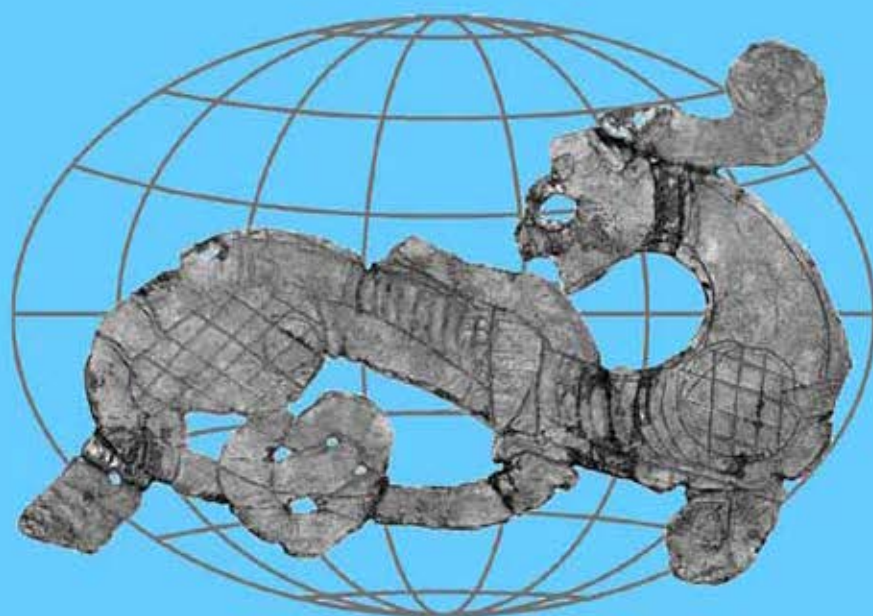


# **GEOMORPHIC PROCESSES AND GEOARCHAEOLOGY**

## **From Landscape Archaeology to Archaeotourism**

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## **EXTENDED ABSTRACTS**

prevent any bacterial decay which is a powerful contamination factor.

Here we tried to describe briefly the permafrost as a specific working environment for the field archaeology and show potential difficulties of survey, excavation, and radiocarbon dating of the sediments and cultural remains. It is well known that archaeologists normally deal with the traces of the permafrost that existed in the past such as cryoturbation, ice-wedge casts, cryogenic cracks etc. Observations made in 'live' permafrost conditions help better understanding of the processes that took place in the past during the formation of the frozen sediments and, which is even more important, understanding the effect caused by its thawing.

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### CHARACTERISTICS OF THE GEOTOURISM DEVELOPMENT IN THE SMOLENSK REGION

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Nowadays geotourism is gaining more and more popularity and is developing very fast. As a kind of tourism geotourism is comparatively young. It can be called a modern one.

Geotourism is a journey with scientific, educational, entertaining, and other goals which is connected with geological and geographical natural objects [1].

Although this kind of tourism is rather well-known and wide-spread among professionals, only few tourists use it. Various problems of the geotourism development are discussed at geological conferences and congresses on the international, national and regional levels.

Geotourism is often regarded as a step towards ecotourism. This perception is quite understandable because one of the objectives of geotourism is not to do any harm to the environment and to enjoy the genuine beauty of various places. Respect for the local population plays an important role among the postulates of geotourism.

If tourists visit a particular place because of its uniqueness, it encourages and motivates local authorities to preserve this site. Proponents of geotourism claim that this



kind of tourism will offer new opportunities in creating workplaces for the local population and in increasing profits of local entrepreneurs.

Some foreign countries such as the USA, Canada, France, Italy, Spain, Norway, South-African Republic, Australia and other destinations are particularly good at arranging geotourist routes. There are only few regions in Russia which attempt to develop geotourism on commercial basis. The most promising are considered to be the regions that possess substantial natural resources such as a unique geological formation, mineral deposits, diversity of the landscape as well as various processes which used to take place in the past or are happening these days. The territory of the Gorny Altai, the Krasnoyarsk region as well as the Urals, lake Baikal etc. are bright examples of efficient development of geotourism.

Among all Russian regions the Smolensk region has a considerable potential for developing tourism thanks to its significant history. The synergetic combination of the rich cultural and historical heritage with natural beauty and beneficial geographic location on the eastern border offers opportunities to attract both Russian and foreign tourists. The Smolensk region is distinguished by a large number of monuments such as churches of the XII century, the Fortress Wall, monuments to the Patriotic War with Napoleon in 1812, the Assumption Cathedral, manorial estates of the XIX century and other sights.

The region is annually visited by more than 200 thousand tourists, 32 thousands of which are foreigners. The majority of foreign tourists are from Poland, Germany and the USA. According to the forecasts, the flow of tourists will increase by 1.5 in 2013, because of the celebration of the 1150-year anniversary of the first reference to our city in the chronicle [3].

On the whole, traditionally there have been developing the following kinds of tourism: cultural and educational, health-improving and sanatorium as well as tourism for children. Recently there has sprung up a tendency to develop some new kinds of tourism such as religious, agricultural, hunting, fishing, event-based, ecological and geotourism.

Apart from the traditional (cultural and educational), in some promising areas there have been developed other kinds of tourism, e. g. business tourism in Smolensk, sport tourism in the Krasninsky and Dorogobuzhsky administrative entities, event-based tourism in regional centers, fishing tourism in the Gagarinsky and Dukhovschinsky administrative entities, agricultural and geotourism in the Demidovsky and Vyazemsky administrative entities, hunting tourism in the Pochinkovsky, Roslavlsky and Vyazemsky entities.

All changes which are taking place on the Russian and international tourist markets have caused an increased demand for rest and health-improvement as well as for ecological, and fishing tours and for pilgrimage. There can be distinguished six tourist zones for further exploration in the Smolensk region:

- Smolenskaya (Smolensk, the Smolensky, Kardymovsky and Krasninsky administrative entities);
- Central (the Dorogobuzhsky and Yarzevsky administrative entities);
- Northern-Western (the Velizhsky, Demidovsky, Dukhovschinsky and Rudniansky administrative entities);
- Northern-Eastern (the Sychevsky and Novoduginsky administrative entities);
- Eastern (the Vyazemsky, Gagarinsky, Urgansky and Temkinsky administrative entities);

- Southern (Desnogorsk, The Pochinkovsky, Elninsky, Roslavlsky and Shumyachsky administrative entities).

Tourist resources of these administrative entities are developing unevenly and have a number of drawbacks. All the above mentioned tourist zones suffer from inadequate development of the tourist infrastructure.

The Smolenskaya tourist zone is characterized by a large number of accommodation and public catering facilities, entertainment establishments, natural and historical tourist attractions, sanatoriums and children's health camps. The priority in development of this zone is given to tourist resources, namely, the Gnezdovsky archaeological complex, historical and archaeological complex «Teremok» (it means «tower-chamber») in the Smolensk administrative entity, «Solovyeva pereprava» (it means «Solovyeva river-crossing») in the Kardymovsky administrative entity, battle places in the Patriotic war against Napoleon of 1812 in the Krasninsky administrative entity.

In the Central zone the Holy Trinity Boldino Monastery of St. Gerasim in the Dorogobuzh administrative entity and the museum of the Yartzevsky cotton factory in Yartzevo will be primarily developed.

There are plans of development of Serteysky archaeological complex in the Velizhsky administrative entity and tourist complexes in the national park «the Smolensk Lakeland» in the Demidovsky and Dukhovschinsky administrative entities [4].

In the Northern-Eastern zone the priority is given to manorial estates such as Lipetzy (Khomyakov's estate), Alexandrino (Lobanovy-Rostovsky's estate) in the Novoduginsky administrative entity, Dugino (Panin's estate) in the Sychevsky administrative entity. There are plans to develop tourist routes to the river head the Dnieper river in the Sychevsky administrative entity and that can contribute to the overall geotourism development in the region.

In the Eastern tourist zone utilization of the natural and recreational potential is suggested in the following parts: the Yauzovskoye and Vazuzskoye reservoirs in the Gagarinsky administrative entity, the Ugra river basin in the Temkinsky and Ugransky administrative entities. Researches carried out in these zones in 2010 proved that they are very popular among fishers and hunters as well as tourists who are fond of water and walking tours. Consequently, this zone is quite promising for the development of geotourism.

In the Southern zone the key points in development of tourist resources are the following: the monument to Saint Murcury of Smolensk in Dolgomostye in the Pochinkovsky administrative entity, the Cathedral of Transfiguration in Roslavl and the museum of Pervomaysky glass factory in the Shumyachsky administrative entity.

There is a great potential in developing ecological and geotourism in the Smolensk region. It is worth mentioning that such kinds of tourism can not only improve and increase tourist attraction of the region, but also attract tourists who appreciate healthy and educational rest. For Smolensk it gives an excellent opportunity to diversify the range of services for tourists, offering them something more modern than all the historical and cultural monuments that our region abounds in.

The Smolensk region is located in the middle part of the Russian plain and its landscape is typical for the central part of Russia. An important characteristic of the regional landscape is the main watershed of the Russian plain from which its largest



rivers such as the Volga, The Dnieper and the Western Dviena flow [2]. Naturally, the prevailing plain landscape creates appropriate conditions for setting up individual sites of geotourist attraction.

One of the geotourist attraction sites can be the Dnieper river head. Tourists can see with their own eyes the birthplace of this great Russian river. The Dnieper starts from the southern part of the Valdai Highlands near the Dudkino village in the Sychevsky administrative entity of the Smolensk region in the vicinity of Gavrilovskoye lake and it falls into the Dnieper estuary of the Black sea. When we speak about the Dnieper such names as Berezina, Sozh, Pripjat, Desna, Vorskla, Samara, Konka, But and many other spring to our mind. In the lower reaches the priority of the Dnieper riverbed is beyond any doubt, whereas in the upper reaches the question about equal roles of the main riverbed and its tributaries naturally arises even if you are not a specialist. There is an ancient legend about the Dnieper and the Desna. Allegedly, they were a brother and a sister in the past. They decided to travel to the sea in the morning and fell asleep to have a rest before a long journey. The Desna overslept the dawn, while the Dnieper decided not to wait for her and went ahead. No matter how hard she tried, the Desna failed to catch up with her brother and, eventually, she turned into his tributary [5].

The Dnieper crosses various landscapes and there are great many interesting natural sites and historically significant places. Nowadays a route «To the origins of the Dnieper» is being developed in the Sychevsky administrative entity.

Among other geo-objects of the Smolensk region there are specific ranges, stony remnants, ribs which were left by the glacier etc. (table 1) [2].

*Table 1. The main geo-objects of the Smolensk region.*

Type	Sub-type	Examples
Geological	Mineralogical	Covered peat (the village Mikulina in the Rudnyansky administrative entity and the village Nemykari in the Smolensk administrative entity)
Geomorphological	Glaciological-glaciogenic	Ribs in the zone of the Valdai glaciations in the Smolensk administrative entity
	Erosive	Gullies of the valley of minor watercourse in Smolensk
	Water-accumulative	Ranges left by the glacier in the Demidovsky administrative entity
	Residual	Sand-gravel remnant «Talashkinskaya tower» in the Smolensk administrative entity
	Eolian	Eolian soil along the river Western Dvina
	Exarational	Valleys of the glacial plucking of lake Rytoc and lake Dgo in the Demidovsky administrative entity
Hydro-geological		Mineral water spas in the village Przhevalskoye in the Demidovsky administrative entity
Landscapes		Specific landscapes of the Valdai glacier in the Demidovsky administrative entity; peculiar Roslavlskaya-Aselskaya range in the Roslavlsky administrative entity

we'll plan to finish the monograph «Gold of Eurasia steppe», which is characterized noble metals in ores and ancient Au items from this unique region.

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#### THE STRUCTURE AND LANDSCAPE PATTERNS OF THE GNEZDOVO NECROPOLIS

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The Gnezdovo complex of archaeological sites situated some 7-13 km to the west from Smolensk town is one of the major preurban centers of Medieval Rus' covering an area of more than 150 hectares. The complex is settled mostly on the right, with some parts also on the left, bank of the Dnepr River. The Gnezdovo archaeological complex currently consists of 2 hillforts, vast settlement and 6 groups of mounds interrelated by period of existence and homogeneity of material culture. The necropolis of Gnezdovo totally count more than 1600 mound survived from damage and previous excavations (fig. 1).