

THE LITTLE CARPATHIANS 2023

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Gymnázium Karola Štúra Modra

Silvia Oscitá
Marek Jakuš



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Authors:

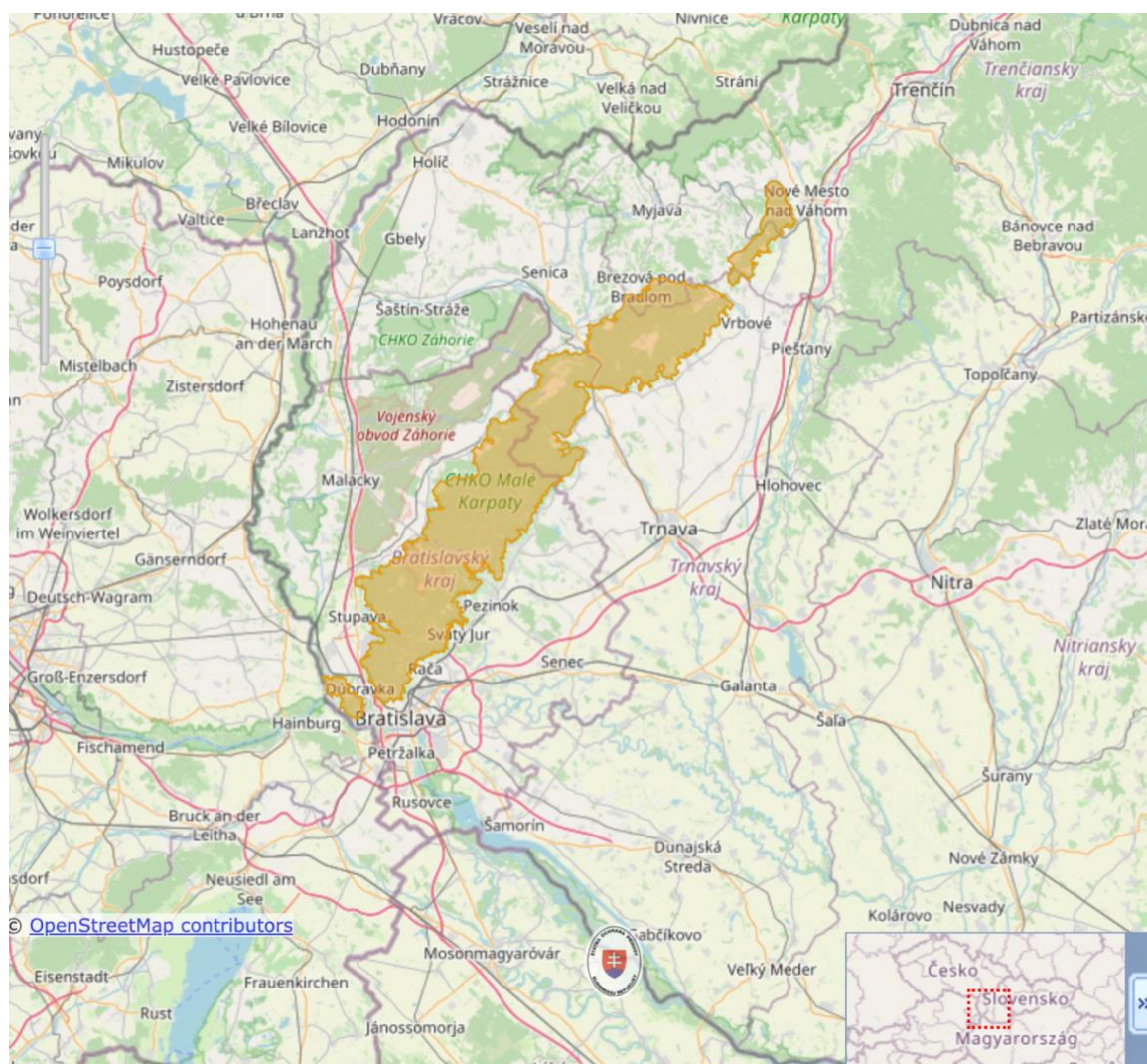
Silvia Oscitá and Marek Jakuš (Gymnázium Karola Štúra Modra)

2023

NATURE

The natural park

Protected Landscape area of the Little Carpathians is located in the southwest of Slovakia. It was established in 1976 and spans for 64 610 hectares in an area surrounded by Záhorie lowland and Bratislava in the west, and Danubia lowland in the east. It is a mountain range that bridges the Alps and the Carpathians. With altitude ranging from 300-800 meters above the sea level, the highest peaks are: Záruby (767 m), Vysoká (754 m), Vápenná (752 m).

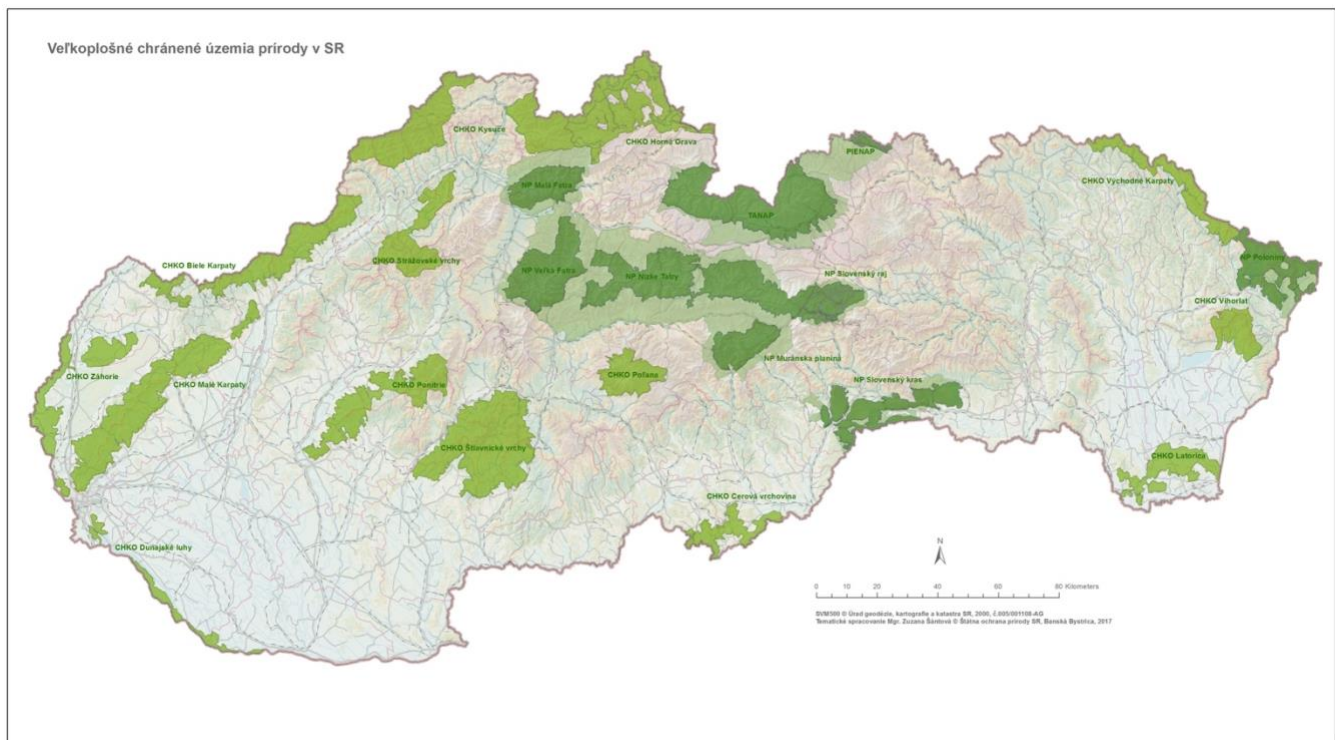


Map of the Protected Landscape of the Little Carpathians (yellow color).

Source: State nature protection of the Slovak Republic (2022).

Accessed from: <https://maps.soprs.sk>

Despite the low altitude, the mountains make a spectacular impression that they are huge, especially at their junction with the Danubia and Záhorie lowlands (450 - 550 m). There are around 300 caves in the Little Carpathians including the cave Driny. The park is a part of Natura 2000 because it is inhabited by rare birds such as Saker falcon (*Falco cherrug*), European honey buzzard (*Pernis apivorus*) and Middle spotted woodpecker (*Dendrocopos medius*). Many important species from different groups of insects and invertebrates inhabit this area. For example, the river crayfish (*Austropotamobius torrentium*) in the streams in the southern part of the territory, and the large dragonfly (*Cordulogaster hero*).



Map of natinal parks (dark green) and protected landscape areas (light green) in Slovakia.

Source: State nature protection of the Slovak Republic (2023).

Accessed from: https://www.sopsr.sk/cinnost/doc/Mapka_VCHU.jpg

Thanks to the excellent geographical location and climatic conditions, the area is densely populated. In the past some of the districts were inhabited by settlers from different cultural backgrounds, some towns and villages were founded on the original settlements of early cultures. There are significant archeological traces from several periods.

The park is managed by Protected Landscape of the Little Carpathians in Modra which is owned by the National protection of nature Slovakia. The level of protection is 2 out of 5.



Protected Landscape of the Little Carpathians logo.

Source: State nature protection of the Slovak Republic (2023).

Accessed from: <https://www.sopsr.sk/web/?cl=11212>

Geology

The Little Carpathians belong to the horst culture in the Pannonia Basin, and they split it to the Little Hungarian plain and the Vienna basin. They are a part of the Fatra-Tatra area, and they are among the core mountain ranges. The core consists of metamorphosed rocks such as granite, or schist. From the point of view of geomorphological division, the Little Carpathians are part of Western and Inner Carpathians within the Carpathian arc, which begins in western Slovakia and ends in Romania.

The interesting feature of the mountain range is the Driny cave. Driny is a limestone cave with the entrance altitude 399 m. The cave was declared a nature monument in 1968 and became part of the newly designated Little Carpathians Protected Landscape Area in 1976. Today, of the total explored length of 636 m, 550 m are open to the public.



Schist



Granite

Accessed from: wikipedia.org



Driny cave

Source: Miroslava Blahútová (personal archive)

Another interesting feature is Sandberg. It is an important paleontological site located in the Bratislava region in the Devínska Kobyla National Nature Reserve. This site was discovered during sand mining, and among the most significant finds in this area are, for example: shark teeth, gastropods, seal bones and the remains of Tertiary whale bones.



Sandberg

Source: Bratislava Region Tourism web page

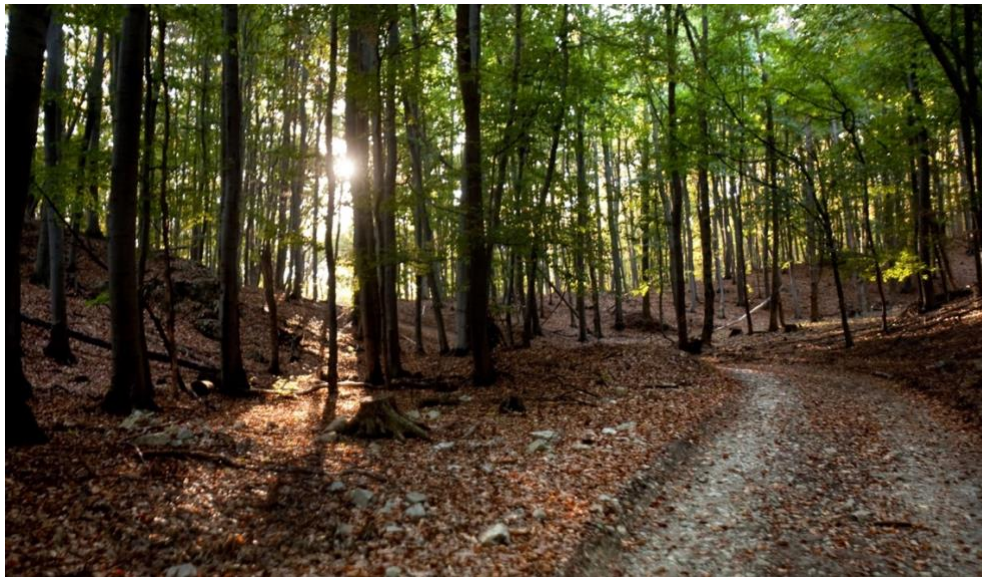
Accessed from: <https://bratislavaregion.travel/poi/127/sandberg>

Habitat

The habitat in The Little Carpathians is diverse, including forests, meadows, and rocky cliffs. The forests are primarily made up of beech, oak, and fir trees, while the meadows are home to a variety of grasses and wildflowers. The rocky cliffs provide habitat for a number of bird species, including the black stork and the peregrine falcon. Additionally, the Little Carpathians are home to many small mammals, such as the European pine marten and the European wildcat, as well as several species of reptiles and amphibians. Overall, the Little Carpathians provide a unique and diverse habitat for a wide range of plant and animal species.

Flora and vegetation

The beech forests are the most widespread in the Little Carpathians. They are found at elevations between 400 and 800 meters and are characterized by a high degree of biodiversity, with a variety of understory plants such as ferns, mosses, and wildflowers. The oak forests are found at elevations between 800 and 1000 meters and are typically composed of sessile oak, with a rich understory of shrubs and herbaceous plants. The fir forests are found at higher elevations, above 1000 meters, and are characterized by a dense canopy of European silver fir with a rich understory of mosses and lichens.



The Little Carpathians forest

Source: Veronika Šoltinská

Accessed from: <https://sk.forbesmedia.cz/uploads/2018/02/s-8.jpg>

The meadows in the Little Carpathians are typically found at elevations between 600 and 1000 meters, and are characterized by a diverse array of grasses and wildflowers, including species such as the alpine meadow-grass, and gentian.

The rocky cliffs, which are found at higher elevations, above 1000 meters, are characterized by a variety of lichens, mosses, and ferns that are adapted to survive in harsh, exposed conditions.

The Little Carpathians are also home to a number of rare and endangered plant species, including the lady's slipper orchid (*Cypripedium calceolus*) and the alpine pasque flower (*Pulsatilla grandis*), which are protected under the Slovak law.

The hill Sandberg which was mentioned before is also known because of a rich sandstone flower bed.



Orchid in the Little Carpathians

Source: The protected landscape area of the Little Carpathians FB page

Accessed from: <https://www.facebook.com/chkomalekarpaty>

Fauna

Devínska Kobyla stands out from the individual sub-units of the mountain range. For example, more than 600 species of butterflies were found here, many of which are not found in other areas of Slovakia. Among the insects, we can come across the predatory bush cricket (*Saga pedo*), the European mantis (*Mantis religiosa*) and the European stag beetle, which is the largest species of beetle in Slovakia (*Lucanus cervus*). Our biggest wolf spider (*Lycosa singoriensis*) also lives here.



Devínska Kobyla

Source: Bratislava Region Tourism web page

Accessed from: <https://bratislavaregion.travel/poi/109/narodna-prirodna-rezervacia-devinska-kobyla>

In the Little Carpathians, we can also find interesting species of reptiles, such as the green lizard (*Lacerta viridis*), the fire salamander (*Salamandra*) or our longest snake - the Aesculapian snake (*Zamenis longissimus*).

Several species of songbirds live in this mountain range. As for birds of prey, the peregrine falcon (*Falco peregrinus*) or the barn owl (*Tyto alba*) can be found here. Rarer birds include the common rock thrush (*Monticola saxatilis*) and the black stork (*Ciconia nigra*).

Very interesting and also rare is stone crayfish (*Austropotamobius torrentium*).



Fire salamander

Source: Ján Zábajník

Accessed from: https://www.nahuby.sk/obrazok_detail.php?obrazok_id=699749

We can find many species of mammals here. From predators, for example, red fox (*Vulpes vulpes*), European wildcat (*Felis silvestris*), beech marten (*Martes foina*) and European pine marten (*Martes martes*). Red deer (*Cervus elaphus*), European fallow deer (*Dama dama*), European mouflon (*Ovis musimon*) and wild boar (*Sus scrofa*) are also important animals represented.

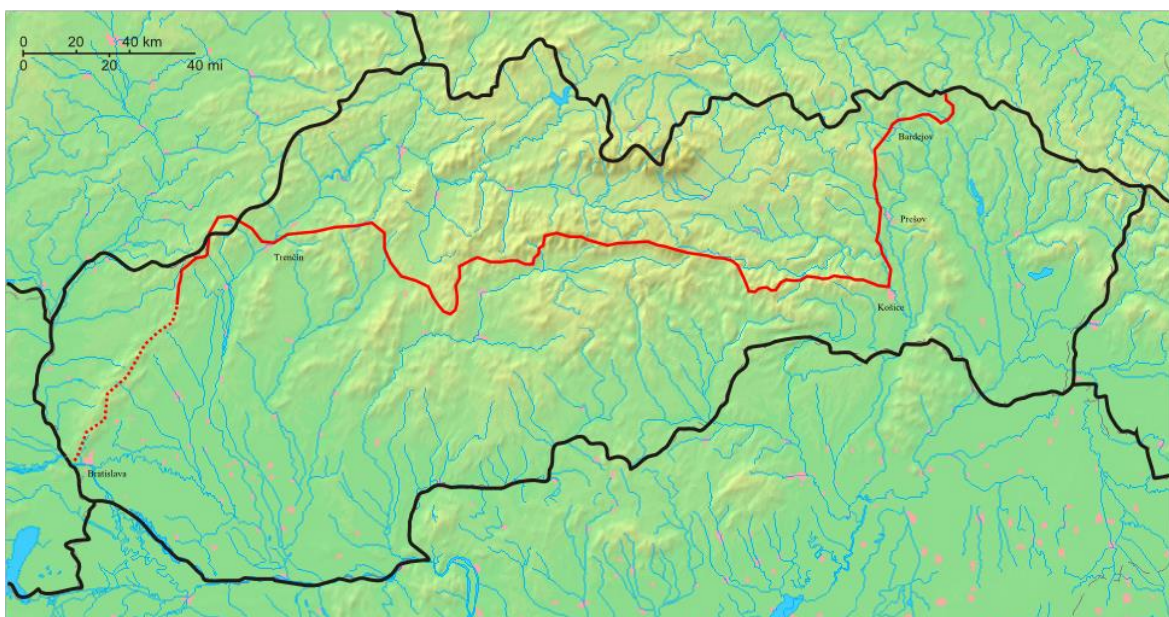


Stone crayfish

Source: The protected landscape area of the Little Carpathians web page
Accessed from: <https://chkomalekarpaty.sopsr.sk/galeria/fauna-a-flora/>

Hiking options

The entire mountain range is connected by a rich network of well-marked and maintained hiking trails. The most important red-marked tourist highway - The Path of the Heroes of the Slovak National Uprising, which in the Devín section bears the name Štefánik's highway, passes through the main ridge of the mountain range. Peak hikes are very popular, for example to the highest peak of the Little Carpathians - Záruby, which has a height of 768 meters above sea level, to Vysoká, with a height of 754 meters, or to Vápenná, with a height of 752 meters.



The Path of the Heroes of the Slovak National Uprising
Accessed from: https://sk.wikipedia.org/wiki/Cesta_hrdinov_SNP

In Slovakia, perhaps the world's most developed centrally controlled trail marking system in the field is used, which is operated by the Slovak Tourist Club. The advantage of marking is that the marks are uniform for the whole Slovakia. The color red indicates the most important long-distance or ridge routes. Blue signs indicate important regional tourist routes, leading through one mountain range. Green signs are mainly hiking trails from valleys to ridges, and yellow signs indicate simpler and shorter routes, connecting to more important trails.



Hiking trails in the Little Carpathians on the map
Accessed from: <https://mapy.dennikn.sk>



Slovak tourist markings
Accessed from: <https://tatrami.sk/prispevok/5/vyznam-turistickyh-znaciek->



Slovak tourist guide signs

Accessed from: <https://turisticketrasy.wbl.sk/smerovniky.html>

HISTORY

Although the Little Carpathians are considered low mountain ranges, they fulfill the role of a mountain barrier.

In the past, mining took place in the Little Carpathians, especially around Modra and Pezinok. Around the 14th century, gold was panned here from the streams and mined from the veins springing to the surface. Later in the 18th century, there was even a search for sulfur deposits but after that, gold mining gradually fell apart. Manganese was once mined further in the area of Borinka, Jablonové, and Stupava, while slate was mined near Marianka. After mining and mining works, we were left with several monuments and interesting places, for example, the Modra educational trail.

The winery was and is an important and integral part of this mountain range. In autumn, winemakers open their cellars and create various events for wine tasting with a possible art exhibition or small refreshments. After a thorough tasting, wine lovers have the chance to buy their favourite wines. Wine production and cultivation of vineyards are most widespread in the cities of Pezinok, Modra, Limbach, and the Rača district



Vineyard in Modra

Source: Slovak tourism web page

Accessed from: <https://slovakia.travel/modra>

As there were many rulers and tribes on the territory of Slovakia, we also have some remnants of the Celts (fortified settlements of Bratislava and Devín) or the nomadic Avar tribe (castle on Molpír hill) in this area.

Already in the earliest times, the forests of the Little Carpathians had the main economic importance. Wood was an important raw material for manufacturing companies scattered throughout the foothills.

SURROUNDINGS

According to the current territorial and administrative division of Slovakia, the territory of the Little Carpathians includes three regions – Bratislava, Trnava, Trenčín, and nine districts. The Carpathians are also an important place to explore, especially for people from big cities. In the summer, the Driny cave - the only publicly accessible cave in western Slovakia, is very visited. In the southern and eastern parts of the Carpathian Mountains, dominant vineyards are extended into cities. Other popular locations in this area are natural monuments: Kršlenica rocks, Sandstone rock Sandberg and Hlboča waterfall or cultural heritage: Červený kameň castle or Devín Castle



Červený kameň Castle

Source: Bratislava District web page

Accessed from: <https://bratislavskykraj.sk/tip-na-vylet-z-modry-na-cerven-y-kamen/>



Devín Castle

Source: Slovak tourism web page

Accessed from: <https://slovakia.travel/hrad-devin>



STAFF

Park manager

Technical – economic specialist

Zoologist – writes reports concerning the protection of animals, monitors animals (mainly protected and rare species), takes care of animals (management activities like keeping an eye on the nests of birds of prey, barrier building, helping amphibians migrate, putting up nesting boxes for owls, taking care of sick animals and their release back into their habitats)

Agricultural engineer – writes reports for environmental bodies, keeps digital records of animals and their habitats, cooperates on creating maps of the park, processes data about immovable properties in the park, processes data about the acreage and the borders of the park

Landscape architect and inorganicist – is in charge of construction plans, tourism, trekking, sports activities, protection of inorganic nature, mining minerals, mapping of significant inorganic features of the park (waterfalls, quarries, protected minerals, fossils...), studies areas suitable for tourism, sports activities, holiday homes (cottages)..., monitors the impact of visitors to the park on ecosystems

Dendrologist – writes reports concerning cutting down trees and planting new ones

Botanist – writes reports about protected species of plants (protection and care), monitors endangered and protected species and their numbers, suggests ways of enhancing their habitats

Park warden (Park ranger)– vigilance; makes sure no laws concerning protection are broken in the park, monitors the area, participates in various research, marks the area of the park, natural reservations and natural sites, organises taking care of sick animals, deals with offences in the park and crime, helps solve the crimes, works as a guide for visitors, cooperates with the local bodies

ANNEX I: Practical activities in the Little Carpathians or about the mountains

1. STUDENTS TESTING THE GAME IN THE GETUP PROJECT IN THE FORM OF A BOARD GAME – June 2022 (photos: Silvia Oscitá)

My name is Katarína and I'm 16 years old. At first my feelings were mixed in regards to the game. It seemed quite complicated and I and my team had a hard time understanding the concept. But once we got it, strategizing and playing was really fun. Admittedly, there were some details we had to change but that is perfectly understandable as it was just a beta version.

My name is Dominik and I'm 16 years old. I really liked how we were testing the game. The concept itself is really great and has a nice feel to it. We had a first hand experience with balancing some of the values, which we even managed to do in some of the cases. Overall, it was a great experience and I would be very happy to continue helping with the development.



My name is Barbora and I'm 17. Last year I played a beta version of a new GETUP project game. It wasn't easy because there weren't exact rules and we had to change them a little

bit, but it was fun. I worked in a team and spoke English, so it was also educational. The game taught me a lot about administration, ecology and finances.

My name is Stella and I'm 16. A few months ago we played the GETUP project game. I liked it. In my opinion, it is a good game for improving English and financial literacy. We played the game in groups. We had to decide what was important in that situation for our park and if it was really needed. We had to think about the future. Our goal was to preserve the biodiversity of our park as

much as possible, have the most trails and also have a good income. I'm excited to see the final version of the game.

My name is Lea and I am 16 years old. In June 2022 I took part in testing the GETUP project game. I was excited that I could participate. We worked in teams. At the start, the game was confusing to me. There weren't many rules and I had no idea what I was doing but as the game progressed, I and my teammate got the hang of it. From then on the game became easy and I enjoyed it.



2. Forest pedagogy at the Gymnázium Karola Štúra Modra (photos: Andrea Dolinská)

Since we are fortunate to live, work and study at the foot of the Little Carpathians, it is even more crucial for all of us to pay respect to nature and express our gratitude. Our school organises multiple events concerning environmental issues. We are grateful to professional people who can spread their knowledge among our students and teach them to appreciate nature and respect it in all sorts of aspects.

On one such visit to our school, the forest teachers from company LESY SR (The Forests of Slovakia) worked with younger students aged between 11-14. Forest pedagogy is environmental education based on the sense perception of nature and aimed at learning about life in nature. The schoolchildren listened to a lecture about the significance of trees and forests, about their roles, they learned interesting information about the work of



foresters and about forest management. They discussed why it is vital to protect the values of trees and the whole forests and take responsibility for one's own actions in the forest.

The practical part of the event was building birds' nests, some of which were placed outside our school and the rest was used around

the Little Carpathians. The main activity was obviously planting trees. It was a highly enriching day full of meaningful tasks and interactions.



3. DofE expeditions to the Little Carpathians (photos: GKŠM students)

DofE, which stands for *Duke of Edinburgh's international award*, is a project founded by Prince Philip. Its aim is to motivate young people to focus on what really matters to them. A big part in the programme plays an adventurous expedition, which is completed at every level of the award. Our students go on adventurous expeditions around the Little Carpathians. By completing the requirements of the expedition, they get to learn more about the natural life and make it better, cleaner and safer place for the wildlife.



