

## PLAGIAULACIDA MULTITUBERCULATES FROM THE LATE BARREMIAN-EARLY APTIAN OF TERUEL (SPAIN)

**Badiola, A., Canudo, J. I., & Cuenca-Bescós, G.**

Universidad de Zaragoza, Zaragoza, Spain, abadiola@unizar.es

The Aragonese branch of the Iberian Range is becoming one of the most important areas in the study of Early Cretaceous vertebrate faunas, including mammals, because of the abundant and stratigraphically well-correlated fossiliferous bone-beds. Eleven sites are recorded with mammal fossils from Late Valanginian to Late Barremian, which are located in the continental and transitional deposits of the Maestrazgo basin and the joined Aguilón sub-basin. One of the most rich and diverse sites is Vallipón in Castellote (Teruel). This site is located at the bottom of the Artoles Formation (Morella sub-basin) which is late Barremian-early Aptian in age.

Vallipón contains at least forty different marine and continental vertebrate taxa. The fossiliferous level, which consists of red and yellowish sandstone and conglomerates, was formed in a coastal environment with a hard substrate where the vertebrates likely were carried in by predators and accumulated by shallow streams and possibly also tidal action. Multituberculates dominate the mammal fossil assemblage, though representatives of ?Theria and Gobiconodontidae have also been described.

Here we report four taxa of Plagiaulacida multituberculates: two m2 of a paulchoffatiid taxon; lower and upper teeth (P1/3, P5, M1, M2, m1, m2, I1) of the eobaatarid *Eobaatar*, which seem correspond either to *E. hispanicus* and/or *E. pajaronensis*, together with incisors (I2, I3) tentatively assigned to *Eobaatar*; and several P5 and M1 teeth of a pinheirodontid taxon (?*Lavocatia*).

The Early Cretaceous multituberculate fauna of the Vallipón site comprises Iberian endemic Jurassic survivors, such as the Paulchoffatiidae; those that are currently recorded in Western Europe such as Pinheirodontidae (Spain, Portugal, Britain, and France), and others such as Eobaataridae, which are also registered in Asia.

Consistent with the gobiconodontid of Vallipón and other Iberian records of Sauropoda and Ornithopoda dinosaurs, the presence of different representatives of *Eobaatar* from the late Hauterivian to late Barremian

in the Iberian Peninsula and in the Barremian of Britain, as well as in the Aptian or Albian in Mongolia, indicates that geographical connections between different areas of Laurasia could have existed either sporadically or constantly for most of the Early Cretaceous.

Keywords: Multituberculates, Cretaceous, Maestrazgo