Experience Nature
EmsCycleTrack

ein grüner Stern
für den EmsRadweg

Ems Radweg

Location of the stars along the river Ems

* Magic moments of nature along the river Ems in Northrhine-Westphalia: At this point the cycle track deserves a “green Star”.

A green Star for the EmsCycleTrack in NRW

Basic or luxury – these days this is often a question of stars. And as far as that goes, the four stars, which the ADFC, the German cyclists association, awarded to the EmsCycleTrack are not to be underrated. One of the reasons why it didn’t quite make the fifth star is the fact that the river Ems flows almost all the way through sandy terrain. This is very unusual for Central Europe – however, it’s a handicap with regard to stars. When it comes to fitness for traffic, the sand of the river Ems results in point deduction at some places. Asphalt is no solution here. Sand tracks have become rare elements in the landscape of the river Ems and are worth being preserved.

We have teamed up to help the EmsCycleTrack get its fifth star all the same – a symbolic green star. We, i.e. the four biological stations in charge of the conservation areas along the river Ems in North-Rhine Westphalia and with us in the same boat is the FH Münster (university of applied sciences), in charge of the technical side of the project.

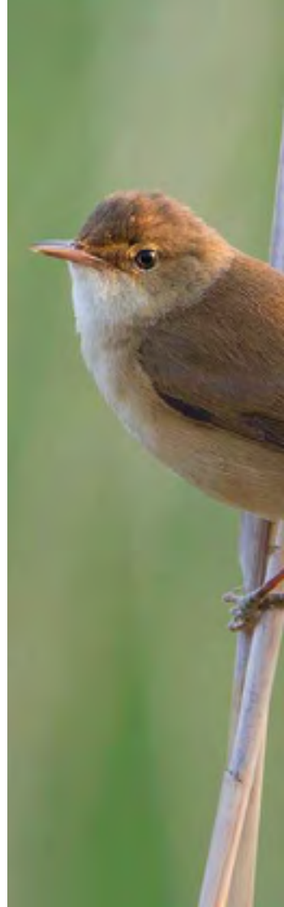
.It is nature proper that makes travelling via the EmsCycleTrack so charming. The river Ems and its rich pastures are almost completely protected as part of the European natural heritage. The 23 “great moments of nature” introduced to you in this brochure are exemplary for the great variety of the landscape along the river Ems. The brochure itself is only part of an extensive information bundle tied up by us for cyclists, nature lovers and all those who have grown fond of the river Ems. If you are travelling with a smartphone, you can download information locally and gain an insight that would probably have remained concealed to you otherwise. A website and a richly illustrated book are further possibilities to become acquainted with the river Ems and its natural beauties.

However, nature is experienced best in the open. On the EmsCycleTrack. May this brochure be your helpful companion.

A green star for the EmsCycleTrack in NRW (www.gruener-stern-emsradweg.de)

A cooperational project of the Biological Station Kreis Steinfurt, the NABU-Nature Preservation Station Münsterland, the Biological Station Kreis Paderborn-Senne and the FH Münster, Software Engineering Lab.

Page Content



A river with a (hi)story

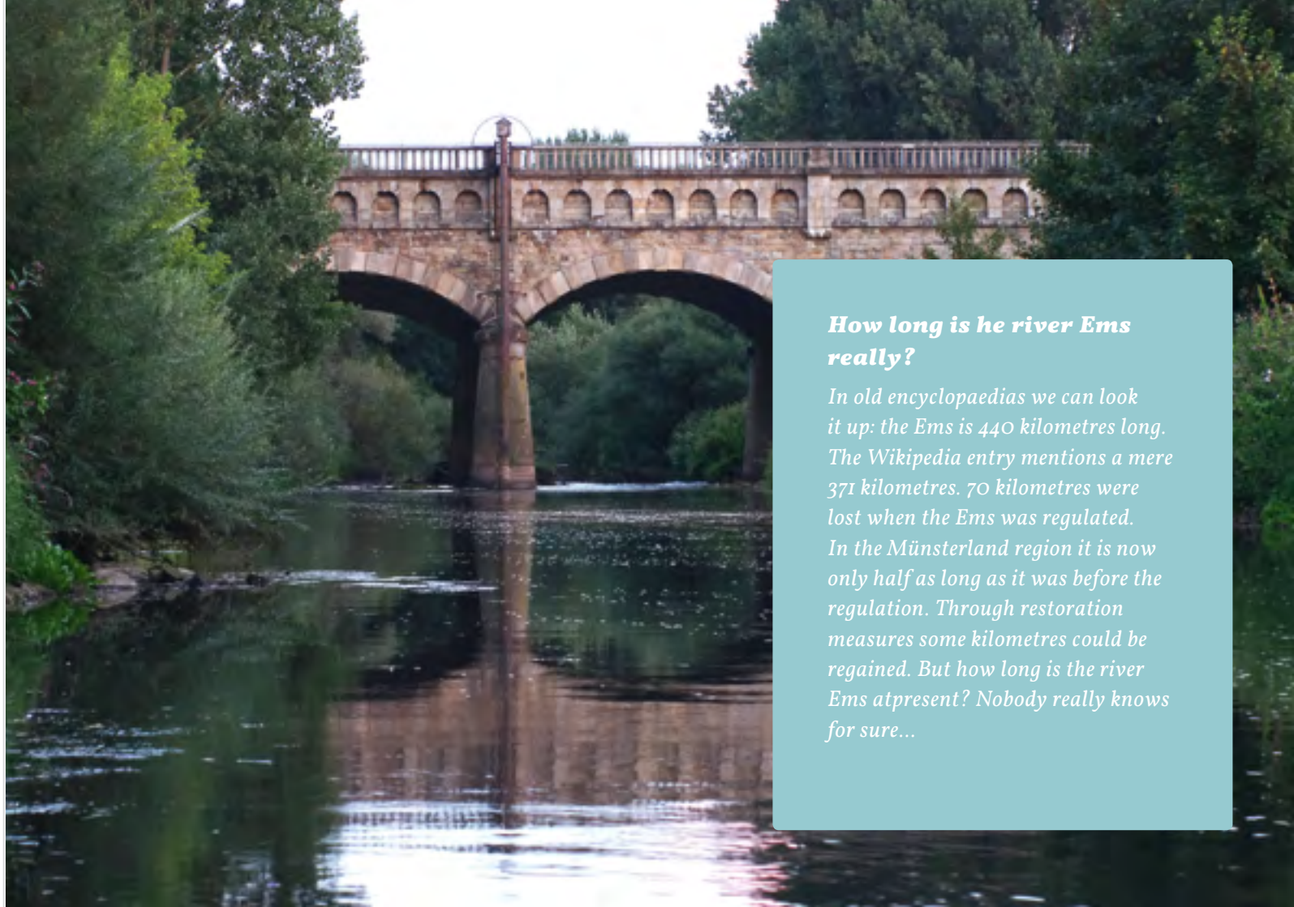
The river Ems is full of peculiarities: it is Germany's shortest large river, on its course it runs all the way through lowland and the differences in altitude that it has to overcome - from its source in the Senne up to its estuary in the Dollart - amount to hardly more than a mere 130 metres. Also, it flows more or less entirely through sandy terrain.

Not least, however, the river Ems functions as the most important nature preservation axis in northern Westphalia. A good part of the river course and the meadows belong to Europe's protected areas. In the course of its history, the river Ems had created habitats, which became the homes of many diverse plants and animals. Sand martins and kingfishers dug their hatching caves into the steep river banks and the plover laid its eggs onto the sandbanks.
Much of this was destroyed by man, when he first rooted out the riverside forest and then regulated the natural course of the river. Some of this is being restored now by giving the river more space again. Beaver and otter, long ago wiped out in the Westphalian section of the river Ems, may soon return.

Thanks to the EmsCycleTrack, cyclists get the opportunity to witness the diversity of the Ems right in front of their eyes – from its source to its estuary. Yet, the EmsCycleTrack is not a 'river cycle track' in the true sense of the word. En route, the cyclist repeatedly loses sight of the river. A disadvantage? Not at all, for the Ems has decisively had a formative influence on the landscape it passes through. Sand dunes or bayous off the present-day river course are a great enhancement when experiencing nature.

For half of its course of about 370 kilometres the Ems passes through the state of North Rhine-Westphalia. This section is introduced in the brochure at hand. The cyclist can witness how the brook gradually turns into an imposing river. However, it doesn't deserve the designation 'big stream', until it enters Lower Saxony and when its lower course noticeably widens under the influence of the tide.

The brochure shows some of the star-winning highlights of nature by the river Ems in North Rhine-Westphalia and makes plain that the river and its cycle track definitely merit a 'green star'.
At the same time, it serves to whet your appetite for experiencing the immediate beauty of the Ems landscape during a cycling tour!



How long is he river Ems really?

In old encyclopaedias we can look it up: the Ems is 440 kilometres long. The Wikipedia entry mentions a mere 371 kilometres. 70 kilometres were lost when the Ems was regulated. In the Münsterland region it is now only half as long as it was before the regulation. Through restoration measures some kilometres could be regained. But how long is the river Ems atpresent? Nobody really knows for sure...

Brooks, ponds & half-timbering

Section 1: From the source to Rheda-Wiedenbrück (47 kilometres)

The initial part of a cycle tour via the EmsCycleTrack is best made on foot. If you want to know where Germany's shortest big river makes a start, leave your bicycle behind. A wooden gangplank is leading across the initial yards of the Ems. Not far from there, at two information centres, the cyclist gets a little foretaste of what is expecting him during the next 375 kilometres.

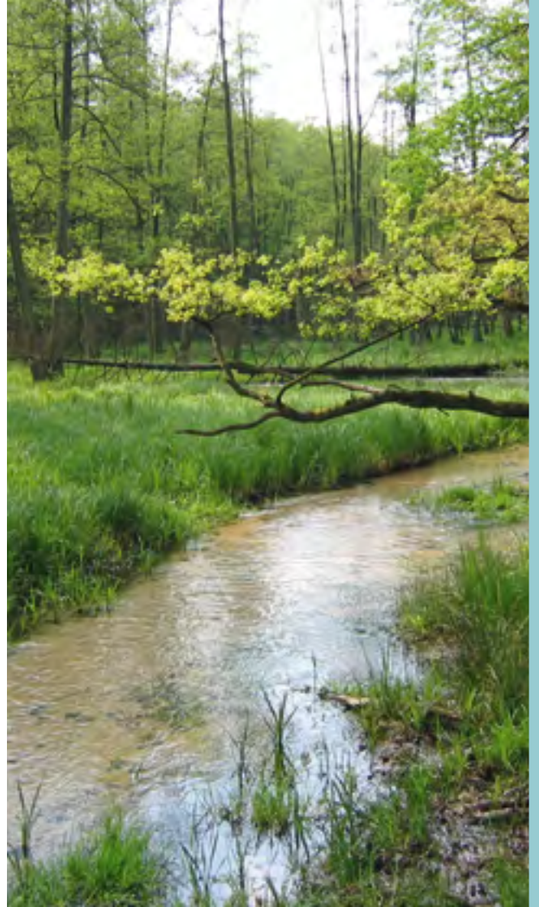
About 30 brooks and rivers have their source in the Senne. The most well-known are Lippe and Ems. While the Lippe is oriented slightly towards the south,the river Ems soon takes a westward course, leaving Hövelhof behind and crossing a low-lying area, which in former days was so swampy that even malaria mosquitoes felt at home here. But this belongs to the past. The swamps were drained, the Ems has been tamed. In the Steinhorst basin its initial verve is cut down completely.

The Ems water is spread over many ponds here. This manmade habitat offers protection from floods and at the same time makes a habitat for many plant and animal species. Right along the Ems, meanwhile an imposing brook, the cycle track leads through the low-lying areas near Rietberg with its wet meadows. The Rietberg fish ponds deprive the Ems of part of its water. Fat carps are not splashing about in the ponds anymore, but instead, the extensive reeds are a paradise for water birds.

Half-timber is dominating the last part of this section. In Rietberg and the double-city of Rheda-Wiedenbrück, the EmsCycleTrack doesn't only lead you past impressive buildings but also crosses the terrains of two former state garden festivals – with plenty of opportunities to dwell.

Ems
EmsCycleTrack
Stars

1 Ems Source
2 Steinhorst Basin
3 Rietberg Low-lying Areas
4 Rietberg Fishponds
5 Ems Lake



Oases in the sand – Senne brooks

Senne brooks are something special. Not only because their water is wonderfully clear and they make their beds with sand. That's what it's like with brooks that have their sources in 'sand deserts'. The canyons with their flat floors and steep slopes, are striking.

You only find them where the terrain still has some reasonable incline. If the water runs slowly, the conditions reverse. The sand carried along settles at the bottom of the water and makes the brook bed rise, so that some of the Senne brooks flow in 'loft beds' up to 2 metres above terrain level.

Stern 1

Watercress

Ems source

The river takes its course – The source

It doesn't bubble, it doesn't gurgle either – it rather seeps from the soil soundlessly. The place from which the water of the Ems begins its journey of 370 kilometres towards the North Sea seems quite unspectacular at first sight. Neither is the Ems content with one single source only.
Around 35 tiny source rivulets are united to form a clearly visible brook within a short distance, easily recognisable by its typical 'ripples' on the clear sandy soil. This source situation is typical of the Senne brooks and can be observed from a wooden gangway and a new viewing platform, fully accessible for people with impairments.

The spring water of the Ems is rich in lime, because the rain previously fought its way through the cleft limestone of the Teutoburger Wald. The Ems is only one of around 30 brooks originating along a common source horizon in the Senne zone. Furlbach, Ölbach and Haustenbach are some of them. Initial companion of the Ems is the water cress, which favours cold and clear waters. Other occupants of the source area live more in hiding, like the caddis-fly larvae that evolve inside a self-made quiver of grains of sand or remnants of leaves.
The Ems sources are embedded in the Moosheide Nature Reserve.With its marshes, heathland and brook valleys it offers the entire diversity of the unique Senne habitat.

Floated meadows

Most people dislike seeing rivers and brooks carry high water, but in the past, farmers used to dam up the Ems and other Senne brooks on purpose in the springtime and then made the water seep into the meadows using an ingenious network of ditches.
In this way the 'floated meadows' or 'water meadows' were naturally manured. Good times for some, bad times for others: When the farmers dammed up the brooks, they literally pulled the plug on the millers, whose mills often stood still because of lack of hydro power.

Semi-wild: The Senner horses

Meadow under water

They've come home - Senner horses

Semi-wild horse keeping had been practised in the Senne since 1160. Presumably the 'Senner' are even the oldest German horse breed altogether. For many centuries they had been roaming through the Senne, shaping the landscape. After a long absence they came back to their homeland at the beginning of this millennium, The Biological Station Kreis Paderborn-Senne has initiated a 'project in the wild' where the animals graze on 20 hectares of land in the Moosheide Natural Reserve right next to the EmsCycleTrack.

Stern 2

Nature from the drawing board – The Steinhorst basin

Originally, everything was planned differently. During times of continuous rainfall the Steinhorst basin was to hold back the deluge of Ems water, which until then ran through Rietberg and Rheda- Wiedenbrück unbridled, causing floods in the area. But during the first damming-up test the ornithologists, above all, were simply amazed. Water birds and waders obviously liked the artificial lake so much that they spontaneously assembled in great quantities. The idea was born to fill the basin with water not only during floods, but permanently. Having taken four years to build, by 1990 a manifold mosaic of habitats had formed on 82 hectares of land.

View from the lookout tower

Lakes of varying depths decoy breeding and resting birds alike and are ideal for amphibians and dragonflies. Reed warblers and little grebes are hatching in the reeds and the wet meadows provide peewits with a rich variety of foods.
An outer moat, up to 20 metres wide, protects the sensitive occupants against disturbances. Yet, visitors need not forgo exciting observations of nature. A circular path of 4.5 kilometres length with two lookout towers offers excellent opportunities to experience 'second-hand nature'.

Goose Medley

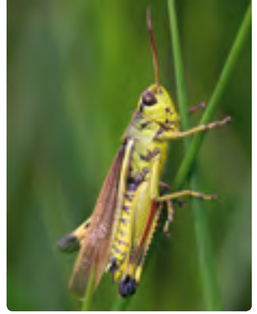
The Steinhorst basin is the centre of attraction for many geese, especially greylag, Canada and Nile geese. 'Real' wild geese are the white-fronted geese that breed in the far North and make a stopover on their flight to their winter quarters on the Lower Rhine or in Holland. Canada and Nile geese, however, are descendants of captivity refugees.
The 'goose exotics' are spreading themselves out, which is being critically observed by conservationists.

Greylag geese

Winged artist in turbulence

A distinctive 'pee-wit-pee-wit' call is accompanied by the lapping sound created by its broad wings during its daredevil flight – in spring the peewit (also known as lapwing) is all but unobtrusive. Unfortunately, the former 'run-of-the-mill bird' has become one of the big worries in nature protection. Extensive farming is giving it a hard time. It doesn't exclusively hatch in the wet grassland but also in fields of maize. They are often free of vegetation until springtime, which is convenient for the peewit. But appearances are deceptive. Many nests and chicks fall victim to late vegetation. And into the bargain, there's the fox and the weasel raiding the clutches. Tough times for the peewit.

Stern 3



Marsh grasshopper

Southern emerald damselfly

Marsh cinquefoil

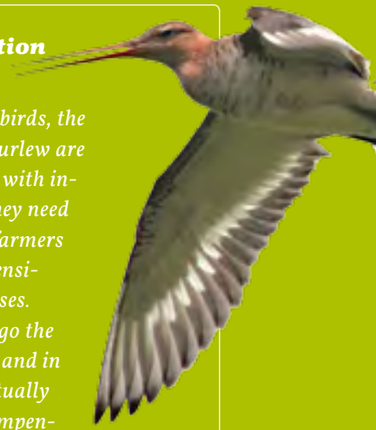
Diversity inwet meadows: The Rietberg low-lying areas

Silted-up bayous and fens, riverside forests and swamp forests originally escorted the upper reaches of the river Ems. Today the landscape looks different. The Ems is dyked and dammed up on a level with the Rietberg fishponds. Consequently, its water level is above the level of the adjacent grassland, which is correspondingly wet. Marsh cinquefoils and marsh marigolds welcome this just like the endangered grasshopper species marsh locust and marsh grasshopper. Particular emphasis is placed on the grassland birds: the curlew, the peewit and the black-tailed godwit raise their young in the wet meadows.

To keep it that way, 430 hectares of wet meadows are protected in the EU bird sanctuary 'Rietberg low-lying areas with Steinhorst basin'. And even more so:
In the past years many shallow waters, so-called 'Bläncke', have been laid out, which occasionally dry up. Not only do they enhance the range of food for birds, but they also create habitats for competitively weak plants like the thin-leaf brookweed and the rock speedwell as well as for rare dragonflies like the southern emerald damselfly and the black darter dragonfly.
Hedgerows and field copses subdivide the Rietberg low-lying areas. The rows of pollarded willows along the plot boundaries are typical. With their old cavernous trees they are important hatching places for the little owlet, the starling and the tree sparrow.
Altogether, 82 hatching bird species have been detected, among them partridge, cuckoo and nightingale. But birds of passage are also to be found on the observation list, like the common snipe, the crane and the whinchat as well as winter guests like the great grey shrike, the white-fronted goose and the bean goose.

An impressive appearance – The curlew

His size and the elegantly curved beak make the curlew one of the most impressive appearances among the birds of the meadows. And he is in good voice, too: During the mating season in spring he accompanies the cyclist across the Rietberg low-lying areas with his warbling and whistling calls. Around 15 pairs are hatching here. The wet meadows with their shallow water pools are an ideal habitat for them, unfortunately, they are becoming rarer and rarer in the agrarian landscape.



Nature conservation by contract

Being ground-nesting birds, the sand martin and the curlew are having their problems with intensive agriculture. They need grassland, which the farmers mow late, using it extensively for grazing purposes.
In short: they can forego the highest possible profit and in turn receive a contractually regulated financial compensation. Information on which type of exploitation is best for flora and fauna can be obtained from the staff of the Biological station Gütersloh/Bielefeld who are responsible for the section Rietberg Low-lying Areas in close cooperation with the farmers. Nature protection by contract – an effective remedy for the preservation of a diverse cultural landscape.

Green frog on water lily

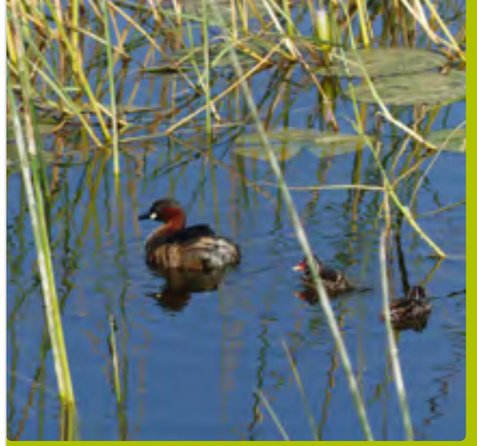
Shovelers and pochards are hatching in the reeds and so is the furtive water rail. The reed warbler is a skilled climber. His elaborate nest, tightly fixed to three or four reed blades, is prone to heavy winds. Peewits and curlews fly in from the neighbouring Ems meadows poking in the mud in search of food. In the summer months water lilies turn the ponds into seas of blossoms.
Inconspicuous rarities, however, are mudwort and cancer root, which cover the dried up pond bottoms. During the migration periods the osprey is looking out for prey, while in winter the bittern is eking out its secret existence in the reeds.

Earls, carps and birds: The Rietberg fishponds

Earl's residence, fishponds, birds' paradise – the area of the Rietberg fishponds has an eventful past. In the 19th century a manor house replaced the demolished castle of the earls of Rietberg. In the 20th century the estate owners set up 50 hectares of fish farming grounds around the former castle moat, with 25 ponds, in which carps and tenches were splashing about. The ponds were fed with Ems water. After fish farming had been abandoned, precious habitats started to develop, which today are under protection.

Hint:

The fishponds are private property and not accessible to the public. However, the observation platform at the western edge of the EmsCycleTrack offers a splendid view over the pond areas.



Powder puff diver – The little grebe

Tiny but loud – this not unusual combination goes for the little grebe, too. Our smallest native diver primarily draws our attention with his loud mating warbles – gladly performed as a duet, too. We rarely get to see him, though. He either conceals in the reed jungle or goes in hiding underwater to hunt for water insects or small fish. When he's not in the water, his pricked-up feathers are standing out. From behind, they make the little grebe look a bit like a swimming powder puff.

Goes blue in the springtime – The moor frog

When the male moor frog turns blue in the springtime, he unmistakably and spectacularly reveals himself. At other times, they resemble the common grass frog. However, when choosing his habitat the moor frog is a lot more meticulous.
He lives – as the name suggests – mainly in the moors. From his incidence in the Rietberg fishponds we can draw conclusions relating to the history of the area, which used to be fenland.

Stern 5

Rich fishing – The Ems Lake

Man has had a hand in most of the bigger lakes along the EmsCycleTrack.
Most of them came into being, because the sand, with which the river Ems lined its meadows, has become much sought-after building material. Even the Ems Lake, 12 hectares in size, is a former sand pit. What sets it apart from many other flooded pits along the Ems is its peace and quiet. If you want to fish, hunt or go for a swim you are out of place here.
This is of benefit to all species of birds in need of a rest. Crested grebes, tufted ducks and greylag geese hatch by the Ems Lake, teals and pochards and even the osprey are meeting up every year during the migration periods in spring and late summer.

Crested grebe

The clear water lures the kingfisher into catching small fish out of the water. Somewhat 'thicker morsels' are snatched away by the cormorant.
Birds passing through, like the peewit and the wood sandpiper, prefer the shallow lake shores in the north when searching for food.
Underwater or floating-leaf vegetation are rare in the Ems Lake. In places where the bottom of the lake dries up in the summer, pioneer plants like the miniature rush are spreading quickly. In some sections of the riverbank, ancient cavernous pollarded willows mark the transition to the bordering grassland. The viewing platform right next to the EmsCycleTrack allows a splendid view across the lake.

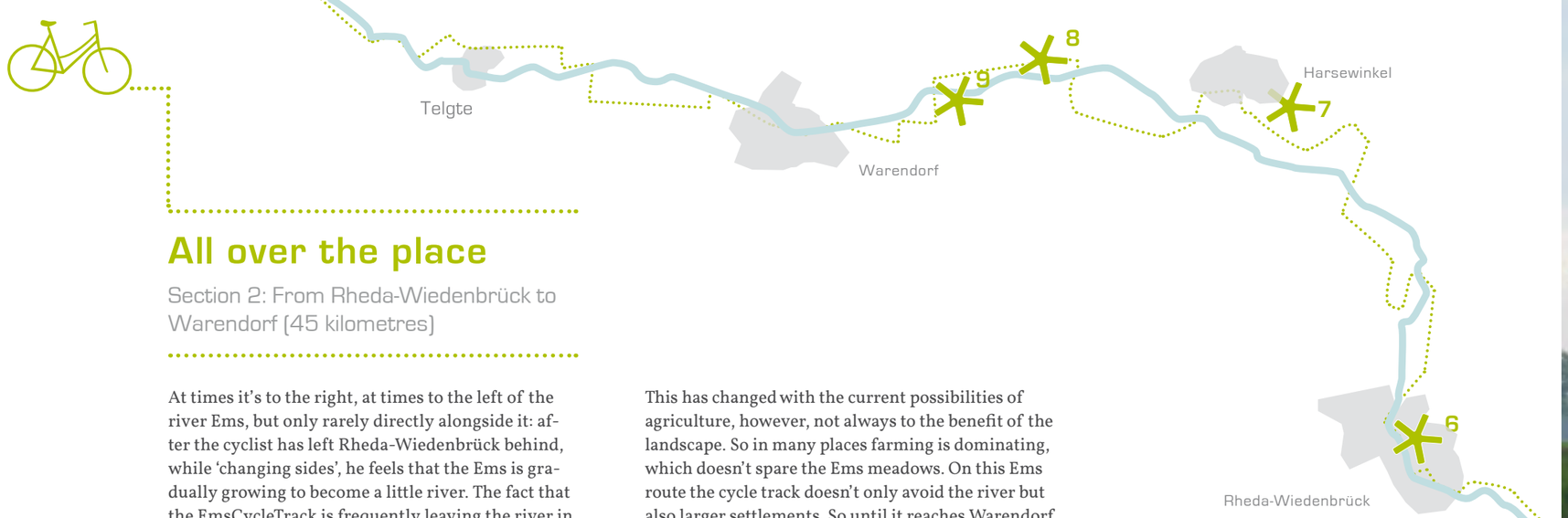
Cross and cormorant

His flight silhouette bears resemblance with a cross. But what makes fishermen and pond owners cross is that he claims the same fish that they are after. Being a master fisher, he got almost stamped out until the beginning of the 1980s. After he was protected he reproduced so well that he's now really in for it again. An apt example for the fact that economic interests usually go before the protection of endangered species. ^ At the Ems Lake the cormorant finds his peace and quiet – and fish.

Short-term habitat – Sand excavations

Sand excavations are a peculiar business. On the one hand they interfere with nature and on the other hand they create new habitats for specialised flora and fauna. The exposed sand is ideal for nutrient-poor grassland species like sand sedge and sheep scabious. Sand martins are hatching on the steep slopes, the larvae of the rare natterjack are evolving in the shallow and sunlit pools and lakes. Frequently these are short-term habitats, because after the exploitation the excavations are filled up again or holidaymakers and anglers conquer the waters for themselves. From a nature protection point of view it would be better to promote an undisturbed development, like at the Ems Lake.

Sheep scabious



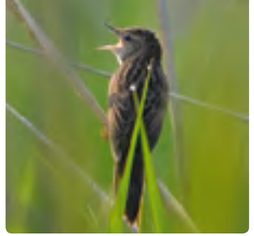
All over the place

Section 2: From Rheda-Wiedenbrück to Warendorf (45 kilometres)

At times it's to the right, at times to the left of the river Ems, but only rarely directly alongside it: after the cyclist has left Rheda-Wiedenbrück behind, while 'changing sides', he feels that the Ems is gradually growing to become a little river. The fact that the EmsCycleTrack is frequently leaving the river in this section is not a disadvantage. The surrounding environment, which has formed it, is of more interest than the regulated Ems in this part of the track, which includes sand dunes like the Boomberge and Mattelmann's Heath with its special fauna and flora. Anyway, the sand spread out by wind and water during the last ice age is omnipresent here.
Up to the 19th century wide parts of the Ems sand plain were barren heathland, which didn't promise any riches. This has changed with the current possibilities of agriculture, however, not always to the benefit of the landscape. So in many places farming is dominating, which doesn't spare the Ems meadows. On this Ems route the cycle track doesn't only avoid the river but also larger settlements. So until it reaches Warendorf one recalls above all Marienfeld, a suburb of Harsewinkel, with its former Cistercian monastery.
It is not until he approaches Warendorf that the cyclist is confronted with urban life again. When reaching the city, in former time member of the Hanseatic League, he has finally entered the Münsterland region. Everybody knows that this area is not only bicycle land but also horse's land, which cannot be denied when making a tour through the old alleys of the 'City of the Horse'.

6 Rheda Castle Meadows
7 Boomberge Dunes
8 Valley ditches at Vohren
9 Dunes near Dackmar

Stern 6



Grasshopper warbler

Devil's bit

Spotted woodpecker

Nature meets park – Alder swamp forest and castle meadows at Rheda

Two became one. When in 1970 Rheda and Wiedenbrück merged to form the city of Rheda-Wiedenbrück, the river Ems was the linking element between both parts of the city. The state garden festival in 1988 took up this idea. Today's Flora Westfalica Park is attempting the balancing act between horticulturally created park and natural meadowland. The almost three kilometres long green belt along the restored Ems is attractive for pedestrians and cyclists alike. One of the park's highlights is the moated castle of Rheda, first mentioned in 1170. It is located in the centre of a nature reserve with wet meadows and an alder swamp forest. The high water table is caused by the artificially dammed up Ems in this section and is absolutely essential for the conservation of the castle:
The oak piles on which the castle rests, must under no circumstances come into contact with air, otherwise they will moulder. In the old days the women did the washing in front of the castle using dolly and washboard and afterwards spread the sheets on the meadows leaving them to bleach in the sun. In the wet bleaching meadows – these days agriculturally exploited – we can now find the ragged robin, the water ragwort and the devil's bit, plants, which have become rare in most places. The alder swamp forest near the banks of the Ems is often flooded in winter, which most tree species cannot tolerate, except the black alder. In spring, marsh marigold, the lesser celandine and the iris cover the soil with a yellow carpet of blossoms. With a bit of luck you can observe the small woodpecker in the alder swamp forest or watch the shimmering kingfisher hover above the Ems.

Waterproof

In places where the ground water in the Ems meadows is high all year, swamp forestswere able to survive. They are the realm of the black alder. Wet feet are not really a problem. On the contrary: the ability to stand with its roots in the water over a long period is its decisive competitive advantage. At the base of its trunk, cavities in the bark and air channels act as 'snorkels', which safeguard the roots' air supply. Only after the trunk base has been under water for too long, even alders get a hard time. The fact that many alders died off in the Rheda Castle Park had another reason. They fell victim to a disease.

Shiny harbingers of spring – Marsh marigolds

In the past they leant a yellow-gold glimmer to the wet meadows in the springtime. Today the banks of ditches and wet swamp forests are the home of the marsh marigold. Here the oily shimmering yellow blossoms are heralding the spring. Buttercup is another, but not unmistakable name for the cute plant, because its blossoms – like those of other species too – used to give the butter its yellow tint. However, the plant is slightly poisonous. Cows know. They spurn the marsh marigold ...

Stern 7

Bog heather

Pearlwort spurrey

Cowberries

Significant inland dunes – Boomberge

On the EmsCycleTrack, the cyclist regularly encounters inland dunes. They were formed during the last ice age more than 10,000 years ago.
Heavy winds swept across the bare surface of the soil and carried away the light sand particles - often for miles - to deposit them elsewhere in the form of dunes. In the Boomberg dunes the sand drifts are particularly powerful with 80 metres above sea level at their highest point.With their unfertilised sand spots they are a significant inland dune area in the upper Ems valley. Inland dunes often had an eventful past.

In the beginning they turned arboreous, then man deprived them again of their forests by rooting out the trees and letting the cattle graze in the woods. Extensive heathland formed, through which flocks of sheep passed until the beginning of the 20th century. Later, the dunes were reafforested with undemanding deep-rooted pine trees. Below their crowns gather oak trees, birches and mountain ashes. Further down grow cranberries and bog heather. The tree pipit and the pied flycatcher are regular hatching birds in the forest edge areas and clearings.

The ant-lion is the larva ...

... the adult ant-lion is the insect proper

Trappers in the sand

The fact that the larva is better known than the actual insect is rather unusual in the fauna kingdom. But this is actually the case with the adult ant-lion. Its larvae trade under the name of ant-lion.
This doesn't only sound dangerous but it is. Above all for ants. The ant-lion lives in the loose sand and digs small funnels in there. If an ant drops into one, the ant-lion pelts it with sand. The victim slides down further and further, where finally two strong pliers are awaiting it ...
The adult ant-lion – the finished insect – vaguely resembles a dragonfly and is nocturnal.

More light!

In the Boomberg dunes, a close look into wood clearings, the sunlit edges of forests and waysides of paths with nutrient-poor sand habitats. can be rewarding. Here, light-loving species and 'professional fasters' like grey hairgrass, shepherd's cress and pearlwort spurrey eke out an existence under harshest conditions: the water seeps away quickly and they get scorched by the sun. The heated-up sand is the wild bees' delight. They dig nest holes into the loose sand, where the young can develop in the summer.

Young tree pipit

Stern 8

Bur-Reed

Southern Damselfly

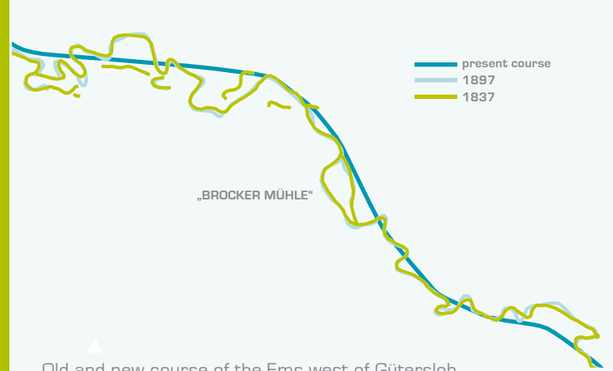
The Ems escort – Valley ditches between Harsewinkel and Warendorf

Between Harsewinkel and Warendorf the Ems is escorted by rift valleys on both sides. Without them, any intensive agricultural exploitation would hardly have been possible, even before the regulation. The river Ems carries a lot of sand with it that settled at the bottom of the riverbed, and during floods was deposited in the areas near the banks. This led to a raising of the riverbed and to the formation of so-called riverbank dams, which reversed the natural incline in the meadows. Flood and rainwater could not drain off, but accumulated at the outer meadow margins before the edges of the terrace so that the soil was too wet for any cultivation.

Only the valley ditches, dug in the 19th century and later during the conversion works, put things right by draining off the water.Now the valley ditches have developed into a valuable habitat with floating-leaf vegetation, reeds and shrub land.
The blue damselfly, a dragonfly which is endangered in the whole of Europe, makes one of its rare appearances in North Rhine-Westphalia. From the New Mill, about 100 metres south of the EmsCycleTrack, you can observe it. The mill wheel of the listed building is missing and it would be pretty useless today, anyway. The Ems, formerly powering the mill, has been flowing 200 metres further south since its canalisation 80 years ago…

Straight instead of bent

Dead straight is the course of the Ems between Rheda-Wiedenbrück and Warendorf. But it wasn't always like this. The map shows the course of the Ems within the city limits of Gütersloh back in 1837 and today.
In 1837, its length was still around 5,400 metres. Today, it measures merely 3,700. In 1898, plans were made for a distinct reduction of the course length. The complete regulation commenced in 1933 and was carried out by the Reich Labour Service. Following the 'flood of the century' in 1946, further regulation works followed.



Old and new course of the Ems west of Gütersloh

Southern Damselfly

Strictly protected in the whole of Europe is the southern damselfly. This includes the privilege that terrains have to be verified especially for its protection. The southern damselfly feels comfortable in sunny meadow ditches with clean water and a lushly growing underwater vegetation.
Its occurrence in the valley ditches of the Ems is one of the largest in North-Rhine Westphalia.

Water mills – now barrier-free

Countless mills were powered by the water of the Ems until right into the last century, especially flour and oil mills, but also – even if more rarely – fulling and timber mills. Every watermill was an interference with the river: the mill water had to be impounded to ensure that there was enough of it to drive the mill wheels, which were mostly undershot, i.e. they had the water come streaming onto their lower halves. And yet, with low water the mills sometimes would not run. For the fish and other migrating organisms the mill impoundments were barriers that could hardly be overcome. Bypass channels now facilitate their passage.

Stern 9

Wild rabbit in the dunes

Contrary to socially living honeybees, wild bees are loners. They nest in cavities, stems of plants, cracks in walls or even empty snail shells. Wild bees nest in the soil and prefer partly overgrown sand, into which they dig their breeding ducts.

Sand sedge

A case for specialists – Dunes near Dackmar

The mightiest system of inland dunes in northwest Germany escorts the river Ems. Wind as well as man has contributed to its existence. First came the storms that piled up the dunes after the last ice age. Later they turned wooded with oaks, birches and beeches. Timber that would come in handy for the people of the Middle Ages and later. The latter rooted the forest and were responsible for the fine sand being exposed to the winds once more. In Dackmar the pine trees, reafforested 200 years ago, finally managed to stop the sand drifts.

Loose sand, low in nutrients, pretty well heated up by the sun in summer and hardly able to store water – that is what makes dunes a case for specialists. Open, treeless dunes are a very exciting microcosm.
The sand sedge 'stitches up' the sand with subterranean runners, the ant-lion builds sand funnels – a deadly trap for ants – tiger beetles chase smaller insects and the long-horned grasshopper adapts to the sandy soil perfectly with its colouring.
Open dunes are rare nowadays. Partial replacement is offered with sand paths and sandy scarps that some species fall back on – which goes to prove that it is worth preserving even such seemingly unspectacular habitats.

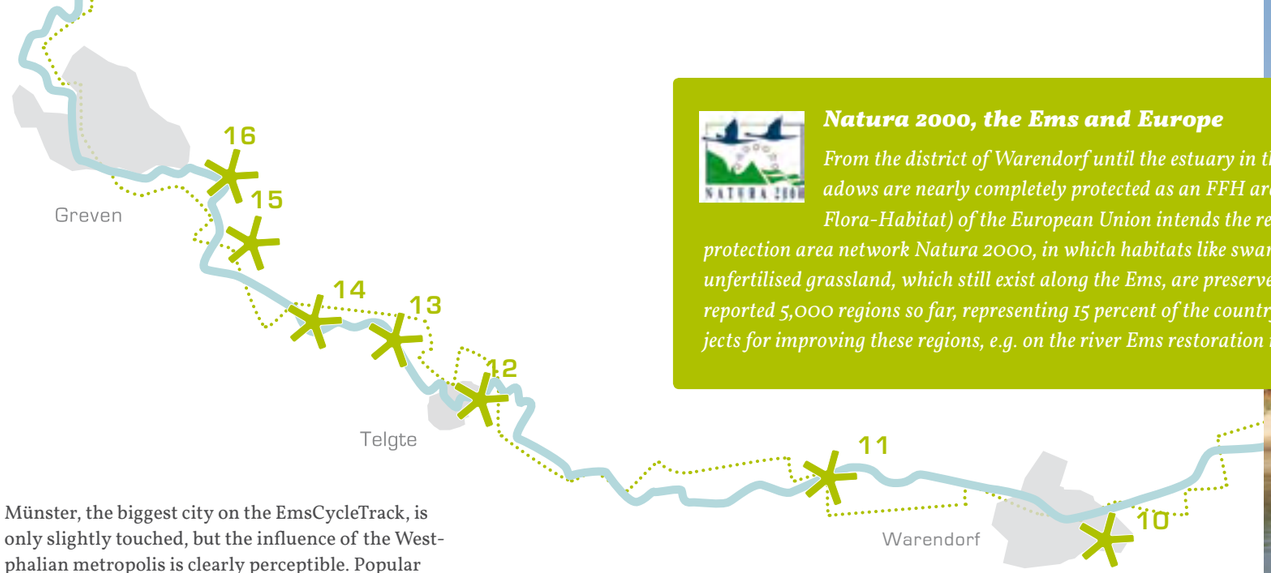
Hint: A walk to the dune forest

South of the Ems bridge the hiking trail X 19 leads you eastwards to the wooded dunes. After 400 metres, past the dune ridges with beautiful foliage trees, you reach an old beech tree, registered as a natural monument, the roots of which have been exposed through wind and water.

Ancient beds and new ones

Section 3: From Warendorf to Greven (47 kilometres)

Something is afoot with the Ems: This is nowhere as apparent as in this section. NearWarendorf-Einen the cyclist marvels at broken-off river banks and fresh sand banks, around Telgte along the way he encounters aurochses, wild horses and bayous which aren't bayous anymore because water is running through them. In short: The river Ems, tamed in most sections, at some places shows its unspoilt, 'wild' face – very much to the delight of the sand martin, the kingfisher and many other occupants of the Ems who now find new habitats. It becomes obvious – more than before – that the Ems is not a brook anymore, but a real river. The meadows are wider and more diverse, bayous and flow channels testify that the course of the river had always altered in the past – sometimes with the aid of man, sometimes without. Dunes still escort the river. In the Bockholt hills, they are overgrown with juniper heather for a change, in the Wentrup hills, they reach heights like nowhere else on the EmsCycleTrack.



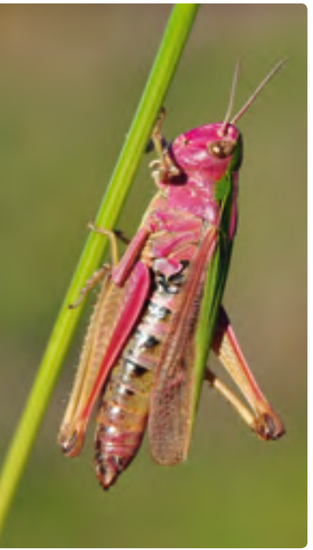
Münster, the biggest city on the EmsCycleTrack, is only slightly touched, but the influence of the Westphalian metropolis is clearly perceptible. Popular country inns or the 'coffee village' of Gimbte are favourite destinations, when city folks mount their bikes at the weekends.
Telgte and Greven are Ems cities with different characters. While the former Hanseatic city of Telgte received its town charter as early as 1238, Greven only turned from farming village to city through the textile industry in the 19th and 20th century. The town's coat of arms shows an Ems punt, evidence for the important role of the river.

Natura 2000, the Ems and Europe

From the district of Warendorf until the estuary in the Dollart the Ems and its meadows are nearly completely protected as an FFH area: The FFH guideline (Fauna-Flora-Habitat) of the European Union intends the realisation of the European protection area network Natura 2000, in which habitats like swamp forests, sand dunes and unfertilised grassland, which still exist along the Ems, are preserved and developed. Germany has reported 5,000 regions so far, representing 15 percent of the country area. The EU promotes projects for improving these regions, e.g. on the river Ems restoration measures near Einen.

10 Warendorf Oatgrass Fields
11 Restored Ems near Einen
12 The Ems Meadow Park in Telgte
13 Pasture Landscape Pöhlen
14 The Ems Meadows near Vadrup
15 The Bockholt hills
16 The Hassel bayou

Stern 10



Coloured grasshopper

Big locust

Oxeye daisies

Lady's smock

Blossom dreams by the river Ems – Tall oatgrass meadows at Warendorf

The Ems meadows at Warendorf belong to the finest on the EmsCycleTrack. In early summer, closely set lady smocks are craning their white blossom heads to the sky, while the shelamannik and the knapweed set colourful nuances.
In places where the soil is wetter, ragged robin and lady's smock add to the play of colours.
Such lush splendour of bloom not only pleases the human eye but also feeds many insects. Butterflies, like the lycaenid, flutter from blossom to blossom and the coloured grasshopper starts his mating search with persistent buzzing.
Oatgrass meadows with colourful flowers belong to the most biodiverse habitats, but at the same time they have become very rare today and are protected all over Europe.
The oatgrass and the other typical species feel especially comfortable if the meadows are mown twice a year and are fertilised as little as possible.
The Ems meadows at Warendorf benefit from the fact that they are situated in a drinking water production area. Strong fertilising or the use of weed control agents are out of the question here.

Thirst-quencher Ems

The Ems water may be relatively clean, but it's better not to drink it. However, the Ems is nonetheless important for the supply of drinking water. During and after the ice age, the Ems and its tributary brooks deposited huge layers of sand on the chalky subsoil – an excellent conductor for ground water (aquifer). Therefore, we can find many wells on both sides of the Ems through which waterworks extract the precious liquid from up to 20 metres depth.
However, other substances also quickly seep away into the sandy soil, which do not belong in the drinking water. Therefore agriculture is less intensive in the vicinity of the wells. This again is for the benefit of flora and fauna.

The common blue

Tumbler between the blossoms: The Common Blue

Blue butterflies rank among the most beautiful of its species. However, in northern Germany they are rare. The most common is the common blue. It tumbles from blossom to blossom in the Warendorf meadows, too. Really blue and beautiful is only the male. The female has more of a brownish or pale blue tinge at the most.

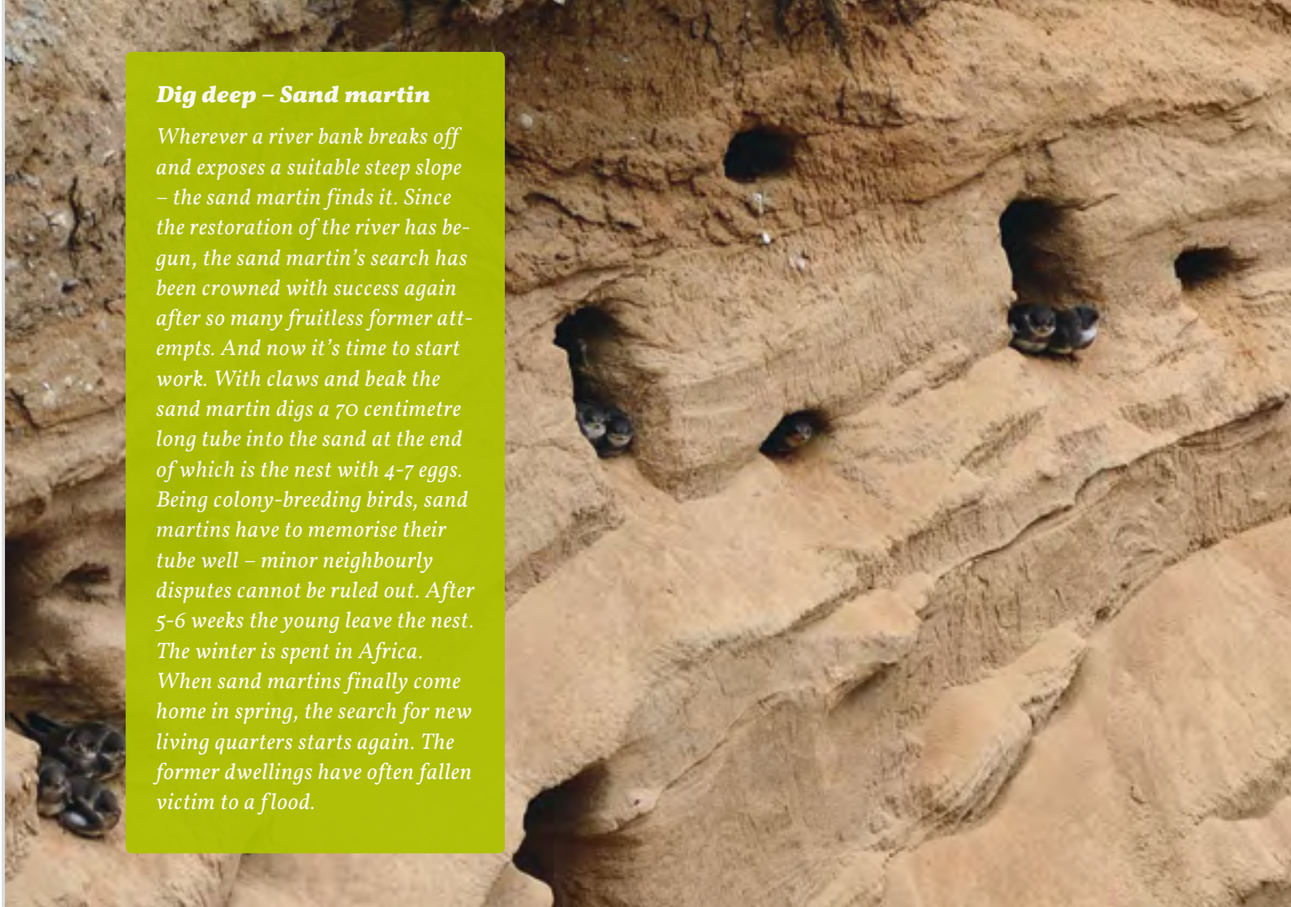
Regulation of the Ems in the 1930s

Restored Ems near Einen

Back to the future – Restored Ems near Einen

Man has always tried to change the courses of rivers to suit his own purposes. For example, there have been interventions to facilitate navigation on the river Ems. Regulation on a grand scale, which gave the river its present appearance, started in the 1930s and continued until the 1970s. Flood protection and a more intensive exploitation of the meadows were the goals. Nature was the loser. Many animals and plants lost their habitats on the canalised Ems. Not even 20 years later, first discussions to reverse the river regulation, at least partially, arose. The protection concept for the Ems meadows proposes to re-establish the tight interlacements between the Ems and its meadows.

Since 2009, not far from the village of Einen, the so far most extensive measures are being carried out to restore some of the river's former dynamic force. A project subsidised by the EUand the state North-Rhine Westphalia is aiming at conceding the Ems more opportunities to develop on a section measuring almost 4 kilometres. Excavator scoops have extended the Ems' course and created new flooding areas, in which the river is able to 'work'. What it takes in one place, it washes ashore in another. Animal and plant pioneers are capable of quickly populating new broken-off riverbanks and sandbanks. Even below the surface of the water things are starting to change. Varying streaming conditions are developing, very much to the benefit of the fish fauna, as first findings testify.



Dig deep – Sand martin

Wherever a river bank breaks off and exposes a suitable steep slope – the sand martin finds it. Since the restoration of the river has begun, the sand martin's search has been crowned with success again after so many fruitless former attempts. And now it's time to start work. With claws and beak the sand martin digs a 70 centimetre long tube into the sand at the end of which is the nest with 4-7 eggs. Being colony-breeding birds, sand martins have to memorise their tube well – minor neighbourly disputes cannot be ruled out. After 5-6 weeks the young leave the nest. The winter is spent in Africa. When sand martins finally come home in spring, the search for new living quarters starts again. The former dwellings have often fallen victim to a flood.

Stern 12

Meadow thistle

Hint

An educational nature trail guides you through the Ems Meadows Park informing you about habitats and species. An accompanying map is available at the Telgte tourist centre.

A copy of nature – The Ems Meadows Parkin Telgte

The Ems Meadows Park in Telgte is an urban park of a different kind. Looking for flower beds would be a vain effort. The designers, who took up the reshaping of the hitherto agriculturally exploited areas, had something else in mind. They wanted to revive elements of the meadow landscape, which had fallen victim to the regulation of the Ems. The EmsCycleTrack therefore runs past extensively used biodiverse meadows, and waters modelled on bayous or food channels.

A wet swamp forest is also part of the park and made accessible to the public by a plank gangway. In many places repairs and improvements have been undertaken to justify the 'green star'. The ponds are now devoid of mud and cut free, new shallow water zones and meadows, 'inoculated' with biodiverse grass cuttings, cater for an even richer flora and fauna in the park.
Its location on the river was both, blessing and bane for Telgte. A ford across the Ems at the junction of several trade routes was favourable for the development of the town in the Middle Ages. At the same time the Ems caused extensive damages in the town at high water. For this reason the Ems Meadows Park function as a natural flooding zone.

Little Dragon – The crested newt

The crested newt is the biggest, rarest and most imposing native newt. Especially the male is very impressive with his deeply serrated spinal crest and his colourful belly.
Crested newts are protected in the EU. They inhabit sunlit water grounds that are fairly fish-free and spend the winter somewhere dry. Where exactly, is largely unknown.

Fertile and disastrous - Floods

In summer, wellingtons may suffice to cross the Ems without getting your feet wet. But we had better watch out! After it has been raining for a long time, the river swells up quickly. In the past the flood water used to be quite welcome, for it naturally manured meadows and fields, but in winter it could be disastrous. Crops were destroyed and cattle drowned in the high water. A 'millennium flood' is a combination of various unfavourable circumstances. The last time this fate caught up with the river Ems was in February 1946. Back then, the old part of Telgte was highly flooded. This resulted in speeding up the regulation of the Ems. Floods still exist, but since then the towns have been spared.

1946: High water near Telgte

Stern 13

Koniks (left) and heck cattle

Pasture landscape Pöhlen – Wilderness in the Ems meadows

Several areas between Telgte and Westbevern convey the impression of an air of wilderness to the cyclist on the EmsCycleTrack. One of these is the pasture landscape 'Pöhlen'. In a former river loop of the Ems, now almost completely silted up, water bodies, marshy meadows, dry sand hills and clumps of copse are closely interlocked with each other and form a habitat for a great variety of plants and animals. The landscape is subject to continuous changes. Responsible for this are periodical floods, but also grazing animals, like heck cattle and konik horses.
These animals under the protection of the NABU (German Society for Nature Conservation) are roaming through the area, 27 hectares in size, triggering off dynamic processes by treading and biting the soil. The impressive creatures prevent the excessive growth of shrubs and open up the soil with their hooves, thus creating cavities for rare species of wild bees and beetles. In the grassland, dry and wet sections often take turns within limited space and accordingly the flora is diverse. Rare amphibians like the crested newt live in the waters. On warm evenings in May, the concert of the tree frogs can be heard from far off. The grass snake benefits from the variety of amphibians and finds rich quarry. From three observation points the visitor gets a good overview of the landscape. The 'Pöhlen' pasture area is connected with the adjacent nature reserve 'Haus Langen'. Not far from the former manor 'Haus Langen' with its own water mill runs the river Bever meandering towards the Ems in tight bends. Together, both rivers have formed a meadow landscape rich in structure.

Not quite wild

'Real' wild cattle and wild horses don't exist anymore in Europe. The aurochs (in the 17th century) as well as the wild horse (in the 1960s) became extinct in the wild.
Many attempts have been made to reproduce typical characteristics of the wild variant. The heck cattle in the Pöhlen pasture area go back to breeds of the brothers Heck in the 1920s. The konik horses resemble the tarpan, the extinct east European wild horse. Koniks as well as heck cattle are robust and in the open air all year round. In winter they get additional food rations.

▲

Harmless and shy: The grass snake

The scenario is not so improbable altogether: a reptile is wriggling across the EmsCycleTrack in front of the cyclist's eyes and then disappears in the adjoining thicket. Almost certainly it was a grass snake that had been sunbathing on the trail. It loves intact river meadows. Here it finds everything it desires. Frogs, its favourite dish, flotsam heaps, washed ashore by the flood, in which it lays its 10-30 eggs, and frost-proof winter quarters, where it hibernates for half the year.
It can be seen from time to time by the river Ems near Telgte, but otherwise it makes only rare appearances.

River plover

Dune tiger beetle

The Emsunchained – Meadows near Vadrup

Hardly an Ems section has undergone as many changes over the past years as the one northeast of Telgte. Heck cattle and wild konik horses are roaming through the meadows and affect the landscape through their selective feeding behaviour. But quite a bit has also been going on with regard to the Ems itself. River loops, detached from the river for almost 70 years after the regulation are now filled with streaming water again. An impressive example is 'Ringemanns Hals'. A viewing platform allows the view across the big Ems loop. By integrating three bayous the course of the Ems south of Vadrup, which had been drastically shortened during the regulation in the 1930s, it was extended by more than one kilometre. At the same time, the stone corset that squeezes the Ems into a narrow riverbed, got partially removed. Only now the dynamic force of the 'unchained' river becomes visible. Riverbanks, hollowed out by the water, are breaking off and newly formed sandbanks appear. Kingfishers and sand martins are building their hatching ducts into the fresh steep faces, while the river plover lays his perfectly camouflaged eggs on the sandy riverbanks. Every flood leaves traces behind – and new habitats for fauna and flora.

Kingfisher

Everybody knows him, no one hardly ever sees him. The kingfisher is very well camouflaged, especially because of his bright colourful outfit, when he lies in waiting for small fish on overhanging branches by the Ems or by one of the bayous. Most of all he calls our attention when he rapidly flies closely above water level with a high-pitched 'tjeee'. Kingfishers raise their young ones in self-dug breeding ducts. With up to three hatches a year they can make up for losses suffered during the winter months.

For better water grounds

Something is afoot at many rivers and brooks. Not least because of the EU water guidelines. They demand that the water grounds, until 2027 at the latest, be in 'good condition'. This sounds vague, but there are criteria, which have to be fulfilled. The water quality must meet the set standard and the range of species in the habitats should be similar to that of natural water grounds. To meet this demand, river bank reinforcements are being removed and barrages altered in such a way that wandering fish can pass through them. As a complete restoration of waters is rarely possible, these mostly selective measures are to 'radiate' from there to the entire water grounds.

Stern 15

Über die Heide sind wir gegangen,
Und die Heide war blütenleer,
Goldene Käfer flogen schimmernd
Auf dem Sande vor uns her.

Alle Fuhrenzweige blühten,
Und die Heidelerche sang
Aus der wolkenlosen Höhe
Süß zu unserm Heidegang.

Hermann Löns (1866-1914)

The poet and naturalist Hermann Löns often spent some of his time in the Bockholt dunes, when he used to study in Münster.

Uniqueness along the EmsCycleTrack – The Bockholt hills

The Bockholt hills are a peculiarity on the EmsCycleTrack. Only here the Ems dunes are overgrown with juniper heather. It shows that even nature reserves require human tending. To let nature run its course – for an intact marsh or an old deciduous forest surely the best solution – would not work here. In order to preserve the juniper heath and the dry sand grass, some effort is needed. Voluntary conservationists regularly pull out brambles and growing coppice from the sandy soil. A flock of sheep, supported by the NABU Nature Preservation Station Münsterland and reinforced with some goats, helps keep the heath intact for four weeks every year.

For Scotch heather, junipers and other heather plants need assistance to ward off the competing trees. Otherwise, oaks and pine trees would deprive them of the light that they badly need. It's worth the effort. Rare plants and animals like shepherd's cress, grey hairgrass, tiger beetles and sand lizards have found an important sanctuary in the Bockholt dunes. For the visitors, a walk through the heath is a journey into the past. Only 200 years ago, heathland was omnipresent on both sides of the Ems.

Rare sun worshipper

The sand lizard likes sand. And warmth. If, as in the Bockholt hills, sparsely overgrowing plants are adding to his comfort, and a heap of wood or some root plates are available for sunbeds, chances aren't bad to find out more about this sophisticated reptile's tricks. But only from March till October. For the rest of the year the saurian hibernates in some secure place. In May, the female digs a hole, where it lays the eggs from which the young lizards hatch out after a few weeks.

The Heather is abloom...

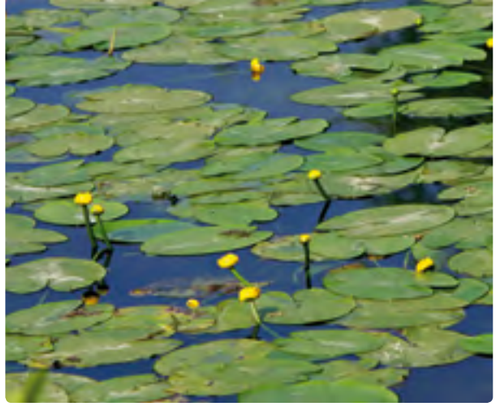
...but only if it is periodically rejuvenated and able to sprout. If this isn't done, it overages and dies. An ideal solution is the so-called 'plaggen' cutting, practised over many centuries, whereby the farmers usaed to cut off the upper layer of the soil, including the heather, and used it for litter in the stables – for the remaining heather a 'fountain of youth', for the farmers a grind. Other methods are mowing or grazing by sheep. Fires can also act as a living cell therapy. But controlled burning of the heath in winter is only practised in such large heath areas as the Lüneburger Heide.

Hint

Once in the Bockholt dunes, we advise a change of perspective: get down from the saddle and proceed walking! You can obtain a hiking map for the nature trail e.g. in Landhaus Oeding or in the Hotel-Restaurant Kaltef leiter in Gimbte – both are right on the EmsCycleTrack. If you want to yield to your urge to explore you might also consider renting 'experience nature rucksacks for the whole family.

Hooked off – bayou by the Hassel

On its way from the Senne to the North Sea the river Ems doesn't take the shortest route. Not only because mountain ranges like the Teutoburger Wald are barring its course. For physical reasons varying flux conditions are prevailing in the river. Due to the latter, rivers form loops or meanders, which increase when the drop decreases. Bulging slopes start to form, which the river starts to 'gnaw' at and gliding slopes develop, where the river deposits materials. When the loops touch, the river takes its shortest course again. The 'hooked off' bayou is left behind and slowly but surely starts to silt up. From that point of view one could argue that man merely anticipated nature, when he regulated the Ems and left behind a vast number of bayous in one single go.



Yellow pond lily

However, as he secured the Ems riverbanks with a mighty pack of stones, he also made sure that the natural forming of bayous came to an end.
The 'Hassel bayou' is such a 'man-made' bayou dating from the 1930s. But one that has a lot to offer. The kingfisher fishes here, the flowering rush is abloom and the carpet of water lilies is not just visually impressive but also stages the frog's summer concert.
In the surrounding grassland wet flood channels take turns with dry dams. The diversity is reflected in an abundance of rare species. Here grow more than 40 red-listed plants presently.

River escort

The distribution pattern of the marsh speedwell, also called orchidaceous, is quite interesting in the Münsterland. It practically only occurs alongside the Ems and some of its tributary brooks and therefore belongs to the so-called river valley plants. Why these plants have an affinity to larger river meadows has not been established yet.

Poplar – pure bred

Almost all tall poplars in the Ems meadows were crossbred between the native black poplar and the Canadian black poplar. They grow fast, usually stand neatly in a row. and are not so popular with conservationists. This is different with the 'pure' native black poplar, which used to be typical for river meadows. There are only a few thousand specimen left of them in Germany. One of them is to be found not far from the bayou. An extensive genetic examination proved that this really is a purebred poplar.

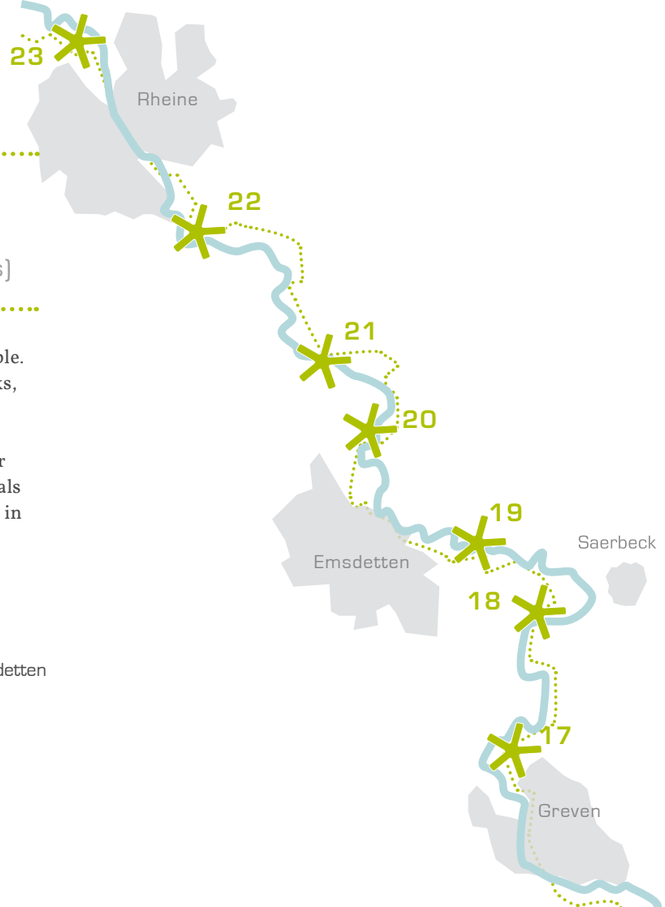
Tufted ducks

Nearly always, common pochards swim on the bayou. The black-and-white males have a striking tuft of feathers at the back of their heads – just like the grey heron – only that the females' crest is hardly visible. Common pochards, also called tufted ducks, are diving birds and jump down into the water with a 'racing dive' into depths up to 2 metres.

Curvaceous

Section 4: From Greven to the Lower Saxony state boundary (45 kilometres)

From Greven the Ems is considered to be navigable. And the towns, which have developed on its banks, grow with the river.
Greven, Emsdetten and Rheine all grew through and with the textile industry and owe part of their upswing to the river Ems. At first, the raw materials cotton and linen were transported to the factories in special vessels, the so-called Ems punts.



17 Wentruper Berge
18 Hembergen
19 Emsaue. Hembergen/Emsdetten
20 Reinermanns Steg
21 Bockholter Fähre
22 Emsaue Rheine-Gellendorf
23 Kloster Bentlage

Now the EmsCycleTrack allows a view into the noticeably wider meadows, where grassland and pastures are prevailing.
With a bit of luck you can watch the marsh harrier looking out for prey in fluttering flight or disappearing in the reeds to warm its young ones. Again and again the meadow waters glisten, flood channels with the remnants of the last high water or bayous that were separated from the river course. Early attempts were made to straighten the many bends of the Ems to facilitate shipping and rafting. Both belong to the past. Today only canoes are en route on the Ems. The Bockholt ferry is the last of its kind and brings back nostalgic memories. The final stage of the North-Rhine Westphalian section of theEmsCycle-Track is a monastery. The Monastery Bentlage north of Rheine is surrounded by historic cultivated landscape. Shortly afterwards, the cyclist passes the boundary of Lower Saxony. About half the journey is completed. Another exciting 180 kilometres along the Ems until its estuary in the Dollart are ahead.

En route with 1 HP

Special vessels, the 'Ems punts', used to navigate on the Ems since the 16th century. With their flat keel-less bottoms, stumpy prows and pointed sterns they were well adapted for use on the winding river, which carried little water in the summer. They travelled under sail or were hauled by horses.
Most of the punts came from shipyards in Haren (Emsland), but some were launched in Greven. They transported textiles, grain, peat, coal and a selection of merchandise.

Stern 17

Brambles

An eventful past – The Wentrup hills

Sand sedge, creeping bent grass, tiny wild rapunzel: The names of some typical flora species in the Wentrup hills are on the agenda. The 'Püppkesberge', as they are also called, are Greven's largest sandpit. Some of the dunes are towering above the surroundings, as high as nowhere else along the EmsCycleTrack. The Ems conveyed the sand masses with the meltwater from the glaciers during the last ice ages. Mainly towards the end of the last ice age, when the soil was sparsely overgrown, storms displaced the sand and piled it up to form dunes. Later, by clearing the woodland, man made sure that the sand, which had been fixed through vegetation, was on the move again.

The dunes in the Wentrup hills were continuously on the move, too, up to the middle of the 19th century. It was only then that by means of afforesting the sand could finally be fixed – a method successfully adopted for many Ems dunes.
Remarkable in the Wentrup hills is the natural forest of oaks and birches, covering more than half of the terrain.
Old oak and birch trees belong to the habitats that the member states of the EU have pledged themselves to protect and optimise. Therefore the pine trees in the Wentrup hills are to be replaced with foliage trees on the long run.
One problem in the Wentrup hills is the rapid spreading of the bramble in the undergrowth, which makes life difficult for other plants. The bramble is benefiting from the high nitrogen input from the air fertilising the meagre sandy soil.
Due to its proximity to the town, the Wentrup hills are an important recreation area for the citizens of Greven.

Hint

An adventure path, 2.5 kilometres long and with 13 stations, gives information on flora and fauna and on the formation of the landscape. A brochure can be downloaded under www.greven.net.

The 'Pöppkes hills'

'Pöppkes hills' is what many people from Greven call the dunes which are right in front of their doorstep. Where does the name come from? Children used to form small figures from the clay of the nearby Ems riverbank to use as toys. It is from these small puppets that the name 'Pöppkes' derives. Soon legends grew up around this place. The story goes that dwarves dwell there ready to offer help for those in need.

Pushed away

In January 2007 the hurricane 'Kyrill' tore some gaps into the wooded Wentrup hills. Nature conservationists made a virtue of necessity . Instead of reafforesting, they rooted out the trees on the site of one the gaps and pushed away the surface layer to give those plants and animals which need open sand terrain the chance to colonise.

Stern 18

Village by the river – Hembergen

Hembergen is just by the river. It is only a good 100 metres walk from the Ems riverbank to the parish church, which has roots dating back to the early 13th century. About eight meters difference in altitude has to be cleared – enough to protect the centre of the village against floods.
For the villagers, the river used to be part of everyday life. It supplied food in the form of fish, it was washhouse and cattle trough and served to convey goods. So between 1839 and 1842,more than 1,000 rafts were passing the village on the Ems, mainly logs of oak, which had been cut down near Telgte and Warendorf and were being floated to Leer and Papenburg for shipbuilding purposes.
An important source of income was the manufacture of wicker baskets. The basket makers cut the osiers on the riverbank of the Ems or in the wet low-lying areas near the river. Man has always sought the vicinity of rivers. Stately old farmhouses, which the cyclist continues to encounter next to the EmsCycleTrack, are in flood-proof locations and have access to the meadows. An example for this is the 'Sachsenhof' situated directly next to three kilometres before Hembergen. The reconstruction of medieval farm grounds of the 9th century gives a graphic description of how our ancestors used to live.

Hint

If you would like to get to know the tub maker's trade with all its facets, you should briefly digress to the Tub Maker Museum in Emsdetten (Mühlenstraße 30, open all afternoons except on Mondays).

Wicker baskets

The manufacture of wicker baskets had been an important source of income for the people who lived near the river Ems. Willow shrubs from the riverbanks of the Ems provided the weaving material. A special product was flat tubs, in which the threshed grains were separated from the chaff and dust by throwing them up into the air with a jerk. The tubs were exclusively manufactured in Emsdetten. An own guild protected the trade and secured the position of monopoly. Many tubs were hauled via the Ems to Holland and from there to the colonies. To be able to support their families, tub makers had to produce more than 300 tubs a year. The boom time of prosperity for the tub makers was the 18th century, With the invention of the malt mill the trade started to decline.

Sounds from the swamp forest

Not far from Hembergen, one of the few remnants of a white willow swamp forest has survived. It is unmistakable because of the silvery glimmer of the willow leaves. From airy heights the golden oriole sings its song. 'Vogel Bülow' - its name in the vernacular is an onomatopoeic imitation of his song - is scarcely ever seen, though. Its yellow plumage helps it vanish among the tangled leaves. Its realm is the treetop and it hardly ever leaves it. Also, its guest performance is very short. The golden oriole arrives in May and flies back to Africa again in August.

Stern 19

Blackthorns in bloom

Close to the edge – The Ems meadows between Hembergen and Emsdetten

Almost the entire Münsterland section of the Ems meadows is protected. The boundary of the meadows is marked by a distinctive grade in the terrain, the so-called edge of the terrace. It is often lined with a narrow strip of woodland, usually beeches and oak trees. Between Hembergen and Emsdetten the EmsCycle-Track often leads along this 'meadow edge'. Farmers settled here early in flood-proof areas. The river's presence can only be suspected here: Unless it's high water, the Ems is hiding in its bed here.

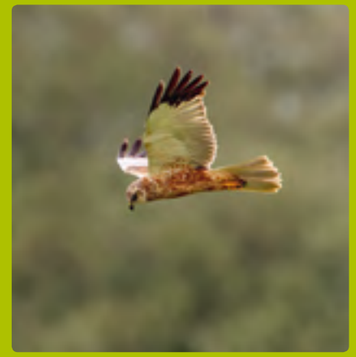
Since its regulation, the Ems has dug deeper and deeper into the sandy foundation. Only willow shrubs on the riverbank are betraying its course. Yet, a viewing tower near the sewage treatment plant allows a gaze onto the river. With some luck, you can observe a marsh harrier looking out for food. It hatches in the Ems meadows as does the nightingale that sings its beguiling song well hidden in the dense thicket, sometimes even right next to the Regionale viewing tower.
Old narrow passes cut through the edge of the terrace leading to the grassland and the pastures in the meadows. Some tributary brooks of the Ems also find their way to the river. Their natural brook valleys complete the picture of a meadow landscape replete with diversity.

Lowered bed

Since its regulation the Ems has been running distinctly faster. The river can work more that way. As the riverbanks are shouldered on both sides, it vents its excessive power on the riverbed.
The consequence: the river Ems has lowered its bed by up to 2 metres in the past decades. Parallel to this, the ground water level in the meadows fell. Flood channels dried up and wet grassland turned into fields. It is an objective of the restoration to lengthen the course of the Ems and reduce flow rate.

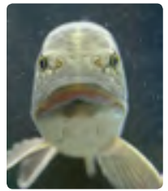
Elegant Tumbler

'They are back again, the ducks' bane, the coots' death, the peewit's fear, the snipe's terror.' This is howHermann Löns describes one of our most elegant birds of prey. When the marsh harrier is hovering above the Ems meadows in tumbling low-level flight, looking out for its prey, danger is looming. Above all, young birds and chicks have to watch out! The harrier feeds them to its young ones, raising them up well hidden in the reeds. In October, the horror is over and the marsh harrier flies back to its African winter quarters.



Fishing in the dark – Reinermann's gangway

Reinermanns gangway is the bridge leading the cyclist across the Ems close to Sinningen. Well, the term 'gangway' doesn't seem quite fitting for the elegantly curved construction. In fact, the name refers to the more modest predecessor, who breached the gap for the first time in 1937, thus replacing the ferry which had run up to then. The Ems is not very revealing from up on the bridge. The murkiness of the water is too dense. It is caused by swirled-up solid matter and plankton. And so the fish splashing about in the Ems remain invisible. And they are plentiful. Carp bream, silver bream, pikeperch, perch, rudd, tench, eel, and pike seem to manage quite well in the muddy water, which is comparatively low in oxygen. Quite different from the river trout. It manages to find the clear and cold water, rich in oxygen that it needs, above all in those sections of the river Ems close to its source, which are therefore called the trout region.
The carp bream lends its name to the bream region, which is very rich in fish and takes up most of the course of the river Ems.



Pike

Stranded guests

Many plants have settled along the Ems, whose original homelands lie in remote continents. The most striking example is the Himalaya balsam, which originates in the Far East and grows in plenty on the riverbanks of the Ems in late summer. Bees and bumblebees love the tasty nectar produced by the plant, which itself is also a real pleasure to look at. It is not unproblematic, though, because it can supress the original native flora on the river banks. The same goes for the golden rod that came to us from North America.

Mysterious Brook Lampreys

Brook lampreys are in many ways full of mystery. They are not proper fish and spend the most part of their lives in the muddy water grounds in the form of wormlike larvae. After about five years, they transform into the real river lamprey. Its life is short but intensive. The river lamprey stops the food intake, reproduces and dies shortly afterwards. The river lamprey is to be found mainly in minor tributary brooks but also in the Ems itself. It is protected in all Europe.

The historic Bockholt ferry

Grey wagtail

“Ferry me over!“

Until the beginning of the 20th century only few bridges crossed the Ems river. Between Greven and Rheine there wasn't a single one – today there are five at least! Hardly imaginable, because the railway line Münster-Rheine that was opened in the middle of the 19th century, had brought a great upswing, above all to the textile industry, and the missing bridges impeded the transportation of goods in the east-west direction considerably. Instead, ferries took care that people, animals and goods got from one bank to the other. Next to smaller passenger ferries there were also vessels that could accommodate horses and carts.

On the Westphalian Ems, the Bockholt ferry is the last relic from those times. Because of its isolated position it was presumably of merely local significance. It is known that the owner of the farm operated a distillery and also a brewery. Whether hard liquor changed sides with the ferry has not been handed down, however. Only one thing is for certain: the owner Heinrich Bockholt received a licence to sell alcoholic drinks under the obligation to keep up the public ferry service. And this is still the case up to this present day. At weekends and on public holidays in summer the word goes: “Ferry me over!“

Fieldfare

Hint

How grains are transformed into hard liquor is vividly demonstrated at the Corn Schnapps Distillery Museums in Telgte, Contact Stadt Telgte. +49 2504-690100 and Saerbeck, Contact Gemeinde Saerbeck +49 2574 89-503 (both very close to the EmsCycleTrack) Both museums are still in possession of the original technical equipment. Both museums are with guided tours only and must be booked in advance.

Bird proverbs for the hobby ornithologist

Talking about birds and proverbs, what common sayings involve our feathered friends? Here is a small selection:

The early bird catches the worm.
Birds of one feather stick together.
One swallow does not make a summer.
A bird in the hand is worth two in the bush.
Don' count your chickens before they hatch.
What's good for the goose is good for the gander.

May the blue bird of happiness fly over you, now and for evermore ...

Hardly afraid of the water – The grey wagtail

The grey wagtail, a slightly more colourful relative of the common wagtail, also occurs in flat country. It hatches near the Ems, above all in places with stronger current. Therefore it likes barrages and bridges. Here the water usually flows faster and a roof above the head can do no harm when rearing the fledglings. When chasing insects, the grey wagtail doesn't mind a jump into the cold water – provided the safe riverbank is not far off.

Marsh bird's-foot trefoil

Stonefly

Oystercatcher

Colourful variety – Ems meadows near Rheine-Gellendorf

Bayous, colourful meadows, sandy uncultivated strips of land – the Ems meadows near Gellendorf offer a wide range of what river landscapes are able to exhibit with regard to habitats. Whereby man has added an important part to its diversity. He has early rooted out the forest of oak, ash and alder that grows naturally in river meadowland to harvest hay for the cattle. An undertaking not free of risks. Again and again, untimely high waters made hay sheaves fall victim to the floods.

The regulation of the Ems has facilitated the cultivation of the meadows. However, the consequence was that the growing of maize replaced the traditional grassland agriculture in many locations. Fortunately, things are different in Gellendorf. The mosaic of different habitats ensures an excellent biodiversity. Maiden pink and wild thyme grow on meagre scarps, dragonflies patrol above the bayous and an overflying kingfisher loudly utters its territory claim with shrill whistling.

Endangered beauty – Maiden Pink

Formerly there used to be habitats in abundance for the maiden pink in the sandy Münsterland. Heathland, sand paths and rough pastures were a paradise for the plant with the striking blossoms. This has changed, though. The heath has gone, the sand paths are surfaced with asphalt and the meadows are so heavily fertilised that the tender maiden pink has no chance against the competition of vigorous grasses. However, if it wants to survive, it has to look for niches. A rough wayside, for example. Or the edge of a pasture, just below the barbed wire, where the fertiliser sprayer doesn't come. On the Ems-CycleTrack there still are places like that every now and then.

Plant & Butterfly

Many butterflies lay their eggs only on plants that their caterpillars feast on at a later stage. The small copper butterfly prefers the small sorrel, the orange-tip likes the cuckoo flower, the admiral's caterpillars only choose the leaves of the stinging nettle. The actual butterflies are usually less fussy and make use of a wide range of flowering plants to suck the nectar. But even here there are preferences. So the peacock butterfly goes in particular for the blossoms of the hemp agrimony.

Stern 23

Monastery and cultural landscape

Monastery Bentlage belongs to the best preserved monastery complexes in Westphalia. The historic cultural landscape has also largely remained intact, as a comparison with historic maps shows. Over centuries, the monks shaped the landscape according to their demands. Meadows, forests, fields, orchards and fishponds around the monastery supplied them with everything they needed to live.
The Bentlager Busch, one of the oldest woodlands near the river Ems, still shows traces of their old traditions, whereby monks drove the pigs into the woods to feed on acorns and beechnuts. The once wet grassland has now for the most part been drained.
The 'Wöste', the largest meadow west of the monastery, is channelled with wet ditches and partly marshy.

Bentlage monastery

During the mowing period, white storks frequently come over from the neighbouring Rheine Nature Zoo to feast on the frightened away mice and frogs.
Not far from the monastery is the 'Saline Gottesgabe' (God's Gift salt works) with its graduation house, another specific feature of cultural history at the end of the Westphalian part of the EmsCycleTrack.

Little owl

Apple blossom

Hunting-star copse, ridge-and-furrow field and the 'Winterlake'

Clergy and gentry have been formative in many ways for the cultural landscape around the Bentlage monastery. So even now, the remnants of a ridge-and-furrow field can be made out, which promised better crops under wet soil conditions. The copse put up in1738 near the monastery carries the name 'Sternrnbusch' (hunting-star copse) because of the hunting star made up of two strictly diagonal hunting routes crossing each other, which probably served the prince bishop of Münster as a hunting ground for small game. In the 'Winterlake' (winter sink), an inlet created by monks on the right riverbank of the Ems, not far from the monastery and serving as a trap, fish gathered during high water – and stayed there, imprisoned when the water level sank, ready to be consumed on Fridays. Orchards provide the little owl with vitamins and habitats.

A Touch of the North Sea...

The imposing graduation house of the former 'Gottesgabe' salt works is only a stone's throw away from the Bentlage Monastery and an obvious testimony for the salt production, which has reportedly been practised in Rheine since 1022. The brine trickles through a filling of blackthorn brushwood with a large surface profile, so that the concentration of the brine is doubled in this process called 'trickle thorn graduation'. The salty spray water makes sure that plants, whose real home is on the sea coasts, grow here in the environment of the graduation house, like saltmarsh-grass and saltmarsh sand-spurrey.

Saltmarsh sand-spurrey

A little river turns into a big stream – The Ems in Lower Saxony

In Lower Saxony the loops of the river Ems get wider. Just before Lingen the Ems meets up with the Dortmund-Ems-Kanal, at first sharing a few sections with it, until the river finally can cope with the shipping alone. Among the vessels are also 'big tubs', cruise liners of more than 150,000 gross register tons (GRT), built by the Meyer shipyards in Papenburg. For their transfer the river Ems had to be excavated and dammed up, with negative consequences for the fluvial ecosystem.

Left side:Ferry at Ditzum. Photo below:The Borken Paradise

The cyclist is beginning to feel contrasts: here the Geeste reservoir, filled with Ems water used as coolant for the nuclear power plant in Lingen and at the same time a leisure region, and there the 'Borken Paradise', a picturesque piece of the traditional 'Hude' landscape, as it was used by our ancestors, and situated in a former river loop of the Ems north of Meppen. In the Emsland the river course touches Bourtange Moor, formerly the biggest moor in Western Europe, which only fell victim to peat cutting in the second half of the 20th century. From Papenburg the EmsCycleTrack runs parallell to the dyke that protects the surrounding countryside from storm tides. Here the Ems is already very much tidal. The river becomes a stream.

The Ems towns possess their own charm: Lingen is the lively shopping centre for the southern Emsland. The shipping town Haren and Papenburg, Germany's biggest fen settlement, show distinct influences from their Dutch neighbours. The old commercial centre Leer, the gateway to East Friesland, impresses with a very well preserved medieval centre. In the Dollart, the Ems and the EmsCycleTrack finally terminate. Towards the very, end the union between the river and the cycle track becomes very intimate: the cyclist has to change over before he can tackle the last few kilometres to Emden. A ferry takes him from Ditzum across the water to the other riverbank.

The EmsCycleTrack

375 kilometres measures the EmsCycleTrack from the source to the estuary. The river Ems is a real lowland river – therefore the cyclist is not pestered with any steep slopes. For most of the way, the journey is on quiet shouldered paths with little traffic.
But every now and then the cyclist becomes aware of a peculiarity of the Ems: It is Germany's only river that exclusively runs through sandy terrain.
The EmslandCycleTrack is fully signposted. The official cycling signs – red&white in North-Rhine Westphalia and green&white in Lower Saxony – have corresponding inserts with the logo. Tourist associations offer package deals for the entire track or sections of it.
More detailed information on the EmsCycleTrack can be obtained through the website

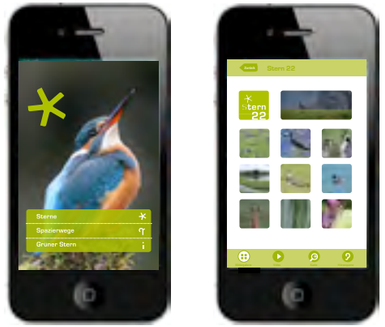
www.emsradweg.de.

Ems Radweg

The project

A green star for the EmsCycleTRack in NRW

ein grüner Stern für den EmsRadweg



The app for the 'Green Star' was developed by the FH Münster and offers an insight into nature alongside the river Ems that might otherwise remain undisclosed to the cyclist. Video and audio tracks as well as picture galleries complete the package. The App can be downloaded free of charge for iPhones and android smartphones.

The attractive routing, safe signposting and excellent touristic infrastructure have made the EmsCycleTrack one of the most used cycle tracks in Germany. The ADFC (German Cycling Association) has certified it as a quality route with four stars.
The 'Green Star' represents something else: The river Ems and its meadows are a nature reserve over wide sections and form part of the European conservation area network 'Natura 2000'. The 'Green Star for the EmsCycleTrack' wants to make the cyclist – and others – familiar with the diversity and beauty of the river and its meadow landscape in Westphalia. Four biological stations are in charge of the conservation areas of the river Ems in NRW. They have joined forces for the project in order to introduce the 'star-winning highlights of nature' along the EmsCycleTrack in words and pictures. This brochure is only a module in this context.

The cyclist can call up information on-site via smartphone. An app developed for that purpose serves as access key to information that would probably have remained disclosed otherwise. If you wish to 'tune in' at home, you are welcome to do so on the project website: www.gruener-stern-emsradweg.de. A richly illustrated book completes the information package and invites you to dip in.

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Biologische STATION Kreis Paderborn | Senne

NABU Naturschutzstation Münsterland

Fachhochschule Münster University of Applied Sciences

Imprint

Publisher:
Biologische Station Kreis Steinfurt e.V. Bahnhofstr. 71
49545 Tecklenburg
Tel: +4954829290
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in cooperation with:
NABU Naturschutzstation Münsterland e.V.
Biologische Station Gütersloh/Bielefeld e.V.
Biologische Station Paderborn-Senne e.V.
FH Münster – Labor für Software Engineering

Redaktion:
Thomas Starkmann

Gestaltung:
Blauensteiner · Groß-Weege, Münster

Druck
1. Edition: April 2014

Our thanks to all image authors:

T. Starkmann: P.7, 9, 10 (top left), 11 (top left), 12, 14 (top left), 19 (bottom right), 21, 23, 24, 25 (top left & centre left), 26 (left), 28 (top centre), 29, 31, 32 (centre right & bottom left), 33 (top left), 40 (top right), 38, 42 (right), 44, 45 (top centre & right), 47, 48, 49 (top & bottom left), 50, 51 (top & centre), 52 (top left), 54 (top), 55 (top), 58 (top left & top centre), 59 (top), 60, 61 (top centre & bottom right), 62 (left)
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B. Walter: P. 15, 16, 17 (top), 22 (top right)
H.D. Kampf: P.17 (bottom), 41 (top), 53 (bottom right)
I. Jürgens: P.22 (top left)
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B. Tenbergen: P.62 (right)

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The project is subsidised by the Regional Administration Münster with funds from the Programme for Nature and Landscape Conservation of the Ministry for Climate Protection, Environment, Agriculture, Nature Conservation and Consumer Protection of the State North-Rhine Westphalia.

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