

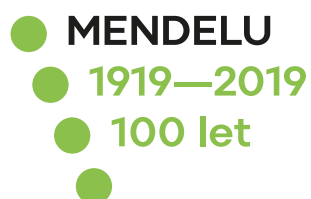
MENDEL UNIVERSITY IN BRNO

Czech Society of Landscape Engineers – ČSSI, z.s.,



and

**Department of Landscape Management
Faculty of Forestry and Wood Technology
Mendel University in Brno**



**Public recreation and landscape protection
—
with sense hand in hand...**

Conference proceeding

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of Markéta Vaňková, the Mayor of the City of Brno,
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of Klára Dostálová, the Minister of the Regional Development CZ,
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HERITAGE OF THE MEDIEVAL HUMAN ACTIVITY IN THE PRESENT LANDSCAPE OF THE NATIONAL PARK LOW TATRAS (SLOVAKIA)

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Abstract

Low Tatra Mts. located in the central part of the Western Carpathians and Slovakia has been, thanks to its nature and mountainous landscape, declared as protected area National Park Low Tatras in 1978. After re-assessment of its borders, the National Park covers an area of 728 km². National Park Low Tatras is one of the most visited tourist destinations in Slovakia. It includes specific conditions suitable for both summer and winter recreation and tourism development. Various geological, geomorphological and landscape beauties have been exposed by the human activity from the beginning of the settlement in this area in the 13th century. Significant impact on the land of the national park has begun with the development of intensive mining in the 15th century. Along with mining and metallurgy, in the forests of today's national park other crafts (lumbering and coal trade) developed. These activities changed the character of the landscape from the bottom to the upper parts of the lateral valleys in Low Tatras. From the 15th century, but mainly in the 16th century, another process occurred – Walachian colonization which more intensively changed the landscape and contributed to the recent character. Walachian colonization advanced along the main ridge, deforested the area and created recent unique scenery of the grassy uplands.

Key words: Low Tatras, national park, Middle Ages, anthropogenic activity, cultural landscape, tourism

Introduction

Low Tatra Mts. together with their valleys were used for economic purposes, especially by lumbers, miners and shepherds, ab antique. In the granite zone of the main mountain ridge rich mining activities were present. Precious metals (mainly gold) and iron ore were mined here. In the montaneous landscape old miners' trails, shafts and spoil banks have been preserved.

Shepherds had the largest impact on the landscape. Deforesting of the upper parts of the mountains (on its ridge) resulted into development of large grassy uplands – anthropogenic-formed created alpine grass fields. Such modified landscape was present in the area of Low Tatra Mts. at the end of Middle Ages (16th century). The uniqueness of this landscape, which is, by many visitors, considered as natural, has significantly contributed to the attractiveness of the mountains from the tourism perspective. Last but not least, unique grass formations also contributed to the definition and establishment National Park Low Tatras.

The aim of this study is, based on historical-archive study and field research, to describe the history of landscape transformation in the upper (ridge) part of the Low Tatra Mts, recently protected within the national park area. From the time perspective, the research is focused on the period of the Middle Ages. The paper highlights preserved relics of medieval landscape within recent land, mainly in terms of grassy uplands development.

Materials and methods

The main methodological principle in the process of Low Tatras' medieval historical landscape study was the use of archive research methods aimed at collecting and analysis oldest texts from the 16th century. This method is composed of classical steps of historical research methods (Gerber 1974; Hroch et al. 1985; Best and Kahn 1998; Dvořák et al. 2014). Following the archive study, detailed field research aimed at relics of historical medieval landscape in the upper part of the mountains was the most important part of the study. This research was performed from 2002 to 2018. Field research was performed using classical (verified) methods of landscape study (e.g., Gerber 1974; Hroch et al. 1985; Best and Kahn 1998; Dvořák et al. 2014, etc.)

Using GIS tools (ArcGIS 10.4) and using maps from the Landscape Atlas of the Slovak Republic (2002) (Map Nr. 39: Territorial Protection of Nature and Landscape and Map Nr. 87: Potential Natural Vegetation) and land-cover layer of Corine Land Cover (Copernicus 2018), extension of grassy uplands and anthropogenic deforestation in the area of National Park Low Tatras were visualized into maps.

Results

The National Park is located in the central part of Slovakia and the shape of its territory is extended in the west-east direction (Fig. 1). Even in the 13th century, the primeval forests in the mountains in the northern part of Slovakia, including the Low Tatras, were almost intact by human activity (Musil 2004). The ridge of the Low Tatras was covered by extensive forests of European beech (*Fagus sylvatica*), rising to 900 m above sea level (a.s.l.), and rarely higher. The mixed beech-fir forests, but especially the white fir-dominated primeval forests (*Abies alba*), rose up to 1100 m a.s.l. The highest parts of the valley were covered by coniferous forests, mostly white fir, with abundant spruce (*Picea abies*). Pure spruce forests were rare. Coniferous forests reached the upper forest boundary at an altitude of around 1800 m. a.s.l. The highest parts of the Low Tatras ridge grew in the level of subalpine dwarf-pine communities and in the highest parts of the massif there was a range of alpine meadows (Michalko et al. 1985; Michalko et al. 1986) (Fig. 2)

The first significant anthropogenic impacts on original forest land of Low Tatras were, from archives, noticed after the year 1230, when the area of Liptov as terra Lyptou is mentioned (Marsina 1971). In the second part of the 13th century, gradually settled forest area of Liptov on northern slopes of Low Tatras is mentioned in several archive documents. The area of southern slopes of Low Tatras, Horehronie, is historically mentioned later. In 1265, a settlement “Brezno” is mentioned as terra Berezun together with its forest area on southern slopes of Lower Tatras (Beňko 1998). In both cases, the term terra refers to the fact that the vast original forest grew in the area of Low Tatras which has been partially economically used, but with no permanent settlement.

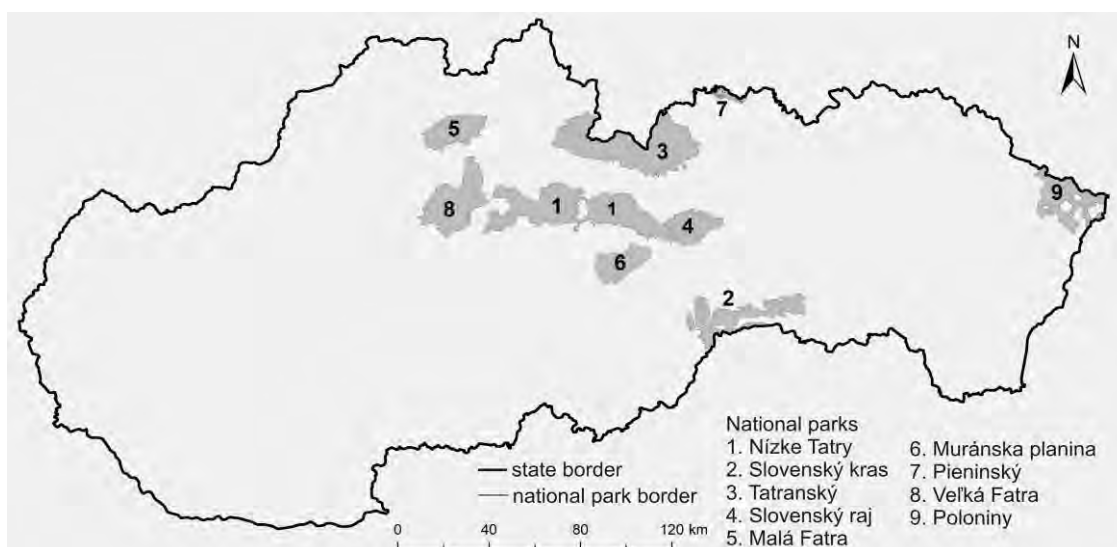


Fig. 1: Location of the National Park Low Tatras within the territory of Slovakia and compared to other Slovak national parks. Source: Landscape Atlas of the Slovak Republic, 2002 (Map Nr. 39 Territorial Protection of Nature and Landscape, Kramárik)

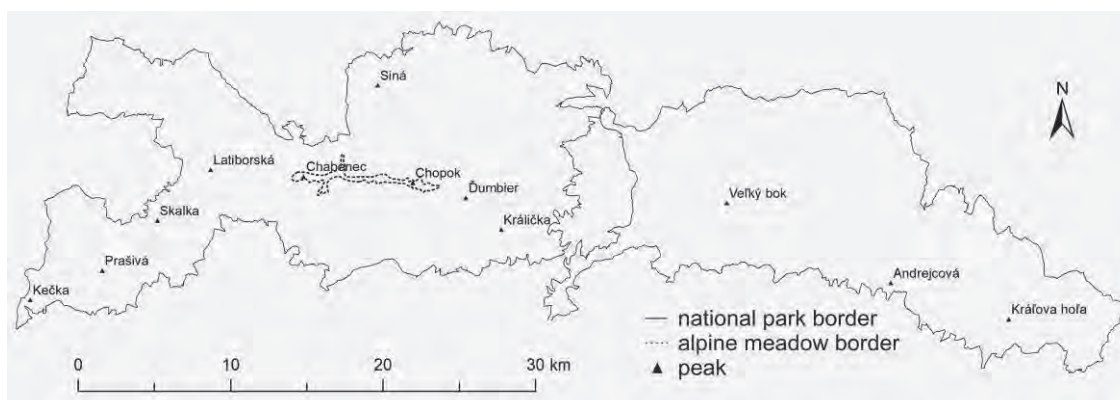


Fig. 2: Original extension of alpine grass fields (non-forest formations) in the upper parts of the mountains until the 15th century (before the first anthropogenic interventions) Source: Landscape Atlas of the Slovak Republic, 2002 (Map č. 87: Potential Natural Vegetation, Maglocký)

The change of the original primeval landscape in the geographical area of the Low Tatras begins in connection with the German colonization of the area, which ran from the first half of the 13th to the end of the 14th century (Rábik, 2001). The German element significantly contributed to the development of mining and accompanying crafts, which were the first to significantly change the appearance of the original primeval land. A strong stream of German settlement has been documented in the Liptov region since the mid-13th century. In the Horehronie region, in the vicinity of Brezno, it was during the 14th century (Lacko 2010).

The impact of mining and forestry on the change of the original forest land has begun to be manifested, at the latest, in the 15th century. Mining as the main cause of forest destruction was initially developed as surface gold panning in almost all northern and southern valleys of the mountain range, and the subsurface mining of precious metals has been intensively developing since the 16th century (Hronček and Budaj 2017).

The forest was the only source of fuel and an indispensable source of livelihood for the first settlers. It provided a variety of plant resources for food, was used to hunt for wildlife, which was inherently accompanied with poaching. A lot of forestry crafts were concentrated in the forest area following the mining that was the foundation of the economy. With the development of surface mining and gold panning, trees were also excavated and valleys deforested, which gradually moved further into the mountains along the streams (Hronček 2015). In the second half of the 16th century, extensive completely deforested areas and devastated land (Madlen 1962) were present as a result of extensive excavation of the original forests. As late as the 19th century, monocultures of spruce forests were planted in the mountains, which currently dominate in the country (Jančík 1954).

Since the 14th century, but especially in the 16th and 17th centuries, the Walachian colonization contributed to the creation of an anthropogenic landscape of the Low Tatras (Tomeček 2014). Walachs gradually settling Horehronie became a serious and irreversible transformation factor in the Low Tatras (Kvietok 1943). Walachs grazed their flocks of sheep and goats in forests that were intensely damaged. They destroyed forests not only "from below" against watercourses, as mining, but, above all, they began to create and expand pastures (grassy uplands) in the top parts of the ridge running out of the main ridge of the Low Tatras, as well as directly on the main ridge. Shepherding caused a reduction of the upper edges of the original forests by about 200 m altitude (Fig. 3). In the area of the anthropic upper forest boundary, the negative impact of shepherding was manifested directly by the excavation of the forest, which progressed towards water resources and indirectly by yearly trimming, barking, biting and peeling the tree bark. Growing vegetation led to shallow soil exposure and subsequent erosion (Midriak 1973; 1977).

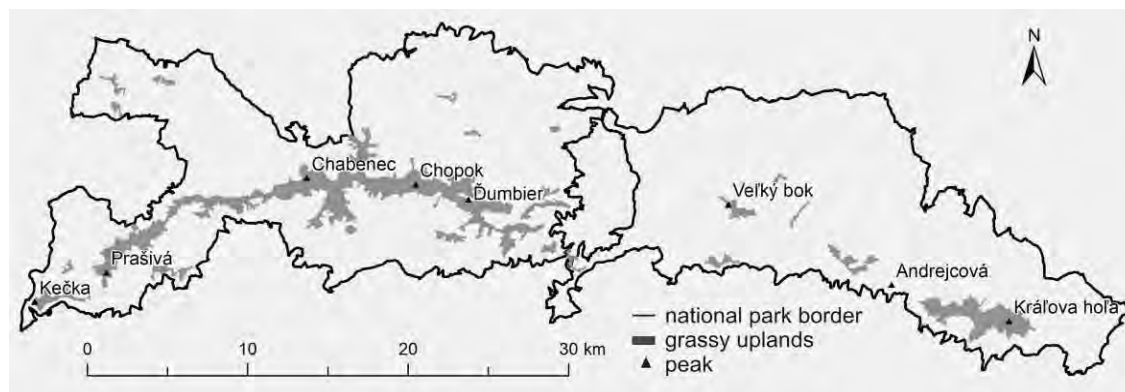


Fig. 3: Extensions of deforested upper parts of Low Tatras - grassy uplands that were created in the Low Tatras by anthropogenic activity already at the end of the Middle Ages and currently represent an important feature of the Low Tatras National Park as a relic of the medieval country, which significantly increases the attractiveness of the mountain range for tourism Source: Corine Land Cover (Copernicus 2018)

Conclusion

All these historical anthropogenic activities led to the fact that alpine landscape in the Low Tatras was "one great devastated territory" in the second half of the 16th century (Madlen 1962). The miners proceeded from below, against the direction of the mountain streams, and deforested the mountain range in the summit. The activity of geldings has led to the creation of characteristic hills. The mountain range of the Low Tatras has significantly changed the original, natural character of the forested mountain range to anthropogenic deforested landscape.

Paradoxically, anthropogenic grassy uplands as the main relic of the medieval lands significantly increased the potential of the current mountain landscape for modern tourism. Just in the anthropogenic deforested peaks of the mountains, in the second half of the 20th century, the most important tourist resorts were established. From the west, they are Donovaly, Chopok, Tale, or Certovica. Similarly, anthropogenic deforested valleys, such as Bystrianska, Demänovská or Revúcka dolina valley.

Even the most important (geo)tourist points (geosites) sought by tourists on the ridge of the mountain range are located in anthropogenic deforested parts of the country, e.g., from west Prašivá, Ďurková, Chopok, Ďumbier, Beňuška, Kráľova hoľa.

In conclusion, anthropogenically created parts of the country in the Middle Ages significantly increased landscape potential and the uniqueness of the country, leading to the declaration of National Park Low Tatras in the second half of the 1970s. In order to preserve its unique appearance even after the economic exploitation (grazing of sheep and cattle) of deforested peaks, this historic landscape requires active and intensive management from its protectors.

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Souhrn

Pohoří Nízke Tatry ležící v centrální části Západních Karpat a Slovenska bylo díky své jedinečné přírodě a horské krajině vyhlášené v roce 1978 za chráněné pod názvem Národní park Nízke Tatry. Po přehodnocení jeho hranic v roce 1997 má v současnosti rozlohu 728 km². Národní park patří mezi nejnavštěvovanější turistické destinace na území Slovenska. Disponuje podmínkami na rozvoj rekreačních aktivit letní i zimní turistiky. Jeho geologické, geomorfologické, ale především krajinářské jedinečnosti jsou vytvořeny činností člověka od počátku jeho osídlování ve 13. století. Výrazné zásahy do krajiny národního parku začaly až s rozvojem intenzivního hornictví na jeho území od 15. století. S hornictvím a hutnictvím se v lesích současného národního parku rozvíjely i další doprovodné řemesla - dřevorubectvím a uhliarstvo, které výrazně změnilo vzhled krajiny směrem z „ zdola "do vyšších částí bočních dolin pohoří. Od 15., ale především v 16. století, nastoupil další proces - Valaská kolonizace, který ještě výrazněji změnil krajinu a vytvořil její nynější vzhled. Valaské osídlení postupovalo hlavním hřebenem přičemž ho odlesňovalo a vytvořilo současnou jedinečnou scenérii lesního pásma.

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