**Physical Geography** 

## New Discoveries in the Vere River Valley (Central Georgia)

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**ABSTRACT.** New studies have been carried out in the river Vere valley. Specific geological and geomorphologic objects, reflecting development of this morphological structure are revealed. A basically new vision of historical development of this region, based on the data of the field studies is presented. © 2009 Bull. Georg. Natl. Acad. Sci.

Key words: r. Vere valley, geological structures, landscapes, archeological find.

The Vere is a right bank tributary of the Mtkvari (Kura) river. It originates on the southern slopes of the Kartli ridge in the vicinity of the village of Manglisi, at the height 1800.5 m above sea level and runs into the Mtkvari in the center of Tbilisi at the mark 390m (stream gradient 1410.5). The area of the basin is  $150.6 \text{ km}^2$ . The character of the lithology and structure of the area in many respects defines the features of the relief of the territory under study. The basin is timed to syncline fold constructed of alternating horizons of gypsum clays and sandstones of the Upper Eocene, which are discordantly bedded on the rocks of volcanogenic formations of the Middle Eocene (tuff breccia, conglomerates, etc.). Lacustrine deposits are widely developed here [1]. As to paleogeography the Vere river basin represents an extensive paleo-bay of the Eocene sea, which is attested by the general character of geology as well as massive pebble conglomerates at the watershed part of Trialeti ridge on the Tskneti-Samadlo motorway, with thickness up to 2-5m, representing a delta formation [2-4].

By the end of the Eocene and Middle Miocene, as a result of sea regression, the territory was of lagoonlacustrine character, as attested by numerous areas built of clay formations (within the area of Tbilisi, the thickness of these deposits is 3-10m, in the village of Tskneti up to 15m, in the area of lake Lisi - 12m etc.). The distance from the source to the confluence of the Mtkvari is 28.6 km, actual length 1.2. The general extent of the river network is equal to 173.2 km, its density being 1.2 km/km<sup>2</sup>.



Fig. 1. Massive pebble conglomerates at the watershed part of Trialeti ridge on the Tskneti-Samadlo motorway [5].



Fig. 2. Entrenched meanders below the settlement of Samadlo.

Such complicated geological and geomorphologic conditions are intensified by the fact that the whole valley of the Vere river from Tbilisi up to Manglisi village represents a continuous chain of settlements. (Bagebi, Akhaldaba, Tskneti, Betania, Tsveri etc.)

However, people only repeated the choice of their predecessors lodging in these places in the remote past. This fact is attested by the general data about the history of this region and materials of the excavations carried out on the territory of Kiketi and Pantiani settlements [6-9].

Some ancient finds were made on the left bank of the Vere in the vicinity of Tsveri settlement by local residents (E.Kvitaishvili, O.Tavadze, and I. Mikadze) in the summer 2008. In November of the same year a group of experts of Vakhushti Bagrationi Institute of Geography carried out preliminary investigation of these burial places along with geomorphologic and paleogeographic researches.

The burial place is located on the left bank of the Vere gorge and is timed to a large 3 fluvial terrace above flood-plain under the name Didi Veli (Fig.3) Coordinates 41 41' N and 44 33' W, height above sea level 991m.

The burial place looks like a 190 m long and 64 m wide stone box-sarcophagus overlapped by the same slabs (Fig.3).

Plates of stone cover were broken and apparently the



Fig. 3. Space image to Google site surface Didi-Veli (III above floodplain terrace)



Fig. 3a. The broken cover of a stone cist-burial ground.

burial place was plundered as far back as in ancient times since no utensils or other objects were discovered there.

The depth of occurrence of the underlying slab fluctuates from 75 to 44 cm from the soil surface. The broken top plates have given in at the place of their broken contact, forming a depression on the surface, facilitating their discovery. The fragments of remains of two persons (apparently a man and a woman) were found. The man's skeleton was better preserved with almost undamaged skull, bones of hands and legs, fragments of collar bone. (Fig.4) The second skeleton was represented only by upper jaw (Fig.5) and tibial bones. Cover fragments have geometrical form of the following size (see Fig.6). Presumably the burial place was opened repeatedly since the second burial place was partially broken.



Fig. 4. Stone box sarcophagus.



Fig. 5. Burial place fragment.



Fig. 6. Fragment of the upper jaw.



Fig. 7. Fragments of ceramics found in the vicinity of Didi Veli site.

Approximate age of this burial place is the beginning of the late Middle Ages.

Besides the burial remnants fragments of ceramic vessels – jugs of various types were found in the vicinity (Fig.7), whose age, their forms and manufacturing tech-

nique can be defined as the Classical period [8,9].

All the above said shows that the given region represented in antiquity a habitable district with highlydeveloped culture and requires detailed paleogeographical and archaeological study.

ფიზიკური გეოგრაფია

## ახალი აღმოჩენები მდინარე ვერეს ხეობაში

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მდინარე ვერეს ხეობაში ჩატარებულია ახალი კვლევები. გამოვლენილია კონკრეტული გეოლოგიური და გეომორფოლოგიური ობიექტები, რომლებიც ასახავენ არსებული მორფოსტრუქტურის განვითარებას. ნაშრომში წარმოდგენილია საკვლევი რეგიონის პალეოგეოგრაფიული განვითარების პრინციპულად ახალი ხედვა, რომელიც საველე კვლევების მონაცემებს ეფუძნება. აღმოჩენილია ძველი ნასახლარები და სამარხები, რომლებიც თარიღდებიან ანტიკური ხანით და ადრეული შუა საუკუნეებით.

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