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Initiation of human dispersal by rising water levels in the Black Sea during the Holocene

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Introduction

There is evidence of a major flood in the Black Sea area ca. 7500–7600 cal BP (Dimitrov, 1982) and evidence of a mass migration of people out of this general area (Gimbutas, 1985; Kortlandt, 1990). This paper examines the evidence for a flood that triggered this migration, and it also examines the extent of the migration.

Shopov et al. (1996) found evidence that high rainfall flooded the Black Sea basin at 5600–5500 cal BP. Dating based on two independent data sets: (I) Shopov et al. (1996) at 5600–5500 cal BP and (II) Dimitrov (1982) coincide within experimental error, supporting the statements of Shopov et al. (1997) and Ryan et al. (1997) that a catastrophic flooding occurred in the Black Sea region at that time. Ryan et al. (2007) later revised their interpretation, placing the time of rapid inundation at about 8,300 cal BP or earlier. Although it does not exclude possibility of further sea level rising at 5600–5500 cal BP.

Evidence of People in the Area and the Timing of their Migration

Paleolinguistic evidence

` The oldest inhabitants of the Black Sea coast were the ancient Indo-Europeans (Gimbutas, 1985; Kortlandt, 1990; Wiik, 1999). Before 5500 BC, Indo-Europeans inhabited a significant part of the brackish water Black Sea coast. Separation and differentiation of the Indo-Europeans into groups like German, Thracian, Illyrian, Greek, Arian, etc. started just after 5500 BC (Wiik, 1999), after the Black Sea flooded as dated by our geological evidence. Therefore, we can state that the differentiation of the Indo-Europeans and their migration out of the Balkan Peninsula may have been initiated by a ca. 7,5 00 cal BP Black Sea Flood (Shopov et al., 2007). According to Derjavin (1946), ancient Bulgarians belong to the old proto-Indo-Europeans, so their migrations can be used to trace the dispersal of Indo-Europeans in their early stages of development (Shopov et al., 2005a).

Archaeological evidence

A unique ancient plate was discovered on the bottom of the Black Sea about 100 meters below the sea surface in the location of the old shoreline at the shelf periphery. It was found buried by sediment indeep water making it unlikely it was dropped from the sea surface. Its age can be even older than Neolithic, because it is not ceramic but there is no way to obtain an absolute age for this plate that is carved from a solid piece of sandstone.

It is suggested that this artifact was on the sea shore before the Black Sea flooded (Shopov et al., 2007). So, it is believed to have been made and used by the pre-flood population of the Black Sea coast. Eight signs of an ancient script on this plate coincide with signs scratched upon Vinča pottery, while eight other signs coincide with those found on many of artifacts excavated from sites in southeastern Europe and dating between 6000 to 4500 BC (Ager, 1998).

Materials and methods

In order to trace the locations and migrations of the ancient Indo-European branches, we developed a new method for reconstructing boundaries (or more precisely the maximal expansion) of ancient societies by plotting the toponyms and hydronyms (geographic names of large water bodies) formed from their ethnic names on the map (Shopov et al., 2005a; Shopov, 2007).

This study is based on the processing of 6,900,000 toponyms and hydronyms from using GIS and the precise positioning of the established 4399 toponyms and hydronames formed from the ethnic names of Bulgarians and their branches (Shopov et al., 2005a) on the maps of Europe and Asia.

Even now, during modern migrations, when the name of an old city or district appears in a new place, it is always due to the migration of population from the old place to the new, which is called by the same name. For example, the map of the North America is abundant with names of cities like London, Paris, Moscow, etc. because these places were founded by people coming from the original cities. Indeed, ancient Bulgarians carried with them some characteristic toponyms all the way from the Balkans to Bangladesh and back (Shopov et al., 2005a, Shopov, 2007). Written sources demonstrate that their migration along this path lasted at least 3100 years, but archaeological data Sammara, Sialk tepe and Godin tepe. suggest that it started far before the appearance of the script and any historical records and may have been initiated by the Black Sea flooding (Shopov et al., 2007).

Results

Ancient Bulgarians were not homogenous but consisted of well-defined branches or clans—Kutiguri (Kuti), Utiguri (Uti), Onoguri, Kuchi-Bulgar, Kupi-Bulgar, Kotrags, and dynastic clans (Dulu). Each of these ethnonyms produced hundreds of toponyms and hydronyms across India, Pakistan, Bangladesh, Afghanistan, Uzbekistan, and Iran, which tend to cluster in relatively small parts of these countries. There are 2251 toponyms and hydronames in Pakistan formed from the ethnic names of Bulgarians and their branches; 647 such toponyms appear in India, and 186 in Bangldadesh (Shopov, 2007).

Our study suggests that migrations from the Black Sea due to the flooding of the region were extensive and far reaching, suggesting a migration of large number of people, coming from a vast region, pointing on flooding of large lands.

Conclusions

In conclusion, we provide some data demonstrating that flooding of the Black Sea region at 5600–5500 BC may have initiated a separation and differentiation of the Indo-Europeans into groups like German, Thracian, Illyrian, Greek, Arian, etc. The same or another Black Sea flood triggered an out-migration from the Black Sea area.

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References

Ager, S. 1998. Omniglot Writing Systems and Languages of the World. *Writing and Writing Systems* http://www.omniglot.com/writing/definition.htm

Derjavin, N.S. 1946. *Istoriya na Bulgariya. t.1. Proizhod na bulgarskiya narod I obrazuvane na purvata bulgarska durjava na Balkanskiya poluostrov.* [*Bulgarian history, v.1. Origin of Bulgarian Nation and Formation of the Furst Bulgarian State on Balkan Peninsula*], pp. 203–207. Slavizdat, Sofia. (in Bulgarian)

Dimitrov, P.S. 1982. Radiocarbon dating of bottom sediments from the Bulgarian Black Sea Shelf. *Oceanol. Bulg. Acad. Sci.* 9:45–53.

Gimbutas, M. 1985. Primary and secondary homeland of the Indo-Europeans. *Journal of Indo-European Studies* 13:185–202.

Kortlandt, F. 1990. The spread of the Indo-Europeans. *Journal of Indo-European Studies* 18:131–140.

Ryan, W.B.F., Pitman, W.C., III, Major, C.O., Shimkus, K., Moskalenko, V., Jones, G.A., Dimitrov, P., Görür, N., Sakınç, M., and Seyir, H.I. 1997. An abrupt drowning of the Black Sea shelf at 7.5 kyr BP. *Geo-Eco-Marina* 2:115–125.

Ryan, W.B.F., Major, C.O., Lericolais, G. and Goldstein, S.L. 2003. Catastrophic flooding of the Black sea. *Annu. Rev. Earth Planet. Sci*. 31:525-554

Ryan, W.B.F. 2007. Status of the Black sea flood Hypothesis. In: *The Black Sea Flood Question: Changes in Coastline, Climate and Human Settlement* Yanko-Hombach V., Gilbert, A.S., Panin, N. and Dolukhanov, P.M., eds, pp. 63–88. Springer

Shopov, Y.Y., Tsankov, L., Georgiev, L.N., Damyanova, A., and Marinova, E. 1996. Speleothem luminescence proxy records of annual rainfall in the past. Evidences for "The Deluge" in speleothems. In *Climatic Change: the Karst Record,* Lauritzen, S.-E., ed., pp. 155–156. *KWI*, Bergen.

Shopov, Y.Y., Tsankov, L.T., Georgiev, L.N., Damyanov, Y., Damyanova, A., Ford, D.C., and Yonge, C.J. 1997. Evidences for "The Deluge" in Speleothems. *Proceedings of 12th UIS Congress (10–17 August 1997; La Chaux-de-Fonds, Switzerland)*, v. 1, pp.107–109.

Shopov, Y.Y., Tsankov, L., Yalamov, T., Mutafova, M., Azady, H., and Hnkanosyan, G. 2005. Unknown data for the migrations of the ancient Bulgarians in Eurasia: Data from toponimes, hydronames and ethnonimes. In *Roots of Bulgarian Civilization*, pp. 241–251. Bul Koreni, Sofia.

Shopov, Y.Y., Dimitrov, P., Dimitrov, D.P., and Shkodrov, B. 2007. Bulgarian state tradition and its delivery to Europe. The Deluge: Oldest written evidences and migrations of Bulgarians. *Avant-garde Research of Ancient Bulgarians* 1:3–23.

Wiik, K. 1999. Europe's oldest language? *Books from Finland* 3:207–212.