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Analytic summary

MOLINA BALLESTEROS, E.; ALONSO GAVILÁN, G. & GARCÍA TALEGÓN, J. (2011): Bibliographic record on the rock materials used in construction and restoration of buildings of historical and monumental interest in the SW region of Castilla and León (Zamora, Salamanca, Ávila). *Stud. Geol. Salmant.*, 47 (2): pp. 127-140, 165 bibliographic references. Salamanca.

ABSTRACT: A summary on the publications dealing with rock materials used in construction and restoration of buildings and monuments in the provinces of Zamora, Salamanca and Ávila (Castilla and León, Spain) is presented here.

Key words: Bibliographic references, rock materials, monuments, Castilla and León.

ALONSO GAVILÁN, G.; BRAGADO GONZÁLEZ, M.; MENÉNDEZ BUEYES, L. R.; RODRÍGUEZ ALONSO, M. D.; BARTOLOMÉ, M. & HERNÁNDEZ FERNÁNDEZ, H. (2011): Use of the Salamanca Sandstone Fm (Latest Cretaceous-Paleocene) in the pavement and ashlar of the Roman Bridge in Salamanca: geoarchaeological analysis. *Stud. Geol. Salmant.*, 47 (2): pp. 141-174, 15 figs., 54 bibliographic references. Salamanca.

ABSTRACT: The geoarchaeological study of the building materials used in the pavement and ashlar of the Roman Bridge over the Tormes River in the city of Salamanca allows them to be assigned to the Salamanca Sandstone Fm (Latest Cretaceous-Palaeocene). The identification of this lithostratigraphic unit as the main building material resulted in a further search and identification of possible extraction sites, that is, quarries which could have been the source of both 20th century and older dressed stones. The stratigraphical and sedimentological analyses of the sedimentary deposits carried out in the hills of Peña Celestina, San Vicente, Peñuelas de San Blas, the slopes of Calvarrasa de Arriba, both Arapiles («Chico» and «Grande»), and Aldeatejada, together with many others, revealed the presence of lenticular-tabular shaped outcrops of coarse grained, white coloured with reddish patches sandstones and microconglomerates, cemented with silica. These sandstones are similar to those used in the Roman Bridge, especially the samples taken from the pavement during the 1999 restoration work. Stratigraphic studies did not only make it possible to establish the sequencing of the geological events associated to the Salamanca Sandstone Fm but also the stratigraphic position of deposits similar to those used in the construction of the Roman Road. Sedimentological and petrographic analyses allowed defining the sin and postsedimentary processes that conferred the present textural features of Salamanca

Sandstones that differentiated them from other lithostratigraphic units of the study area. On the other hand, an X-ray diffraction study was carried out trying to find specific minerals that might allow us to differentiate between outcrops of the same Fm, which instead resulted in a homogeneous picture on the diffractograms. As a consequence, even if well-defined areas associated to the ashlar used in the construction of the Roman Bridge could be drawn, so far it has not been possible to pinpoint their exact location within them with greater precision. Concerning the building phases of the Roman Bridge, the morphological characteristics, historic records and the archaeological context of the pavement provide evidence to date it back to the late Flavio period, between 81 and 98 AD under the rule of Domitian or Nerva, whereas the ashlar of the upper structure of the bridge can be seen as pertaining to a much later work in the 18th Century.

Key words: Geoarchaeology, Pavement and dressed stones Roman Bridge and Roman Road, Salamanca Sandstone Fm (Latest Cretaceous-Paleocene), Salamanca, Spain.

KARL, H.-V.; GRÖNING, E. & BRAUCKMANN, C. (2011): New Oligocene turtle remains of the Oberleichtersbach doline filling (Lower Franconia, Germany) and revision of the genus *Palaeomauremys* (Testudines: Geoemydidae). *Stud. Geol. Salmant.,* **47 (2)**: pp. 175-194, 2 figs., 4 pls., 72 bibliographic references. Salamanca.

ABSTRACT: New Late Oligocene (Chattian) remains of the terrapins *Palaeoemys hessiaca* Schleich, 1994 and *Palaeomauremys tuberculata* (Portis, 1882), the soft-shelled turtles *Allaeochelys parayrei* Noulet, 1867 and *Trionyx* cf. *triunguis* Forskål, 1775, and the snapping turtle *Chelydrasia decheni* (H. V. Meyer, 1852) from lacustrine sediments of the Oberleichtersbach doline (Lower Franconia, Bavaria, Germany) are reported. The morphological features of these five species, their taxonomic position and their palaeobiological implications are discussed. The new *Palaeomauremys* material suggests that *P. mlynarskii* (Hervet & Lapparent de Broin, 2000) is a junior synonym of *P. tuberculata* (Portis, 1882).

Key words: Testudines, *Palaeoemys hessiaca* Schleich, 1994, *Palaeomauremys tuberculata* (Portis, 1882), *Allaeochelys parayrei* Noulet, 1867, *Trionyx* cf. *triunguis* Forskål, 1775, *Chelydrasia decheni* (H. V. Meyer, 1852), Late Oligocene, Chattian, Oberleichtersbach, Lower Franconia, description, palaeobiology.

DELGADO, M. L.; RODRÍGUEZ, M. E.; TESSONE, M. & ETCHEVERRY, R. (2011): Mineralogical study of the deposit of kaolin María Eugenia, Tandilia, Argentina. *Stud. Geol. Salmant.*, **47 (2)**: pp. 195-205, 8 figs., 17 bibliographic references. Salamanca.

ABSTRACT: Clay deposits in Buenos Aires province are located in different stratigraphics units of the Sierras Septentrionales or the Tandilia system. The present contribution is focused in the geological and mineralogic knowledge of the kaolinitic clays from the Sierra del Volcán, Balcarce, which were formerly operated in the "María Eugenia"-mine. The application of modern techniques such as Reflectance Spectroscopy SD Field Spec Pro^{TM}, Scanning Electron Microscopy (SEM) and the use of XPowder software for interpretation of X-ray diffractions patterns, allowed recognize different sectors within the mineral deposit with varying degrees of argilization. The most outstanding (west) has identify the association kaolinite of high crystallinity + illite 2M1 along with the development of a dense texture of the crystals, indicate a hydrothermal origin for the kaolinite, has detected subordinately kaolinite variety of low crystallinity is associated with goethite and develops a less dense texture indicating a supergene origin. The presence of sulfides and quartz veinlets cross-cutting the Buenos Aires Complex rocks, recognize in west area, are evidence of fluid flow through this rocks, and could be the responsible for the argilic alteration developed on the rocks of basement.

Key works: Kaolin, hydrothermalism, argilic alteration, Tandilia, Argentina.