



European Middle Palaeolithic during MIS 8 – MIS 3

cultures – environment – chronology
Wolbrom, Poland, September 25th–28th, 2012



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Guidebook & Book of Abstracts

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what corresponds to nearly entire Vistulian glaciation period (MIS 5 – MIS 1) (Cyrek et al. 2010; Krajcarz and Madeyska, unpublished). To determine phylogenetic position of lemmings from Biśnik Cave we used available sequences of *Dicrostonyx torquatus* and performed multimethod phylogenetic analyses. Obtained trees and haplotype network shows high diversity of Pleistocene *Dicrostonyx* mtDNA lineages. Despite high sequence diversity there were no significant morphological differences between lemmings from subsequent layers as the dominance of only one morphotype were observed throughout all layers.

Modern mtDNA lineages sampled from entire *D. torquatus* range (Fedorov and Goropashnaya 1999) do not forms a separate clade but falls within one of *D. gulielmi* clades. Dense sampling of Pleistocene *D. gulielmi* is required to elucidate in details its geographic diversity and population history. However, placement of modern *Dicrostonyx* mtDNA lineages within one of Pleistocene clades do not support, despite morphological differences, distinction between *D. gulielmi* and *D. torquatus*.

References

- KOWALSKI K., 2001, Pleistocene Rodents of Europe, *Folia Quaternaria*, 72, p. 1–389.
- SMIRNOV N. G., FEDOROV V. B., 2003, Holarctic Collared Lemmings: Traces of Their Spread as Related to the History of the Arctic Biota, *Russian Journal of Ecology*, 34(5), p. 332–338.
- ABRAMSON N. I., SMIRNOV N. G., TIKHONOVA P. E., 2004, morphological studies on collared lemmings (Rodentia, Arvicolidae, *Dicrostonyx*) from Bolshevik Island of the Severnaya Zemlya Archipelago, with notes on evolution and taxonomic position. *Russian Journal of Theriology*, 3(2), p. 63–70.
- CYREK K., SOCHA P., STEFANIAK K., MADEYSKA T., MIROSLAW-GRABOWSKA J., SUDOŁ M., CZYZEWSKI Ł., 2010, Palaeolithic of Biśnik Cave (Southern Poland) within the environmental background. *Quaternary International*, 220 (1–2), p. 5–30.
- FEDOROV B. V., GOROPASHNAYA V. A., 1999, The importance of ice ages in diversification of Arctic collared lemmings (*Dicrostonyx*): evidence from mitochondrial cytochrome b region. *Hereditas*, 130, p. 301–307.

***Stephanorhinus kirchbergensis* (Jäger, 1839) (Mammalia, Rhinocerotidae) from European Russia – A detailed repertory of sites and material**

Emmanuel M. E. Billia

The aim of this attendance is that to present a status review performed on the fossil remains discovered in European Russia and assigned to *Stephanorhinus kirchbergensis* (Jäger, 1839). Just as in

areas other than Russia, despite of its wide distribution, this taxon appears rare on this area as well. Furthermore, a large part of the *S. kirchbergensis* material reported in literature is presently untraceable in the Russian museum collections. In fact, from twenty-one sites on the whole, the material is physically available from three of them only. The rhinoceros remains from the Verkhojansk district (Yakutya) reported by some authors may confidently be assigned to *Coelodonta antiquitatis* (Blum.). The few available material has been studied using morphological and non-metric characters. As far as the Russian-Siberian area is concerned, the related sites and material have previously been treated in detail by the author.

Paleoclimatic and paleoenvironmental proxies to the Marine Isotope Stage 7e (Middle Pleistocene) in central Spain (Valdocarros II, Madrid) by means of the small-vertebrate assemblages

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The successive fossil small vertebrate assemblages from the Middle Pleistocene archaeological site of Valdocarros II (Madrid, central Spain) provide an unique opportunity to characterize the climatic and environmental shift from cold to warm conditions during the transition from MIS 8 to MIS 7 (also called Termination III) in a continental sequence (Blain et al. 2012). Archaeological site is in an abandoned meander. This palaeochannel is partially preserved, showing 40 m width, 4 m depth and ca. 180 m of radius of curvature (Uribelarrea 2008). Along 836 m² were excavated, revealing four thin archeological layers, from bottom to top numbered 1, 2, 3 and 4 respectively and fining upwards from silt to silty-clay each one, 30 to 50 cm thick and several tens of meters wide (Panera et al. 2011). A total of 2750 bone remains of large mammals have been recovered. *Cervus elaphus* is the most

abundant species, followed by *Equus caballus*, *Bos primigenius* and in a minor way by small-sized cervids (*Capreolus* sp., *Dama* sp.) and *Elephas* sp. Also a small number of remains pertain to carnivores like *Felis* sp., *Canis lupus* and *Vulpes vulpes* (Yravedra & Domínguez-Rodrigo 2009). At least *Erinaceus europaeus*, *Crocidura* aff. *russula*, *Eliomys quercinus*, *Castor fiber*, *Apodemus* sp., *Cricetulus (Allocricetus) bursae*, *Arvicola* aff. *sapidus*, *Microtus brecciensis* and *Oryctolagus cuniculus* have also been identified (Sesé et al. 2011). The zooarchaeological analysis suggested that hominids were the main accumulating agent of large mammal bone remains and that the various carcasses were brought to the site almost complete and from short distances (Yravedra & Domínguez-Rodrigo 2009). The associated lithic industry is of Acheulean type (Panera 2009): 3 009 lithic artifacts and 1 119 pebbles have been recovered.

In level 4, that has been correlated with the beginning of the MIS 7e, the amphibian and reptile bone remains include 300 elements, which correspond to a minimum of 81 specimens, representing at least 11 taxa, including toads (*Pelobates cultripipes*, *Bufo bufo* and *Bufo calamita*) and frog (*Pelophylax perezi*), turtles (Turtle indet.), lacertid (*Timon lepidus* and *Psammotromus* cf. *algius*) and scincid (*Chalcides striatus* and *Chalcides* sp.) lizards, and two snakes (*Natrix maura* and *Coronella girondica*). By applying the Mutual Climatic Range method on the fossil herpetofaunal assemblage, the interglacial MIS 7e can be estimated to have been 1.4°C warmer than the current mean annual temperature in the central Iberian Peninsula, with a high atmospheric temperature range. The summer was warm and the winter was temperate. Rainfall was low and its distribution was fairly regular, occurring principally during winter and to a lesser extent during spring and late autumn. The aridity indexes suggest a semi-humid to humid, continental Mediterranean climate with three dry months in summer. Reconstruction from the amphibian and reptile assemblages suggests that during the late Middle Pleistocene there was a patchy landscape with a large representation of dry meadows, scrublands and rocky habitats. Some taxa, such as *P. algius* and *Ch. striatus* preferentially live in sunny and rather open biotopes with loose soils. *P. cultripipes*, *T. lepidus* and to a lesser extent *B. calamita* are inhabitants of drier open environments, with poor and short plant cover and with loose or stony soils. Because the site was localized close to the main river, water-edge environments are fairly well represented, with the presence of typical inhabitants of aquatic environments such as *P. perezi*, turtles and *N. maura*. Riverine woodlands are somewhat well represented, reaching 34% of the total landscape surface. Such reconstructions

are concordant with the results obtained from other Iberian sites, like the Gran Dolina Cave (level TD10) in Atapuerca.

References

- BLAIN H.-A., PANERA J., URIBELARREA D., RUBIO-JARA S., PÉREZ-GONZÁLEZ A., 2012, Characterization of a rapid climate shift at the MIS 8/7 transition in central Spain (Valdocarros II, Autonomous Region of Madrid) by means of the herpetological assemblages. *Quaternary Science Reviews*, 47, p. 73–81.
- PANERA, J., 2009, La ocupación del medio fluvial en el Paleolítico antiguo. Caracterización geoarqueológica de depósitos pleistocenos del valle del río Jarama (Madrid) y estudio tecnocómico de la industria lítica, PhD thesis, Universidad Nacional de Educación a Distancia, Madrid.
- PANERA J., TORRES T., PÉREZ-GONZÁLEZ A., ORTIZ J. E., RUBIO-JARA S., URIBELARREA DEL VAL D., 2011, Geocronología de la Terraza Compleja de Arganda en el valle del río Jarama (Madrid, España). *Estudios Geológicos*, 67 (2), p. 495–504.
- SESÉ C., PANERA J., RUBIO-JARA S., PÉREZ-GONZÁLEZ A., 2011, Micromamíferos del Pleistoceno Medio y Pleistoceno Superior en el Valle del Jarama: yacimientos de Valdocarros y HAT (Madrid, España). *Estudios Geológicos*, 67 (1), p. 131–151.
- URIBELARREA, D., 2008, Dinámica y evolución de las llanuras aluviales de los ríos Manzanares, Jarama y Tajo, entre las ciudades de Madrid y Toledo, PhD thesis, Universidad Complutense de Madrid.
- YRAVEDRA J., DOMÍNGUEZ-RODRIGO M., 2009, The shaft-based methodological approach to the quantification of long limb bones and its relevance to understanding hominid subsistence in the Pleistocene: application to four Palaeolithic sites, *Journal of Quaternary Science*, 24, p. 85–96.

New Middle Palaeolithic sites in Southern Moravia, Czech Republic

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Moravia is the traditional oikumene of the Central European Middle Palaeolithic preceding the regional and well-known Upper Palaeolithic cultures with the World-famous Gravettian sites found in the loess belt extending along the eastern slopes of the Czech Massif from the foothills of the Palava Hills (Dolní Věstonice, Pavlov) through the central Moravia (Předmostí u Přerova) to the NE part of the country (Petřkovice u Karviné). In general, the Moravian territory represents due to its geographic position one