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## Military landscapes of the Pryvododilni Gorgany as a premise for increasing tourist attractiveness of the area (the case of the Chorna Klyva mountain)

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**Abstract.** The article examines the potential of military landscapes for promoting environmentally sustainable forms of active tourism (aimed at both natural sightseeing and military history of the area) in the Ukrainian Carpathians region focusing on the case of military landscapes of the mountain Chorna Klyva (the Bratkovskiy Ridge of the Pryvododilni Gorgany).

The line of fortifications, which constitute their basis, used to belong to the so called “St. Laslo Line” built in 1939–1943 on the remains of the World War I fortifications. These fortifications (the system of trenches) were built in the upper parts of the mountain slopes allowing ideal observation of the lower areas and ensuring fire superiority along the border (at the time it was a border between Czechoslovakia and Poland). These trenches were designed in a way to organically use natural landscape features for both engineering and tactical purposes. Absence of intensive fighting as well as slow speed of natural recovery in that particular area contributed to a good state of their preservation often noted by occasional trail hikers. The goal of this article is to analyze both historical and natural conditions in which those landscapes have evolved as well as assess their current state. We discuss the prospects of promoting those landscapes as tourist attractions combining elements of natural scenery and sites of historical interest. The analysis is based upon historical geographic approach coupled with the original field observations. The article examines the most important features of those military landscapes, which can be used for tourism promotion in the area. An overview of comparable international experience in promoting military landscapes as tourist attractions is given to emphasize the potential of the area in question, which so far has been neglected by local communities and tourism businesses alike. We point out the factors limiting tourist flows, yet, at the same time, we argue that promotion of military landscapes will boost the number of visitors in the area generating demand for tourist services, hence promoting small business development. We argue that boosting such forms of tourism can bring positive effect to local communities and promote the area between Svydovets and Pryvododilni Gorgany ranges in the Chorna Tysa river basin for better preservation of the unique natural and historical sights. For the first time, a comprehensive study of historical events and natural landscapes in a specific area at the Chorna Klyva mountain has been performed with the focus on how human activities have conjoined with the natural landscape processes resulting in what we now call military landscapes. The obtained results prove that these military landscapes are of significant natural and historical value and can be successfully promoted as tourist attractions.

**Keywords:** military landscapes, Chorna Klyva mountain, Bratkovskiy ridge, military tourism, natural and cognitive tourism

## Белігеративні ландшафти Привододільних Горган як передумова підвищення туристичної атрактивності району (на прикладі г.Чорна Клива)

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**Анотація.** У роботі наводяться результати дослідження белігеративних ландшафтів та можливостей їх використання для підвищення туристичної атрактивності верхньої частини басейну р. Чорна Тиса у межах Братківського хребта (Привододільні Горгани). Метою роботи стало вивчення історичних та природних умов формування белігеративних ландшафтів у привершинній ділянці гори Чорна Клива та оцінка їх сучасного стану і перспектив використання для просування та розвитку екологічно сталих активних форм туризму. В роботі проаналізовано теоретико-методологічні основи дослідження белігеративних ландшафтів, також розглянуто питання використання подібних ландшафтних комплексів в туристичній сфері в Європі загалом та Українських Карпатах зокрема. Методологічно дослідження ґрунтується на історико-географічному підході, розробках з планування та організації турів та результатах власних експедиційних ландшафтознавчих досліджень. Белігеративні ландшафти даного регіону є прикладом антропогенномодифікованих природних комплексів високогір'я Українських Карпат. На дослідженій території розташовані залишки фортифікацій, що входили до складу частини оборонної лінії Арпада, побудованої в період 1939–1943 років на основі укріплень часів I-ї Світової війни. Вони нині становлять як військово-історичний, так і природопізнавальний

інтерес. Представлені у межах г. Чорна Клива белігеративні ландшафти відносяться до двох типів польових белігеративних ландшафтів, таких як: укріплення для закриття позиції від дії вогню, перешкоди від штурму та довгострокові белігеративні ландшафти. Головними причинами, що зумовили їх добрий стан збереженості, визначено: відсутність інтенсивних бойових дій на даному відрізку лінії оборони під час II-ї Світової війни, особливості природних процесів самовідновлення ландшафтів та господарське використання даної території. У статті зазначено, що популяризація белігеративних ландшафтів як комплексних об'єктів природопізнавального та військового туризму сприятиме зростанню загальної кількості відвідувачів у регіоні, що, у свою чергу, створить попит для розвитку малого бізнесу у сфері надання туристичних послуг, та сприятиме збереженню даних природних комплексів та історичних пам'яток території.

*Ключові слова:* белігеративні ландшафти, гора Чорна Клива, хребет Братківський, військовий туризм, природопізнавальний туризм

**Introduction.** Advancing environmentally sustainable forms of tourism with educational component requires promotion of tourist attractions, which can serve as examples demonstrating various natural and/or social processes, phenomena, and events at both scientific and popular level. Hence, there is a need to reevaluate the way in which the already well-known sites are promoted and think about promoting the new ones.

In this light, military landscapes (ML) make a potentially interesting resource for tourism. By *military landscapes* we mean a genetically specific type of landscapes, which evolve in the combat zones, where either actual fighting took place or special preparations for it were made. In other words, those landscapes that formed because of the military activities (Milkov, 1973). H. Denysyk and O. Antoniuk (2017) believe that military landscapes are self-sufficient and important sites of combined natural and manmade origin. They preserve social history of a certain period and, at the same time, represent natural processes of the area, therefore being of great educational importance. The current consensus is that the most efficient way to use military landscapes is by promoting them for recreation (Antoniuk, 2010) and tourism activities, especially for the natural sightseeing and educational types of tourism (Bortnyk, Kravchuk, Kovtoniuk & Lavruk, 2018) as well as for military tourism (Kushnariov & Polischuk, 2014) preserving the sites with their historical and cultural heritage.

Of the previous research done in this direction, we can mention a number of works stressing the importance of military landscapes for preservation of historical and cultural heritage in general (Antoniuk, 2007, 2010; Denysyk & Antoniuk, 2017; Korzyk, 2009). There are also contributions exploring military landscapes' potential for tourism (Ierko & Melnyk, 2016; Nosa, 2015; Polischuk, 2014 (a); Semeryaga, 2014 (b)). And yet, in spite of the number of works published over the last decade promoting tourist attractions in the Carpathian region, e.g. (Giletskyj, 2009; Palkov, 2012), the military landscapes found on the popular hiking and cycling trails, specifically those in the Gorgany, Pryvododilni Gorgapny and Chornohora ranges, are often overlooked due to, among other rea-

sons, the lack of information about historical events, which took place in those areas. There is a big gap in spotlighting historical and geographic features of the military landscapes in the area in question in scientific and popular educational publications. Contributions of this sort would be useful for trail arrangement and could help drawing a larger number of visitors boosting tourism activities in the region.

In our previous research (Halahan, Kovtoniuk & Korogoda, 2018) we stressed that there are only few if any applied works in Ukraine focusing on military landscapes in the mountainous areas combining both historical and natural perspectives and investigating their potential for direct involvement in tourism activities. Therefore, the aim of this article is to investigate the history of construction and use of fortifications as well as their natural features and social factors, conditioning the current state of the military landscapes of the upper areas of the Chorna Klyva mountain (Bratkivsky ridge of the Pryvododilni Gorgany range). This will allow considering those landscapes as potentially attractive for natural sightseeing, educational, and military tourism.

**Data and research methods.** As H. Denysyk and O. Antoniuk (2017) note, successful exploration and preservation of military landscapes require understanding of their integral nature and inseparability of natural and manmade heritage. Therefore, for the study of the military landscapes in the upper areas of the Chorna Klyva mountain, we employed the historical-geographic approach (Semeryaga, 2014 (a)), relying on the published literary sources, archived materials and maps on history and geography of the area and combined those with our own field observations of the sites. Our conclusions on the potential of the area to attract visitors premise on the work of O. Lubiceva (2003) on tourism activities planning and arrangement.

**Results and their analysis.** Military landscapes are attractive for visitors as integral fortification sites with unique history of their formation and because of significance of historical events related to them. Their attractiveness is also strengthened by the natural sightseeing potential. At the same time, an im-

portant factor is their physical accessibility (time and effort spent on getting there should not considerably exceed the time spent and satisfaction experienced at the site).

International and domestic experience shows that military landscapes of various sizes, locations, time of creation and purposes can be equally attractive for visitors. In Europe, there are museums created on the numerous remains of the well-known fortifications of the World War I and World War II periods. Sites along the Atlantic Wall and the Maginot Line in France and the Salpa Line in Finland are used for organized excursions; the unfurnished fragments of the Mannerheim Line (built by Finns, now the territory of Russia), the Stalin Line (the Kyiv city fortification area, Ukraine) and others are destinations for both organized and unorganized visiting. Popular sites not only include those with ferroconcrete structures but also those preserving remains of trenches constituting part of the military landscapes.

In Ukrainian Carpathians, military landscapes mostly formed as a result of defense preparations during the World War I and World War II. In 1939–1944, the Hungarian government has constructed the system of fortifications under the common name of the “*Arpad Line*”, which stretched across the territory of today’s Poland, Slovakia, Ukraine, and Romania. It included both newly built and already existing fortifications remaining from the World War I and the interwar period. Those fortifications were installed utilizing topographic features of the area. They were mostly located along ridge crests and valleys of the biggest rivers. Overall, the fortification system was almost 600 km long and up to 70 km wide. The line was not continuous and consisted of separate nodes and several defense lines built at various times. Of those, the major ones within Ukrainian Carpathians included the *Hunyadi Line* along the Outer Carpathians ranges, *Szent László Line* along the Central Carpathians ranges, and the *Árpád Line* stretching 15–20 km to the west of the *Szent László Line* with the defense nodes in the valleys of Tysa, Teresva, Tereblia and Latorytsia rivers and their tributaries (Semeryaga, 2014; Szabó, 2002).

At present, those fortifications are sites of military and educational tourism (Polischuk, 2014 (b)) maintained and promoted by the interested local hospitality businesses and NGOs without sufficient regional government support (Nosa, 2015). There are several destinations in the region with available organized excursions to the military history sites (Nosa, 2015; Turystychnyj marshrut “*Liniia Arpada*”):

1) the vehicle route *Árpád Line* (190 km long, designed by F. Shandor) through the towns and villages

of Svaliava, Uklyn, Verkhnia Hrabivnytsia, Pidpolozzia, Huklyve, Mizhhir’ia, Synevyr;

2) the *Árpád Line* museum in the village of Kolochava;

3) the *Árpád Line* hiking trail (1.5 km long, designed by the NPP *Synevyr* staff)

The latter one, representing the Synevyr section of the Khust direction of the *Árpád Line*, can be considered an example of military landscapes being used for tourism purposes. There is a maintained, technically and informationally equipped trail amidst ferroconcrete structures and earthen trenches. The above mentioned trails are quite popular among both domestic and foreign visitors.

At the same time, military landscapes of the central part of Ukrainian Carpathians are not at all represented by the military history trails. The Bratkovskiy ridge in the south-eastern part of the Pryvododilni Gorgany is among such unrepresented districts. It belongs to the medium-height ridges and stretches for 15 km to the north-west of the Legion Pass to the valley of the Dovzhyna stream. Above the flattened upper area of the ridge, there rise arched-topped and soft-featured peaks of Durnia, Hropa, Mala Bratkovska, Ruska, Chorna Klyva, Chornyi Hrun. The highest elevation point in the area is Velyka Bratkovska mountain – 1788 m.

Along the ridge axis, there lies the fragment of the so-called “thousand-year borderline” separating countries or their administrative parts. At various times it separated Hungary and Rzeczpospolita, Hungary and Galicia within the Austro-Hungarian empire, Poland and Czechoslovakia (the latter is still visible by the remaining stone border poles marked «ČS» on one side and «P» on the other, see Fig. 1), Hungary and the USSR, and, these days, separating Zakarpattia from Ivano-Frankivsk and Lviv oblasts of Ukraine.

In the upper area of the Bratkovskiy ridge, there stretches the fragment of the *Szent László* fortification line. It was designed to cover possible troops withdrawal from the *Hunyadi Line* to the *Árpád Line* positions. Creation of this fortification line began simultaneously with the creation of the *Árpád Line* fortifications in the river valleys in 1939. Remains of the World War I fortifications built between 1914–1916 were used as the basis for the construction. In 1943 the finished fortification line got its name in honor of *Szent László* – one of the most notable kings of Hungary of the *Árpád* dynasty. The line was not continuous





Fig. 1. Borderline pole #35 at the top of the Chorna Klyva mountain (photograph by O. Kovtoniuk)

and consisted of smaller strongpoints, covered firing points, and machine-gun pits. It is worth noting that, within the Bratkovskiy ridge, the *Szent László* fortifications have never been part of an actual battlefield, especially during the *East-Carpathian Operation*, which was happening in September-October 1944. It is probably due to this fact that they remained intact until the present day (Halahan et al, 2018; Ravasz, 2006; Szabó, 2002).

Remains of one of the defense strongpoint of the *Szent László* line is located in the upper area of the Chorna Klyva mountain. It can be potentially interesting to those visitors who, for various reasons, do not have an opportunity to hike along the whole Bratkovskiy ridge but wish to get a first-hand impression of the fortification line. For the most part, the Bratkovskiy ridge is a rather remote area. Visiting most of the sites along the ridge requires a several-day hike with a certain degree of trailing experience. At the same time, there are remains of several fortification points located close to each other at the upper area of the Chorna Klyva mountain, which can be accessed by an average visitor without special physical requirements during a one day relatively easy hike. The mountain is located in close proximity to the Chorna Tysa village. An important factor that can boost attractiveness of this site is its close proximity to the quite popular trail “To the Origin of Tysa” (Giletskyj, 2009; Halahan, Kovtonyuk, Korogoda & Tsvelykh, 2017) as well as to the trails from Svydovets to Gorgany (see Fig.2). If properly arranged, attending the Chorna Klyva mountain can become either part of those trails raising their popularity, especially among foreign visitors, or a self-sufficient destination for historical, military and natural sightseeing tourism.

Among other things, ascend to the Chorna Klyva summit offers an opportunity to explore the variety

of natural landscapes of the Pryvododilni Gorgany at various elevations in a compact timeframe. Under approximately 1450-1500 m above the sea level, the slopes are covered with the spruce forest, which change upwards to *krumholtz* composed of mountain pine, juniper, blueberry and lingberry shrubs. The upper areas, with the elevations over 1500 m, are sometimes covered by the loose stone fields, typical for the Gorgany (Halahan et al., 2018). The panoramic view, which opens from the summit, allows to learn the orographic structure of Ukrainian Carpathians as well as reveals differing features of its parts: the ranges of Gorgany, Svydovets and Chornohora. This kind of information may be used for the nature-learning content of excursions.

The military landscapes at the Chorna Klyva mountain, according to the Semeryaga's classification (2014 (b)), belong to the *open* type, which include fortifications for protecting positions from gunfire and making obstacles to enemy's assault (breastworks, sconces, trenches, connecting corridors) as well as entrenchments and manmade barriers. There is also the long-term type of military landscapes present in the area including blindages and wooden-earthen fire-points, etc.

One may distinguish two parts of the military landscapes at the Chorna Klyva mountain. The first one is a fragment of the fortification line stretching along the ridge crest. It consists of separately located entrenchments and fire-points at elevations within 1600-1700 m range above the sea level looking over the northern slope of the ridge. Those were designed to protect the frontier against the possible onslaught from the upper Bystrytsia Nadvirnianska and Dovzhyzna basins as well as from the watershed between them. Fortifications were arranged in the gravelly soil. Those positions were additionally protected by the barbed



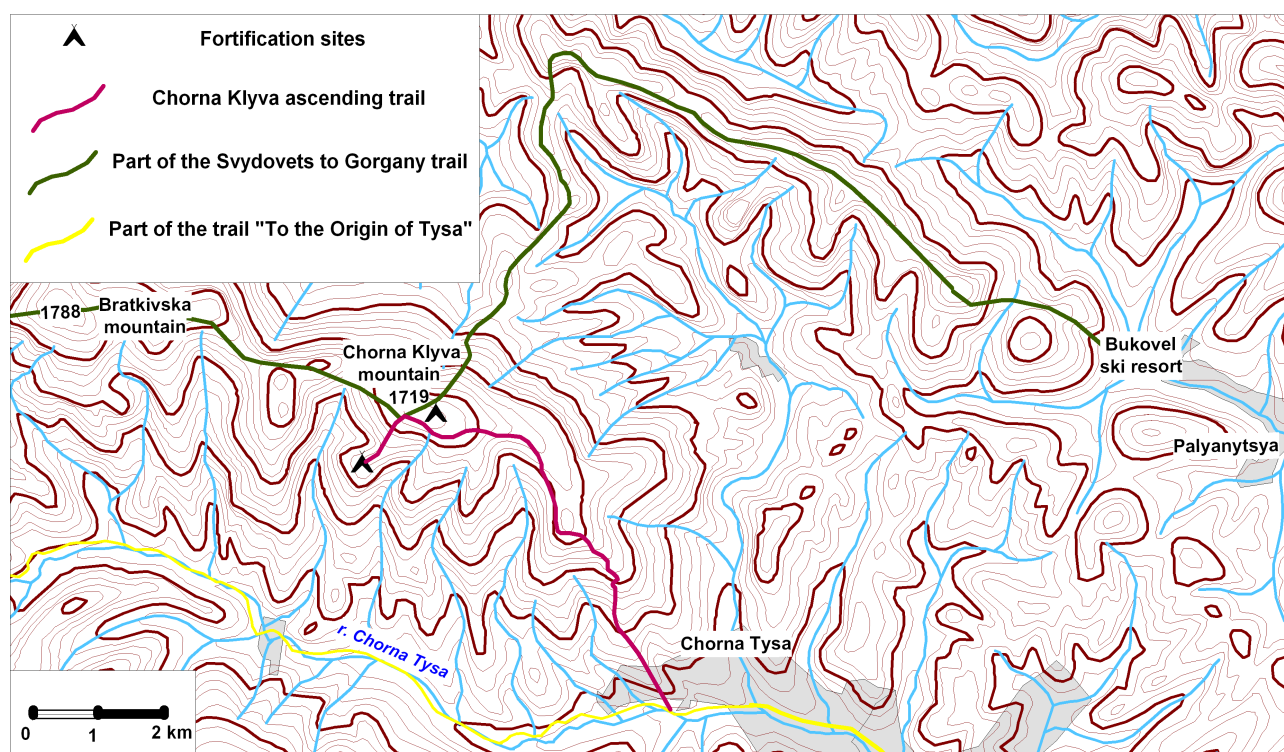


Fig. 2. Location of the military landscapes in the upper part of the Chorna Klyva mountain and popular trails

wire, still remaining on the slopes and posing a certain danger of injury to those leaving the trail. Czechoslovakian post-cards issued during the interwar period give the idea of how those positions looked like. One of the post-cards (see Fig.3) depicts the fortification at that period with the inscription on the other side “*Yas-ynia. Chorna Kleva. War-time barbed wire obstacles*” giving a clear location reference.

Analysis of the literary sources, maps and archived materials allows comparing vegetation covering the area in question. The topographic map issued in 1935 by the Military Institute of Geography (Wojskowy Instytut Geograficzny (WIG)) in Warsaw designates the upper areas of the Bratkivsky ridge (including the Chorna Klyva mountain) as *moorlands and pastures* (see Fig. 4). According to Stoyko (2012), it was



Fig. 3. A post-card depicting fortifications on the Chorna Klyva mountain during the interwar period (Postcards.Carpatho-Ukraine)



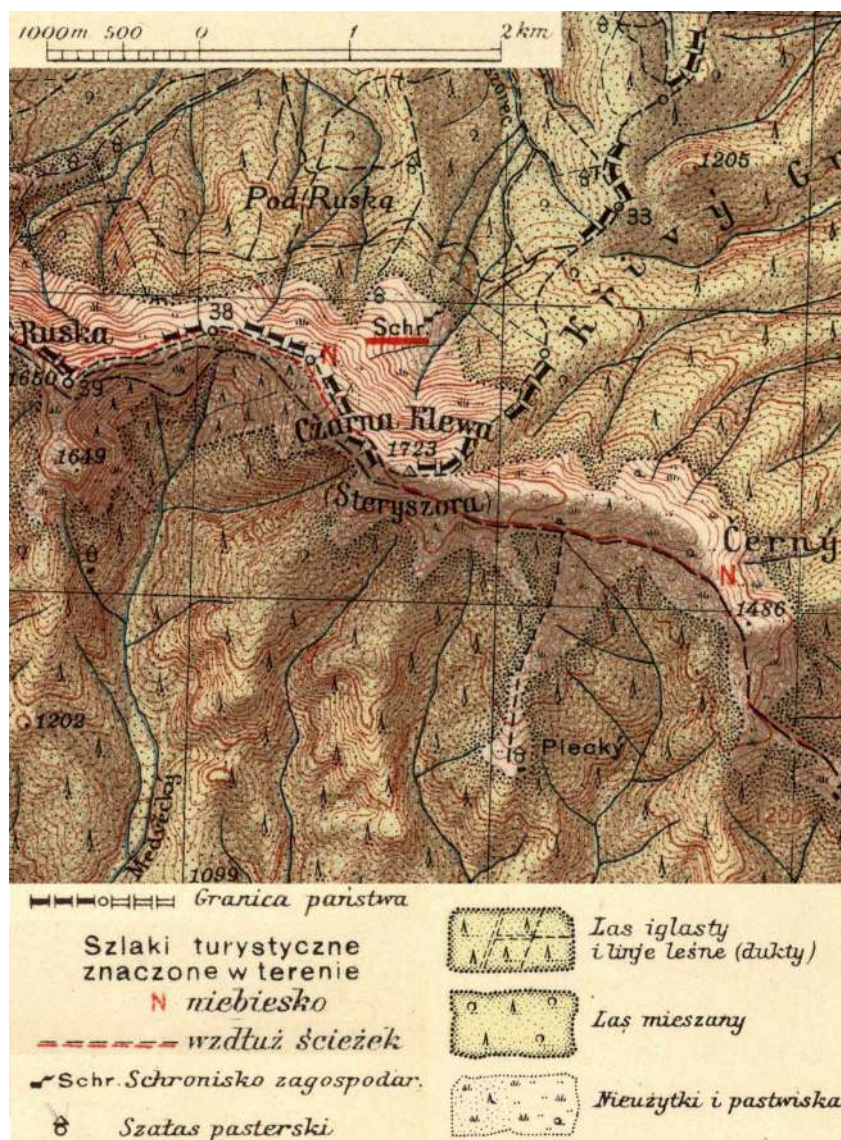


Fig. 4. A fragment of the topographic map «PAS 55 SLUP 38 RAFAJŁOWA» (1935 p.) (Topograficheskiye karty zapada Ukrainy)

since the early 17<sup>th</sup> century, that the vegetation typical for the subalpine belt (1600–1800 m) in this area, including green alder (*Alnus alnobetula*), junipers, and mountain pine has been destroyed in order to extend pasture areas. This led to formation of secondary grasslands and extended areas covered with shrubs of blueberry and lingberry.

Nowadays, since herding is almost extinct in the area, mountain pine and juniper krummholtz, as well as sparse growth of spruce trees appear to restore amidst blueberry-lingberry-moss covered moors. Remains of the entrenchments and fire-points are only partially turfed. The current appearance of the fortifications at the Chorna Klyva summit is representative of the current state of the whole fortification line along the ridge (see Fig. 5a, b).

In addition to the main defense line, there also are remains of the command point. It is located on the transversal spur of the main ridge dividing Velykyi

Vedmezhyi and Malyi Vedmezhyi streams' basins about 1 km away from the Chorna Klyva summit at the elevation of 1540m above the sea level. It is accessible by the trail along the slope and the dirt-road. At the flattened surface of the watershed, there is an earthen breastwork, two lines of trenches encircling the position and remains of the blindage (see Fig. 6). Unlike the trenches along the ridge, these ones are strengthened by the uncemented sandstone plates. At the time of construction, according to the map (see Fig. 4), the slopes were covered with the forest masking the fortification. These days, the slopes of Velykyi Vedmezhyi and Malyi Vedmezhyi streams' valleys are also covered with spruce woods, which do not hinder the spectacular view of both upper ridge and the defense line. In addition to the strongpoint features and location, there are remains of the cart-roads approaching the point along both stream valleys and the watershed giving evidence to the fact that the site





**Fig. 5.** Fragments of the fortification line on the summit of the Chorna Klyva mountain.  
**a** – turf covered line of entrenchments in front of the view of the Dovbushanka ridge (Gorgany range);  
**b** – turf covered fire-point trenches (photographs by O. Kovtoniuk)

served as a command point. A fragment of the road cut into the slope and strengthened with stone retaining walls is observable between the two locations.

It was mostly natural features, namely steepness of the slopes and depth of erosion, which conditioned the advantage of the Chorna Klyva Mountain for locating a defense strongpoint there. At the same time, gravel screes (evolved as a result of sandstone denudation) offered natural material for strengthening the fortification. A more detailed analysis of the geomorphological conditions, in which the military landscapes of the Bratkivsky ridge were created is given in our work elsewhere (Halahan et al, 2018).

Fortifications at the Chorna Klyva mountain are generally well preserved for the two main reasons. Firstly, this portion of the defense line was spared from becoming an actual battlefield, thus the fortifications were saved from physical destruction. Secondly, the area has very slow rate of natural landscape restoration due to the specifics of geological, geomorphological and climatic conditions.

Of course, attracting visitors to the above-described sites requires, at the very least, elementary arrangements with marking trails and placing information stands at points of interest. Good examples of

similar projects implemented in Ukrainian Carpathians include “Geo-Carpathians” (Bubniak & Solecki, 2013) as well as the “Arpad Line” hiking trail (Turystychnyj marshrut “Linia Arpada”).

International experience provides numerous examples of economic development in similar areas by promoting sustainable forms of tourism, which creates demand for tourism-related services but still focuses on preservation of the natural environment and historical heritage. The most popular forms of such tourism are hikes and horse-riding excursions along specially designated trails with pre-arranged spots for resting, drinking water, camping and sheltering with controlled trash and waste management. Such forms of tourism promote healthy lifestyles, popularize natural and historical-ethnographic heritage of the area and preserve both unique natural landscapes and man-made historical artifacts.

We believe that the best infrastructure model would comprise large hotels within bigger settlements (the town of Yasynia), smaller lodgings in private homesteads (green tourism) within smaller villages (the village of Chorna Tysa) as well as small autonomous shelters and designated camping sites along the trails arranged at distances allowing easy one-day





**Fig. 6.** **a** – Fragment of an earthen breastwork next to the command strongpoint. **b** – coil of barbed wire in front of the earthen breastwork. (photograph by O. Kovtoniuk)

hikes to the most important tourist attractions in the area. Active involvement of local households into the hospitality business is instrumental for improving employment among the local population.

The overall strategy of exploiting military landscapes as tourist attractions may include the following tasks:

Promoting these attractions.

Planning trails with regard to various categories of visitors based on their physical conditions.

Furnishing the trails: marking it in the field, installing litter bins, assigning spots for resting and camping.

Identifying key requirements for tourist infrastructure: driving access to the trail start points, availability of the appropriate vehicles, time saving options of lodging.

Involvement of a wider circle of stakeholders in order to promote this kind of recreation and drawing a larger number of local people into the hospitality business. We mean promoting joined efforts of the already involved local businesses, tourist agencies, local governance bodies, NGOs (both domestic and international), potential investors, and the public. International experience in promoting sustainable forms of tourism in similar areas is of great importance here.

Inviting professionals for actual excursion arrangement, namely professional tourist guides and carriers.

**Conclusions.** The article represents a study of the military landscapes in the upper areas of the Chorna Klyva mountain, which allows us to treat them as integral sites with rich natural and cultural heritage with strong potential of becoming a tourist attraction. The factors contributing to this potential are as follows:

1. Military landscapes at the Chorna Klyva mountain are in a well preserved condition;

2. They are representative of the fortification sites all over the Bratkovskiy ridge, thus giving a good impression of the whole fortification line;

3. The variety of natural landscapes is highly representative of the natural variety of the Pryvodosilni Gorgany range, while the panoramic view from the summit provides a great visual representation of the geomorphology of Ukrainian Carpathians highlighting differing features of their parts;

4. Already existing and quite popular trails in close proximity to the military landscapes of the Chorna Klyva mountain makes it easier to add those sites to the list of tourist attractions in the region.

Making the most out of the tourist attracting potential of the military landscapes at the Chorna Klyva mountain depends on the two key tasks. The first one is promotion of these sites and integrating them into the list of well-known tourist attractions in the region. The second one has to do with the general development of tourist infrastructure allowing for better accessibility of the area opening it for hiking



and horse riding excursions, thus making it accessible for visitors with weaker physical conditions. In this way, it could contribute to promoting sustainable forms of tourism in the area.

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