

imply a very young age of deformation in the area, including the last stages of nappe emplacement over the autochthonous of Attica as well as the development of penetrative structures within the granitic rocks, because the available radiochronologic data point to an age of 9-10 Ma for the granitic rocks. However, the dated outcrop is not deformed, belonging to the last stages of magmatism in the area and thus the age of the deformed granites might be somewhat older.

SEDIMENTOLOGICAL EVOLUTION OF MESOZOIC - EARLY TERTIARY SMALL OCEAN BASINS IN THE EASTERN MEDITERRANEAN NEOTETHYS

A.H.F. Robertson, P.D. Clift, P. Degnan, G. Jones

Department of Geology and Geophysics, University of Edinburgh, Grant Institute,
West Mains Road, Edinburgh EH9 3JW, U.K.

The palaeoceanography of the Eastern Mediterranean Neotethys is here interpreted in the light of palinspastic reconstructions of the area as a series of Mesozoic - Cenozoic small ocean basins and microcontinents, rifted from Gondwana. Permian rifting first detached Apulia from Gondwana, giving rise to a southerly seaway (Sicily, Crete, N. Cyprus). More general rifting then produced a mosaic of blocks and basins in the Early - Mid Triassic (Scythian-Ladinian). Rift facies include intermediate composition extrusives, volcanoclastics, gravity deposited carbonates and siliciclastics, and localised radiolarian sediments (eg. Pindos, Antalya). Ammonitico rosso facies accumulated in subsiding rifts and on seamounts. Continental break-up and sea floor spreading began in the Late Triassic (Carnian, Norian). Rift and marginal oceanic crust is predominantly of calc-alkaline character (eg. S. Greece), while more axial oceanic crust and seamounts are mainly mid-ocean ridge and within-type basalts. Sea floor spreading in the Antalya area, SW Turkey isolated a number of continental slivers that were overlain by carbonate build-ups. A single large carbonate platform was also present within the Pindos ocean, Greece (Parnassos). The Apulian passive margin in Greece was offset by large continental margin transform faults (eg. Sperchios, Metsovo). During the Late Triassic, radiolarian sediments accumulated below the carbonate compensation depth (CCD) in the deeper basins, while periplatform ooze was shed from carbonate platforms to form «Halobia» limestones. Deeper-water passive margin areas subsided through the CCD by Early Jurassic. Related to regional compression in the mid Jurassic, ophiolites were created by spreading above subduction zones in the Pindos Ocean (Greece, Albania, Yugoslavia). Passive margin-trench collisions regionally emplaced huge ophiolite thrust sheets (eg. Vourinos, Othris) westwards onto the Pelagonian microcontinent in the Late Jurassic. The Pindos Ocean survived into the early Tertiary as a remnant basin, closed in the N, but undergoing mainly pelagic carbonate deposition in the S. By contrast, further east (eg. Antalya, Mamonía), passive margin deposition lasted from Late Triassic until Late Cretaceous. This was interrupted by a pulse of regional crustal tension in Late Jurassic-Early Cretaceous time, documented by localised gravity deposition of siliciclastic

sediments, alkaline and tholeiitic volcanics, and hydrothermal activity. Late Cretaceous eustatic sealevel rise and/or tectonic subsidence, possibly related to renewed seafloor spreading finally exceeded the rate of shallow-water build-up in the Late Cretaceous (eg. Antalya). In the east, Africa – Eurasia convergence after mid Cretaceous triggered the genesis of ophiolites above intra-oceanic subduction zones (eg. Troodos, Hatay). The Troodos extrusives were erupted near, or above the CCD, then subsided below the CCD, with condensed metalliferous pelagic sedimentation for ca. 5-7 Ma, before the accumulation of radiolarites. In general, diachronous microcontinental collisions progressively closed the Neotethys, cutting off deeper-water circulation, from the Late Jurassic in the Pindos ocean, and the Late Cretaceous further east (eg. Troodos ocean). Pelagic sedimentation, however, continued locally (eg. M. Eocene, Maden Complex, E. Turkey); Miocene – Early Pliocene of Cyprus.

NEW STRATIGRAPHICAL AND TECTONIC DATA OF THE PLIO-PLEISTOCENE DEPOSITS OF THE PREVEZA AREA

Th. Rondoyanni, A. Mettos, P. Paschos, Ch. Georgiou

IGME, 70 Messoghion str., 11527 Athens, Greece

In the area of Preveza (Western Greece), a detailed study of the plio-pleistocene deposits has resulted in the determination of their stratigraphy as well as of the tectonic events affected upon them. These sediments consist of lacustrine, brackish and marine facies, with frequent alternations.

The lower members of the plio-pleistocene sediments consist of deltaic conglomerates which change laterally into upper pliocene – pleistocene marls of the Kanali-Ag. Thomas area. In the Kanali area these sediments bend gently towards north as well as to the south, where the dips are steep (60°-70°). The above sediments change laterally and to higher stratigraphical horizons into brackish and marine deposits.

In the western part of the area, the marine deposits consist of loose sands which alternate with thinly bedded sandstones.

In the eastern part, the sediments alternate with lacustrine, brackish and marine deposits which form the upper members.

Finally the younger marine deposits overlie the pleistocene sediments unconformably and this is observed in the areas of Mytika and camping «Kanali» and at the small bay of Ag. Nicolas south of the Amvrakikos gulf.

The tectonic evolution of the greater area is composite and is characterized by the alternation of extensional and compressional regimes.

Microtectonic analysis in the Preveza area showed:

- a compressional phase with ENE-WSW direction.
- an extensional phase with a NNW-SSE direction.