O42. CASPIAN - BLACK SEA - MEDITERRANEAN CORRIDOR FORMATION, PARATETHYS SEA DEGRADATION

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We propose a possible mechanism leading to the transformation of the Paratethys seas (i.e., the Sarmatian Sea-Lake, Meotian Sea, Pontian Sea-Lake, etc.). The time period from the formation of the closed Sarmatian Sea-Lake to the present is considered. The main reason for the collapse of the Sarmatian Sea-Lake into the Black and Caspian seas was development of a canyon that cut through the mountains separating the Black and Mediterranean seas. Later, this canyon was transformed into the Bosporus and the Dardanelles straits. The canyon was formed mainly by erosive activity of a river that had periodically emerged from the Paratethys. Abrasion of the canyon bottom and the related erosional lowering of its level led to gradual drainage of the Paratethys basins. The consequences of the Messinian Salinity Crisis in the Mediterranean Sea contributed to the penetration of salt water into the Paratethys and then to its temporary isolation and transformation into a closed sea-lake. Later, its level rose, and the river was formed again. That river again flowed into the Mediterranean Sea, in the process eroding its own bed. During low levels of the World Ocean, the riverbed eventually dropped below high ocean level. When the ocean level uplifted the canyon was flooded by Mediterranean water. This process led to the formation of a corridor linking the seas together; this corridor developed over the course of many glacioeustatic fluctuations in the World Ocean.