BNRD 2013

Tabulae sceleti et musculorum corporis humani (Albinus and Wandelaar 1749)

3rd Annual Bioarchaeologists’ Northeast Regional Dialogue Conference

February 23rd, 2013

Departments of Anthropology and Anthropology Graduate Student Organizations of Syracuse University and University at Albany - SUNY
The Bioarchaeologists’ Northeast Regional Dialogue (BNRD) Conference was established in 2010 to initiate dialogue among bioarchaeologists in the Northeast United States and to provide a semi-formal venue in which students and faculty can present current research in subfields of biological anthropology including, but not limited to, human osteology, paleopathology, paleodemography, forensic anthropology, and taphonomy.

The 2013 conference will be held at Syracuse University. It is hosted by the Department of Anthropology and the Anthropology Graduate Student Organization at Syracuse University and the Department of Anthropology of the University at Albany – SUNY. It is funded by the Graduate Student Organization of Syracuse University and the Department of Anthropology at Syracuse University.

### 2013 Conference Committee

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Schedule

10:00 a.m. - 10:30 a.m. Welcome Reception and Introduction (Refreshments)
10:30 a.m. - 12:00 p.m. Session One
12:00 p.m. - 1:00 p.m. Lunch (Provided by AGSO of Syracuse University)
1:00 p.m. - 2:00 p.m. Keynote Lecture
2:00 p.m. - 3:30 p.m. Session Two

Location

Maxwell Hall, Room 204 on the campus of Syracuse University. Free parking at University Ave. Garage starting at 8am; please identify yourself to the parking attendant as a conference participant.
About our Keynote Speaker

Shannon Novak
Associate Professor of Anthropology at Syracuse University

Dr. Novak is a bioarchaeologist specializing in human skeletal analysis as a way to study social and political behavior in the past. She approaches the body as both a living organism and a cultural symbol. Her research focuses on skeletal injury patterns as indicators of social conflict and violent acts and on how human remains and skeletal evidence are deployed in political arenas to shape social identities and to influence the construction of historical narratives.

She has analyzed skeletal remains from prehistoric, historic, and forensic settings in Jordan, England, Croatia, Guatemala, and the United States, and her recent work has focused on two infamous events in nineteenth-century America: the Mountain Meadows massacre and the ordeal of the Donner Party. Her most current research is on the Spring Street Presbyterian Church burial vaults, a collection of early nineteenth-century burial vaults of the radical abolitionist church. Accidentally unearthed in 2006, the some 200-250 commingled individuals are being analyzed at Syracuse University.

Dr. Novak is the author of *House of Mourning: A Biocultural History of the Mountain Meadows Massacre* (2008) and the coeditor of *An Archaeology of Desperation: Exploring the Donner Party’s Alder Creek Camp* (2011), both of which have won the Society for Historical Archaeology’s James Deetz Book Award.

Keynote Lecture
1:00 – 2:00pm

Partible Persons and Persons Apart: Anatomized Remains within the Spring Street Church Burial Vaults

In this paper I contextualize three unique individuals recovered from the historic Spring Street Presbyterian Church burial vaults in lower Manhattan (ca. 1810-1834). The crania of an adult male, an adolescent, and of an infant display clear evidence of having been subjected to a craniotomy. All had complete circumferential incisions to remove the calvarium for internal examination. The adolescent, however, underwent further postmortem preparation: thin scalpels indicate defleshing, and metal pins embedded in the frontal and occipital bones would have facilitated opening and closing of the vault, presumably for teaching. The illicit exhumation of graves to obtain cadavers for anatomical dissection was a widespread phenomenon by the early 19th century and prevalent in New York City. Though the bodies of criminals, the destitute, and the marginalized were often targeted, grave robbers were opportunistic in their clandestine pursuit of the dead. At the same time, some of the more privileged class requested autopsies, whose findings were used to elaborate on a person’s life history. Thus, the presence of three anatomized crania in the burial vaults of the Spring Street Presbyterian Church leads us to ponder why the heads of these three individuals were opened up, and how they came to be interred with the bodies of others who remained intact. Such an inquiry requires a closer examination of the rise of American medicine and anatomy, as well as the social and historical context of the church itself.
Physiological stressors in an Eneolithic Ukrainian skeletal sample

A decline in health following the adoption of agriculture has been observed in data from prehistoric skeletal populations. Support for this hypothesis relies heavily on evidence from North American populations. Recent studies of populations from ancient Japan, Mexico, and Thailand reveal contrary results and challenge the universality of this theory. Evidence for global diversity in the spread of the Neolithic also indicates that the social and biological effects of this transition should be examined with region-specific data. We examine the health of the Tripolye, the earliest intensive agriculturalists in Eastern Europe, using a skeletal sample from Verteba Cave (3500 calBC). Mortuary sites of Neolithic groups are rare in Eastern Europe, and this sample is one of two associated with the Tripolye. Enamel hypoplasia frequencies and stature estimates are used to assess physiological stress and are compared to published values for Mesolithic hunter-gatherers from Ukraine. The Tripolye sample has significantly more enamel hypoplasias and shorter stature than the Mesolithic populations. The results of this study indicate that the earliest intensive agriculturalists in Ukraine experienced higher physiological stress than hunter-gatherer populations from the same region which supports the hypothesis that the transition to agriculture was detrimental to the health of prehistoric populations. Unlike North American populations who relied on a few staple crops, the diet of the Tripolye incorporated a variety of cultigens and domesticated animals. The observed decline in health may be the result of the addition of carbohydrate rich foods to the diet, or negative consequences associated with increased sedentism.
Accurately identifying skeletal markers of life history stressors can be difficult, as detailed information on any given individual is often lacking from museum records. Here, we describe the skeleton of a famous gorilla named Gargantua, formerly Buddy. Available records indicate that this lowland gorilla (*Gorilla gorilla gorilla*) was collected in Africa as an infant, and suffered an acid attack to the face before being donated to and cared for by a wealthy menagerie owner in Brooklyn, NY. On reaching adulthood, Gargantua was subsequently transferred to the Ringling Brother & Barnum and Bailey Circus, where he was a media star from 1938 until his death in 1949. Following a necropsy by primate anatomist Adolph H. Schulz, Gargantua’s skeleton was donated to the Yale Peabody Museum of Natural History, where it was mounted for exhibit. The Gargantua skeleton shows skeletal pathologies consistent with available life history data. The cranium and face show bilateral asymmetry and scarring associated with the acid incident, and craniometric data indicate that Gargantua’s skull development followed a different trajectory than wild gorillas. Skeletal evidence of severe dental disease, respiratory ailments, and postcranial arthritic changes are concordant with the recorded captive environment. By reviewing documents and historical material, we are able to provide a clearer picture of the gorilla who had captivated the American public, but whose life and death illustrate the importance of modern captive management and enrichment programs. This work was support by the Yale Peabody Museum of Natural History and by the Yale University Department of Anthropology.

This study reports the occurrence of mandibular exostosis in an extinct hominin fossil from the Pleistocene of Kenya. The mandible, KNM-ER 820 has been identified as a juvenile belonging to the species *Homo erectus/ergaster*. The specimen was discovered from the Koobi-Fora locality on the east of Lake Turkana, northern Kenya; and is dated to 1.5 MA. The pathological evidence shows the presence of benign bilateral exostoses below dm2s on the lingual aspects of both horizontal rami. This study implicates mechanical forces during mastication for the presence of the condition, but other etiologies are also considered. The presence of this condition in the Pleistocene epoch indicates that this oral pathology occur earlier in our evolution than previously known and may have some implications on the feeding behavior or oral health of our extinct relatives.
Dental Health in the Islamic Cemetery at Tell el-Hesi

In Near Eastern archaeology (and in modern-day Israel, particularly), bioarchaeological analyses of historic Islamic cemeteries are relatively rare. Archaeological program goals typically include pre-historic or early historic sites, and more recent remains are seen as obstacles to these earlier time periods. Therefore, little is known about skeletal health in the Ottoman Period from the southern Levant. In the 1970s, the archaeological expedition to Tell el-Hesi uncovered a large Bedouin cemetery (16th – 19th centuries). Many of the skeletons were reburied, but those of particular pathological interest were curated. This project examines dental health in these Islamic burials from Tell el-Hesi. Although the sample is biased, it still represents one of a few opportunities to look at health from this time period. Dental caries was very low in permanent teeth (<3%), even when compared to contemporary Bedouin groups (e.g., Khirbat al-Mudayna). Dental wear was severe, and antemortem tooth loss was prevalent (similar to contemporary groups). Digital x-ray and digital microscopy were used to provide a more nuanced understanding of pathology. Severe dental wear and a low caries rate is likely the result of food preparation technique in a sandy environment, which introduced a lot of grit into the diet.

Questions for Session One

Lunch

Keynote Lecture

Partible Persons and Persons Apart: Anatomized Remains within the Spring Street Church Burial Vaults
Session Two

2:00 – 2:20

Lauren Hosek
Syracuse University

Contextualizing “Deviance”: A Bioarchaeological Investigation of Unusual Early Medieval Burials

Burials that differ from the normal mortuary rites of a community are not necessarily indicative of a “deviant” social identity in life. This contextualized analysis of skeletal remains from unusual burials reveals complex social entanglements, powerful local traditions, and evolving rituals in an early medieval setting. Libice nad Cidlinou is a large early medieval fortified settlement in what is now the Czech Republic. Multiple excavations throughout the twentieth century have uncovered several cemeteries associated with the early medieval period. One of the largest, Kanin, dates from the late ninth through tenth centuries and consists of 212 graves. Of these, 22 graves deviate from the normal extended burial position. This paper will examine several of the unusual burials using a biocultural approach that takes into account the life course of an individual and the potential for transformative impacts on the skeleton. Using multiple lines of evidence, including osteological analysis, archaeological data, historical sources, and comparative cases, these burials are placed in the context of tenth century Bohemia. An exploration of the reasons for uncommon burial includes the possibilities of slavery, social ostracism and poverty, the presence of particular diseases, foreign places of origin, and perceived revenants.

2:20 – 2:40

Nicholas F. Bellantoni and Gary P. Aronsen
CT State Museum of Natural History and Archaeology Center
Yale University

The Repatriation of Albert Afraid of Hawk: From an Unmarked Grave to an Emotional Homecoming

One hundred and twelve years ago, a young Oglala man died suddenly while participating in Buffalo Bill’s Travelling Wild West Show tour of the East Coast. He was buried in Danbury, CT’s Wooster Cemetery by Buffalo Bill, in a grave with no marker. It seemed inevitable that he would be lost to history forever. However, the remarkable story of Albert Afraid of Hawk connects Sioux spirituality, local historians, and scientists in unexpected ways. Here, we describe the life of Mr. Afraid of Hawk, and the efforts of a small but dedicated group to find, exhume, identify and repatriate him to his ancestral homeland.
Where are the Children? Disproportionate Representation of Children in the Bioarchaeology of West Mexico

This contribution examines the bioarchaeology of children in the Late Formative period (200BC – 200AD) in the West Mexican shaft and chamber tomb culture. Juveniles are generally underrepresented in Mesoamerican skeletal samples during the periods of increased social and agricultural complexity. Analyses from previous seasons work in the Los Reyes Valley in the state of Jalisco conform to this, with few interments of children recovered. However, most recent excavations in the Los Reyes Valley identified a disproportionately high number of subadult interments. Eight of 20 interments (40%) at the site of La Bolita fall within the juvenile classification with the majority categorized as ‘child’ (2-12 yr.). This stands in contrast to previous analyses from the sites in the same valley, begging the question ‘Are children dying more frequently at La Bolita?’ Is there an increased frailty (susceptibility to illness) in children from this site or are juveniles finally being represented in the burial assemblages? Cross-cultural comparisons are made to examine mortality profiles and look towards indicators of health, nutrition, and disease for answers. Previous analysis of Late Formative shaft and chamber tomb culture indicate a socio-economically stable, egalitarian society without the burden of nutritional deficiencies impacting overall health. What is different at La Bolita? The increased frailty at La Bolita, when compared with previous sites, is supported by the higher prevalence of enamel hypoplastic defects, markers of nutritional stress and physical illness, in both the adult and juvenile remains.

Presence and Absence: An Exploration of Scurvy in the Subadults in the Spring Street Presbyterian Church Collection

This paper presents the results of an examination of scurvy in the commingled subadult remains (MNI = 90) of the Spring Street Presbyterian Church. This historic congregation in New York City had active burial vaults from 1820-1846. Scurvy is a vitamin C deficiency that results in hemorrhaging at the sites of muscle origin and insertion, particularly around the skull. These resulting lesions can be visible in the remains of subadults undergoing growth, weaning, and dietary stress. Applying ideas suggested by Geber and Murphy (2012), this research examines specific sites on the skull for lesions consistent with and suggestive of scurvy. This article presents population data from maxillae, sphenoids, and orbits, and also examines three osteobiographies. By connecting the biological data to the socio-cultural environment of the church, this article raises questions of how to interpret the presence and absence of scurvy in a collection.

Questions for Session Two