The cultural and historical landscape of the Izborsko-Malskaya valley as a unique monument of nature and history in Pskov region

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Abstract. A cultural-historical landscape is understood as a compound historical-cultural and natural formation that developed in a specific territory possessing certain homogeneous natural (landscape) properties as a result of long-term interaction between the man and the landscape that occurred in the course of their coherent development. The Izborsko-Malskaya valley is a single, coherent cultural and historical landscape, with the unique nature of which modern villages and an archaeological monument – Truvorovo gorodische of the VII-VIII centuries, the Izborsk city fortress of the XIV century, the remains of the Malskaya fortress-monastery, churches and chapels, ‘Truvorov’ stone cross – blend in. Already in the X century, an agricultural district with a dense network of settlements was formed around the city. The Malsky cross stands as a witness to one of the branches of the historical path From the Varangians to the Greeks, since it served as a special indicator of the route’s direction. The specific nature of the Izborsko-Malskaya valley is due to its geological features and the history of its relief evolution. The dissected topography, with outlets of picturesque karst springs – the Slovenian springs – and the mosaic nature of the local landscape complexes predetermined the great variety and variegation of vegetation and fauna. The natural basis for the morphological structure of the Izborsk-Malsky cultural-historical landscape is formed by four physical and geographical areas belonging to three interfluvial plains: undulating end-moraine, glaciolacustrine and abrasion-depositional, dissected by dells formed by streams of melt glacial water, with inherited river valleys. The cultural and historical landscape of the Izborsko-Malskaya valley is characterized by a balanced combination of the natural and anthropogenic components, aesthetic appeal and economic feasibility, which all together created the cultural and historical image of a national landscape, formed by the culture of many generations.

1. Introduction

The Pskov region is Russia’s western borderland with a singularly rich history, spectacular scenic and diverse landscapes. The relatively small Pskov region (by Russian standards) is home to numerous cultural, historical and landscape complexes. A cultural-historical landscape is understood as an integral historical-cultural and natural formation that developed in a specific territory with certain homogeneous natural (landscape) properties as a result of long-term interaction between the man and the landscape that occurred in the course of their coherent development [1].
The territory of the complex natural monument of regional significance Izborsko-Malskaya Valley and Izborsk State Historical-Architectural, Landscape and Natural Museum-Reserve, which were created here in 2008 can serve as a ‘multilayer’ cultural and historical landscape. The Izborsko-Malskaya valley is a single, integral natural-architectural ensemble, 30 km west of Pskov, where the modern villages, majestic Izborsk city fortress, scenic remains of the Malskaya fortress-monastery, numerous churches and chapels, large memorial stone cross (through legends associated with the legendary Varangian Truvor [2]) blend in with the vast expanses of natural landscapes.

2. Research methodology and methods

The characteristic features of cultural and historical landscapes are: originality, uniqueness (or typicality) of the natural environment and the historicity of the landscape (preservation of its historical appearance), abundance of monuments of historical, architectural and spiritual heritage, integrity and unity of the natural and anthropogenic components. The originality of a cultural and historical landscape is determined not only by its natural conditions, but also by the exploration and development by the man of a particular area in its historical retrospective. A characteristic of many cultural and historical landscapes is their economic position, great diversity and contrast of environmental conditions, which in turn determine the richness of the natural resource potential, and, consequently, the possibilities for the spiritual and economic development of such territories. The diversity of natural conditions also ensured their extraordinary aesthetic appeal, both in the past and in the present [1, 3].

Cultural landscapes, along with natural (indigenous) elements of the morphological structure and anthropogenically transformed components, include artifacts, socio-facts, mentifacts, which are major monuments of cultural heritage. They can serve as a kind of a ‘biographical chronicle’ of the vital activities of the population in certain landscape conditions at a particular historical time, a testimony to the material and spiritual culture of the society that created it [3].

The methodological base for the research was the findings of field route studies, large-scale landscape mapping at the key sites and an analysis of the source base reflecting complex landscape, component, paleogeographic, historical and archaeologat published and fund materials. Among these materials, the analysis and subsequent ‘crossing’ of landscape maps, archaeological and historical maps for the given territory had particular importance. Another important method of research was retrospective reconstructions of nature exploration and management and landscape-historical mapping involving the production of a series of multi-temporal maps for the key areas, which reflect the formation and development of the settlement structure, environmental management systems and cultural and historical complexes at a certain historical stage in specific landscape conditions. The series of compiled large-scale landscape-historical-archaeological and landscape-ecological maps and profiles are now at the stage of integration into a unified landscape-historical GIS.

3. Results

Izborsk (Truvo) settlement emerged no later than the turn of the VII and VIII centuries. The oldest Izborsk is associated with a well-known archaeological monument, the Truvorovo gorodische in the village of Stary Izborsk. Even then, Izborsk was far from an ordinary settlement. In the Ustuyug chronicle (reflecting the Smolensk chronicle), there is direct reference and evidence that Izborsk served as the tribal center of the Krivichi. Initially, Izborsk was built on a steeply sloping ledge of Devonian deposits – at the high cape (48 m above the lake) where a deep-bed stream flowed into Gorodishchenskoye Lake. From the outer (facing the enemy) side, the settlement was protected by a rampart reinforced with stonework, up to 6 m high, the moat being about 3 m deep. Long-term investigation and research by V.V. Sedov, an architect, showed that at its earliest times, the fortified settlement of the Truvorov gorodische had a pre-urban (‘proto-urban’) character [4]. Even then, it was distinguished by the presence of streets and a ‘veche’ area. During the initial period of its existence, representatives of various Baltic and Baltic-Finnish tribes lived in Izborsk, along with the Slavs. In the X century, an agricultural district with a dense network of settlements was formed around the city.
According to archaeological data, the construction of the Detinets (citadel) dates back to the beginning of the XI century [5]. The historical significance and archaeological uniqueness of this settlement has attracted historians’ attention for several centuries. In 2013, N.V. Lopatin, A.V. Mikhailov and E.A. Yakovleva drafted the concept of a project for the museumification of the Truvorov gorodische in Stary Izborsk (turning it into an archaeological park) [6].

In 1303 a new, originally wooden, Izborsk fortress was built on a different site – on Zheravya Gora (mountain), 400 m south of the site of the former fortress. At the same time, the first stone tower, Lukovka, was erected, dominating the entire Izborsk-Malskaya valley; and the stone cathedral of St. Nicholas was built, which has survived to this day. In 1330, the fortress was rebuilt into a stone one, which significantly increased its defensive capacity. At the turn of the XIV-XV centuries, the fortress was fortified, stone towers with loopholes were erected: Talavskaya, Vyshka, Ryabinovka and Temnushka; and a secret passage (about 40 meters long) to a spring well was arranged. The eastern and northern steep, and, in some places, even vertical slopes of Zheravya Gora, and deep moats on the western and southern sides made the powerful military fortification almost unassailable. The fortress withstood long sieges, the destructive power of battering guns and cannons, and the assault onslaught of a huge army (up to one hundred thousand men), which happened in 1480. On Zheravya Gora, after the construction of the fortress, the Cathedral of St. Nicholas the Wonderworker was erected. It is one of the preserved ancient monuments of the Izborsk fortress. The Cathedral of St. Nicholas the Wonderworker is first mentioned in the chronicles in 1341. The services at this church have not been interrupted since the day it was consecrated. At the beginning of the XVI century, with the development of artillery, the fortress was significantly fortified: the walls were thickened to reach up to 3, 7 m (the side walls) and up to 5 m (on the attack side of the fortress) [6, 7]. After the Northern War, the fortress lost its military significance and began to gradually decay. However, even now the Izborsk fortress still produces a formidable impression, surprising researchers and numerous tourists with its majesty and grandeur.

In addition to the memorial crosses near the Malsky Spaso-Rozhdestvensky Monastery (Onufriev Monastery), on the shores of Malskoye Lake, the Malsky portage cross was discovered. Portage crosses were special direction (road) markers that spread from the head of one river to that of another. In the X-XII centuries, a busy water trade route passed through the Pskov region – it was one of the branches of the famous historical route From the Varangians to the Greeks. This route connected Scandinavia and Byzantium, as well as various parts and cities of the Russian state; a network of large strongholds of the Pskov region formed along that route. The Velikaya River served as its mainstay (the most important stronghold being the city of Pskov), along with Chudskoye Lake, Pskovskoye Lake and the Narva River that provided access to the Gulf of Finland. Large tributaries and a system of portages connected the Velikaya River with the Sheloni, Polist, Lovati rivers in the basin of Lake Ilmen, as well as with the Western Dvina and the Gauja River with access to the Gulf of Riga. It should be noted that the development and operation of this essential water communication system became the backbone for the formation of this cultural and historical landscape.

The specific nature of the Izborsk-Malskaya valley is largely due to the style and features of its geological structure and the history of its relief development. The relief base is the Devonian cuesta, i.e., a bed of carbonate rocks, which abruptly breaks off in the north, by the southern shores of Lake Pskov [8]. The carbonate strata is represented by limestones and dolomites that accumulated over many millennia, almost 400 million years ago, at the bottom of a warm shallow sea. Linked ones to these limestones are also the karst processes that left behind numerous karst depressions and sinkholes, and karst springs’ outputs, in some places forming cascades of waterfalls [9]. The group of Slovenian Springs by the Gorodishchenskoye Lake is particularly scenic. These springs are first mentioned in the Book of the Major Maps: ‘From Pskov, thirty versts to the west, the city of Izborsk stands, by the Slovenian Springs’. The unique natural and historical monument of Slovenskiye Klyuchi is also a place of pilgrimage. The water in the Slovenian Springs or the ‘Springs of the Twelve Apostles’, as the pilgrims call this place, is considered healing and life-giving. The springs all have their own names: Love, Happiness, Health...But no one knows the particular name of each
spring; it is believed that after drinking water from one of the springs, a person will be able to feel its true name. There is a belief that he who drinks from all the springs will possess all of their properties. In the spring, the springs discharge increases sharply, and they form a cascade of waterfalls. The water temperature is around 8-8.5 C. The mineralization is 200-340 mg/l. The PH is 7.2-8.5. The power is 3.5-4 l/s [7].

Izborsk dolomite and limestone is decent building material. It was actually used in the construction of the local fortifications, and both dolomite and limestone are still used in construction to this day. Massive memorial and grave crosses were also made of limestone slabs. The most famous among such crosses is the so called Truvorov Cross, 2.2 m tall, erected at the entrance to the Trurovo gorodische and, according to one of the legends, on the grave of the legendary Truvar. These rock deposits are presented in the Shventoy and Sargayevsky horizons of the Frasnian stage. The Shventoy horizon is composed of sands, poorly cemented sandstones, siltstones, and clays. The Sargayevsky horizon includes the Snetogorsk, Pskov and Chudovsk layers, which are composed of dolomites, dolomitized limestones and marls with interlayers of clay and gypsum. The total thickness of the carbonates’ stratum in the Izborsk region reaches 43 m. Such outcrops are still found only on Snetnaya Gora (mountain) in the city of Pskov. Sections of the Snetogorsk and Pskov layers of the Sargayevsky horizon are considered in geological literature as stratotypes (standards) of these layers for the Main Devonian field of the Russian plate [10] and can be independent objects for scientific and educational tourism.

Even in the pre-Quaternary time, the limestones’ surface was severely dissected by erosion processes; and broadly speaking, the deeply trenched Izborsko-Malskaya valley was formed. Its width now reaches almost 800 m, and the depth of the trench is 40-50 m. The flat floor of the valley is currently occupied by a terrace above the floodplain, a floodplain and two lakes. In the Quaternary time, the last glacier only ‘sprinkled’ slightly its surface with a thin moraine, but left behind many lakes. In the valley itself, in the area of the village of Rogovo, a glacier dammed one of its sections with a layer of moraine; as a result, a large postglacial lake was formed. After the Obdekh River broke through this dam and another cofferdam formed, modern Malskoye Lake (total area of 0.6 km², average depth of 4.5 m, maximum depth of 11 m) and Gorodishchenskoye Lake (total area of 0.12 km², average depth of 2.1 m, maximum depth of 5.75 m) were formed. The lakes are fed principally by the groundwater; therefore, the water in these two lakes is colder than in other lakes, and more mineralized (in Gorodishchenskoye Lake, for example, the total mineralization exceeds 500 mg / l) [11]. By fishermen, Malskoye Lake is considered rich with roach and perch, and Gorodishchenskoye Lake – with pike.

Based on research by O.A. Tatarnikov and S.Yu. Pavlov [12], four areas can be distinguished that constitute the natural basis for the morphological structure of the Izborsk-Malsky cultural and historical landscape:

1. Ancient deep preglacial valleys, inherited by the channels formed by streams of melt glacial water and modern river valleys.
2. The elevated Izborsk abrasion glaciolacustrine plain.
3. Obozerskaya abrasion-depositional plain.
4. A rolling, end-moraine plain with kames.

The first area, in fact, is the deep, steep preglacial Malskaya valley, inherited by a large channel formed by streams of melt glacial water, with modern river valleys and lakes: the Smolka River, Gorodishchenskoye Lake, Skhidnytsia River, Malskoye Lake, and Obdekh River. The slopes are dissected by numerous short gullies and ravines. Landslide processes are common within the left slope. This territory is occupied mainly by small-leaved forests with oak, elm and ash trees and filbert undergrowth; pine forests and areas of dry meadows on sod-podzolic and podzolic soils. The bottoms of the ancient valleys are occupied by flat, poorly drained above-floodplain terraces of small rivers and floodplains with soddy-gley and shallow-marsh soils, as well as lowland bogs [12].

The elevated Izborsk abrasion glaciolacustrine plain is represented by relatively well-drained upland tracts, composed of moraine loams, overlying limestones and dolomites of the Upper Devonian
period. The soils are sod-calcareous eluviated and podzolized heavy loamy soils, which have been long and well explored and developed, this area being the oldest agricultural region in the North-West of the Russian Plain. Now most of it is occupied by arable land, meadows, hayfields; and in the past, oak forests were widespread here, which is testified by the names of the surrounding villages (Dubnik, Dubrovka, Podpubye).

The Obozerskaya abrasion-depositional plain is represented by gently undulating, shallow, moderately and weakly drained upland tracts on thin moraine loams and Limne-glacial sands, overlaying sandstones and clays of the Upper Devonian period. The territory is poorly developed and scarcely populated; most of it is covered with lichen-pine forests and cowberry groves over sod-podzolic and podzolic soils. A rolling, end-moraine plain with kames is the most elevated section of the relief of this landscape. Thick layers of Quaternary sediments (up to 20 meters or more thick) – moraine loams and fluvioglacial sandy loams – are covered with pine-spruce forests, admixed with broad-leaved species and areas of dry meadows, over podzolic and sod-podzolic soil [12]. The tracts are subdominant: moraine and kame hills, with a height of 5-15 m. The territory of this area is quite well developed.

The described territory belongs to the border area between the natural zones of taiga and mixed forests [13]. Along with the usual species of fauna and flora, typical for these zones, there are also rare species with small populations that are under strict conservation protection. Despite the first impression of the apparent forest-and-field appearance of the landscapes of the Izborsko-Malskaya valley, most of its territory is still occupied by forests, albeit following the island pattern. Secondary mixed and small-leaved forests here alternate with light taiga pine forests, and in some places with dusk spruce forests. Therefore, a unique combination of the faunal forms of taiga and mixed forests and ‘human-companion’ species developed here. Particularly interesting is the population of migratory birds, numbering almost 130 species. Since the Izborsko-Malskaya valley is located along the migration route of the birds flying southward from Northern and North-Eastern Europe and then back, its various landscapes attract birds for rest and feeding. Despite the ‘anthropogenized’ nature of the valley, its numerous rivers, streams and lakes with abundant plant food along the banks attracted such rodents as the water vole and beaver. Beaver dams and canals, fallen trees can now be found almost near the city of Izborsk itself [14].

Across the forests, meadows and marshes of this protected area, you can find almost half of the 160 plant species that are subject to conservation protection in the region under consideration. Among them there are such rare species as the Mediterranean species of waterwort (Asplenium trichomanes), a miniature fern, common at the limits of its distribution area and found nowhere else in the region. Noteworthy are also the Cotoneaster melanocarpus and the pear plant (common gromwell) which are both rare and phytogeographically important species. Of the 17 orchids that are generally rare for this area, 4 are included into the Red Book of Russia: yellow lady’s slipper (Cypripedium calceolus), red phantom orchid (Cephalanthera austiniae), fly orchid (Ophrys insectifera) and military orchid (Orchis militaris) [13].

4. Conclusion

As can be seen from the above, the territory of the Izborsk-Malskaya valley is distinguished by a rich history, the numerous events and developments of which sometimes had fateful significance not only for the region, but for the whole country as a whole. The emergence and development of the early city of Izborsk served as the landscape-forming nucleus for the development of this cultural and historical landscape. And the operation of one of the branches of the busy historical waterway from the Varangians to the Greeks became the backbone for the unique cultural and historical complexes of this territory. At the local level, the morphological structure of the natural basis of the Izborsk-Malsky landscape is unusually complex and diverse, which is due to its position in the border area between the natural zones of taiga and mixed forests, as well as by the particular features of its geological structure and the history of its relief development. The cultural and historical landscape of the Izborsk-Malskaya valley is characterized by a balanced combination of natural and anthropogenic components,
aesthetic appeal and economic feasibility, which all together created the cultural and historical image of a national landscape, formed by the culture of many generations.

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