



WWF

BROCHURE

EN

2014

Brown Bear Conservation

THE BROWN BEAR, THE TREASURE OF THE CARPATHIAN MOUNTAINS



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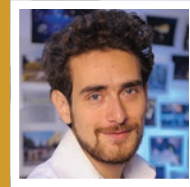
NOTE TO PRESENT EDITION

This booklet is an adaptation for the masses of Leonardo Berezky's work "The brown bear – biology, ecology and behavior".

Leonardo Berezky is a graduate of the Faculty of Forestry within the Cynegetics and Biology of Vertebrates Institute from the Sopron West University in Hungary; he is currently reading for a doctor's degree in the ecoetology of the brown bear with the same university.

Leonardo is also the founder of the *Centre for the Rehabilitation of Orphan Bears* in the Hasmas Mountains (the county of Harghita, Romania) – the only establishment of this sort across Europe, ever since 2004. Starting with 2013, WWF-Romania alongside *Ursus Breweries* have had the honor of supporting this center, so that orphan bears can be rescued and delivered back into their natural, wild habitat, provided they are found in good time.

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At WWF-Romania, the bear is one of the species we prioritize, not only because it is probably the most loved and important inhabitant of our forests, but also because its presence is an essential indicator of a healthy forest.

Magor Csibi

COUNTRY MANAGER WWF-ROMANIA



FOREWORD

The brown bear has always been the object of fascination for everybody and its image has found a place in our traditional customs or the stories of people who, throughout time, have learned to live close to it and respect it. Despite all this, the knowledge on the species is scarce and often mistaken. There are only a few works of research on the brown bear available and lack of solid information has always led to either acts of destruction or a negative image of the species among common people.

Experience shows that, unfortunately, even the professionals – such as hunters, forest guards, rangers, managers of national parks or protected areas – that come in contact with the brown bear and its natural habitat more often than common people, have a limited knowledge on the species. So, this booklet is designed for us all; we hope that you find here the most relevant information on the biology, ecology and behavior of the largest European carnivorous species, together with a much necessary emphasis on the situations that arise as a consequence of the competition between humans and bears for space and resources.



THE BROWN BEAR

The brown bear (*Ursus arctos*) is the largest representative of European predators and belongs to the order of *Fissipeda* (carnivore mammals with sharp teeth and very well developed canines) and the family of *Ursidae* (large, heavy carnivorous mammals that step on their whole paw, have very strong claws and a short tail).

Popular knowledge would have you believe that within the mountains of both Romania and Ukraine, there are two species of bear present: the *anteater bear* and the *regular bear*. In fact, the anteater bear is just a young brown bear or a smaller brown bear, with “some experience” (and consequently, a lot of courage) that prompts it to venture into open spaces, ransacking ant farms.

A long time ago, the brown bear used to inhabit the whole of Europe; over the last centuries, however, it disappeared from most parts. Some of the causes for that were: the increase of human population, the fragmentation of natural habitats, the development of agriculture or excessive hunting.



**TODAY, EUROPE ONLY HAS AROUND
14,000 BEARS, WITHOUT TAKING INTO
ACCOUNT THE ONES THAT LIVE IN RUSSIA.**



The form
of the bear's footprint

HOW BIG IS A SMALL BEAR?

The size of bears has always been a topic overly discussed and the object of continuous controversy. To the untrained eye, the bear appears to be quite large, but reality has proven that people tend to exaggerate the size of any animal, let alone that of one with a reputation of being big. The information seems to be conflicting even in the literature on the subject. According to the latest studies on the matter, the biometrics of the bear are as follows:

With the adult bear, the height at withers, measured from sole to the highest part of the shoulder: 90-150cm. Males are generally bigger than females.

The length of the body, measured from the tip of the nose to the end of the tail: 150-165 cm with females and 170-200 cm in the case of male bears.

(Mertens, Ionescu, 2000)

KILOGRAMS?

Individuals from the same habitat would weight differently due to the general state of health, age, sex, ability to find food, a slower or a faster digestion of particular nutriments, the efforts of avoiding humans or coping with the changes caused by humans to their habitat. There are also differences in the weight of certain individuals brought

about by seasonal changes: in late autumn, before the hibernation, bears generally weigh much more than during spring, when they leave their lairs. Here are some figures for your information: female adult bear: 100 - 200 kg, male adult bear: 140 - 320 kg.

(Mertens, Ionescu, 2000)

HOW BROWN IS THE BROWN BEAR?

The color of a bear's fur is quite varied. Often in the case of one and the same individual, changes in the coloring occur when the bear goes from being a cub to an adult or when the seasons change; moreover, our own perception of their color can vary or be mistaken due to a particular angle or the differences in light.

Usually, the only one changing the color is, in fact, the protective coat of a bear's fur (the fluffy hair), while the actual fur stays the same (the undercoat). Albino bears are quite rare. The predominant color is light to dark brown. The cubs can have a white collar but that usually goes away after the first year. The most common colors are: brown or chestnut (41%), light brown or golden brown (15%), dark brown or chocolate brown (39%), ashen brown or grey brown (5%). (Micu, 1999)

The length of the hairs varies according to season. The length of the winter hair (December to April/May): 8-9 cm on the back, 10-12 cm on the withers. The length of the summer hair (July-September): 4-6 cm. The normal physiological temperature of the body is 36.5-37.5°C and

varies according to types of activities performed and particular traits of each individual. The temperature drops a little during night time or when the animal is not engaged in any activity; also, it can drop when the days are cold. During the winter hibernation the temperature can reach $\pm 32^{\circ}\text{C}$.



41%

BROWN OR
CHESTNUT



39%

DARK BROWN OR
CHOCOLATE BROWN



15%

LIGHT BROWN
OR GOLDEN BROWN



5%

ASHEN BROWN OR
GREY BROWN

THE FEET

The bear steps almost like the human being and walks on the whole paw; the feet account for walking, running, climbing, swimming, hunting, feeding, digging, protection. The paws are almost flat, with 5 fingers – the ones at the back are wider than the ones at the front. Even with such massive paws, the bear is fully capable of handling small objects. The claws are curved, non-retractable*, shorter on the back paws and longer on the front ones.

If necessary, the bear can easily gallop but it would rarely trot; most of the times it walks, back foot behind the front one. In the ground, the impression of the back feet is clear and looks just like a human's, only bigger and with claws.

**do not retract either backwards or forward*



THE TEETH

Together with the paws and the claws, they are the main means of protection and the main tools to get food. Normally, the brown bear does not bite the prey in order to kill it, but has teeth that can thrust through it and squash it within its very powerful jaws with massive muscles.

The teeth are wide and adapted to omnivorous food. The main difference between omnivorous animals and the carnivorous ones is the presence of the post-carnivorous

molars*; with the bear these teeth are wide and flat so that they can grind vegetable nutrients. The brown bears have 42 teeth. The permanent teeth usually grow within 2 years and a half. According to particular types of food and habitat, the traits of the incisive teeth, of the canine ones and of the pre-molars and molars are going to vary but only slightly so.

**carnivorous: noun. Each of the four big and biting back teeth of some carnivorous animals.*

AGE

Bears can live up to 25-30 years and so they are animals of average longevity. Their age can be divided into the following categories:

CATEGORY 0 the cubs	CATEGORY I juvenile bears of 2 to 5 years of age	CATEGORY II very young bears of 5 to 10 years of age	CATEGORY III young bears of 10 to 15 years of age	CATEGORY IV mature bears of 15 to 20 years of age	CATEGORY V 20 years of age or over
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(Micu, 1999)

THE HEARING

A bear's hearing is quite exceptional, even though all the information on the subject is, more or less, anecdotic. Bears can hear ultrasounds between 16-20 MHz and possibly even higher. This can prove very helpful when tracking down their pray from under the ground (rodents). They can also hear a dialogue between humans from approximately 300 m, or a camera shutter from 50 m.

THE SIGHT

It has long been believed that the sight of bears is quite weak; recently, however, scientists have been able to prove the opposite. The eyes are small and situated towards the front of the head, with a large distance between them; their color is different shades of brown and the pupils are round.

THE SENSE OF SMELLING

The olfactory sense is a bear's most important weapon and, as it turns out, best developed among all the carnivorous species. It is fundamental for protection and attack and, at the same time, a window to the surrounding world, even more so than sight; it serves for finding a mate, detecting human beings or other bears, locating the cubs or discovering food. The bear is able to detect traces of human presence after more than 40 hours.



*A pine needle dropped into the forest.
The vulture was able to see it, the deer
was able to hear it and the bear was able
to smell it.*

(Native American proverb)

SLEEPING DURING WINTER TIME OR HIBERNATION?

By the end of autumn, once they have accumulated enough fat for the winter sleep, bears settle into their lairs. The winter sleep can last three to six months. The lair is dug underground or laid out in natural delves or under rocks. It is also possible for a bear to build its lair out of tree branches, above ground, similar to the ones that storks often build.

When there is enough food to be found, bears can stay active throughout the whole year. This kind of behavior is encouraged by luring them to artificial feeding points. The duration of the winter sleep is directly proportional to the amount of fat accumulated in autumn and inversely in accordance with the quantity of food available during winter time.

In fact, the winter sleep is the way bears adapt to lack of food during this particular season, a behavior that prompts the animal to use up the energy accumulated in the form of fat storage. It is important to acknowledge the fact that when we disturb a bear during its winter sleep we force it to lose energy; energy that the bear can only restore by getting fed; during winter time, however, natural food resources are quite scarce. Therefore, the “disturbed” bears might need to get closer or even ransack human abodes, in search for food.

The winter sleep, as a form of survival during the cold season, is different from regular hibernation and is referred to as *bear hibernation*. Regular hibernation, present in the case of some species, such as the hedgehog or the groundhog is a natural adaptive behavior: the body reduces to the minimum its vital functions: temperature, breathing, pulse, cardio-vascular tension, so that it can only use up limited amounts of energy, close to none. Coming out of this state is a very difficult and long process that takes a fair amount of hours. So, the animals that hibernate can be extremely vulnerable, incapable of protecting themselves or escaping natural enemies or other rival species.

The pseudo-hibernation the bear goes into takes this very drawback out of the way. The bear does not «afford» to be vulnerable while it winters. Its vital functions are only slightly reduced and the bear gets to keep his ability to

protect itself or to escape at any given point intact. During the winter sleep, the cardio-pulmonary activity is reduced but not to the same extent as in the case of animals that do hibernate.

The most important factors that prompt the bear to retreat for the winter sleep are lower temperatures of the environment, lack of food, the increase in size of the snow coating, the size of the fat layer accumulated by the bear and the decrease of day time in late autumn. When coming out of the winter sleep, the action of leaving the lair is prompted by: the increase of day time, the rise in the temperature, the melting of the snow and the decrease in size of the fat layer.

In order to avoid being disturbed, especially by human beings, the bear would sometimes travel considerable distances, in search for mountain areas that are quiet, forested or covered in very thick vegetation. In these areas the snow coating is usually very big and this in itself constitutes a fair obstacle for human beings or other animals. Therefore, it is advisable for tourists to stay out of these parts when they go mountaineering and to avoid the slopes oriented to the south in particular. Forest exploits and the setting up of running hunting sessions in these parts of the mountains have many unpleasant effects and cause most of the behavior changes in bears.

In the case of female bears with cubs, the disturbances during the winter sleep are even more of an issue. The female bear would give birth exactly during this period of inactivity, from January through February. Even though cubs are very small at birth (under 500 g), they develop very quickly, due to the high nourishing values of their mother's milk. Producing this milk would require the use of great amounts of energy in the mother's body, especially in January through April – a time when the mother cannot feed herself. Any disturbance throughout this particular period of time would mean an even greater loss of energy which can lead to the mother losing or abandoning the cubs. Unable to follow the mother, the cubs are going to be deserted and the only chance to save them, providing they are found in due time, is to place them in a rehabilitation center.



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THE BEAR AMONG ITS OWN KIND

The bear is essentially a solitary animal that only needs to get closer to individuals of its kind during the mating season.

However, throughout the first two or three years of life, the cubs or the very young bears require the presence of «a fellow» bear.

At the *Center for the Rehabilitation of Orphan Bears* in the mountains of Hasmias it was discovered that young bears would gather in groups of 8 to 10 individuals that only part ways after two or three years. Such groups are going to hibernate together, in the same lair. During the early ages, bears live close to their mother. Moreover, it has been documented that some cubs of 2 to 3 years of age would continue to follow their mother, even though the mother has given birth again in the meantime. Except during the mating season, adult bears avoid each other. Once they have grown up, male bears would scatter away, while female bears set up their environment inside or close to their mother's territory.

The bear is not a highly territorial* animal, such as the wolf or the lynx, so bears often tolerate each other in parts of mountains where the food is abundant or even within the areas suitable for wintering; cases of up to eighty bears populating a habitat of a couple of hundred hectares have been known to happen. (Micu, 2000)

**a behavior that entails the marking and protecting of a certain territory from individuals of the same species*



THE REPRODUCTION AND NATURE'S PRECIOUS STRATEGIES OF SURVIVAL

The brown bear reaches sexual maturity at a late age. Female bears of 4 to 6 years of age give birth to 1 to 4 cubs. Mating takes place once in 2 years, during the months of May to June.

The bear is a polygamous species so a male bear can mate several female bears during the same reproduction period. Once the fertilization is through, the embryo develops up to the stage of blastocyst*; it then ceases to grow until the end of November, when the implantation takes place and the development cycle begins again. This phenomenon is present in the case of other wild animals as well – such

as the hart – and it is nature's way of increasing the odds of survival for the cubs. If, starting from the moment of fertilization, the embryo would develop continuously, the cubs would be born precisely during the months of the most adverse weather conditions, when the food is scarce. In most cases, this would mean losing the cubs. By this phenomenon of late implantation, the cub is being born during the most auspicious of times: in the spring. Gestation takes 6 to 8 weeks.

The cubs are brought to life inside the lair, during the winter sleep, in the months of January to February. Another strategy of survival of the species: the newly-born cubs are extremely vulnerable and unable to walk, so it is better for the female bear to have them hidden inside the lair. Moreover, even male bears stay inside the lairs during this time so the risk of the female being attacked by a male wanting to kill the cubs is kept to a minimum.

Because nursing the cubs takes place during a time when the female cannot feed itself, another survival strategy is the very size of these cubs. The newly-born weigh around 0.5 kg but grow really fast, accumulating up to 70 g every day, due to the highly nutritious milk of the female bear.

**stage in the development - with mammals – where the embryo appears as a vesicle surrounded by cells.*



Cubs leave the lair in April-May; this is a time when the female bear takes particularly good care of them, walking them especially within very safe areas. The mother tries to avoid male bears that could kill the cubs in order to make her mate again.

During the second year of life the cubs remain by themselves. The female bear would take on the reproduction cycle only once the cubs become independent – that usually happens after approximately 2 years. When left by their mother, at the age of 1.5-2, the cubs are forced to manage alone. It is the most difficult time of their lives. Lacking the experience, they venture into dangerous areas: towns, folds, garbage disposal places. They can be attacked by dogs or die in road and train accidents. Still innocent and used to their mothers looking out for them, they are easily discovered and killed by large male bears. This is, in fact, the main natural way of controlling the bear population. (Bereczky, 2010).

WHAT DOES THE BEAR EAT?

The food of the bears is of the omnivorous type*. The study of their teeth has proven they prefer vegetable food and invertebrate animals. During spring and the beginning of summer bears feed especially on grass and buds. In summer and at the beginning of autumn they look for mushrooms and fruit (raspberries, blackberries, cranberries, apples, plums and pears). For late autumn and during winter time, bears prefer acorns. Insects, especially of the *Hymenoptera* kind (ants, bees, wasps) can also be an important, seasonal, food resource, due to their high protein content.

Finally, bears prefer meat they get from preying, carcasses**, small wild animals or the one they find in artificial feeding points; meat is highly nutritious and a type of food bears assimilate very easily.

This complex diet of the bear, together with its physical traits, account for a totally distinctive behavior among the other carnivorous animals. The omnivorous feeding system

that allows the bear to digest both vegetable and animal types of foods, helped turn the bear into an extraordinarily adaptable animal, from an ecological point of view: it can always switch to the type of food available within its habitat. This is why bears have been populating all sorts of environments, from tundra to the snowy regions of the North Pole and up to the Gobi desert. This ability to adapt so easily is enhanced by physical traits: the bear has an impressive set of muscles and can kill a bull in just one blow. It can stand on its feet, much like the human being, and can use the front feet as “hands”. The soles of the front feet have prehensile*** fingers, the teeth are large and powerful, the sight, the hearing and the olfactory sense are quite extraordinary as well. This is a rare combination of factors in the animal world and unique among the rest of the large carnivorous mammals. A bear, and a large one at that, can climb a branchless tree as easily as a feline would. At the same time, despite the heavy body, the bear can catch up to a horse with remarkable speed.

**both vegetable and animal types of food*

***part of a skinned and eviscerated animal or just the bones and the muscles*

****able to grab and seize*

THE BEAR AND ITS ILLNESSES

Similar to the human being, the bear can feel pain, even though there is no possible comparison to be drawn between what causes pain to humans and to bears or how humans and bears react to this pain.

In case of persistent pain, the bear gets irritable and possibly aggressive towards human beings or other bears.

The most common conditions for the bears are:



ABSCESSSES

bears have more trouble with their teeth than other animals, especially because of the high content of sugar in the food they prefer



INJURIES

caused by guns or traps



FIGHTS

with other bears or any other natural rivals



PARASITES

internal parasites, especially flat worms



AGE

loss of teeth caused by old age



ENRAGED BEAST OR SICK ANIMAL?



Anca Georgescu

COMMUNICATION OFFICER
WWF-ROMANIA

Though rarely, the bear can catch on rabies by feeding from an already infested dead body or due to other natural causes.

Rabies is an acute infectious disease (*meningo-encefalitis*) caused by the rabies virus. It is also known as *rage tantrum* or *hydrophobia* (a fear of water) and it affects, both in human beings and animals, the brain and the spine. Therefore, a bear infected with the rabies virus is a sick individual and its aggression in this state, a mere symptom of the disease, so, ultimately, a sign of suffering.

Within the media, re-running over and over again of panic-inducing news and the inflammation of public opinion by use of phrases such as “enraging beast”, “beast off to kill”, “public enemy” tends to cause a violent, sometimes cruel, behavior of people towards the sick animal, which, in turn, exacerbates the bear’s pain and fear. Exaggerated reactions or behavior that is noisy and aggressive can sometimes turn against people as the bear, cornered, would certainly have reason to become even more unpredictable and dangerous if the fuss and the hostility around it increase.

It is good to know that the animal – infected with rabies or suspected to be infected – is going to surely die so a demure behavior and a call to specialists that are equipped to handle such situations can prevent more accidents, the contamination of other animals attacked by the sick bear and human victims.

”



Leonardo Berezky

Rabies in bears is not a disease as dangerous as it is believed.

Rabies is quite rare with bears and even when a particular individual was suspected of carrying the disease, research

never proved with certainty it had been rabies indeed. Getting the disease would mean that the bear has been bitten by another sick animal, because rabies is transmitted by means of bodily fluids. Also the rabies virus is a very weak one – once the infected animal has died, the virus will die as well, in around 2 hours; so, in fact, the dead body of a sick animal no longer has the virus present. That is why the probability that the bear would stumble upon a dead body with a still active virus is very small and therefore considered insignificant.





THE BEAR AND THE HUMAN BEING

Both the brown bear and the human being are at the top of the food chain, this meaning that neither of them has any natural enemies. It is even possible to say that the brown bear and the human being actually compete for the same natural resources when they share the same **habitat**. (Chiriac et al, 2010)

In older times, the bear used to be a danger always present for the human being and a really hard one to avoid, due to its physical superiority. But with the technical progress and the perfecting of weapons, the situation shifted and the human being has become superior to the bear, in terms of defense and attack resources. The conflicts between the human beings and the bears are not exclusively caused by either species. Neither the human being, nor the bear, can simply be just the attacker or the attacked. The sharing of the same habitat is the sole factor responsible for such conflicts. (Pop, 2011)

The bear is used to getting its food from where it is more easily procured; this sometimes means getting around to cultivated lands, farms, domestic animals, bee hives or garbage disposal bins left at the edge of the forest.

(Chiriac et al, 2010).

The most critical time when bears tend to cause massive damage to domestic animals is between the months of July to September. Even when it's hunting, the bear's real concern is safety, so the possibility of a quick retreat. They rarely prey in open areas, at more than 1000 m away from the forest. (Pop, 2011)

Conflicts between bear and people are usually brought about by the mistakes we seem to be making. The human

being has invaded the forest: wood exploitation, the gathering of mushroom and berries, tourists on ATV's or other vehicles, chaotic tours, the development and expansion of touristic areas. All this leads to garbage, sounds and smells that are new to the bear, noise. Willingly or not, the bear adapts to this kind of situations and finds it natural to come closer to the people that not long ago it used to avoid.

This phenomenon is the obvious response of nature to the changes that people bring about. If we are within the habitat of wild animals (forests, places with thick vegetation, detritus) it is recommended that we do not interfere with them, especially because wild animals usually rest during the day. In order to avoid stumbling upon a bear, there is no need to make a lot of noise and fuss. It is quite efficient to make our presence known by talking calmly with each other or by clapping regularly. With its very powerful senses, the bear will know we are around, even before we get a chance to spot it. Excessive noise can only irritate a female bear with cubs that we find ourselves near to and the attack in order to protect the cubs would be something that we have provoked.

MEETING WITH THE BEAR

The bear would only attack a human being when attack appears to be the only way out of an unfamiliar situation that causes it to be scared for its life: getting too close to the cubs, a very sudden encounter that neither human being, nor bear, have been able to predict or, quite rarely, situations when the bear is protecting prey hidden underground. Even in such instances, the attack is quick and the bear's intention is, in fact, to scare away the intruder and not to punish him, as it is commonly believed. It is however true that regardless of the bear's intentions, the attack can have serious consequences.

If we see a bear that, in turn, has spotted us as well, we just need to get away at once, calmly. Usually, the bear would try to do the same. It is highly unproductive to throw ourselves down and keep still and it is much more efficient to clear away quickly and steadily in order to show the bear we do not intend to attack it or its cubs, or take away their prey. The bears are very intelligent and can very quickly grasp the situation. If, by any reason, the bear appears to be coming our way, it is recommended that, while we steer away, we drop something behind (a jacket, a backpack). The animal would get involved in sniffing the object and that will gain us time to get away.





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HUNTING AND POACHING

Ever since the beginning of time, the human being has tried to dominate or defeat the bear. In the past and sometimes even today, the killing of a bear was viewed as a sign of bravery. The most important difference between the past and the present is that nowadays the brown bear is a protected species across Europe and in certain parts of the continent the hunting of bears is strictly forbidden by law. In order to be able to manage the bear population, hunting remains the means to eliminate “problematic” individuals (“extraction” in hunting terms).

Some conflicts, however, are still resolved empirically, by unprofessionals. There are quite a few situations where poachers, for instance, lay out slipknots inside the forest. Bears or other wild animals that step into such a knot die a really cruel death: wounded and in terrible pain, the animal dies of hunger and thirst, slowly, in a couple of weeks. It is important to understand that this kind of solutions, apart from being criminal contraventions, are undignified and do not solve the actual issues. There are some many other humane solutions that have proven much more efficient, that people can use in order to protect their cultivated lands or their animals: electrical fences, mobile and flexible attachments to regular fences (colored cloth), dogs, human watch.

THANK YOU, BARDAU!



Costel Bucur

HEAD OF FORESTS AND PROTECTED AREAS
WWF-DANUBE CARPHATIAN PROGRAMME

The transboundary project OPEN BORDERS FOR BEARS BETWEEN ROMANIAN AND UKRAINIAN CARPHATIANS that occasioned the printing of this booklet, had at its core the capture and monitoring of five brown bears. Costel Bucur, the Head of the Department of Forests and Protected Areas within WWF (The Danube-Carpathian Programme) was part of one of the capturing processes:



© Cristian Ilea / Camera 4 Timisoara / Wildlife, Romania



„All my life I have seen some bears. Usually, I have no fear when going towards the middle of the forest, knowing that the bears will feel my presence beforehand and they will not fall foul of me. Although I was in a place I knew like the bottom of my hand, it was different this time. I was called at 12.30 and announced that the bear was caught in the cage from Bardau (a few kilometers uphill from Viseu de Sus, on the Vaser Valley). In an hour’s time, people from all over the country were headed towards the northern border.



Bohdan Prots

PROJECT MANAGER,
RACHIV ECOTUR, UKRAINE

Ukraine is a gateway to Eastern and West Europe for the brown bear. Why do we respect the brown bear and work in order to help protect the species?

Because the brown bear is a key species within the very diverse ecosystem in the Carpathian Mountains. It is a part of our culture and of who we are spiritually. It is the one species that allows for the ecosystem to continue functioning in a healthy way. It is the species that makes it possible for us to exploit wood and cultivate the land without destroying the environment or running out of resources.



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Hungary-Slovakia-Romania-Ukraine
ENPI Cross-border Cooperation Programme

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To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

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