

## THE TERMINAL TETHYAN EVENT AND RELATED CHANGES IN PECTINID BIVALVES

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The Early Miocene was a critical period in the Old World's biogeographic pattern, because of the Tethyan closure and establishment of the first continental bridge between Euroasia and Africa since the Mesozoic. Paleobiological patterns of Oligocene to Early Miocene pectinids of Europe, northern and eastern Africa and southwestern Asia have been studied in order to trace concurrent changes of the pectinid communities in that region. The Oligocene Western Tethyan fauna still share taxa with the southwestern Iranian to western Indian region (e.g., *Amussiopecten labadyei*), Early Miocene records, however, point generally to a segregation. In the Oligocene - Miocene transition period the Western Tethyan region undergoes a significant turnover of its pectinid fauna. This resulted in low diversity pectinid faunas in the lower Early Miocene followed by a massive speciation and radiation in upper Early Miocene. Thereby the new genera (e.g., *Flabellipecten*, *Macrochlamis*) become characteristic contributors to the proto-Mediterranean Miocene pectinid community. However, not only the taxonomic inventory changed but also morphological characters of the new community differs importantly from the former. Particularly the increase in average body-size in shallow water representatives happened not only in newly evolved giant genera (e.g., *Macrochlamis*, *Oopecten*) but also within persistent forms (e.g., *Amussiopecten*). These changes can be related to the termination of the circum-equatorial sea route which caused changes in oceanic and atmospheric circulation patterns, contributing importantly to the global climate changeover from the greenhouse to the extant ice-house state.