




  
FOJANA – A PIECE OF NATURE



In the heathland of Lower Saxony, not far from the town of Unterlüß, is the site where Rheinmetall tests its vehicles, weapons and munitions. Today the company's own proving grounds cover a total area of around 55 square kilometers, of which nearly ninety percent is used for forestry operations. The cornerstone for professional forestry was laid at the Unterlüß firing range around eighty years ago. In 1928, the first forester was put in charge. He founded a tradition which has continued up to the present day by shaping and managing the area in the interests of retaining the typical, primordial character of the countryside, as well as the flora and fauna. Today, Rheinmetall looks with pride upon a place that is in a class all its own. By thus actively engaging in nature conservation, Rheinmetall tops off its commitment to the region, where its 800 jobs make it the largest employer next to the *Bundeswehr*, the German armed forces.



The result of this commitment is an unusually opulent world of plants which in turn draws a rare diversity of insects and birds while in addition offering a habitat to a large population of wild animals. More and more species are taking up their abode here thanks to the protection the restricted zone offers them – the most stringent security regulations prevail on the firing range. Moreover, observations here have proven that the thundering cannons do not frighten the animals. The only disturbance to the tranquility of this paradise is caused by hunting, only allowed at specified times. However, it plays an important part in helping to keep the species in their proper balance. And although it is run according to the strict rules of integrated nature conservation, the company's forestry business is still in the black.

This distinctive balance of forestry, hunting and nature conservation protected by the restricted zone has created a world we would like to present to you: **Welcome to Fojana**



## TRACES OF THE ICE AGE

As if a giant had pressed his left hand down into the Earth, Fojana looks like the outline of a hand pointing north on the map. Seventeen kilometers long and an average of more than three kilometers wide.

Outside, on the edges, the forest stands dark. Inside, gorse blooms in the spring and heather in the late summer. Three brooks run through the site like lifelines. Two of them course to the west, toward the Weser, and one eastward toward the Elbe. And then there are lakes, ponds and moors. On the whole, an area of 5,500 hectares, most of which belongs to the district of Uelzen, lying at altitudes of between 85 and 105 meters above sea level.

This is gently rolling country that rises toward the north. The terrain was shaped more than a hundred thousand years ago by Ice Age glaciers. They left behind a clearly visible primeval river valley, lots of sand and a scattering of huge erratic boulders whose long journey from Scandinavia ended here.



Except for a small portion, this is all restricted territory – 3,400 hectares of forest and 800 hectares of heath. Environmentally friendly agriculture takes up 420 hectares. Here you can find herds of Black Angus and Galloway cattle nearly the whole year round.

Only a few people have access to the security zone. This is a good reason for animals to make their homes here, far from civilization, in the midst of one of the largest contiguous forest areas in Lower Saxony.

Actively fashioning the landscape helps to attract endangered species. Habitats for Fojana's unique plant and animal life have been created by irrigating dry areas or deliberately creating areas of dry grassland, for instance, or by rewetting moors, restoring wetlands, piling up simple mounds of stones for breeding or hiding, setting up nesting places and clearing open spaces in the forest.



## A CULTIVATED LANDSCAPE FROM TIME IMMEMORIAL

With its 800-meter width and length of 15 kilometers, the firing range cuts a broad swath through the forest. Here, where a clear line of sight is an absolute necessity, you will find one of the largest unbroken areas in all of Germany covered by heather, *Calluna vulgaris*, which in earlier centuries was used as roofing, stable litter, a substitute for tea and a medicine for diseases of the kidneys and bladder. The Lüneburg Heath got its name from this plant.

When *Calluna vulgaris* blooms, it smells of honey, and gives sustenance to 700 bee colonies in Fojana alone, which confirms that nothing very useful can be obtained from the soil beneath it. The plants on the heath are a source of food for many thousands of insects and innumerable bird species. This huge biotope starts off the year clothed in springtime yellow, and early summer is when the furze and broom are in blossom, or the arnica, which is known to aid blood circulation and help heal wounds. Only later, in August, does the heather don its red-dish-purple garb.



This is the kind of countryside people need. If the heath were left to itself, it would turn into a birch-pine forest in a few decades. The heath is a cultivated landscape, maintained primarily by German Gray-Horned Heath Sheep, the black-headed Heidschnucken. While these Heidschnucken sheep are eating the heather, they are also decimating the weeds which would otherwise soon overgrow the land.

However, the sheep cannot perform this function on the firing range. Here trees must be felled, for instance, when the birches get too tall. But the heathland is mainly preserved by something that at first glance might seem to be a hostile element: fire. When it is cold, in January or February, selected areas of the heath are intentionally set aflame. Not everywhere at once, but at different places each year. This easily controllable winter fire spreads at a walking pace and does no harm to the insects in the ground below. However, it does destroy the plants and the humus layer which would themselves eventually deprive the heath of its sustenance. And after a year, it blossoms even more prolifically than before.



## A SCULPTURED EVERGREEN GARDEN

You can enter the Rheinmetall site at its northernmost edge. Any one, any time. This bit of land is called the Ellendorf or Juniper Heath. It is a small but lovely area, ideal for taking walks and viewing an ancient landscape the like of which is found only in a few reserves. The land rises slightly as you go north, and is marked by the very last moraines of the Ice Age. The panorama looks as if the well-known heath poet Hermann Löns had personally been the architect of this garden. Juniper bushes jut out of the plain at irregular intervals. Between them blooms not only the *Calluna vulgaris*, but also another species, *Erica* heather.

A great deal of work and commitment has transformed this area over the years into a sculptured evergreen garden. Especially in August, when the violet heather and the green juniper make for a wonderfully harmonious vista.

The Ellendorf Heath is cultivated using traditional methods. Between the juniper bushes, 800 sheep are at work conserving the landscape. Human visitors keep to the walking paths. This is not unwise, since the heath is also inhabited by snakes – not only grass snakes and smooth snakes, but also vipers and adders. As a rule, they flee from humans, but it is not advisable to surprise them. The bite of a viper is not entirely harmless, especially for people of delicate health.





## THE FOREST – A SOURCE OF LIFE

Two-thirds of the area is covered by forest. This serves as a security zone on the longer sides of the site and is put to profitable use. Each year, it yields a good 10,000 cubic meters of timber, largely for building purposes. Some of the stands, whose average age is sixty years, show that they are utilized: the pines so common in northern Germany rise up as straight as pillars and are superbly able to get along on the ancient, low-nutrient soils of the heath. These conifers with their shallow roots stand ready for the harvest, you might say.

Much of this obviously planned forestry is the consequence of damage wrought by the severe storm of November 1972. Because so many areas were destroyed, it was necessary to plant new trees that would grow quickly. For ten years now, however, the forest has been undergoing a sustainable transformation. Many new neighbors have taken up their place between the pines, such as birches, beeches, oaks and Douglas firs. Plantation areas are fenced in to keep the wild animals from browsing the trees to death, while others no longer need to be thus surrounded by wire. The leaves are changing the soil, enriching it. In this way, a forest soil will be able to develop in the next few years enabling the creation of a mixed woodland broken up by wild meadows. This is much less susceptible to storm damage and harmful environmental influences such as acid rain, prevents pest outbreaks and provides a more varied habitat



## UNDER THE FOREST CANOPY

There is a lot moving under the shelter of the trees. Red deer and roe deer are very numerous. On the whole, about 300 harts live in Fojana. Most of them are does and therefore bear no antlers. By nature indigenous to open woodland, red deer find ideal conditions here, not least owing to the deliberate development of the forest's edges in conjunction with the open heath areas. The roughly 300 roe deer are also thriving thanks to the mixed nature of the woodland. About ten percent of the roes are not colored red-brown as usual, but are black as ravens. This is a peculiarity caused by a mutation long ago. There are no fallow deer among the settled inhabitants of the site.

Around 300 wild boars root up the ground in the forest areas and grasslands. There are also between five and six hundred rabbits and hares serving as food for the predators: wolves, foxes, badgers, eagles, hawks, owls and raccoon dogs. These last-mentioned are nocturnal omnivores that have immigrated from Eastern Europe. Their population is rapidly growing. One was even found with twelve young.

All the animals living in the forest are shy and cautious. In this large habitat, the red and roe deer can hide from observation by foresters for weeks at a time. Other species make use of the facilities humans have created. For instance, nearly all the raised hunting blinds accommodate



bats, from the Greater Mouse-Eared Bat to the Noctule. However, these observation posts are unsuitable for hibernation. That is why several bat bunkers have been set up.

## THE RECLUSIVE IMMIGRANT

In May 2007 proof was found that a wolf had arrived in Fojana. Now there are also photographs documenting the fact. He was seen for the first time nine months earlier, in September 2006. Even earlier yet, evidence of the gray immigrant had already surfaced. So far, it has not been possible to determine where he came from. Possibly from the former coal mining area of the Lausitz, not far from the Polish border, where several wolf packs have been living for several years. What is certain, though, is that he is a wild immigrant. This wary predator has shown by his behavior that he is not used to humans. Instead, he has come in the guise of that once-feared rival of humans – as a hunter.

This development marks a triumph of nature conservation. The presence of the wolf, who takes such pains to avoid contact with humans and who now appears to have been followed by a second one, provides incontrovertible evidence of the success of the sophisticated concept of Rheinmetall's foresters.

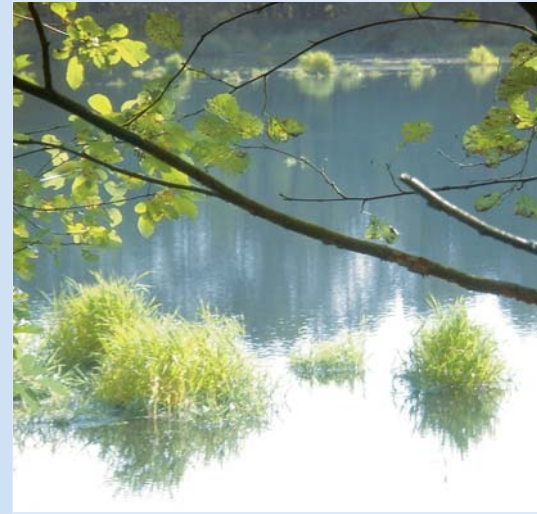




## **ON LAKE, RIVER AND MOOR**

Once upon a time there was a forest superintendent. Fate had taken him from Masuria out into the heath. To remind him of his homeland, he dammed Gerdau Brook and thus created a lake. Today, decades later, a creature is living here who elsewhere is but a memory of times gone by: the shy otter.

Above the lake, Germany's heraldic bird gyres imposingly, the mighty White-Tailed Eagle, with a wing span of up to 2.60 meters. It is a matter of special pride in Fojana that the osprey, nearly extinct in the rest of Germany, now hunts over the site's waters, as well. Below him, many different, often rare, species of duck can be seen swimming. In the lake live fish whose ancestors were largely released by humans: carp, tench, Crucian carp, pike and eel.



Thirty years ago, the Gerdau was a straight canal for draining the moor areas. Now, following a project of deliberate renaturation, it is again flowing past natural banks. It meanders along in all tranquility and is once again the home of the trout. On its edges, the kingfisher fishes.

A boggy alder swamp forest frames the riverside. It is currently under exploration by beavers. Frogs and toads live in the alder forest and on a few small ponds, along with another rare bird: the Black Stork. This forest scene, reminiscent of legends and fairy tales, is accentuated by rare plants, orchids and the carnivorous sundew.



## **A BUZZING IN THE AIR**

Heath, forest, moor, brooks and a dammed lake offer a home not only to 700 colonies of bee, but also to innumerable other insects. And in almost unimaginable variety. A researcher is currently counting the number of airborne moths. So far, he has found more than 800 different species and is certain he will end up with a thousand all told. In Fojana, there are 167 different members of the geometer moth family alone – although they are not very welcome to foresters, since they have an insatiable appetite for leaves and needles.

In addition, twelve types of butterflies not yet registered in Lower Saxony have been discovered here up to now, as well as another 34 species of insect held to have been extinct in Lower Saxony for the past eighty



years. Along with rare dragonflies and other large insects, there is also a local specialty in Fojana: the Heath Bush Cricket.

Identifying the insect species is complicated and laborious. Samples from Unterlüß are sent to zoological institutes all over the world. The most important foundation for the species diversity is the sustainable management of the heath as a cultivated landscape. For instance, purposely setting controlled fires in winter keeps the thin soil low in nutrients by using up the restrictive humus. In the course of the seasons, the soil is thus exposed to greater fluctuations in temperature, which in turn encourages a wide range of insect species to make their home here. That is quite gratifying, especially for the bats.



## **SINGERS AND HUNTERS IN THE SKY**

Fojana offers a perfect food chain. The wide variety of plants feeds a large number of insects. The diversity of mosquitoes, beetles and moths in turn attracts birds – and not only those familiar to large-scale gardeners.

To begin with, we have the little ones: the nearly extinct stonechat, the oriole, the woodlark, the Great Gray Shrike and the Red-Backed Shrike. Even the Nightjar, also called "Goatsucker", whirrs through the heath. On the water you can see kingfishers, which are unusually plentiful here, and from time to time the rare Great Bittern.

Among the larger inhabitants on the lake are the Gray Heron and the Mute Swan, which normally prefers much larger areas of water and reeds. Nonetheless, there it is. Up to a kilogram of fish goes into the stomach of every single cormorant you can see here. Furthermore, harriers and the fascinating osprey and Sea Eagle circle the skies.





The black-and-white lapwing, which is critically endangered by intensive agriculture, shows off its characteristic flapping flight. Each spring, graceful cranes gather on the meadows. Since 1985, there have been three breeding pairs each year. Well hidden in the woods are the nests of the Black Stork and the woodcock.

Even the most ubiquitous of all European hawks, the Common Buzzard, has a peculiarity here that you cannot find elsewhere: there are some specimens with a great deal of white in their plumage. And when you see something black fluttering over the heath, then it often turns out to be not a common crow, but a raven, instead.

When dusk falls, large, dark pinions rise up without a sound into the night. Here are the hunting grounds of the Eagle Owl – five specimens are presumed to be living on the site – and an incredible variety of other owl species, from the Pygmy Owl to the Tawny Owl.



## THE SEASON OF COURTSHIP

To see grouse, you actually have to go to central Sweden. They have all but died out in Germany in the past few decades. But some are still breeding in Fojana. They live on the heath, in the woods and moor, eating berries and buds and forming a symbiotic relationship with ants, who clean pests from their plumage.

Owing to their scarcity and because they are successfully propagating, the roughly forty specimens of this rare family of bird are winged proof of the sustainability of the kind of nature conservation practiced here. Evidence of a largely intact habitat. However, they also provide proof of the necessity of human protection. Foxes, badgers and raccoon dogs, who would like nothing better than to feast on the eggs and young of this ground-nesting bird, are kept under control by hunting. Grouse are also the subject of scientific study in Unterlüß.

In the spring, the cocks display their brightly colored plumage at their regular places of courtship in order to attract the attention of the hens. During the weeks of summer, neither they nor the rather drab female birds are to be seen. While the ladies are breeding, the males are busy molting, which leaves them nearly unable to fly. Therefore they remain hidden in the heather until September.



## SYMBIOTIC RELATIONSHIP BETWEEN HUNTING AND NATURE CONSERVATION

Each year, three days in November are reserved for the big hunt. Guests are invited from near and far. This hunt reinforces the bond which the Rheinmetall company has with the region. Roughly six percent of the local population are active in nature conservation, a comparatively high proportion. Of these, hunters are by far the largest group. One strong stag from Fojana per year belongs to the hunters in the region. In addition, up to eight royal stags are bagged each year by individual hunters. On the whole, stags, wild boar and roe deer supply eight to ten metric tons of high-quality game every year.

The Rheinmetall foresters are convinced that only where hunting is allowed can a forest be properly cared for and the diversity of species kept in balance. Without hunting, the forest would suffer: an ecologically stable stand of slowly growing tree species would soon be stunted from the damage caused by browsing deer. For the foresters at Fojana, hunting and nature conservation definitely go hand in hand.





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The defense branch of the Rheinmetall Group, with its Land Systems, Weapons and Munitions, Propellants, Air Defence, C4ISTAR and Simulation and Training Divisions, is counted among the most famous and biggest players in the international defence and security industry. As the largest employer in Unterlüß, Rheinmetall maintains an area of 55 square kilometers in accord with the principles of integrated nature conservation.