

The only constant in a riverine ecosystem is change. Rising and falling water levels and the permanent shift of sand and gravel are characteristic of natural rivers, allowing the emergence of steep banks and islands of sand and gravel which come and go. Home to a variety of native flora and fauna, these vital ecosystems have been brought to the brink of extinction across Europe by river regulation through building levees, straightening bends and dredging channels. DANUBEPARKS puts the protection of river dynamics and free migration between different sections and habitats at the heart of its work, as the only way to ensure the long-term preservation of biodiversity and vital riverine environments.



**TURE'S** 

HAVENS ON THE DANUBE PROTECTED AREAS FROM SOURCE TO

DELTA





is publication has been produced by the project DANUBEPARKS STEP 2.0 proved in the framework of South East Europe Transnational Cooperation Programme and funded by the European Union

# NATURE'S HAVENS ON THE DANUBE PROTECTED AREAS FROM SOURCE TO DELTA



DANUBEPARKS







- Donauauwald Neuburg-Ingolstadt
- 2 Donau-Auen National Park
- 3 Dunajské luhy Protected Landscape Area
- 4 Szigetköz Landscape Protection Area
- 5 Duna-Ipoly National Park
- 6 Duna-Dráva National Park
- 7 Gornje Podunavlje Special Nature Reserve
- 8 Kopački rit Nature Park
- 9 Lonjsko Polje Nature Park
- 10 Djerdap National Park
- 11 Persina Nature Park
- 12 Rusenski Lom Nature Park
- 13 Kalimok-Brushlen Protected Site
- 14 Danube Delta Biosphere Reserve































## NATURE'S HAVENS ON THE DANUBE

PROTECTED AREAS FROM SOURCE TO DELTA

IN/4 O FRC

## NATURE'S HAVENS ON THE DANUBE

## PROTECTED AREAS FROM SOURCE TO DELTA

Editor András Sevcsik

Photographers Zsolt Kudich and Réka Zsirmon

## This book was produced through the collaboration of staff and helpers of the DANUBEPARKS Network member organisations:

#### Donauauwald Neuburg-Ingolstadt

Veronika Ruisinger, Lukas Kupfer, Thomas Schneider, Jonas Liegl, Siegfried Geißler

#### Donau-Auen National Park Erika Dorn, Magdalena Wagner, Ursula Grabner, Georg Frank, Josef Mühlbacher, Josef Steiner

#### Regional Association for Nature Conservation and Sustainable Development (BROZ) Pavol Surovec, Miroslava Rakovská, Andrej Devečka, Matúš Kúdela, Peter Rác,

Jozef Mátyás, Tomáš Kušík

#### Fertő-Hanság National Park Directorate Attila Fersch, Csaba Szabó, Zoltán Fűzfa

**Duna-Ipoly National Park Directorate** Annamária Csóka, Réka Előd, Ferenc Halász, Pál Kézdy, Gyula Kiss, András Sevcsik, Balázs Tóth, Zsuzsanna Tóth

#### Duna-Dráva National Park Directorate

Éva Horváth, Attila Komlós, Barnabás Felső, Balázs Trócsányi, Tibor Parrag, Ervin Mezei, Endre Sztellik, Zoltán Omacht

Public Enterprise "Vojvodinašume" Radmila Sakic, Milan Rajić

Kopacki rit Nature Park Vlatko Rožac, Dorja Bučević, Renata Forjan, Boris Bolšec

Lonjsko Polje Nature Park Valerija Hima, Zlatko Sučić, Nada Đilas, Nikša Ravlić

#### Djerdap National Park

Dragana Milojkovic, Jelena Bujdic Kreckovic, Zoran Milovanovic, Dragan Drndarevic and Marija Milenkovic-Srbulovic

Persina Nature Park Daniela Karakasheva, Radoslava Dzhantova

Rusenski Lom Nature Park Emiliya Petkova, Tsonka Hristova

Kalimok-Brushlen Protected Site Emiliya Petkova, Yordan Kutsarov, Georgi Georgiev, Kameliya Zlatanova, Radka Ivanova, Personal story: Stovanka Pavlova

#### Danube Delta Biosphere Reserve Authority

Gabriela Morozov, Alina Codreanu, Gabriela Cretu, Grigore Baboianu, Liliana Ivancenco

Photographers: Zsolt Kudich and Réka Zsirmon www.kudich-zsirmon.com Christoph Roland: Little-Ringed Plover Copy editor: Alan Campbell Illustrations: Batmyagmar Purevjav Design and prepress: Zsolt Dékány

ISBN 978-615-5241-13-0



Editor: András Sevcsik Executive publisher: Duna-Ipoly National Park Directorate 1121 Budapest, Költő utca 21.

Prepared for printing by Alexandra Könyvesház Kft. 1075 Budapest, Károly körút 3/C www.alexandrakiado.hu, www.alexandra.hu

Cover photograph: Donau-Auen National Park, Danube

#### Map insert:

Le cours du Danube depuis sa source iusqu'a ses embouchures: presenté a Monseigneur le Dauphin Dressé sur les memoires les plus nouveaux du P. Coronelli et autres, par le Sr. Sanson. (The River Danube from Source to Mouth by S. Sanson, based on the latest observations by P. Coroneli et al (1696)) Duna Museum, Esztergom www.dunamuzeum.hu







This publication has been produced by the project DANUBEPARKS STEP 2.0 approved in the framework of South East Europe Transnational Cooperation Programme and funded by the European Union

- Foreword.....
  The DANUBEPARKS Network
- 1 Donauauwald Neuburg-II
- Donau-Auen National Par

C

- C 3 Dunajské luhy Protected L
- C4 Szigetköz Landscape Prote
- 5 Duna-Ipoly National Park.
- 手 🛛 Duna-Dráva National Parl
- Gornje Podunavlje Specia
- 🜔 Kopački rit Nature Park...
- 🌔 🛛 Lonjsko polje Nature Park
- Djerdap National Park....
- Persina Nature Park......
- (12 Rusenski Lom Nature Parl
- Kalimok-Brushlen Protect
- Danube Delta Biosphere
- About the photographers



## Contents

6
ork7
ngolstadt8
rk14
andscape Area
ection Area
k38
Il Nature Reserve
k74
ed Site
Reserve

## Foreword

The Danube basin has a more "international" character than any other great river. Strung along the river are four national capitals, several other large cities and hundreds of towns and villages. The Danube passes through land of all kinds of agricultural and industrial uses, and through human habitation of widely varying levels of development. The impact of this human activity, in terms of water quality, changes in the landscape, and loss of biodiversity, has been a matter of serious concern since the 1980s.

Long stretches of the Danube began to lose their natural character in the middle of the nineteenth century through large-scale river regulation works mostly aimed at flood control. Later, particularly in Germany and Austria, the construction of hydroelectric power plants on the river accelerated the transformation of the original riverbed and floodplain. The loss of longitudinal continuity, lateral connectivity and other hydromorphological alterations, together with water quality deterioration, led to a dramatic change in riverine biota. River regulation activity to improve navigation and flood control is still in progress in many Danubian countries.

International cooperation in addressing water quality problems took great steps forward through the Bucharest Declaration of 1985 and the UNECE Ware Convention and Helsinki Treaty of 1992. These paved the way for cooperation among the Danube basin countries, formalised in the Danube River Protection Convention signed in Sofia in 1994. Present activities are governed by the EU Water Framework Directive of December 2000.

Large sections of the Danube have already been transformed by human intervention. It is therefore very important to protect what remains of its natural treasures. Effective nature conservation requires active transboundary cooperation among all the countries the river flows through. Conservation is also an increasingly important public issue as awareness of environmental quality increases throughout the region. Each protected area along the river must be in tune with local features and accommodate the needs of people who have long traditional connections with the Danube.

This Danubeparks book looks at the protected areas from a refreshingly new angle, linking colourful local highlights with glimpses of folklore and lesser-known moments of local history. It takes us on a fascinating journey down the Danube from the Black Forest to the Black Sea. Throughout all the diversity we encounter on the way, one message remains clear: if we want the Danube region to remain a healthy environment for future generations, we must face the challenge of preserving its natural heritage.

Béla Csányi Hydrobiologist, MTA Ecological Research Centre, Danube Research Institute

# The DANUBEPARKS Network

The foundations for transnational cooperation concerning the protected areas along the Danube were laid in 2007, and DANUBEPARKS – the Danube River Network of Protected Areas – was officially founded with the signing of the Declaration of Vienna in 2009. Since then, much has been achieved.

The work on two ETC-SEE projects has engendered robust and amicable cooperation. The mutual exchange of experience and know-how has led to coordinated strategies for many nature conservation issues.

DANUBEPARKS has become a platform for lively cooperation among the protected areas along the river, and interactions have expanded horizons at local level. Danube-wide strategies are being drafted, and several specific protective measures have already been implemented.

DANUBEPARKS has also become a widely recognized nature conservation network. International bodies such as the International Commission for the Protection of the Danube River (ICPDR) and the EU Strategy for the Danube Region (EUSDR) are among its permanent partners.

The growth of DANUBEPARKS itself is proof of its success. Founded in 2007 with eight members in five countries, it now embraces 20 conservation areas in nine countries, all working together to protect the precious natural heritage of the Danube.

In future, DANUBEPARKS intends to act as the combined voice of the Danube Protected Areas, vigorously promoting their shared agenda in the political arena and developing as a framework for cooperation to promote and expand its projects. This work will ensure that DANUBEPARKS will continue to have a positive and constructive impact on sustainable development in the Danube region.

www.danubeparks.org



DAN

This publication has been produced by the project DANUBEPARKS STEP 2.0 approved in the framework of South East Europe Transnational Cooperation Programme and funded by the European Union





# Donauauwald Neuburg-Ingolstadt

The ability to migrate freely between different habitats is essential to sustained biological diversity



## **Donauauwald Neuburg-Ingolstadt**

One of the most important floodplain forests in Germany ranges along the Danube in the middle of Bavaria, between the beautiful historic cities of Neuburg and Ingolstadt with their palaces and old buildings.

The constantly changing water levels – groundwater and floods – have shaped the riversides and the riparian forest of the floodplain landscape. This has built up natural habitats for many plants like spring snowflake (*Leucojum vernum*), yellow lady's slipper (*Cypripedium calceolus*), autumn crocus (*Colchicum autumnale*) and pedunculate oak (*Quercus robur*). The animal life is also highly distinctive, with European beavers (*Castor fiber*), Red Kites (*Milvus milvus*), Collared Flycatchers (*Ficedula albicollis*) and stag beetles (*Lucanus cervus*). The spring snowflake, a threatened and dwindling species in Germany, finds an undisturbed haven in Donauauwald Neuburg-Ingolstadt. The conservation project "Dynamisation of the Danube floodplain between Neuburg and Ingolstadt" aims to protect and rebuild some parts of the area. One crucial scheme has been the re-introduction of the beaver, a natural landscaper which brings new diversity to the enviroment. The Gerolfinger Eichenwald (Oak Forest) has a very special function, linking diverse habitats – humid and dry, fertile and less so, open and wooded.

A striking feature in the breakthrough valley of the Danube west of Neuburg is the Finkenstein Rock, a Jurassic formation towering 50 metres above the north bank. It has been protected as a place of botanical interest since the beginning of the twentieth century. The Bavarian feather grass (*Stipapulcherrima* subsp. *bavarica*) is a plant unique to the Finkenstein area. Klenzepark, which connects the historical city with the Danube, was created for the Ingolstadt Garden Festival in 1992 and is now a fine recreational area. The biggest winter swimming festival in Europe takes place in Neuburg on the last Saturday in January every year: brave people swim four kilometres in the very cold Danube.

The Aueninformationszentrum (Danube Information Centre) in the historical hunting lodge of Grünau near Neuburg was opened in April 2009. Its exhibition vividly presents the riparian zones and their special habitats, how they developed, and their importance for flood and nature protection. This is complemented by the Donaupavillon beside the Ingolstadt barrage. It has constantly-changing exhibitions on Danube-related themes. Connecting the information centres is the Donauradwanderweg, a bike trail along the Danube which offers direct experience of a unique and diverse natural environment: the floodplain forest between Neuburg and Ingolstadt. There are also plans to build a new Danube museum of European scope near the New Castle in Ingolstadt. Its exhibition will cover the whole of the Danube from source to outflow.

www.donauauen.de



Schloss Grünau

A very old pedunculate oak is a memorial to the ancient hardwood forests

A dead tree is a refuge for many aquatic species





Sunset in the Neuburg Hills

A floodplain meadow with hardwood forest patches



Ophrys orchids have a more complex flower structure than any other

### An old town by the Danube: Neuburg





Agricultural mosaic landscape

## LEGEND

### The Devil and the Ferryman

From 1285 a ferry used to carry people, mainly local farmers, between Gerolfing and Weichering.

One moonlit night Mr Fischer the ferryman heard a voice calling him over to the other side of the Danube. He crossed over and picked up his passenger, and they set off towards the other bank. As they reached the middle of the river, the boat started to slow down.

In the glimmering light, the ferryman saw the man in the boat had a goatee beard. It was the devil himself! In his distress the ferryman started to pray. All of a sudden, the devil vanished and the ferry floated on its own to the other side.

### A true tale of nature by the Danube

Siegfried Geißler, project manager at Danubeparks, tells the story of taking a class of nine-year-olds to study the Danube floodplain: "It was a very sunny morning, perfect weather for a field trip. After watching the beaver working on its dam to keep the water level up and then crawling through the dense jungle of the floodplain forest, we suddenly found ourselves in the middle of grassland surrounded by hundreds of flowering orchids. Suddenly, the sun disappeared behind thick thunderclouds. Heavy winds started to blow and lightning flashes hit the ground all around us. There was nowhere to hide. Since we would have been in greater danger from the lightning among the big trees of the forest, I decided to stay on the grassland. To hide my own fear from the children, I kept on explaining about the beauty and richness of nature around us. After a while, the storm subsided. Nobody was hurt, and we went on our way. But I retain a lasting impression of all the children kneeling on the meadow, listening to my explanations with lightning all around us, and no fear in their eyes."



# Donau-Auen National Park

Gallery forests by the Danube



## **Donau-Auen National Park**

Land am Strome (Land on the River): the first lines of the Austrian national anthem celebrate the Danube, the river that has so mightily influenced the history and culture of the region. The influence is especially palpable in Vienna and Lower Austria, among last surviving stretches of a riverine landscape once widespread in Central Europe. These are the protected wetlands of the Donau-Auen National Park.

In part this riverine landscape owes its continuing existence to the thrill of the chase: in past centuries, the Danube wetlands were favoured hunting grounds for the royals in Vienna. Of course, the region has been significantly altered – through major river regulation projects, fisheries, forestry and agriculture, flood protection and shipping. Yet despite these interventions, the fundamental character of the landscape has remained intact, and the area includes the last free-flowing stretches of the Upper Danube. The Donau-Auen National Park was founded in 1996, after the abandonment of a huge hydroelectric project near Hainburg. Being right in the heart of the "Centrope" project region, close to Vienna and Bratislava, has presented both challenges and opportunities.

The Danube, the lifeline of the National Park, flows freely for nearly 36 kilometres. The force of its waters, whose level can differ by as much as seven metres, is continually re-shaping the riverine landscape. This keeps nature in a constant state of flux, undisturbed by human intervention except where absolutely necessary. The grounds of the National Park are not used for any commercial purposes.

The Park is a treasure trove of rare natural habitats, from shallow gravely waters to steep river banks, mature riparian forests to broad wetland meadows. Each habitat shelters a multitude of species: over 800 vascular plants; 30 mammalian, 100 bird, 60 fish, eight reptilian and 13 amphibian species; and a huge number of insects and invertebrates. Endangered species enjoying special protection include the kingfisher, White-tailed Eagle, Little Ringed Plover, mudminnow and European pond turtle. Botanical highlights include the black poplar, many types of orchid, and the wild grape, rare ancestor of the common grape vine.

Conservation in Donau-Auen National Park means more than just preservation and protection: the aim is to improve the overall environmental state of the region. In order to protect the wetlands in the long term, it is necessary to encourage a natural dynamic and allow the Danube to shape its own surroundings. This involves reconnecting side arms to the main current, removing hard banks and adapting existing hydraulic structures. This will allow new forms of wetland landscapes to emerge, benefiting the flora and fauna native to these habitats. Protecting natural processes also protects species. The effectiveness of the national park's strategy has attracted much international attention.

You only treasure the things you know. That is why it is so important to directly experience the Donau-Auen National Park and

its conservation activity. The Park's rangers lead hikes and boat tours, and there are workshops, events, school programmes and educational project weeks at National Park Camps. The Schloss ORTH National Park Centre and the wien-lobAU National Park House are popular destinations for day visitors and provide information, booking services and multimedia presentations.

www.donauauen.at





The castle of Orth is now the centre of Donau-Auen National Park

A typical fish species of the river branches: the tench

Softwood forests in morning haze

DONAU-AUEN NATIONAL PARK

The shoals built up by the Danube are invisible at high water level but emerge as islands when the level falls



Poplar roots exposed by erosion



## LEGEND

### **River Urchins**

Josef Steiner grew up in the 1950s near what is now the Donau-Auen National Park. He has many stories about what life was like then.

"There weren't as many hydroelectric dams on the Danube back then, and the ice jams stretched almost all the way up to Vienna. The river still had some of her original power, despite all the embankments and dykes. When I was a child, people still talked about the extremely cold winter of 1928 to '29, when the Austrian Danube froze completely, from the Wachau valley to Hainburg. The ice was as thick as 50 cm, and you could even cross the Danube on foot!

For us kids, the Danube and its floodplains were the best playground we could imagine. After the war, the shores were full of shipwrecks, like the sugar barge at Haslau, which was looted by the local population – everyone finally had sugar again!

We watched every boat that landed in the area. Once, just before Christmas, a boat arrived with what seemed to us to be a very poor family. We wanted to give them a present, but didn't have any money for one. So we sneaked into somebody's garden, cut down a spruce, and the poor family on the boat got a Christmas tree.

We often went fishing on the Danube and its side arms, and explored all the old hulks. Sometimes Russian soldiers also came down to the Danube to fish. They used explosives instead of nets or rods! After each detonation, the fish would float up to the surface and the soldiers would jump into the water to catch them, put them into a wooden barrel, and then load it on to a lorry. The soldiers were happy with their catch and they gave us bread when they left. But they only got the small fish; the big ones came up to the surface later. So not only did the soldiers provide us with bread, they provided us with pike-perch and pike, too!

Traditional fishing was a completely different thing, though. For centuries the Danube had been a major source of income. In the flowing waters of the current, a large net – what the locals call a "Segen" – was cast into the water from a flat-bottomed boat, then the net would be pulled to shore by hand. We fished from river banks using these flat-bottomed boats along with the square nets that were tied to flexible poles on the banks. In still waters, like in the backwaters of the river, we used gillnets set upright to section off the body of water on both sides. To catch the fish we then cast out the big seine, which had to be pulled in by hand.

The number of fish species has been reduced by more than a third in the last century due to the effects of human intervention, for example the damming and straightening of the river. This meant that by the 1950s, the days of professional fishing in Austria were over.

The same thing happened with the ferry crossing service, which used to be extremely important. If you think about it, my hometown of Haslau only exists because a ferry crossing from here to Orth on the Danube was established in the Middle Ages. But as cars and trains became increasingly important, the ferry became less so. In 1962, the service was discontinued altogether. So it is quite nice that the ferry resumed for pedestrians and cyclists in 1995 –we are connected once again!"



DONAU-AUEN NATIONAL PARK

# Dunajské luhy Protected Landscape Area

Kanh my State (194)

Regulation of the course of the Danube led to a drastic change in the condition of the system of river branches. Now a system of weirs maintains a minimum water level in the side branches. The Danube side branches harbour a wealth of natural treasures.



## **Dunajské luhy Protected Landscape Area**

The Dunajské luhy Protected Landscape Area in Slovakia comprises five separate areas covering a total of more than 12,000 hectares. They are spread along a natural levee beside the Danube near the Austrian and Hungarian borders. This section of the Danube is one of Europe's largest inland river deltas. It has floodplain forests, forest steppes, meandering river side arms and lowland meadows, and on its several river islands there are nesting colonies of hundreds and even thousands of birds. The most precious nesting bird species are Black Stork, White-tailed Eagle, Black Kite and Black Woodpecker. The river-branch system is an important migration corridor and wintering place for waterfowl. It is also home to an important small terrestrial mammal, a relict subspecies of the root vole. The "Danube forest steppe" areas preserve dry grassland plant communities which harbour endangered species such as the autumn lady's tresses orchid. The varying water tables and flood-water levels of the area have given rise to a mosaic of softwood and hardwood forests.

Devínska Kobyla National Nature Reserve lies on the very first hills of Carpathians, on an area near Bratislava that spans the Slovakia-Austria border. Huge rocks embedded with fossilised scallops and shark's teeth are among its many geological and paleontological features, and the reserve boasts more than 1700 higher plant species on an area of only 100 hectares.

Since Dunaiské luhy Protected Landscape Area starts within the boundaries of Bratislava, it attracts many inhabitants of the capital city as well as large numbers of foreign visitors. A cycling route along the Danube between the villages of Dobrohošť and Sap takes in some of the most fascinating parts of the area. On the river itself and its side arms, there are places for canoeing, kayaking, swimming and fishing. A walk through the sights of the Devínska Kobyla reserve ends in the Devín district, where the castle ruins offer a breathtaking view over the confluence of two rivers – the March and the Danube. Under the castle, you can finish the day with a good dinner accompanied by a glass of the local currant wine.

One of the last large remaining Danube islands in Slovakia – Veľkolélsky Island near Komárno – combines land preserved in a pristine natural state with traditional sustainable farming. A walk here takes you through floodplain forest and wet meadows, and along the sand and gravel beaches beside the Danube. All along your way, signs keep you informed about the different natural habitats and points of interest. Cows, sheep, goats and horses graze on the traditional open grassland, Sand Martins nest on the river banks, European water chestnut covers some of the backwaters, the forest has oak trees that are several hundred years old, and a separate nature reserve protects a dense area of ancient natural forest. The whole island is a birdwatcher's paradise. Everybody can see the great flocks of grey herons and cormorants, and more patient visitors are rewarded by sightings of Little-ringed Plovers and White-tailed Eagles circling overhead. Alternatively, you can see the island on horseback or take to the water in a canoe, or even try

your hand at gold washing. During the season, qualified guides from BROZ (the Slovak NGO which manages the island) lead groups through the most interesting points and reveal the secrets of nature on the island.

www.broz.sk



Military Orchid



oak tree in the Danube floodplains



The shallow water habitats are important for young fish



The burrows of Sand Martins are also threatened by the floods of Danube

> Danube floodplains attract the White-tailed Eagle again



## LEGEND

### **Catching Napoleon**

In the early nineteenth century, as Napoleon and his army approached Bratislava, the people there decided to stop him, and to stop the war.

A wily fisherman called Matej made a plan. He knew that before any attack, but after the scouts have spied out the area, a general always comes to look at the battlefield. So Matej and his friends prepared a net among the trees at the place with best view of Bratislava. And the French soldiers duly came. Of course the first of them were just spies. It was Napoleon they were interested in. Then came a group of four soldiers. They were an easy target, and all of them ended up in the net. But there was a surprise for Matej. One of the soldiers said, "You're looking for Napoleon? He's not with us, he was here before!" They had been so close to catching Napoleon and just let him go! Nevertheless, they decided to make a memorial of the event, and carved a big letter "N" on the rock that Napoleon had stood on to observe Bratislava. You can still see it today if you go for a walk along the Danube.





# Szigetköz Landscape Protection Area

A young Little Grebe



## Szigetköz Landscape Protection Area

The Fertő-Hanság National Park Directorate, set up in 1991, is responsible for the management of the national park and other protected areas of national importance in Győr-Moson-Sopron county, including the landscape protection areas of Pannonhalma, Szigetköz and Sopron. In Szigetköz the main priority is to protect the floodplain ecosystem of the Danube, while the Sopron Landscape Protection Area has pre-alpine habitats of special interest. The Directorate is also responsible for the conservation of smaller nature reserves, some protected parks, botanic gardens, marshes and saline grasslands.

The Szigetköz region covers 375 square kilometres between the Old Danube and the Mosoni Danube, 97 of which belong to the landscape protection area.

At the end of the Tertiary period, the Pannonian Inland Sea, which occupied the Kisalföld area of Hungary, started to drain and gave way to a system of freshwater lakes. The rivers flowed into the basin from the Alps and the Carpathians, filling it further with their alluvial deposits. Where plants succeeded in colonising the banks of sediment, islands built up which divided the river into branches. These barriers that the river had created forced the river to create new channels, thus establishing a complicated network of streams which divide and then reunite. The evolution of the Szigetköz flora has been largely determined by water of the Danube, and this process still continues. Typical trees of the floodplain are bay willow and purple willow. Hollowroot and snowdrop abound in many places. Further away from the surface water and the water table, oak-ash-elm forests dominated on the higher elevations. These characteristic communities can be found today along the Mosoni Danube. A protected plant of the softwood forests is the summer snowflake.

Szigetköz was traditionally an important nursery area for the fish of the Danube. The main species today are brown trout, originally a fish of the clear mountain streams, and the European weatherfish, a protected species of the marshes. Almost all native amphibian species are present in the Szigetköz. *Rana esculenta*, fire-bellied toad and agile frog are all common. Typical protected butterflies of the area are the Dusky Large Blue and the Scarce Large Blue on the marshes, the Purple Emperor in the willow-poplar forests, and the elm moth *Dicranura ulmi* in the hardwood forests. There are estimated to be 230 bird species in the area. The herons are the most visible, and the strictly protected species breeding here include the Great White Egret, Black Kite, Night Heron and Black Stork. The White-tailed Eagle has re-established itself as a breeding species in recent years, and it was here that the beaver, which died out a hundred years ago, made its first natural return to Hungary in 1991.

www.ferto-hansag.hu









The yellow and purple specimens of dwart firis usually mix – in spring, dwart firis blossoms in dense patches of yellow and purple





Spring Snowflake is a characteristic spring species of the hardwood forests



Marsh frogs use their vocal sacs to produce their "laughing" call





A Greylag Goose floating away

The Eurasian Penduline Tit makes its nest from the fluffy cotton seeds of poplar



## LEGEND

### The Legend of Szigetköz

Once upon a time, there was a lake so big that nobody knew where its other shore was or where it was deepest, but one thing was for sure: it had a lot of fish. The fishermen in the little village beside it were happy. But early one morning, they pulled out their net and found it cut to pieces. As they sat bewildered in the boat, the water beside them started swirling, roaring and rushing, and the head of a terrible monster rose out of the turbulent water, and said:

"Men, now you know how strong I am! I will cut you to pieces like your net unless you give me the most beautiful of your daughters!"

The fishermen rowed home in silence, heads bowed. Everybody thought their own daughter was the most beautiful, but nobody wanted to give her up. So they decided to never again to even look at the lake. They resolved to go into the forest and pick berries, roots and mushrooms. And so they did, even though every day they talked of nothing but fish: the taste of fried bream, catfish stew, sliced pike-perch, pike, and tenderer-than-veal boneless sturgeon.

One day, they were making their way with home with baskets full of mushrooms, they found a poor, worn-out journeyman who had been beaten and abandoned, unable even to speak. They took pity on him, carried him home and tended his wounds. Hardly a week passed before he stood up, put on his patched-up clothes and said:

"Now, good men, one good deed deserves another. Make a wish!"

They looked at him in disbelief, but when he insisted, they told him of the monster in the lake and his demands.

Next morning the whole village followed him down to the lake at dawn. There he reached deep into his pocket and took out a crystal, which he held out to the rising sun. On the other side, a glowing beam of light shimmered on the water. The water started to hiss and steam, and the surface to swirl and rush. The monster stuck out his head and swam to the shore in a fury. The young man turned the beam to burn through the heart of the monster, who collapsed and died at the water's edge.

The water gradually calmed, and the stunned villagers watched as the young man left without a word. But when they turned back, the lake had gone, and in its place there was a bottomless swamp. They cried and lamented. Even the monster would be better than this! Then a little boy at his mother's skirt noticed something glimmering in the west. He called out and soon everybody was staring open-mouthed as a stream, nay a river, of crystal-clear water meandered its way towards them with golden-haired fairies swimming to and fro. The currents followed them, and when they met, shoals and islands emerged one after the other. Three hundred islands with fine green woods growing on them. The fishermen called this wonderful world of water Szigetköz, "among the islands", and their grandchildren have been living there happily ever since.

Great Egret looking for prey





# **Duna-Ipoly National Park**

The magnificent Danube Bend and Börzsöny Hills



## **Duna-Ipoly National Park**

The Duna-Ipoly National Park was established in 1997. It is distributed across several sites over an area of northern Hungary from the Slovakian border to the outskirts of Budapest. This includes the diverse countryside of the Pilis, Visegrád and Börzsöny Hills, undisturbed sections of the Ipoly Valley and parts of Szentendre Island.

The limestone and dolomite Pilis Hills stretch from Esztergom to Budapest. The volcanic hills were split into the Visegrád and High Börzsöny ranges by a valley carved out during the last ice age, leaving what is now the scenic Danube Bend.

The national park is part of the Natura 2000 network. Pilis is listed as a Biosphere Reserve under UNESCO's MAB programme, and the Ipoly Valley is a Ramsar area, one of the white waters of international importance. The Duna-Ipoly National Park is also a member of the Network of Protected Areas in the Carpathians.

The Hungarian iris (*Iris variegata*) is the emblem of the Pilis Biosphere Reserve. The Hungarian ferula (*Ferula sadleriana*) grows in very few other areas of the Carpathian Basin. Its habitat is highland rock steppes and bush with southern exposure.

The spectacular longhorn beetle (*Rosalia alpina*), which features in the National Park's logo, is widespread in the older beech forests. As the area of old beech forest shrinks, its existence is threatened. The Börzsöny Hills have a thriving population of White-backed Woodpecker (*Dendrocopos leucotos*). Our highly protected carnivorous mammal is the lynx (*Lynx lynx*). It almost completely disappeared from the area in the beginning of the twentieth century, and there have only been occasional sightings in the Börzsöny area in the last ten years. It is an extremely wary carnivore and very sensitive to the disturbing presence of humans.

Királyrét Forest School and Visitor Centre in Börzsöny stands at the starting point of countless hiking trails. The "Residents of Börzsöny" exhibition tells of the flora and fauna living here and of the human activities that have shaped the landscape. The Centre also arranges guided tours and provides accommodation. A walk along Királyrét Study Trail gives a fascinating introduction to the forest and lake habitats, and tells the story of the local narrow-gauge railway and the old iron mines.

Sas Hill Nature Reserve in Budapest is a refuge for many valuable and endangered species of plants and animals. Its visitor centre has an interactive exhibition telling the history of the hill and the habits of the precious species living there. The terrace offers an outstanding panoramic view of Budapest.

### Bike and canoe tours on Szentendre Island

With no hills, little traffic, wonderful natural surroundings and helpful tourist services, Szentendre Island is an ideal place for bicycle tours. Another way to discover the area is by canoe. A guided tour along the safe, quiet stretch of the Danube between the villages of Kisoroszi and Tahi promises sights of backwater wildlife, including kingfishers and even the occasional Black Stork.

www.dunaipoly.hu

The exotic pond slider now poses a serious threat to the indigenous European pond turtle





Rainbow over the floodplain meadow





The Early Marsh Orchid can be generally found in wet meadows

Pasque flower at dusk

A Black Stork standing in dawn's light





The Nosed Grasshopper earned its name from its peculiar head shape

## LEGEND

### The Legend of the Water Man – as recounted by Ferenc Micsei of Szob

Until not so long ago, an old local law prohibited swimming in the rivers between midday and one o'clock. That was when the Water Man lay in wait.

The people of the Lower Ipoly and the villages of Szob, Zebegény and Nagymaros knew this well, but the Water Man could be crafty.

About a hundred years ago, the judge of Szob was walking beside the Danube when he saw the Water Man rise out of a whirlpool, twiddling his moustache. The Water Man held out a wooden platter full of beautiful apples and pears, beckoning him into the water. But the judge knew the rule and stood firm. The infuriated Water Man, his gills twitching behind his human face, told the judge of Szob that he would have his soul and put it in a clay ewer sealed with cow gut. The judge had little time to tell his story. A week later he lay dead, his head in a puddle in the middle of Szob.

The Water Man also sealed the souls of children in his clay ewer after luring them into the water with fruit on a wooden platter.

There was many a dark evening when the Szob ferryman, answering a call from the far bank, rowed across the Danube only to find nobody there. As he rowed wearily back, and night began to fall, he heard the fearful laughter of the Water Man and the crashing of a fin on the water.

The Water Man was last seen just after the Second World War, but many eye-witnesses from Ipolydamásd, Szob, Zebegény and Nagymaros have told their stories. It is a chilling fact that all of them have described the Water Man the very same way: moustached, bearded, with deep-set eyes and gills...



# Duna-Dráva National Park

Roe deer on the floodplain



## **Duna-Dráva National Park**

The Duna-Dráva National Park in South Transdanubia, Hungary, consists of several areas beside the Danube and Dráva rivers. These form part of Europe's last remaining natural floodland and contain some of the continent's most diverse riverine habitats. Despite much artificial river regulation in the last century, these two major rivers still retain enough of their dynamics to support vast wetland areas. Regular floods maintain habitats supporting almost all types of wetland plant associations and an equally diverse fauna.

The Gemenc and Béda-Karapancsa areas of the National Park feature floodplain habitats such as bushy willow stands, willow-poplar gallery forest and oak-ash-elm gallery forests. Summer snowflakes and Danubian squill are among the protected plants found there. The most remarkable tree of the Lower Danube Basin is the strictly protected Pannonian black hawthorn which grows up to 6 m tall, has white flowers in May and black fruit. It easily hybridizes with the common hawthorn to form the dark-red-fruited Degen hawthorn.

Floodplain forests provide prime habitats for birds, small mammals and game. Oxbows and inner lakes, many tucked away in almost-inaccessible places, abound in fish and are major feeding places for heron and egret species, Black Storks, White-tailed Eagles, Black Kites and many other protected or strictly protected birds. They also provide shelter and prey for otter and wild cat populations. Hungary's largest bird of prey, the White-Tailed Eagle, builds its nest high up in the canopy and catches the majority of its prey around water. With its nearly 2.5 m wingspan and distinctive white tail, it is a commanding spectacle as it flies by.

The area is interwoven with the traces of the medieval flood-control system of natural and artificial channels known as *foks*. The people who settled here used the *foks* to regulate the inner wetland areas and make them habitable. Living in harmony with nature, they developed "floodland farming", a coordinated mix of fishing, extensive animal husbandry, apiculture and fruit gathering.

The White Stork Museum in Kölked, besides telling visitors all about these iconic birds, gives an insight into floodplain management and is a centre for environmental education in the area. It is also the starting point for outdoor adventures: hikes along the Nagypartos study trail, canoe tours on the Outer Béda side branch, and birdwatching walks. The fishing demonstration site at the Boki-Duna side branch gives real insight into traditional fishing methods and tools, and the floodland farming life.

The floodland habitats along River Dráva have their own unique highlights. One of several gravel shoal-nesting bird species is the little tern, which is found nowhere else in Hungary. There are also many other protected birds that circle above the river, including the White-tailed Eagle. Botanical rarities include the trifoliate anemone, the snakeshead fritillary and the Siberian iris. The high bank along the river is home for the Bee-Eater and Common Kingfisher.

The Dráva Kapu Visitor Centre in Barcs-Drávaszentes gives a fascinating introduction to the natural sights along the Dráva. On the land beside the building is an area of grassland where visitors can see domestic animal breeds which are unique to Hungary. Guided tours through the Wet Meadows study trail take a closer look at the wildlife of the area and the grazing grey cattle.

www.ddnp.hu



The river bed here is mainly sand



Seagulls and egrets in search of a roost







The Babás szerkövek rock formations in the Duna-Dráva National Park Directorate

*River branch with thick submerged vegetation* 



Waders and wild pigs find sustenance in the subsiding flood water

A famous stag of Gemenc



Water remaining from the flood provides plenty of food for the Great Egrets



## LEGEND

### Archbishop's Move

The 10–12 kilometre-wide floodplain along both sides of the lower Danube from Báta to Dunaföldvár used to form a region called Sárköz. Villages of various size with a few hundred inhabitants were scattered in its lush floodplain marshes. The people there fished, farmed animals, grew fruit and kept bees. During the Ottoman era, villagers along the Osijek-Buda military road at the foot of the Szekszárd hills had problems that were even more serious than the constant floods. The ravages of war emptied most villages, and those which survived were hidden deep in the marshlands. By the early 1800s, there were only two such small villages on the left side of the Danube, one called Csanád and the other Sükösd.

People in these two villages hated each other. This hatred may have been rooted in the time when Ottoman troops kidnapped and dragged away Hungarian women and children and led them on leather leashes to the Balkans to be sold on the slave market. Because the people of Sükösd were descended from Serbs, the Csanád villagers associated them with these atrocities. The Archbishop of Kalocsa had a plan for moving the two villages out of the inundation area to higher ground and craftily used the tensions between them to carry it out. He ordered all the men from the two villages to go to the other village, on the same day, and destroy all the houses there, telling them, "When you arrive, the people won't be at home anyway!" And so it was. The people from both villages were away demolishing the houses of the other. Everybody got a shock on returning home, but the archbishop had his way: in 1807 the two villages eventually moved away from the floodplain, from which date the village of Csanád has been called Érsekcsanád ("Archbishop's Csanád").



# Gornje Podunavlje Special Natural **Reserv**e

The floodwater sometimes completely covers the willow gallery forest



## Gornje Podunavlje Special Nature Reserve

As one of the last integral floodplains of the Danube, Gornje Podunavlje contains some of the most valuable wetland habitats and is a sanctuary for many species dependent on the river. Natural willow, poplar and oak forests, occasionally-flooded wet meadows, oxbows, and swamps, once widespread wetland habitats along the Danube, are today rare and fragmented. The area is a secluded island of nature surrounded by dams, fields and human habitation. The diverse wildlife includes the White-tailed Eagle and Black Stork, both key indicators of wetland habitats. Numerous fish species find ideal spawning conditions in the oxbows and shallow shoals of the river, and endangered mammals – the otter and wild cat – find sanctuary here. There is also a population of European deer living in its natural wetland habitat. Despite constant pressure from human activities, the area remains an authentic natural living space for the many species.

All along the floodplain the demands of life by the river forged unique cultural patterns over the centuries. The land was subject to occasional floods and was generally inhospitable, but set against this were all the resources presented by the river. Old maps confirm the existence of a medieval settlement named Bodrog, and there are archaeological remains of Bortani near Bački Monoštor. Despite the floods, people survived and maintained traditional ways of harnessing nature. Even today they preserve their social patterns, customs, music and food. People still make a living from traditional ways of fishing and the use of natural materials like reeds and bulrushes. The design of wooden boats and specific ways of preparing food are shared among the people of the floodplain in all three countries. These traditional activities are what give this area its significance and authenticity, and contribute to local economies and environmental conservation. They deserve to be protected from the threats of modern life.

The main challenges faced by Gornje Podunavlje concern the integration of local communities with nature conservation and transboundary cooperation. People started to transform the land more than two hundred years ago, digging channels to dry out the wetland, building dams and regulating the main Danube flow. The pressure on nature intensified in the twentieth century with new dams, agricultural modernization and the clearing of natural forests to plant artificial ones. Most of these activities had a direct negative influence on the area's biodiversity. Together with natural treasures, traditional ways of living began to die out, although the more inaccessible parts of the floodplain have retained their authenticity. Only in the last few decades have major efforts been made to conserve biodiversity. As in Hungary and Croatia, a major section of the floodplain has been put under protection. This involves prohibiting the use of natural resources in some ecosystems and limiting their use in others. Numerous measures aiming at nature conservation have been implemented. Partnerships established with local communities have given rise to joint programmes in which stakeholders work to preserve local traditions and pursue developments which benefit rather than harm the natural surroundings.

www.vojvodinasume.rs/ponuda/srp-gornje-podunavlje



The old specimens of Black Poplar are unique natural assets



A predator of tiny fish: the Common Tern

#### Fringed water lily on a branch of the river



The red fox is a common predator along the Danube

A white willow of odd shape









The Danube has the power to destroy as well as build, as these fallen willows show

# LEGEND

### The Chained Storm Cloud

"This is what was told in my grandfather's time," said the old shepherd. "There was a very rich man who had great fields beside the Danube. He had a gift. He could tell when the storm cloud was coming, full of hailstones that would flatten his crops. One year, when a storm cloud appeared, the rich man knew it was the work of a shaman. He rushed into his house, took out his hatchet, and struck it into the eaves. The hailstorm came to nothing, and the dark clouds dispersed as fast as they had come. People started to say that the shaman had tied down the storm cloud with a rope, and the rich man had severed it with his axe. The shaman came to the rich man's door and said, 'It was only a rope holding down the storm cloud. You were lucky. But I'll be back!' The next year the shaman returned, bringing storm clouds and hail that flattened the corn on the rich man's field. That time the shaman tied the clouds down with a chain, so the rich man swung his axe in vain."



49

# Kopački rit Nature Park



## Kopački rit Nature Park

Kopački rit Nature Park occupies part of the Baranja Plain in Osijek-Baranja County in north-east Croatia. It is an area of unique beauty and ecological treasures of international significance.

Near the Nature Park is Osijek, the centre of Eastern Croatia region, and there are many picturesque rural villages in the surrounding area. These places are steeped in history and are full of fascinating sights and plenty of delicious local dishes for anyone with a sense of discovery.

Lying on a floodplain of the Danube, the landscape of Kopački rit Nature Park has been defined by the constant flooding and the meandering of waters over the centuries. This has created a vast wetland with many tributaries, channels and silted-up areas overgrown with aquatic plants and forests. As a result, the Nature Park area looks like a large inland river delta. The environmental significance of Kopački rit Nature Park was recognised in 1993 when it was included on the Ramsar List of Wetlands of International Importance. The local water dynamics create ideal conditions for many species of flora and fauna, including many endangered and rare birds and animals such as White-tailed Eagle, Ferruginous Duck, Pygmy Cormorant, Black Stork and the European Otter. Kopački rit is also one of the most important fish spawning areas of the Danube.

The fluctuating water levels keeps the ecosystem of Kopački rit in a state of constant transformation. As well as determining the layout of the Nature Park, the flood dynamics cause the face of the landscape to change from season to season, and this draws in visitors throughout the year. Attractions and activities for tourists focus on conveying the area's natural, cultural and historical heritage, and are connected to places of interest in the surrounding area.

As you enter Kopački rit Nature Park, near the village of Kopačevo, there is a visitor centre which provides information on the whole area; it's a good place to plan your visit. There is a lot to choose from. Take a tour on the waters of the Special Zoological Reserve by large boat, small boat or canoe. Hike along nature trails with names like Sakadaš, Veliki Sakadaš, Old Elm and Tikveš Castle Complex. Tour through Tikveš Castle Complex and visit the Bio-Ecological Station, which has a fascinating flora and fauna exhibition and a multimedia presentation that covers the whole Nature Park, especially areas that are not accessible to visitors. (The Bio-Ecological Station also has a conference hall, facilities for organising events, and accommodation.) Take a bike ride along one of the specially laid-out bicycle routes, or if you like fishing, there are areas especially laid out for you in several zones of the Nature Park. And there are endless opportunities for birdwatchers.

As well as experiencing a unique natural environment, a visit to one of the restaurants in the vicinity of Kopački rit Nature Park introduces you to some of the region's other ethno-cultural values: traditional delicacies and a wide range of local wines.

www.kopacki-rit.hr



The famous fishermen of Kopács advertised their trade on the front of their houses









Conservation efforts have once again made the European Beaver an increasingly common sight beside the Danube Willow gallery forest

The Otter is a very widespread carnivorous mammal







Squacco Herons capture water insects, fish and frogs

The fish consumption of Great Cormorants generates conflicts with the fishing industry

# LEGEND

### The Marsh Ghost

There is a long-held belief that a ghost lives on one of the islands inside the marshes of Kopački rit. He is held to be either a mischievous spirit of the dead or a supernatural being in white, attempting to lead nature protectors and environmentalists astray. The appearance of the Marsh Ghost is alleged to be that of a poacher who was punished for disturbing the balance and peace in nature and returned in the shape of a ghost. His presence in the marshland reminds visitors and travellers how important it is to protect and preserve the marshland with its rich biodiversity.





# Lonjsko polje Nature Park

The beak of the Spoonbill really was used as cutlery in ancient times



## Lonjsko polje Nature Park

Lonjsko polje Nature Park is spread along the central course of the River Sava in the Republic of Croatia, about 75 km downstream from the capital, Zagreb. The exceptional diversity of the natural landscape and human culture along Sava and throughout its basin are of great importance for the Danube Basin. Extending over a total of 50,650 hectares, Lonisko polie Nature Park is one of the largest wetland areas in the Danube Basin.

The area preserves a cultural landscape which was common in many Central European regions until the second half of the nineteenth century. Today, Central Posavina, with its periodically inundated grazing and pasture areas, and lowland forests, is the last "living" example of this form of land management. It is a mosaic of traditional villages, pasture land, ox-bows, ponds, rivers, untouched tributaries and riparian forests. It is an outstanding example of how people have adapted to the floods, as reflected in the vernacular wooden architecture and the spatial organisation of villages. The methods of farming have shaped the landscape through a specialised form of land use and the breeding of indigenous breeds (Posavina horse, Slavonian-Syrmian Grey Cattle, Turopolje pig, the black Slavonian pig, the Posavina goose) whose habits are especially adapted to the local conditions.

The special landscape feature of Lonjsko Polje, covering two thirds of its area, is natural lowland riparian forest. It is the largest expanse of this kind in Europe and beyond. One species specific to this kind of forest communities is the Slavonian oak, whose quality and durability make it a byword for excellence in many European countries. The grasslands, hay meadows and pasture lands grazed by the livestock of Lonjsko Polje and Mokro Polje are flooded partially or completely for 30 to 100 days almost every year, and are thus dynamic habitats. The first animals to return to the pasture after the floods in early spring are the pigs, and as they root for their food they help to spread rhizomes of upright water clover. This has ensured the survival of a plant which has become extinct in many regions of Europe.

Lonjsko polje Nature Park holds the record for the number of breeding pairs of White Stork, and a mixed colony of spoonbills and herons feeds on the wet grasslands around one of the oxbows. The man-made natural habitats of the area also favour the survival of the corncrake, another globally endangered bird species.

Visitor centres in the villages Čigoč and Krapje have exhibitions giving information on the area, as well as lecture rooms and small souvenir shops. Many traditional farmyards are open to visitors, and several collections have been set up as exhibitions in the last ten years. There are also small rural tourism centres offering individual accommodation with traditional food. Places that visitors should see when they come to Lonjsko polje are: Krapje – Architectural Heritage Village, Čigoč – First European Stork Village, and for birdwatchers, Krapje Djol and Rakita Ornithological Reserves. For those who like active recreation, there are six cycling routes, three hiking trails with various themes (forest, grasslands, birdwatching), canoeing and eight educational programmes.

www.pp-lonjsko-polje.hr



A typical oak house by the River Sava







Common water-crowfoots need habitats with permanent water cover

This kind of floodplain farming is very rare nowadays

The common pond skater is a "feared" predator on the water surface



## LEGEND

### The Haiduk Legend

During the Ottoman period, when people were exhausted by the many years of wars and poverty, up sprang a band of heroes known to the peasants as Haiduks. To the nobility they were no more than common brigands and outlaws, but for the impoverished commoners they represented all the hope and glory of heroism. The Haiduk code held that it was dishonourable to rob the poor, and so they plundered the rich and shared their booty with the poor of the area.

One day, the gendarmes captured a celebrated Haiduk and sentenced him to be hanged. While he was waiting to be hoisted into the noose, his mother came wailing and said: "Oh my son, why did you have to choose a dishonest life?" and he said: "Mother of mine, you did not object when I brought home the eggs, you asked me to bring the hen too."



# Djerdap National Park

Honesty flowers along the bank of the Danube



## **Djerdap National Park**

Djerdap National Park covers an area of 63,799 hectares of north-eastern Serbia, land whose abundant and diverse wildlife has long been famous, being first mentioned by travellers many centuries ago. The Djerdap Gorge (the Iron Gates) was cut out of the Carpathian mountain range over millions of years as the Danube drained the Pannonian Sea. Nowadays, Dierdap is the biggest mountain breakthrough in Europe, consisting of four gorges and three valleys with an overall length of 130 km.

The ancient oak and beech forests of Djerdap National Park preserve their rich stocks of game – deer, boars, badgers, martens, hares, wild pigeons and doves, and the rocky cliffs of Djerdap Kazan are home to mountain goats, eagles and falcons. Bear and lynx still wander the wooded vastness of Djerdap National Park, and there are also numerous wolves, jackals, foxes and wild cats. The huge expanse of Lake Djerdap is inhabited by many various swamp birds, and small game is bred on the cultivated land beside it.

Notable species of the region include lynx (Lynx lynx), a nocturnal predator famous for its sharp hearing and eyesight, and the Squacco Heron (Ardeola ralloides), which returns from its African wintering grounds to nest in the area. It has a distinctive brown back, and its wings are white underneath. Turkish hazel (Corylus colurna) is the largest kind of hazel tree, growing up to 25 m tall with a trunk 1.5 m in diameter. The purple berries of the European nettle tree (Celtis australis) provide food for many different animals.

To take a walk through Dierdap National Park is to feel the breath of history. For thousands of years, people here have survived at a confluence of historical forces. The story starts with the eight-millennium old Lepenski Vir, a prehistoric fishing settlement which was the centre of a complex culture. The Romans bridged the Danube and cut the road through the Djerdap Gorge. Tabula Traiana and Diana Palace survive as witnesses to the power and wealth of the ancient Roman Empire. The legend of the beautiful girl Golubana still lives in the greatest Sesir kula of Golubac fortress.

A hike along any of the nine well-marked trails, all with spectacular viewpoints along the way, bestows a sense of freedom and leaves enduring memories. The Sokolovac plateau dominates the view of Gospodiin Vir gorge, rising to a height of 625 m. At the top are broad meadows ringed by deciduous forest and covered with flowers in spring. The geological formations of Greben have earned it the reputation of being the most beautiful hill in the Balkans despite its modest height of 119 metres. For the more adventurous, the view from the 358-metre peak of Kovilovo, the "roof of the world", extends down the 25 km-long Donjomilanovacka valley from Greben to Golubinje. Trips to the top of Ploce (375 m), Veliki Strbac (768 m) and Mali Strbac (626 m) give strong impressions of the awesome power of nature at work in the Djerdap Gorge. The gateway to the Djerdap region is Baba Kaj rock, 132 kilometres downstream from Belgrade, near Golubac Fortress. For centuries, it has served as an inspiration for poets and painters, as well as a beacon for tired boatmen.

www.npdjerdap.org



The fortress of Golubac



Ore Mountains, at the border of Serbia and Romania



The Iron Gates

A gorge of the Danube between the South Carpathians and the Serbian


Green forest with lamium

#### The diverse landscape of the lron Gates



A shepherd with his sheep and goat in the Serbian Ore Mountains

# LEGEND

### The Danube Water Ghost

The Danube water ghost is a figure from Serbian folk mythology. He is imagined as a dwarf with a long nose, a beard reaching to his waist, goat's legs, and horns and goat ears on his head. He wears a conical hat. He is evil, a menace to people. The Danube is believed to have ninety-nine of these ghosts plus their leader who carries a drum to call his company together. If any of them displease him, he catches them by the tail with his whip and drowns them.

The water ghosts call their victims by name and order them to come to the Danube. Then they wrap a whip around their legs or neck and chain them to the river bed. An old way of finding somebody who had drowned was to put candles and a coin into an unsalted cake. Then a naked woman would unwind her hair, step into the water between midnight and the first roosters, release the cake with its burning candles into the water and plead to the devil to release the drowned person.

A Danube ghost only has power in the water. When a man crosses himself, the ghost disappears. It was said in the past that there were women who extracted the ghosts from the Danube. They walked into the water with dishevelled hair and naked except for some light cloth to save their modesty and chanted the Bajanje charm. Some women were said to give themselves to the ghosts and thus acquire power over them. These women were then able to bring their husbands success in fishing.

Fishermen, to avoid falling into the hands of the devil, would not sleep beside their tackle at night, so that the ghosts would not find them. There is a saying, "not even the devil knows where the fishermen sleep."

River Brnjica







# Persina Nature Park

The Ferruginous Duck is a globally endangered species



### **Persina Nature Park**

In the provinces of Pleven and Velico Tarnovo in central northern Bulgaria, an immense ecological treasure is protected on the 22,000 hectares of Persina Nature Park – the only nature park on the Bulgarian stretch of the Danube, and a NATURA 2000 site under the Habitat Directive.

To protect the Park's riverine forest and inland marsh ecosystems, several separate conservation areas have been marked out, including many Danube islands.

The largest island, Persin (or Belene), boasts four freshwater marshes. These had previously been cut off from the river and drained, resulting in catastrophic consequences for the flora and fauna. For a period of seven years, the internationally-funded Wetlands Restoration and Pollution Reduction project implemented by the Ministry of Environment and Water restored wetland on the island covering an area of approximately 7,000 hectares. In 2000, it was included in the Ramsar Convention and declared a wetland of international biodiversity importance. Today the marshes on Persin Island are home to hundreds of species of plants and animals.

Twelve of the diverse flora species in Persina Nature Park have international conservation status, and there are approximately 300 species of medicinal plants. The willow communities are extremely valuable. Rare and threatened plant species include white water lily (*Nymphaea alba*), yellow water lily (*Nuphar lutea*), waterclover (*Marsilea quadrifolia*), summer snowflake (*Leucojum aestivum*), yellow floating-heart (*Nymphoides peltata*) and water chestnut (*Trapa natans*).

The Park's mammalian life includes wild boar, European polecat, roe deer and the globally-threatened European otter (Lutra lutra).

The greatest wealth of the Park, however, lies in its birds. There are more than 220 species, almost all with conservation status. The Belene Islands Complex supports breeding, feeding and resting habitats for more than 120 bird species, 62 of which are of European conservation concern.

Persin Island's marshes are home to many rare and threatened species of waterfowl, including Ferruginous Duck (*Aythya nyroca*), Red-necked Grebe (*Podiceps grisegena*), Black-necked Grebe (*Podiceps nigricollis*), Mute Swan (*Cygnus olor*) and Whiskered Tern (*Chlidonias hybrid*). Cormorants, egrets and spoonbills also nest in the vicinity.

Sand bars emerge between the islands at low water, providing resting places for Dalmatian Pelican, Graylag Goose, Great Cormorant and gulls. Of the thousands of white-fronted geese which gather in the region in winter, two species – Red-breasted Goose and Lesser White-fronted Goose – are globally threatened. Persina Nature Park is justly called a waterfowl paradise.

The White-tailed Eagle, one of Bulgaria's rarest nesting birds, is one of the symbols of Persina Nature Park. Because it is highly sensitive to disturbance, human activity is severely restricted on the areas it haunts – the nature-reserve islands Kitka and Milka.

The architectural heritage of the area's rich historic past include the first-century Roman castrum of Dimum in town of Belene, a rock-hewn church from the tenth century near the town of Nikopol, the fortress of King Shishman on Kaleto Hill, and the Church of Saints Peter and Paul from the period of the Second Bulgarian Empire.

In its headquarters in Belene the Persina Nature Park has a visitor centre, which provides information on the whole area.

For visitors who would like to get close to nature, a series of resting places and birdwatching platforms have been built along the river, and there are places to camp all along riverbank. To take a rowing boat on to the river is to receive a refreshing charge of energy direct from nature.

www.persina.bg



Like its larger relative, the Little Egret feeds on aquatic insects, fish and frogs



At certain times the cows have to wade thruogh the floodwater to reach the pastures

Softwood forests can be flooded several times a year





The European tree frog has sucker-like discs at the end of its toes to help it climb



Hawfinches have strong beaks that can break the hardest of seeds



## LEGEND

#### The Legend of Persin

Once upon a time, a young shepherd called Belyo was watching nature's colourful parade along the Danube. The briars and osier beds cut through the fog, and the wind blew through the hills. Belyo put a wooden flute to his lips, and his breath became a melody. The wind took up the playful sounds and blew them through the reeds along the riverside.

The magic of the song stopped at a loud noise. Belyo realised someone was in danger. A horse and cart were heading towards the abyss. He thought, "someone will be hurt", and sprang to his feet. His brave and good heart told him what he had to do.

It was over in a moment. Belyo took threw himself at the cart and held it back from the edge. Then he saw who it was he had rescued. No less than the Turkish governor Mahay Bey and his daughter Persin. "Persin... that name sounds like a song," thought Belyo. As he saw the girl's face light up the night, something turned upside down in the young shepherd. He couldn't take his eyes off Persin. "How beautiful you are," he whispered. Persin shyly lowered her head and blushed. The two of them fell deeply in love.

With such a powerful father, of a foreign faith, this love was impossible. But Persin and the shepherd could not live without each other. Their pure love swept them away, and they threw themselves into the Danube, making their way to a big island where no-one could find them. The light sank into the dark water as they swam, the deep shores were slowly erased, and overhanging branches of the willows threw odd shadows. The island loomed up and seemed to bear down on them. Persin was silent. The whole world for her was in this dark-haired shepherd, and her heart was filled with fear and warmth. As the wind swept around the island, it tore from the leaves a menacing whisper, as if the whole world was in a conspiracy against two young people's love. On the island, Persin finally relaxed and snuggled up to her lover, her face shining with happiness. "How beautiful it is," she said. The lovers embraced in silence and floated into a dream of a new world.

On learning his daughter had run off with the shepherd, the father was consumed with fury. The boy's courageous act in saving his life quickly flew from his memory. Mahay Bey had other plans for his daughter. "I'll kill him! He will be flayed alive!"

It did not take Mahay Bey's servants long to find the lovers on the big island. Belyo and Persin were captured, but their love was stronger than anything. For Belyo, Persin was the light, he couldn't live without her. For Persin, Belyo was the whole world.

The young shepherd has gone, the divine Persin has gone. There is only a story and the poetic name of an island, like a song, and as beautiful as Love. Persin Island.



# Rusenski Lom Nature Park

European ground squirrels basically feed on grass, but are not above robbing nests



### **Rusenski Lom Nature Park**

Rusenski Lom Nature Park lies in North Bulgaria 20 km from Ruse. It occupies 3,408 hectares of the canyon-like valley of River Rusenski Lom, the last right tributary of the Danube.

The people and traditions of the area have been connected with the Danube since Roman times. The Danube formed a border, and towns grew up near the river ports. The only rock monastery still used is to be found in the village of Basarbovo. Other sights are the rock-hewn church of Ivanovo, which has frescoes protected by UNESCO, and the medieval castle of Cherven, where the tourism season opens with a pageant of the local aristocrat's court. Villages throughout the park feature local stone architecture and maintain old customs and traditional food – milk, cheese and honey bearing the bouquet of wild plants.

Rusenski Lom is a unique mosaic of landscapes: forests, pastures, wet meadows and agricultural fields, all landscapes with high natural value. On the largest scale are the deciduous forest ecosystems dominated by silver lime, elm, oriental hornbeam, and several species of oak. Old tree hollows shelter Tawny Owls, woodpeckers and Stock Doves. The Long-eared Owls, makes use of abandoned crows' nests. With 172 protected bird species, the nature park is included in the list of Important Bird Areas and is a Natura 2000 site.

There are 16 species of orchids in the Park. The most interesting and rare is the Balkan Lizard Orchid. Its unique scent attracts flies which pollinate the species. Purple and monkey orchids, and large white and long-leafed helleborines are other species of the family found here.

Of the 200 bird species found in the Park, the Egyptian Vulture – a sacred bird in ancient Egypt – is most severely threatened by extinction. It is a daytime bird of prey which winters in Africa, and Rusenski Lom is as far north as it spends the summer. According to traditional beliefs, Egyptian Vultures are monogamous – the pairs mate for life. They make their nest on an inaccessible rock and carry the construction material in their beaks, not in their claws like other birds of prey.

The Black Stork, an endangered species, is the chosen symbol of Rusenski Lom Nature Park. Elsewhere in Central Europe, and even in other places along the Danube, it nests in forests, but in this area it nests on the rocks. Parents take turns in taking care of their offspring. According to traditional beliefs, this magical creature brings luck, health and wellbeing.

The Park's latest visitor centre in Lomovete, near the village of Nisovo, has interactive displays that give a deep insight into the rich biodiversity of the area and its connection to the Danube. An ornithological route from the centre runs along the river of Mali

Lom, near cliffs where hollows carved out as monks' cells have since been turned into nests by rock-dwelling birds. The final point of this route is the Big Nisovo Monastery, hewn high in the cliff, and reached through the Via Ferrata and steps cut into the rock.

www.lomea.org



"Horse cemetery near Nisovo



The Black Stork usually nests on trees, but sometimes on rocks

Orlova Chuka Cave



The last river which flows into the Danube on the right side: Rusenski Lom





A beautiful World Heritage site: the rock-hewn churches of Ivanovo



Distinctive rock formations on the bank of the Cherni Lom at Koshov



The Hoopoe forages for insects in meadows and nests in cavities of old trees

## LEGEND

#### Lovers' Towns

River Rusenski Lom has over the years carved out a picturesque canyon within vertical cliffs, more than 120 metres high in some places. The caves, inhabited by monks between the twelfth and fourteenth centuries, are now the preserve of Black Stork, vultures, swallows and swifts. It is a secret place, full of energy, old memories and legends.

Hundreds of years ago, there was a town which lay on both sides of Danube at the mouth of Rusenski Lom. The plain was covered by forests and the rivers were full of fish.

On the southern bank of the river there lived a beautiful maiden called Rusa. She had long hair light as straw, and her eyes were as blue as the sky and glittered like stars.

On the northern bank of the Danube lived Georghi – a strong, agile and brave lad. He was a skilled fisherman and hunter.

These two young people were in love. They were happy and devoted to each other. They eagerly awaited the equinox, when they were going to be wed and start their own family and home beside the river. The spring, the sun, the beautiful flowers and the river – everything contributed to the harmony between these two young people. But then the barbarians came. The town was burned to the ground, and the few survivors left for good. Rusa and Georghi hid in a cave in the canyon of Rusenski Lom.

The long-haired barbarian chief had noticed Rusa while she was running from the town. He decided he had to have her. She would be his perfect trophy!

The young people in love lay hidden deep in the cave and kept silent when barbarians passed near. The rocks kept them from fire and arrows.

Unable to find them, the furious barbarian chief punished all survivors in the area by dividing the people between the two banks of the river. He expected that no-one would give food and shelter to the couple.

But they survived because love always survives.

And now two towns face each other across Danube – Ruse and Giurgiu. Rusenski Lom has sheltered love and happiness, history and nature.



# Kalimok-Brushlen Protected Area



### **Kalimok-Brushlen Protected Area**

The Kalimok-Brushlen Protected Area lies along the Danube on Bulgaria's northern border between Ruse and Silistra. It includes the village of Babovo and the town of Tutrakan, and the Bulgarian islands Mishka, Malak Brushlen, Golyam Brushlen, Pyasachnik, Nameless, Kalimok and Radetski.

Local culture and lifestyle speak of the deep symbiosis between the local inhabitants and the Danube. It is manifest in many villages in the area, but most strikingly in Tutrakan, where the "Fishermen's Quarter" keeps the oldest occupation in the area alive with boatyards, fishing-net workshops, fishermen's houses and local cuisine. The Danube Ethnographic Museum "Danubian Fishing and Boat Construction" tells visitors more about life on the river over the centuries. The annual "feast of the river" is a grand celebration of local traditions.

Conservation priorities are highest on the Danube itself and in the connecting water basins: the remains of the former Kalimok and Brushlen swamps, diffuse areas nearby, and drainage channels in the lowlands. The key ecosystems of the Protected Area are the riparian floodplain forests on Danube islands, alluvial sediments along Danube, slightly saline riparian pastures, and mesophilic meadows with tall grasses.

Here thrive the white water lily, yellow floating-heart, gibbous duckweed and fen ragwort. The large-fruited horseradish is a species endemic to the Danube Basin. It survives sustained flooding and starts to grow as soon as the water subsides. Kalimok-Brushlen is also an important ornithological site, a breeding place for the Dalmatian Pelican and Eurasian Spoonbill. It has one of the largest colonies of herons (*Ardeidae*) in Bulgaria and some of the last remaining century-old elms, black poplars and oaks. This part of Danube is important habitat for some of the rarest fish on the planet – sturgeons: beluga, stellate sturgeon and Russian sturgeon. The wild Danube carp is one of the most endangered of the species which are dependent on the swamp water cycle. In the past, the spring high waters of Danube flooded the swamps and carp spawned in the warm, nutrient-rich waters. As the river levels decreased towards the end of the summer, the small fish, together with the swamp waters, ran into Danube. Nowadays, as swamps along Danube have been drained or cut off from the river, the carp has lost its natural spawning grounds.

Kalimok-Brushlen is very popular for fishing and – more recently – water sports, especially kayaking. Just outside the protected area, there is well-managed wild boar hunting. Birdwatchers and people who like to see nature in the wild state visit the area every year. The dykes have been developed as cycling and trekking routes, and there are exciting water routes on the Danube and other waterways in the protected area.

http://www.danubeparks.org/?park=3



The flood affects both the native willow species and the alien Desert Indigo







White Storks forage in agricultural areas as well as wetlands



Great Crested Grebe

Great Egret

A European Roller with its grasshopper prey



Grey Heron



The Eurasian Coot prefers stagnant water and the slower stretches of rivers

The Barn Swallow feeds on flying insects





## LEGEND

### The Fisherman's Tears

My life is the life of a fisherman. It is tied to the River. She knows all my sorrows and joys: my wedding; the birth of our children; what I feel when I experience the wind, the storms, the cold, the heap of wet cloths, the pains in my bones and joints, the cents in my pocket that are not enough even to buy laces for my children's shoes.

Ask the River. She will tell you about that day. The way I stood there desperate and helpless on the bank. Then I got in the boat and I set off without direction. She led me to the island and gave me plenty of draught.

Probably, there was somebody next to me – Neptune or St Nicholas or a mermaid. But even if they were there, they had been called by the River. She had asked them to help me. She had asked them to endow me with fish, so I could buy some clothes for my children.

I didn't know how to thank her. I was overcome with joy. I bent down from the boat, I took a handful of water and I touched it with my lips in adoration. Tears of joy dropped from my eyes.

Birds flew past me, the water was swishing and I heard, I swear that I heard, a whispering voice from the deep water:

"Your tears have warmed my body. Go home. Hurry up, fisherman. You have children. Bring them hope for tomorrow and carry faith in your soul."

Many years have passed since then, but I still remember that day. I know that a man's tears are enough to warm the whole River.

By Stoyanka Pavlova, Nova Cherna village



# Danube Delta Biosphere Reserve

The Dalmatian Pelican, weighing in at 10–12 kg, is the largest aquatic bird



### **Danube Delta Biosphere Reserve**

The Danube Delta Biosphere Reserve lies in the historical region of Dobrogea in the South-Eastern part of Romania, close to the towns of Constanța, Brăila and Galați. In 1990, the area became the only delta in the world declared entirely as a biosphere reserve. The objectives of the Danube Delta management are to protect its biodiversity while promoting sustainable development of local communities in harmony with nature.

The almost unspoiled natural landscape is a diverse mosaic of river branches, channels, lakes, reedbeds, sand dunes, oak forests with Mediterranean vegetation, and beaches. These natural treasures are the main attractions for visitors.

The astonishingly diverse deltaic ecosystems host no less than 2,383 plant and 4,029 animal species. The bird populations of the delta are almost unsurpassed anywhere in the world. Many of the 334 recorded species nest in the area.

The ecosystems in the Danube Delta Biosphere Reserve are of 30 types: 23 natural and 7 man-made. Flowing water (rheophilic) ecosystems consist of the Danube branches and the larger streams and channels, providing optimal conditions for worms and molluscs among many other animals, and for carp (Cyprinus carpio), zander (Lucioperca lucioperca), catfish (Silurus glanis), sturgeons, and other migratory fish. Then there are standing water ecosystems, mainly lakes, which have rich submerged and floating flora that includes water chestnut (Trapa natans) and arrowhead (Sagittaria sagittifolia). Swamps and flood-prone ecosystems, consisting of reeds and floating reed islets, are dominated by the common reed (Phragmites communis). Floating reed islets of reed rhizomes, grass vegetation, and organic and soil remains are a special feature of this ecosystem.

Prominent protected species in the reserve include the vellow water-lily (Nuphar luteum), a 10-30 cm long perennial aquatic species, with a thick repent rhizome buried in the mud and a yellow flower. This is found in stagnant and slow-flowing waters near shores throughout Europe and into Asia as far as Siberia. Another is sand bindweed (Convolvulus persicus), a white-flowered perennial which grows on the sandy soils of the Black Sea shore. This vulnerable species is protected along the entire coastline. The beluga sturgeon (Huso huso) lives along the Black Sea coast and from the mouth of the Danube up to the Iron Gates. It is usually about 200-250 cm long and 100-150 kg in weight, but can grow to a length of 6 m and weigh over 1,000 kg.

The 25 villages distributed across the reserve area developed as their inhabitants adapted to local conditions. Nowadays, they preserve the traditions specific to the Romanian, Ukrainian and Russian-Lipovan ethnic groups living in the region. Complementing its natural attractions, the Danube Delta also has many museums, archaeological sites (in the area between the Danube and the Dobrogea Plateau), and fine architectural heritage.

Visitors to the Danube Delta are treated to a feast of natural sights, beautiful beaches and excellent fishing spots. There is also

a warm welcome in the local villages which have their folk architecture, customs and gastronomy. Special routes have been laid out on the reserve – 15 boat tours and 9 hiking trails. Some of the water routes start from the main gateway points to the reserve - Tulcea, Murighiol and Jurilovca - and others from points inside it - Chilia Veche, Crişan, Sulina and Sf. Gheorghe. Hiking trails start from Tulcea, Murighiol, Uzlina, Sulina, Sf. Gheorghe and Chilia Veche. Information for visitors is available from centres run by the Danube Delta Biosphere Reserve Authority in Tulcea, Crişan, Sulina, Murighiol and Sf. Gheorghe.

www.ddbra.ro





The Great White Pelican has a wingspan of up to three metres

Reed islands often break off, some of them are big enough to isolate complete villages



A group of Great Cormorants crosses the sky above a channel in the Delta

The Danube Delta is the realm of endless reedbeds, with hundreds of channels for navigation



Traditional house in the Danube Delta



Sitting on a water lily leaf, a marsh frog enjoys the sunshine



Team fishing: pelicans and cormorants cooperate to bring in a feast Filtration by huge reedbeds makes for clear water in the lagoons of the delta



# LEGEND

### The Otter Legend

A long time ago, in the days when many stories were told, there lived a king who had three daughters. The Marsh King sent one girl to the east to marry the King of the Sunrise and another to the west to marry the King of the Sunset. The youngest daughter spent all her time in the water, and when the King of Stone Land asked her to become his wife, she ran away with her lover, Plaur, a fisherman.

Consumed by anger, her father asked a witch to put a spell on her so that she would spend the rest of her life on the water feeding on fish and having many children. So the witch turned Princess Otter into an animal. Unable to imagine a life lived without his beloved, Plaur asked the witch to turn him into a floating island (the meaning of the word plaur). Otter made her burrow on the "plaur" and they have been living together happily ever since.

This old story originates from the village of Murighiol in the Danube Delta and was collected by the famous ethnographer Gheorghe Mihalcea.





## **ABOUT THE PHOTOGRAPHERS**

Zsolt Kudich and Réka Zsirmon are nature and fine-art photographers based in Budapest. Their work has been published in many international publications, books and calendars, including National Geographic, Nature's Best Photography Magazine, GEO Magazine, Nikon International Calendar and many others. Their work has won them numerous awards and been taken up by private and corporate collections.

> In their latest project they have explored protected areas along the Danube River, photographing nature in all of its aspects and all of its richness.

They now also enjoy sharing their expertise by organising training courses and guided nature photography tours.



Zsolt Kudich and Réka Zsirmon

Email: zsolt@kudich.com | Phone: +36 20 9847274 | www.kudich-zsirmon.com

www.facebook.com/kudich.zsirmon.photography





scan here with your smart phone to download now

You may get your favourite protected area desktop and mobile wallpaper photos http://www.kudich-zsirmon.com/danubeparks/wallpapers/



#### Acknowledgements

The photographers would like to thank the following people for their kind support and contributions to this book:

 Gyula Kiss, András Sevcsik, Csaba Szabó, Tibor Parrag, Ervin Mezei, Endre Sztellik, Zoltán Omacth, Renata Tot Forjan, István Tórizs, Szilárd Lázár, Srðan Stefanović, Marija Milenkovic-Srbulovic, Zoran Milovanovic, Bence Máté, Valerija Hima, Nikša Ravlić, Tomáš Kušík, Pavol Surovec, Matúš Kúdela, Vincze Ignác, Mátyás József, Emiliya Petkova, Alina Codreanu, Zoltán Kosa, Radoslava Dzhantova, Daniela Karakasheva, Stela Bozhinova, Thomas Schneider, Georg Frank, Magdalena Wagner, Josef Mühlbacher, Josef Steiner, Radmila Šakić, Milan Rajić, Siegfried Geißler



















"The photographers were contracted by the DANUBEPARKS Network for the production of this book. If you are a nature lover and photographer yourself, then please get in contact with the administration any time go to a Protected Area: the legal regulations often demand a permission, especially for professional photographers. Also, the Protected Area will be able to tell you where you can go to take nice photos without disturbing nature too much."



Printed and bound by Dürer Nyomda Kft., Gyula, 2014

Managing director: János Kovács

Printed on 13.32 A/5 sheets