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## Landscape Background for Tourism and Recreation Development in the Pokutsk Carpathians (Ukrainian Carpathians)

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**Abstract:** The presented research shows the analysis of natural resources of the Pokutsk Carpathians in context of tourism development. The Pokutsk Carpathians constitute one of the most diverse regions of the Ukrainian Carpathians in terms of environment conditions (geological structure, relief, climate, water, soil, fauna and flora) and economic development. Based on field study and the analysis of cartographic materials, the authors classify the Pokutsk Carpathians subregions into five categories representing different degrees of suitability for recreation and tourism. This classification is predicated on a detailed description of crucial animate and inanimate environment features and the inventory of protected areas.

**Keywords:** tourism, recreation, Pokutsk Carpathians, Ukrainian Carpathians

### 1. Introduction

The Ukrainian Carpathian mountains are one of the most interesting regions of the East Carpathians. The following mountain ranges have earned considerable popularity among tourists: Chornohora, Svydovets, Skole Beskids, Pokutsk Carpathians (Hetman, 2010; Hrytseliak, 2016). The Pokutsk Carpathians are a part of the Ukrainian Carpathians, and are located between the Prut river and its right-back tributary – the Cheremosh river, in the Kosiv and, in part, the Verkhovyna district of the Ivano-Frankivsk region. This part of the Carpathians constitutes a natural-economic region within the mountainous section of the ethnographic region of Pokuttia. In terms of physico-geographical division, the Pokutsk Carpathians encompass the northwestern part of the low Pokutsk-Bukovynian Carpathians in the low Skebian region and

the northwestern part of the mid-mountainous Pokutsk-Bukovynian Carpathians district of the Middle-Skebian Region (Melnyk, 1999; Gostiuk and Melnyk, 2017). Due to a considerable variety of natural resources and good accessibility, in recent years the Pokutsk Carpathians have become an important tourist and recreational region of the Ukrainian Carpathians (Prorochuk Ed., 2013; Hutyriak, 2016; Brusak and Dimbrovska, 2017; Gostiuk, 2018b).

The study aims at analyzing the natural resources of the Pokutsk Carpathians in the context of attractiveness from the standpoint of recreation and tourism. The study pursues to analyze the landscape structure of the study area, which serves as the basis for the assessment of attractiveness of individual landscape units with regard to their tourist potential.

### 2. Area descriptions, methods and material studied

The analysis of landscape spatial differentiation for the purpose of reclamation and

development of the Pokutsk Carpathians was performed with regard to the following source

materials: landscape map of the study area prepared by the authors in accordance with the G.P. Miller's (1974) mapping method of mountain areas at the scale of 1:50 000 (Gostiuk and Melnyk, 2017), topographical, geological and geomorphological maps at 1:50 000 (Vashchenko, 1968), tourist map of the Pokutsk Carpathians at 1:50 000 (Hutyriak, 2016), tourist map of Kosiv district at 1:80 000 (Brusak et al., 2011). Furthermore, the authors made use of 5x5 m Google Earth images and data collected during own field research and expeditions. The study was also supplemented with stock materials obtained from the national nature

park "Hutsulshchyna" and a number of literary sources (Brusak and Kobziak, 2008; Brusak et al., 2011; Gostiuk, 2016, 2018a; Prorochuk Ed., 2004, 2013; Stefurak Ed., 2018).

All materials were processed with the use of the ArcGIS 10.0 software, which resulted in the creation of a digital database containing information on the landscape structure of the study area, nature protection objects of the Pokutsk Carpathians and little-known objects deemed valuable from a scientific, cognitive, environmental or recreational standpoint. This served as a basis for analyzing landscape conditions with regard to recreation and tourism potential.

### 3. Natural resources of the Pokutsk Carpathians

The natural conditions of the Pokutsk Carpathians feature considerable diversity of flora and fauna as well as distinct geological structure and relief, temperate continental climate, which all combined translate into rich biological and landscape structure. The region is easily-accessible owing to a junction of asphalt roads which connect Kosiv and Verkhovyna, as well as a number of villages located in the valleys. The Pokutsk lowlands are characterized by dispersed rural development that fits into the relief

of not excessively high mountain ranges, gentle slopes, and steeply sloping river valleys often covered with beech and spruce forests. As far as the Pokutsk mid-lands are concerned, there is a prevalence of forest vegetation (mainly spruce forests), the ridges are covered with post-forest meadows (mountain valleys), and there are a few villages sited at the floor of river valleys. All this creates favorable conditions for the development of tourism and recreation.

#### 3.1. Geology and geomorphology

Taking into account the tectonic division, the study area belongs to the Inner Zone of the Precarpathian bend and the Skybian Carpathians zone, which are structural parts of the Carpathian fold region (Kravchuk, 2005).

From the geomorphological point of view, the Pokutsk Carpathians belong to the sub-region of the Pokutsk-Bukovynian Carpathians, and falls within two districts – the low-hill region of the Pokutsk-Bukovynian Carpathians and the region of the mid-hill terrain of the Skybian Pokutsk-Bukovynian Carpathians, as well as two sub-districts – the Pokutsk low-hill terrain and Pokutsk middle-hill terrain (Kravchuk, 2005).

The folded structure of Pokutsk is represented by the Kamenist, Karmatury, Brusnyi, Ploskyi and Maksymets folds (Liashchuk, 1963; Herenchuk, 1973). Accordingly, the Pokutsk Lowlands are a system of predominantly symmetric

anticlinal chains with broad ridges, steep and slopes, separated by syncline depressions. The ridges are composed mainly of flysch deposits with the prevalence of sandstone of the Cretaceous-Pleogenic age, as well as sandstone-argillite valleys and Paleogene shale flysch. Several low-hill mountain ranges with altitudes of 700–800 m a.s.l. (the Lebedin-Kamianystyi, Karmatura-Khominskyi, Brusnyi-Sokilskyi, Ploskyi-Glynystyi, Maksymetskyi (Liashchuk, 1963; Herenchuk, 1973) extend parallel to the edge of the Carpathian Mountains.

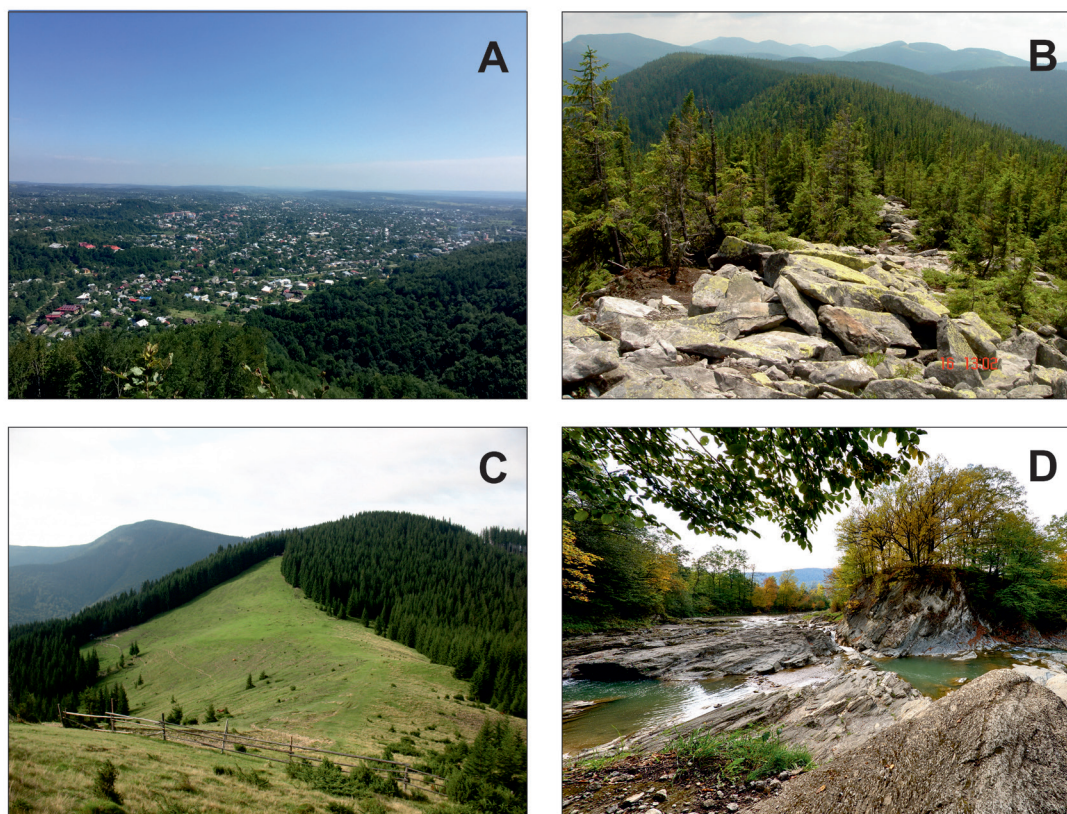
The Lebedyna-Kamianystyi ridge that runs along the border with the Precarpathian hills forms a well-defined orographic ledge, the height of which ranges from 250 to 350 m a.s.l. The absolute height of the ridge oscillates between 600 and 800 m a.s.l. (Mykhalkiv 812.4 m a.s.l.). The absolute heights increase gradually (Bukovets Ritskyi hill, 1059 m a.s.l. – the maxi-

mum height of the Pokutsk low-hill terrain). The transversal valleys of the Pistynkyi, Ribnitsa and Cheremosh cut deep and divide the ridges into separate segments (Liashchuk, 1963; Herenchuk, 1973; Kravchuk, 2005; Prorochuk Ed., 2013).

The Pokutsk middle lands encompass the Orevskaya Skyba and the Parashka Skybian Carpathians, and are predominantly composed of flysch deposits with the prevalence of sandstone of the Cretaceous age. They border with the Pokutsk lowlands to the north-east and the Vorokhta-Putyla lowland region of the Vododilno-Verkhovynian Carpathians to the south-west. The area of the Pokutsk middle lands features a distinctive asymmetry of the mountain ranges and their significant vertical and horizontal dismemberment. Furthermore, there is a prevalence of narrow and deep river valleys, which are accompanied by large-size drainage basins in the upper reaches. The ridges are mostly narrow, with rocky crests and slopes. The mountain range runs through the Orivskaya Skyba and features the following peaks: Gregot (1472 m a.s.l.), Black Grun (1387.5 m a.s.l.), Kopilash

(1155.5 m a.s.l.), Pysanyi Kamin (1221.4 m a.s.l.) and the Parashki Skyba – the mountain range of the Rotilo peak (1483.2 m a.s.l. – the highest peak of the Pokutsk-Bukovynian Carpathians), Gaborian (1444.5 m a.s.l.), Bila Kobyla (1476.9 m a.s.l.), Variatin (1038.5 m a.s.l.), Synytsia (1185.6 m a.s.l.), Lesnichka (1118.6 m a.s.l.) (Tsys, 1956; Kravchuk, 2005). There is a total of 21 tourist trails set out in the mountain range of the Pokutsk Carpathians (Hutyriak, 2016; Brusak, 2017). They vary in length and range from 2 to 30 km. They are believed to be of average difficulty level. However, taking into consideration a lack of sleeping accommodations (shelters, mountain hostels, lodges), tourists need to travel with a tent. The most attractive trails lead through the following peaks: Ostryj, from the top of which one can appreciate a marvellous view over the town of Kosiv and the foothills of the Carpathians (Fig. 1A); Rotylo, Pysanyj Kamiń, as well as the ridge of Sokilskij and Kamianystyj.

On the Pokutsk Carpathians territory there are a number of interesting geological objects



**Figure 1.** Landscape of the Pokutsk Carpathians: A – town of Kosiv at the foothills of the Pokutsk Carpathians (photo: Z. Gostiuk), B – Gregit peak (photo: L. Derzypilski), C – Polonina Preluky (photo: M. Tomych), D – Waterfalls on the Pistynka river (photo: S. Kantserenko)

that constitute nature monuments. Moreover, in the low mountains of the Pokutsk Carpathians there are stone complexes resting on top of individual ridges that are believed to be of scientific, cognitive, sports, megalithic and aesthetic value. The largest of said complexes include the ones on the Sokilskyi range, Ternoshora hill, Dovbush Stone at Zavoyela, Pysanyi Kamin hill. In the mid mountains, on the other hand, some of the highest peaks are covered with stone fields (locally known as *gorgans*), which constitute the main tourist and recreational attraction. Most notable stone fields are found on the Igrat range, as well as Gregit and Rotylo hills to name a few. From the mountaintops one can appreciate the picturesque view of

### 3.2. Climate conditions

The climate of the Pokutsk Carpathians is temperate continental, with mild summers and winters (Prorochuk Ed., 2013). Mean annual temperatures vary from +7.0 to + 9.0 °C. The average air temperature in July over the lowlands is +18.2, in the middle mountains it amounts to + 15.8 °C, and in January it is, respectively, -3.6 and -4.8 °C (Prorochuk Ed., 2013; Stefurak Ed., 2018). Annual rainfall ranges from 470 to 1500 mm, whereas mean annual precipitation is at 800–900 mm (Prorochuk Ed., 2013). Most of the precipitation occurs in the warm period (March–November), which stands for 73–87% of all rain (Prorochuk Ed., 2013; Stefurak Ed., 2018). Permanent snow cover occurs in the second half of January, and it melts by the end of March. Predictable snowfall and the presence

### 3.3. Water network

The rivers of the Pokutsk Carpathians have gorge-like valleys with waterfalls and channels of varied gradient. The largest waterfalls are the famous Sheshory waterfalls on the Pistynka river (Fig. 1 D) and Kosivsky Gukki on the Rybnytsia river. Lebedyn is the best known of all the lakes in the low mountains of the Pokutsk Carpathians within the Karmatura ridge. There are also many water springs in the region. At the foothills of the Pokutsk Carpathians, still within the Precarpathian Hills, there are mineral salt and hydrogen sulfide springs – the

the surrounding ridges and settlements (Fig. 1 B and C).

Almost all of the highest ridges and peaks of the Pokutsk Carpathians offer a view of the highest parts of the Ukrainian Carpathians – the Chornohora Range. While hiking in the low mountain ranges, given good weather, the pre-Carpathian villages and the towns of Kolyomyia and Sniatyn are clearly visible. Land relief of the Pokutsk Carpathians is considered suitable for hiking and cycle tourism. Mountain ridges are of relatively low absolute altitudes and can be easily traversed. Taking into account the geomorphological conditions in the region and the lifestyle of local inhabitants, equestrian tourism is becoming increasingly successful.

of several ski lifts (Kosiv, Yavoriv village, Sheshory) constitute the basis for the development of winter recreation – skiing, snowboarding, sledging. Ski tourism concentrates around the above-mentioned facilities, albeit it is relatively underdeveloped. Northwest and western winds show prevalence across the entire region.

A significant amount of precipitation contributes to the formation of a dense river network in the Pokutsk Carpathians. The rivers of the study area fall within the Prut basin. The largest of them are the Black Cheremosh, Berezhnytsia and Iltsia rivers, which have a longitudinal stretch, while the Luchka, Pistinka, Rybnytsia, Cheremosh rivers run across the Pokutsk lowlands (Herenchuk, 1973; Kravchuk, 2005; Prorochuk Ed., 2013).

Krinchist well, the Pistyn salt well and the salt springs in the village of Liucha.

Water streams are actively used for recreation and tourism. The Czeremosz river is particularly suitable for extreme water sports, for instance rafting. This is due to a considerable river gradient, strong current and diverse channel morphology featuring numerous riffles and deeper sections (Brusak et al., 2011; Prorochuk Ed., 2013, <https://skyta.com.ua/rafting-cheremosh.html>). Nearby the waterfalls tourists can find a place to relax. More-

over, in recent years the use of salt and hydrogen sulfide spring waters for health purposes

has gained considerable popularity (Stefurak Ed., 2018).

### 3.4. Flora and fauna

The region of the Pokutsk Carpathians is rich in mountainous brown soils (haplic cambisol) formed under forest vegetation. The haplic cambisols and medium skeletal soils prevail in the area, and are characterized by weak differentiation of the soil profile as far as genetic horizons are concerned. Moreover, they are high acidity, have relatively high humus content, and show low to medium compactness (Herenchuk, 1973; Prorochuk Ed., 2013).

State-owned forests occupy nearly 58% of the Pokutsk Carpathians area (Gostiuk, 2018a). Said forests vary in terms of their structure and types, and demonstrate highly diversified species composition (Shparyk et al., 2015). Low mountain ranges (500–1000 m a.s.l.) are covered predominantly by beech forests. The beech formations are represented by beech-fir-spruce sub-formation (*Piceeto-Abieto-Fageta*) and the group of beech forest with a prevalence of common wood sorrel (*Fageta*, *Oxalis acetosella*) and silver fir (*Abies alba*), which constitute the second most common formation in the low mountains and are always accompanied by beech. There are no pure fir forests, although there are areas where the fir can be considered the dominant genus. Firs are found in the composition of almost half of the lowland forest.

In the mid mountains, the slopes of mountain ridges with heights ranging from 800 to 1100 m a.s.l. are covered with forests showing prevalence of beech (*Fageta sylvaticae*), with the most common types being beech-fir forests (*Abieto-Fageta sylvaticae*) and beech-fir-spruce forests (*Piceeto-Abieto-Fageta sylvaticae*). In the upper parts of the mid mountain ranges, at 1100–1483 m a.s.l., most commonly found types include beech-fir-spruce forests (*Piceeto-Abieto-Fageta sylvaticae*) and beech-fir forests (*Abieto-Fageta sylvaticae*) in the northern part of the country. In the upper parts of the ridges, on the other hand, above 1200 m. a.s.l. one can notice the prevalence of spruce forests (*Piceeta*), formations of European spruce (*Piceeta abietae*) (Shparyk et al., 2015; Prorochuk Ed., 2013; Debryniuk et al., 2017). Arolla

pine (*Pinus cembra* L.) occurs on the highest ridges of the study area (Rotilo, Gregit). In addition to the main forest species, there are grey alder (*Alnus incana* (L.) Moench), common hornbeam (*Carpinus betulus* L.), birch (*Betula* L.), aspen (*Populus tremula* L.), and in the understorey – mountain-ash (*Sorbus* L.), goat willow (*Salix caprea* L.), red elderberry (*Sambucus racemosa* L.), honeysuckle (*Lonicera* L.) (Prorochuk, 2013).

Meadow vegetation of the Pokutsk Carpathians is certainly plentiful. Most meadows in the region formed in the place of deforested areas, and currently serve as hayfields and pastures. On typical meadows more than 85% of species are considered common, including: meadow fescue (*Festuca pratensis* Huds.) and red fescue (*Festuca rubra* L.), orchard grass (*Dactylis glomerata* L.), sweet vernal grass (*Anthoxanthum odoratum* L.), rough bluegrass (*Poa trivialis* L.), browntop (*Agrostis tenuis* Sibth.), Ukrainian deervetch (*Lotus ucrainicus* Klok.), different types of clover, including white clover (*Trifolium repens* L.), dandelion common (*Taraxacum Officinale* Wigg.), cow-parsnip (*Heracleum sphondylium* L.), ribwort plantain (*Plantago lanceolata* L.), brown knapweed (*Centaurea jacea* L., *Centaurea pseudophrygia* Mey.), ox-eye daisy (*Leucanthemum vulgare* Lam.) and others. In spring the most widespread plants include the following: *Crocus heuffelianus* Herb., and other kinds of orchis: lesser butterfly orchid (*Platanthera bifolia* (L.) Rich.), round-headed orchid (*Traunsteinera globosa* (L.) Reichenb.) and others (Derzhypilskyi et al., 2011).

Along the banks of streams and rivers one can find the following hydrophilic plant species: white butterbur (*Petasites albus*), hybrid butterbur (*Petasites hybridus*), various species of spikesedges (*Eleocharis*), common reed (*Phragmites communis*), bulrush (*Typha latifolia*), creeping buttercup and giant buttercup (*Ranunculus repens* - *Ranunculus acris*) etc.

Due to the diversity of vegetation in the region of the Pokutsk Carpathians, there has been considerable development in utilitarian

tourism and recreation – harvesting berries, mushrooms, medicinal plants and drying grasses.

The wildlife of the Pokutsk Carpathians is presented in Table 1. There are over a dozen of species of mammals, birds, amphibians, reptiles and fish. One should note that some

of them (e.g. brown bear) could pose threat to tourists. However, increased tourist traffic may adversely effects the fauna and flora. Therefore, while discussing the prospective development of tourism, it is of utmost importance to draw attention to issues pertaining to the protection of natural habitats.

**Table 1.** Fauna in the Pokutsk Carpathians (after Prorochuk Ed., 2004, 2013).

№	Klasa	Gatunek	
		Lat. name	Eng. name
1.	Mammals	<i>Apodemus agrarius</i>	Striped field mouse
		<i>Sus scrofa</i>	Wild pig
		<i>Meles meles</i>	Eurasian badger
		<i>Vulpes vulpes</i>	Common fox
		<i>Erinaceus roumanicus</i>	Northern white-breasted hedgehog
		<i>Capreolus capreolus</i>	Roe deer
		<i>Martes martes</i>	European pine marten
		<i>Cervus elaphus</i>	Red deer
		<i>Ursus arctos L.</i>	Brown bear
2.	Birds	<i>Alauda arvensis</i>	Eurasian skylark
		<i>Columba palumbus</i>	Common wood pigeon
		<i>Parus major</i>	Great tit
		<i>Cuculus canorus</i>	Common cuckoo
		<i>Turdus philomelos</i>	Song thrush
		<i>Buteo buteo</i>	Buzzard
		<i>Strix aluco</i>	Tawny owl
		<i>Picus viridis</i>	Green woodpecker
		<i>Dendrocopos major</i>	Great spotted woodpecker
3.	Amphibians	<i>Salamandra salamandra</i>	Fire salamander
		<i>Lacerta agilis</i>	Sand lizard
		<i>Triturus vulgaris</i>	Common newt
		<i>Rana temporaria</i>	Common frog
4.	Reptiles	<i>Natrix</i>	Water snake
		<i>Zamenis longissimus</i>	Aesculapian snake
		<i>Vipera berus</i>	Common European adder
5.	Fish	<i>Hucho hucho</i>	Danube salmon
		<i>Salmo trutta</i>	Salmon trout
		<i>Carassius</i>	Crucian carp

### 3.5. Landscape units and protected areas

The Pokutsk Carpathians encompass various landscape units that demonstrate considerable differences in elevation and a large vari-

ety of morphogenetic processes responsible for the formation of the study area (Miller 1974). According to the landscape map of the

Pokutsk Carpathians, we can distinguish five types of high-altitude areas within the study region (I-V in Fig. 2).

In order to preserve biological and landscape diversity, 27 objects of the nature reserve have been established, including the national park

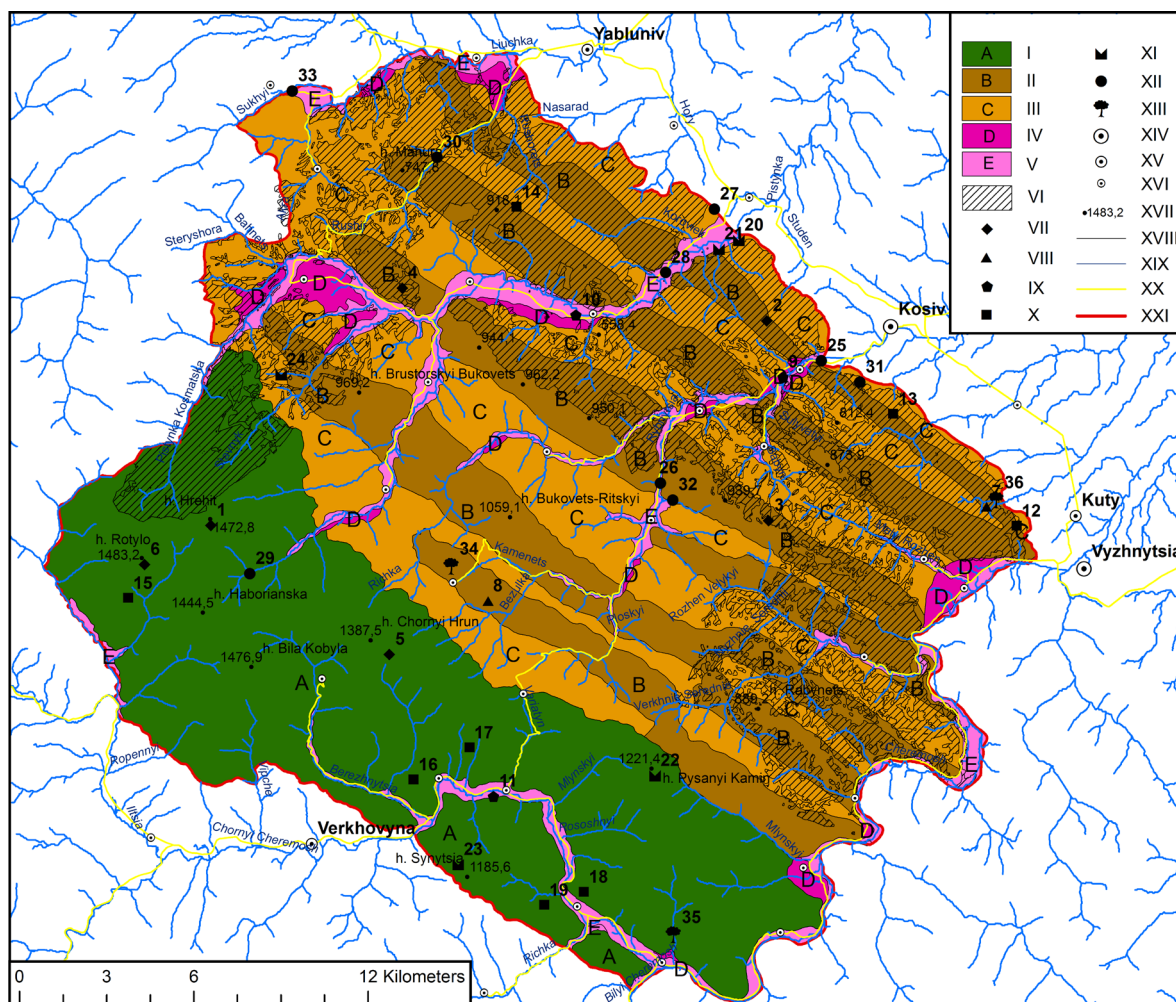


Figure 2. Attractive areas and natural objects of the Pokutsk Carpathians (Source: Authors' own study)

**Natural Territorial Complexes (Highlands):** I - Steep erosion-denudation medium mountains with beech, spruce-fir-beech, beech-fir-spruce and pure spruce on medium and low-strength brown mountain (Haplic cambisol soil). II - Steep erosion-denudation low mountains and secondary-lowland mountains with beech-fir-spruce, spruce-fir-beech forests on low-strength, highly skeletal brown mountain soils (Haplic Cambisol soil). III - Moderately sloped erosion-denudation secondary-lowlands with beech-fir-spruce on medium-sized mid-skeletal brown mountain soils (Haplic Cambisol soil). IV - High terraced slopes of river valleys with secondary meadows on turf-brown soils (Umbric Leptosol soil). V - Terraced floor of river valleys with formations of gray alder and secondary meadows on turf-brown soils (Umbric Leptosol soil). **Protected areas and objects** (Gostiuk, 2016; Pelypeiko et al., 1997). VI – National Park “Hutsulshchyna”. VII – **Landscape Reserves:** Existing: 1 – Hrehid; 2 – Kamenystyi. Proposed: 3 – Sokilskyi; 4 – Garshytisia; 5 – Igrrets; 6 – Rotylo. VIII – **Forest Reserves:** 7 – Kamenets; 8 – Ternopil. IX – **Hydrological sanctuaries:** 9 – Rybnytisia River; 10 – Pistinka River; 11 – Chornyi Cheremosh River. X – **Reservoirs:** 12 – Kamenetz; 13 – Khominsk 14 – Lebedyn; 15 – Chornyi Potik; 16 – Berezhnitsia; 17 – Zarichia; 18 – Lypovyi Hai 1; 19 – Lypovui Hai 2. XI – **Geological nature monuments:** Existed: 20 – Limestone outliers; 21 – Pistiyi shales; 22 – Pysanyi Kamin; 23 – Dovbushanka Rock Corridor. Proposed: 24 – Dovbush Stone in Zavoyel. XII – **Hydrological nature sites:** Existing: 25 – Kosiv Huk; 26 – Yavorivskyi Guk; 27 – the salt well of Pistinka; 28 – Sheshory waterfalls; 29 – Shepitskyi Guk; 30 – Rushirskyi waterfall. Proposed: 31 – Krynychysta krynytsia; 32 – Bezdzvynnyi Huk; 33 – Tekuchan salt springs. XIII – **Botanical nature monuments.** Existing: 34 – Stone; 35 – Larch. Proposed: 36 – “Steppe Echo”. **Other objects:** XIV – cities, XV – urban settlements, XVI – rural settlements, XVII – elevation above sea level, XVIII – boundaries of towns and villages, XIX – rivers, XX – roads, XVIII – boundaries of the Pokutsk Carpathians.

“Hutsulshchyna”, and a number of lower-rank objects, such as reserves and nature monuments, which are believed to hold natural, scientific, recreational as well as aesthetic value (Fig. 1) (Pelypeiko et al., 1997; Gostiuk, 2016; Hutyriak, 2016; Brusak and Dimbrovska, 2017).

Protected areas and objects occupy 30% of the total area of the Pokutsk Carpathians (Gostiuk, 2016). In addition to objects that have an environmental status, there are numerous other objects that can be of interests to tourists.

#### 4. Landscape and tourist resources as factor shaping tourism development

Protected areas and objects, flora and fauna resources, as well as landscape values are important for the development of recreation in the Pokutsk Carpathians. However, due to uneven distribution of these elements in differ-

ent parts of the study area, we propose a classification of highlands according to the degree of their suitability for the development of recreation and tourism (Table 2).

**Table 2.** Assessment classification of the high-altitude landscapes in the Pokutsk Carpathians for the purpose of recreation and tourism (Source: Authors' own study)

Suitability of conditions for recreation and tourism	Characteristics
Very high	No less than seven protected sites, several other interesting natural objects (hydrological, geological, botanical, etc.), recreation sites, natural conditions suitable for establishing tourist trails and routes. Very high aesthetic value of the area.
High	At least five protected sites, other interesting natural objects (hydrological, geological, botanical, etc.), recreation sites, natural conditions suitable for establishing tourist trails and routes. High aesthetic value of the area.
Average	At least two protected sites, other interesting natural objects, recreation sites, natural conditions allowing for establishing tourist trails and routes.
Low	Availability of some interesting natural objects, attractive recreational places.
Very low	Absence of objects of nature reserve fund, interesting natural objects, natural conditions suitable for establishing tourist trails and routes, attractive places for rest.

The terrain of the steep forest-covered midland (the full name of the site is indicated in the legend to Figure 2) constitutes a broad strip stretching from the northwest to the south-east. There are anticline ridges with deeply incised valleys, and peaks of the ridges at times feature stone runs. Moreover, there is a considerable concentration of tourist trails and geological monuments. From the mountain peaks and ranges one can appreciate picturesque landscapes of the Vorokhta-Putilsk Lowland, Chornohora, and the lowlands of the Pokutsk Carpathians. In terms of the availability of natural resources, the area in question demonstrates a high degree of suitability for recreation and tourism (Table 2), most notably hiking, as well as equestrian, cognitive, recreational and utili-

tarian tourism (Brusak et al., 2011; Prorochuk Ed., 2013; Gostiuk, 2018b).

The steep woodland forest and the secondary meadow lowlands are located in the Pokutsk lowland and stretch in wide stripes from northwest to southeast, alternating with the area of hilly lowlands. The area features all the landscape, forest reserves, nature tracts and botanical nature monuments of the Pokutsk Carpathian lowlands, as well as the Bezdvinnyi Huk waterfall, which should be given the status of a natural hydrological monument. The highest ridges feature considerable concentration of stone complexes. The area is of high aesthetic value, and the authors believe it represents very high potential for the development of recreation and tourism.



A large part of the Pokutsk Lowlands with hilly forests and secondary meadow lowlands is deemed least attractive in terms of tourism and recreation, as it mostly features secondary meadows and settlements, and there are few valuable natural objects to be found – mainly water springs and geological objects. The area is suitable for the development of rural green tourism.

The area of the terraced floor of river valleys constitutes a minor part of the Pokutsk Car-

pathians, but is considered highly suitable for recreation and tourism. There are three hydrological sanctuaries, i.e. the Black Cheremosh, Rybnitsia and Pistynka rivers. There is also a number of hydrological (waterfalls) and geological (limestone and limestone shale deposits) local nature monuments. The main type of recreation here involves leisure tourism in the vicinity of waterfalls followed by extreme tourism in the form of rafting on the Cheremosh river.

## 5. Conclusions

The Pokutsk Carpathians are characterized by a considerable diversity of natural conditions, including land relief, geological structure, climate, water resources, vegetation, soil, fauna and landscapes in general, and as such show significant recreational and tourist potential. Nature protection areas and objects are believed to be of significance for the development of tourism and recreation. The most note-worthy include the national nature park “Hutsulshchyna” and rivers – the

Black Cheremosh, Rybnitsyia and Pistynka. The authors believe that the steep forest-covered mid-mountains represent the highest tourist potential, and it is only natural that it has become a popular destination for hikers, as well equestrian, cognitive, recreational and utilitarian tourists. The areas of steep forests, secondary meadow lowlands and the hilly woodland and lowland meadows are considered less attractive, nevertheless, suitable for rural green tourism.

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