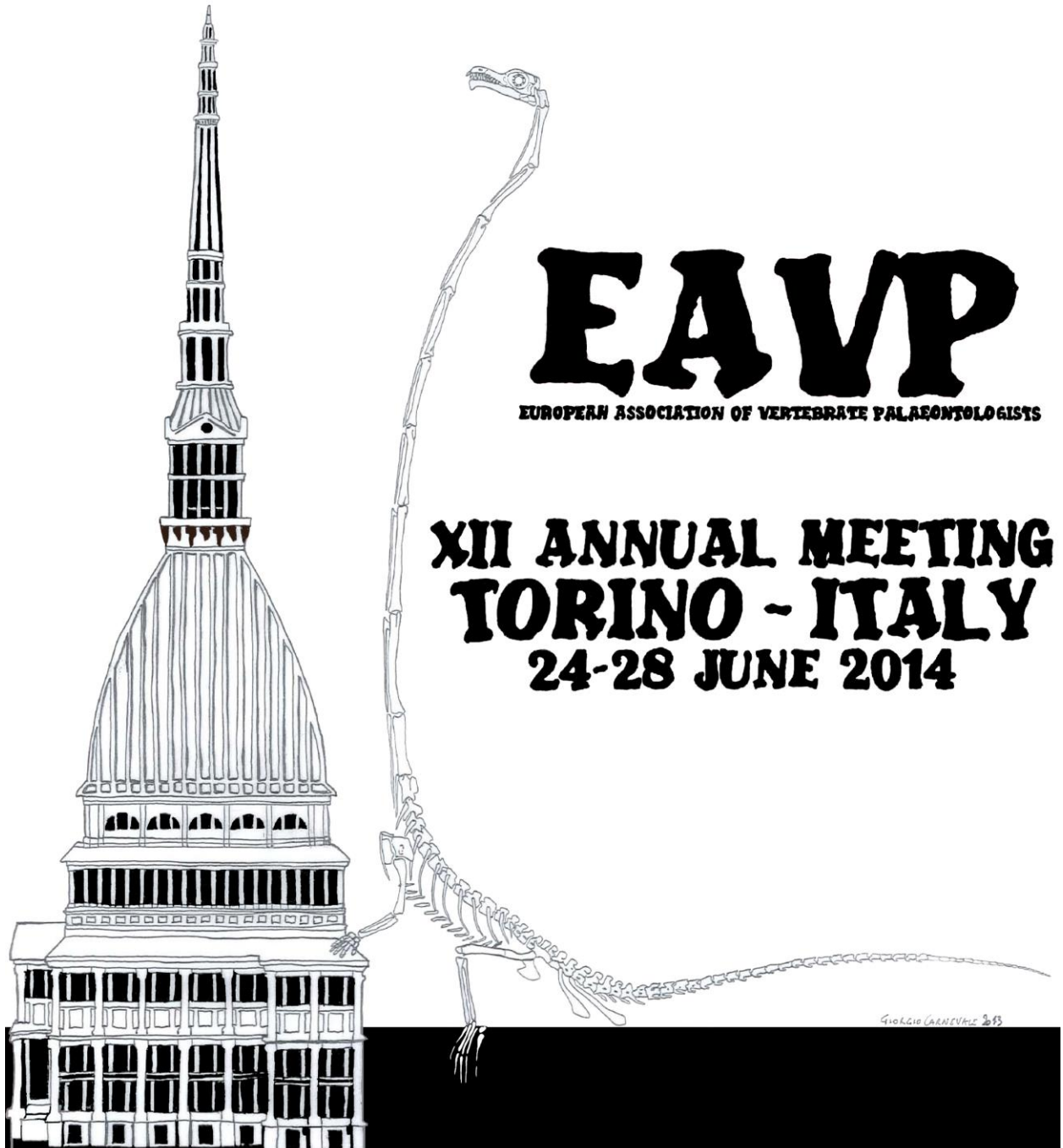


Abstract Book and Field Trip Guide



**M. Delfino, G. Carnevale & M. Pavia
(editors)**

XII Annual Meeting of the European Association of Vertebrate Palaeontologists

Torino, Italy

24-28 June 2014

Host committee

Massimo Delfino, Giorgio Carnevale, Simone Colombero, Daniele Ormezzano, Giulio Pavia,

Marco Pavia & Giovanni Repetto

Organized by

Dipartimento di Scienze della Terra - Università degli Studi di Torino

in collaboration with

Geomeetings Torino

Dipartimento di Scienze della Vita e Biologia dei Sistemi - Università degli Studi di Torino

Museo Civico di Storia Naturale di Verona

Museo dei Fossili di Bolca

Museo Eusebio - Alba

Museo Regionale di Scienze Naturali - Torino

Regione Piemonte

Transmitting Science



Under the patronage of the

Società Paleontologica Italiana



AN EXCEPTIONAL SMALL VERTEBRATE FAUNA FROM THE LATEST MIDDLE MIOCENE OF AUSTRIA

J. Prieto^{1*}, D. Vasilyan², M. Böhme³, M. Gross⁴, C. Angelone⁵, I. Casanovas-Vilar⁵, J. Hír⁶, L.W. van den Hoek Ostende⁷, and L. Maul⁸

¹ Department for Earth and Environmental Sciences, Ludwig-Maximilians-University Munich and Bavarian State Collections for Palaeontology and Geology, Richard-Wagner-Strasse 10, 80333 Munich, Germany

² Department of Geosciences, Eberhard Karls Universität Tübingen, Sigwartstraße 10, 72076 Tübingen, Germany

³ Senckenberg Center for Human Evolution and Palaeoenvironment (HEP), Sigwartstraße 10, 72076 Tübingen, Germany

⁴ Department for Geology and Palaeontology, Universalmuseum Joanneum, Weinzöttlstrasse 16, 8045 Graz, Austria

⁵ Institut Català de Paleontologia Miquel Crusafont, Universitat Autònoma de Barcelona, 08193 Cerdanyola del Vallès, Spain

⁶ Municipal Museum, 3060 Pásztó, Pf. 15, Hungary

⁷ Naturalis Biodiversity Center, PO Box 9517, 2300 RA, Leiden, The Netherlands

⁸ Senckenberg Research Station of Quaternary Palaeontology, Am Jakobskirchhof 4, 99423 Weimar, Germany

*j.prieto@lrz.uni-muenchen.de

Keywords: palaeoecology, micromammals, Miocene, Austria, biogeography.

The late Middle Miocene is fascinating for the study of terrestrial palaeoecosystems: following the long period of the Middle Miocene Climatic Optimum, drastic climatic changes induced important faunal re-arrangement and migration within Europe. Rich and diverse fossil faunas are thus of primary importance for the understanding of these processes. The late Middle Miocene is well recorded in various Iberian basins, but complete faunas of this period are rare in Central Europe. Therefore, the recent discovery of an exceptional fossil assemblage of macro- and micro-vertebrates in Gratkorn (early Late Sarmatian, Austria, Styria), allows a fresh look on the palaeocommunity following the Mid-Miocene cooling.

Based on the degree of corrosion on the dental elements and the presence of pellets, most, but not all, of the small mammal remains (19 species) are tentatively interpreted as a result of accumulation by nocturnal raptors. Probably, part of the fossorial individuals of the lower vertebrate (including two fish, eight amphibian and 17 reptile taxa) might have been buried in situ, maybe in their own burrows in the sandy soil

Lower vertebrates, small mammals and molluscs occur in abundance in the same thin fossil enriched layer, and give a mixed picture of the environment: relatively sparsely vegetated floodplain with sandy soils, including short-lived ponds, streams or rivulets in the close vicinity, relatively open landscapes, with a dry, semi-arid climate. Indications of „forested area“ are indicated by the gliding mammals.

This could indicate the presence of different microhabitats around the excavation place, but may also be a taphonomical artefact based on various different agents of accumulation contributing to the thanatocoenosis. Nevertheless, the extreme quick accumulation (decades?) of the fossils.