

It's beautiful!



## It's beautiful!

It's not quite five in the morning and we're walking along a track in the forest. The moon is high in the sky and provides enough light for us to see where we are going. A wolf howls in the distance. We have come to Poland's Białowieża Forest, the last refuge of the European bison, in the hope of getting a glimpse of this greatly endangered animal in its natural habitat.



**Photo:** Białowieża Forest  
© G. McInnes

But the bison is not quite so keen to be spotted, so we must be stealthy in our approach. We turn off the initial track, and Mateusz Szymura, a park ranger and our guide to Białowieża Forest, signals to us to keep quiet. We've already switched off our mobile phones and have been warned not to use our personal cameras. Any sound will startle the bison and our journey will be wasted.

When we enter a clearing, Mateusz realises that the viewing platform we were going to use has been dismantled. So he takes us into the trees on the edge of the clearing, where we sit and wait for dawn to come and for the bison to appear. Our long nighttime wait is interrupted only by the roar of a stag from somewhere deep in the forest.

That we are here at all is in many ways remarkable. The European



**Photo:** Interview with Mateusz Szymura  
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Białowieża Forest attracts visitors and wealth to the local area. Located some four hours drive east from Warsaw on the border with Belarus, it straddles the new boundary between the European Union and its eastern neighbours. The border fence splits the forest area in two, Białowieża in Poland to the west and Belovezhskaya in Belarus to the east. The fortified tower of Kamieniec (now in Belarus), painted white by the Russians in the 19th century and called 'Biała Wieża' or 'White Tower' provided the name for the Forest.

The village of Białowieża is on the up. It has a new hotel and many of the old wooden cottages have been modernised or rebuilt to accommodate newcomers, holiday visitors or entrepreneurial locals.



**Photo:** Białowieża Forest  
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bison very nearly disappeared altogether from the continent. The animal once roamed widely across Europe, from southern Sweden to the northern border of Greece and from northern Spain to the Caucasus. But, starting in the eighth century, they were progressively wiped out, as man turned the bison's forest home into cultivated fields, and hunted the animal for food and clothing. The last wild lowland bison died in

1919, and in 1927, the last wild mountain bison was killed.

But here in Białowieża, the bison has made a come-back. Białowieża is one of Europe's last remaining primeval forests, and is a haven for many other endangered species. Much of the forest is now a national park, and the area's rich biodiversity won it World Heritage Site status in 1979. Białowieża has been a protected wildlife

Białowieża Forest is rich in biodiversity. It has more than 20 forest and other natural habitats, 786 species of flowering plants, 352 lichens, 145 mosses, 1585 macrofungi, 59 mammals and 117 inter-breeding birds as well as 13 amphibians, 6 reptiles and 10 500 insects. Most are found within the National Park where there is, within a relatively small area, a great variety of habitats, limited access and little or no human activity maintained with relatively little disruption over centuries. The



habitats include subcontinental oak-lime-hornbeam forest (the most prominent habitat type in Białowieża), bog forest and ash-alder riparian forest as well as raised bogs, grasslands and meadows.

All of Białowieża Forest is identified as a Natura 2000 site under the EU Habitats Directive with supervision by the Białowieża National Park authority. 12 of the natural habitats, 28 species of nesting bird, 29 animal and 3 plant species of European interest are listed for conservation within the forest as part of the Natura 2000 site.

The top priority species for conservation are the European bison (*Bison bonasus*), Three-toed woodpecker (*Picoides tridactylus*), White-backed woodpecker (*Dendrocopos leucotos*), Wrinkled bark beetle (*Rhysodes sulcatus*), Flat bark beetle (*Cucujus cinnerinus*), Goldstreifiger beetle (*Buprestis splendens*) and False



darkling beetle (*Phryganophilus ruficollis*). All four of these beetles — the latter two of which are quite rare and only found in Białowieża Forest — live on dead or decaying wood, and they require the stability of the Strict Protection Area for survival. Other species and habitats protected as part of the Natura 2000 site are considered as high priority objects or important objects for conservation.

**Photos:** Białowieża Forest © G. McInnes



**Photo:** Bert, Mateusz, Gordon and Małgorzata (left to right) with Stone commemorating 600 years of park protection © Małgorzata Bednarek

area in one form or another for most of the past 600 years. This 600th anniversary is another reason for our visit. Falling first under the protection of the King of Poland and Lithuania, the forest then passed to Russian rule and was protected as a royal hunting ground. But after coming under the control of German forces in 1915, the bison was plundered, dying out entirely in 1919.

And the forest would have remained empty of its former

inhabitants had it not been for a breeding programme begun in 1929 with just one male and one female. A total of only 54 remaining animals (most beyond breeding age) were subsequently tracked down in captivity in various private collections. The herd has grown steadily over the years, initially in the Białowieża Breeding Centre followed by a return to the wild in 1952. There are now more than 800 bison in the forest, a great improvement in 80 years, but

the species is still classified as endangered.

It is one of these 800 bison that my team from the EEA is now so eager to catch sight of. But huddled between the trees at night, there seems to be precious little for us to see or even hear. It's still dark and a mist hangs over the clearing. But Mateusz listens intently and informs us, in a quiet voice, that there are 20-odd bison close by in the clearing. 'Can we see them?' For a moment we listen and peer intently in the mist. We can certainly hear some low mooring. Could that slightly darker shape in the mist be a bison? That must be the bison!

Our inexperienced senses desperately try to detect the sight and sound of the herd. Mateusz hears them move off

and decides to go with Esben, our video cameraman, to find a better location.

I continue to wait in the clearing with Bert, my EEA colleague in charge of the project to produce a series of videos on the impacts of climate change across Europe. We keep as quiet as possible and strain our eyes across the clearing as the light slowly improves.

Suddenly we hear a truck approaching. Should we keep out of sight or show ourselves? Why would anybody other than us be out and about in this clearing at five in the morning? The truck passes us, moving over the rising ground, and then on out of sight. We resign ourselves to the fact that the truck has most likely scared off the bison, making worthless much of our careful stalking over the past few hours.

But, a few minutes later the small truck reappears. The driver leans out his window and informs us, in German, that there are 25 head of bison in the clearing, and encourages us to go and see them.

Should we go? Where are Mateusz and Esben? They've been gone over half an hour and we're totally out of contact. We don't see much point in keeping quiet and out of



**Photo:** European bison in Białowieża Breeding Centre Reserve  
© G. McInnes



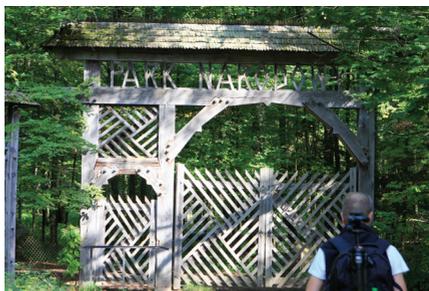
**Photo:** Esben filming in Białowieża Forest  
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sight any longer, so we decide to set off across the clearing, not quite knowing where to look. Suddenly we see dark shadows in the mist where the clearing meets the trees. It's a herd of bison!

What should we do? Stay still? Take pictures? Move closer? Finally we spot Mateusz and Esben, closer to the bison and busy filming. We decide to move closer. However, we take a long track around some trees to try to keep out of sight. As we get closer to our colleagues and the bison, we suddenly hear the rumble of hooves and the bison are gone. It was our footsteps and not the truck that eventually scared them off. Bisons have had tens of thousands of years to detect humans approaching but only a few years to get worried by the approach of a big white truck. Mateusz and Esben are excited

that they have twenty minutes of video footage of bison but annoyed with us that they could not get more! Bert and I are pleased that we at least got a fleeting view of the herd. Happy with our early morning venture, we slowly retrace our tracks to the car to go back to the hotel for breakfast while Mateusz goes home reluctantly to change into his suit 'to go to the office'.

Mateusz grew up in Białowieża. He studied forestry for five years at the Technical School of Forestry located on the eastern edge of the town, and then continued his studies for a further five years at the University of Warsaw. He has worked as a ranger for the Białowieża National Park since 2004 and still lives near to the park. He has a passion for the forest and takes great delight



**Photo:** Gates to Białowieża Strict Nature Reserve  
© G. McInnes

The role of dead trees in forests was first recognised in Poland in the 1970s following pioneering work on the supply and decay of deadwood in Białowieża. Deadwood provides a habitat for a host of different organisms, which change drastically in composition as decay continues over the years. As a dead tree decomposes, its remnants are colonised by a succession of animals, fungi and plants. The composition of fauna, flora and microflora is different from the nearby living trees and the forest floor because the dead tree provides different lighting, temperature, humidity and nutrient levels attracting and benefitting different species. The deadwood therefore provides different opportunities for survival. Many of the beetles of European interest protected as part of the Natura 2000 site benefit from these conditions and survive in large or limited numbers in the forest.



**Photo:** Białowieża Forest  
© G. McInnes

The oldest recognisable remains of timber present on the soil surface may be up to 100 years old. On average there is almost 110 m<sup>3</sup> of lying deadwood per hectare in the Forest with an additional 50 m<sup>3</sup> per hectare of standing dead trees and trunk fragments to provide an average volume of decaying timber more than 10 times higher than found in an average managed forest.

in both describing the history of the forest and showing us around the park, highlighting the many different habitats, trees, plants and animals we meet — 'an ecosystem functioning without human touch'. With great feeling, he declares 'It's beautiful! We don't have to know everything

[about forests] to see the beauty of them!' (see 'A Day in my Forest' <http://discomap.eea.europa.eu/map/environmentalatlas>).

Renata Krzyściak-Kosińska is another park ranger who helped us during our visit. She has worked for the park since 2005 after

gaining her degree in amphibian biology from the University of Krakow. We met Renata on the first day of the celebrations for the 600th anniversary of Białowieża as a protected area, and she was keen to show us and tell us as much as possible about the park's history, structure and composition and got impatient with us when we paused too long to take pictures of the living trees and deadwood, mosses and mushrooms that surround us.

Bert and I may have frightened the herd on our visit, but for the time being, the European bison is safe in Białowieża. However, as we heard at the celebration conference during our visit, the future of Białowieża National Park and the surrounding forest faces an uncertain future. The forest and its incredible biodiversity is

threatened by climate change, pollution, human population growth, and the threat of fragmentation by competing demands for land, as development comes to intrude on even this remote area on the fringe of the European Union. The European bison stands as an indicator not only of the health of the forest but of Europe's ability to sustain its natural heritage. Time will tell if the right decisions are made.

## Acknowledgements

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**Photo:** Farmhouses in Białowieża Village  
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Front cover photo: Białowieża Forest © G. McInnes

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