



Paratethys flooding and Mediterranean-Paratethys interactions during the onset of the Messinian Salinity Crisis: The Pontian of Azerbaijan

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Recently, the boundary between the Late Miocene Meotian and Pontian regional stages of the Eastern Paratethys has been magnetostratigraphically dated at ~ 6.04 Ma. The boundary coincides with a rise in Paratethys sea-level caused by the establishment of a connection to marine waters. Following this, the Lower Pontian of the Eastern Paratethys is characterised by highstand brackish-marine deposits. The establishment of the connection between Paratethys and Mediterranean Sea immediately precedes the Messinian Salinity Crisis in the Mediterranean Sea, the onset of which has been dated at 5.96 ± 0.02 Ma. The role of the connection between Paratethys and Mediterranean at this time is not well known. In particular, the influence of the Paratethys on the hydrological budget of the Mediterranean Sea during the Messinian Salinity Crisis is an important unknown. It is important to know how far east the Paratethys reached during the Pontian and if rivers currently draining into the Caspian Sea were also potentially affecting the Mediterranean hydrological budget. Here, we present data from Pontian sections and localities throughout Azerbaijan aiming to create a high-resolution integrated stratigraphy by means of bio-magnetostratigraphy and Ar/Ar radio-isotopic dating. We focus in particular on the Meotian/Pontian boundary interval in order to more accurately date and describe the paleoenvironmental change associated with this boundary. Our new data will improve the understanding of the connectivity between Paratethys and Mediterranean Sea during the onset and the first stage of the Messinian Salinity Crisis.