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## Analytic summary

RUIZ, F.; GONZÁLEZ-REGALADO MONTERO, M. L.; CIVIS, J.; ABAD, M.; VALLE HERNÁNDEZ, M.; GONZÁLEZ DELGADO, J. Á.; RIVAS, M. R.; TOSCANO, A. & GARCÍA, E. X. (2011): Micropaleontology of core "Huelva" (Huelva, SW Spain). II: Ostracoda of the middle and lower sections. *Stud. Geol. Salmant.*, 47 (1): pp. 11-19, 1 fig., 1 table, 14 bibliographic references. Salamanca.

**ABSTRACT:** This paper analyzes the ostracod faunas obtained from the lower and middle sections (170.4 m-89.3 m depth) of the core "Huelva" (SW Guadalquivir Basin). These sections were deposited in an epibathyal to outer shelf environment, where these organisms were extremely rare compared with other groups of microfossils. The Tortonian-Messinian boundary appears to mark a temporary shallowing of the environment, characterized by progressive disappearance of epibathyal forms.

Key words: Ostracoda, Tortonian-Messinian, SW Guadalquivir Basin, SW Spain.

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MARTÍN, G.; BAHAMONDE, J. R.; COLMENERO, J. R. & FERNÁNDEZ, L. P. (2011): Sedimentology of the Piedrasluengas Limestone (Moscovian of the Pisuerga-Carrión Province, Cantabrian Zone). *Stud. Geol. Salmant.*, 47 (1): pp. 21-56, 11 figs., 1 table, 62 bibliographic references. Salamanca.

**ABSTRACT:** The Piedrasluengas Limestone is a carbonate unit, *Kashirian-late Vereian* in age (substage belong to stage Moscovian; serie Middle Carboniferous; subsystem Pennsylvanian; system Carboniferous) (MENNING *et al.*, 2006), which crops out in the NE limb of the Casavegas syncline of the Pisuerga Area (Pisuerga-Carrión Province, Cantabrian Zone).

This work presents a stratigraphic and sedimentological study of the Piedrasluengas Limestone in the vicinity of its type area, between the localities of Camasobres and Piedrasluengas. In this area, the unit, which ranges from 200 to 300 m in thickness, gradationally overlies the marine siliciclastics of the Potes Group whereas its top is truncated by a major discontinuity, namely, the Palentian unconformity.

In the study area, 15 lithofacies have been distinguished in the Piedrasluengas Limestone, which fits a carbonate-platform ramp model. In this model, inner ramp deposits comprise mainly ooidal, peloidal and skeletal grainstones, whereas wacke- and packstones with abundant beresellid algae and *Chaetetes* sponges account for the mid ramp and, finally, wacke- to packstones with abundant siliceous sponge spicules and micrite buildups represent the outer ramp.

Facies vertical stacking patterns permit to individualize up to 12 transgressive-regressive cycles in the Piedrasluengas Limestone, which range between 5 and 50 m in

thickness and are bound by subaerial exposure surfaces developed on subtidal facies. These sequences are interpreted as the record of high amplitude and high frequency (4<sup>th</sup>-5<sup>th</sup> order) cycles controlled by glacioeustatic sea-level changes, which were characteristic of the Carboniferous glacial periods (icehouse cycles).

Key words: Cantabrian Zone, Pisuerga-Carrión Province, sedimentology, stratigraphy, transgressive-regressive cycles, Moscovian, Carboniferous.

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BOGAN, S. & GALLINA, P. A. (2011): Some considerations about an *Hypolophodon* (Chondrichthyes, Myliobatiformes) record in upper Jagüel Formation (Maastrichtian), Río Negro province, Argentina. *Stud. Geol. Salmant.*, 47 (1): pp. 57-67, 3 figs., 35 bibliographic references. Salamanca.

**ABSTRACT:** The fossil record of the extinct ray *Hypolophodon* is restricted to the Paleogene marine sediments of Northern Hemisphere (in America and Europe) and North Africa. In this paper, a new tooth material from the higher level of Jagüel Formation, at Bajo Trapalcó Río Negro Province, Argentina, is described. This tooth is referable to *H. silvestris* based both in morphological and histological reliable evidence. This record also allows the reassignment of MML 228 to this genera and species, instead the original assignation to the genus *Pseudohypolophus*. Additionally, it represents the southernmost occurrence of the genus *Hypolophodon* and the first record for South America. The marine Ichthyofauna of the Jagüel Formation from north Patagonia evidences a strong relationship with coeval ichthyofauna from Brazil, Caribbean, North Africa and Madagascar, showing a clear distinction with selachian faunas from the Weddellian biogeographic Province.

Key words: *Hypolophodon silvestris*, *Pseudohypolophus*, Batoidea, Myliobatiformes, Jagüel Formation, Maastrichtian, Argentina.

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LICHT, M. (2011): A short contribution about the pycnodont fishes (Actinopterygii, Neopterygii) from Lower Saxony (NW-Germany) described by Fricke (1876). *Stud. Geol. Salmant.*, 47 (1): pp. 69-76, 2 figs., 17 bibliographic references. Salamanca.

**ABSTRACT:** Pycnodontiform fishes are mostly represented by disarticulated cranial elements such as the vomer or prearticulars. These elements with their characteristic molariform dentition play an important role in establishing taxonomic identity. During the last 150 years, several species of pycnodonts were described from Lower Saxony based on the dentition of the prearticular and/or vomer. This paper describes a prearticular from Hanover which differs from all known prearticulars of this area and was determined as *Proscinetes minutus*. It has just three large oval teeth in the principal tooth row. Four tooth rows are above these three large teeth, each of them is formed by six to seven small quadrangular or roundish teeth. The teeth anterior to these tooth rows have no special alignment. They have a roundish form and are as small as the row teeth. Two tooth series are beneath these irregular teeth. This special dentition demonstrates that this prearticular does not belong to the genus *Proscinetes* because it has more than

four tooth rows. It shows similarities (number of tooth rows and form of the large teeth) with the genus *Eomesodon*, but up to now it is not possible to identify the genus (cf. *Eomesodon*) with certainty based on a single dental element.

Key words: *Eomesodon*, Pycnodontiformes, Actinopterygii, Neopterygii, Kimmeridgian, Hanover, *Pteroceras*-layers, NW Germany.

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PASCUAL-ARRIBAS, C. & HERNÁNDEZ-MEDRANO, N. (2011): Possible baby theropod tracks at the Valdehijuelos tracksite (Soria, Spain). *Stud. Geol. Salmant.*, **47** (1): pp. 77-110, 13 figs., 3 tables, 60 bibliographic references. Salamanca.

**ABSTRACT:** The Valdehijuelos tracksite (Soria, Spain) has provided, in several isolated plaques, a significant number of tiny theropod footprints, between others with bigger size. The associated morphometric characteristics and relationships make them different from those of *Grallator*, *Anchisauripus* and *Eubrontes* ichnogenus, whose morphology is relatively similar and whose size, in some cases (*Grallator*), is also small. However, they appear to be quite similar to the big tracks around so it could be supposed to be the baby of the big trackmakers.

Key words: Cameros Basin, Berriasian, baby tracks, theropods.