

The lowermost Cambrian in the Valdelacasa Anticline (central Spain): some new palaeontological data

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Successions straddling the Precambrian/Cambrian boundary in northern and southern Spain show important hiatuses, but this transition is recorded without important breaks in the central part of the country. The western part of the northern side of the Valdelacasa anticline (Toledo Mountains) is one of the most suitable areas to study the palaeontology of this transition in central Spain, and also one of the best in western Europe. Here, fine siliciclastics of the Río Huso Group (Pusa shale) crop out providing a fairly rich record of ichnofossils, small shelly fossils, trilobites and other groups. The stratigraphic succession is ca. 2,000 m thick and includes a lower unit of greenish shales, a middle unit including black, micro laminated shales, phosphate beds and conglomerates, and an upper unit of greenish shales, very fine sandstones and scarce calcareous sandstones.

Cambrian-diagnostic trace fossils appear from the base of the lower stratigraphic unit, including *Phycodes pedum*, *Monomorphichnus lineatus* and small specimens of *Psammichnites* ichnosp.

The middle unit contains phosphatized fossils, namely *Cloudina*, anabaritids, halkieriids, sponges and probably small arthropods.

The upper unit provided rich and diverse body fossils assemblages at several horizons, as well as abundant ichnofossils. A lower assemblage consists of small shelly fossils (aff. *Aldanella*, hyoliths and others, including forms of centimetric sizes) and trilobites of the Family Bigotinidae. Another assemblage, placed a few meters above in the column, contains more diverse small shelly fossils: monoplacophorans (aff. *Aldanella*), hyoliths (hyolithids, circothecids and orthothecids), possible protoconodonts (aff. *Mongolitubulus*) and coeloscleritophorans (chancelloriids). A recently found uppermost assemblage, placed about hundred meters above in the column and shortly below the base of the Azorejo Formation, has provided very abundant bigotinid trilobites, small shelly fossils (molluscs and others, including forms of centimetric sizes), trace fossils (*Sericichnus* and *Teichichnus*) and probably articulate brachiopods.

Trace fossils in the upper unit of the Pusa shale are, as a whole, of bigger size than in underlying units and include feeding burrows of several patterns, such as *Dactyloidites* ichnosp., *Treptichnus bifurcus* and big specimens of *Psammichnites gigas*. This succession is overlain by sandstones and shales of the Azorejo Formation containing *Rusophycus* ichnosp.

According to its palaeontological record, the age of the fine siliciclastics of the Río Huso Group (Pusa shale) in the studied sections ranges from the lowermost Cambrian (Nemakit-Daldynian) to the latest Tommotian or Atdabanian.

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