

THE GHOMARIDES PALEOZOIC TERRANE, RIFT – COAST RANGE, MOROCCO, AND ITS BEARING ON WESTERN MEDITERRANEAN TECTONICS

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In the Gibraltar arc, the Ghomarides (Rif) – Malaguides (Betics) nappes are the uppermost basement-bearing units of the Alpine inner zones. Paleozoic rocks constitute the prominent part of these upper nappes that virtually escaped Alpine metamorphism.

A study of the Ghomaride Paleozoic rocks allowed to reconstruct a chip of the former Variscan belt. Ordovician to Famennian sediments accumulated on a north-deepening margin and were folded (N-verging folds) and slightly metamorphosed prior to the deposition of a Culm sequence. The segment correlates well with the Eastern Morocco Variscan belt (Alpine foreland) and the Kabylia-Calabria-Upper Austro-Alpine Paleozoic sequences.

The Mesozoic-Cenozoic cover sequences of the Ghomarides nappes and associated Dorsale units indicate an extensional (transtensional?) setting from Triassic to Early Cretaceous time. Stratigraphic gaps characterize the Late Cretaceous-Eocene period. The nappes piling-up occurred prior to Upper Oligocene-Miocene coarse sedimentation. A moderate metamorphic event affected the very base of the Ghomaride pile at about 25 Ma, at the same time that the underlying Sebides units. Correlations with the Upper Austro-Alpine-Tuscany area support the concept of an African homeland for the Ghomarides, a «terrane» that originated more than 500 Km east of its present position.

CORRELATION OF THE GEOTECTONIC POSITION OF KYTHIRA AND CYCLADES WITHIN THE GEODYNAMIC EVOLUTION OF THE HELLENIC ARC

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The tectonic structure and evolution of Kythira is in general similar to that of the Cyclades with a difference in the chronologic succession of the alpine and post alpine geodynamic processes which have ended in the Cyclades in contrast to Kythira where they are still in evolution. A basic distinction has to be made between the early phase of compressional tectonism which built up the alpine nappe pile and the late phase of extensional character which denudates the non metamorphic units from the crests of the anticlinal domes of the underlying metamorphic units. During this late phase the decollement and sliding of the non metamorphic units along their contact with the underlying metamorphic units is dominant under the important effect of gravity.