crania are part of the Pleistocene AMHS cluster, which lies on the fringe of modern *H. sapiens* variability, while the Neanderthals are distinctly separate. We describe detailed findings for the braincase and the face (if extant), including supraciliary morphology and occipital protrusion, and discuss considerations towards a possible ancestry of Neanderthals.

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Evidence of biomechanical stress in a Middle Mississippian skeletal population.

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Skeletal remains and funerary objects from the MacDuffee Site in northeastern Arkansas are being analyzed at the request of the Quapaw Tribe, the most likely affiliated descendants. Archaeological evidence indicates a Late Woodland/Middle Mississippian origin for the site. Sex and age could be reliably determined for only 44 (27 males, 27 females) of 112 adults. In addition to disease indicators and trauma, the presence and severity of degenerative pathologies were described for each of these 44 skeletons. Forty-three of the MacDuffee adults had hypertrophic muscle attachment sites. Seventy-seven percent of the individuals exhibited osteoarthritic changes on four or more joints. Osteophytosis was present in 44% and 65% of the adult males and females respectively, and disk herniations were observed in 12 males and nine females.

In this paper, evidence of biomechanical stress among the adult skeletal remains is considered by sex and age category. Patterns of hypertrophy and arthritis possibly attributable to sexual divisions of labor are discussed. The MacDuffee material is compared with other contemporaneous Mississippian sites, including Dickson Mounds. In general, the prevalence of muscular hypertrophy was greater in young females (16-25, 26-35 year categories) than young males for the shoulder, elbow, hip, and knee joints, whereas a greater percentage of older males (36-45, 46-55 years) than females was affected by muscular hypertrophy in those same joints. Males exhibited osteoarthritic changes more often than females in all joints except the jaw. The incidence of arthritis increased with age in most joints. The MacDuffee population exhibited more degenerative pathologies than Dickson Mounds individuals in all age categories.

The post-cranial functional morphology of Javanese bovids as an indicator of paleoenvironment.

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The vertebrate paleontological scheme currently utilized for Java, while useful for examining broad evolutionary trends, lacks the resolution necessary to address questions of local environmental change and early hominid behavior. An increasing number of studies indicate that the environment plays a key role in understanding hominid morphological and behavioral adaptations. For Java, environmental reconstructions have been limited primarily to comparisons of overall faunal compositions within the current biostratigraphic framework. While this method is useful, it relies on an assumption of temporal stasis in habitat preference in addition to requiring taxonomic and phylogenetic robusticity. Studies of African bovids have shown that a more effective way of examining past environments is through the study of morphological traits that are characteristic of functional adaptations to different environmental conditions. Before morphological traits characteristic of function could be discerned for Javanese bovids, identification criteria for the post-cranial bones of the two most common large bodied genera, *Bibos* and *Bubalus*, had to be constructed. Based on the examination of modern representatives of these genera, 32 qualitative characters for 14 skeletal elements have been identified. Additionally, based on ecomorphological characters of the femur, the work indicates that these two genera are morphologically adapted to two different environments. Ultimately, the study provides an empirical means by which the paleontological record can be examined and may provide insight into environmental preferences of early hominids on Java.

Age estimation of human skeletal remains - A comparison of methods from Lauchheim, Germany.

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A wide variety of methods for estimation of age-at-death from human skeletal remains are now available, reflecting a long history of interest in the subject. These methods rely largely on morphological changes in the maturing dentition and skeleton. The diversity of methods results in a diversity of reliability, rendering comparisons between methods insecure. The present study applies various methods of adult age estimation by independent investigators (the coauthors of this study) in order to document and interpret reliability and applicability.

Each observer applied a specific age estimation method to the same subsample (n=121) of a large early medieval (A.D. 550-750) cemetery at Lauchheim, Germany (n=1400). Previously, the tooth cementum annulation and Complex Method employing a range of methods recommended by the European Anthropological Association were used (Kunter, Wittwer-Backofen). For the present study, the following methods were used and compared to the results of the previous study: transitional method (Boldsen), auricular surface (Buckberry), suture closure (Larsen, Wahl), tooth root translucency (Prince), and osteon density (Doppler, Grupe). In addition, two observers (Hotz, Kemkes-Grottenthaler) applied a combined spectrum of different methods.

The results of this study reveal a general consistency of adult age-at-death, but with a high degree of variation. The study suggests that use of multiple age indicators is important for reconstruction of demographic profiles in archaeological settings.

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A modern revision of E. Hooton's study on the Indians of Pecos Pueblo.

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Earnest Hooton recorded metric and nonmetric data from more than 450 individuals for his study, "The Indians of Pecos Pueblo". The focus of this research is a re-analysis of Hooton's original data using a modern conceptual and statistical framework. Although the skeletons from the Pecos site have been reburied, there is still a great deal of research potential