



Correlation of the Main Tectonic Units and Paleotectonic Reconstructions of the Eastern Black Sea – Caucasian – South Caspian Region

Shota Adamia, Victor Alania, Tamar Beridze, Alexandr Chabukiani, Koba Khmaladze, Tamar Chkhotua, Nino Sadradze, and Guram Zakariadze

I.Javakhishvili Tbilisi State University (ninosadradze@gmail.com)

Eastern Black Sea – Caucasian-South Caspian Region sited at the central part of the collisional zone between Eurasian and Africa-Arabian continents represents a collage of lithosphere fragments of oceanic Tethys and its northern and southern continental margins. Within the region, there existed systems of oceanic island arc, intra-arc and back-arc units. Several events of supra-subduction, MOR and withinplate types magmatic activity and obduction of oceanic crust, lateral displacement of lithosphere fragments took place during the Neo-Proterozoic, Paleozoic, Mesozoic and Early Cenozoic. Final closing of the oceanic and back-arc basins, continent-continent collision, topographic inversion and formation of the present-day structure of the Caucasus was accomplished in the Late Cenozoic.

Regional geological, paleobiogeographical, geophysical and paleomagnetic data indicate a position-correlation of the main tectonic units of the region in relation to Africa-Arabia, and Eurasia.

An interpretation in favor of a Gondwanan origin of Late Proterozoic-Middle Paleozoic Transcaucasian terranes basement rocks was proposed by Zakariadze et al. During the Early-Middle Paleozoic, in the wake of northward migrating Gondwanan fragments the Paleotethyan basin was formed. Northward migration of the Transcaucasian massif throughout the Paleozoic caused narrowing of the Rheic Ocean (Prototethys) and its transformation into an oceanic back-arc basin. The crystalline basement of the fold-and-thrust belt of the Caucasian (Great Caucasus) consists of various Paleozoic metamorphic and magmatic rocks. The southernmost strip of the crystalline core is represented by thrust slices of metaophiolites – Paleozoic oceanic accretionary complex.

In the Late Paleozoic-Early Mesozoic, the oceanic basin separating the Africa-Arabian continent from the Taurus-Anatolian-Iranian platformal domain was gradually extending. However, this time, only the Central Iranian Terrain (CIT) separated from Gondwana. The Taurus-Anatolian Terrains (TAT) separated from Gondwana later, in the Middle Jurassic. The Neotethys was formed in the Middle-Late Mesozoic. Northward displacement of TAT resulted in its gradual approaching with the Pontian-Transcaucasian-Iranian active continental margin, narrowing of the Paleotethys-Tethys, formation of the suture belt between the TAT and CIT. The suture belt, apparently, is marked by fragments of ophiolite mélangé of the Lakes Van-Urumiyeh and Khoy region.