

## NATURE PROTECTION MANAGEMENT

### Grazing indigenous domestic animals

Grazing indigenous domestic animals, such as - the vernier horse, the Hungarian grey cattle, the Water Buffalo, the 'mangalica' pig or the 'racka' sheep - is essential for the nature, development and maintenance of Hortobágy. These native animal species are totally undemanding, they can be kept outside from spring to autumn, often in winter. Our sample areas are surrounded by electric fence in order to minimize any kind of human intervention or disturbance, by keeping to the letter of the law of veterinary hygiene.



Hungarian grey cattle

### Cultivation of fields on Great Bustard protection area

We have to provide appropriate circumstances for the globally endangered Great Bustard (*Otis tarda*) on our arable fields in order to ensure distraction safe nesting. For this reason it is essential to plant grain according to the needs of this species, such as lucerne, oil-seed rape or sunflower, and to establish the necessary crop rotation. The technology of agriculture on fields of great bustard protection enables agricultural activity and planting crops only in autumn, as field condition in the spring in Hortobágy makes it impossible to work at the end of March - the beginning of April. In the last third of April bustard-hen begin to nest, so every kind of agricultural activity after this point of time endangers the brood.



*Otis tarda*

Extensive agricultural activities have been introduced - without use of chemical fertilisers, ripeners or insecticides - according to the ecological needs of the species. There is only one exception in case of insecticides, as rape fields which serve as food for the great bustards in the winter have to be protected against insects. Only insecticides with piretroids and a maximal break-down-time of 4 hours are allowed to be used at about sunset. This is highly important to rule out the possibility of a secondary poisoning.

Time to time there is also sunflower planted that can serve as a place for bustard chicks to hide in hot summer after the harvest of the other cultivated plants. Any of agricultural activity is stopped on affected places of fields till the bustard chicks reach the age of being able to fly.



### Habitat-reconstruction of Karácsonyfok

In 1995 during the reconstruction works of the former rice-fields we aimed to establish a kind of 'habitat-mosaic' of the saline lake character region to ensure feeding-, nesting- and resting place for several shore bird and waterfowl species of Hortobágy. The 53 hectares area was surrounded by an electric fence. At present time there are two saline lake - like habitats, where the upper layer of the ground was removed to establish several smaller nesting islands for shore birds - first and foremost for the Pied Avocet (*Recurvirostra avocetta*). On three other parts of the area saline marsh and grasslands make up a 'habitat-mosaic'. In 2007 with the building of new culverts we solved the problem of water-level regulation of the area.



*Recurvirostra avocetta*

*Egretta alba*

In order to keep the mosaical character of the habitat we used to regulate vegetation by mowing and cutting, today - co-operating with the Directorate of the National Park - grazing Hungarian grey cattle and Heck cattle solves the same problem. A shed has been built for the animals to protect them against summer heat, wind and rain. In the early years alone several species of birds visited the area, since then thousands of shore birds and wild ducks have appeared here every spring. In best nesting-years density of shore birds exceeded the level of the best regions of Hortobágy National Park.

### Habitat-reconstruction of Akadémia Lake

In 2008 the reconstruction of the 6,5 hectares former material-sourcepit was realized. Our aim was to establish nesting-, resting- and feeding place for shore birds and waterfowl. By dredging the reed and bulrush we formed an open lake habitat where six nesting islands can be found. Having rebuilt the filling canal of the nearby fishpond with a new system, the lake can now be flooded, as these species of birds need a place covered with water time to time.



*Branta ruficollis, Anser albifrons*

After finished reconstruction works Lapwing (*Vanellus vanellus*), Black-tailed Godwit (*Limosa limosa*), Common Redshank (*Tringa totanus*) nested here. Squacco Heron (*Ardeola ralloides*), Spoonbill (*Platalea leucorodia*), Greylag Goose (*Anser anser*), Glossy Ibis (*Plegadis falcinellus*) visit the place to feed. Part of the reed - bulrush was left during the work, because of two families of Marsh Harrier (*Circus aeruginosus*).



*Himantopus himantopus*

*Limosa limosa*

The whole area is surrounded by an electric fence, so Water Buffalo can be grazed here without any distraction. Their grazing helps to maintain the appropriate ecological condition of the saline pasture / saline lake habitat mosaic.



## EDUCATION, AWARENESS-RAISING

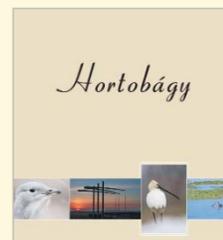
Hortobágy Public Foundation takes an active part in representing and introducing natural values of the Hortobágy.

'Kis-Jusztus' and the area of 'Akadémia' Lake make up a part of the representative zone of the National Park. Orientation is enabled by an observation tower and a system of signs which greatly contribute to educational purposes and help to form an environmentally-centered way of thinking and last but not least to meet all the requirements of being a representative part of the National Park.

We organise informational meetings for farmers of the area. The main topics of these meetings were representing and protecting natural values, opportunities of agri-environmental programs, Special Protection Areas, and Natura 2000 network.



A bilingual (Hungarian-English) book has been published, trying to represent natural values in an easy-to-understand way, wanting to make people interested in protecting nature and in this unique and incomparable region of Europe, Hortobágy.



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 Hortobágy region, please support our efforts.

### Hortobágy Public Foundation

H-4063 Debrecen-Nagymacs  
Kastélykert utca 41/b  
Phone: 06 30 655 4528  
E-mail: [szelence@termesztv.t-online.hu](mailto:szelence@termesztv.t-online.hu)  
[www.teraholnapert.hu](http://www.teraholnapert.hu)

Bank account:  
MKB 10300002-34609240-00003285



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# HORTOBÁGY

PUBLIC FOUNDATION



8 years  
in service of the Nature



HORTOBÁGY  
Természeti és  
Közalapítvány



**Hortobágy Public Foundation for Nature Conservation** was established at the turn of the millenium - by joining forces of the local government of Nádudvar, local state-owned nature-protecting companies, public organisations, experts of environmental protection working in the area and farmers - in order to be able to protect, save and hand down some tiny parts of Hortobágy.

Primary aim of setting up the Public Foundation was to complete buying up, management and long-term maintenance of all the habitats on grassy and watery lowland plain having natural value; to purchase agricultural areas where great bustards can be found and further on to settle natural cultures appropriate for protecting great bustards. Protecting and development of natural values to push an advantage of the possibilities sustainable agriculture and eco-tourism can offer. Working out and practice of the protection concept of globally endangered species in Hortobágy in a wider sense. Realization of up-to-date nature protection activity, research, environmental education and propagation of eco-tourism in the region of Hortobágy National Park, co-operating with the Directorate of the National Park, nature protection companies established in Hortobágy, other public organisations for the protection of nature and local farmers working in this field.

While completing professional tasks in its scope of duties the Public Foundation has gained a lot of priceless experience by its members who have been continuously working to protect nature for the last couple of years and decades. The financial sources of this activity have been provided by national and EU tenders.



The Public Foundation has been actively doing its job in five regions of Hortobágy, in an area of about 190 hectares, which are partly owned by the Public Foundation itself (116 hectares), partly belong to the trust management of the National Park.



### Wetlands

The majority of the affected areas is a kind of wetland, such as Kis-Jusztus marsh, Karácsonyfok, and Akadémia Lake, among which you can find saline marshes, abandoned rice-fields as well as a goose-keeping lake. Their protection helps to restore the mosaical habitats characteristic of Hortobágy. The most important task to do in these parts of the region is to restore natural habitats and to supply appropriate feeding-, nesting- and migrating place for the species of birds periodically living here and making up the greatest natural value of Hortobágy. Common characteristics of these sample-areas are, that they can be flooded in years of drought, while maintenance of the appropriate ecological state can be solved by grazing big gaminivores - just like Hungarian grey cattle, Water Buffalo or Heck cattle.



### Karácsonyfok

53 hectares area in the north of Hortobágy, near the settlement Hortobágy-Kónya, a part of which - 17 hectares - belongs to the Public Foundation. The habitat mosaic of saline lake / saline marsh / saline meadow in place of the former abandoned rice-field gives home to a lot of plant species typical of Hortobágy, such as the Creeping Bent (*Agrostis stolonifera*), the Saline Rush (*Schoenoplectus tabernaemontani*), or the Cat-tail Grass (*Alopecurus pratensis*).



By creating the area we primarily wanted to establish a resting-, feeding and nesting place supplying favourable conditions for birds. At the moment Karácsony Cape is one of the most diversified habitats of shallow water, that provides excellent home and outstanding conditions for several common and multitudinous species, such as the Lapwing (*Vanellus vanellus*), the Black-tailed Godwit (*Limosa limosa*), the common redshank (*Tringa totanus*), but also for a number of endangered species, for example the Common Crane (*Grus grus*), the Pied Avocet (*Recurvirostra avosetta*), the Black-winged Stilt (*Himantopus himantopus*) or the Great Snipe (*Gallinago media*).



The maintenance of the appropriate ecological state and the necessary amount of vegetation is ensured by grazing Hungarian grey cattles and Heck cattles. The area is surrounded by an electric fence in order to minimize any kind of human intervention or disturbance.

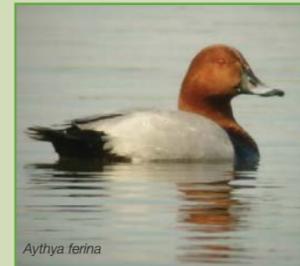
## NATURAL VALUES

### Kis-Jusztus Marsh

The approximately 140 hectares saline moorland in the middle of Hortobágy just off the village Kócsújfalu was formed from the ancient riverbed of the Tisza. The marsh was banked up in 1995 and there was a 10 hectares space as a habitat on a saline lake established. The marsh gets the necessary supply of water year by year, that's why we encircled part of the area with an electric fence in order to prevent total occlusion. Grazing of 'mangalica' pigs and Hungarian grey cattles can makes it sure, that the vegetation - first and foremost - Saltmarsh Bulrush (*Bolboschoenus maritimus*) and Common Reed (*Phragmites australis*) - can be rolled back.

It is a favourite nesting place of several birds, such as Lapwings (*Vanellus vanellus*), Common Redshanks (*Tringa totanus*), Black-tailed Godwits (*Limosa limosa*), Pied Avocets (*Recurvirostra avosetta*) and Common Terns (*Sterna hirundo*). During dry periods several species of shore birds and wild ducks take a rest here while migrating, in the summer whole families of Greylag Geese (*Anser anser*) assemble in the saline lake.

It has been a problem recently, that the marsh was marked out to serve as an emergency-reservoir, so it cannot be grazed safely.



### The wetland of Akadémia Lake

The 29 hectares grassland between main road 33 and 'Akadémia'-fishpond was a habitat of birds in the 1980's. Several bird species, just like Pied Avocets (*Recurvirostra avosetta*), Black-winged Stilts (*Himantopus himantopus*) and other shore birds used to feed and nest here. In the so called 'Nádas-hodály', on the former livestock farm, geese were raised which also served to keep the habitat barren. Because of restrictions introduced by the Directorate of the National Park goose-farming was stopped in 1998. Since then 'Nádas-hodály' is filled with the stock of buffalos, although the appropriate grazing of the field would have been rather dangerous because of the closeness of the busy main road. There is more and more bulrush growing and the place has lost its saline lake character. The importance of saving nature here is forced now by the fact, that researchers found the endangered species of High Stolon-wheat (*Elymus elongatus*) in 2007.



### Dry habitats

#### Grasslands

The Public Foundation is in possession of 59 hectares grassland in the surroundings of Hortobágy and Tiszafüred that serves as a very important feeding- and nesting place for bird species just like the Marsh Harrier (*Circus aeruginosus*), residents of the nearby Red-footed Falcon (*Falco vespertinus*) colony, the Hoopoe (*Upupa epops*), the European Roller (*Coracias garrulus*), the Lesser Grey Shrike (*Lanius minor*), or the Corn Bunting (*Miliaria calandra*).

These habitats are typical examples for saline plain grasslands, representing rare plant species such as the Saline Rose (*Aster tripolium ssp. pannonicum*), the Hungarian Sea-Levander (*Limonium gmelini*), or the Sea Wormwood (*Artemisia maritima*), keeping their natural state is a very important task of saving nature. Co-operating with the farmers working here the problem can be solved by partly cutting, partly grazing.



### Ploughlands

The about 40 hectares ploughland area near Szásztelek is owned by the Public Foundation. This ploughland, which is next to one of the biggest, extensively grazed grasslands of Hortobágy National Park (called Pentezug) has been nesting place of 'the bird of the plain', the strictly protected Great Bustard (*Otis tarda*).



In the early spring the number of insects and small mammals are very low, and the young sprouts of the grass cannot give enough food to the great bustards to get the necessary level of physical condition being able to reproduce. As young bustards need a big variety in their diet from spring to autumn, hen often choose ploughlands to nest which provide several kinds of grain, such as lucerne, rape or sunflower. Agricultural work continuously disturbs and endangers the brood, hens and chicks which are unable to fly. Our most important task is to protect all the nests on ploughlands, to give the bustard chicks the possibility to grow and reach the age of being able to fly and leave their nesting place.

Primary aim of our activity is that's why to establish an appropriate nesting- and feeding place and to ensure an undisturbed and peaceful habitat for this endangered species.

