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On the Cover: Columbus Skyline, photo by J.K. McKee

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and serum samples, taken on a single day during the putative luteal phase from study participants in La Paz (n=26) and Chicago (n=20). They concluded that there is significant interpopulational variation in the salivary/serum P ratio, and that populational differences in salivary P cannot be assumed to be indicative of comparable variation in serum P.
We present additional analyses of these data that call into question their conclusions. The correlation between individual salivary and serum P is only 0.17 in Chicago (n=15) and 0.45 in La Paz (n=25). Yet, their original description of their new salivary P assay reported r=0.75 for concurrent serum and salivary P "for single luteal phase samples from 48 US women" (Lu, Chatterton et al 1997), which is consistent with the reports of other studies. Furthermore, individual salivary/serum P ratios are 0.62%-70.7% in Chicago and 0.37%-8.4% in La Paz.'s The 115-fold range in the Chicago sample is untenable. These and other analyses cast substantial doubt on the utility of these data, therefore no conclusions regarding populational differences in salivary/serum P ratios can justifiably be inferred. The study should be re-done with stricter controls on sample handling and assay performance.
Funded in part by the National Science Foundation, Binghamton University, and a Fulbright Fellowship.

Bringing the Stone Age into the Information Age: introducing the Paleoanthropology Database.

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Online databases and datasets have become indispensable tools for modern scientists. A number of such databases relevant to paleoanthropology are currently in development; many of these can be accessed through Paleoanthportal.org. These databases are thus far narrow in their scope and detailed in their content. I present here the Paleoanthropology Database (PADB), the first broad and general database designed to be useful to both researchers and students of human evolution.
The database contains 40 types of basic data categories filled with information culled from the published literature. These data categories include, for example, age of the site, skeletal elements present, taxonomic affinities, archeological and behavioral evidence, and associated faunal remains, all fully referenced to an extensive source list (over 4,000 references in total for Europe). Here I present the first phase of the database, 300 European sites. An additional 900 African and Asian sites, as well as Miocene hominoid sites, will be added in the future. The primary goal of PADB is the facilitation of access to the evidence of human evolution through its open access status (anyone with a computer that is online may use it). Its secondary goal is to be a continuously updated source of paleoanthropological data through a streamlined updating protocol (utilizing the familiar Excel spreadsheet). At the heart of PADB's ease of use and updateability are its straightforward database structure (two MySQL tables) and flexible, simple, yet powerful search functions (written largely in Perl). The database can be accessed through Johnhawks.net.

Testing histological age determination techniques on Prehispanic Maya skeletal populations.

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Histological age determination techniques measure age-dependent morphological features in samples taken from bones or teeth. They hold advantages over macroscopic methods when conventional parameters cannot be applied for lack of preservation, as is the case with the Lowland Maya skeletal remains. In this study, we test the potential of histomorphological techniques in Maya research, using three regression formulas derived from rib morphometry of series with known ages: Stout and Paine (1992), Cho et al. (2002) and Valencia Pavón (2007). While the first two formulas were developed from populations of European-American and African-American descent, the latter is founded on a cohort of modern individuals with known ages from the Yucatan peninsula. For the purpose of this study, a series of rib sections were obtained from 35 adults dated to the Classic period, recovered from Palenque, Chiapas, Ek Balam, Yucatán, and Calakmul, Campeche (all in Mexico). Osteon density (OPD), osteon size (On.Ar), and cortical area measures (Ct.Ar/Tt.Ar ratio) were determined in two sections of each individual. The results were then compared with macroscopically determined age ranges, and the influence of diagenesis and interobserver differences noted. Our findings reveal a greater correlation between the macroscopically derived ages and the age estimates from the regression formulas based on OPD developed by Stout and Paine (1992) and Valencia Pavon (2006), while the combined application of osteon size (On.Ar) and the ratio of cortical bone to total area (Ct.Ar/Tt.Ar) employed in the Cho et al.(2002) only provided better correlation with macroscopic age estimates in older individuals.
The study was funded by CONACYT 33743-H grant to Vera Tiesler.

Whale hunting may place individuals at risk for spondylolysis.

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North American Inuit populations are thought to have the highest prevalence of spondylolysis, which is a unilateral or bilateral separation of both the centrum and neural arch of a vertebral element at the pars interarticularis. Spondylolysis may affect any vertebral unit and is commonly found in lumbar vertebrae. High risk activities hyperflex and hyperextend the back, such as dragging heavy objects and bending at the waist with the legs fully extended. This study compares two Inuit groups from Point Hope, Alaska, the Ipiutak and Tigarak, housed in the American Museum of Natural History, for the presence and absence of spondylolysis. The Ipiutak lived approximately from 2100 – 2500 BP and hunted caribou, seal, and walrus. In contrast, the Tigarak lived from approximately from 800 – 300 BP and hunted whales in addition to other large mammals. Data were collected from both populations noting presence, absence, and location of spondylolysis. A total of 30 Ipiutak individuals were evaluated with 26 % prevalence in males (5/19) and 9 % in females (1/11). A total of 92 Tigarak individuals were evaluated and demonstrated 50 % prevalence in males (21/42) and 60 % in females (30/50). It is likely that both groups acquired spondylolysis from standing or sitting while bending at the waist with legs fully extended. The increase in prevalence among Tigarak may be because of whale hunting. Men towed the dead whale to shore and women dragged the meat to camp, both activities that predispose individuals to spondylolysis.

Extinction of critically endangered West African colobus monkeys will lead to a major loss in molecular diversity.

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Red colobus monkeys rank among the most endangered of all living primates with nearly half of the 18 forms threatened with extinction in the near future. Designation of conservation priorities for these animals is hampered by an unresolved phylogeny that remains among the longest-standing problems in African primate taxonomy. Thus, there is no consensus on how many species of red colobus should be recognized, and the assignment of species names to certain forms remains contentious. This is the first study to address the systematics of this group using molecular phylogenetic methods.
An 897 base pair fragment of mitochondrial DNA was amplified and sequenced in nearly all red colobus forms from tissue, fecal, and museum specimen (tooth) samples. A combination of tree-based and distance methods was used to infer evolutionary relationships and divergent mitochondrial lineages. This information was combined with that from previous studies based on morphology, pelage, and vocalizations to