tested using age and sex data: trophies of war, revered ancestors, and memento mori/objects for ritual use. The hypotheses that Hopewellian culturally modified human remains represent trophies of war or memento mori/objects for ritual use are tentatively rejected. Regardless of the purpose culturally modified human remains served in Hopewellian mortuary behavior, adults of either sex were used as donors of raw material or as posthumous recipients of culturally modified human remains. Future researchers should consider the possibility that multiple stimuli ed to the production, use, and deposition of Hopewellian culturally modified human remains. Available online at : http://rave.ohiolink.edu/etdc/view?acc_num=osu1039181572

Kalinowski, Donald David

Detailed consideration of prehistoric meteorites including Anderson (Turner) and Hopewell Sites, concluding that the source for meteoritic
Mills, Lisa Ann  

Teeth of 34 individuals excavated by Shetrone from Mounds 2, 4, 7, 25, and 26 had mtDNA extracted and tested for restriction site olymorphisms, in order to test for the five maternal mtDNA haplogroups and sequence Hypervariable region I (HVI from 16047 to 16429. Four of the possible five mtDNA halotypes known to have been involved in the initial peopling of the New World were identified. HV I data from 50 modern and ancient Native American sample populations generated Neighbor Joining trees, allowing the placement of the Ohio Hopewell Mound Group sample in the context of existing modern mtDNA variation. The Hopewell Mound Group sample shares unique mutations with mtDNA lineages in China, Korea, Japan, and Mongolia. Available online at:  
Available on the WWW at  
http://www.ohiolink.edu/etd/view.cgi?osu1054605467

Oberlin, Jennifer Michelle.  

Documents parallels between the historic preservation movement in Lucas County, Ohio, and those of the national movement in certain eras. Issues pertaining to successful preservation, such as grassroots organizations, federal programs, tax incentives, the impact of preservation law, and planning are explained, as are the issues surrounding poor preservation, such as urban renewal, disinterest, migrations out of the city, and social unrest. Public perceptions of historic sites and of the preservation movement are overviewed, showing that certain intrest groups held influence over what was to be saved. Also, significant sites in Lucas County (1820-1910)are described as examples of successful and poor preservation. Available online at:  
http://www.ohiolink.edu/etd/view.cgi?acc_num=toledo1102625546

Patton, Paul E.  

This study utilized Energy Dispersive X-ray and X-ray Diffraction technologies to explore what clay resources were used in production, if and why transitions in production occurred, and how archaeologists might
best understand prehistoric ceramic manufacture in the Hocking Valley. Results demonstrate a long continuity among ceramics produced, with a systematic shift in temper resources during the Late Prehistoric Period; changes appear to be less the result of cultural tradition and more related to functional performance and opportunism. Concludes that potters utilized clays that were nearest to their residences Available online at: http://www.ohiolink.edu/etd/view.cgi?acc_num=ohiou1180051803

Pederson Weinberger, Jennifer
2006 Ohio Hopewell Earthworks: An Examination of Site Use from Non-mound Space at the Hopewell Site. Unpubl. Ph. D. dissert., Ohio State University

Site uses proposed for Ohio Hopewell earthworks, are formulated into two general hypotheses. The Ceremonial Center hypothesis limits earthwork use to ritual and mortuary activity, thus non-mound space is similarly restricted in terms of its archaeological record. The Corporate Center hypothesis posits a variety of political, economic, ceremonial, and social activities varying in nature (sacred vs. secular) and extent (short-term vs. long-term and small-scale vs. large-scale). To test these hypotheses, a random sample of non-mound space at the Hopewell Site was studied using geophysical and traditional archaeological techniques. Analysis of the magnetic, electrical resistance, and artifactual data identified several non-mound activity areas. Evidence supports use for ceremonies, communal meetings, and possibly settlement, but these latter activities were limited in nature and extent, with no evidence to suggest long-term or large-scale settlement. When compared to expectations for the two hypotheses, the Ceremonial Center hypothesis is rejected and the Corporate Center hypothesis is not rejected. The finding that non-mound space at the Hopewell site was used only for limited activities associated with earthwork construction, maintenance, and use supports the Vacant Ceremonial Center and Dispersed Sedentary Community models. Available online at http://www.ohiolink.edu/etd/view.cgi?acc_num=osu1141810673

Peoples, Nicole M.

Taber Well (33HO611) is situated above a marsh and floodplain environment along Monday Creek, a tributary of the Hocking River. Excavation and analysis attempt to determine the function, size, and chronology of the site. Site chronology indicates the presence of prehistoric hunter-gatherers from Early Archaic through the Middle Woodland periods. Taber Well is located approximately 2 kilometers northeast of a natural Upper Mercer outcrop on Kitchen Run. Laboratory
analysis identifies a complete reduction sequence for Upper Mercer, Brush Creek and Flint Ridge/Vanport chert. Abundant debitage and diverse tool assemblage, chronology of point types and radiometric dates, numerous post-molds and hearth features, suggest that this site was revisited for occupation and for reduction of large blocks of chert and cores into workable performs or complete tools. Analysis confirms a utilization of Taber Well for occupation and lithic reduction during the Archaic to Middle Woodland periods. Radiocarbon dates of \(2130 \pm 40, 1960 \pm 80, \text{ and } 2000 \pm 80\) were obtained on features. Available online at: [http://www.ohiolink.edu/etd/view.cgi?acc_num=ohiou1103229925](http://www.ohiolink.edu/etd/view.cgi?acc_num=ohiou1103229925)

Sanford, Charles Frederic.  
1970  
Using inference and analogy, selected objects in grave association of the prehistoric Hopewell culture-complex in southern Ohio appear to define a cult of the dead and further suggest the presence of ritual specialists (shamans) and a highly structured social system. The mortuary cult may have been based upon cosmological elements similar to those present in aboriginal eastern North America. At least three hypothetical funeral variants can be reconstructed from existing data. Available online at: [http://www.ohiolink.edu/etd/view.cgi?acc_num=osu1172781430](http://www.ohiolink.edu/etd/view.cgi?acc_num=osu1172781430)

Spertzel, Staci.  
2005  
Late Woodland Hunting Patterns: Evidence from Facing Monday Creek Rockshelter (33HO414), Southeastern Ohio. Unpubl. M.S. thesis, Ohio University.  
Intensified use of southeastern Ohio rockshelter environments during the Late Woodland period is illustrated by faunal exploitation and lithic procurement patterns associated with Late Woodland logistical organization at Facing Monday Creek Rockshelter (33HO414). The cultural materials recovered during excavation are analyzed with the intent of understanding the use of rockshelters as specialized task localities. Results of analyses are synthesized with comparative research to delineate broad cultural patterns associated with rockshelter utilization. A pattern includes intermittent seasonal exploitation by small hunting parties or task groups in search of target resources at a known location. It is hypothesized that during the Late Woodland period, aggregation to larger residential settlements within the broad alluvial valleys would have resulted in an increase in those distances traveled to upland settings, initiating a functional attribute for rockshelters as temporary hunting stations. Available online at: [http://www.ohiolink.edu/etd/view.cgi?acc_num=ohiou1134579425](http://www.ohiolink.edu/etd/view.cgi?acc_num=ohiou1134579425)
Thompson, Amanda J.  

Charred textiles from Edwin Harness, Hopewell, Seip, and Tremper Mounds were studied and a labeling system was developed that will allow future researchers to locate the exact pieces examined. A Burial Practices Framework was developed that predicts the survival of textile assemblages in different burial scenarios. The use of textiles outside the cremation or final burning ceremonies, known to have occurred at Seip and Harness mounds, is indicated by the presence of uncharred fabrics at these sites. Compact fabrics made of coarse yarns likely were used to transport crematory remains to the gravesite. More open, loosely twined fabrics made of fine yarns probably served aesthetic rather than functional purposes. Because only charred materials were found at Tremper, a second burning in the communal cache, comparable to the “final ceremony” conducted at other Hopewellian sites, is indicated although not proposed in the past. Charred textiles with applied designs were identified, a feature never before reported in the literature. It is possible that other charred textiles have applied designs but these are not visible in the fabric’s present condition. Textiles are not only indicators of Hopewell burial and cremation practices, but also of interaction in Hopewell societies. Fabric structure, yarn size, and yarn spacing vary between each of the four sites studied. Fabrics from Seip Mound include those made with spiral interlinking, a structure not found in the other three sites studied. While use of textiles in cremation and burial may have been prescribed regionally, as would be anticipated in a Hopewell “cult”, the particular structure of the fabric was locally determined. Local craftspeople manufactured the fabrics with particular end uses in mind; there is no particular pattern that typifies them as Hopewellian. Distribution of textiles between sites is not indicated. The research forms the basis for further work in the exploration of social differentiation of Hopewellian societies based on their textile production and use. Available at: http://www.ohioli nk.edu/etd/view.cgi?acc_num=osu1054507830

Wakeman, Joseph  
2003  Archaeological Settlement of Late Woodland and Late Prehistoric Tribal Communities in the Hocking River Watershed, Ohio. Unpubl. M.S. thesis, Environmental Studies, Ohio University. 73 p., 18 fig.

The settlement patterns of Late Woodland (ca. A.D. 400 – A.D. 1000) and Late Prehistoric (ca. A.D. 1000 – A.D. 1450) communities in the Hocking Valley present significant changes in food subsistence, landscape utilization and population increases. It is unclear as to which established archaeological taxonomic units apply to these prehistoric tribal communities in the Hocking valley, if any. The extensive OAI electronic inventory is used to
identify settlement patterns of these time periods in the Hocking River Watershed, results indicating that landform selection for habitation by these prehistoric communities did change over time. The data suggest that environmental constraint, population increases and subsistence changes dictate the selection of landforms. The LW and LP sites in the studied region should be viewed separately in terms of their settlement patterns. Available online at: http://www.ohiolink.edu/etd/view.cgi?ohiou1071235963

Wymer, Dee Ann
1987 The Paleoethnobotanical Record of Central Ohio—100 B.C. to A.D. 800: Subsistence Continuity Amid Cultural Change. Unpubl. Ph.D. Dissert., Ohio State University

Paleoethnobotanical analyses on Middle and Late Woodland sediments from two sites in Franklin and Licking Co. reveal a great deal of similarity, with both populations utilizing the same Eastern Agricultural Complex horticultural products and deciduous forest resources. Comparison with the Illinois region show a similarity that negates broad explanations based on differences in subsistence. Available online at: http://www.ohiolink.edu/etd/view.cgi?acc_num=osu1219945114

Zadeh, Yousef Yousefian

Based upon undeformed skull samples from the Late Archaic (Watts Cave, Kentucky, and Berry Hill, Ohio) and Adena samples from Holmes, McMurry, and Cowan Creek Mounds, as well as deformed samples from Holmes Mound Cowan Creek Mound and Berry Hill Site. Craniofacial morphological features of undeformed skulls from Terminal Late Archaic and Adena demonstrate very close resemblance. Terminal Late Archaic Lenapid Indians are not dolichocephalic but more brachycephalic. Cradleboarding and use of head bands created artificial deformation (brachycephalization) of craniofacial features in Adena Indians, including decrease in cranial length, increase in cranial height and breadth, and increase in inter-zygomatic width and total facial height. The most significant variables are cranial length, breadth and height, total facial height, facial breadth at inter-zygomatic and inter-gonial width. In future studies incomplete skulls can be included and broken internal structures of the cranium do not have an adverse effect on the results. Available online at: http://www.ohiolink.edu/etd/view.cgi?acc_num=osu1146152283
This thesis primarily documents and evaluates the design and implementation of two interactive multimedia museum exhibits of the EarthWorks Project: 1) Earthworks Interactive Video Museum Exhibit, Hopewell Culture National Historical Park, Chillicothe, Ohio (2003 - present), and 2) Earthworks Interactive Video Museum Exhibit, “Little Miami Valley,” Cincinnati Museum Center, Cincinnati, Ohio (2003 - present). This thesis discusses the general design philosophy and approaches developed by the Earthworks project team in order to provide a complete context for the author’s specific contributions in three major digital production procedures—virtual reconstruction, interactive design, and video editing—however, the selected case studies detail the technical solutions of just the first two: 3D computer reconstruction and interactive re-design for the museum environment. The third case study is an interactive re-design of the existing timeline, which functions as a relatively independent component of the overall program. Because of the rapid pace at which the capacity of digital technology is growing, the current objectives and goals of EarthWorks have been expanded to a multi-format program which currently anticipates a traveling multimedia museum exhibit, a companion DVD publication, and a supporting website. The purpose of this thesis is to document the processes that have been successful so they can be used for further development and improvement. Available online at: http://www.ohiolink.edu/etd/view.cgi?acc_num=ucin1122400233