



Gorczański
Park Narodowy



Polskie
Parki
Narodowe



Information brochure

**on the natural exhibiton
in the Education Centre
of the Gorczański National Park**



Introduction

The Gorczański National Park (GPN) was established in 1981 and is one of 23 national parks in Poland. Its area covers the central part of Gorce mountains, including the Turbacz, Kudłoń, and Gorc massifs. Many valuable plant and animal species from the Carpathian primeval forest are protected on an area of over 7,000 ha. An important element of the Gorce natural landscape are montane glades with semi-natural ecosystems, which enrich the biodiversity of this part of the Carpathians. In 2004 the highest part of the Gorce Mts, extending to almost whole area of the Gorczański NP was included in Natura 2000, a European Ecological Network, thereby recognizing that the nature of these mountains is valuable in order to preserve Europe's natural heritage.

The management office of the Gorczański National Park is located in Poręba Wielka in the Wodzicki's manor park. The GPN Education Centre was founded in an old court outbuilding. The historic basement of this manor annex was adapted to an exhibition space, which is the main attraction of the Centre. The exhibition presents the natural heritage of the Gorczański National Park.

The exhibition tour reflects a hiking trail that begins in the valley along a mountain stream, and leads to the highest Gorce peak through various natural biotopes – the Carpathian beech forest, an subalpine spruce forest, and a montane glade. Dioramas, interactive stands, and soundtracks have been arranged in such a way that the visitors can engage different senses and choose their individual ways to learn about the presented subjects. It takes about an hour to visit the entire exhibition.

If you would like to know more about the wildlife of the Gorczański NP and topics presented at this exhibition, there are a few documentaries, which are available here:

- Gorczański National Park
- Dead trees in a forest ecosystem
- Large predators in current forest ecosystems
- European spruce bark beetle in subalpine spruce forests

Practical information

The exhibition is located in the **Education Centre of the Gorczański National Park**



Poręba Wielka 4
34-735 Niedźwiedź
Tel. 18 33-17-944



Exhibition opening hours:

May - October:

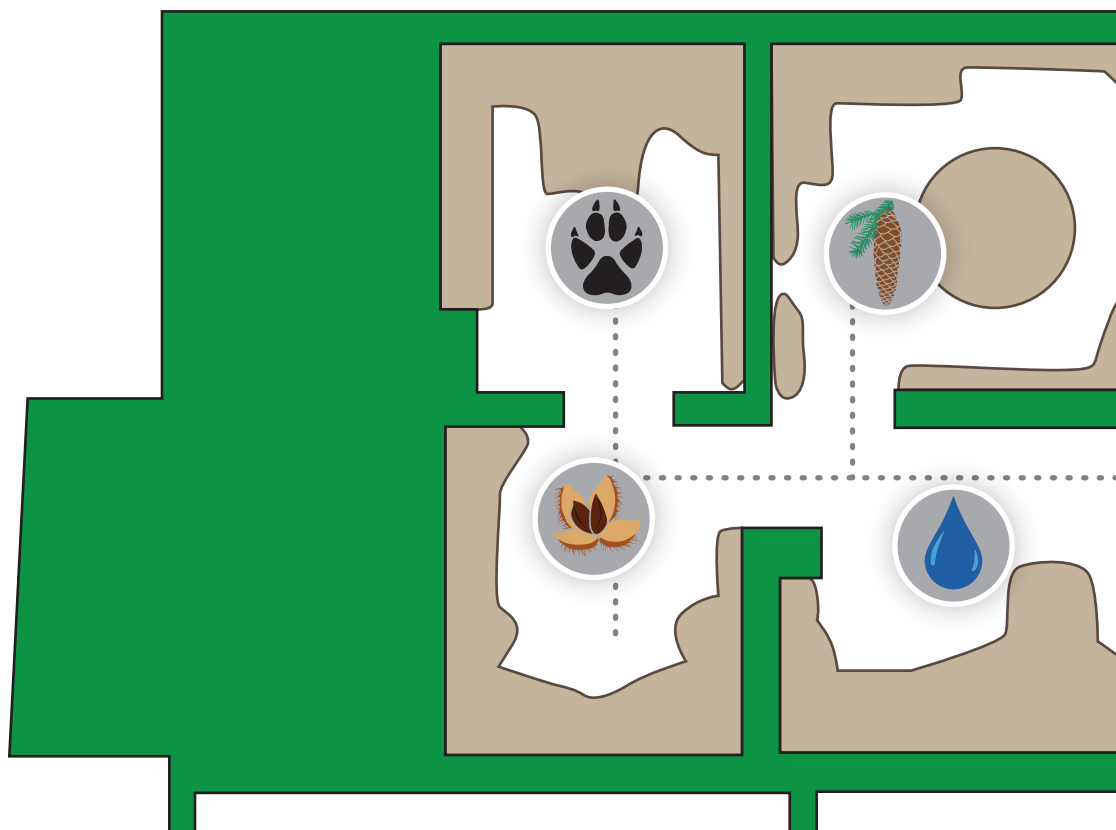
Tuesday to Sunday, excluding public holidays,
10 am - 4 pm / *Last admission at 3 pm*

November - April:

Tuesday to Friday, excluding public holidays,
10 am - 3 pm / *Last admission at 2 pm*

Visiting at a different time by prior arrangement: +48 18 33 17 944

Map of the nature exhibition in the Education Centre of the Gorczański National Park



Mountain alder

stream • marsh-marigold
• amphibians • grey alder
• water reservoir

page 4



Predatory mammals

wolf • stoat • lynx • badger
• weasel

page 13



Carpathian beech forest

beech • Carpathian primeval
forest • dead trees
• white-backed woodpecker
• fire salamander

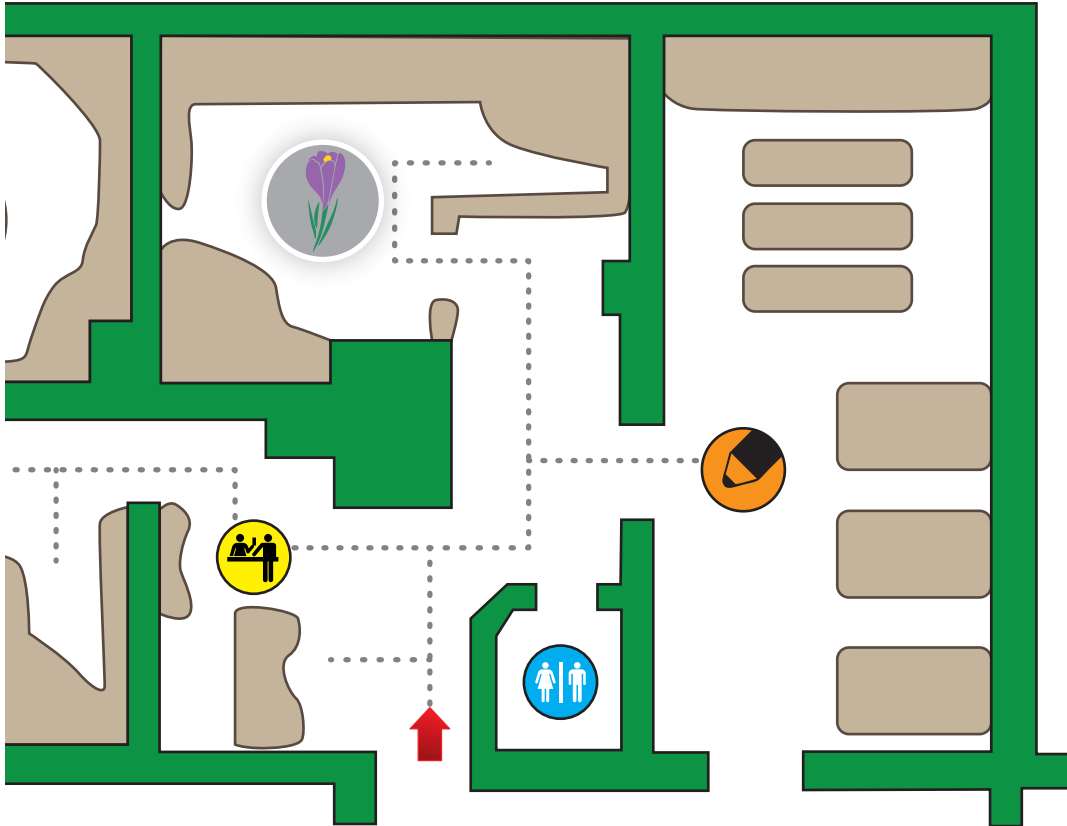
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Subalpine spruce forest

spruce • capercaillie
• three-toed woodpecker
• strict protection • spruce
bark beetle

page 16



Montane glades

- crocus • gladiolus • ring ouzel
- active protection • sheep grazing

page 20



Reception



education room



toilet



inaccessible space



exhibition elements



entrance



educational path



Mountain alder



stream ● marsh-marigold
● amphibians ● grey alder
● water reservoir

Fun fact

Otter can swim at speed 1.5 m/s. Otters love playing in the snow and sliding downhill. After such a slide, it remains gutter-like trail in the snow.



Otter

In the valleys of larger Gorce streams on riverside stones covered with a layer of soil, there is a riverside mountain alder with a grey alder stand. In flat, swampy places, the same species forms a swamp mountain alder community, which occurs mainly in lower forest zones. Both the riverside and **swamp mountain alders** *Alnetum incae* and *Caltho laetae-Alnetum* belong to the priority habitats of the Natura 2000 European Ecological Network. The diorama presents a part of the mountain alder with selected animal and plant species.

The **Eurasian otter** *Lutra lutra* is one of the largest representatives of Polish weasels, permanently visiting mountain streams in the Gorczański NP. It leads an amphibious life, which means it is a great swimmer and diver. Its strong, muscled paws help to move around in water, its feet have membranes between the toes, and it has a long tail, which work as a rudder. Otters feed mostly on fish and amphibians.



Grass snake

The mountain alder wetlands are also excellent habitats for the **grass snake** *Natrix natrix*, representing reptiles. This snake, common in Poland, is characterised by yellow spots on its head, behind temples. The grass snake is also a great swimmer and diver. It feeds mostly on amphibians, which it swallows alive.

Small natural and artificial water reservoirs and large puddles in the valleys are inhabited by several species of amphibians including: **yellow-bellied toad** *Bombina variegata*, **Alpine newt** *Ichthyosaura alpestris* and **Carpathian newt** *Lissotriton montandoni*, **common frog** *Rana temporaria*, and **common toad** *Bufo bufo*.

Did you know...

It sometimes happens that the larvae of an alpine newt spend the winter in the water, and their transformation can occur after as much as 3 years.

The **yellow-bellied toad** looks like a small toad but has a more delicate physique. It is characterised by a rough, brown-olive skin with numerous warts. Its belly is covered with a black-yellow pattern, which is supposed to scare off any predators. A characteristic feature of the yellow-bellied toad are triangular, or heart-shaped, pupils. It spends winters on land, hidden in deep burrows, pits, or under tree roots.



Yellow-bellied toad

The **alpine newt** is the most common newt in the Gorczański National Park. It can be found all over the park. During its breeding season from spring to summer, it mostly stays in water, preferably in small reservoirs or long-term puddles, where it eats small crustaceans, snails, and insect larvae. The males of the alpine newt are distinguished by the sky-blue tinge of their flanks covered with black dots from head to tail as well as their bright orange belly. Outside the breeding season, alpine newts inhabit land ecosystems and are only active at night. They eat earthworms, mussels, small insects, and spiders. In winter, they hide in various hideouts in the ground or buried under mulch. The **Carpathian newt** prefers similar conditions. It is a sub-endemic species to Carpathians, which means that it occurs mostly in the Carpathians.



Carpathian newt



Alpine newt

The **white-throated dipper** *Cinclus cinclus* is the only domestic species of songbirds that can move efficiently under water. When looking for food, it can

dive into the water and walk on the bottom of a stream, where it catches water invertebrates and their larvae. White-throated dippers can stay under water for up to 30 seconds and, in that time, dive to a depth of up to 1.5 m.

The **grey wagtail** *Motacilla cinerea* is a colourful ornament to the Gorce streams, as it's distinguished by a yellow-grey feathering. It often sits on the riverside stones, while constantly moving its tail.



White-throated dipper

It feeds on terrestrial and water insects, their larvae, and other small invertebrates caught on the banks of streams, on stones sticking out of water, or in the air. In a lush, multi-layered ground flora, you can find hygrophilous plant species. During the vegetation season, the landscape changes repeatedly. In spring, **marsh-marigold** *Caltha palustris* subsp. *laeta*, blooms here forming yellow patches on the forest ground. You can also spot blue-flowered **true forget-me-not** *Myosotis scorpioides*, yellow **sticky sage** *Salvia glutinosa*, and **horsemint** *Mentha longifolia* with pale pink flowers.



Grey wagtail



Water avens

Along the valleys of the Gorce streams, there are also **water avens** *Geum rivale*, **black widow** *Geranium phaeum*, and **hairy chervil** *Chaerophyllum hirsutum* with small white flowers formed into small umbels.

One of the earliest spring-blossom mountain plants is the **butterbur** *Petasites kablikianus*. It blossoms before the leaves have a chance to develop. Young leaves are slightly hairy, while older ones are almost bare,



Sticky sage

hence the Polish name for it is "bald butterbur". The parasite

called **yellow blight** *Orobanche flava* is often found on butterburs. It doesn't produce chlorophyll, so it doesn't have green leaves. The stalk is covered with small yellow scales along its entire length. Yellow blight has no roots, but suckers, with which it extracts from the plant its nutrients and water with mineral salts.

On butterbur's leaves you can often find the **weevil beetle** *Liparus glabrirostris*. Its black elytra are covered with yellow spots. Larvae of this beetle feed on rhizomes of plants such as the butterbur or hairy chervil.



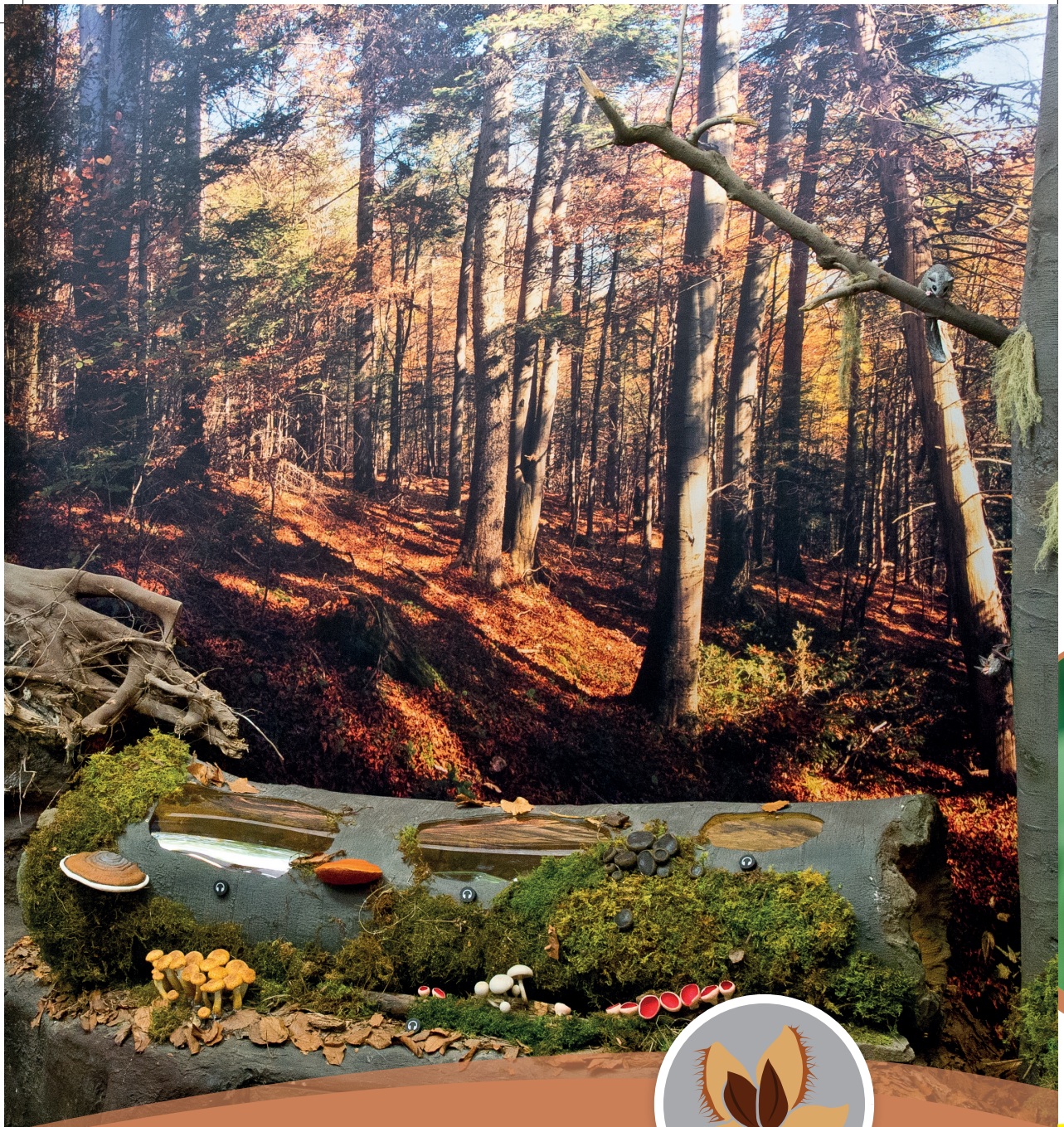
Yellow blight



Weevil beetle

Fun fact

Scientists estimate that the elytra of the yellow blight can withstand a weight corresponding to a pressure of about 30 tons on a human body!



Carpathian beech forest



beech ● Carpathian primeval forest
● dead trees ● white-backed
woodpecker ● fire salamander

The Carpathian beech forest occupies lower parts of mountains and covers about 60% of the Gorceński National Park. The main forest-forming species is **European beech** *Fagus sylvatica*, which is usually accompanied by **silver fir** *Abies alba*, **Norway spruce** *Picea abies*, and sometimes **sycamore** *Acer pseudoplatanus* and mountain **elm** *Ulmus glabra* trees. The trees that grow in the park area live to old age and reach impressive sizes. The **Carpathian beech forest** *Dentario glandulosae-Fagetum* is not a homogenous plant community. Depending on exposition, topography, soil, and humidity conditions, it forms various sub-associations.

The diorama presents the Carpathian beech forest with selected representatives of its fauna and flora.

The beech forest's appearance changes with the seasons, and among these changes are not only leaf colours, but also everything that happens on the ground. In early spring, you can admire the richness of the undergrowth plants that, in order to grow, use the short period of an insolation occurring before the development of leaves on trees. The diorama includes the following species from this group: **Carpathian toothwort** *Cardamine glanduligera*, **heart-shaped comfrey** *Symphytum cordatum*, **corydalis** *Corydalis cava*, **wood anemone** *Anemone nemorosa*, and **cross** *Cardamine trifolia*. Among the most magnificent spring-flowering plants is the **wild garlic** *Allium ursinum*, growing in moist habitats rich in humus. The **martagon lily** *Lilium martagon*, which blossoms in late June, is a unique decoration of the beech forest. The large, dark-pink flowers attract many insects. The nectar, however, can only be reached by insects with long trumpets, mainly hawk moths *Sphingidae*.

Many animal species live in the wild parts of the Gorce primeval forest. One of them is the **edible dormouse** *Glis glis*. It lives on trees and rarely



Martagon lily



Wild garlic



Edible dormouse

Fun fact

Lily flowers inspired Polish highlanders to create a decorative motif called "leluja", which appears often in the interiors of traditional huts, as well as on wooden furniture and regional costumes.



Boreal owl

descends to the ground. It is active at night and sleeps in hideaways and tree hollows during the day. For the most part of the year, from autumn to late spring, it hibernates in burrows.

The beech tree hollows are often occupied by owls, including one of the smaller ones – the **boreal owl** *Aegolius funereus*. It has a very thick plumage which covers the bird from legs up to its claws. On the other hand, one of the largest European owls is the **Ural owl** *Strix uralensis* characterized by its striped tail. The bird hunts mainly at

night, and catches by ambush. It sits on tree branch and watches the surrounding carefully to look for potential victims. It can hunt down

a rodent moving under a layer of snow. Among the species associated with old beech forests are also very rare **white-backed woodpecker**

Dendrocopos leucotos and **red-breasted flycatcher**

Ficedula parva, which arrives to

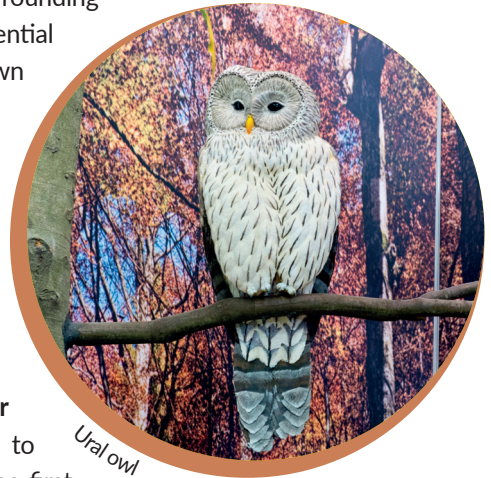
Poland from far away in Asia. The first of the mentioned birds looks for food and a place to forge a hollow in dead or dying trees. The

red-breasted flycatcher stays high in beech crowns. It hunts small, flying insects and builds nests in tree trunks and branches. The flycatcher males mark their presence with loud, resonant singing during the breeding season.

The **mistle thrush** *Turdus viscivorus* male also revives the forest



White-backed woodpecker



Ural owl



Mistle thrush



Red-breasted flycatcher

with melodious singing from the tree crowns. Similarly to other thrushes, it looks for food mainly on the ground. Earthworms, insects, and various invertebrates make up most of its menu.

One of 13 bat species found in the Gorczański National Park is the **Bechstein's bat** *Myotis bechsteinii*. It is the common forest bat that uses tree hollows as shelter in summer, while spends entire winters in caves.

Lower forests with decaying logs, especially near streams, are the living environment for the **spotted salamander** *Salamandra salamandra*.

In decaying wood, it finds a place for food and shelter for several months during the hibernation period. This Europe's largest tailed amphibian can be found on the Gorczański National Park's coat of arms. Its contrasting coloration is the warning signal informing about the presence of venom glands in the animal's skin. It is an effective weapon thanks to which an adult salamander keeps its enemies off.



Bechstein's bat

Dead and dying trees play a special role in natural forests. For many years, broken or knocked down giant trees give life to organisms that participate in the uninterrupted circulation of matter.

Fun fact

Adult salamanders lead a terrestrial lifestyle, while their larvae are born and develop in mountain stream waters.



Spotted salamander



Myriapods



Springtail

Thanks to their activity the wood decomposes gradually and the soil is supplied with the necessary elements to provide life for all plants forming the forest ecosystem. Among thousands of invertebrates associated with decaying wood, there are numerous species of **springtails** *Collembola* including the violet-coloured **giant springtail** *Tetradontophora bielanesis* reaching up to 9 mm in length.

The myriapoda group is characterized by numerous legs, and is represented by, e.g. the **striped millipede** *Ommatoiulus sabulosus*, which feeds on rot, or a carnivorous **brown centipede** *Lithobius forficatus* which hunts inside decaying tree trunks. Very impressive and mobile ground beetles also hunt within rotten logs.



Scarlet elfcup

Centipedes, insects, and other invertebrates living in logs become food for insectivorous mammals, such as the **alpine shrew** *Sorex alpinus*, which constantly penetrates forest litter and nooks of rotten logs. Its extremely high metabolism causes the alpine shrew have to spend

most of its life foraging, eating each day even more than it weighs.

Dead, humid logs are a natural habitat of numerous fungi species, which draw nutrients from it by breaking down wood into simple minerals necessary for life of a new forest generation. Among fungi that stand out thanks to their colour and shape are: the **scarlet elfcup** *Sarcoscypha austriaca* with a bright red interior, the **honey mushrooms** *Armillaria mellea*, the **artist's bracket** *Ganoderma applanatum* with a white rim, the **cinnabar polypore** *Pycnoporus cinnabarinus*, the white **porcelain fungus** *Mucidula mucida*, and the **black bulgars** *Bulgaria inquinans*.



Honey mushroom



Predatory mammals

wolf ● stoat ● lynx ● badger
● weasel



Lynx

Together with mid-forest glades, the Carpathian primeval forest in the Gorczański National Park is a natural living habitat of large and small predatory mammals.

The **grey wolf** *Canis lupus* and the **Eurasian lynx** *Lynx lynx* used to inhabit a large part of our continent but the anthropopression limited their occurrence significantly. Nowadays, there are fewer and fewer places like Gorczański National Park, where large predators can reproduce peacefully.

The **lynx** usually inhabit forests with old trees and dense undergrowth dotted with logs. In the Gorczański National Park, lynx individuals choose wild forests with rock outcrops, which they use to rest and observe the surroundings. At night, the lynx become active and goes around the area to hunt. Its food of choice is roe deer, but it sometimes eats smaller animals such as birds or rodents. The lynx leads a solitary life with the exception of the mating season and the period when a female looks after her kittens.

Fun fact

Wolves are great singers. Most sounds are used to communicate between members of the herd within a short distance. However, over long distances wolves communicate by howling. In a forest area, they can be heard from a distance of 10 km, while in the open space, it can be up to 16 km.

In Poland, the **wolf** used to be exterminated for decades, especially in the second half of the 20th century. Since 1998, when it was put under protection, its almost destroyed population has been slowly rebuilding and the predator has been returning to the areas it once inhabited.

Wolves live in family packs led by a parent couple. The other animals are usually their offspring from previous years. A wolf family typically counts from a few to a dozen animals. The birth

of new cubs is the most important event in the life of a herd. An alpha female gives birth to cubs, while all the pack members participate in their upbringing. There are 1 or 2 wolf families in the area of the Gorczański National Park and its surroundings.

The wolf feed mostly on red deer, roe deer, and wild boar. The herd hunts in a very organized way. Animals that are unable to escape are most often killed, e.g. weak, elderly or young and less experienced victims. Despite being very agile predators, more than half of the hunts fail, so wolves eat their victims until the last bite. They will abandon food only when people bother them.



Wolf

The **badger** *Meles meles* is a nocturnal animal and hardly anyone knows it is sociable mammal which often lives in the family groups living in the common area. Its diet is far from what we think of a predator's menu. Most its food are earthworms, which are abundant from spring to autumn in forests and on meadows.



Badger

Fun fact

Badger trails, which are their paw prints, remind of a miniature bear trail.

Moreover, badgers eat carrion, fruits, and insects. They can dig up nests of wasps and bumblebees to eat their pupae. They also hunt rodents and birds nesting on the ground. They capture amphibians, for example toads, which they eat from the abdominal side to avoid any contact with venom glands.

Badgers are distinguished by their ability to build burrows. Their underground houses are a vast corridor system. They are very clean animals. All the dirt is thrown outside and they excrete only into specific dug up holes that serve as latrines.



Weasel

The **least weasel** *Mustela nivalis* is a smallest representatives of European predatory mammals. Compared to other mustelids, it have very short tail, usually shorter than a third of its body length. It is incredibly slim and flexible, which allows this animal to easily slit into underground rodent corridors to hunt. Weasels active both during the day and at night. In winter, weasels dive under the snow, and when it is freezing cold, they can hunt only in the underground or under-snow corridors. They often inhabit their victims' burrows.

The **stoat** *Mustela erminea* is slightly larger than the least weasel, but equally fast and agile. Similarly to the weasel, the stoat sits high on its back legs to look around the area. The black tip of its tale is permanent even when it changes fur in winter into snow white. The seasonal change of coat colour happens gradually, so you can find individuals that are white, brown, or spotted.



Stoat



Subalpine spruce forest



spruce ● capercaillie ● three-toed
woodpecker ● strict protection
● spruce bark beetle

The subalpine spruce forests in Gorce range were formed naturally in a cold zone above an altitude 1150 m. The weather conditions are severe here, which promotes the development of podzolic soils, which are almost exclusively covered with spruce trees. Their appearance changes as the altitude increases. In higher altitudes, the lower and more densely branched trees are growing.



Diorama with a fragment of the subalpine spruce forest

The diorama presents a fragment of the subalpine spruce forest in four seasons with its selected animal and plant inhabitants.

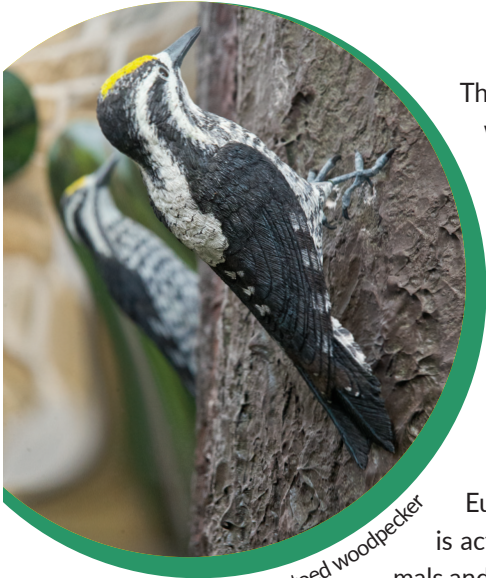


Capercaillie

Old, thinned spruces are a refuge for the **capercaillie** *Tetrao urogallus*. It is the biggest and the rarest representative of forest galliforms. Their population in Gorce range is estimated at about 40 individuals. The capercaillie is well adapted to difficult winter conditions. In autumn, its toes grow tiny horn needles on the sides, which create a larger surface area and make it easier to walk on snow without collapsing. In spring, the needles fall off. During freezing cold weather, the bird buries itself in a snow cave, where the temperature is higher than outside, and protects it from predator attacks. An adult individual feeds mostly on plants, with occasional invertebrates to spice its diet up. In winter, it mainly eats needles and buds from coniferous trees such as spruces or firs.

Fun fact

During the last verse of the mating song, which sounds like sharpening a scythe against a stone and lasts about 1.5 seconds, a male capercaillie stops responding to external stimuli – it deafens.



Three-toed woodpecker

The **three-toed woodpecker** *Picoides tridactylus* is the only woodpecker with three toes. Its plumage lacks any red colour. A male can be distinguished by a yellow cap, while a female has a striped grey cap. The three-toed woodpecker lives mostly in the subalpine spruce forests inhabited by the bark beetle, whose larvae and pupae are its main food. Woodpecker tree hollows are often used by the **Eurasian pygmy owl** *Glaucidium passerinum*, the smallest European owl. The bird is only about 17 cm long and needs several hollows. It usually creates a nest in one, and uses others as shelters or pantries. The Eurasian pygmy owl is an efficient hunter of small birds, and is active usually during the day. It also captures smaller mammals and insects. During the mating season, male individuals whistle characteristically with a monotonous voice that can be heard at dawn and dusk.



Eurasian pygmy owl

The **red crossbill** *Loxia curvirostra* stands out among other birds thanks to its beak shape. It is thick and strong, and its ends are slightly bent and cross each other, making the bird a master at removing seeds from cones.



Red crossbill male

Fun fact

Red crossbills are always born with straight beaks, which gradually cross during their growth and development.



Ring ouzel

Among inhabitants of spruce forest are also the **ring ouzel** *Turdus torquatus*. Its size and silhouette resembles a blackbird, but it can be easily identified thanks to the white half-collar on the chest. It usually resides on glades situated high above sea level, especially those neighbouring with young spruces. It feeds mostly on insects and their larvae, and in summer and autumn, it also eats fruit collected from the ground and from tree branches.

The European spruce bark beetle

Ips typographus is one of the smallest inhabitants of the spruce forest but has a very big impact on its appearance. It feeds on fresh spruce bast, and its living environment in all development stages is the space between bark and wood. There, the bark beetle drills corridors, where the entire development cycle happens: egg laying, larvae development, and transformation. Firstly, it inhabits fallen and broken trees. Then, it takes weakened, standing trees. Due to its natural tendency to mass reproduce, the bark beetle can contribute to killing trees on large areas. However, this does not mean that the forest ecosystem is completely destroyed. It is only a transitional stage in the natural process of generation exchange, as young trees replace dead spruces.



European spruce bark beetle

Depending on the habitat conditions, mainly humidity and insolation, the appearance of the spruce forest undergrowth changes. The most prevalent undergrowth in Gorce range are mosses and shrubs, with **blueberry** *Vaccinium myrtillus*. The **twisted-stalk** *Streptopus amplexifolius* decorates the Gorce forests.

Individuals of this plant are the most beautiful at the end of summer, when their fruits are ripe and take on a blood-red colour. The evergreen **hard-fern** *Blechnum spicant* and the impressive in size **Alpine lady-fern** *Athyrium distentifolium* are noteworthy examples of ferns. The latter plant's leaves can reach about 100cm in length. In the spruce forest undergrowth, there is also the **Alpine coltsfoot** *Homogyne alpina*. It is a rather small plant with leather-like, almost round, evergreen leaves gathered in a ground-clamp. This plant blooms from May to August.



Hard-fern



Montane glades



crocus ● gladiolus ● ring ouzel
● active protection ● sheep grazing



The Gorce montane glades were created as a result of a human activity, where originally, there used to be a forest. They are a characteristic element of the Gorce landscape. They stand out due to their natural richness and unique cultural and landscape values. Many of the glades offer wonderful views of the neighbouring Carpathian ranges: Beskid Wyspowy, Pieniny, Babia Góra, and the Tatra Mountains. Wooden huts representing regional Zagórz and Podhale architecture are also the remains of the former pastoral economy. In the Gorce range, pastoralism is no longer as great as it had once been but one can still come across a shepherd and sheep in the Gorczański National Park, for example at Hala Długa near Turbacz, where cultural sheep grazing takes place.

Thanks to human activity over the centuries, the Gorce glades may cover with valuable plant communities and noteworthy plant species. The diorama presents many of them.

The small patches of **bog-spring** *Valeriano-Caricetum flavae* occur in the Gorce range in wetlands surrounding water springs. These bogs can be distinguished by the richness of plant species that grow there. Some noteworthy species are: **broad-leaf cottongrass** *Eriophorum latifolium* with white, broad multiple fruit and orchids: **heath spotted-orchid** *Dactylorhiza maculata*, **marsh helleborine** *Epipactis palustris*, and **common twayblade** *Listera ovata*.

Marsh helleborine



Broad-leaf cottongrass



A leaf from a round-leaved sundew

Very peculiar additions to this community are insectivorous plants: **common butterwort** *Pinguicula vulgaris* and **round-leaved sundew** *Drosera rotundifolia*. Both species catch insects in their leaves, which secrete digestive enzymes that break down protein. This way, plants supplement the nitrogen deficiency in the soil.

The **thistle meadow** *Cirsietum rivularis* occupies permanently wet and fertile parts of the glades. It is a habitat covered with floral herbs, predominantly perennials accompanied by small proportion of grass. The most characteristic species of this community is the **thistle** *Cirsium rivulare*, which can grow as tall as 1 m.

The **gladiolous-bentgrass meadow** *Gladiolo-Agrostietum capillaris* is a fertile habitat created as a result of traditional pastoral economy. In spring, it is covered with a purple crocus rug. The plant came to Gorce range probably thanks to Wallachian shepherds and their sheep. In summer, meadows are covered mainly with grass, dominated by the **common bent** *Agrostis capillaris*.

A very impressive and characteristic plant is the pink-flowered **gladiolus** *Gladiolus imbricatus*.

Oatgrass meadows *Arrhenatherion* are rare in the Gorce range. It can be found in lower altitudes, for example in the manor park in Poręba Wielka. The meadows are covered with tall grass, such as: **false oatgrass** *Arrhenatherum elatius*, **meadow**



Gladiolus



Scotch argus



Crocus

foxtail *Alopecurus pratensis*, and **orchard grass** *Dactylis glomerata*. Among the green grass, there are several flowers that attract attention: dark pink **meadow crane's-bill** *Geranium pratense*, pale pink **bistort** *Bistorta officinalis*, and yellow **meadow salsify** *Tragopogon pratensis*.

The **Montane matgrass sward** *Hieracio (vulgatae)-Nardetum* occupies poor, acidic soils in the Gorce range, at an altitude of at least 800 m. It is domi-

nated by the **short grass** *Nardus stricta*, which forms

a compact turf that changes colour during the growing season from greenish to fawn. The field is diversified by colourful flowering plants, such as: **Alpine avens** *Geum montanum*, and yellow **hawkweed** *Hieracium lachenalii*. Magnificent rosettes of the stemless **carline thistle** *Carlina acaulis* which blooms in late summer, are the pride of the meadow.



Bistort



Stemless carline thistle

Fun fact

Currently, there are 110 glades in the Gorczański National Park, which take up almost 400 ha, which constitutes around 6% of the total area of the park. To ensure protection of the Gorce meadows and other valuable habitats, a Special Area of Conservation called Ostoja Gorczańska has been created thanks to the European Ecological Network Natura 2000.



Thank you for visiting!



Gorczański
Park Narodowy



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Text:

Anna Kurzeja
Mariola Stefanik
Żaneta Król

Photos:

Paweł Stauffer
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Natalia Mialik

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Gorczański National Park in Poręba Wielka,
Poręba Wielka 590, 34-735 Niedźwiedz
tel.: 18 33 17 207
e-mail: gpn@gorcepn.pl
www.gorcepn.pl

Layout and printing:

Zakład Poligraficzny SINDRUK,
45-594 Opole, ul. Firmowa 12
biuro@sindruk.pl, tel.: 77 442 09 69

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