

Brachiopods from the uppermost Lower Ordovician of Peru and their palaeogeographical significance

Juan Carlos Gutiérrez-Marco and Enrique Villas Acta Palaeontologica Polonica 52 (3), 2007: 547-562

The studied brachiopod assemblages from the uppermost Lower Ordovician beds of Peru are of very low diversity and are among the northernmost known strata of that age in South America. They have been collected at the Carcel Puncco canyon of the Inambari River, near San Gabán in the easternmost Eastern Cordillera. Of the six species described, Euorthisina orthiformis and Paralenorthis immitatrix were already known from the Bolivian outcrops of the same Andean Eastern Cordillera; two species are new: Ahtiella zarelae Villas sp. nov. and Paralenorthis carlottoi Villas sp. nov. The new species of Ahtiella, of late Floian age, represent the oldest record of the genus characteristic of Celtic assemblages. During the early Mid Ordovician the genus migrated eastward from this region into the north margin of proto-Avalonia and after that, in Llanvirn times, into Baltica. During the early Llanvirn Ahtiella also migrated westward reaching the Precordillera Argentina region. Brachiopod faunal affinities suggest that there was a closer proximity of Avalonia with the Central Andean Basin, in similar temperate latitudes, than with the Southwestern European Platform, placed in very high latitude. Paralenorthis does not give any palaeogeographical signal, since it is known from all latitudes and palaeocontinents. Nevertheless, the occurrence of Euorthisina reinforces the Gondwanan signature of the region, since this genus spread during the Arenig throughout the middle latitude belt at the Gondwana margins, although it also colonised sub-polar latitudes, coinciding with the Llanvirn transgression over North Gondwana.

Key words: Brachiopoda, palaeogeography, Ordovician, Arenig, Gondwana, Celtic Province.

Juan Carlos Gutiérrez-Marco jcgrapto@geo.ucm.es, Instituto de Geología Económica (CSIC-UCM), Facultad de Ciencias Geológicas, 28040 Madrid, Spain; Enrique Villas <u>villas@posta.unizar.es</u>, Departamento de Ciencias de la Tierra, Facultad de Ciencias, Universidad de Zaragoza. 50009 Zaragoza, Spain (corresponding author). Attribution License (for details please see <u>creativecommons.org</u>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

