

PALEOZOIC SPLITTING, ROTATION AND REAMALGAMATION AT THE NORTHERN EDGE OF GONDWANALAND

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Located north of Gondwanaland in a Pangean reconstruction, Armorica is one of the pieces which detached from this continent in the Lower Paleozoic. After a tentative delineation of the boundaries of these different pieces, their migration during Paleozoic time is discussed. The study of the Paleozoic paleomagnetic rotation poles suggests that Gondwana suffered, in addition to its known northward migration, a 50° clockwise rotation around its own vertical axis, between the time of the microplates fragmentation and their re-amalgamation. This rotation explains why there are so many difficulties to correlate, in a Pangean configuration, the Panafrican-Avalonian-Cadomian structures of the drifted blocks, with the trends of the same age known in Gondwana. After our restoration, the Panafrican-Avalonian-Cadomian structural trends known in Europe, Eastern Canada and northern Africa link each other. These correlations are reinforced by the Upper Proterozoic ages actually published. This restoration is also in agreement with the location of the threshold which separated the Arabic-Chinese-Iranian shallow platform from the deeper Armorican shelf, during the Lower Ordovician. It also shows, why the Chinese trilobites colonized Armorica and the northern part of Gondwana, but not its western border. There are no more reasons to try to make correlations of any kind between Armorica and northern Gondwanaland on the usual Pangean reconstructions.