

8-12. - APPLICATION OF GEOLOGIC AND GEODYNAMIC RESEARCH IN ISRAEL TO THE NATURE OF THE EASTERN MEDITERRANEAN

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The dissimilarity of rocks, stratigraphy and structure of Turkey to those of Israel and Egypt do not lend support to the recent plate-tectonic reconstructions of the Eastern Mediterranean 1). Yet these attempts are provoking with respect to the relationship between the Tethys and the Mediterranean. While the steep northward gradient into the very thick Infracambrian arkosic basin in southern Israel 2) and the aeromagnetically detected northward transition of the basement from acid to more basic in central Israel 3) suggest that the southern border of the Tethys ocean was rather close to the present southern border of the Mediterranean, it seems that the present sedimentary regime of the Eastern Mediterranean was probably initiated by the end of Permian. At this period the rather thin blankets of the Paleozoic sequence are followed by thick Triassic (c. 1,000m), Jurassic (c. 2,000m) and Cretaceous-Tertiary (c. 2,000m) 4), indicating the initiation of new deep basins.

This phase is associated with mild normal faulting at the end of Triassic and late Jurassic 5) and with rather extensive alkaline basic and acid intrusions and extrusions 6) in Israel and Lebanon. These phenomena may be the onland expressions of the initiation of the Eastern Mediterranean starting with the Triassic Mammonia melange in southern Cyprus and with Triassic ophiolites in southern Turkey 7), on the back side of the Pontid and central Iranian island arcs which were deformed and metamorphosed at this period 8). It is suggested that some of the Paleozoic marine sediments of southern Turkey were deposited on the southern margins of Tethys offshore Israel and Egypt, being later squeezed in the Turkish-Iranian island arcs when the Eastern Mediterranean was widening behind them as the Sea of Japan does in the Cenozoic behind the Japanese island arc.

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