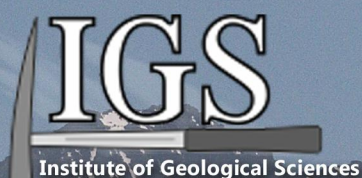




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INQUA – SEQS SECTION ON EUROPEAN QUATERNARY STRATIGRAPHY WORKSHOP

03 – 10 SEPTEMBER 2016

**Bridging Europe and Asia:
Quaternary stratigraphy and
Paleolithic human occupation in Armenia
and Southern Georgia**

**Yerevan
ARMENIA**



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Abstracts

THE PLIOCENE-QUATERNARY EVOLUTION OF THE EUPHRATES VALLEY IN THE NORTHERN SURROUNDING OF THE ARABIAN PLATE

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Paleogeography of the Euphrates River valley changes due to sinistral movements on the East-Anatolian Fault Zone (EAFZ) and the Taurus Ridge rise by movements on the South Taurus Thrust. Evidence of these changes is based on studies of the Pliocene–Quaternary deposits of the Euphrates River basin to the north and the south of the Taurus Ridge and the Late Cenozoic deformation. Combination of methods was used to date the Pliocene–Quaternary deposits. They were geological and geomorphological correlation of sections, determination of remanent magnetic polarity, paleontological and archaeological finds, palynological analysis, and K-Ar dating of volcanic rocks. To the north of the Taurus Ridge, the Late Miocene tectonic depressions were filled by lakes connected by migrated channels. The waters found flow at the Early Pliocene to the south via the graben-like trough of the recent Sultan-Suyu River valley and farther to the Göksu River. The flow was interrupted because of some desiccation and rise of the Taurus Ridge, recommenced in the end Gelasian – early Calabrian and was interrupted again. At the end of Calabrian (~0.8–0.9 Ma), the Euphrates waters broke via the Taurus Ridge along the recent valley and the former upstream bottoms of the Euphrates and its tributaries became the upper terrace. After this, the Taurus Ridge raised more than to 330 m. The lower terraces were formed because of the regional uplift. The uplift was more intense to the north of the Taurus Ridge, than to the south of it. The new-formed Euphrates valley was offset on the EAFZ at 12 km that gives the average slip rate 13–15 mm/year. The Early Paleolithic stone industries were found in the Lower Pleistocene deposits. They are picks, pick-like tools, one-sided and double-sided choppers. The oldest artefacts were found in the layers that deposited before the Olduvai subchron, i.e., ~2 Ma. These finds mark a way of migration of the oldest hominine from Arabia to Caucasus and possibly to the other Eurasia.