

## TRIMARGINIA AND TRIMARGINITES (AMMONOIDEA) FROM THE IBERIAN BASIN

Fernández-López, Sixto<sup>1</sup>, Meléndez, Guillermo<sup>2</sup>

<sup>1</sup> Depto. Paleontología, Fac. Ciencias Geológicas, 28040-Madrid (Spain), sixto@eucrnax.sim.ucm.es

<sup>2</sup> Depto. Geología (Paleontología), C.I Pedro Cerbuna, 12,50009-Zaragoza (Spain), gmelende@posta.unizar.es

South Tethyan or Arabian ammonites among NW European faunas occur in several episodes from Pliensbachian to Callovian time. Larval or pseudolarval dispersal is the most probable spreading process; however, such a requisite is not sufficient for establishing a true adult interbreeding population. *Trimarginia sinaitica* ARKELL is known from the Upper Bajocian of Sinai. The occurrence of Middle Jurassic *Trimarginia* ARKELL in Sicily, Spain and Normandy has been interpreted as a consequence of Arabian ammonite arrivals in European areas. An Upper Bathonian specimen of *Trimarginia* has been reported from Switzerland also: *T. sylviae* MANGOLD & GYGY (M). In the case of NW European assemblages, the arrival by drifted shells (*i.e.*, taphonomic dispersal) appears as the most probable dispersal process. However, Iberian populations of *T. iberica* FERNÁNDEZ-LÓPEZ (M+m) are formed by monospecific assemblages, including juvenile specimens, representing true interbreeding, biological populations, rather than the result of occasional larval dispersal away from the living area of the species.

Representatives of the Oxfordian genus *Trimarginites* ROLLIER include the middle Oxfordian, Transversarium Zone species *Trimarginites arolicus* (OPPEL) (M) - *T. stenorhynchus* (OPPEL) (m), and the upper Oxfordian, Bimammatum Zone *T. trimarginatus* (OPPEL) (M), the presumable microconch representatives being still usually assigned to the species *T. stenorhynchus* (OPPEL) (m). The species *T. arolicus* appears restricted to the middle-upper part of the Transversarium Zone (Luciaeformis to Rotoides Subzone) and comprises abundant, mostly juvenile individuals, pointing to their interpretation as components of true biological populations inhabiting the Iberian Basin. The record of *T. trimarginatus* (OPPEL), at the Bimammatum Zone, much scarcer and formed mainly by adult individuals, points at them as components of allochthonous assemblages, formed by drifted shells from distant and deeper areas.

Iberian representatives of Bajocian *Trimarginia* and Oxfordian *Trimarginites* show many similarities in morphology and population structure. However, they have been respectively referred to the families Opeleidae (DOUVILLÉ, 1890) and Haploceratidae (ZITTEL, 1884). According to the taphonomic data, a habitat of epicontinental platform for the Iberian representatives of *Trimarginia* and *Trimarginites* is proposed here. Both taxonomic groups may represent adaptive radiations from populations belonging to the family Lissoceratidae (DOUVILLÉ, 1885) of shelfal or oceanic basins.