ABSTRACTS

Neonatal and postnatal mortality in Roccapelago through the study of human skeletal remains and parish records

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During the restoration of the Conversion of San Paolo’s church, in Roccapelago (Italy), a hidden crypt was brought to light. Therein, a large amount of human skeletal remains was retrieved, including a considerable amount of disarticulated non-adult specimens, belonging to the inhabitants that lived there from the last decades of the 16th century to the end of the 18th century. Simultaneously, parish registers of birth and death were found and digitized. This is the first study focused on the juvenile post medieval community of Roccapelago, which aims to provide new data about infant mortality and paleopathology during the 16th and 18th centuries, through the comparison of anthropological data to information available in parish records.

Standard anthropological protocols were used to assess the Minimum Number of Individuals, age-at-death and pathologies.

Results showed that at least 161 non-adults were buried into the crypt. The mortality range was high among perinates, especially between the 36th and the 40th weeks (26%), and during the first postnatal year, particularly in the first six months (11%). Then, mortality rates fell within the 5th years (2.4%). Parish records confirmed the high mortality rates at birth and among the first postnatal year, linked to the risks associated to the birth and the peril of the weaning period. The pathological analysis highlighted the presence of metabolic diseases, such as scurvy.

This study provides a unique opportunity to compare anthropological protocols for age estimation to the information registered in the parish records when dealing with commingled juvenile remains.

Proxies of ungulate diet reconstruct the paleoenvironment of Australopithecus afarensis at Laetoli, Tanzania

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Inferences about paleoenvironments are critical for modeling the selective pressures that led to adaptive shifts and divergence events in the hominin lineage. Reconstructions of the paleoenvironment of Australopithecus afarensis in the Upper Laetolli Beds (~3.85-3.63 Ma) indicate that it was a mosaic of woodland, shrubland, and grassland. Analyses of three independent proxies of ungulate diet (hyposodonty, mesowear, and δ13C of tooth enamel) show that obligate grazers were rare among the ungulate fauna of the Upper Laetolli Beds. The proportion of browsing to grazing taxa is most comparable to modern African communities that inhabit forests and closed woodlands. A distinctive feature of the ungulate fauna is the predominance of species classified as mixed feeders, which represent a higher proportion of taxa at Laetoli than in any modern-day African habitat. It is unclear whether this indicates that the Laetoli ungulate fauna had a unique composition or is an artifact of the methods used to infer diet. Nevertheless, the results do show that species which incorporated browse into their diets were more common at Laetoli than in modern ungulate communities living in woodland-grassland habitats. This implies that the ecological relationships and the types of woodland mosaic habitats that supported a diverse guild of browsing ungulates in the Pliocene no longer occur today.

Diet and cultural diversity in Neanderthals and modern humans from dental macrowear analyses

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