



What triggered the early Pleistocene tectonic transition across the eastern Mediterranean?

U. Schattner

Department of Marine Geosciences, Charney School for Marine Sciences, University of Haifa, Department of Marine GeoSciences, Charney School for Marine Sciences, Haifa, Israel (schattner@sci.haifa.ac.il)

Subduction plays a fundamental role in plate tectonics but when interrupted it may trigger a series of geodynamic and sedimentary responses. A cascade of synchronous structural modifications recorded across the entire eastern Mediterranean region are dated to a relatively short period - late early Pleistocene. These deformations are documented within plates (e.g., Arabian, Sinai and African plates); along plate boundaries (e.g., Dead Sea and North Anatolian faults and Cyprus arc); and in the Mediterranean basin. During the same period the northward subduction of the Sinai plate was interrupted when the Eratosthenes Seamount - Cyprian arc collision initiated. Subduction-collision processes of the eastern Mediterranean serve as a unique modern analogue for similar settings worldwide. Understanding their association with accompanying neo-tectonic processes is therefore predominantly important. By fostering a detailed and comprehensive approach this research provides a coherent tectonic picture for the eastern Mediterranean early Pleistocene tectonic transition in order to explore its triggering mechanisms.