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Worldwide population variation in pelvic sexual dimorphism

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Estimating the biological profile from skeletal remains is an essential component of the anthropologist's role in medico-legal investigations and in bioarchaeological analyses. Sex estimation is paramount because many methods for stature and age estimation are sex specific.

The innominate, specifically the pubic bone, is considered the best indicator of sex in adults and is widely used for sex estimation. The Klales et al. method, a modification of Phenice's technique, is currently being used and cited in forensic case reports throughout the United States and internationally; the method is also being used in bioarchaeological contexts. In light of *Daubert* and the NAS report from 2008, the method needs to be tested for validity and reliability. The present research tests the reliability and validity of the method in multiple national and international samples.

A sample of adult pelves (n = 532; females = 239; males = 293) from several collections was blindly scored for the three Klales et al. traits (ventral arc, subpubic contour, and medial aspect of the ischio-pubic ramus) by an experienced observer. The samples are derived from Thailand, South Africa, and various U.S. populations. Using the original logistic regression classification equations by Klales et al., the external validity of the original method was tested. Next, sample specific equations and a pooled sample logistic regression equation were generated. Results indicate that the method works well for classification (accuracy 75.9%-93.3%) and is valid; however, classification accuracy increases when using sample-specific equations (accuracy 97.9%-99.0%).

Do grooming bouts diminish ectoparasite load in wild *Propithecus edwardsi* in the rainforests of Madagascar?

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Grooming is a well-documented behavioral archetype among primates and is commonly ascribed to both hygienic and affiliated behavior. While grooming is assumed to carry a hygienic function, the quantitative influence it has on an individual's ectoparasite load has not been extensively explored. The hygienic function of grooming may be especially important to consider among strepsirrhines, which exhibit specialized toothcombs utilized during grooming bouts. To understand whether grooming influences hygiene, as measured by ectoparasite load, our research explores the proportion of bouts spent being groomed and relative ectoparasite loads among Milne-Edward's sifaka (*Propithecus edwardsi*) in Ranomafana National Park, southeastern Madagascar. Our research used focal animal behavioral data for *P. edwardsi* collected in the years 1995 to 1998 and 2000 to 2005. Relative parasite loads (scale from 0-5) and presence of specific ectoparasite types (e.g. Hippoboscids flies, ticks, lice) were recorded for all captured individuals over the same time period. Grooming bouts accounted for approximately 16% of all recorded instances. Our results show that increased proportions of grooming bouts for individuals did not have a significant effect on ectoparasite load ($p > 0.05$). These results suggest that grooming may serve a substantial social function in this species beyond pure hygienic purposes. Further research could illuminate the interplay between grooming, ectoparasite load and social contact, a factor which could actually facilitate ectoparasite transmission.

Battle vs Massacre – the use of perimortem injuries to differentiate between violent encounters

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This presentation is a comparison of distribution, pattern and location of the perimortem traumas from Udbina and Cepen where the difference of the attack can be clearly seen. According to all parameters of the injuries the main question is "how can we compare/differentiate a massacre and/ or a battle".

The battle of Krbava Field in 1493 was one of the worst defeats in Croatian mediaeval history. Archaeological site Udbina – Sveti Jakov, Croatia, is located within the range of 2 km from the Krbava Field. During the excavations, which have been carried out from 2000 till today, a total of 208 (in situ) skeletons had been recovered (123 males, 40 women and 45 children). Anthropological analysis established that 26 skeletons exhibit 113 perimortem trauma characteristic of mediaeval battle injuries. The remains of all 26 skeletons belong to healthy males aged between 18 and 45 years.

The skeleton material from Udbina is compared to the skeleton material from Cepen, Croatia.

Excavation of the historic period cemetery in Cepen, Croatia, showed the presence of a large number of perimortem injuries distributed among males, females, and subadults. Archaeological and historical data suggest these individuals were victims of a raid carried out by Ottoman akinji light cavalry in 1441. Furthermore, perimortem trauma in the series were analyzed by sex, age, location, and depth of the injury. A total of 82 perimortem injuries were recorded in 12 males, 7 females, and 3 subadults.

Tooth Size and Diet among the Extinct Monkeys of the Caribbean

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Large molars are a defining peculiarity of the recently-extinct primates of the Greater Antilles, but the functional significance of this feature has not been explored. Molar *form* reflects selective pressures posed by the physical properties of foods, and ultimately aspects of the adaptive zone occupied in life. A comprehensive study of molar crown *shape* reported a tendency towards frugivory in these taxa, though molar *size* was not examined. Large molars generally correspond with the mechanical challenges of folivory. Bite force and specific attributes of foods are also associated with molar size (e.g., toughness, abrasiveness, and particle size). Here, the functional significance of large molars among Antillean taxa is explored by calculating relative molar row area in a broad sample of primates with diverse diets. Molar area is scaled to the arcade, permitting inclusion of taxa of uncertain body size. Results from the extant primate sample demonstrate the expected pattern whereby molar area is greatest among folivores, cercopithecines that routinely feed on highly-abrasive foods, and the powerful nut-cracker, *Pongo*. Sampled Antillean genera (*Xenothrix*, *Antillothrix* and *Paralouatta*) exhibit remarkably high values, matching or exceeding the most specialized living anthropoids; *Paralouatta* exhibits the largest relative molar area of all taxa studied. These primates do not exhibit highly