



New dinosaur fossils from ANA locality, Arcillas de Morella Formation (Aptian, Lower Cretaceous, Cinctorres, Spain)

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Ana is one of the several dinosaur bone sites located in the Arcillas de Morella Formation (Aptian, Lower Cretaceous; eastern Iberian Chain, Spain). This site was discovered in 1998, but it remained unexcavated until 2002, when a palaeontologist team formed by members of the Institut Paleontología Miquel Crusafont from Sabadell and the Grup Guix from Vila-real unearthed the first fossil from the locality.

Nowadays there are five hundred fossils collected, including vertebrate and invertebrate species. Dinosaur bones (Theropoda and Ornithopoda) are abundant in this assemblage and in the last field season bones determined as Sauropoda were found. Taxonomically, Ana is dominated by disarticulated remains of Ornithopoda, which are usually fragmentary and abraded. Many of the elements may have been reworked (spatial averaging and/or time averaging), and the fossil concentration constitutes an autochthonous to paraautochthonous association, in a spatial sense.

The remains found in the Ana fossils site are placed in sandstones and limes containing marine autochthonous fauna. These deposits were formed during the transgressive infilling of an incised valley. Sedimentological features indicate that fossils were finally deposited in starved shallow estuarine environment. Mineralogically, the sediment including the fossils contains grains of quartz, illite/mica, kaolinite/clorite, K-feldspar and plagioclase, distributed in two mainly grain populations, a silty-clay and a coarse sand size grain, indicating that the sediments were bedded in a low-medium energy depositional environment.

Nowadays we identified in Ana, teeth of Theropoda indet. and Baryonychinae indet., and bones of Iguanodon sp. Herein, we report new fossil findings from Ana site. These materials have been determined as Iguanodontia, Titanosauriformes and Theropoda. These new findings will help to understand the dinosaur fauna present in the Lower Cretaceous of Els Ports (Castellón, Spain).

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