

# NATURE OF BEING

自然 NATURE

NATURE  
OF BEING  
IN NATURE



Nature of Being in  
*Nature*







Dear Readers,

It is with great pleasure that I present to you this publication, which serves as an invitation to establish a closer connection with the natural world around us. In this guide, you will find information and experiences gathered from four countries – Poland, the Czech Republic, Slovakia, and Finland. The selection of these countries is not accidental; the collected materials are the result of cooperation among four non-governmental organizations that spent 18 months promoting outdoor physical activity among urban and rural residents, as well as encouraging the exploration of the natural and cultural values of nearby areas.

Humans are part of nature and have always been deeply dependent on their natural environment. Unfortunately, today, in an era of advancing civilization and economic development, we often forget this. We fail to realize that our bodies need contact with nature; that a walk in the forest or a moment of rest on a park bench, watching city pigeons, has a calming and regulating effect on us. Something that was a norm a hundred years ago—being outdoors, walking, working in nature, or venturing into the forest—is now becoming something exclusive, recreational, something many of us, especially those living in cities, simply don't have time for. Our living conditions have changed drastically over the past hundred years, and our lives have become different; in many ways easier and more comfortable. At the same time, however, we have lost our connection with nature—an essential part of ourselves that reminded us that we, too, are part of the world around us. This publication therefore aims to emphasize how valuable our relationship with nature is, and to help us rebuild it.

I hope our guide will encourage you to step outside and serve as an inspiration for how you can safely enjoy this time and feel a part of nature.

Karolina Chomacka,  
Polish Ecological Club in Gliwice



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# General Information About Each Country



## CZECH REPUBLIC

Despite its small size, the Czech Republic offers many reasons to visit nature. Apart from the sea, the Czech countryside provides just about everything a person looking for natural experiences could want: the beautiful mountains that form the borders of most of the Czech Republic, the mysterious volcanic hills of Central Bohemia, the sought-after sandstone rock towns, and even one of the largest cave complexes in Europe. Those looking for quieter places can relax in the forests, which comprise about a third of the country's territory. In addition to the common coniferous forests, native Central European deciduous forests with beech and oak predominate. Those who find forests too dark can look to long, sunny meadows and pastures for inspiration, many water-logged in the mountains, forming unique peat areas. Wild mountain streams converge into a multitude of rivers and ponds, many of which are good for observing aquatic flora and fauna, as well as refreshing the body in the summer heat.

With such a rich list of natural monuments, it is no wonder that the Czech people are attentive to nature; in total, a quarter of the total territory of Bohemia is protected in some form against interference with nature. The Krkonoše National Park, declared in 1963, is the oldest in Czechia. However, interest in nature has been widespread among people for longer, since the beginning of the 19th century, with the Romantic period, there was a growing interest, especially among the townspeople, in discovering the beauty of nature. This resulted in the founding of the Czech Tourist Club in 1888. This club helped to popularize mountain hiking by marking and building hiking trails, publishing maps, and building mountain huts and shelters.

Under such conditions, it is therefore easy to start hiking in the countryside as well. There is a network of marked hiking trails all over the country,



which makes it easy to follow the trail of one's choice without fear of getting lost. Signs are regularly placed, and information on metal signposts indicates the direction and distances of the various destinations the trail can take you to. As already mentioned, tourism is quite popular in the Czech Republic, so on sunny days you don't have to worry about not meeting anyone on popular routes or in the area of well-known destinations. Another advantage is that the Czech landscape is quite cultural, so you often come across human footprints elsewhere. A lot of interesting destinations are located near villages, many routes pass directly through them. This is advantageous from a transport point of view because most of the villages are well connected to the public transport system and we can therefore plan our trip accordingly, while also being able to use them in case of sudden changes in weather or other situations. Czech people are kind to tourists, so you don't have to ask for water, travel advice, or other help in case of an emergency in a stranger's building. The best server for checking transport connections is **idos.cz**, and the best tourist maps are **mapy.cz**.

The climate in the Czech Republic is favorable for exploring nature. In the summer months, temperatures reach up to 30 degrees, so you can spend most of your time on a short sleeve. At the same time, it is necessary to bear in mind that at higher altitudes, and especially in the mountains, it is usually colder, so it is always good to wear a sweatshirt or jacket over you. The same applies to overnight stays outdoors, where temperatures can drop below 10 degrees at night and in the morning, even in summer. Especially in the mountains, the weather can change a lot and it is therefore advisable to check the weather for the area several times before your trip, even from more sources, and to adapt your equipment and route to the weather and be prepared for sudden changes. Also in the winter months, nature is beautiful, but getting around in it requires good equipment and fitness, and you need to be cautious when devising routes. In general, it's a good idea to stick to the marked trails, carry a charged phone with maps, preferably a power bank, and at least some food and drink. Some places may not normally have mobile signals, so I would strongly recommend downloading offline maps to your phone.

The Czech Republic is also lucky when it comes to potential other outdoor hazards. We are mostly not in any immediate danger from any animal. Yes, there are wolves and occasionally bears in the Czech Republic, but in both cases, they are relatively rare. Encounters with wild boar may be more common. In any of these encounters, it is important to remain calm, the animals do not consider you as prey and therefore will not attack unless they feel threatened themselves. Slowly back away from the animal, letting it go its way. Do not make sudden movements and do not run away, most animals are faster than you anyway. If you are unsure, you can make noise, for example, if I hear a suspicious noise from the bushes in front of me, I can sing or say something loud. As mentioned, animals are shy and do not seek contact with humans, so if you let the animals know you are coming, you will also give them room to hide from you. For your safety, you can carry a commercially available pepper spray with you into the wild. Our only poisonous snake, the viper, is considered a greater danger. They like to bask in the sun during the summer months, especially on rocks and stones, so it's a good idea to use caution when moving through these areas. Again, vipers tend to attack only when suddenly disturbed. In the event of a bite, keep calm, it is not life threatening to a healthy person. However, an antidote is needed, so stay at the place and call the medical service.

There is an extensive network of information centers in the Czech Republic. They are located not only in most of the larger towns but also near popular tourist sites. In addition to buying souvenirs, you can always check the latest information about the weather, road accessibility, or visiting hours of tourist destinations along your route. Tourist information centers always have maps, often free of charge, to help you find your way around the area. The locations of tourist information centers are usually marked on maps with a white 'i' in a green box. You can also check the opening times of the information centers online in advance. If there are no such centers along your route, mountain huts and kiosks around the path often serve similar services. If necessary, you can also ask for information at the municipal office of the municipality you are visiting.

You don't need much equipment for normal day trips or even shorter walks. All you need to do is to map out a route and get out there. Clothing and footwear should be adapted to the terrain and weather. In the summer months, it is possible to walk in open shoes, but in spring and autumn, especially when it is wet, you should expect mud in the coun-

try side, so more durable and sharp-soled shoes and clothes that can get dirty are suitable. It is always good to have a charged phone with you to check the route and in case of an emergency. It's also a good idea to plan your hike with time in mind, for example, don't start a long hike in the afternoon, the darkness can be treacherous, especially for a non-skilled visitor. Calculate that the average walking speed on flat ground is about 4-5 km/h, but in hilly or rocky terrain it can be considerably slower. Do not overestimate your strength.

For longer trips with sleeping outside, the situation is similar. It is necessary to have clothes adequate for the weather. For sleeping outdoors, you need a sleeping bag and preferably some sort of pad underneath to provide more comfort and thermal insulation from the ground, which can be damp, and also to protect the sleeping bag from damage or soiling. Especially in spring and autumn, the ground temperature can vary considerably from the air temperature, so it is a good idea not to neglect this layer. You can also use a tent to sleep outside. It will protect you from the rain, but it has to be put up and taken down every day. Moreover, by using a tent you are camping, not just bivouacking, and camping is not allowed everywhere. In addition to your sleeping gear, you will also need a torch and a knife. On a cold evening, you can make a fire in the countryside, but only in places that are suitable and reserved for this purpose, certainly not in protected areas or national parks! Fire should be handled with care, which is why it is the subject of its chapter in this book.

Take the optimum amount of food with you on your trip, food that you can easily prepare in the countryside or that can be eaten cold. However, it is always better to carry a little more food than to starve on the road. In the Czech countryside, you will also find plenty of things to add variety to your travel diet during the summer and early autumn. In the mountains, it's all types of berries, then apples, pears, plums, cherries, and even other fruits. Mushrooms also grow throughout most of the area, but only pick those that you can identify with certainty. Water is also very necessary for your trip and its presence in nature depends mainly on the weather. Especially in the summer, you should carry plenty of water with you and, on longer journeys, keep it topped up at mountain huts or wells. Wells, especially in mountainous areas, can usually be considered drinkable; if you don't trust them, you can boil the water or use specialized filters. In general, however, it is better to drink water of uncertain quality than to risk dehydration and subsequent exhaustion.



Finland is the land of forests. About 75% of the country's land area is covered by forests, and about 60% of the forests belong to private landowners. All people have the right to enjoy nature anywhere in the Finnish countryside, regardless of land ownership.

The legal concept of "Everyman's Right" in Finland means that people can walk almost anywhere in nature, but they must be careful not to disturb it.

Everyman's Rights don't apply in national parks or other reserves. These areas have their special regulations.

### **Everyone is allowed to...**

- ⌚ walk, ski, cycle, or horseback ride freely (except very near homes and other private buildings or through farm fields and nursery plantations which could easily be damaged)
- ⌚ camp out temporarily a reasonable distance from homes
- ⌚ pick wild berries, mushrooms, and flowers, as long as they are not protected species
- ⌚ fish with a simple rod and line
- ⌚ use boats, swim, or bathe in inland waters and the sea
- ⌚ walk, ski, or drive a motor vehicle or fish on frozen lakes, rivers, and the sea
- ⌚ all the above can be restricted or forbidden in national parks and other nature reserves during certain seasons or year-round to protect sensitive areas and threatened species of plants or animals. Please pay close attention to any restrictions.

### **It's NOT allowed to...**

- ⌚ disturb people or damage property
- ⌚ disturb reindeer, game, breeding birds, their nests, or young
- ⌚ let pets off-leash
- ⌚ cut down or damage trees

- ☒ collect moss, lichen, or fallen trees from other people's property
- ☒ light open campfires without permission, except in an emergency
- ☒ disturb people's privacy by camping too near them or making too much noise
- ☒ leave litter
- ☒ drive motor vehicles off-road without the landowner's permission
- ☒ hunt without the relevant permits
- ☒ fish with nets, traps, or a reel and lure without the relevant permits.



## POLAND

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Poland is a diverse country with a rich nature. Its natural landscape includes lowlands, highlands, mountains, seaside beaches, dunes, lakes, meadows, wetlands, rivers, ponds, and forests which cover about 30 percent of the country. These forests are home to many species of plants, fungi, and animals. It is important to respect nature. Leave no trace. Take your trash with you. Keep quiet and listen to the sounds of nature.

Staying safe requires proper preparation. Before going on a trip, it is good to check a map of the area. Wearing comfortable shoes and weather-appropriate clothing, including protection against insects, is essential. It is also a good idea to bring food, water, or a warm drink. A power bank and flashlight may be useful in case you return after dark. However, remember that many animals are more active at night, so it is better to plan hikes during the day to avoid disturbing them.

You can experience Poland's nature at night by camping. However, camping is only allowed in designated areas, such as official campsites, camping fields, and tent sites. In forests, it is only permitted in areas marked by the local forest district or within the "Sleep in the Forest" program. In the mountains, some shelters can be found along hiking trails, and some are built for overnight stays. Camping outside these places is forbidden.

The same rules apply to making fires. It is only allowed in designated places, and even there, it is often required to notify the land manager in advance.

The websites of national parks, state forests, and landscape parks are the best sources for information on natural attractions, hiking trails, lookout towers, and accommodation options. Useful tools also include the Forest Data Bank maps and Geoportal, where you can find protected areas, natural sites, and related tourist infrastructure.



## SLOVAKIA

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Slovakia, the Slovak Republic, is a landlocked country in Central Europe. It has an area of 49,036 km<sup>2</sup> and a population of approximately 5,447,270 (approximately 5.5 million). It borders the Czech Republic in the northwest, Austria in the southwest, Poland in the north, Ukraine in the east, and Hungary in the south. The country is predominantly mountainous, as most of the surface is occupied by highlands. From the north, the Carpathians reach here from a massive arch, and the Pannonian basin stretches to the south.

The surface of Slovakia is predominantly mountainous – mountains and highlands occupy approximately three fifths of the territory. The extensive mountain range of the Carpathians is filled with many mountain ranges and basins. Individual groups of mountains differ according to their origin and the rocks they are composed of. Around the middle course of the Hron is a group of volcanic mountains – Kremnické vrchy, Vtáčnik, Poľana, Javorie, Štiavnické vrchy and others. The Slanské and Vihorlatské hills in the east are also of volcanic origin. Bands of folded mountains stretch from the Little Carpathians in the southwest through central and northern Slovakia. The highest peaks are the Malá Fatra, Veľká Fatra, Nízke Tatry and Vysoké Tatry. In the Tatras rises the highest peak in Slovakia – Gerlachovský štít, 2,655 m above sea level. m. Other famous hills are Lomnický štít (2632 m), the symbol of Slovakia Kriváň (2492 m) and Rysy (2499 m). The most extensive mountain range is the Slovak Ore Mountains.

It follows from the geographical description that Slovakia abounds in mountains and hills that have still preserved remnants of primary for-

ests and wilderness. In contrary to neighboring countries, the estimated number of wolves reaches approximately 300 individuals and the number of bears approximately 1300. Rare endemic plants and shrubs grow in many places in Slovak nature.

The majority of visitors to Slovakia come precisely for the wild nature, which is preserved in various national parks. The most popular park are the High Tatras, Low Tatras, Mala Fatra, Veľká Fatra, Muránska planina, the land of canyons and gorges Slovak Paradise and the karst territory of the Slovak Karst with numerous caves. Such a varied range enables a number of sports and activities and possibilities, which are increasingly provided by growing tourist services. The natural environment of Slovakia allows for family and fitness walks for families and seniors in the mountain environment, but also adrenaline activities from mountain climbing to rock climbing, cycling, skiing, water sports for youth. It is however important to acquire basic safety habits for staying in nature, as several dozen people die every year in the Slovak mountains due to overestimating their abilities and judgment and underestimating the nature and its elements. Weather fluctuations as well as climate changes must be taken into account (extreme heat, but also sudden cooling, floods, storms, gales, landslides and uprooted trees.) Those who are prepared are lucky and it is necessary to have the necessary equipment for staying in forest and mountain environments, to recognize protected, but also dangerous plants and fruits and know how to behave appropriately when meeting wild animals and beasts. Many carefree tourists pay for lack of preparation (absence of suitable shoes, clothing and hiking aids) and despite one of the best tourist signs, tourists often pay for the inability to orient themselves. The pressure of civilization on nature is also inexorable, inappropriate resorts and centers are being created in national parks (for example Demänovská dolina in the Low Tatras). Thanks to this, however, a large number of accommodation options, from luxury hotels to accommodation in private cottages, are available through the most common search engines and networks on the country's websites (Booking.com, AirBaB, <https://ubytovanie.lesy.sk/vyhladavanie.html>, <https://www.megaubytovanie.sk/chaty-chalupy/v-lese>, <https://echaty.sk/chaty-chalupy/pri-lese>).

The country is slowly but increasingly being better connected by highways, the network of good cycle paths as well as possibilities for horseback riding is growing. Many accommodation facilities rent electric bicycles, city scooters. Both Uber and Bolt operate in the country, so there is a cheap option to get to tourist sites even outside of public transport schemes. It is necessary in Slovakia to purchase a daily, weekly or annual motorway stamp (60 EUR). International bus and train or air connections to neighboring countries are also improving. Tourists can also use 4 regional and 3 international airports (Bratislava, Košice, Poprad-Tatry).

## RESPONSIBLE HIKING, CONSERVATION

**Tourism** is an activity consisting in (mostly) less demanding travel, which distinguishes it from trekking, which is defined as a multi-day to long-term journey, often in difficult terrain. A common phenomenon in tourism are repeated one-day events that end with a return to the place of sleep (home, hotel, cottage, campsite, caravan, ...). The most common location for hiking is nature, where tourists move along hiking trails and orient themselves thanks to tourist signage. Classic hiking is on foot, but we also know other types, partially listed in the next point.

Selected types of tourism: hiking (agritourism, tramping, ...), cultural tourism (getting to know monuments, cities, cultures), organized group tourism, bicycle tourism, car tourism, motorcycle tourism, hitchhiking, water tourism, mountain tourism, geocaching, currently emerging space tourism (commercial space flights) and many others. For our needs, we are primarily dedicated to hiking in nature, but advice, risks, experience and principles are often intertwined.



www.freepik.com

## NECESSARY EQUIPMENT

Some tramps say with humor that the only necessary equipment is a knife, as a universal tool, and a spoon, so that they have something to eat with a friend. The content of the equipment is adjusted and changed by the individual based on his own preferences and experience. He often starts with minimal equipment, gradually increases the number of items, and later reduces the content of his inventory to the necessary minimum.

### Footwear

Hiking that leaves us with positive emotions and pleasant memories begins with quality footwear. We choose footwear based on the terrain, climate, experience and resulting preferences. In general, however, we choose low and softer shoes for easier terrain (forests, meadows, countryside, low hills, ...), when we also have a lighter backpack. We choose high and harder footwear for difficult to difficult terrain, when it will

provide us with support and sure footing in exposed terrain, when carrying a heavy backpack, but also in the mountains when we will use the reinforcement of the sole when using crampons during ice climbing. It is a good idea to carry spare laces with you in case they break/break.

### **Clothes**

We choose based on location, season, weather conditions, length of planned stay (however, we always think about unforeseen circumstances – unplanned extension of the hike, sudden change of weather, ...). It is ideal to always have a waterproof compact jacket packed. In cold weather, we prefer layering clothing and, based on the activity performed and the difficulty of the terrain, we work with it operatively to keep the body warm but at the same time not to overheat unnecessarily or sweat excessively. Sweat would later cool us down in less demanding stages and take away our body heat. It is advisable to carry a spare T-shirt that we can change into after a difficult stage (difficult ascent, ...) and socks as well. Headgear is helpful all year round. In warm weather it protects against direct sunlight, in winter it protects against cold. **WARNING!** Most body heat escapes through the head!

### **A knife**

A universal tool that will provide us with a wide range of uses from food preparation, woodworking, an alternative way to start a fire and many others, in extreme cases also as a weapon for hunting or defense. We keep the knife clean and sharpened.

### **Light source**

Nowadays, the most practical light source seems to be a headlamp. The light beam goes where our eyes are, and at the same time we have free hands to work. On today's market there are various variants of power supply, design, resistance.

### **Nesmeky/cats/climbing irons**

Recommended during winter hiking in the hills, necessary in the mountains! They ensure grip, stability and the ability to move safely on even, even exposed terrain, and minimize the possibility of falling.

## **RISKS, PREVENTION, ELIMINATION**

### **Planning**

Don't underestimate tourism planning. Most often, during tourism, we find ourselves in an (for us) unfamiliar environment and are dependent on our knowledge, skills and information that we have secured beforehand.

## **The weather**

We will search for weather forecasts from several sources for our chosen location of movement. We monitor factors such as temperature, probability and abundance of precipitation, wind strength, avalanche forecast. We follow the warnings and alerts of the hydrometeorological institute and the mountain service. Based on the information obtained, we reassess the suitability of the route/date and possibly modify the original hiking plan.

## **Distance/ route elevation**

Based on our fitness abilities and previous experience, we choose the length and terrain difficulty of the hiking route. **WARNING!** Even a relatively short route can be physically/time-consuming due to the high altitude!

## **Drinking mode**

Sufficient fluid intake is very important during hiking, which we lose much faster during exertion. We are very careful about fluid intake even in winter, when we naturally feel thirsty less and much later than in warmer conditions. If we use natural water resources whose quality we do not know, we use processes to reduce the health risk.

Mechanical treatment of water by filtration, either using commercially available filters or using improvisation (e.g. filtration through sand, pulp, ash, ...). In this way we get rid of solid particles. Some microfilters are capable of mechanically removing bacteria and viruses from water.

Chemical treatment of water (tablets, drops, ...). In this way, we get rid of bacteria and viruses.

## **Snack**

Whether we are planning an easy walk or a more difficult hike, we should always have a packed snack with carbohydrates as a quick source of energy.

## **Surprise of the beast**

Danger from wild animals and their possible attack on humans is most likely under normal circumstances if we surprise the animal. Therefore, it is advisable to communicate with companions, or whistle, etc., especially in unclear terrain /growth (where the animal often rests and hides during the day). If the animal is aware of our approaching presence, they will almost always run away and move away.

## **Rolling the obstacle**

If, for some reason, we roll/move an obstacle in nature (stump, tree trunk, stone, etc.), we first roll it towards ourselves. If there is an animal under the obstacle (reptiles,

spiders, rodents, ...), we will create an escape route for it towards us. If we were to do it in the opposite direction, the only escape route is through us and we expose ourselves to possible danger.

### **Resting under the trees**

Whether we want to take a break and rest under the trees, or decide to sleep on the spot, we always check the trees around us, above us and their branches. We are looking for dry trees or dry branches above us. There is a risk of spontaneous falls here, along with increasing wind, the risk of breaking dry wood and its subsequent fall increases.

### **Sleeping bag over the face**

Sleeping in nature is wonderful. However, we can unintentionally reduce our comfort by covering our face with the sleeping bag and breathing into it in the hope of warming the sleeping bag with our breath. However, this will only increase the humidity in the sleeping bag and make it colder at night. That's why we don't breathe into the sleeping bag, we don't cover our nose and mouth with a sleeping bag. To increase thermal comfort, we use a cap in the sleeping bag, and in more extreme conditions, a hood.

### **Mat in the hammock**

Despite the fact that in the hammock we are not lying on the cold ground but above it, during sleep we need an insulating layer under us, which the sleeping bag does not provide from below even in the hammock. We will feel it most clearly in the wind. Sleeping bag mattress for the night always, even in summer!



# Nature protection in Poland



Nature protection aims to preserve valuable natural elements and processes for future generations. In Poland, nature is protected in various ways. The Nature Protection Act defines 10 official forms of nature conservation:

## 1 — NATIONAL PARKS (PARKI NARODOWE)

are areas of special natural, scientific, social, cultural, and educational value. Each park must cover at least 1,000 hectares. The main goal of national parks is to protect biodiversity, geological formations, and natural processes. Many rare and endangered plants, animals, and fungi species can be found in these areas. Around each park, there is a buffer zone, which is not a protected area itself but helps shield the park from external threats. Each national park follows an individual Protection Plan, which outlines conservation goals and tasks. The parks operate under the supervision of the Minister of the Environment and have dedicated park services responsible for monitoring, conservation, and management. Many parks also have educational centers and museums, which are great places to learn about local wildlife, history, and culture.

## 2 — NATURE RESERVES (REZERWATY PRZYRODY)

protect ecosystems that remain in a natural or nearly natural state. They include habitats for plants, animals, fungi, geological formations, and entire ecosystems. Some reserves also have buffer zones. Each reserve follows a Protection Plan, which outlines specific conservation measures to maintain its condition.

## 3 — LANDSCAPE PARKS (PARKI KRAJOWE)

are created to protect not only scenic beauty but also natural, cultural, and historical values. Areas surrounding a landscape park may



National parks and nature reserves are the most important forms of nature protection in Poland. In these areas, visitors must stay on designated trails. It is forbidden to disturb or feed animals, pick mushrooms or wild fruits, or damage plants in any way, including picking them.

serve as a buffer zone. Like other protected areas, landscape parks follow a Protection Plan. Rules here are less strict than in national parks or nature reserves. Agriculture and forestry are allowed as long as they do not conflict with the park's conservation goals.

## 4 — AREAS OF PROTECTED LANDSCAPE

(OBSZARY CHRONIONEGO KRAJOBRAZU)

are established in regions with diverse ecosystems. They serve as ecological corridors, connecting national and landscape parks. These connections help animals move between habitats, providing them with shelter and food. These areas also support tourism and recreation.

## 5 — NATURA 2000 SITES (OBSZARY NATURA 2000)

is the newest form of nature protection in Poland, established in 2004 after the country joined the European Union. Its goal is to protect both natural habitats and rare or endangered species.

## 6 — DOCUMENTATION SITES

(STANOWISKA DOKUMENTACYJNE)

protect geological formations of scientific importance, such as fossil deposits, minerals, caves, rock shelters with sediments, and both surface and underground excavations.

## **7 — NATURAL MONUMENTS (POMNIKI PRZYRODY)**

are a form of protection that focuses on individual elements of nature, either living or non-living, or their clusters, rather than entire areas. These monuments are designated for their scientific, natural, cultural, historical, landscape value, or unique characteristics. Examples include impressive trees, waterfalls, springs, rock formations, boulders, and caves. Trees designated as natural monuments are protected until their natural decay, as long as they do not pose a danger to people or property.

## **8 — CONSERVATION AREAS (UŻYTKI EKOLOGICZNE)**

protect important remnants of ecosystems that are essential for maintaining biodiversity, but due to their small size, they could not be included in reserve protection. These areas include natural ponds, wooded areas, wetlands, bogs, dunes, and rock outcrops, which are often habitats for rare and protected species of animals, plants, and fungi.

## **9 — LANDSCAPE-NATURE PROTECTED COMPLEXES**

**(ZESPOŁY PRZYRODNICZO-KRAJOBRAZOWE)**

focus on parts of the natural and cultural landscape, primarily valued for their scenic or aesthetic appeal. This form of protection includes manor and palace parks, river valley fragments, and old river beds.

## **10 — PLANT, ANIMAL, AND FUNGI SPECIES PROTECTION**

**(OCHRONA GATUNKOWA ROŚLIN, ZWIERZĄT I GRZYBÓW)**

focuses on specific species. A list of species under this protection can be found in the regulations of the Minister of Environment regarding the protection of plants, animals, and fungi. This list mainly includes rare, threatened, endemic, and endangered species at risk of extinction due to environmental changes, or those with decreasing populations or shrinking habitats, as well as species at the edge of their range. These species should not be collected, disturbed, or have their habitats destroyed. However, it is important to remember that every natural object, even if not listed in the regulations, is valuable for the environment and should be respected.

Forms of nature conservation	Numbers
National Parks	23
Nature Reserves	1524
Landscape parks	126
Areas of protected landscape	407
Natura 2000 sites	Birds Directive – 868 Habitats Directive – 145
Natural monuments	33935
Documentation sites	189
Conservation areas	7765
Landscape-nature protected complexes	275
Plant, animal, and fungi species protection	Plants – 715 Animals – 801 Fungi – 322

**Source:** <https://crfop.gdos.gov.pl>. (30.10.2024)



### 3.

# Responsible Hiking, Camping and Fire Safety



## OUTDOOR ETIQUETTE

Respecting nature, getting around, camping, lighting fires, and litter-free hiking – once you have mastered these, you are ready to head outdoors. Always check the detailed rules of your excursion destination



Here is the short version of Outdoor Etiquette:

- 1. Respect nature – leave no trace in it. Keep your pets on a leash.**
- 2. Mainly use marked trails and follow the rules. Check the areas and times in which access is possibly restricted at your destination.**
- 3. Camp only where it is allowed. Do not wash the dishes or yourself directly in a water body. Follow the rules of wilderness huts.**
- 4. Light your campfire only where it is allowed and use a camping stove where possible. Do not light a fire when a forest or grass fire warning is in effect.**
- 5. Do not litter.**

### Trash-free camping

-  Reduce waste already at home. If possible, leave out plastic and foil packaging from stores and pack snacks in proper containers.
-  Bio-waste can be thrown into woods or composter. Combustible waste can be burned in a bonfire. Always carry a plastic bag to put the rest of the waste in to transport it out.



- 👉 Don't leave your trash behind for anyone else to find it.
- 👉 If you find someone else's trash in nature, you're doing a good job for the day by fixing it up.

## **Washing in nature**

- 👉 Immerse yourself in natural waters.
- 👉 Return to the land and use a biodegradable product for washing.
- 👉 Wash the soap with bottled water on the ground far enough away from the water.
- 👉 Check that there is no insect nest or other animals' home right next to it.
- 👉 A drinking bottle with a sports cap is suitable for this shower, as the amount of water can be easily regulated.
- 👉 If you use detergents to wash your dishes, use a washing container. In this way, you can finally absorb the dirty washing water into the ground far enough away from the waterways.
- 👉 By using warm water, you may not need detergents at all.

## **Taking pets outdoors**

- 👉 Dogs must always be kept on a leash in national parks and other nature conservation areas. Even a well-behaved dog must be kept on a leash to set a good example if nothing else.
- 👉 National parks are protected areas where plants and animals must be left alone. Allowing your dog to run free in a national park is prohibited by the law at all times of the year. This can cause damage to young birds and other animals simply by scaring them.

- 👉 In reindeer herding areas, dogs may get excited by the reindeer, which can exhaust weak calves even when the dog just wants to have a bit of fun. The barking of a dog can also hamper reindeer husbandry work by frightening the reindeer and causing them to run in the wrong direction.
- 👉 Digging holes and pulling twigs and branches off dead trees is forbidden in national parks and other nature reserves – and this also applies to dogs. For example, dead trees provide a home for many threatened insects. Let your dog fetch sticks and dig holes before you enter the national park.
- 👉 Do not disturb other hikers. Not everyone likes dogs and some people may be afraid of them.
- 👉 Please pick up your dog's waste and keep the trails clean. When out and about, you can use a branch to sweep dog poo into the forest. In yard areas, you must collect it in a bag and put it in a mixed waste bin. Do not leave dog waste bags on tracks or paths.
- 👉 Check to find out if dogs are allowed in the huts. The pet rules for open wilderness, rental, and reservable huts vary by region.
- 👉 People accompanied by guide or assistance dogs have a statutory right to access all locations.
- 👉 As a general rule, dogs must be kept on a leash everywhere except in your yard and dog parks.



## **Responsible photographing**

-  Take photographs responsibly. Do not harm nature to get better pictures.
-  Show consideration for plants. Plants being trampled by photographers is a problem in many places.
-  Stay at a respectful distance from animals and their nests.
-  Do not feed animals.
-  Respect other hikers and do not photograph them without their permission.

## **When flying drones in nature reserve areas, always consider the following**

-  Flying drones are prohibited in restricted areas as well as key bird nesting areas (such as islands, skerries, and sea bays, where bird populations nest) and key rest stops.
-  National parks and other nature reserve areas are also important recreational areas for humans, who seek the peace and tranquility of nature, among other things. In these types of areas, flying drones is not generally advisable and may even be prohibited due to the disturbance they cause to other visitors.

## **Responsible behavior on social media and the Web**

-  Behave responsibly on social media and the Web. Make sure that the GPS trails and social media content you share comply with the rules of protected areas.
-  You can save GPS trails for your personal use, but if you publish them on track services (including Gpsies.com or Strava), make sure they remain on permitted routes.
-  Think about what you publish on social media. Use your magnificent nature photos to encourage others to follow Outdoor etiquette. A picture of a dog running loose in a national park, for example, gives other hikers a wrong impression of what is permitted in the national parks.

## **Building rock piles**

-  Building rock piles is harmful to nature and disrespectful of cultural values. The rock piles built by tourists damage the natural soil patterns created by frost and change the natural landscape. This activity is also a threat to ancient monuments.

## Campfires and hobo stoves

A hobo stove is a lightweight stove with a tin can for burning wood, such as loose and dry twigs and small branches. That's why it is an ecological option however, you should consider a few points when using it.

-  Using hobo stoves is forbidden if there is a grass or forest fire warning because of the risk of sparks.
-  The hobo stove is an open fire and using it requires permission from the land-owner.
-  You can use hobo stoves on state-owned land wherever walking and trekking are allowed but you can't use them in areas where making campfires is completely prohibited.
-  Always take special care when using a hobo stove. The stove must be placed on sand, stone, or a vegetation-free surface, never directly on a grass or brush.
-  In protected areas, removing or destroying trees, bushes, and other plants or their parts is prohibited. However, in protected areas, you can use dry twigs and branches that have fallen into the ground.
-  Bury the ash in the ground when you are sure that it has completely cooled down. The best way to cool down the ash is to pour plenty of water on it. In protected areas, damaging the soil is prohibited, so you can put the ash under a stone.

## In Case of Fire

-  If you see a forest fire, call the emergency services number 112 immediately.
-  Try to put out the fire from upwind. To help beat out a fire, find a small spruce tree or a juniper bush, and cut off sections about a meter in length from the lower branches to make brushes. If there is water nearby, wet the branches. Beat down the fire but take care not to beat too hard and spread sparks.
-  Beat any burning areas towards the fire, pressing the brushes to the ground to smother the fire. Prevent the spread of the fire by clearing away any loose branches, sticks dry moss, etc. from the ground ahead of the fire.

## If Your Clothes Catch Fire

-  If your clothes catch fire, throw yourself to the ground and roll around to smother the flames. Wet your clothes with water if possible.

- ☞ If you see that someone else's clothes are on fire, throw them to the ground quickly. Smother the flames by rolling them around on the ground or by using a blanket or water, starting from their head to prevent facial injuries first. Wet their clothes if possible.

## Help Prevent Forest Fires

- ☞ The most common reasons for forest fires are lightning and carelessly tended campfires. Forest fires are also sometimes caused by careless smokers or by children playing with fire.
- ☞ Campfires should never be left unwatched.
- ☞ Always put out campfires properly.
- ☞ Be aware of any official forest fire warnings, and do not light fires when warnings apply.
- ☞ Do not throw smoldering cigarette ends onto dry terrain.
- ☞ Teach young children how to treat fire with respect. Most kids are fascinated by fire, and adults should take care not to leave matches or cigarette lighters where curious children could find them.
- ☞ The careless use of camping stoves can also result in forest fires. Do not refill stoves with fuel until they have cooled down properly. Use a funnel to make sure fuel is not spilled onto the ground. Keep camping stoves and their fittings in good condition.

## Hiking in protected areas

- ☞ Collecting plants is not permitted in protected areas, you may pick berries and mushrooms.
- ☞ If you leave marked trails, be careful not to trample on vulnerable vegetation.
- ☞ Hiking in strict nature reserves is usually only permitted on specifically designated trails, and there may be restrictions in other protected areas.
- ☞ Always check the restrictions of the area before visiting.



If you see a forest fire, call the emergency services number 112 immediately!

# 4.

# Orientation in Nature



For a successful journey into nature and safe return, the most essential thing is to know where you are and how to reach your intended destination or to know how to find this information. If you are in a familiar area, such as local parks and forests, you may know these places well. However, in less familiar or entirely unknown places, it's wise to plan your route and follow it during the hike. In nature, various unexpected situations can arise: rain may start, your foot might begin to hurt, or you might run out of water. It is essential to be able to respond to these situations, adjust your route, or return if necessary. In extreme cases, you might need to call for help and indicate your exact location. For these reasons, it's valuable to know how to navigate in nature and to be prepared to use navigational skills when needed.



## NAVIGATING WITH TOOLS

When heading out into nature, we are usually prepared- physically, mentally, and with the right equipment. Even on the shortest of trips, most people bring along at least some essentials, and today, almost everyone has a mobile phone readily at hand.

### Mobile Phone

A mobile phone combines the advantages of several navigation tools, as it typically includes a compass and a map application. Furthermore, it provides internet access and location services, allowing us to easily determine our exact position and the direction to follow. By enabling location services in your phone settings and opening a map application, a blue dot usually appears on the map to indicate your position, with a shaded area indicating the direction you are facing or the orientation of your phone.

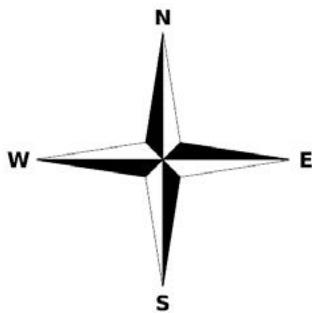
This orientation must be taken into account when navigating on mobile maps. We can rotate the map in different directions. The left part of the



image below shows an example where we can rotate the map by rotating our fingers in the direction we are looking, so it shows things directly as they appear in front of us. At such a moment, the compass of the cardinal points will show the same thing. In this case, the red arrow points downwards, i.e. behind us, and the white arrow points upwards, i.e. in front of us. This means that we are looking to the south, which is shown by the white arrow, while the red arrow always shows north. On the second (right) map, which is from the Mapy.cz application, the map position is oriented towards the north, which shows the letter N for North, which shows us north in this application. If the map is oriented this way, the cardinal points have an agreed map direction, i.e. north at the top, south at the bottom, east on the right, and west on the left. So I'm standing as the icon shows in this case, so I'm looking west, so south is on my left and north is on my right.



Modern map applications, such as Google Maps or Mapy.cz, offer even more features. They display notable landmarks or even services, and when clicked with an internet connection, they can show photos, accessibility information, opening hours, or reviews from other visitors. These applications also display train and bus stops, and in some cases, even provide departure times for routes in various directions. These tools are highly useful for travel planning.



Despite these benefits, we can encounter a situation when the telephone can't help us. Mapping services rely on internet access, which may be poorly available in remote areas, and in some areas, you may have no signal at all. Therefore, it's wise to download offline maps to your phone, which don't take up much space and can be helpful in emergencies. Both mentioned map applications offer this feature, allowing you to download an entire country's map or only specific areas. Modern mobile phones also tend to lose battery quickly, so it's advisable to conserve power during your trip by switching to a power-saving mode or even flight mode for extended journeys. For longer trips, it's essential to bring a power bank and a charger. Even so, technology might fail or the device may simply run out of power, making it necessary to rely on other navigational tools.

### Map

Whether a map is paper-based or digital, it is always the most useful tool for planning a route and navigating it. When venturing into unfamiliar areas, it is advisable to plan your route, choosing specific, ideally marked paths to follow. Map stands are commonly found along marked tourist trails in popular areas, and paper maps are available for purchase at tourist information centers and bookstores. Even if you are uncertain about your exact location, a map can still be helpful.

If you are unsure where you are, you can mentally retrace your steps and compare your memory with the map. You likely remember your starting point. If you have a digital map, you can simply type the name of a location into the search bar; with a paper map, you may need to search manually. Remembering the general direction and path you took

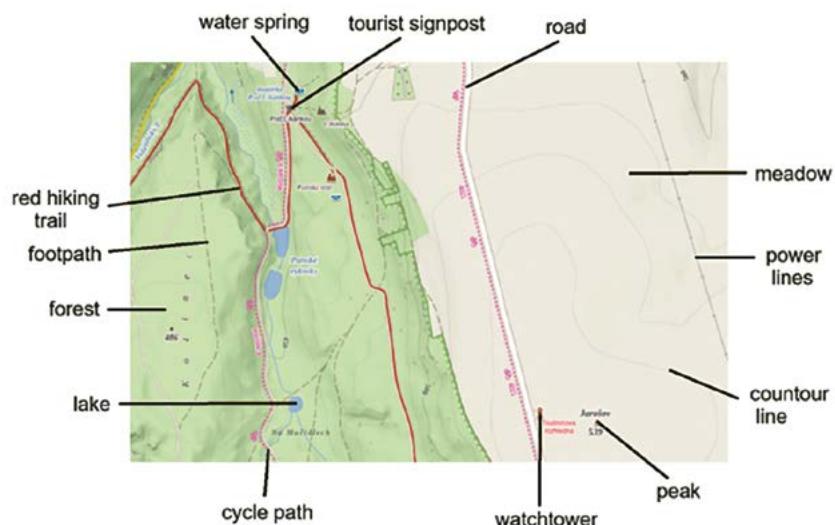


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can help track your position up to the last familiar spot, from which you can estimate your current location based on your subsequent direction and walking time. It's important to note that maps always display north at the top. Therefore, when looking at a map, east will be on your right, west on your left, and south at the bottom.

Also, other marks on the map may help find your location, paths, roads, and crossroads. Tourist maps show vegetation in addition to paths: green areas typically represent forests, and white spaces represent meadows. By comparing the map with your surroundings, you may be able to determine your approximate location. Other useful landmarks include water bodies marked in blue, buildings, hills, or power lines, which appear as thin black lines on maps. In forests are these areas cleared of vegetation for power lines and can also serve as helpful reference points or even it can be used as paths.

Maps also display contour lines, which illustrate the terrain's relief. Each line is marked with an elevation number indicating altitude. For instance, if you know you've been descending, look for spots with lower elevations than where you started.



## Compass and Boussole

The compass and the boussole (oriented compass) are similar tools that help determine cardinal directions in the landscape. A compass is a device with a circular analog display that includes a scale and a rotating needle. This needle is magnetized so that one end always points toward the magnetic North Pole. If the needle is two-sided, the red end indicates north. To use a compass, hold it horizontally in front of you and rotate yourself until the needle points north, commonly marked as "N" (North). From there, you can deduce that east ("E") is on your right, west ("W") is on your left, and south ("S") is behind you.

In some compasses, the entire display rotates, so rather than a separate needle, the direction is printed directly on the display itself. One advantage of a compass is that it can be made very small, making it a convenient accessory for various types of equipment.



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If you remember from the map that your path continues approximately to the east, you can use this information to identify which path to take at an unmarked crossroad. A boussole is a more professional tool with broader applications. Like the compass, it has a circular surface with directional markers, but in this case, the surface is rotatable and includes a two-sided needle. You align it similarly to a compass by ensuring that the red end of the needle points to "N" (north), which should align with the instrument's axis.

If you have both a map and a boussole, you can place them together so that the top edge of the map aligns with the north indicated by the boussole or compass. This can help you determine which direction to proceed if you know your current location. If you don't know exactly where you are, it can still assist in finding your position on the map. For



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instance, if you are at the edge of a forest and a meadow, you can orient the compass so that the north aligns along the boundary. This helps you understand that you are likely on the eastern edge of the forest, which you can then look for on the map.

## NAVIGATING WITHOUT TOOLS

### Marked touristic paths

Marked trails have several advantages, as they often connect scenic or interesting spots. The trails are marked, so you only need to follow the signs along the path. At regular intervals, especially at significant points or intersections, there are trail signs indicating destinations in both directions, often with distance estimates in either kilometers or time. If you are unsure of your exact location but are on a marked trail, simply follow the trail to the nearest marked intersection. Signs are placed on tree trunks, rocks, and posts, in urban areas on walls or street lamps. Each intersection should be marked to indicate the direction to follow.



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If you are uncertain during your walk, signs can appear either ahead or behind you. If you don't see one, continue a few hundred meters as markers are placed at regular intervals, even on open stretches. If needed, retracing your steps can confirm whether you're on the correct path. The same applies to intersections: after passing through, you should see a sign marking the way forward. If you encounter an inadequately marked intersection, try one of the possible paths; the sign should reappear within a few dozen meters. Trail markers are usually refreshed every three years, though this is not always sufficient. Changes to the path, tree removal, or other damage can affect markers. Therefore, using a paper or mobile map is helpful as tourist maps also show marked trails.

### Pathways

Even off the marked paths, we can lose our bearing or come to a cross-roads we don't know and are unsure how to proceed. Even in this case, it is important to remain calm. We can always turn back and find a familiar place. The advantage of paths is that they usually lead somewhere and

sooner or later we will meet a person, a cottage, or some other trace of civilization that will help us determine our location. If we can remember the approximate direction of travel, we can try to pick our way, for example, at an unmarked fork in the road. If we are not sure, it is always advisable to choose the largest, i.e. the most used, route with the greatest chance of meeting someone who can give us advice or of reaching a marked place, a civilization. So from the unknown footpath and forest road with tire tracks, we choose the latter. Similarly, we prefer to take the path away from the forest or other impenetrable areas. Paths can also sometimes end abruptly. In the open countryside, we can, if we feel confident about it, go on without a road, for example beyond a nearby village. In forests, cliffs, and similar rugged terrain, it is always safer to return to the fork from which we came and continue along another path.

### **Roadless**

If we find ourselves completely off the path and don't know which way to go, finding the way is the first and most important step. If we can't remember the way back we must try to choose a direction and stick to it, sooner or later we will find a path or civilization. In the open countryside, it is generally easier to find our way, we can pick a destination on the horizon and follow it. In the woods, it is more complicated, so if we are at the edge of the woods for example it is advisable to go out, use clearings within the woods to pass through, or even animal trails. We always try to simplify the situation and take the easiest route. Otherwise, we have to try to follow one of the methods described below.

### **Reading in the landscape**

We are in an obscure place off the road and we don't know which way to go. Even so, the landscape around us can give us a little hint, at least which direction is better to take. *Waterways* – Waterways can also help us find our bearing or get to civilization. Watersheds join together to form streams, creeks, and rivers, always flowing downhill. Most settlements are located around watercourses for historical reasons, so it is a good idea to follow the watercourses downstream, increasing the chances of coming across a village or road.

*Elevation* – As mentioned, settlements are often located around water and water flows through valleys. Going rambling, therefore, can also give you a chance to find civilization. Roads, railroads, and other signs of civilization are also more likely to be found in valleys. This rule certainly doesn't always apply, for example, if we are in the mountains near a major ridge and have just taken a wrong turn somewhere it is of course a bad to dangerous idea to immediately start traversing into a valley without thinking.

*Peaks* – This rule is somewhat contradictory to the previous one. Again, from higher ground or places without vegetation, there may be a better view of the surroundings, which can also help us to get our bearing. For example, we may notice a typical

peak, road, or village. This can help us to determine the next direction of travel.

### **The Sun**

Using the sun, we can determine the cardinal directions quite well on a clear day. The sun always rises in the east and sets in the west. In our northern hemisphere, it is at noon in the south. So if we have at least an approximate idea of what time it is, the sun can help us at least a little. So if we know that it is approximately 10 am, that means that the sun is probably in the southeast.

It is more accurate to use shadows to determine north. Stick a stick in the ground and use the pebble to mark the direction that its shadow points. We then wait for the sun, and therefore the shadow, to move. Mark the other direction of the shadow. Their line should point west at the first mark, and east at the second. So if we stand with our backs to the stick at this junction, we are looking up north.

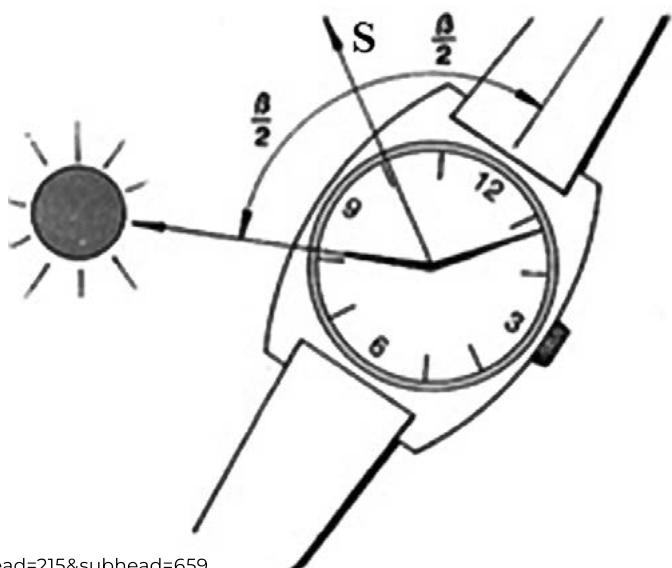


**Source:** <https://www.radyprovsechny.cz/jak-urcit-svetove-strany-bez-kompassu/>

If we have a wristwatch, we can determine the cardinal directions quickly and easily. We put it horizontally and turn it so that the small hand, the hour hand, points to the sun. We then observe the angle between this small hand and the 12 in the clockwise direction, exactly halfway south.

### **Night sky**

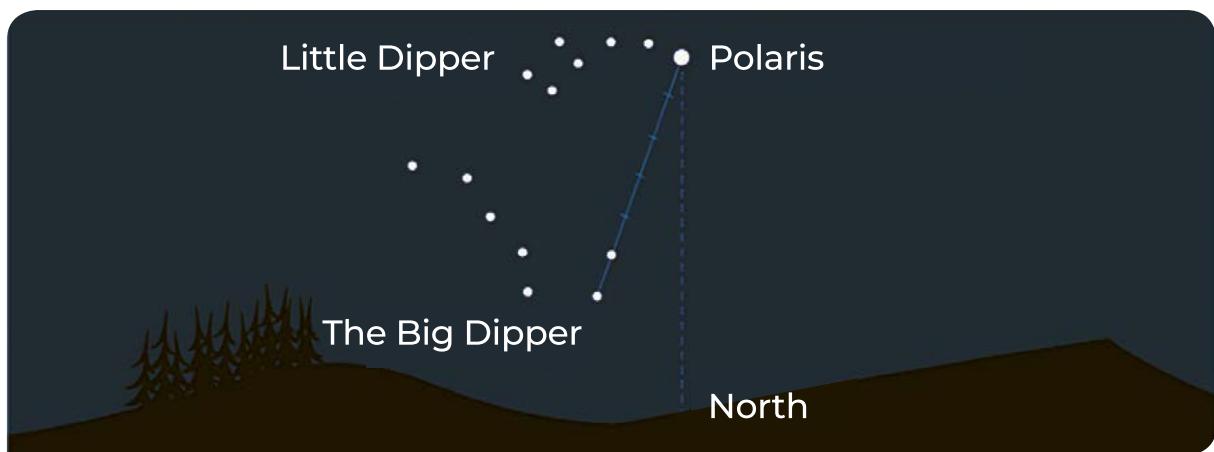
Orientation in the night sky is a bit more complicated. Again, we need the sky to be clear, then we can use the stars or the moon. In the case



Source: [www.vzdelavani-dh.cz/publicCourse?id=68&head=215&subhead=659](http://www.vzdelavani-dh.cz/publicCourse?id=68&head=215&subhead=659)

of stars, we can use the star called Polaris or the North Star. This is located on the axis of the earth, always directly on the north side. Its brightness and therefore its apparent larger size make it easily visible in the sky. It can be found completely at the end of the tail of a little dipper. If we cannot find the little dipper, we can follow the line joining the two front stars of the big dipper, and at about five times the distance of the two stars we will find Polaris.

In the case of the moon, we also need a wristwatch as with the sun. This method is a little more complicated because we first have to estimate how many twelfths of the diameter of the moon's disc the luminous part is. If the moon is growing (the shape resembles the letter D), we subtract the number of twelfths from the actual time; conversely, if the moon is receding (the shape resembles the letter C – receding), we add the number of twelfths. The sum or difference gives the hour at which the Sun would stand in the sky where the Moon is at that moment. Then we proceed as in normal determination of cardinal points in sunlight. We rotate the number on the



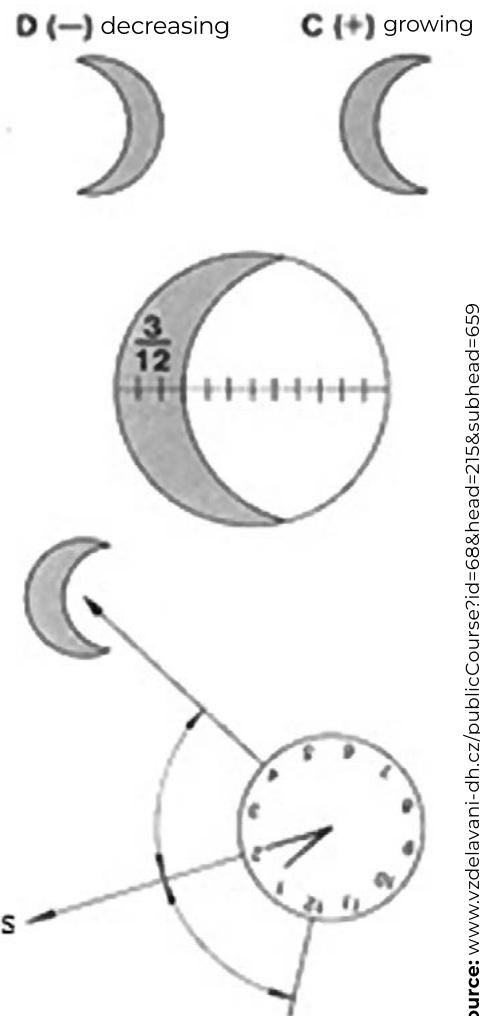
Source: <https://jakprzetrwac.pl/jak-wyznaczyc-polnoc-za-pomoca-gwiazdy-polarnej/>

dial that indicates this resulting calculated hour to the Moon and bisect the angle between the number and the 12. The bisecting line of the angle (the axis) will point south. For example, at one hour and 10 minutes after midnight,  $3/12$  of the Moon is visible, which is receding. We add 3 ticks to 1 o'clock and get the result to 4. We rotate the numeral 4 on the watch to the moon and the half line (which passes through the numeral 2) points south.

### Fauna and flora

There are a few more tips on identifying the north in nature in your area. However, nature is not bound by these rules and should be taken with a grain of salt as a possible hint rather than a guiding sign.

- ➲ Moss and lichens overgrow tree trunks mainly on the north side.
- ➲ The stumps of felled trees tend to be closer together towards the north than from the south, where the sun shines.
- ➲ Trees growing in the open have a denser and wider crown on the south side where there is more light. The branches tend to be thinner on the north side. Trees exposed to the wind may also lean slightly away from the prevailing winds. In Europe, the wind often blows from the west so that trees may be slightly tilted towards the south.
- ➲ Also, tree fruits may ripen earlier on the southern side more exposed to sunlight.
- ➲ On the north side of the trees and rocks, the north slopes are the most sheltered from sunlight, so this side remains covered with snow or ice the longest in the spring.
- ➲ The north slopes also usually have thinner vegetation or are more sought after by shade and moisture-loving plants such as ferns, or even mushrooms.



Source: [www.vzdelaani-dh.cz/publicCourse?id=68&head=215&subhead=659](http://www.vzdelaani-dh.cz/publicCourse?id=68&head=215&subhead=659)

- ⌚ On the south side, the rocks are often lighter or more weathered because they are more exposed to the sun. On the north side, they tend to be darker and may be covered with moss or lichens. Also on the south side, the stones or rocks may be more cracked due to greater temperature fluctuations.
- ⌚ Ants build their dwellings in such a way that the northern side, from where the wind blows the most, is covered as best as possible with a log or stone. This wall tends to be the steepest.
- ⌚ The insects often orient themselves according to the light, for example facing east in the morning and west in the evening.
- ⌚ Birds often build nests on the north side of trees or rocks, where their nest is better protected from the sun and predators.



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# First aid

5.



We often go out into nature without the necessary equipment that can save our lives. Even during a short walk, we can trip or slip and cause ourselves injury, for example with inappropriate shoes. If we want to prevent accidents, it is advisable to carry a first-aid kit with you, or at least let at least one of the parties have one. A tourist first aid kit does not take up much space, so it is not a problem to pack it.

"Better to have it and not use it than not to have it and need it".

**The basic material of the tourist first aid kit contains:**

- +** Sterile dressing
- +** Elastic bandage
- +** Gaza
- +** Bandage cotton
- +** Patches
- +** Leukoplast
- +** Disinfection solution
- +** Safety pin
- +** Small scissors
- +** A three-pointed scarf, a scarf
- +** Aluminum foil for covering



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## SPRAIN

- ⊕ Place the injured part of the body in a stable place. If you have an ice pack, you can apply it to reduce swelling.
- ⊕ Clean the wound – with a clean towel or bandage, disinfect with a disinfectant solution.
- ⊕ Applying sterile cotton wool – Place sterile cotton wool directly on the wound to avoid direct contact with the elastic bandage.
- ⊕ Bandaging – Cover the leg with an elastic bandage from the bottom up. Starting from the bottom of the leg and working upwards, secure the bandage so that it is firm but not too tight.

## FRACTURE

- ⊕ In the case of a fracture, it is necessary to seek more professional help, until then it is necessary to immobilize it.
- ⊕ We can immobilize a broken leg by tying it together with a healthy leg. Tighten the knots on the side of the healthy leg. Wrap the bandage around the ankle and foot.

## BLEEDING OF WOUNDS

- ⊕ With slight external bleeding, it is possible to stop the bleeding by pressing and elevating the injured area.
- ⊕ With heavy bleeding, the injured may go into shock. After determining the shape of the wound, try to press their edges together and squeeze the wound.



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-  Place the injured person and raise the injured limb so that it is higher than the heart. Bandage the wound and press to help stop the bleeding.
-  Apply a sterile bandage and tighten the wound tightly, not too hard so as not to disturb the blood circulation. Keep the limb elevated while bandaging.

## BURNS

-  These injuries are usually caused by accidents with fire, stove, or boiling water. If we act as soon as possible, we can cause further tissue damage.
-  Do not remove anything stuck to the burned area.
-  Pour clean water over the burned area for at least 10 minutes. The pain will be reduced and the extent of the burn will be reduced. Protect the burned area from infection with a clean plastic bag.
-  Place gauze on the burns and tie it with a bandage.

## SUNBURN

-  Staying in the sun for too long leads to skin burns. This can lead to redness, burning, skin sensitivity, or blisters.
-  We cool the skin with a cold compress.
-  It is necessary to take in a sufficient amount of fluids.
-  We protect burnt areas from sunlight.

## CRAMPS

-  Cramps mainly affect those parts of the muscles that bend. They cause unpleasant muscle contraction accompanied by sharp pain.
-  Massage the affected area with firmer pressure.
-  If you get a calf cramp, stretch the affected muscle and pull the ball of your foot toward your body.
-  With a cramp in the back of the thigh – raise your leg.
-  When you "catch" a cramp in the area of the front thigh, bend the leg at the knee and slowly massage it.

## HYPOTHERMIA

Hypothermia or hypothermia occurs when the body temperature drops below 35 °C

-  In case of hypothermia, we warm up the affected person – transport them to a warm environment, and change wet clothes to dry ones (sweaty clothes cool the body), it is advisable to use aluminum foil (it is light and provides excellent insulation), drink a hot sweetened drink.
-  In a sleeping bag the body warms up faster, so keep communicating with hypothermia.

## IF A PERSON IS UNCONSCIOUS

Unconsciousness can have various causes: head injury, low blood sugar, sudden stroke, cerebral hemorrhage, blood loss, shock, hypothermia, but also heat stroke, allergic reaction, poisoning.

If the person has lost consciousness, it is necessary to make sure that the lungs and heart are working.

It is necessary to carry out three basic actions: 1. check the airways, 2. restore breathing, and 3. ensure blood circulation.

-  Open the affected person's mouth and remove everything that prevents the flow of air. By tilting the head and pressing the chin at the same time, the breathing tube is released. Press your forehead with your hands and tilt your head.
-  Find out if the injured person is breathing. Place the shape over his mouth for about 5 seconds while watching his chest move. In this way, you will also feel very weak breathing, which means that the lungs are oxygenated.
-  By applying pressure on the artery, we can see if the heart is beating. If the pulse is palpable and the victim is breathing, place him in a stabilized position.
-  If a cardiac arrest occurs, we immediately start resuscitation.

## RESUSCITATION

### Artificial respiration:

-  Place the injured person on his back. Place one hand on his forehead and squeeze his nostrils. Put your other hand under his chin and tilt his head.
-  You pinch his nose with your thumb and forefinger, put your mouth on his and breathe deeply into his lungs within 2 seconds. Stand back and wait for the air to come out of your chest.

-  Repeat this at a rate of 10 breaths for a minute until help arrives or breathing resumes on its own. Keep monitoring your heart rate. If cardiac arrest occurs, we start with cardiac massage.

### **Resuscitation:**

-  Place the injured on a hard mat. Use your index and middle fingers to feel the lower ribs and follow them to the point where they join the sternum.
-  The index finger now rests on the sternum. Move the edge of the other hand up to the index finger, so that it rests on the lower end of the sternum. In this place we will press the chest.
-  Put your hands together and cross your fingers. Squeeze your chest hard, then release the pressure, but keep your hands in the same place. We continue with a frequency of at least 100 per minute. 30 compressions are followed by 2 rescue breaths.
-  We continue with resuscitation until help arrives or a pulse starts.



# 6.

# Edible plants and Mushrooms



When spending time in nature, we inevitably come into direct contact with the surrounding environment. This often raises many questions and concerns about potential dangers. How can we enjoy the outdoors while ensuring the safety of ourselves and our loved ones?

Humans tend to fear the unknown- a natural survival instinct that once protected us from hidden dangers. However, with basic knowledge of common plant and animal species, we can move confidently through nature, appreciating its beauty and even benefiting from its resources. In this section, you will learn about selected edible plants, including the best times to harvest them and their effects on health. You will also become familiar with some wild animals, understanding how to react if you encounter them and what to avoid to ensure both your safety and the well-being of the animals.

Edible plants have always been a crucial part of human life. Every fruit or vegetable we buy in stores originally grew in the wild, though many have changed significantly through cultivation. However, some wild plants have remained largely unchanged and continue to grow naturally around us- often without us even realizing it. It is also important to follow basic foraging principles to avoid collecting plants from polluted areas, as they may contain heavy metals and harmful substances.

The plants we will take a closer look at include dog rose, Cornelian cherry, European beech, ground ivy, red dead-nettle, and common lilac. These species are widespread, and chances are, you've already encountered them many times.

**REMEMBER!** Before we dive into descriptions of specific plants, it's important to highlight some key principles for safely collecting edible plants:



- ⌚ Avoid polluted areas. Plants growing in cities or near roads are often exposed to environmental pollution and can absorb harmful substances like heavy metals. To minimize health risks, avoid collecting fruits or other plant parts from roadsides or urban areas with heavy traffic.
- ⌚ Always wash what you collect. While this may seem obvious, it's crucial to thoroughly wash all foraged fruits, flowers, and leaves before consuming them. Wild plants can carry eggs or larvae of harmful parasites, such as the liver fluke or tapeworm.
- ⌚ Harvest responsibly. To protect plant populations, pollinators, and local wildlife, avoid excessive harvesting from a single plant or area. Always assess whether you are stripping a tree or shrub of all its flowers or fruits. When foraging in the wild, follow the principle of harvesting only for personal use and never take more than necessary.

After learning the basics of safe foraging, we can move on to the practical part- identifying and using selected plants.



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**DOG ROSE** (*Rosa canina*) is a shrub from the rose family (Rosaceae) that can grow up to 3–4 meters tall. It is easily recognizable in autumn by its oval-shaped, orange-red fruits. These fruits are rich in vitamin C and antioxidants. Foraging should be done after the first frost, as cold temperatures help reduce the fruit's natural bitterness. If you want to

harvest them earlier, you can mimic this process by freezing the fruits for 2–3 days. It's best to pick them up on dry days to prevent spoilage. Dog rose fruits can be used in various ways, such as making preserves, herbal teas, or even health-boosting liqueurs.



**CORNELIAN CHERRY** (*Cornus mas*) is a shrub from the dogwood family (Cornaceae), commonly found in parks as well as natural forest habitats. Its red fruits, which resemble dates in shape, are ready for consumption between late August and September. Fully ripened and well-colored fruits can be used to make homemade jam or an excellent fruit

liqueur. Cornelian cherry fruits contain more vitamin C than lemons and can also be eaten raw. However, always remember to wash them before eating.



**EUROPEAN BEECH** (*Fagus sylvatica*) is a tree from the beech family (Fagaceae) and is commonly found both in urban greenery and forests. Young beech leaves are edible and should be harvested in spring after leaf buds open (depending on weather conditions, this can be from March to May). Fresh young leaves can be added to salads, providing

a rich source of minerals and beneficial micronutrients. The younger the leaves, the more delicate and slightly sweet they are. Older leaves are also edible but may develop a bitter taste in summer. Beech nuts, which appear in autumn, can also be eaten raw.

**GROUND IVY** (*Glechoma hederacea*) is an herbaceous plant from the mint family (Lamiaceae), commonly found in meadows, abandoned fields, and urban areas such as lawns, green belts, and city parks. The edible parts of the plant are its above-ground portions, with young leaves being the sweetest, offering a pleasant, spicy taste. Ground ivy can be eaten raw, added to salads, or used to make infusions from its leaves and flowers. The plant has anti-inflammatory properties and can soothe respiratory infections due to its flavonoid content. It can also be used for compresses and applied to skin irritations.



**RED DEAD-NETTLE** (*Lamium purpureum*) is an herbaceous plant from the mint family (Lamiaceae), commonly found on lawns, meadows, and green belts, much like ground ivy. Young leaves can be used to prepare an infusion (but remember to use hot water, not boiling water). This tea has a beneficial effect on the circulatory system, helping to regulate blood pressure. However, as with any natural remedy, moderation is key- follow the "1:2 method," meaning one week of regular use followed by a two-week break. This approach helps prevent unwanted side effects from excessive consumption.



**COMMON LILAC** (*Syringa vulgaris*) is a shrub from the olive family (Oleaceae) and is frequently found in urban areas as well as at the edges of forests. Due to its early spring blooming, it is often referred to simply as "lilac." The edible parts are the flowers and young twigs, which should be collected during blooming. These can be used to make herbal infusions that have calming effects, support liver function, help with cough relief, and promote digestive health. The infusion also has antiseptic properties.



## UNUSUAL EDIBLE MUSHROOMS

Mushroom picking among Polish people is often jokingly considered a national sport, but in this section, I'd like to focus on those mushrooms that may not be among the most commonly collected. When it comes to foraging, it's always worth remembering that no matter how experienced we are, if we're unsure about a particular specimen, it's best to leave it. Making a mistake in identification can put not only ourselves but also our loved ones at risk. The mushrooms described below belong to the group of edible fungi. It's also a good moment to remind ourselves that mushrooms are divided into three categories based on their usability:

-  edible mushrooms
-  inedible mushrooms
-  poisonous mushrooms

This means that mushrooms in the first group can be safely consumed. The second group does not pose a health risk but lacks the taste qualities needed for cooking. The third group, however, includes mushrooms that can have serious health consequences if eaten and, in some cases, may even be fatal due to the toxins they contain. Because of this, we should be extremely careful and attentive when foraging, as some species can have very subtle differences.

Moving on to the main point, the following section will introduce selected mushroom species that can add some variety to our cooking. It will include identification methods for different species and reliable sources where we can find information about these fascinating organisms.



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**WARNING!**

Always collect only those mushrooms that you are sure are edible. It is a good idea to have a pocket mushroom atlas or use reliable online sources for identification.



### JELLY EAR

(*Auricularia auricula-judae* (Bull.) Quél.)

Also known as wood ear mushroom, can be an interesting addition to dishes served with rice, but not exclusively. Its name refers to the black elder tree, on which this species is most commonly found, as it rarely appears on other trees or shrubs.

The mushroom itself does not have a distinctive taste, but it certainly adds a pleasant aroma and texture to our dishes. A mushroom it can sometimes be confused with is the Warty Jelly Fungus (*Exidia nigricans*), which differs from the jelly ear by its glossy appearance and more gelatinous consistency.



### HORN OF PLENTY

(*Craterellus cornucopioides* (L.) Pers.)

This is another fascinating species, commonly known as the "dead man's trumpet," though this name shouldn't be alarming, as the mushroom is edible and poses no danger. It is an excellent ingredient for soups, giving them an incredible aroma and unique flavor.

Due to its characteristic appearance and funnel shape, there is little risk of mistaking it for another species. It has a dark brown coloration and a distinct shape that makes it easy to recognize.



### CHICKEN OF THE WOODS

(*Laetiporus sulphureus* (Bull.) Murrill)

This is one of the edible polypores. It gets its name from its distinctive yellow color. It is most commonly found on trees in moist habitats, though this is not a strict rule. When fried, its texture is often compared to meat or tofu. It works well as an addition to pasta dishes and more. It is important to always consume it only after proper heat treatment.



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### SCARLETINA BOLETE

(*Neoboletus erythropus* (Pers.) C. Hahn)

This mushroom belongs to the bolete family and is characterized by a reddish-brown stem with visible lighter pores. It can be mistaken for the Lurid Bolete (*Suillellus luridus* (Schaeff.) Murrill), but both are edible, so there is no cause for concern. Due

to its intense mushroom flavor and aroma, it is perfect for mushroom sauces or soups.



© Martyna Stawarska

### BIRCH POLPORE

(*Fomitopsis betulina* (Bull.) B.K. Cui, M.L. Han & Y.C. Dai)

This fungus grows on both living and dead specimens of the Silver Birch (*Betula pendula*). Although it belongs to the group of inedible mushrooms, scientific research has confirmed its antibacterial properties. In the past, it was used to stop bleeding.

Today, it can be consumed as tea. To prepare it, the mushroom should be sliced and dried (stored in an airtight container away from light). To make the tea, use 30g of dried mushroom, pour 500ml of water over it, and simmer covered for an hour.



© Kajetan Sala

### OYSTER MUSHROOM

(*Pleurotus ostreatus* (Jacq.) P. Kumm.)

This species belongs to the oyster mushroom family and grows on dead hardwood. It can be confused with other members of the same family, but they may have different cap coloration, an anise-like scent, or a serrated cap edge. It is an edible and

sometimes cultivated mushroom that can be freely added to various dishes. It is a good source of easily digestible protein, supports the immune system, and has a pleasant mushroom flavor.

## 7.

# Observation of wildlife



While spending time in nature, aside from admiring the scenery, we also have the chance to observe various wild animals. In recent years, many species have become increasingly present in urban areas. But how should we react to wildlife encounters, and what should we avoid doing?



**First and foremost, it is essential to remember that even if animals appear accustomed to humans, they remain wild creatures!**

We should never approach them too closely, let alone touch them. Some wild animals can carry diseases that pose risks to both humans and pets. It might feel natural to want to help these animals by feeding them, but we must be aware that most human foods are unsuitable for them and, in many cases, can be harmful.





In the springtime, while walking through forests or meadows, we may come across young deer or fawns. However, it is important to remember that their mother is usually nearby. Newborns have no scent, which helps protect them from predators. If we touch them, our scent will transfer onto their bodies, and their mother may reject them upon her return. This would leave the young animal vulnerable to starvation or predator attacks. The same applies to young hares, which can often be found in forest meadows- do not touch them.

Near bodies of water in late autumn and winter, we may encounter various water birds such as ducks, swans, grebes, and goosanders. Unfortunately, there is a common misconception that feeding them bread is beneficial. In reality, bread is extremely harmful to these birds and can lead to serious health problems- even death. Water birds produce a special oil secretion that coats their feathers, keeping them waterproof and insulated against cold temperatures. Consuming bread disrupts this process and can interfere with feather growth, leading to a condition called "Angel Wing"- a deformity of the last joint in the wing that prevents proper flight. This condition makes survival much harder, especially in winter. Instead of bread, their natural diet consists of aquatic plants, mollusks, and insect larvae. If we wish to help them in winter, we can provide grains, oats, or finely chopped raw or cooked (unsalted) vegetables.



The great egret.

 Martyna Stawarska

The same principle applies to other bird species found both in cities and in the wild. Their natural diet differs significantly from the foods we commonly have at home. Therefore, we should avoid giving wild birds processed foods such as bread or seasoned dishes. Instead of helping them, these foods can cause severe harm. Let's remember to assist wildlife in a responsible and informed way.



Eurasian nuthatch Wojciech Olma

### **When Should We Help a Wild Animal, and How to Do It?**

In most cases, wildlife can manage perfectly well without human intervention. However, there may be situations where an animal's health or survival depends on our ability to correctly assess the situation and take appropriate action. We should only intervene if we are certain that the animal is injured- such as limping or, in the case of birds, struggling to take flight. In these situations, we must avoid direct interference unless we have proper training and veterinary knowledge. Handling an injured animal without expertise can cause further harm- for example, worsening a fracture, which may result in improper healing and prevent the animal from ever returning to the wild.

Instead, we should contact specialized services or wildlife rehabilitation centers. The specific institutions responsible for this vary by country, but information about them is usually easy to find online. If an incident occurs in or near a city, we can also report it by calling the emergency number 112. While the police are not directly responsible for assisting wildlife outside of road-related incidents, they can help connect us with the appropriate services.

## Where and How to Observe Nature?

Many people still believe that to truly admire wildlife, we must travel to remote and inaccessible places. This is simply not true. In reality, successful nature observation often requires nothing more than everyday items most of us already have at home. A nature walk can take place in a city park, nearby forests, tree-lined areas, or fields—even those close to large cities.

The key elements for successful observation are patience and perseverance, qualities that are often in short supply in today's fast-paced, internet-driven world. To prepare, consider what you want to observe and plan your outing accordingly, as different species are active at different times of the day. However, no matter how well-prepared we are, nature offers no guarantees—sometimes, we simply won't spot what we were hoping for.

So, how can we make the most out of the experience? Keep an open mind. Instead of focusing on a single target, be ready to appreciate whatever nature presents. This mindset ensures that every outing feels rewarding, no matter the outcome.



Dzik europejski © Katarzyna Olma



© Martyna Stawarska

Remember that admiring nature isn't just about spotting wild animals- it's also about appreciating beautiful landscapes, plants, insects, and other small wonders. A good nature observer is first and foremost attentive. Beauty can often be found in tiny, seemingly insignificant details if we take the time to notice them. Additionally, the same place can offer a completely different experience depending on the time of day or season, so it's worth revisiting familiar locations throughout the year. Some tools that may be useful for observation include:

- ▢ Magnifying glass
- ▢ Binoculars
- ▢ Notebook
- ▢ Camera or smartphone with camera

Dressing appropriately is also essential. Comfortable footwear (preferably with ankle support) should be a priority. Depending on the season, make sure to wear suitable outerwear and bring protection against ticks, especially if you're heading into the forest. Once you're dressed, equipped, and know where you're going, all that's left to do is hope for a successful and rewarding nature experience!

Spending time in nature- whether it's an urban park or a forest- offers countless benefits. However, it's important to recognize the differences between these habitats, particularly when it comes to foraging for edible plants and the types of wildlife that live there. We should enjoy nature's resources in moderation- for example, never strip all the leaves or fruit from a sin-



 Martyna Stawarska



© Wojciech Olma

gle plant, as this can weaken it, hinder its growth, or even cause it to die. When observing animals, respect their wild nature- admire them from a distance and avoid unnecessary interactions, especially with young ones. If you choose to feed birds during winter, do so responsibly by offering appropriate food rather than processed human foods that could harm them. Lastly, spread awareness- if you've learned something new from this guide, share this knowledge with others. In doing so, you'll help promote responsible enjoyment of nature and encourage better habits for interacting with wildlife.

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# The Benefits of Natural Rivers (Poland)

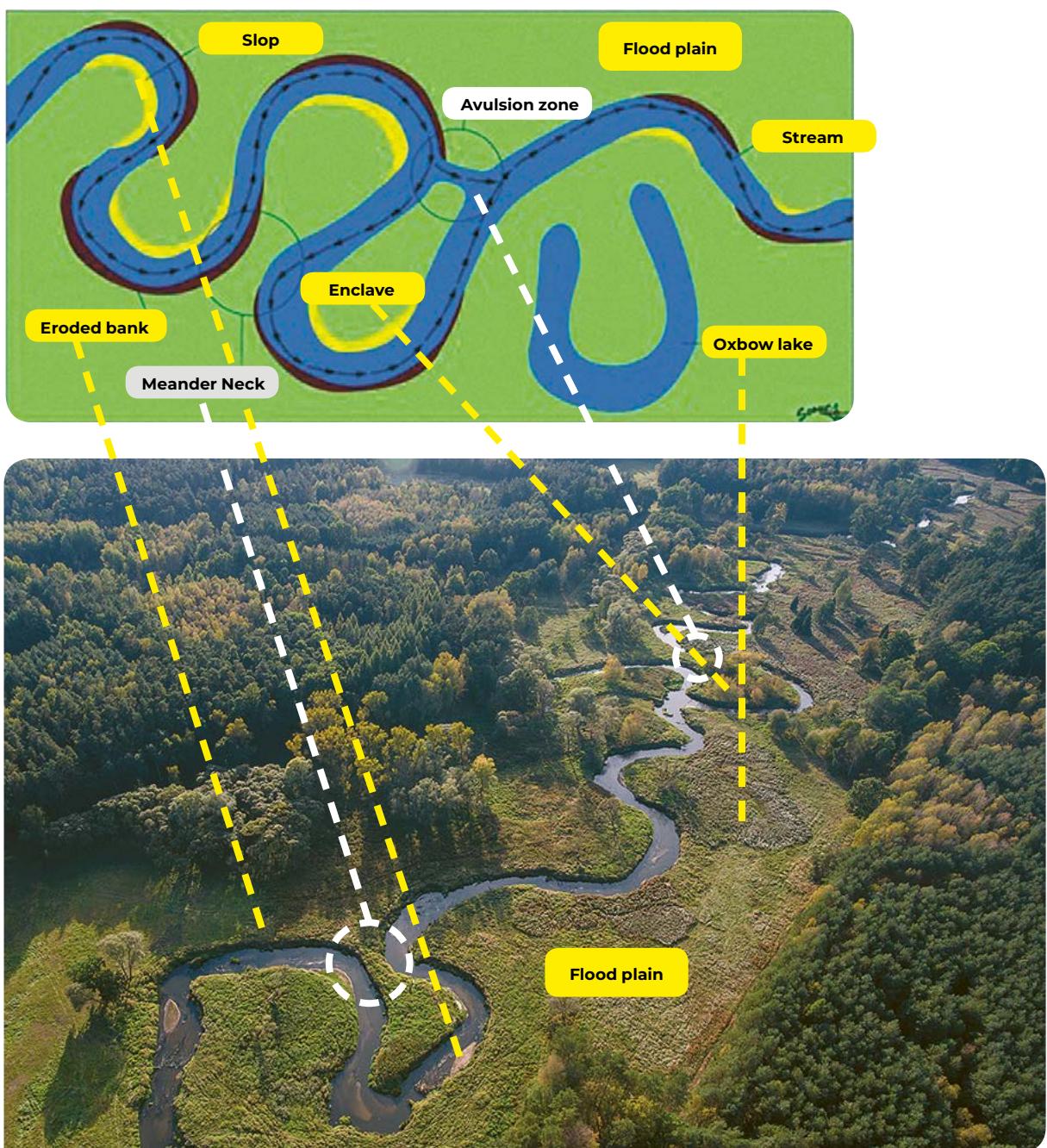


Natural rivers, those that are unregulated and untouched by human intervention, play a number of important roles, both environmentally and for us as individuals and communities: they provide water supply, offer effective flood protection, preserve valuable ecosystems and their high biodiversity, and naturally purify water.

We see a river as a whole – including its valley, floodplain, riparian zones, and wetland buffer areas. Only when a river maintains its full structure is it able to provide us with these ecosystem services, the benefits we use every day and periodically, such as during our vacations. With the current, we can paddle a kayak, admire beautiful and rich old river channels during hikes, and even occasionally visit islands as peaceful retreats in our river activities – always being careful not to disturb the wild residents.



Such river areas can be used by birds as a breeding ground, as an important migration route and resting place, as well as a wintering ground. We can watch, accompany, but not interfere.  **Przemek Doboszewski**



Natural meandering river.

Source: [www.geocaching.com](http://www.geocaching.com); River Ruda, Natural meandering river, Silesian Voivodeship. Marcin Karetta

**Oxbow lake:** a fragment of a former river bend (meander) formed as a result of the break in the neck of the meander, separated from the main river channel.

**Slop:** an accumulation of sandy material carried by a river in the form of a bank growing to the shore; one of the shallowest places on a bend, of a permanent nature, usually covered with vegetation.

**Avulsion zone:** a zone where a river changes course during the natural process of creating a new riverbed – a river can overflow its banks and carve out a new course across a floodplain.

**Eroded bank:** eroded by the river, retreating as a result of the process of lateral erosion when the flowing water washes away one, then the other bank of the river. One of the banks – the eroded and steep one, retreats, the other – flat, grows as a result of the accumulation of material carried by the river.

**Meander Neck:** The neck of a river bend that is undercut on both sides by the two ends of a river bend approaching each other.

Natural, meandering, and clean rivers are gems in Poland that are worth visiting, exploring, and most importantly, protecting. Unfortunately, in our country, on average, every 2.28 km of a river is obstructed by a barrier. River barriers (such as dams and culverts) affect not only the river's health but also the migration opportunities for animals associated with the river, as well as our safety.



River Wilga, Lesser Poland Voivodeship – before and after regulation.  **Cecylia Malik**

The healthy functioning of rivers, and consequently our well-being (known as environmental health), depends on respecting the integrity of the river and its space (e.g., not developing floodplains, keeping rivers natural, or restoring rivers to their natural state). Only then can we fully enjoy the benefits that healthy rivers offer.

Unfortunately, the present times bring many challenges related to rivers, and as a result, to our use of them. Some common issues include water pollution, low flow and droughts, floods, the issue of hydropower, which is no longer considered environmentally friendly, the protection of wetland areas, and the restoration of rivers to a near-natural state to ensure their health, continuous flow, and better usability.

There are areas in Silesia where rivers and streams are so polluted by humans and industry that they are unable to sustain aquatic life and even poison residents. However, there are still some gems that are worth visiting- come along on a journey through such rivers!

Some of the answers to the following questions can be found in this river guide, but not all are driven by curiosity, check them out yourself.

**~ The state of rivers directly affects the quality of drinking water they provide.**

Water from clean, healthy rivers requires less filtration than water from polluted rivers. We usually notice these differences when we visit a region different from the one we live in.

**Where in Poland is the best tap water? Where does the water in my tap come from?**

**~ River areas are teeming with biodiversity!**

It's no wonder our dogs find them one of the most interesting places to sniff and explore. Part of this biodiversity has critical economic and tourism importance.

**What animals can I encounter by the river?**

**~ Rivers attract tourists and vacationers!**

They thus support the broad recreational economy. Those who use the river directly often become its guardians, which benefits both sides. It is those who use the river who are often the first to sound the alarm when something's wrong with the river—they keep an eye on it, visiting

it year after year or living near it. Free-flowing rivers provide us with high-quality rest by the river, which is accessible, has maintained its natural structure, and its continuity is preserved, so we can usually paddle without encountering barriers or blockages, unlike regulated rivers obstructed by barriers.

### **How can I relax by the river?**

#### **~ Natural rivers help effectively protect against floods.**

Interfering with a river, changing its flow, building a barrier, or developing the river valley disrupts the river's structure and natural functioning, disconnects the river from its floodplain, limits its freedom to flow, and often makes it harder to use the river while increasing the risk of catastrophic flood damage to communities. Barriers on rivers also pose a safety threat to humans (such as the case of the earth dam failure on the Morawka reservoir, a tributary of the Biała Lądecka, in Lower Silesia, or the case of the dam in Wilkowice, Silesia). Old, defective, or poorly maintained barriers (e.g., remnants of old mills) cause more harm, including financial loss, than benefit- to the river and to us.

### **Which rivers in my area are natural, offering the full range of benefits?**

#### **~ A river flows into the Baltic and influences the Baltic.**

Rivers are one of the main natural transmission belts for nutrients in nature, transporting them with sediments from distant mountain springs. Free-flowing rivers also carry sediments to floodplains, providing good conditions for plants and animals. Nutrient transfers also play a role in the economy, particularly in fishing.

Both river mouths and sources are exceptional areas worth exploring- get to know your favorite river from source to mouth, along its entire course! Go on a Watershed Hike and get in touch with a river guide.

### **What is your river like from source to mouth?**



Oystercatcher on the Vistula.  Przemek Doboszewski

### **~ Natural rivers and wetlands help fight climate change.**

Protecting free-flowing rivers, and restoring wetlands and peat bogs can reduce greenhouse gas emissions. How does this happen? Natural riparian wetlands (such as peat bogs) capture atmospheric carbon, limiting the greenhouse effect, and providing respite for cities by cooling the local microclimate. Reservoirs, on the other hand, do not provide this effect; instead, they are sources of greenhouse gases released from the sediments accumulated in the reservoir.

### **Does your city or area have a respite function during heatwaves thanks to nearby wetlands?**

Getting to know rivers, understanding how they function, and taking action to protect and restore free-flowing rivers are especially important today. Therefore, when you have a choice- choose an activity by your river, observe it, get to know it, understand how it works, and act to keep it in good condition, become its guardian- since you use it. Activities related to water and exploring rivers offer you a range of benefits, beneficial for your physical health, fitness, mental well-being, and resilience to everyday stress.

### **SILESIA – WHERE THE VISTULA MEETS THE ODER...**

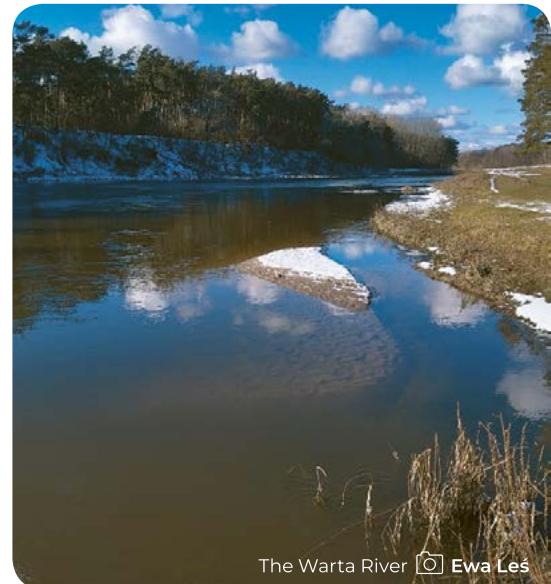
The Silesian Voivodeship and its waters are managed by Wody Polskie RZGW Gliwice, which oversees the water regions of Mała Wisła, Upper Oder, and Czadeczka. Not all waters should or can be used for general recreation purposes. It is important to remember that a popular form of water recreation in Silesia involves using water reservoirs. These are mainly post-mining reservoirs, created by transforming the earlier mining activities into recreational functions, not built from scratch on rivers that block their free flow, like dam reservoirs. Keep in mind that not all reservoirs are available for tourist and recreational purposes, so it's worth checking the area before you go.

For example, the main recreational spots in Gliwice have been artificial water reservoirs: Pławniowice, fed by the Toszecki Stream, and Dzierżno Duże and Dzierżno Małe on the Kłodnica River, a tributary of the Oder. Dzierżno Duże has been dealing with the aftermath of the Oder disaster (2022), which highlights the harmful impact humans have on rivers. [Note: The salinization of the Oder's freshwater is caused by discharges from mines and industrial plants located almost along the entire river. The saline waters become a favorable environment for the golden algae *Prymnesium Parvum* to grow.]

The ponds in the Upper Vistula River basin can also be a great tourist destination, offering opportunities for both active recreation, such as hiking, and culinary tourism.

However, to fully enjoy the benefits offered by these irreplaceable natural aquatic ecosystems, it is worth turning our attention to free-flowing rivers – those rare gems that are still in good condition. As users, we have the power to support their continued existence in an unspoiled state.

A map of Silesian rivers (Google Maps) that also includes user recommendations can help us decide where to go. According to expert suggestions, rivers such as Biała Przemsza, the Graniczne Meandry Odry, Ruda, Krztnia, Liswarta, and Warta are among those worth visiting. Keep in mind that a river can have different characteristics along its course, and some sections may unfortunately be regulated. If you visit one of these rivers, share your opinion about that particular stretch – you'll make it easier for others to choose their destination!



The Warta River  Ewa Les

After choosing a river, the next decision is what type of recreation to enjoy. It's worth taking a look at the "Kajakiem przez Śląskie" portal, which offers interactive maps of various river routes, helping with both safety and navigation.

Check where kayaking is allowed and choose designated kayaking routes. Find out if a river is experiencing excessive kayaking pressure- if so, opt for a quieter river or a different section. Even recreation can put too much strain on rivers and lead to their degradation. Be a responsible river user and make choices that are good for both you and the environment. Don't pick the most challenging route- assess your abilities realistically, consider your physical condition, and let the principle of caution be your guide.

## ENVIRONMENTAL HEALTH

Research suggests that spending time near a river can improve mood, lower stress levels, counteract melancholy, and strengthen the immune system, providing a sense of calm. The proximity to water has a positive impact on mental health, promoting relaxation and reducing stress levels. By stimulating our parasympathetic nervous system, it affects all of our senses – the sight, sound, touch, and smell of water can positively influence our mood and overall happiness – but we're talking about healthy water ecosystems, not transformed or polluted rivers.

Engaging in “blue spaces,” such as rivers and lakes, can help reduce stress and anxiety, and overcome states of melancholy. Water has a calming effect on our senses, promoting relaxation and a sense of well-being. Spending time near water is also an opportunity for outdoor activities and a deeper connection with nature.

Rivers are typically surrounded by lush greenery and trees, which contribute to air purification and provide a specific riverside microclimate, cooling the area during heatwaves. If we live in relatively polluted urban areas, time spent in natural riverside environments becomes even more valuable, offering relief to our respiratory system.

The soothing sound of a river creates a calming environment, providing us with acoustic shelter from the noise of urban life.

The five human senses are crucial in the way we perceive the world. That's why the sensory effects of water can have such a profound impact on our psyche. The sights, sounds, and smells of water provide a calming experience that promotes a positive mental state. River water is dynamic, which is why it particularly attracts our attention and engages our senses, inducing calm and quieting the mind.

It's no wonder urban planners are looking for ways to create “blue infrastructure” in urban communities. Integrating green and blue spaces can strengthen urban communities in terms of mental and physical health. Nature-based solutions (NBS) will “improve environmental conditions, and thus the health and quality of life of citizens,” and are “nature-inspired instruments that utilize the properties and functions of ecosystems to enhance ecosystem services and many health benefits” (EC, 2016).

Research has shown that intentionally visiting a blue space – a natural, outdoor one – can bring potential health benefits, particularly in the area of mental health and promoting physical activity. The most commonly assessed well-being indicators included self-esteem, self-efficacy, confidence in social interactions, resilience, and other psychological indicators (e.g., stress, mood).

Studies also point to the issue of (incorrect) perceptions and stereotypes that persist in public policy, practice, and research regarding aging and being outdoors. Due to its properties, water can play a significant role in leveling the playing field among participants in activities.

### Sources:

- Own expert knowledge
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The beauty of the winter Warta river. Contrary to appearances, the streamline is not in the middle of the river – it moves from the convex to the concave bank, which leads to the formation of meanders (river bends).  **Ewa Leś**



## DEFINITION

By the term "survival" for the needs of our project, we mean a set of activities aimed at saving lives and reducing health damage resulting from the activities we performed in nature (defined in our project). The concept of survival consists of multiple distinct aspects, each focusing on specific details within the overall idea of survival. We know Survival (survival in nature), Bushcraft (trappers), Woodcraft (settlement and crafts focused), Prepper (creating organized groups preparing for the end of the world), Teotwawki (preparing to survive various disasters and the end of the world as we know it). These approaches and directions intertwine and complement each other in different ways.



## DESCRIPTION – DEFINITIONS

Activities ensuring our survival in nature can be divided according to the urgency of the actions necessary to maintain and ensure life. There are many causes of danger to life, we will leave out those not related to being in nature (e.g. car accidents, polluted air, mental disorders, aggression – attack by a person). It is said that a person can survive without food for 30 days, without water for 3 days, and air for 3 minutes... the basis of survival actions is therefore related to ensuring the basic prerequisites for sustaining life, we will go over them gradually.

The description of saving and maintaining lives related to accidents, frostbite, melting, hypothermia, injury, and others is given in the First aid section. In this section, we will focus on the prevention and elimination of risks, not on saving lives resulting from proven damage to health and threats to life. It will be about strengthening the ability to survive polar, desert, mountain, and other environments, extreme temperatures, and the landscape, which is usually somehow connected with the activities of staying in nature (especially 1,2,3,4,5,6,9). We will describe the forms and possibilities of "survival" resulting from these individual activities.

## DELUSION

In nature, it often happens that you don't know where you are. Sometimes it can be quite fun and beneficial: "Adventure begins when you don't know where you are and where you are going". Other times, getting lost can endanger your life or damage your health. If you don't plan to purposefully "wander" and discover, here are some tips and instructions on what to do. The most common way to get lost is related to hiking, but you can also get lost in a cave, on rocks while climbing, at sea, or on a horse, or bicycle... more on that in the given activity.

- ⌚ Find out your current location. The easiest way is to turn on your smartphone, and GPS and find out your location from Google Maps or via Mapy.cz. (Mapy.cz also displays tourist routes and forest roads!). Your location is a blue dot on the map.
- ⌚ If you are in an area where there is no signal, it is advisable to take a paper or offline installed map. You should be able to identify your location from it. The skills of reading maps, and determining the directions of the world (sun, moss, North, ) are needed
- ⌚ If you don't have a map and your cell phone runs out, the best option is to go back to where you came from. If for various reasons you cannot do this and you are not forced to spend the night in an emergency, it is best to look for a way out. It is most often recommended to follow the watercourse, it usually flows into a larger one and can cross a sidewalk or road. Be careful though, it can end in a waterfall, canyon, or abyss.

- ☞ It is possible to use paths trampled by animals (usually they lead to water or pastures and open spaces).
- ☞ If you don't know where you are and don't know if you're afraid to move (for example, in the dark on a cliff – it happened): make yourself known (the best is a whistle, an SOS signal, or a call) or a fire.

## WATER

Of course, you may miss water the most in the desert, but you often need some skills to get it. We get water from springs, streams, rivers, and the sea, but also from puddles and vegetation. It is therefore advisable to have with you in nature the means for obtaining, cleaning, and transporting it. It is ideal to have a plastic bottle, bag, water bottle, or at least a plastic bag with you. Drinking water (apart from boiling) is mainly obtained by filtration and condensation. There are suction cups, UV lamps, but also filtration containers. Water can be filtered through sand, in the trough of a water source. Water can be obtained by evaporation from vegetation and the sea and condensation on a plastic bag. Several plants (baobabs, lianas) contain water, so it is necessary to learn in advance which ones. We get water from melted snow, and ice, but also by squeezing the stomach contents of a killed camel.



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## HEAT

### Shelter

The best producer of heat is your body. However, it must be dry! One of the causes of death in the mountains is extreme hypothermia. At the same time, people are living in tents even at -60°C. As we described in activities 1,2,6, ensuring dryness is a prerequisite for maintaining body heat. The easiest way is to have spare dry and heat-retaining clothes with you – ideally down and wool sweatshirts. If we don't have it, we have to provide heat in another way. The first of them is fire (we will describe it in the next article) and the second is the retention of body heat. To retain and use body heat, it is necessary to use available natural materials (from rhododendrons in a protected park to snowblocks). In both cases, you will need a large knife or machete to build the nest. We

start by choosing a suitable location. Various holes, shallow caves, overhangs, over-turnings, and dense vegetation are best suited for nesting. We make a nest or nest in these places from coniferous or other branches and soft branches. Shelter from thick branches and trunks (we throw branches or snow). If we have wet clothes, we have to wring them out and dry them with our own heat and constant movement.

## **Fire**

The ability to start and maintain a fire in any weather has been inherited for millennia and is an essential skill for survival in nature and for obtaining warmth or food. So how to do it? It is best to be prepared for the situation (the need to start a fire). This is related both to your abilities and also to your (available) gear (gear will be described below). You can start and maintain a fire even in heavy rain – but it requires extra effort and tools. It is best to carry a reliable lighter and/or waterproof match with a dry match. If you don't have them, the mini survival kit (KPZ) can help. It is also necessary to have a means of spreading the fire (usually a piece of rubber from a bicycle or a car, a paraffin block, a candle, or a scroll of birch bark). However, soaked branches (often only on wet ground) cannot be caught, so you need a knife and the production of wooden cuttings. You get them by removing the moist bark and wood down to the dry core, which you split and grate. It is laborious but necessary. You can then add wetter twigs and branches to this base (it is ideal to use dead branches of conifers – they are protected by the crown and therefore drier than those on the ground). We add stronger branches or trunks (preferably hardwoods) to the already-lit fire. A well-founded and well-maintained fire will dry your clothes, warm your body, and keep the surroundings warm even in severe frosts. Of course, during heavy rain, we start the fire in a sheltered environment (a rock overhang, a shallow cave, under a thick tree, or we use a canopy). You can also start a fire by rubbing wood, a stronger branch and a grated spindle or a simple bow are enough.

## **FOOD**

During a longer stay in nature, food is necessary for your survival. For the first hours and days, you can make do with what you have and some reserves in your body, but later you need to get food. Since we, like bears, are omnivorous, the food will consist of plant and animal components. What can be eaten in nature? Almost everything, but we won't destroy protected plants and animals for fun. However, in the case of survival, this principle goes aside...

### **Plant source foods**

As in the early Neolithic, it is now made up of edible roots, herbs, berries, leaves, fruits, and seeds. We will focus here on the basis and list of **edible** and **inedible** (dangerous) plants.

### — lichens, ferns

Lichens represent a symbiosis between fungi and plants. Many cultures use them as part of their food (spice, seasoning). For example: Icelandic blisterwort (*Cetraria islandica*), kalpasi (*Parmotrema perlatum*). In Scandinavia, lichens are still used in the construction of wooden houses as a traditional joint filler – reindeer moss (*Cladonia rangiferina*), in our country, for example, common orange lichen (*Xanthoria parietina*). Most ferns are poisonous in their raw state, so they must be heat-treated. Sprouts are used in particular, when the upper leaves form the so-called "snail". Edible species include: Ostrich fern (*Matteuccia struthiopteris*), Asian Osmunda (*Osmunda asiatica*), and eagle fern (*Pteridium aquilinum*). You can also sweeten your drinks with common polypody (*Polypodium vulgare*). It has medicinal properties, is used to clear the lungs of mucus in bronchitis, has diuretic effects, and speeds up digestion.

### — herbs, flowers

You can find more edible herbs in the "Edible Plants" section. Herbs and flowers are most often used in the form of salads and tea blends. These include aromatic herbs (melissa, mint, thyme, marjoram, raspberry, blackberry, strawberry leaves, yarrow, garlic, wild garlic, spring primrose (*Ficaria verna*), hawthorn (*Crataegus sp.*), chickweed (*Stellaria media*), ground elder (*Aegopodium podagraria*), lungwort (*Pulmonaria officinalis*), coralroot bittercress (*Dentaria bulbifera*), young beech (*Fagus sylvatica*) and field maple leaves (*Acer campestre*), European larch (*Larix decidua*) – young shoots of needles and cones are tasty and full of vitamins.

Among edible flowers, we especially include linden flowers, elderflowers, daisies, violets, marigolds, roses, nasturtiums, dandelions, lavender, wild garlic, marigolds, corn-flowers and citrus.

### — seeds, berries, forest fruits

Edible seeds include hazelnuts, nuts, fruits (cherries, rowanberries – barberry, apple trees, pears, plums, thorn, rose hips), strawberries, raspberries, blackberries, blueberries, cranberries, but after heat treatment also beech, acorns, limbo and pine nuts, fruits of elderberry, hawthorn, dogwood, blackthorn, mulberry, chestnut, medlar, fig tree, strawberry tree, sea buckthorn, chokeberry.

### — mushrooms

For survival, it is advisable to consume all edible types of mushrooms, even those that collectors consider inferior or bitter. A more detailed description is in the "Mushrooms picking" section. For beginners, it is good to focus on species that are clearly and easily recognizable (boletus mushrooms, chanterelles, parasol, and oyster mushrooms).

### — ferns

Most ferns are poisonous in their raw state, so they need to be heat-treated. The male fern (*Dryopteris filix-mas*) is the most common in our forests, it is poisonous, we do not collect it, but it is suitable for building shelters.

### — herbs

Among the most dangerous herbs and shrubs is the spotted hemlock (*Conium maculatum*), growing in uncultivated areas near human settlements. Poisonous plants are the alkaloid-rich family of nightshades (*Solanaceae*) with poisonous representatives, such as the nightshade (*Atropa bella-donna*) with round black berries like a smaller cherry, the most common cause of poisoning in small children. Of the glycosides, the following are dangerous: the saponins of the crow's eye – the four-leaved crow's eye (*Paris quadrifolia*) with black-and-white poisonous berries growing in floodplain forests and coastal scrub. It is also necessary to know the difference between elderberry bushes and poisonous elderberry.

### — berries, forest fruits

in this area, the emetic-inducing swamp bilberry, the edible yew fruits (with poisonous stones), the marsh thorn, and the red elderberry are dangerous. Devil's trumpet (*Datura stramonium*) contains in one flower an amount of the alkaloid atropine that would kill a small child! The flowers of the foxglove (*Digitalis purpurea*) contain poisonous alkaloids.

### — mushrooms

Anyone who decides to pick mushrooms for survival reasons must be able to safely recognize the most poisonous mushroom in the world – the death cap (*Amanita phalloides*) and its spring, white variants. When collecting mushrooms, it is necessary to recognize the poisonous Satan mushroom (*Boletus satanas*) as well as poisonous arachnids.

## Animal source foods

In addition to the common game, we will also use small rodents, birds, insects, reptiles, and fish for survival. A description of simple traps for catching game (meshes, nets, cages, falling wood) can be found in specialized publications focused on survival.

## NECESSARY EQUIPMENT

As mentioned in all chapters, even during activities, the highest quality equipment and its conscious and reliable use guarantees health protection and therefore survival.

To survive in nature, we need the following:

- ☛ reliable, sharp, strong, and high-quality knife (for survival, the bigger the better)
- ☛ means for starting a fire (lighters, flintlocks, matches) and starters
- ☛ means of communication (mobile phone and solar charger)
- ☛ lamp (ideally solar LED)
- ☛ firm, reliable, and durable footwear
- ☛ waterproof and strong, comfortable clothing
- ☛ dry spare clothes
- ☛ blanket, sleeping bag
- ☛ strong, light, and high-quality backpack
- ☛ headwear
- ☛ glacier (sun) glasses
- ☛ ropes
- ☛ containers for water and cooking
- ☛ repair tools (sewing, drills, wrenches)
- ☛ first aid kit (medicines)
- ☛ tools for securing food (hooks, wire, rubber bands, spikes, glue)
- ☛ waterproof clothing (windbreaker)
- ☛ mini survival kit (KPZ)



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