

The Permian of Morocco: Paleogeographical Study

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In Morocco the Permian is a turning point period between Hercynian cycle and Mesozoic cycle. Only continental deposits are present, with principally detritic material in intramontane basins. A great detritic sedimentation ratio deposited in a predominantly fluvial system, with locally a lacustrine environment, associated with sedimentary volcanic series. Coarse deposits on the margins of the basins or at beginning of sequences are opposed to fine deposits which spread on flat topography in flood plain environment, or in temporary and shallow lakes, far from the relief or at the top of positive sedimentary sequences.

New material from the Central Morocco basins (Tiddas, Bou Achouch, KhZnifra) and the high Atlas basins (Ourika, Ida ou Ziki, Ida ou Zal, oued Zat) and the Jebilet basins (Haouz, Senhaja), where grey and red formations have yielded a rich typically euramerican paleoflora ; a new *Callipteridium*: *C. marginatum*; *Peltaspermum*, ovuliferous organs, linked with *Rhachiphyllum* sterile foliage, *Glossopteris*-like leaves, previously believed to be restricted to the Gondwana; a new Coniferous male cone, *Darneylla gracilis* associated with a number of female cones. The group of Ginkgophytes and very advanced fructifications of *Voltziales* in Bou Achouch basin is only known in

This transitional zone between two floristic realms, Gondwana and Laurasia, allows a better knowledge of the geodynamic evolution of the Hercynian Range and of the paleogeographic relations between Laurasia and Gondwana during the Permian. The new floral and Vertebrate footprint data, and on account of the spatial distribution of volcanism, we are led to enclose the different Permian events of Morocco in the geodynamic context of the Western Mediterranean domain.