

MOLARS FROM DENISOVA CAVE AND PALEOGENETIC DATA OF A HOMININ FROM SIMA DE LOS HUESOS: PERSPECTIVES OF THE HUMAN EVOLUTION MODELS

Buzhilova Alexandra

Research Institute and Museum of Anthropology, Lomonosov Moscow State University, Moscow, Russia

The much more interesting results of new coming investigations for the emergence of *Homo sapiens* in Eurasia are the mitochondrial and nuclear DNA sequence retrieved from few anthropological samples excavated in Denisova Cave in the Altai Mountains in southern Siberia. The individuals from Denisova cave represent an unknown type of hominin that shares a common ancestor with anatomically modern humans and Neanderthals. While both Denisovan mtDNA sequences from different individuals represent individual archaic hominin lineages, the Denisovan nuclear genome from one of them appears less divergent, forming a sister group with Neanderthals. An almost complete mitochondrial genome sequence of a hominin from Sima de los Huesos (Spain) was quite recently published. The site became famous due to the largest assemblage of Middle Pleistocene hominin fossils dated about 300,000 years ago. According anthropological investigations, the skeletal remains and teeth share a number of morphological features mostly closed to *Homo heidelbergensis* and also display distinct Neanderthal derived traits. Data of mitochondrial genome sequence of a hominin from Sima de los Huesos show that it is closely related to the lineage leading to mitochondrial genomes of individuals from Denisova cave. Paleogenetics explained that the background of Denisova genome derives from a population that lived before the separation of Neanderthals, Denisovans and modern humans. This component may be present due to gene flow, or to a more complex population history (Krause et al., 2010; Reich et al., 2010; Meyer et al., 2012; 2014). Nowadays odontological studies provide additional criteria for comparing morphological data, because teeth are preserved in greater numbers than are other parts of the skeleton, they are a closer reflection of the genotype, they are more directly affected by the forces of natural selection, and they are easily treated by quantitative methods. The morphological data gave possibility to stress that two upper molars of Denisovans preserved some archaic morphological features, and that is why they are separated from the odontological morphological complex of *Homo neanderthalensis* and *Homo heidelbergensis*, both as AMH. In context of genomic data Denisovans received gene flow from a hominin whose ancestors diverged deeply from the lineage leading to Neanderthals, Denisovans and modern humans. Who is this general ancestor of all the taxa? Data on odontology allow assuming that *Homo erectus sensu lato* can be the most probable applicant for the role. The investigation was done in frame of the Project of RFBR # 13-06-12035.

Key words: *paleolithic, emergence of Homo sapiens in Eurasia, Denisova cave, Neanderthals and Modern Humans*

Contact information: Buzhilova Alexandra, e-mail: albu_pa@mail.ru.

THE FIRST MODERNS IN ANATOLIA: ÜÇAĞIZLI CAVE AND ORNAMENT USING

Güleç Erksin Savaş

Ankara University, Department of Anthropology, Ankara, Turkey

Üçağızlı Cave is located on the Mediterranean coast in the Hatay Province, about 10 km South of the point where the Asi River empties into the sea. The cave is on a steep slope at about 18 m above the current sea level and was discovered and first investigated in the late 1980s by Angela Minzoni-Deroche. The current excavation began in 1997 and has been led by Prof. Dr. Erksin Savaş Güleç, from the University of Ankara. Two principal cultural components are represented in Üçağızlı Cave. The first, more recent component closely