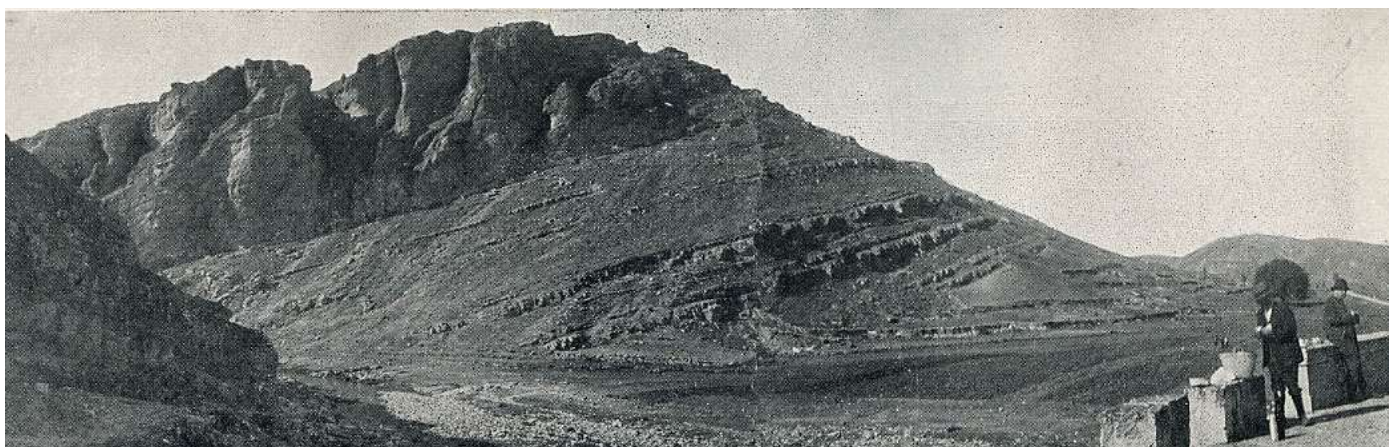




V CONGRESO DEL CRETÁCICO DE ESPAÑA

García-Hidalgo, J.F., Gil-Gil, J., Barroso-Barcenilla, F.,
López Olmedo, F. y Díaz de Neira, J.A. (Editores)



GASTROPODS FROM THE LOWER CRETACEOUS AT THE CAMEROS BASIN (LA RIOJA, SPAIN)

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The early Cretaceous strata of the Cameros Basin have rich gastropod faunas dominated by the genera *Paraglauconia* (Cassiopidae) and *Viviparus* (Viviparidae). These genera can be used to differentiate palaeoenvironments, with *Viviparus* indicating freshwater, and *Paraglauconia* characterising more saline environments within the stratigraphic sequence. Following the stratigraphy developed by Mas et al. (1993, 2002, 2011) we focus on three sections, Valdeperillo, Cornago and Enciso, all with rich mollusc faunas. The taxonomy of these faunas are reviewed and discussed.

At Valdeperillo, the well-exposed outcrops of the Urbión Group are rich in *Viviparus*. Delvene and Araujo (2009) and Bermúdez-Rochas et al. (2013) interpreted the sequence as deposited under freshwater conditions. Mas et al. (2002, 2011) considered the Urbión Group to date from the late Barremian to early Aptian. Both juvenile and adult specimens of *Viviparus* are found, belonging to a unique species. It is found in association with the bivalve *Protopleurobema numantina* (Unionoidea, Unionoida). Since they are a low diversity/high abundance fauna, and considering the environmental tolerance of living analogue *Viviparus*, the freshwater interpretation of the sequence is convincing.

The bivalve fauna described by Delvene and Munt (2011) from the Enciso Group (Aptian) outcrops at Cornago, close to the famous dinosaur footprints site at Los Cayos. The fauna comprises *Nippononaia* (*Paranippononaia*) *camerana* (Unionoida, Trigonioideoidea) and *Neomiodon* (Veneroidea, Arcticoidea). These occur in association with abundant *Paraglauconia*, indicating a brackish-water environment. As at Valdeperillo both adult and juvenile individual specimens co-occur. Finally, at Enciso, the Enciso Group is exposed; dinosaur footprints are abundant and there is a monospecific assemblage of *Viviparus*, however rare bivalves also occur.

The early Cretaceous exposures in the Cameros Basin are contemporaneous with the Wealden Group in the Wessex Basin (Isle of Wight and Dorset) and the upper part of the Wealden Group of the Weald Basin (Sussex and Surrey) of southern England; however, they share no species in common. The gastropod genera *Viviparus* and *Paraglauconia* are present in the three basins and also in the Basque-Cantabrian Basin in the North of Spain. The occurrence of the two genera is clearly salinity-controlled, with *Viviparus* restricted to freshwater. The distribution of *Paraglauconia* was reviewed by Cleevely and Morris (1988), being considered an opportunistic and cosmopolitan genus; they could occupy habitats of fluctuating salinity.

Acknowledgements: This work is a contribution to project CGL2009-11838. Funded by Instituto de Estudios Riojanos de la Comunidad Autónoma de La Rioja. The support of the Natural History Museum, Department Investment Fund is acknowledged.

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