

NATURE PROTECTION MANAGEMENT

Rehabilitation of grasslands

Since the establishment of big farming facilities, the proportion of utilised grasslands decreased continually in case of the areas which can only be mowed manually or with special methods. After the change of the regime the areas previously grazed or mowed were mostly left alone. The area became overgrown by willows and hawthorns and, in the floodplains of the Tisza River and along the ditches by the invasive *Amorpha*. To remove these bushes it is needed to use special machines of forest management. The Public Foundation bought such machines with the support of the 'KAC' (Hungarian State fund), and restored the original vegetation already on hundreds of hectares. To prevent the overgrowth again, we provide for the continuous management of these areas by mowing, and the grazing of Hungarian Grey Cattle kept at the farm of Szamárhát



Maintenance of wetlands

The Public Foundation owns some dead branches and swamps hiding heron colonies along the Tisza. It is a priority task in case of these to provide the ecological water supply. Some of the highly eutrophic river-branches are in need of active intervention. Nowadays the preparation and planning of these is taking place.

Programme for the development of riverine woodlands

With the support of the programme we purchased a clearcut area along the Sajó river. Here, on the contrary to the plans of the previous owner to plant hybrid poplars, we started the plantation of a native Oak forest. Our goal is to gain experience here, and, based on that, to realise more plantations with native tree species in place of hybrid poplars or ploughlands.

Water supply of the Dicse-lapos swamp in Tiszaladány

The Dicse-lapos in Tiszaladány is a swamp which developed in an ancient rivebed among ploughlands. It was the first purchased land of the Public Foundation, bought as early as in 1995-96. There is a mixed heron colony in the swamp, where the total number of breeding pairs is near to 1000 in certain years. The biggest population is of Night Herons (*Nycticorax nycticorax*), 4-500 individuals, but breeding of Purple herons (*Ardea purpurea*), Squacco Herons (*Ardeola ralloides*), Little Egrets (*Egretta garzetta*), Great White Egrets (*Egretta alba*) and Spoonbills (*Platalea leucorodia*) is also recorded. The most important task was to stabilize the waterlevel, which was achieved by the dredging of the feed channel and the reconstruction of the sluice on it. The other task was to prevent the already higher water of the swamp from flooding the ploughlands around which was done by building a dike - from the removed excess bed material.

The rehabilitation of the Kelemenés floodplain meadow in Tiszabábolna

After the development of the Tisza reservoir, the areas near Tiszabábolna became state property, and, because of the rised water-level, these were only suitable for grazing and mowing. After the change of the regime these areas were left alone, and a dense jungle of *Amorpha* developed here. These bushes have been removed with special machines. This way, the populations of Hog's Fennel (*Peucedanum officinale*), Blue Iris (*Iris spuria*), March Gentian (*Gentiana pneumonanthe*) and the Solitary Clematis (*Clematis integrifolia*) could survive at Kelemenés. The Corncrake (*Crex crex*) breeds again, and the Black Storks (*Ciconia nigra*) find a calm and undisturbed roosting site here. The desired natural state is maintained by regular mowing.

Reconstruction of floodplain grasslands at the Kesznyéten Landscape Protection Area

The grasslands of the Kesznyéten Landscape Protection Area were also left alone, in two stages. First, after the establishment of the agricultural co-operatives the areas which were not effectively mowable with machines e.g. because they were too wet, were abandoned. After the change of the regime the places which were easiest to reach were only mowed and grazed, according to the decrease of the number of domestic animals. As a result of this, in the place of wet meadows willowy, while in drier places hawthorn bushes developed. We removed these with special equipment, and prevented their overgrowth with mowing and the grazing of Grey Cattle.

EDUCATION, AWARENESS-RAISING

In frame of the integrated small regional development programme of PHARE in 1997, the Regional Development Council of Borsod-Abaúj-Zemplén County supported the project entitled „The Complex eco-touristical development of the Kesznyéten Landscape Protection Area”. The subprojects of this were the landscape rehabilitation works which intended to provide water supply to the wetlands of the Landscape Protection Area, the building of a road for visitors (nature trail), and, the starting of the establishment of a Visitors' Centre. Until the end of 2001, the buildings of the Visitors' Centre were finished with further support of the PHARE SOP'97 programme and the 'KAC'.

In 2001, on a tender opened by the Ministry of Agriculture and Regional Development, the Visitors' Centre got entitled to use the name „Agri-environmental Landscape Centre”.



The duties of the Visitors' Centre are to host visitors, inform them, and to introduce the values of the Kesznyéten Landscape Protection Area to them through the exhibition placed here. We consider the most important role of the Agri-environmental Landscape Centre that, as a sample farm, it shows the interested visitors the ways of management which apply the sustainability principle to landscape management, so providing for the long-term protection and management of natural values as well.

Besides this, using the infrastructure of the Visitors' Centre and our inter-national relations, we plan to hold educations as well, where we would like to train farmers and experts in agri-environmental programmes how to initiate, operate, and supervise this kind of activities, furthermore how to prepare for the legal prescriptions originating from nature protection legislation and the management plans of the given areas. The realisation of the Visitors' Centre was supported, also in a financial meaning by providing a part of the own contribution to the grants, by Utrecht Municipality in the Netherlands.

We regard the education of young generations as our continuous duty, which is performed in outdoor classes, summer camps and fieldwork during the school-year.



We organize a competition for the schoolchildren of the region each year, entitled „Springwatch” where they have to answer questions about nature and traditional farming. The unexpected „side effect” of this latter was that these children had to leave their computer rooms, and visit their grandparents, who were very glad for this, to ask them about answers to the farming questions.

From the Visitors' Centre a route has been built, leading through the most characteristic natural values of the Kesznyéten Landscape Protection area, introducing these to visitors. In frame of the French-Hungarian Biodiversity Protection Programme we exchanged the old displays along this route to new ones, and we established a domestic animal show and a bird observation tower.



Dear Reader! If you agree with our goals, programmes and activities seen above, and if you would like to join us in protecting the natural and cultural values of the Tisza Valley region, please support our efforts.

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TISZATÁJ

PUBLIC FOUNDATION



14 years
in service of Nature



Tiszatáj Public Foundation for Environmental and Nature Protection was established in 1995 by the Hungarian Ornithological and Nature Protection Society and the municipality of Tiszadob.

The goal of the Public Foundation is to help, organize and realize the tasks in connection with the investigation, protection and introduction of the natural values of the Tisza-valley, the connected areas and the region of the Northern-Hungarian Mountains, furthermore to facilitate the development of a healthy human environment. The Public Foundation closely co-operates with the Directorate of the Bükk National Park, the nature- and environmental protection NGOs active in the region, furthermore with municipalities and their associations.

Among the activities of the Public Foundation there are:

- Ensuring the long-term protection of natural values by getting proprietary rights;
- Nature protection aspect management of the areas and landscape rehabilitation of the areas rich in natural values;
- Active protection of protected animal and plant species;
- The operation of a shelter and a hospital for injured and ill wild animals;
- Environmental education and awareness-raising;
- Environmental and ecological aspect development of disadvantaged regions;
- Application and promotion of traditional farming methods.



Land purchase within the programme was focused on the Kesznyéten Landscape Protection Area. The boundaries of this area are the rivers: Tisza, Lakta, Sajó and Tiszalúc Holt Tisza. It can be well observed from aerial photos that the about 2000 hectares marsh system of the protected area was formed in the riverbeds of the Tisza River and its tributaries that formed during the Holocene and later got abandoned.



Regular water supply of the marshes was cut off in the middle of the 19th century as a result of river regulation works. After the works were finished, the new and old dams of the Tisza River became connected and a structure, called „ring dam” by the locals, was formed that completely cut off water supply from the rivers to the area.

The present vegetation was influenced by the rivers meandering for thousands of years, the forest clearings and grazing-mowing livestock husbandry starting from the Middle Ages and river regulation works in the 19-20th century. Most typical habitats, such as the floating aquatic plant communities covering the marshes, the reed beds on the shores and the surrounding willow bogs and willow woodlands, all formed in the remnant old riverbeds.

Sandy steppe grasslands are sparse on natural levees. Softwoods could survive at the marshes' edges and in the riverbeds. On the high floodplains hardwood forests are the most highly modified habitats, mostly replaced by agricultural lands and plantation forests of alien species.

On the banks of the sand pits, in the foreground of the dams built in the second part of the last century, oaks are planted in a structure similar to the original open woodland.

In the protected area there are significant populations of several typical, rare plants, such as Water Chestnut (*Trapa natans*), a Salvinia species (*Salvinia natans*), a Horseradish species (*Armoracia macrocarpa*), Summer Snowflake (*Leucojum aestivum*), Greater Spearwort (*Ranunculus lingua*) and a Daisy (*Chrysanthemum serotinum*).



Among the aquatic plants of the dead branches and oxbows (such as Kerek Lake, Gorbe Lake, Himes Lake and Emberes), Fringed Waterlily (*Nymphoides peltata*), European White Waterlily (*Nymphaea alba*), Water Pineapple (*Stratiotes aloides*) and Common Bladderwort (*Utricularia vulgaris*) should be mentioned. The floating bogs and the willowy edges of the dead arms hide the protected Water Hemlock (*Cicuta virosa*), Marsh Fern (*Thelypteris palustris*), Spinulose Wood Fern (*Dryopteris carthusiana*) and Cypress-like Sedge (*Carex pseudocyperus*). Because of its favourable hydrology the area is rich in floodplain marsh and meadows, with a rich flora caused by mowing. Here we can find Brown Sedge (*Carex disticha*), Marsh Gentian (*Gentiana pneumonanthe*), Elegant Lax-flowered Orchid (*Orchis laxiflora* ssp. *elegans*), Mouse Garlic (*Allium angulosum*), Autumn Crocus (*Colchicum autumnale*), Fen Ragwort (*Senecio paludosus*), Hedge Hyssop (*Gratiola officinalis*) and Wild Pea (*Lathyrus palustris*).



NATURAL VALUES

In the fauna, invertebrates are scarcely known, however, earlier studies show that there are important Mollusc species in the Kesznyéten Protected Area.

Among Arthropods there are hundreds of thousands of the Ephemeropteran Tisza Mayflies (*Palingenia longicauda*) over the water of the Tisza in the second half of June. There are some protected ground beetles, such as *Calosoma auropunctatum*, *Carabus scabriusculus* and *Carabus granulatus*. On summer nights we can encounter individuals of the Giant Diving Beetle (*Dytiscus latissimus*) as they fly by making a loud buzzing noise. Stag Beetle (*Lucanus cervus*), European Rhinoceros Beetle (*Oryctes nasicornis*) and Great Capricorn Beetle (*Cerambyx cerdo*) are protected beetles species of old hardwood forests.



Among diurnal butterflies there are significant numbers of Lesser Purple Emperor (*Apatura ilia*) in softwood forests and willows, and Scarce Fritillary (*Euphydryas maturna*) in hardwood forests. The extremely rare Chamaesphelia palustris lives in marshlands with Marsh Spurge (*Euphorbia palustris*).



The protected Mud Loach (*Misgurnus fossilis*) and Spined Loach (*Cobitis taenia*) and European Mud-minnow (*Umbra krameri*) are present in the water of the landscape protection area, the endemic Tench (*Tinca tinca*), Roach (*Rutilus rutilus*) and Rudd (*Scardinius erythrophthalmus*) have re-settled. At humid, wet habitats, both Northern Crested Newt (*Triturus cristatus*) and Smooth Newt (*Triturus vulgaris*) occur. Marshes are relevant breeding places for frogs and common European Pond Turtle (*Emys orbicularis*).

The declaration of the protection to the landscape protection area was mostly initiated due to its bird fauna - at that time, one of the largest crane colonies of Hungary was situated here. Due to the regular desiccation of marshes, the number of bird species and individuals connected to waters had showed an intensive drop since the mid 1990s. This disadvantageous process was stopped by the habitat rehabilitation works starting in 2003.

Today, Great White Egrets (*Egretta alba*) and Purple Herons (*Ardea purpurea*) nest here in great numbers, also Little Egrets (*Egretta garzetta*), Squacco Herons (*Ardeola ralloides*) and Night Herons (*Nycticorax nycticorax*) have returned.



Among the birds of prey, the most often Marsh Harrier (*Circus aeruginosus*) can be observed in the area, and the most valuable nesting species is Saker Falcon (*Falco cherrug*). At the hay-meadows, as a result of the landscape rehabilitation works, Corncrakes (*Crex crex*) are present again. Ground squirrel (*Spermophilus citellus*), being the favourite esculent of Saker Falcon (*Falco cherrug*) and Imperial Eagle (*Aquila heliaca*) present at short herb pasture-lands. In the channels' water, individuals of the Otter (*Lutra lutra*) appeared even during the greatest drought.



The values of the landscape are represented by the wonderful willowy floodplain meadows. The marshlands of the area can only be viewed from an airplane, on the contrary to the forested sandpits, which provide a beautiful view from the top of the dams.



The Directorate of the Bükk National Park purchased the Szamárhátifarm in Kesznyéten in 1997, where the Public Foundation, hiring it, started to breed native domestic animals (Hungarian Grey Cattle, Racka Sheep, Domestic Buffalo, Mangalica Pig). With the support of the project, Tiszatáj Public Foundation bought the farm from the Directorate in the end of 2007, and started to plan the complete reconstruction. Our goal is to establish the centre of the nature protection management of the already purchased 1100 hectares area on this facility.

Natural values worth protection here consist of floodplain meadows, swamps and swampy meadows, furthermore the woodlands along the river.

