Available online at www.sciencedirect.com
ScienceDirect
ELSEVIER
Quaternary International 167–168 (2007) 3–486

Abstracts

INQUA 2007 Abstracts

Quaternary International
Volumes 167-168, Supplement 1, July 2007

XVII INQUA Congress
Cairns Convention Centre, Australia

28 July - 3 August 2007

doi:10.1016/j.quaint.2007.03.000

0676
Protocols for taphonomic data collection

Christiane Denys[1], Peter J Andrews[2], Yolanda Fernandez-Jalvo[3], Antoine Louchart[4], Thalassa Mattews[5], Denne Red[6]
[1]*Museum National d'Histoire Naturelle (CNRS), France*
[2]*The Natural History Museum, United Kingdom*
[3]*Museo Nacional de Ciencias Naturales (CSIC), Spain*
[4]*Universite de Lyon, France*
[5]*University of Cape Town, South Africa*
[6]*The Smithsonian Institution, United States*

Time averaging, reworking, re-sedimentation are some of the research goals of TAPHONOMY that may certainly help to interpret HUMAN ENVIRONMENTS. Specimen recovery, however, is still far from being acceptable at most palaeo/archaeological sites. The unawareness of a protocol for taphonomic sampling as well as the lack of research of taphonomic disturbances on the site may have serious repercussions on dating, palaeoecological-palaeoclimatic-environmental interpretations, and human behavioural interpretations. A complete step by step description will here be described allowing the collection of specimens without destroying the features necessary to perform a complete palaeontological study. Here, three main collection methods are considered, which constitute the most common procedures:
(a) Surface collection when fossils are exposed,
(b) Surface collection when fossils are partially exposed
(c) Excavation.

Several aspects have never been considered, and they are extremely important to reduce the loss of information when picking up fossils. These procedures will allow us interpreting the past at a maximum level of resolution and prevent erroneous interpretations. Basic DNA/dating sample recovering procedures are also included, although recent publications show the need of establishing a particular protocol for DNA sampling, which will be displayed in: protocols for palaeogenetic sample collection.

0672
The Rise and Fall of the Cretan Deer

Michael D Dermitzakis[1], George Iliopoulos[2], Alexandra A Van der Geer[1], George A Lyras[1]
[1]*University of Athens, Museum of Paleontology and Geology, Greece*
[2]*University of Crete, Museum of Natural History, Greece*

A recent finding of a large antler fragment on Crete reopened our study of the extinct Cretan deer genus Candiacervus. The genus is known to us mainly by its derived forms of the Late Pleistocene. The last representative of the lineage is the smallest species, which got extinct due to extreme habitat reduction. This on its turn was caused partly by a significant sea-level rise as a side-effect of the climatic change (global warming), and partly by the human colonizers. The end of the reign of the dwarf deer is placed around 10,000 years BP. Its success had lasted nearly 0.3 million years. During its blooming period, it knew no competitors. The only other large herbivore was the dwarf elephant Elephas antiquus creutzburgi. Elephants occupy a slightly different ecological niche. It is not clear why this elephant did not reach the miniature size of the pygmy mammoth of the Early Pleistocene, but it may very well have to do with the success of Candiacervus. The deer genus radiated beyond what is seen in a comparable mainland area. Some eight species or morphotypes inhabited the island during the Late Pleistocene, each adapted to its own ecological niche. This is explained as a sympatric speciation to occupy all possible empty niches ranging from dense forest to prickly rocks. The coexistence of various environments has been confirmed by studies on the rich fossil avifauna. The most typical Cretan deer are the two smallest sizes, which have not only relatively and absolutely short limbs, but also long and simplified antlers; these species occupied a niche close to that of the wild goat of Crete today: barren rocks with thorny bushes, as shown by features of their osteology and goat-like body proportions. It deviated so much from mainland deer that it seemed impossible to indicate with certainty its ancestor. At least, till the summer of 2006. A large antler was found on the Lasithi plateau. The sediments indicate a middle Pleistocene age. The morphology of the antler resembles most that of Megaloceros. A megacerine ancestry was suggested already before, but now it seems validated by this finding. With this, the story of the Rise, Success and Fall of the Cretan deer is completed.

0580
Vegetation evolution in southeastern United States during the last deglaciation directly correlated with North Atlantic changes

Stephanie Desprat, Jerry McManus
Woods Hole Oceanographic Institution, United States

Millennial to centennial-scale climatic oscillations punctuated the last deglacial warming. The major climatic changes of the last deglaciation, which are associated with important oceanic circulation modifications, are identified as the cold-warm-cold succession Oldest Dryas-Bölling Allerod-Younger Dryas. They are largely recorded in the North Atlantic from the tropics to the high latitudes, in Greenland and Europe. North America seems to be also affected by the Younger Dryas widespread cooling. However, continental records of southeastern United States detect muted cold conditions or even warming. Furthermore, pollen and plant macrofossil records from Florida appear to show a strong antiphase relationship in the temperature variability between Florida and North Atlantic regions over the last 60,000 years. For a better understanding of the ocean-atmosphere coupling in particular during the last deglaciation, it is firstly essential to document accurately the phase relationship between vegetation evolution and oceanic conditions in the subtropical areas. Here, we present a high resolution marine pollen record of the last deglaciation from the southeastern North American margin (Blake Bahama Outer Ridge). Pollen analysis of core KNR140-2 GGC39 allows a direct correlation between vegetation changes in southeastern United States and oceanic changes in the subtropical North Atlantic, circumventing the chronological problems inherent in continental-marine sequence comparisons.

0845
Beachrocks as indicator of relative sea-level changes since the mid-Holocene on the southern coast of Turkey

Stephane Desruelles[1], Eric Fouache[1,2], Attila Ciner[3], Erdal Kosun[4], Remi Dalongeville[5], Yvan Coquinot[6], Jean-Luc Potdevin[6]
[1]*University Paris 12 - EA 435 Geonat (Creteil, France), France*
[2]*UMR 8591 LGP (Meudon, France), France*
[3]*Hacettepe University - Department of Geological Engineering (Ankara, Turkey), Turkey*
[4]*Akdeniz University - Department of Geology (Antalya, Turkey), Turkey*
[5]*Maison de l'Orient et de la Méditerranée - UMR 5133 Archeorient (Lyon, France), France*
[6]*University USTL Lille 1- UMR 8110 PBDS (Lille, France), France*

On the southern coast of Turkey, up to three beachrock levels, can be observed. Although most of the beachrocks are situated on the vicinity