**WHC Nomination Documentation**

**File Name:** 474rev.pdf **UNESCO Region: EUROPE AND THE NORTH AMERICA**

---

**SITE NAME:** Hortobágy National Park

**DATE OF INSCRIPTION:** 4th December 1999

**STATE PARTY:** HUNGARY

**CRITERIA:** C (iv)(v)

**DECISION OF THE WORLD HERITAGE COMMITTEE:**
Excerpt from the Report of the 23rd Session of the World Heritage Committee

The Committee inscribed the site on the World Heritage List on the basis of criteria (iv) and (v):

Criterion (iv): The Hungarian Puszta is an exceptional surviving example of a cultural landscape constituted by a pastoral society.

Criterion (v): The landscape of the Hortobágy National Park maintains intact and visible traces of its traditional land-use forms over several thousand years, and illustrates the harmonious interaction between people and nature.

**BRIEF DESCRIPTIONS**

The cultural landscape of the Hortobágy Puszta is a vast area of plains and wetlands in eastern Hungary. Traditional forms of land-use, such as grazing domestic animals, have been present in its pastoral society for more than two millennia.

---

**1.b State, Province or Region:** Hajdú-Bihar, Jász-Nagyun-Szolnok, Heves, and Borsod-Abaúj-Zemplén

**1.d Exact location:** 47° 33' N, 21° 7' E

Republic of Hungary
Ministry for Environment and Regional Policy

# Hortobágy National Park

## The Hungarian Puszta

National Authority for Nature Conservation
Hortobágy National Park Directorate

## 1. *Identification of the property*

| | |
|---|---|
| *a) Country* | Republic of Hungary |
| *b) State, Province or Region* | Hajdú-Bihar, Jász-Nagykun-Szolnok, Heves and Borsod-Abaúj-Zemplén counties |
| *c) Name of Property* | Hortobágy National Park<br>(in Hungarian: Hortobágyi Nemzeti Park) |
| *d) Exact location on map and geographical coordinates* | See Map 1. for the location of the Hortobágy National Park in Hungary.<br><br>Central geographical coordinates to the nearest second<br><br>Longitude: 21° 07' 59" E<br>Latitude: 47° 33' 26" N |
| *e) Maps and/or plans showing boundary of area proposed for inscription and of any buffer zone* | See Map 2 and 3.<br><br>Map 2. Zoning of the Hortobágy National Park (including a proposed bufferzone)<br><br>Map 3. Land Cover map of the Hortobágy National Park region |
| *f) Area of site proposed for inscription (ha.) and proposed buffer zone (ha.) if any* | Area of the Hortobágy National Park: 74.820 ha<br><br>Area of the proposed buffer zone: 199 380 ha |

## 2. *Justification for Inscription*

a) *Statement of significance*

Hortobágy is an outstanding example of a harmonious interaction between people and nature, based upon sustainable land-use practices, thereby maintaining a diversity of species and biotopes. The "Puszta" represents the highest scenic quality, with pleasing or dramatic patterns and combinations of landscape features, together with important aesthetic and intangible qualities. The area is completely unspoiled by large scale, visually intrusive or polluting industrial and urban development, with associated infrastructure. It has a distinctive and common character, including topographic and visual unity. At the same time, the integrity of the landscape is maintained with historical monuments, buildings and other structures of great historical and architectural interest. There is consensus among professionals and public opinion as to the world importance of the site, reflected for example, through associations with international renowned writings and paintings about the landscape and its inhabitants. This landscape is undoubtedly a resource of world importance both in terms of rarity and representativeness.

Hortobágy National Park - extending over a vast territory - represents the continuous existence of traditional land-use forms being practised for several thousands of years, maintaining the highest level of biodiversity.

This unique region became the focus of attention of scientists and artists from an early time of its existence.
The Puszta was discovered as early as the 18$^{th}$ century. It is researched in terms of its economic connections with Debrecen on the one hand, and historical studies reach farther and farther layers of history. The early 20$^{th}$ century ethnographers – Lajos Zoltai and István Ecsedi – made authentic reports of the then disappearing traditional pastoral life-style. The Great Plain inspired a large number of Hungarian artists – Sándor Petőfi and János Arany (poets), Zsigmond Móricz, Mór Jókai (writers), Miklós Barabás, sen. Károly Markó, Károly Lotz, Miklós Káplár and Tivadar Kosztka Csontváry (painters) – who, in turn, drew an incomparably vivid picture of their beloved land.

Tivadar Kosztka Csontváry: Storm on the Great Hortobágy (1903)

*b.) Possible comparative analysis (including state of conservation of similar sites)*

In regard to its natural character, Hortobágy National Park is basically a flat, temporary inundated floodplain located on an alluvial fan that has been eroding continuously since the end of the last ice age. It is covered by continental alkaline alluvial soil. Morphological composition of the area is characteristic partially for floodplains, and for loess ridges eroding under steppe climate conditions. The former one is represented by long, levee-like elevations, smaller dune-ranges, ox-bow lakes; the latter one by ditches formed by erosion, smaller surface sink-depressions, surface depressions without an outlet, and the special surface erosion of alkaline soils forming benches.

There are no comparable properties in Europe outside the Carpathian Basin characterised by similar geological and geomorphological features. It appears only in larger continuous patches again east from the Ural River. In Europe, continental plains of solonetz soil reaching a few $km^2$ are regarded as large areas.

Fertő-lake together with the "Seewinkel" area and the series of alkaline lakes of the Danube Valley constituting part of the Kiskunság National Park are also relatively well known alkaline areas of the Carpathian Basin. Fertő-lake is a shallow alkaline lake situated in a depression originally almost without any outlet. From the east, the lake is accompanied by small alkaline ponds accumulated among sand dunes. Dry alkaline soils have small extensions here and, as alluvial deposits of Danube River, they are calciferous. Due to hydrogeological conditions they represent solonchak type. The area is protected by law as part of Fertő-Hanság National Park, and Fertő-lake is included in the list of Ramsar sites. Alkaline plains of Danube Valley are also of calciferous and sodic-solonchak type; the species composition and the landscape history significantly differ from the Hortobágy. Consequently these areas are not comparable.

The Borsodi Mezőség area laying on the opposite (western) bank of the Tisza River has the highest similarity with the Hortobágy. With regard to its extension, this site is the second largest alkaline plain in Europe after the Hortobágy. Local people also perceive this similarity, as they call the area "Little Hortobágy". The legal protection status is satisfactory as it constitutes a Landscape Protection Area which belongs to the Bükk National Park Directorate. The extension of the protected area is approximately one third of the Hortobágy National Park area. Undoubtedly natural values of the site are of great importance, although its integrity is slightly lower (boundaries are more articulated, smaller area), it includes more arable lands, and the number and extension of wetlands is smaller. However the site is a complement of the Hortobágy in a geological sense, hence it displays the picture of the Hortobágy 10 thousand years ago, before the Tisza River (by drifting north-west) affected it by its lateral erosion. However the two plains have preserved their close connection until today. The flora and fauna of the Borsodi Mezőség is reminiscent of that of the Hortobágy. It is generally characterised by the absence, or significantly smaller populations of special dry grassland species in the Hortobágy, while some species have colonised the area from the Bükk Hills. In regard to land use, Hortobágy is comparable with regions of Europe where extensive grazing occurs on extended continuous plains without any settlement, mainly on dry alkaline plains.

*Comparative analysis (continued)*

Here Spanish "dehesa"-s can be mentioned as an example, but they are Mediterranean areas which were developed on non-alkaline soil and with more wooded vegetation. They are also temporarily grazed, but grazing is suspended mainly in summer, not in winter. Another important difference is that the place of "dehesa"-s were considerably forested in historical ages. Conversely, after the last glaciation, Hortobágy never became afforested (even previously was not forested). The origin of nomadic animal farming (4-4,500 years ago) stopped the possibility of development of additional large forest patches.

Although they have a significantly smaller extension, due to their alkaline character, pastures at the Sinoe and Razelm Lakes on Istria, outside of the Carpathian Basin have much higher similarity with the Hortobágy. Basically these are also sheep pastures, similarly unploughed and unforested, but these alkaline soils are of solonchak type, contrary to the Hortobágy.

From a landscape and land use perspective, Aszkanyija Nova National Park in South-Ukraine is similar to Hortobágy, but has a significantly smaller extension. This area is an ancient loess grassland characterised by a very deep water table (> 15-20 metres) whilst the average depth in the Hortobágy is 1-4 m. In this grassland, alkaline patches occur only in larger surface sink-depressions of the steppe. It can be stated that, considering both size and character, Hortobágy – **being the largest puszta on the continent** - is unique in Europe.

*c) Authenticity/Integrity*

Salinisation can be found on about 15 percent of the Great Hungarian Plain. The Great Hungarian plain is approximately 100.000 square kilometres in size, and lies in the central part of the Carpathian basin. Although some written historical records connect salinisation and the river controls in 1850-1880, several itineraries mention the saline plant and soil patches on Hortobágy. Though on the greater part of Hortobágy we have to reckon with productive agriculture and the presence of animal keepers in the last 6-7000 years, the quartergeological-quartermalacological analyses of the last 30.000 years prove that **the formation of salinised areas on Hortobágy is not a result of human activities**. They were present on the eastern part of Hortobágy at the end of the Pleistocene, far before the beginning of productive agricultural activities. Geological and geochemical analyses have proved that the base-rock of high carbonate and silicate content formed between 14.000-40.000 years (so-called infusion loess) has a basic role in the process of salinisation and the salinisation process is a consequence of the interaction of climatical and hydrogeological properties.

As we can see above, if the base-stone/hydrological/climatical conditions existed, salinisation could begin on Hortobágy. This period was an interstadial one (25.000-32.000 BP years before) with gentle, arid vegetation periods when a sodic soil-horizon developed on the eastern side of Hortobágy. The sodic soil-horizon is proved by complex geochemical analyses. The presence of all the mineralogical

*Authenticity/Integrity (continued)*

features characteristic to salinisation (amorphous silicagel, calcite precipitatum) were justified and even submicroscopically cristalline gypsum could be detected. After this period, traces of salinisation have been found in layers formed at the Pleistocene/Holocene verge, younger than 12.000 years, proved not only by mineralogical-geochemical methods but by a presence of a halophytic Mollusca species, *Anisus spirorbis* at that layer. According to recent fauna analyses, this species is still capable of living in alkalic, natrium hydrocarbonate waters of pH 9 to 10. Like the only element of the limnic malacofauna, so we can conclude from the increase of dominance of this species that salinisation and alkalisation of the waters of the area took place. It occurred between 9.000 and 12.000 BP on the eastern and south-eastern part of Hortobágy.
According to bones of prey animals derived from archaeological sites, the real steppe elements (*Equus ferus gmelini, Equus hemionus anatolicus*) also appeared on Hortobágy between 3000 and 7000 BP.

**These mineralogical, quarterpaleontological data prove unambiguously that on Hortobágy, the salinisation and the formation of sodic puszta took place far before historical productive agriculture and animal keeper cultures.**

Complete series of grassland communities interspersed by natural and semi-natural wetlands are found in the Hortobágy National Park. These series include loess grasslands of elevated loess ridges, different communities of dry alkaline grasslands with special surface erosion microforms, open water surfaces of marshes, reeds, tussocks and alkaline meadow belt of wetlands.
Through its large extension, the area provides suitable feeding and roosting sites for some birds of prey requiring large territories, including the imperial eagle *(Aquila heliaca)*, white-tailed eagle *(Haliaeetus albicilla)*, long-legged buzzard *(Buteo rufinus)*, saker *(Falco cherrug)*. Also huge flocks of several species of migrating birds such as the common crane *(Grus grus)*, geese *(Anseriformes)*, dotterel *(Charadrius morinellus)* inhabit the area. In this respect, Hortobágy National Park is appreciated also by international conventions, as the total area of the National Park is a Biosphere Reserve under the UNESCO MAB Programme, and 23.121 ha are included in the list of Ramsar sites as wetlands of international importance.
The man-made environment of the Hortobágy National Park is one of the most peculiar historic relics of not only Hungary, but Central-Europe, as well. The history of the region and the Puszta reaches back to the distant past.

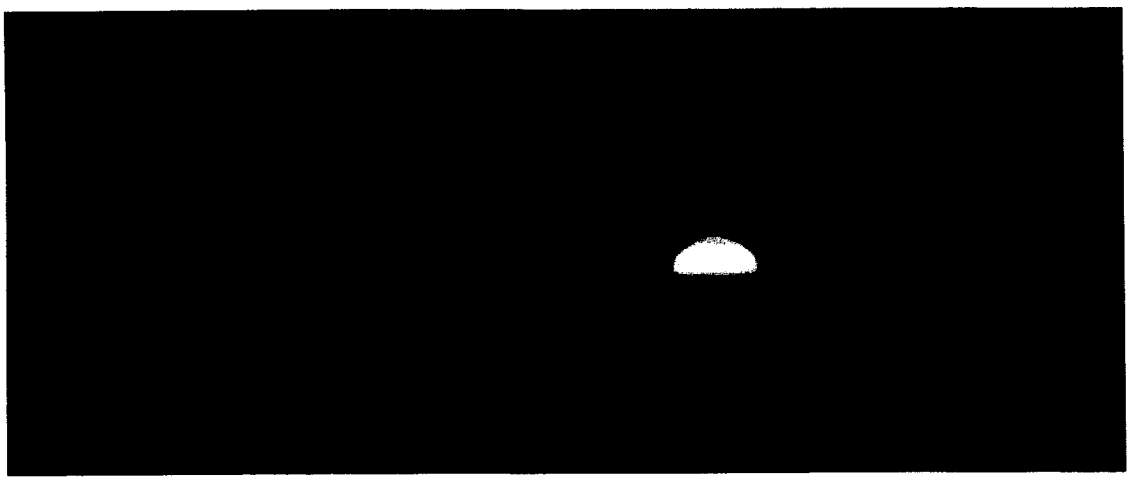
The tumuli („*kurgan*-s" in Hungarian) – ancient sepulchral mounds, barrows – which are the unmistakable constructions of the Plain are among the special artefacts of the cultural heritage of the proposed area – the Hortobágy National Park. The tumuli are not only important points on the landscape, but invaluable treasures of the culture and history. The archaeologists of the region traced the „*kurgans*" back to the Brass Age and the early Bronze Age and these mounds contain the remains of Brass Age and Bronze Age settlements

*Authenticity/Integrity (continued)*

and burial sites, Sarmatian and Germanic graveyards, Hungarian graveyards from the time of the Hungarian Conquest, graves and churches of the Arpadiane age and Cumanian graves
were found. Another type of the mounds is the, so called, „*tell*" from the Neolithic or the Brass Age with traces of settlements. The Hungarians conquered the Carpathian Basin in the $10^{th}$-$11^{th}$ centuries, settling in an area rich in rivers and marshes ideal for animal husbandry. By the beginning of the $13^{th}$ century there was a much denser settlement structure than that of today, which was re-shaped largely after the Tartar Invasion in 1241-1242. Several settlements at the time had small churches - built on tumuli - and the Ohat and Káta clans even disposed of religious centres with monasteries. The settlement density of the area (settlement/50-100 $km^2$) was, however, under the national average (settlement/10-20 $km^2$).

Notwithstanding, the most valuable feature of the cultural heritage of the Hortobágy region and Hortobágy National Park is the outcome of the transformation – started in the $14^{th}$ Century and completed by the end of the $16^{th}$ century – into what we now call the Puszta. The (former populated) inner area of the Puszta became uninhabited and the deserted lands were mostly bought, subsequently rented out and, from the early $18^{th}$ century, used for pastures by the City of Debrecen.

The extraordinary and unique character of the cultural heritage has been created by the extensive animal husbandry that was characteristic to this region – concentrated to much smaller parts by the river control and widespread agricultural cultivation started in the middle of the $19^{th}$ century – which managed to survive in the area of the Hortobágy National Park. This type of animal husbandry harmonised with nature, and hardly transformed it at all. The minor changes which did take place were confined to the digging of draw wells and the building of smaller temporary dwellings, communal buildings, bridges, popular inns (*csárda*). The Hortobágy Nine Arch Bridge is the longest stone bridge of the country. The Hortobágy *Csárda* next to the bridge is the most famous and largest inn of the Great Plain. The bridge built in the first decades of the $19^{th}$ century and the late $18^{th}$ century *Csárda* were the location of the once important and renowned national animal fairs. There are more *csárda*-s in the area which are also declared historic monuments for their architectural value.



Sunrise behind the *kurgán*

The Hortobágy *Csárda*

*d.) Criteria under which inscription is proposed (and justification for inscription under these criteria)*

24.a (iii-iv) The Hortobágy National Park area bears a unique testimony to the cultural traditions of 17th-19th century animal keepers.

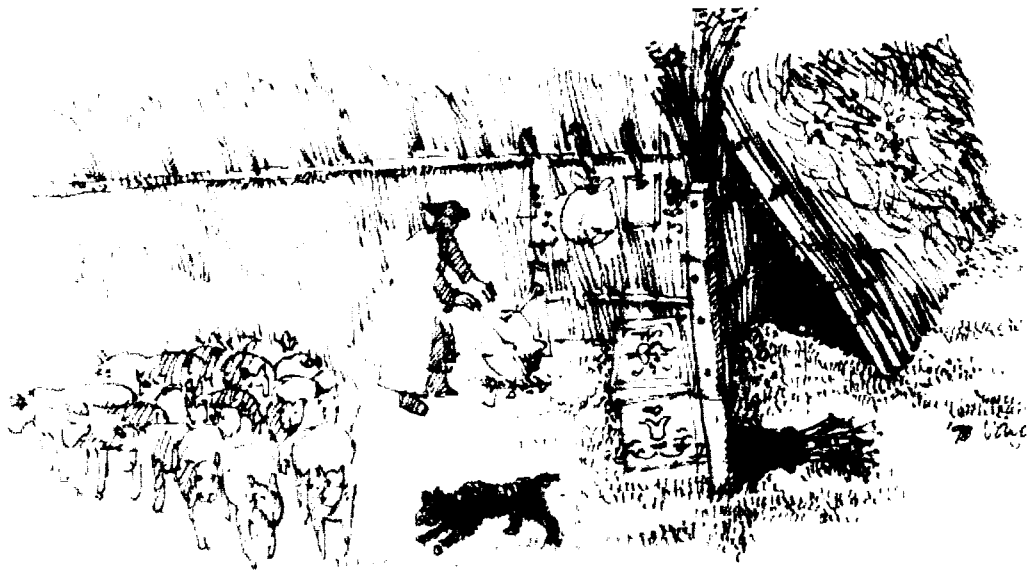
The Hortobágy National Park – the proposed area – is surrounded by settlements on three sides and the man-made environment as seen today is characterised by a rich historical versatility. It encompasses relics of various nations and cultures leaving their traces behind in the course of their migrations. There are architectural monuments here ranging from *kurgan*-s from as early as the 2nd Millennium BC, through the devastated settlements of the Hungarian Medieval Age to the numerous 18th and 19th century buildings functioning even today and which are of exceptional architectural value.
Although, today's man-made environment is diversified and stratified, the feature which makes this region uncommon in Hungary and unique in Europe was mainly formed by the herding activity – which attained great significance in the 18th and 19th centuries. The process of depopulation started in the 14th century and the lands became deserted by the end of 17th century following the series of wars with the Ottoman power.

24.a (v) The Hortobágy National Park area is a still existing, exceptional example of the sustainable land-use of grazing on natural grasslands.

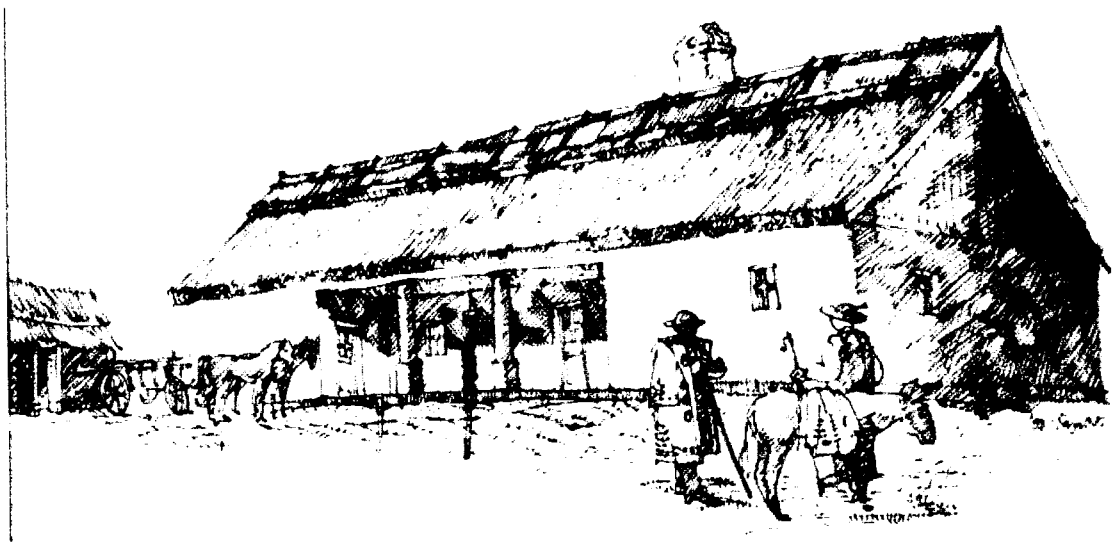
Animal keeping on extensive grasslands was the basic activity and life-style of the nomadic people inhabiting this land in 4-5000 BC and also of the Hungarian conquerors. This way of life was maintained in the middle ages – a late 16th century map refers to this region with grazing cattle – and its later boom put a final imprint on the man-made environment of the region. Herding is a way of land use which does not alter the natural landscape, but instead, it adopts the natural endowments without causing any damage to them. This land use only requires extensive pastures and very few , if any, solid buildings. Therefore, it is not accidental that the proposed area contains only few built constructions. They are wells built for the animals, thatched wooden winter huts, bridges over rivers and *csárda*-s scattered around the roads in half jordana, or jordana distance. They are not only the invaluable records of the former pastoral life, but also the living proof of the harmonious co-existence of man and nature.

24.b (i), 38. The cultural landscape represented by the Hortobágy National Park possesses all the distinctive characters of traditional animal keeping practices which supports high biological diversity.

The **largest pasture in Europe of natural origin (not by deforestation) is found in the Hortobágy National Park**, and is therefore characterised by a high diversity of natural values (both species and habitats). As there is no individual settlement in the National Park, human impact had a minimal influence on the ancient character of the area. The endless, flat horizon uninterrupted by any



Simple shelters, built mainly from reed, protected
the animals and the shepperds against rigours of weather



The Meggyes *Csárda*

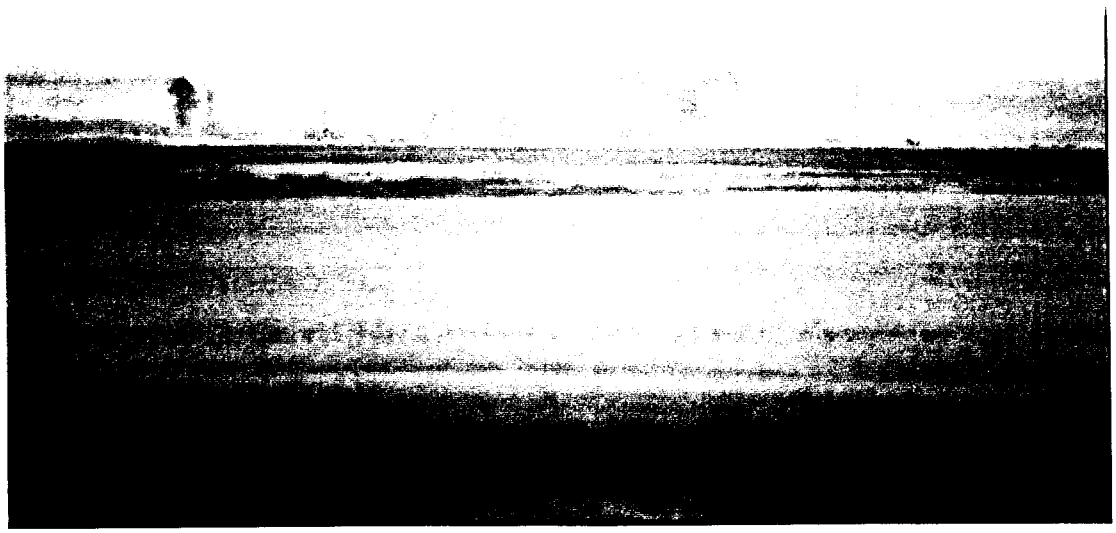
*Criteria under which inscription is proposed (continued)*

settlement, trees, forest, or any other elevations, is aesthetically unique. Alkaline marshes with the largest extension and highest level of diversity covering tens of $km^2$-s are found on the nominated property. Similar to marshes, the largest fish-pond system of Central-Europe is inserted into grasslands; the total area exceeds 60 $km^2$. Due to the diverse composition of natural and man-made wetlands, Hortobágy is one of the most valuable waterbird paradises.

24.b (ii) The adequate protection of the Hortobágy National Park is guaranteed by the recent ownership situation, the Hungarian nature conservation legal system and international conventions.

Major part of the Hortobágy National Park area (almost 70 %) and the most important cultural monuments are owned by the Hortobágy National Park Directorate. Adequate protection of the complete area is assured by the Act No. LIII. of 1996 on Nature Conservation. Nature conservation management is based on the Management Plan of the Hortobágy National Park, prepared in 1997.
Total area of the nominated property is a Biosphere Reserve under the UNESCO MAB Programme, and more than 23.000 ha are protected by the Ramsar Convention as wetlands of international importance

The farm is easily rebuilt by the special winter mirage in a few seconds



## 3. *Description*

*a) Description of Property*

**Natural heritage**

The "locus classicus" of the alkaline and non-coastal sodic and saline soils in Europe is the Carpathian Basin. Among all occurrences of these types of soils in the Carpathian Basin, the largest and most diverse area is the Hortobágy considering the types and sub-types of soils, special micro-geomorphological conditions, erosional forms, microhabitats etc. As an example of this diversity one can mention the altitude of the erosional benches ("padka" in Hungarian) varying from 1-2 cms to 1.2 meters. Alkaline and sodic soils cover more than 60% of the whole (2300 sq km) area of the Hortobágy. As a result of its geological origin, soil and climatic conditions, the character of the landscape is rather treeless and absolutely flat (the biggest natural relief difference is only 6 meters within tha park area). There are some places of undisturbed horizon which is an extremely rare phenomenon in Europe. Continuous, natural grasslands cover an almost 54.000 ha (CORINE Land Cover data) large area diversified by some patches of alkaline marshes, fish ponds, small croplands and forests.

The most typical natural habitats of the National Park from the lowest levels to the highest are:

1. Open water surfaces of the deepest part of the marshes, covered by hair-weed (dominant plant species are: *Potamogeton sp.*, *Startiotes aloides*, *Nymphaea alba*, *Nuphar luteum*, *Nymphoides peltata*).
2. Reeds and other similar plant associations (dominated mainly by *Typha angustifolia* or *Schoenoplectus tabernaemontani*).
3. West-Ponto-Pannonian continental medium-tall (up to 1 m) grassy salt marsh community, like reeds, and which drys up only occasionally. This type of community is dominated by *Bolboschoenus maritimus* and sparsely by *Schoenoplectus tabernaemontani*. It occurs primarily in well-vegetated salt marshes and on the fringe of more saltic stagnant waters with larger open water.
4. Medium tall grassy alkaline meadows with tussocks on column structured clay soils poor in carbonate (*Beckmannion eruciformis* association-group) with the following plant-association types:

4.a Medium tall grassy meadows with tussocks on more alkaline soils of lower surfaces with a long time water-cover (*Agrostio-Beckmannietum eruciformis*). Rich in halophytic species (*Bupleurum tenuissimum*, *Pholiurus pannonicus*, *Puccinellia limosa*).

4.b Meadows on drier, less alkaline soils, poor in halophytic species (*Agrostio-Alopecuretum pratensis*, *Agrostio-Glycerietum poiformis*). On lower levels between the tussocks one can find hygrophile species (e.g. *Lysimachia nummullaria*, *Lythrum hyssopifolium*, *Sium sisaroideum*).

5. Semi-desert like plant associations on carbonate-poor column-structured clayey soils sometimes without structure (*Puccinellion limosae* association-group, dominated by *Puccinellia limosa*, *Puccinellia distans* and *Aster tripolium ssp. pannonicus*).

*Description of the Property (continued)*

6. *Camphorosmetum annuae* community. Desert-like plant association poor in species on higher drier surfaces. Characteristic species are *Matricaria chamomilla, M. inodora*. Where the structure of the soil changes from clay to silty, some *Spergularia* species (*S. rubra, S. salina, S. maritima*) also appear.
7. *Artemisio santonici-Festucetum pseudovinae* community, on lower surfaces usually with an early spring water-cover. The humic level of the soil is less than 10 cm, and is often eroded. It is similar to the *Artemisia*-steppes and semi-deserts of Middle-Asia. Other characteristic species are *Trifolium parviflorum, Bupleurum tenuissimum, Plantago schwarzenbergiana, Taraxacum bessarabicum*. The plant-cover is never complete. This association covers the greatest areas of the Hortobágy National Park (30-40 %).
8. *Achilleo-Festucetum pseudovinae* community, mainly on clay soils with 10-30 cm humic level, characteristic *Achillea* species of which are *A. setacea* and *A. collina*. It can be characterized by small *Trifolium* species. Other characteristic species are *Lotus tenuis, Lotus angustissimus, Centaurea pannonica*. It covers large areas up to tens of $km^2$-s.
9. Tall-grassy loess-steppe grassland, dominated by *Festuca rupicola, Salvia nemorosa, Salvia austriaca*. In the area of Hortobágy, usually some degraded residual patches remain, but the richest still consist of *Astragalus austriacus, Phlomis tuberosa, Inula germanica*, etc.
10. *Peucedano-Asteretum sedifolii* community with a medium tall grassy habitus, primarily in the clearings of oak forests on saltic soils covered by water in early spring. Species-rich association where elements of meadows, dry grasslands and saltic areas can also be found: *Vicia narbonensis ssp. serratifolia, Aster linosyris, Dianthus pontederae, Rumex pseudonatronatus, Iris spuria, Festuca pseudovina, Alopecurus pratensis* etc. This association has its origin in the ages of the early Holocene.
11. Residual oak forest on alkaline soils. Occurs always as a mixture with the *Peucedano-Asteretum* community. The upper canopy is dominated by *Quercus robur*, and by *Qu. cerris*, the bush-layer by *Acer tataricum, A. campestre* and many other species, the undergrowth by forest and alkaline grassland species.
12. Oak-Ash-Alm gallery forest. It occurs only along River Tisza. Closed forest dominated by *Quercus robur, Ulmus minor* and *Fraxinus angustifolia ssp. pannonica*.

The above described biotopes have the following distribution within the National Park (excluding cropland, forests and fishponds):

- *Artemisio-Festucetum*: 35-40 %
- *Achilleo-Festucetum pseudovinae*: 30-35 %
- *Agrosti-Alopecuretum pratensis*: 15 %
- All other meadows, mainly *Agrosti-Beckmannietum eruciformis*: 5 %
- *Bolboschoenetum*: 3 %
- Reeds: 3-4 %
- Others: 1-3 %

As it is proved above the nominated site can be characterised by a high diversity of bitopes. As a consequence of the biotope

Desert-like plant associations very poor in species…

in contrary with the loessy grasslands

*Description of the property (continued)*

characteristics diversity of plants is not so high, on the other hand there are some valuable species in the National Park, listed in Table 1. of ANNEX A.

The richest and the best known value of the Hortobágy is the avi-fauna. This is one of the best nesting and migrating places for waterfowl and raptors in Europe, which we can illustrate as follows:
Based on the most recent Ramsar-list, we can summarize the importance of the Hortobágy National Park briefly related to the waterfowl-species.
Related to all subspecies of a waterfowl, the population of the following, as nesting, reach 1 to 10 % of the total world population in the Hortobágy National Park area: Bittern (*Botaurus stellaris*), Spoonbill (*Platalea leucorodia*) and Whiskered Tern (*Chlidonias hybrida*).
Related to one subspecies of a waterfowl species, the population of the following, as nesting reaches 1 to 10 % of the total world population in the Hortobágy National Park area: Great Egret (*Casmerodius a. albus*).
Related to all subspecies of a waterfowl species, the population of the following reach more than 10 % of the total world population, as migrating birds, which stay in the area of the Hortobágy National Park for at least several weeks: White-fronted Goose (*Anser albifrons*), Crane (*Grus grus*), Redshank (*Tringa totanus*).
Related to all subspecies of a waterfowl species, the population of the following reach 1 to 10 % of the total world population, as migrating birds, which stay in the area of the Hortobágy National Park for at least several weeks: Lesser White-fronted Goose (*Anser erythropus*), Slender-billed Curlew (*Numenius tenuirostris*), Ruff (*Philomachus pugnax*). In Europe, the best wintering grounds of the Lesser White-fronted Goose are found on the Pannon Plains and the Hortobágy seems to be the most important area. The mysterious Slender-billed Curlew occurs regularly at only a few places in the world (its nesting places still unknown). Hortobágy is one of the last areas where some specimens of this bird are recorded each year.
From the above mentioned species, the following nest in reeds or reed-like alkaline marshes: *Botaurus stellaris, Platalea leucorodia* and *Casmerodius a. albus*. They also use usually other types of habitats as feeding places, such as shallow ephemeric open water surfaces and small lakes, artificial fish-ponds, rice-fields, channels and agricultural areas (mainly after harvesting).
Only one mentioned species prefers the vegetation-rich clearings of stagnant waters. This is the Whiskered Tern (*Chlidonias hybrida*) whose floating nests occur on the leaves of different hair-weeds.
The sleeping and resting places of the migrating birds are mainly shallow water-covered alkaline grassland areas and the fish-ponds in spring and in autumn. The *Charadriiformes* species also stay here to feed, but the geese and the crane often select the surrounding agricultural areas.
The Birdlife International handbook on the population numbers of endangered birds of the world enumerates 17 globally threatened and endangered species which occur in the area of the Hortobágy. Of them, the following regularly nest:

Spoonbill in the marsh

Lekking Great Bustard males

*Description of the Property (continued)*

- **Pygmy Cormorant** (*Phalacrocorax pygmaeus*) /30 pairs/
- **Corncrake** (*Crex crex*) /few pairs/
- **Great Bustard** (*Otis tarda*) /recently about 150 inds., but the population also continues to the south of the Park in the "Dévaványa" region (in this case more than 500 specimens in a 4.000-5.000 sq.km. large area/)
- **Aquatic Warbler** (*Acrocephalus paludicola*) /620 singing males, more than 10% of the known total world population/
- **Long-legged Buzzard** (*Buteo rufinus*) /the only nesting area in Central-Europe with 1-2 pairs)

Other important species:

White-tailed Eagle (*Haliaëetus albicilla*) /nesting occasionally, but regular wintering with the top size of 70-80/,
Red-breasted Goose (*Branta ruficollis*) /regular, migrator up to 10-13 inds./
Kite (*Milvus milvus*) /some inds. appear regularly in all year/
Imperial Eagle (*Aquila heliaca*) /summering juveniles mainly, max. 10 inds./
Slender-billed Curlew (*Numenius tenuirostris*.) /see above/.
One has to mention that based on the Atlas of Anatidae Populations in Africa and Western Eurasia the Hortobágy National Park is a key site for a number of species, including *Anser albifrons, A. erythropus* and *Aythya nyroca.*
The extensive alkaline grassland has an endemic bird, which is a subspecies of a widespread small Lark. This is the Short-toed Lark (*Calandrella brachydatyla hungarica*) of which the Hortobágy National Park is the only known area where this subspecies nests in all year. Unfortunately, the size of the population is decreasing rapidly and now it is near extinction. It prefers the *Artemisia santonicum-Festuca pseudovina* dominated grassland community on lower surfaces of the pasture usually with an early spring inundating, where the vegetation covers the surface, only partially interrupted with bare soil surfaces. The other preferred habitat is the barren surface of agricultural areas on alkaline soil where the density of crop is low.
A unique element of the avifauna of the Hortobágy the invasive Rose starling (*Sturnus roseus*), appearing in great numbers, but not frequently (only two times in the last 60 yeras). In 1994-95 it had a big colony of 1700 nesting pairs in the Hortobágy region.

The most valuable mammals are the Fish-otter (*Lutra lutra*) with a strong population consisting of several hundred specimens, and a very rare living fossil rodent of the Ice Ages, *Sicista subtilis trizona.*

Valuable animal species (including Invertebrates) occurring in the Hortobágy National Park of international importance are listed in Table 2. of ANNEX A.

Long-legged buzzard

Rose-coloured Starling

*Description of the property (continued)*

**Cultural heritage**

The Hortobágy National Park cannot be separated from the region which incorporates it – Hortobágy small region – which is an integral part of the Tisza Plain comprising an independent regional-historical unit in Eastern Hungary. The proposed area is surrounded by settlements from east, south and west and was flooded by the Tisza River almost every year from the north before the river control took place. One of the structural centres of the settlement ring around Hortobágy National Park is on the Tisza River at Tiszafüred while the other is around the municipal city of Debrecen. The structural ridge of the area intersects the Plain across the Hortobágy River through the renowned bridge with the Hortobágy village built here in the recent decades. The ridge – and traffic route – dates back to a long time, and it connected Pest-Buda the capital of Hungary through Tiszafüred and Debrecen with Transylvania.

While the above structure of the man-made environment was formed in about 1000 years from the Conquest ($10^{th}$-$11^{th}$ centuries) till today, the lands conquered by the early Hungarians had already been pre-formed. The *kurgan*-s had already been standing and they are still the distinctive elements of the region. The *kurgan*-s are claimed to be either burial places from the Brass, or early Bronze Ages, or Neolithic-Brass Age settlement remains, *tell*-s, or guard and border mounds by archaeologists. In some cases they are not more than geological formations. So, the *kurgan*-s are the unmistakable patterns of the landscape of the Puszta and also valuable cultural and historical relics. They are normally 5-10 metres high and 20-50 metres in diameter with a conic, or domic shape which are always located on dry land but with water resources in the vicinity of former water flows. Although most of the mounds or *kurgan*-s were plundered by later generations, we have relatively reliable knowledge of the early burial habits owing to the relic-rescuing findings. Sometimes the deceased was wrapped up in a mat only and then covered with dirt. In other cases, a small wooden structure was erected above the body under the mound. There were also findings where the *kurgan*-s were underlain by a complex system of labyrinth which led to the burial chamber. The sepulchral mounds must be differentiated from mounds with settlements, or *tell*-s. The *tell*-s are lower and wider than the sepulchral mounds with an irregular ground-plan.

The *kurgan*-s occasionally show rich historic stratification. They were often re-used for burials by other populations living here later. Even the new Hungarians buried the dead here and they built churches on the top of them.

The middle ages of the area is known from archaeological finds and historical documents. In general, between the $11^{th}$-$12^{th}$ and the $16^{th}$ centuries the proposed area was much more densely populated than today, but far less densely than other parts of Hungary of that time. This medieval settlement structure was centred along the road leading from Pest-Buda to Transylvania through the crossing places near Tiszafüred and through the town of Debrecen, being the basis for today's roads, however, the former road-line must have depended on

*Description of the Property (continued)*

the extension of the floods of the Tisza River. It seems to be certain though, that the Hortobágy River was crossed then where it is today, and there were notes made about the *Nagyhortobágy* wood bridge as early as the 14th century.
The settlement structure of the middle ages that can be reconstructed is similar to that of today in having an open access from the north with very few inhabitants, however, there used to be a good number of settlements in the rectangle closed by the present Hortobágy, Nagyhegyes, Nádudvar and Nagyiván. Large settlements could once be found in the areas east from Karcag, Berekfürdő and Kunmadaras line according to the researchers. Their names Ohat, Bodajcs, Bágyegyház, Derzs, Csécs, Papegyháza, Zám, Szabolcs, Máta, Balmaz, Elep, Angyalháza, etc. – and very often preserved in the names of later Puszta-s.
Many of these settlements had a church: we have data of several churches in the surrounding of Hortobágy village. Two clans – the Ohats and the Kátas – had their regional centre with a monastery. Most of the churches were small and simple in structure with an independent belfry. The nave of the main building normally ended in a round-arched sanctuary.
It remains for the future to acquire more knowledge about the middle ages on the basis of systematic archaeological data collection and the presentation of the possible reconstruction of the findings.
The transformation – the depopulation – of the region started as early as the 14th-15th centuries and the process took a wider course during the Ottoman occupation of the country which lasted for 150 years. Never again did the spacious lands of the Puszta attract new population. The animal husbandry which has always been a vital and thriving activity on the Puszta and shaped by specific historical circumstances being a special form of exploitation of the region, shaped the cultural heritage and established what is known all over the world as the Puszta, or rather the Hungarian Puszta. This type of environmental formation includes very little building and whatever gets finally built is only built temporarily. Wells for the animals, provisory winter shelters and accommodations made of everywhere available wood and reed, they were easy to replace and rapidly decaying. The remains of the constructions which survived till today are – bridges and *csárda*-s, public institutions built by the settlers and owners of the Puszta – of more durable materials.

The following main historic monuments can be found in the area of the National Park or its vicinity:

*Balmazújváros*

Kishortobágyi *Csárda*; built in the second half of the 18th century next to Road 3316. between Tiszacsege and Debrecen.

*Hortobágy*

Shepherd's Museum; former carriage shed (stop-over) place. Built around 1780 near the Nine Arch Bridge.

*Description of the Property (continued)*

Nagyhortobágyi *Csárda*; originally built in 1699, rebuilt and extended in 1737, 1777, 1781, 1815 and 1880.

Nine Arch Bridge; built in place of the former wood bridge in Classicist style between 1827 and 1833.
Architect: Ferenc Povolny

*Nagyhegyes*

Kadarcsi *Csárda*; near Road 33., built in the first half of the 19th century.

*Nagyiván*

Görbe *Csárda*; built around the middle of the 18th century.

*Tiszafüred*

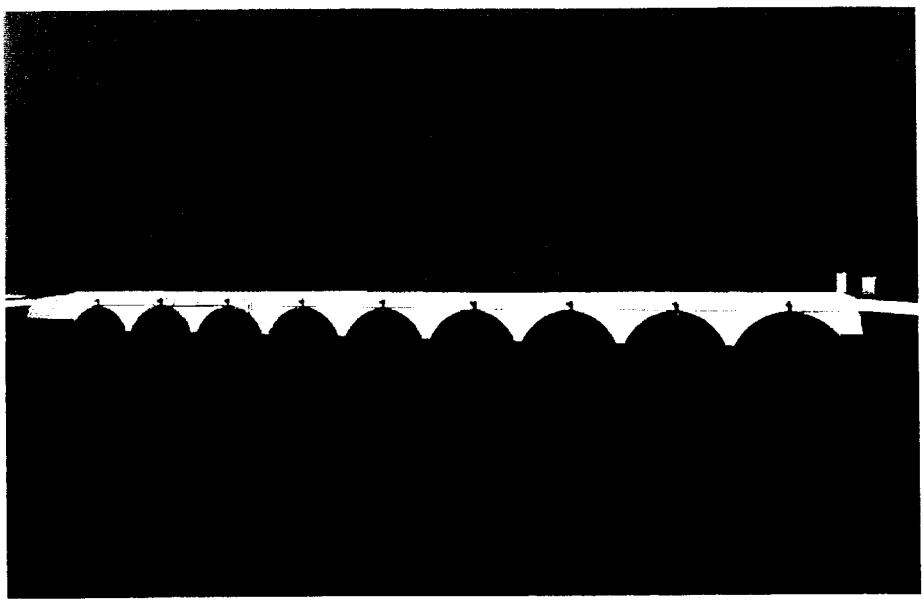
Meggyes *Csárda*; built along the remains of the former salt road, on the county border around 1770.

The Nine Arch Bridge of Hortobágy with the *csárda* and the carriage shed nearby, being the scenery of fairs in the past and today, is the architectural symbol of former landscape exploitation and of pastoral lifestyle.

The Nine Arch Bridge is the longest stone bridge not only in Hortobágy, but also of Hungary. Medieval remains and the wood bridge were replaced by the stone structure designed by Ferenc Povolny between 1827-1833. Above the squat stone-covered river piers are stone-framed arched apertures erected. The parapet wall opens up at the abutments so that the cattle, sheep and swine could be driven through the bridge rapidly. With its good proportions, sturdy and well-balanced structure, the bridge is an unmistakable relic of the Classicist style.

When we talk about the Nine Arch Bridge we should not forget about the Zádor Bridge which is located in the southern part of the proposed area. This stone bridge also used to have nine Arches. It was 76 metres long and built in 1809. The 1830 flood of the Zádor River swept away the two side piers and they were never rebuilt. There is no water in the river bed today.

Another prominent feature of the cultural heritage are the *csárda*-s which can be found in good numbers in the proposed area. The *csárda* is a provincial inn characteristic to the Great Plain of Hungary of the 18th and 19th centuries. The *csárda*-s gained significant due to the rising importance of crossing roads and the more and more widespread animal husbandry in the region. The *csárda*-s were places where food and lodging were offered and which were built outside the settlements in half jordana, or jordana distance. Sometimes, however, they do not offer more than a bar or a kitchen. The building most of the times houses the host or the owner of the *csárda*. The typical



The Nine Arch Bridge on the Hortobágy River

The Zádor Bridge

*Description of the Property (continued)*

*csárda* of the Great Plain consists of two buildings facing each other, both single-storied, thatched and occasionally shingled or tiled with a draw-well, completed with a large wooden trough, an iron-fitted bucket. There was normally a tavern set up on one side of the road equipped with a railed-off counter in a room which had access to the wine cellar and the flat of the inn keeper consisting of kitchen, room and pantry. A few *csárda*-s also had a couple of guest rooms. There were very few *csárda*-s with more than one or two rooms, like the famous ones at Kadarcs and Hortobágy along the heavily travelled Debrecen-Pest route. The *csárda*-s always had a columnar porch. Sometimes a larger porch to drink wine in the shade, or to sleep free of charge at night. Opposite the *csárda*, on the other side of the road, was the stand for the carriages and the horses as well. There was a wide double wing gate at both ends and a smaller door on the wall facing the *csárda*. Besides the two main parts of the building further important structures were a good fresh water well, the trough, the hurdle, the barns for produce and hay.

The Hortobágy *Csárda* is the most important such institution of not only Hortobágy, but the Great Plain as well, which together with the neighbouring Nine Arch Bridge, constitute the architectural emblem or symbol of the region and of its typical life-style. The buildings are more of a traditional *csárda* than a lodging. The „L" shaped cellar, the single-storey building with porch received its final form after several archaeological periods – 1737, 1777, 1781, 1815, 1880 – in accordance with the researchers. Facing the building on the other side of the road stands the carriage shed with undivided inner space from the 18th century, which houses the Shepherd's Museum today.

Another inn, the *Kishortobágyi Csárda,* is located near the bridge on the Hortobágy River on the road from Balmazújváros to Tiszacsege, which is believed to have been built before 1790. The different architectural patterns of the unusually symmetric, closed building with porch suggest that it received its final shape in several stages of rebuilding.

The *Kadarcsi Csárda* on the Debrecen-Tiszafüred road next to the Kadarcs brook was built in the first half of the 19th century. The „L" shaped emblematic Classicist building with an arched porch survived until today after several smaller transformations, unlike the carriage shed on the other side of the road which disappeared some time ago.

The *Meggyes Csárda* can be found east of Tiszafüred, but in the proposed area, which was built after its predecessor burnt down around 1770. Today it is the *Csárda Museum* of the National Park. The *Meggyes Csárda* is an excellent example of folk art, the columnar porch is a hint to Classicist style.

The *Görbe Csárda* is on the village border of Nagyiván and it was built in the middle of the 18th century. The *csárda* features a large arched cellar built of rubble-stone.

*Description of the Property (continued)*

We have to review here those special structures of the former pastoral life-style which have already decayed, but they used to be an integral part of the image of the Puszta. They were raised by the people who lived together with their stock. These were structures that sheltered them from wind, sheepfolds, pens, hurdles and small huts for the shepherd. They all shared one common feature, namely, temporality. They were built of reed and wood that was abundant in the region, but decayed rapidly, and the shepherd could leave them behind any time. The large draw wells with several arms were made of wood, but they were more durable constructions which compassed the shepherds around the Puszta. It is the hallmark of the image of the Puszta.

Temporary or movable constructions of herdsmen
belonged to the traditional way of living in the puszta

*b) History and Development*

There are two major periods in the history of Hortobágy: the long period before the first Hungarian conquerors appeared in the 9th century and settled for good in the 10th and 11th centuries, and the 1000 years after the Conquest, which can be broken down into further stages.

In the long period from the Neolithic Age till the Hungarian Conquest, there was a constant influx of migrating tribes to the Carpathian Basin. It was the nomadic people who invaded the land around 2000 BC – the end of the Brass Age – coming from the eastern pastures who noticeably transformed their living environment. They built a large number of mounds in our region and East of the Tisza River.

There is little knowledge of the local culture during the Bronze Age, however, the equestrian people of oriental origin of Iron Age are known to have used similar mounds for burials in the 8th-7th centuries BC.

The area fell outside the borders of the Roman Empire, and it was inhabited by the Sarmatians, equestrian people from the east. Themselves and their biggest group, the yazigs, who occupied the Great Plain - were subordinated to the Romans. The fortification system built by them, the so called *Csörsz-árka* (Csörsz trench) was considered the first defence-line of the Roman *limes*. Its remains can still be seen in the north-east areas.

The Avarian Conquest took place around 567 and its most important remains is the Reigning Prince Shrine of Kunmadaras, outside of our region. They were followed by Slavic settlers whose heritage is rather scanty.

So, the area had been under various influences before the Hungarian Conquest in the 10th-11th centuries, however, it assumed its current face during the millennium following the Conquest.
Since the area was ideal for animal husbandry for the Hungarian population, they occupied the territories around the Tisza River, rich in water supply and marshes in the 10th-11th centuries. By the early 13th century they established a system of settlements in the area – including the currently deserted lands of the Hortobágy National Park – with much denser population than that of today.
The structural axis of the region was the trading route which connected Buda the capital of Hungary through Tiszafüred and Debrecen – rising in significance as a commercial centre – with Transylvania. The earliest records about the bridge crossing the Hortobágy River were made in the 14th century.
The next wave of newcomers were the Cumanians before the Mongol Invasion of 1241-1242. The places of their first settlements are unknown, but a later decree determines their locations precisely and one of them is today's Nagykunság at the south-west corner of Hortobágy.

*History and Development (continued)*

The Mongol Invasion of 1241-1242 devastated the whole area and some formerly flourishing settlements never rose again, other villages disappeared after the deadly plagues between 1348-1360 and several settlements were digested by what we call an early „urbanisation" of the 1350-1410 years.
The City of Debrecen lying east of the region underwent a dynamic development at the time and swallowed more and more deserted villages and subsequently, became the second largest city of the region after Várad, the capital of Bihar County. At the end of the 15th century it was an important industrial and commercial centre with eight annual fairs of national importance. On the turn of the 15th and 16th centuries it was one of the largest cities in Hungary.

The unfortunate historic events, i.e., the Mongol Invasion of 1241-1242, the epidemics of the 14th century and the depopulation of the 15th century, climaxed in the 150 year long Ottoman occupation.
Debrecen was taken by the Turks in 1543 and the city was subordinated to the Bey of Szolnok in 1555, yet the city never belonged to the Turkish administration. The city owed its rise to its fortunate location on the meeting point of three territories – Transylvania, the Ottoman Empire and Kingdom of Hungary under the rule of the Habsburgs. Debrecen took advantage of its geographical situation as much as possible. The depopulation of the region was pushed further by the wars between 1593 and 1608 – sweeping lively villages off the map – the attack of the Tartars of Crimea in 1594 and finally the 15 Year War. The depopulated situation of this period is well-demonstrated by the first detailed map of Hungary from 1528 (Map 4.)
The most important event of the early 17th century was the settlement of the *Hajdú*-s. The bondsmen and noblemen who impoverished during the wars organised into military groupings and were paid to escort export cattle and formed mercenary troops. They sustained their living by collecting tribute from the people of the Puszta. István Bocskai hired them for military service and made them settle in certain areas in the north-east region. The peculiar ground-plan of the settlements and their regular arrangement prove that they were built for defence.

The formation and the long term existence of the pastoral life are accounted for by a series of facts. There is no doubt that the natural circumstances were decisive at the beginning, the ideal landscape and the former nomadic way of life of the Hungarian tribes added up jointly into what became known as the pastoral way of life in Hortobágy.
The Cumanians who settled in the course of the 13th century became engaged in the same activities since this land had never really been appropriate for anything else.
When Hungary became a large cattle exporter from the 15th century, this region must have been a major supplier. The 150 years of the Turkish rule completed the formerly started process of depopulation and gave a push to the rise of the pastoral way of life. The grazing fields and pastures surrounded by marshes, offered a relative safety and independence for the shepherds and the herdsmen. The largest

*History and Development (continued)*

part of the region was primarily owned by Debrecen and its citizens, and the surrounding settlements, including Hajdúböszörmény, Balmazújváros, Nádudvar, Püspökladány, Karcag and Kunmadaras.

It is interesting - and obvious from the historic point of view – that animal husbandry became a specially important source of revenue for Debrecen when the city lost its key geographical situation after the collapse of the Ottoman rule. From the 18th century the city itself was forced to use the lands, formerly rented out to merchants.

There were countless herds of grey cattle grazing in the fields of Hortobágy at that time (the total Hungarian stock was over 1 million as late as the 1880's) and plenty of „*racka*" sheep. The animals were kept on the pastures from early spring to late autumn, or throughout the whole year and they were only driven to the winter shelters that were located near natural waters in the winter. This was the period when the road and settlement structure of the region received its final form on the basis of the medieval patterns, but with a modified – in the course of the 19th and 20th centuries – network, as it is known today. The fact that the *csárda*-s, which played an important role in the life of the Puszta, were and are scattered around the roads in half jordana, or jordana distance is also rooted in this period's traditions. The pastoral life-style moved to the background with the turn of the 18th and 19th centuries. The slack market, the Napoleon wars, and the change of consumption habits are mainly responsible for the set-back of the cattle farming. Owing to the water regulations taking place from the mid-19th century, more lands could be drawn into agricultural cultivation, which led to the decrease in area of extensive pastures. The small farms around Hortobágy National Park evolved in this period.
The new railways built toward the end of the 19th century also restructured the formal landscape of the Puszta.

The main ecological factor influencing the landscape was undoubtedly the regulation of Tisza River in the middle of the 19th century. Later, several efforts were tried to make better agricultural use of the area. They often ended in failure, which had severe impacts on the area. Based on retracing historical documents and maps, the Tisza River never directly flooded the Hortobágy before its regulation, and also never annually. In years of drought the river remained within its bed, but in wet years it overflowed its banks through the so called "fok"-s, small natural arms of the river for draining floods (the most significant being the so-called "Dobi-fok" at Tiszadob Village). The flood reached the Hortobágy flowing in a southerly direction along former tributary beds - mainly along the present Hortobágy River - running parallel with the Tisza River and arriving to the Sárrét floodplain of Berettyó River in the south, it expanded like an estuary. The natural water supply of this marshland became partially stopped by the embankment of the Tisza River. At the same time, it should be emphasised that the alkalisation process was not initiated by the regulation of the waterways; paleoecological data supports that regulation only resulted in the expanding of the already existing alkaline soils. On the other hand, it is obvious that

*History and Development (continued)*

without water supply, pasture productivity decreased, and this combined with the actual economical situation, lead to the overgrazing of the Hortobágy in the first period of the 20th century.

Already at the beginning of the 20th century, development projects were started on the least productive pieces of lands, aimed at the introduction of other land use practices. The most important being the creation of fish ponds. The so called Hortobágy-Fishponds situated in the National Park were excavated between 1914 and 1918 on 1843 ha. Creation of fish ponds continued in the 1950s, and today their total area reaches 65 $km^2$ in the Hortobágy region. The water supply of the ponds is ensured from the Eastern Main Channel constructed in 1956, and from the Western Main Channel opened for use in 1965. Fish ponds, as man-made wetlands, have taken over ecological functions of the former natural marshes in many respects. Due to their rich food resource and natural-like vegetation, they play an important role in both bird migration and breeding of endangered bird species. The extension of the boundary of the Hortobágy National Park to the most valuable fish ponds (2400 ha), which are not protected yet, is in progress.

One has to mention a failed agricultural project of the 1950s, when rice-fields were created on several parts of the Hortobágy, with many kilometres of ditches and small structures necessary for flooding and draining. Most of the rice-fields were never used, and in many cases the only aim was to obtain state subvention for their creation.

The aforestation programme of alkaline grasslands also implemented in the 1950s should be mentioned, which, similar to the creation of rice-fields, achieved little success. With a view to nature conservation, many forests planted at this time play an important role in the breeding of some rare and endangered bird species such as the red-footed falcon *(Falco vespertinus)*, and the white-tailed eagle *(Haliaeetus albicilla)*.

After World War II the largest economic unit of the region was constituted on the so-called "Great Hortobágy" area, which formerly was property of Debrecen Town. This was the Hortobágy State Farm (HSF), which also included the Fish Farm from 1962. Establishment and development of the Hortobágy Village is dated from this period. Hortobágy Village developed in the central part of the region with most of the inhabitants being employed by the HSF.

The Hortobágy National Park was established on 52,000 ha on 1st January 1973. In regard to land tenure, it was characterised by the following situation: almost half of its area was state-owned and managed by different responsible organisations (HSF, Middle-Tisza State Farm, Hungarian Army, Water Management Authorities), other areas were owned by collective farms of the surrounding villages. The transformation of the political system brought about a complete change in the ownership situation. In connection with this process, the Hortobágy State Farm has transformed with considerably reduced staff into the Hortobágy Nature Conservation and Genebank

Maintaining Public Ltd. Company supervised by the Ministry of Environment and Regional Policy. Purchase of lands owned formerly by co-operative farms started in 1996 and will be finished by 1999 in the Hortobágy National Park. By this time, 75 % of the total area will be state-owned and managed by the Hortobágy National Park Directorate. The recent (1998) ownership situation is described in 4.a.

*c) Form and date of most recent records of site*

**Land registers**

1 : 4000 scale actual land cadastral maps and a database of authoritative estate registers is available in the regional land record offices (Debrecen, Hajdúszoboszló, Püspökladány, Hajdúböszörmény, Tiszafüred). The Hortobágy National Park Directorate has been updated, but not with an authoritative digital data base and analogous 1 : 100000 scale general cadastral maps covering the area of the National Park.

**Topographical maps**

The latest topographical map is one made by the Cartographic Office of the Hungarian Army, available both in analogous and digitised form in scale of 1 : 50000. Hortobágy National Park Directorate has 1 : 25000 scale digitised maps, up dated in 1992 covering the area of the National Park.

**Arial photographs and satellite images**

Black and white aerial photographs taken in 1997 are available at the Cartographic Office of the Hungarian Army. EOSAT satellite images are available at the Institute of Survey and Telemetry. Hortobágy National Park Directorate has SPOT images from 1990 and a LANDSAT image from 1992 covering the total area.

**Biological data**

Data of species and habitats occurring in the area of the National Park are registered in the information system of the Hortobágy National Park Directorate, supported by GIS capacities.

**Environmental data (including water quality)**

Environmental Inspectorate of Eastern Hungary
Middle-Tisza Environmental Inspectorate

**Hydrological data**

Water Management Authority of Eastern Hungary
Middle-Tisza Water Management Authority

**Meteorological data**

National Meteorological Survey

*d) Present state of conservation*

The legal status and future of the nominated property is basically determined by Act LIII/1996 on Nature Protection in Hungary (ANNEX B), which aims at general preservation of natural values and territories, landscapes, their natural systems and biological

*Present state of conservation (continued)*

diversity, promoting understanding and sustainable use, and fulfilling public demands for healthy, aesthetic nature. The law defines the concept of national parks, including the function of protected natural areas and national parks, activities allowed there, and orders concerning creation of buffer zones.

According to XCIII/1995. Law on Restoration of State of Conservation of Protected Areas, those lands of the National Park which were formerly owned by collective farms should be taken over by the state by 1999.

The complex concept of man-made environment - physical structure along with peculiar values - appear in the set of definitions of the Hungarian legislation for the first time in the 1990s. Former legislation intended to enforce protection of peculiar values of man-made environment through protecting individual valuable elements, whilst since the nineties the former approach of practice focusing mainly on objects and historical monuments was replaced by a holistic approach.

The first manifestation of these efforts is represented by LXV/1990. Law on Municipalities, which made it obligatory on community councils, local municipalities and county councils to preserve cultural heritage.

LIII/1995. Law on General Rules of Preservation of Environment, among others, orders for preserving built (artificial) man-made environments.

XXI/1996. Law on Regional Development and Country Planning determines regional tasks concerning environmental, landscape and nature protection.

LIV/1997. Law on Ancient Monuments intends to enforce the demands of monument protection in objectives of formation and protection of the whole man-made environment, regional and settlement development, environmental, landscape and nature protection, along with public education, considering international obligations.

CXL/1997. Law on Protection of Cultural Properties and Museums, Public Libraries and Public Education orders for uncovering, preservation, protection and turning to public property of cultural properties among others archaeological heritage treasured up and preserved during national and world history.

LXXVIII/1997. Law on Formation and Protection of Man-made Environment designates enhancement of natural, landscape, and built values among objectives of settlement planning and it lays down as a duty to protect architectural and natural features of settlements.

---

*e) Policies and programmes related to the presentation and promotion of the property*

Strategic tasks concerning the future of the nominated property are laid down by 83/1997. (IX.26.) Decision of the Parliament on the National Environment Program upon laws mentioned in section b), which describe present status of built and natural environment and determines objectives intended to reach, also gives full details on means needed for the implementation.

Attached to the National Environment Program, a detailed Nature Conservation Master Plan has been prepared (ANNEX C).

## 4. *Management*

*a) Ownership*

Ownership situation in the Hortobágy National Park:

**State-owned: 68.196 ha**

| | |
|---|---|
| Hortobágy National Park Directorate | 49.353 ha |
| Water Management Authorities | 7.913 ha |
| Hungarian Army | 7.057 ha |
| National Privatisation and Estate Corporation | 1.579 ha |
| Forestry Company | 1.567 ha |
| Middle-Tisza State Farm | 601 ha |
| Other state-owned | 126 ha |

| | |
|---|---|
| **Collective Farms** | **5,069 ha** |
| **Private** | **1,263 ha** |
| **Municipalities** | **254 ha** |
| **NGOs** | **38 ha** |

***Total area of the Hortobágy National Park*** ***74,820 ha***

*b) Legal status*

The Hortobágy National Park was established on 52,000 ha on 1st January 1973 by the 1850/1972. Presidential Decree of the National Authority for Nature Conservation. The area of the National Park was extended by 11,422 ha by 11/1993. (III.9.) Decree of the Minister of Environment and Regional Policy, and it reached its present size by 6/1996. (IV.17.) Decree of the Minister of Environment and Regional Policy.
Sections 31-41 of LIII/1996. Law on Nature Protection, attached as ANNEX B, deal with regulations on protected natural areas thus on the Hortobágy National Park. Section 30. of the same law deals with buffer zones to be created around protected natural areas.

*c) Protective measures and means of implementing them*

On one hand, as owner of large territories, and on the other as an authority of first instance, Hortobágy National Park Directorate enforces the observance of regulations and laws.
As land owner the Directorate regulates different farming practices (grazing, mowing, reed harvesting, fishery) according to the goals stated in contracts with tenants and in the management plan.
On the territories owned by others, the Directorate operates as a first instance authority (under provisions of the 211/1997. Decree on Duties and Jurisdiction of Environmental Protection Inspectorates and National Park Directorates) and enforces regulations of the law, decrees of Ministry of Environment and Regional Policy connected to the law, and the nature conservation management plans.
The agricultural use of the area of the National Park goes on in accordance with the provisions of the law on nature conservation, its enforcement order, and the nature conservation management plan.

| | |
|---|---|
| *Protective measures and means of implementing them (continued)* | The utilisation of the areas are performed by Hortobágy Nature Conservation and Genebank Maintaining Public Ltd. Company, grazing companies of the surrounding villages, companies working as legal successor of former collective farms, other companies, and private entrepreneurs.<br>Game management on the area has been a source of conflict since the establishment of the National Park, of which a solution has been difficult to find. Based on the new law on hunting, from 1997 the Hortobágy National Park performs the tasks concerning hunting on its own 54.000 ha hunting-area. By this priority of nature conservation is guaranteed. Sport hunting are not allowed on the area, rangers of the National Park doing only population-control.<br><br>Compliance of nature conservation regulations is controlled by 12 rangers of the National Park. Their work is directed and supported by the head of the ranger service, two regional officers and professional officers working at the Headquarters of the Directorate.<br><br>Since the middle of the 1980s Hortobágy National Park takes a prominent part in ensuring water supply for natural wetlands. Currently, an average water supply of 8 million $m^3$, derived from the Western Main Channel, is used annually for the maintenance of 4000 ha of marsh. Of the marsh systems situated in the National Park, the Kunkápolnás Marsh, the Egyek-Pusztakócs Marsh System and Nagy-rét at Angyalháza have constructed flooding channel systems. The rehabilitation of the Halas-marsh, which covers 300 ha in Zám-puszta, will be realised in 1998. The marshes are flooded according to the natural water regime with early spring inundation. Marshes dry out by the end of summer, although some smaller floodings are possible for the autumn bird migration period. |
| *d) Agency with management authority (name and address of responsible person for contact purposes)* | The nominated property is managed by the Hortobágy National Park Directorate.<br><br>Responsible leader: Dr. Csaba Aradi, Director<br><br>Address: H-4024, DEBRECEN, Sumen u. 2.<br>Tel.: +36-52-349922<br>Fax: +36-52-410645<br>E-mail: honpi.@ktm.x400gw.itb.hu<br><br>Regional offices of the National Office of Ancient Monuments in Debrecen, Eger and Szolnok are responsible for the inspection of historic monuments. |
| *e) Level at which management is exercised and name and address of responsible person for contact purposes* | Management is exercised on a regional level based on the nature conservation and other laws and regulations. |

*f) Plans related to property*

**Feasibility studies**

Since 1992 the following feasibility studies have been prepared, financed by the EC in the framework of PHARE programme and supported by other foreign aids:

- Restoration program for the wetlands and grasslands of the Hortobágy National Park area (feasibility study prepared by the DHV Consultants BV, financed by PHARE, 1992)
- Ecotourism and zoning in three national parks of Hungary (feasibility study prepared by the DHV Consultants BV, financed by PHARE, 1994)
- Management plan for the restoration of southern grasslands in the Hortobágy National Park, Hungary (feasibility study, prepared by Danagro Adviser a/s, Copenhagen, financed by the Danish Environmental Fund for Developing, Central and Eastern European Countries, 1996-97)

**Nature conservation management plan**

In 1997 the nature conservation management plan of the Hortobágy National Park was completed (ANNEX D). The most important goals are reviewed in 4.j.

**Regional countryside planning**

Preparation of a regional development plan of Hortobágy region is currently going on. The work is being done and co-ordinated by VÁTI (Hungarian Regional Development and Urbanistic Public Ltd. Company.)

The final outcome of the planning work will be a land use (regulating) and development plan which will be submitted for approval, and a time-scheduled action plan. These documents will consider country planning designs and decisions of development conceptions of the region and its settlements, and the function and values of Hortobágy National Park

*g) Sources and levels of finance*

Financial resources of the Hortobágy National Park Directorate in 1997:

| | |
|---|---|
| Central budget: | 118 million HUF |
| Central Environmental Fund: | 35 million HUF |
| Foreign donations: | |

| | |
|---|---|
| *Sources and levels of finance (continued)* | Recently, the Hortobágy National Park Directorate had opportunities to obtain foreign support for financing nature conservation development projects, mainly for habitat rehabilitation and ecotourism projects. These are as follows:<br>- complex habitat rehabilitation project of the Egyek-Pusztakócs Marsh System was realised in 1995-96 totalling 40 million HUF,<br>- also on this area an ecotourism development project was carried out of 20 million HUF, in the frame of this a bicycle path was constructed. Both projects were financed by the Danish Environmental Fund.<br>- recently, rehabilitation of the Halas-marsh in Zám-puszta is going on with an approximately 40 million HUF support of the Dutch Government. |
| *h) Sources of expertise and training in conservation and management techniques* | Human resources needed for establishing the theoretical basis and practical implementation of management measures are available at the Hortobágy National Park Directorate. Many ecologist, botanist and zoologist officers of the Directorate have degrees in this field based on the ecology education from the University of Sciences of Lajos Kossuth. Since Hortobágy National Park Directorate has done pioneer work in wetland management, experience and knowledge gained during wetland rehabilitation projects also have great significance. |
| *i. Visitor facilities and statistics* | Public access is basically regulated by the zoning scheme of the Hortobágy National Park. Visitor facilities in the National Park are indicated by Map 5.<br>During the annual tourist season from May until September, an average of 200,000 visitors arrive to the Hortobágy National Park. Most of them take part only in the so-called "puszta programmes" (sight of the ancient races of domestic animals on a horse carriage trip) on two grasslands of the National Park. Each year 80,000 people visit two events (Hortobágy Horse Day and the Bridge Fair) lasting for a few days, both of them taking place in the Hortobágy Village and its neighbouring areas. Regrettably, the number of visitors interested in nature is low - an annual average of 2500 people - however, the Hortobágy National Park Directorate steers the increasing ecotourism pressure to demonstration trails and bicycle paths. |
| *j) Site management plan and statement of objectives (copy to be annexed)* | The recent management plan of the Hortobágy National Park was prepared in 1997 (ANNEX D).<br><br>The main general objectives of the management plan are:<br><br>1./ To purchase the remaining areas owned by collective farms by the Directorate. |

| | |
|---|---|
| *Site management plan and statement of objectives (continued)* | 2./ To support the establishment of grazing companies in the surrounding settlements in order to prevent the development of fragmented land management, which would be difficult to control.<br><br>3./ To obtain management rights for nature conservation on the areas of the intended extension of the National Park and to develop a tenant system operating in the National Park.<br><br>4./ In addition to building regulations included in development plans, to govern by statues and to enforce in practice those regulations dealing with use of chemicals, land use, hunting, etc. in the proposed external buffer zone.<br><br>5./ To systematise and ensure easier applicability of information gained by research in the Hortobágy National Park.<br><br>6./ To continue and extend new species basic surveys, mainly on peripheral territories.<br><br>7./ To designate protected natural values discovered by new research, and to obtain management rights if necessary.<br><br>8./ To elaborate overall conception of research, i.e., to launch and continue pedological-climatical research, biodiversity research and other biological monitoring research. |
| *k) Staffing levels (professional, technical, maintenance)* | Management infrastructure of the Hortobágy National Park Directorate, staff performing tasks concerning the operation of the National Park and authority work:<br><br>Director: 1<br>Deputy director: 2<br>Head of department: 5<br>Professional officer: 12<br>Ranger service: 13<br>Technical staff: 6<br>Driver: 3<br><br>**Total: 42 persons** |

## 5. *Factors Affecting the Site*

| | |
|---|---|
| *a) Development Pressures* | Based on laws regarding nature conservation, municipalities and regional development, development projects harmful from a nature conservation point of view are prohibited on the territory of Hortobágy National Park and proposed buffer zone. Consequently, such development projects do not occur even on a planning level. Institution of a compensation system according to the standards of the European Union will cause problems on the fragmented, and privately-owned intensive agricultural lands situated in the proposed buffer zone. |
| *b) Environmental Pressures* | Only the sewage disposal of the Tisza Chemical Factory loading Hortobágy River can be regarded as a source of considerable pollution. Communal dumps of settlements constitute some problems as some are located near the National Park. Lack of sewage systems is also a problem in some places. |
| *c) Natural disasters and preparedness* | The area of the Hortobágy National Park is not endangered by real elemental disasters. The extension of areas affected by grassland fires occurring in years of drought usually do not exceed 100 ha, and the vegetation regenerates very quickly on these areas. |
| *d) Visitor/tourism pressures* | According to the situation described in section 4., it can be stated that in the Hortobágy National Park, tourism has no serious negative effect, endangering natural or cultural values. Visitor facilities are concentrated on some smaller areas of the National Park which are opened to access according to the zoning system. The number of visitors searching for real ecotourism possibilities is far below the carrying capacity of the target areas. A large extension of the National Park and the zoning system allows to concentrate visitor facilities on places along the two main roads crossing the area, by this saving the inner territories from the unfavourable impacts of tourism. |
| *e) Number of inhabitants within site, buffer zone* | Inside the area of the Hortobágy National Park, 105 residents live in Kungyörgy and Hortobágy-Halastó, both belonging to Hortobágy village. The 13 settlements situated in the proposed buffer zone are inhabited by approximately 85.000 people. |

## 6. *Monitoring*

| | |
|---|---|
| a) *Key indicators for measuring state of conservation* | Principal indicators of protection and nature conservation management:<br><br>- vegetation and habitat pattern;<br>- population size of characteristic species of certain habitat types (e.g., *Aeshna viridis, Gortyna borelii lunata, Calandrella brachydactyla ssp. hungarica, Glareola pratincola, Acrocephalus paludicola*, etc.)<br>- populations of breeding and migrating bird species with large territory requirements (e.g., great bustard *(Otis tarda),*common crane *(Grus grus),* geese *(Anser spp.),*long-legged buzzard *(Buteo rufinus),*spoonbill *(Platalea leucorodia),* great white egret *(Egretta alba,* etc.) |
| b) *Administrative arrangements for monitoring property* | The Nature Conservation Society for the Hortobágy carries out ornithological monitoring in co-operation with the National Park Directorate on the entire area of the National Park using the internationally accepted UTM Grid Mapping method.<br><br>The National Biodiversity Monitoring Program, started in 1997, establishes monitoring projects on a landscape scale for nature conservation purposes on 3, 5x5 km large area (UTM grid-cells) of the National Park. These are as follows:<br>Angyalháza: ET05D4, ET06C3, ET15B2, ET16A1<br>Tisza-lake: DT77D4, DT78C3, DT87B2, DT88A1<br>Kunkáponás Marsh: DT95A4, DT95B3, DT95C2, DT95D1<br>A habitat map in 1 : 25000 scale needs to be prepared for the sample sites by using standard methods. The Angyalháza sample site is surveyed in 1998.<br>Monitoring of historic buildings is carried out by the regional offices of the National Authority for Cultural Heritage.. |
| c) *Results of previous reporting exercises* | Due to the more and more effective enforcement of economical regulations and rehabilitation of wetlands, there has been a stabilisation and increase of populations of certain characteristic species, including the aquatic warbler *(Acrocephalus paludicola),* great white egret *(Egretta alba),* and avocet *(Recurvirostra avocetta).*<br>It is also noteworthy that populations of some bird species preferring short alkaline grasslands and bare surfaces, i.e., short-toed lark *(Calandrella brachydactyla ssp. hungarica),* and black-winged pratincole *(Glareola nordmanni),* have suffered a major decline which is likely connected with a drastic decrease of grazing livestock during the last three decades. |

***Signature on behalf of the State Party:***

(. Dr. Ferenc Baja .)
Minister for Environment and Regional Policy

Budapest June 12., 1998

## *Bibliography*

### General descriptions


Balázsy Ferenc: Heves vármegye története. Eger, 1897.

Bél, Mathias: Notitia Hungariae novae historico geographica I-IV. Viennae 1735-1742, V. Budapest, 1892.

Szerk.: Csikvári Antal; Vármegyei szociográfiák. Hajdú vármegye és Debrecen sz. kir. város. Budapest..

Fényes Elek: Magyarország geographiai szótára. I-IV. Pesten 1851.

Hunfalvy János - Rohbock Alajos: Magyarország és Erdély eredeti képekben. II. kötet. Darmstadt, 1860.

Geographisches-Historisches und Produckten Lexikon von Ungarn, in welchem die vorzüglichen Oerter des landes in Alphabetischer Ordnung angegeben, ihre Lage bestimmt, und mit Kurzen Nachrichten, die im gesellschaftlichen Umgange angenehm und nützlich sind, vorgestellt werden. Von Johann Matthias Korabinszky. Pressburg 1786.

Magyarország kistájainak katasztere. I. Budapest, 1990.

Szerk.: Nadányi Zoltán: Bihar-vármegye. Budapest, 1938.

Palugyay Imre, ifj. Magyarország történeti földtani s állami legújabb leírása I-IV. Pest 1852-1855.

Pesty Frigyes: Magyarország helynevei történeti, földrajzi és nyelvészeti tekintetben. I. Budapest, 1888.

Prinz Gyula - Cholmoky Jenő - gr. Teleki Pál - Bartucz Lajos: Magyar föld magyar faj. I. kötet: Magyarország tájrajza., II. kötet: A magyar munka földrajza., III. kötet: Az államföldrajzi kép. Budapest, é. n.

Szerk.: Rudolf trónörökös főherceg: Az Osztrák-Magyar Monarchia írásban és képben. Magyarország I. kötete., Budapest, 1888. Magyarország II. kötete. Budapest, 1891.

Rupp Jakab: Magyarország helyrajzi története fő tekintettel az egyházi intézetekre vagyis a nevezetesb városok, helységek, s azokban létezett egyházi intézetek, püspökmegyék szerint rendezve. I-III. Pest 1870-1876.

Szerk.: Sziklay János és Borovszky Samu: Magyarország vármegyéi és városai (Magyarország monográfiája). A magyar korona országai történetének, földrajzi, képzőművészeti, néprajzi, hadügyi és természeti viszonyainak, közművelődési és közgazdasági állapotának enciklopédiája. Bihar vármegye és Nagyvárad. Budapest, é. n. Heves vármegye. Budapest, 1909. Szabolcs vármegye. Budapest, 1900.


### Monographs


Aradi Csaba: Hortobágy. Budapest, 1984.

Ecsedi István: A Hortobágy puszta és élete. Debreczen, 1914.

Ecsedi István - Nyilas - Kolb Jenő: Debrecen és a Hortobágy. Budapest, 1935.

Gink Károly: Debrecen, Hortobágy. (Photoalbum.) Budapest, 1968.

Szerk.: Kovács Gergelyné, Salamon Ferenc: Hortobágy. A nomád pusztától a nemzeti parkig. Budapest, 1976.

Könyves Tóth Mihály: Nagy Hortobágy. Debreczen, 1910.

Szép Ernő: A Hortobágy. Budapest, 1936.

Szívós Béla: Debrecen és a Hortobágy. Budapest, 1908.

Zoltai Lajos: A Hortobágy. Debreczen, 1911.

**Geology, pedology, hydrography, paleoecology**


Balogh, J. 1840. A magyarországi szikes vidékek természettudományi tekintetben. (Hungarian sodic regions are in natural sience view). Magyar Tudós Társaság jutalmazott pályamunkája. (in Hungarian)

Bodrogközy 1965: Ecology of the halophilic vegetation of the Pannonicum II. Correlation between alkali "szik" plant communities and genetic soil classification in the northern Hortobágy. Acta Botanica Academica Scient. Hung. 11.

Krolopp, E.-Sümegi, P. 1995. Palaeoecological Reconstruction of the Late Pleistocene, Based on Loess Malacofauna in Hungary. GeoJournal, 36. pp. 213-222.

Marosi-Szilárd 1969: The Tisza Lowland. Acad. Publ., Budapest

Máthé - Précsényi 1970: Phytomass studies of salt pastures (Achilleo-Festucetum pseudovinae). Acta Agronomica Academica Scient. Hung. 19.

Máthé - Zólyomi - Précsényi - Kovács 1967: Der Alkali Waldsteppenwald von Margita als Arbeitsgebiet im IBP. In: Guide

Nyilas, I.-Sümegi, P. 1991. The Mollusc fauna of Hortobágy at the end of the Pleistocene (Würm 3) and in the Holocene. Proceedings of 10th International Malacologica Congress, pp. 481-485.

Précsényi 1970: A study on the energy budget in Artemisio-Festucetum pseudovinae. Acta Botanica Academica Scient. Hung. 16.

Rungaldier 1928: Die Puszta Hortobágy und die Frage der Steppenbildung. Geogr. Zeitschrift 34.

Scherf, E. 1935. Geologische und morphologische verhältnisse des pleistozäns und holozäns der Grossen Ungarischen Tiefbene und ihre beziehungen zur bodenbildung, insbesondere der alkalibodenentstehung. MÁFI Évi Jelentés 1925-1928-ról, pp. 10-37.

Sümegi, P. 1989. Upper Pleistocene geoevolution of Hajdúság region. PhD dissertation, Debrecen, p. 96. (in Hungarian)

Szöőr, Gy.-Sümegi, P.-Balázs, É. 1991.Sedimentological and geochemical analysis of Upper Pleistocene Paleosols of the Hajdúság region, NE Hungary. pp. 47-59. In: Pécsi, M.-Schweitzer, F. Quaternary environment in Hungary. Akadémai Kiadó, Budapest.

Soó 1926: Die Entstehung der ungarischen Puszta. Ungarische Jahrbücher, Berlin 6.

Soó 1936: Die Vegetation der Alkalisteppe Hortobágy. Ökologie und Soziologie der Pflanzengesellschaften. Fedd. Repert. 39.

Soó 1947: Conspectus des groupements végétaux dans les Bassins Carpathiques I. Les associations halophiles. Debrecen.

Stocker 1929: Ungarische Steppenprobleme. Naturwiss. 17.

Szabolcs 1961: Effects of regulations of water ways and irrigation produced on processes of soil formation beyond the Tisza., Acad. Publ., Budapest.

Szabolcs (ed.) 1974: Salt Affected soils in Europe. Martinus Nijhoff- the Haque and Research Institute for Soil Science and Agricultural Chemistry of the Hungarian Academy of Sciences.

Székyné Fux, V.-Szepesi, K. 1959. Über die Rolles des "Alföld-Lösses" in der Entstehung von Alkaliböden. Földtani Közlöny, 99. pp. 53-64. (in Hungarian with German abstract)

Vörös, I. 1981. Wild Equids from the Early Holocene in the Carpathian Basin. Folia Archaeologica, 32. pp. 37-67.

Wendelberger 1955: Zur Frage der Waldlosigkeit der ungarischen Puszta. Burgenl. Heimatbl. 14.

Zoltai 1924: Debrecen and the Hortobágy puszta. Tisza University Press. Budapest.

## Zoology


Aradi-Kovács 1982: The Grey-leg Goose in Hungary. Aquila Tom. 89., Budapest.

Endes 1970: Die Kurzzehenlerche. Die Neue Brehm-Bücherei, 422. Wittenberg-Lutherstadt.

Endes 1972: A revised Description of the Hungarian Race of the Short-toed Lark (Calandrella brachydactyla (Leisler). Bull. British Orn. Club. Vol 92. N. 6.

Faragó-Kovács-Sterbetz 1991: Goose Population staging and wintering in Hungary. Ardea 79.

Fintha 1977: The White-tailed Eagle (Haliaeëtus albicilla) in Hortobágy. Aquila Tom. 84., Budapest.

Glutz & Bauer (ed.) 1991: Handbuch der Vögel Mitteleuropas. 12/I. Aula Verlag Wiesbaden. p. 252-291.

Horváth 1955: The life of the Red-legged Falcon: Falco vespertinus in the Ohat Forest. Intern. Ornith. Congress. 11.

Horváth 1956: A new Race of the Short-toed Lark from Hungary. Bull. Brit. Orn. Club, Vol. 76.

Hoyo, Elliott, Sargatal eds. 1992: Handbook of the Birds of the

World. Vol. 1. Lynx Edicions, Barcelona.

Kaszab (ed.) 1981: Natural History of Hungarian National Parks,

The Fauna of the Hortobágy National Park, Vol I. Acad. Publ., Budapest.

Kosztolányi 1897: Die Vögel des Hortobágy. Waidm. H. 17.

Kovács 1980: Forschungen über auf den Winterestingvögel Hortobágy und Bihar - Aquila Tom. 87., Budapest.

Kovács 1991: Untervegs: Ungarns Hortobágy. Ornis 91/6.

Mahunka (ed.) 1983: Natural History of Hungarian National Parks.

The Fauna of the Hortobágy National Park, Vol. II. Acad. Publ., Budapest.

Nagy 1925: Die Puszta Hortobágy als ein beviezugtes Durchzugs und Überwinterungs-Gebiet in Ungarn. Congrčs Internat. pour l'Čtude et la Protection des Oiseauc-Luxembourg.

Philippona - Lebret 1967: Geese on the Hortobágy. The Wildfowl Trust.

Rose & Scott comp. 1994: Waterfowl Populations Estimates - Annex to the Draft Recommendation REC. 5.14. for the IWB, AWB, WA

Sterbetz 1976: Über die Vogelwelt des ungarischen Nationalparks der Puszta Hortobágy. Die Gefild. Welt 100.

Szabó, S. 1990. The survival, Resettle and Return of the protected snails living in the National Parks in Hungary. Abstracts of the 2nd International Congress on Meidcal and Applied Malacology, Seul, Korea.

Szabó, S. 1993 The effect of becoming waterless and experiments of livingplace reconstruction on Mollusc living in the sodic lakes of Upper Kiskunság. Malacological Newsletters, 12. pp. 47-57.


## Nature conservation


Festetics 1970: Entstehung und Ziele der Pannonischen Arbeitmeinschaft des International Wildfowl Research Bureau (Mit einem Frageboden und praktischen Vorschlägen für das Neusiedlersee-Gebiet und für die Hortobágy-Puszta im Anhang). Wiss. Arbeiten Bgld. 44., Eisenstadt-Österreich.

**Ethnography**


Balogh István: A hortobágyi pásztorkodás történeti múltja. Néprajzi Értesítő XXXII. 1943.

Balogh István: Pusztai legeltetési rend Debrecenben a XVIII-XIX. században. Ethnográfia. LXIX. 1958.

Bencsik János: Pásztorkodás a Hortobágy északi területén a XVIII. század végétől. Közlemények a debreceni Kossuth Lajos Tudományegyetem Néprajzi Intézetétől. 22. Debrecen, 1969.

Béres András - Módy György: A Hajdúság történetének és néprajzának irodalma. Debrecen, 1956.

Ecsedi István: A Hortobágy-puszta természeti viszonyai tekintettel a mezőgazdaságra. Szeged, 1908.

Ecsedi István: A Hortobágy-puszta jelene és jövője. Urania, XIII. 1912.

Ecsedi István: A debreceni népi építkezés. Néprajzi Értesítő. XIII. 1912.

Ecsedi István: A nomád pásztorhelyek a Horbobágy pusztán. Néprajzi Értesítő. XIV. 1913.

Ecsedi István: Poros országutakon. Debreczen, 1925.

Ecsedi István: A hortobágyi szilaj pásztorkodás kialakulása. Debreczeni Képes Kalendárium. XXVII. 1927.

Ecsedi István: Hortobágyi életképek. Debrecen, 1927.

Ecsedi István: A Hortobágyi Intéző Bizottság története. Debreczen, 1931.

Ecsedi István: Népies vadfogás és vadászat a debreceni határban és a Tiszántúlon. Debreczen, 1933.

Ecsedi István: A hortobágyi hídi vásár 1933 tavaszán. Debreczeni Képes Kalendárium. 34. 1934.

Ecsedi István: Népies halászat a Közép-Tiszán és a tiszántúli kisvizekben. Debreczen, 1934.

Gunda Béla: Organisation sociale des pasteurs dans le Grande Plaine Hongroise. Ethnologia Europaea, II-III. Avnheim, 1970.

Szerk.: Gunda Béla: Tanulmányok a Hortobágy néprajzához. Műveltség és hagyomány XV-XVI. Debrecen, 1972-1974.

Györffy István: Das Bauwesen der Histen im ungarischen Tiefland. Budapest-Debrecen, 1927.

Györffy István: A szilaj pásztorok. Karcag, 1928.

Györffy István: Alföldi népélet. Budapest, 1938.

Herman Ottó: A magyarok nagy ősfoglalkozása. Előtanulmányok. Budapest, 1909.

Jenei Gy.: Természet könyve. A hortobágyi pásztor és természetvizsgáló. Pest, 1791.

Kósa László - Filep Antal: A magyar nép táji-történeti tagolódása. Budapest, 1978.

Lükő Gábor: A hortobágyi pásztorművészet. A Déri Múzeum Néprajzi Osztályának Ismeretterjesztő Közleményei. 13. Debreczen, 1940.

Főszerk.: Ortutay Gyula: Magyar néprajzi lexikon. 1-5. kötet. Budapest, 1977-1982.

Rácz Lajos: A Hortobágy és Debreczen sz. kir. város állattenyésztése. Debreczeni Gazdasági Lapok. II. 1909.

Szabadfalvi József: Nomadic Wintering System on the Great Hungarian Plain. Acta Ethnographica, XVII. 1968.

Szabadfalvi József. Az extenzív állattenyésztés Magyarországon. Műveltség és Hagyomány, XII. Debrecen, 1970.

Törő L.: Legeltetési rend a Hortobágyon. Műveltség és Hagyomány X. Debrecen, 1968.

## Archeology

István Ecsedy: The people of the pitgrare kurgans im Eastern Hungary. Budapest, 1979.

Kralovánszky Alán: Hajdú-Bihar megyei régészeti kutatások 1944-1961. A Debreceni Déri Múzeum Évkönyve 1962-1964. Debrecen, 1965.

Mesterházy Károly: A Déri Múzeum régészeti tevékenysége 1962-1965. A Debreceni Déri Múzeum Évkönyve 1965. Debrecen, 1966.

Mesterházy Károly: Régészeti adatok Hajdú-Bihar megye IX-XIII. századi településtörténetéhez. I. A Debreceni Déri Múzeum Évkönyve 1973. Debrecen, 1974. II. A Debreceni Déri Múzeum évkönyve 1974. Debrecen, 1975.

M. Nepper Ibolya - Sz. Máthé Márta: A Hajdú-Bihar megyei múzeumok régészeti tevékenysége 1966-1971. A Debreceni Déri Múzeum Évkönyve 1971. Debrecen, 1972.

M. Nepper Ibolya - Sz. Máthé Márta: A Hajdú-Bihar megyei múzeumok régészeti tevékenysége 1972-1976. A Debreceni Déri Múzeum Évkönyve 1977. Debrecen, 1982.

M. Nepper Ibolya - Sz. Máthé Márta: A Hajdú-Bihar megyei Múzeumok régészeti tevékenysége 1977-1980. A Debreceni Déri Múzeum Évkönyve 1980. Debrecen, 1982.

M. Nepper Ibolya - Sz. Máthé Márta: A Hajdú-Bihar megyei múzeumok régészeti tevékeynsége 1981-1985. A Debreceni Déri Múzeum Évkönyve 1985. Debrecen, 1986.

M. Nepper Ibolya: Okkersíros temetkezés Püspökladány-Kincsesdombon. A Debreceni Déri Múzeum Évkönyve 1976. Debrecen, 1977.

M. Nepper Ibolya - Sőregi János - Zoltai Lajos: Hajdú-Bihar Megye halomkatasztere I. Bihar Berettyóújfalu, 1980. (Bihari Múzeum Évkönyve)

M. Nepper Ibolya - Sőregi János - Zoltai Lajos: Hajdú-Bihar Megye halomkatesztere II. Hajdúság, Hajdúböszörmény, 1981. (Hajdúsági Múzeum Évkönyve)

Sőregi János: A Hortobágy-görbeháti középkori templom és temető. A Debreceni Déri Múzeum Évkönyve 1934. Debrecen, 1935.

Szerk.: Szelekovszky László: A kunhalmok védelmében. Az 1994. november 27-i Békéscsabán megtartott tanácskozás anyaga.

Tóth Albert: Szolnok megye tiszántúli területének kunhalmai. Zounuk 3. A Szolnok Megyei Levéltár Évkönyve. Szolnok, 1983.

Zoltai Lajos: Ásatások Ohat-Telekházán és a Bivalyhalomban. Múzeumi és Könyvtári Értesítő. 1907.

Zoltai Lajos: Ásatás a zámi templom dombján. Jelentés Debreczen sz. kir. város Múzeuma 1908. évi állapotáról.

Zoltai Lajos: Debreceni halmok, hegyek. Debrecen, 1938.

## Architecture

Balogh István: Debrecen. Budapest, 1958.

Barabás Jenő - Gilyén Nándor: Magyar népi építészet. Budapest, 1987.

Eperjessy Kálmán: Városaink múltja és jelene, Budapest, 1971.

Gaál Imre: A hortobágyi kőhíd. Mály Építéstudományi Szemle 1955. 1. sz.

Gellér Ferenc: Csárdák Hajdú-Biharban és Hortobágyon. A Debreceni Déri Múzeum Értesítője 1987. Debrecen, 1988.

Genthon István: Magyarország művészeti emlékei. 2. Duna-Tisza köze. Tiszántúl, Felsővidék. Budapest, 1961.

Györffy István: Magyar falu magyar ház. Budapest, 1943.

Dr. A.N.I. den Hollander: Az Alföld települései és lakói. Budapest, 1980.

Kovács Gergelyné: Hortobágy. Meggyes-csárda. Budapest, 1984.

Miskolczy László - Vargha László: A Nagykunság vidék népének építészete. Budapest, 1943.

Lóssy Schmidt Ede: A hortobágyi kőhíd építészete. Debrecen, 1926.

Novák László: Településnéprajz. Nagykőrös, 1986.

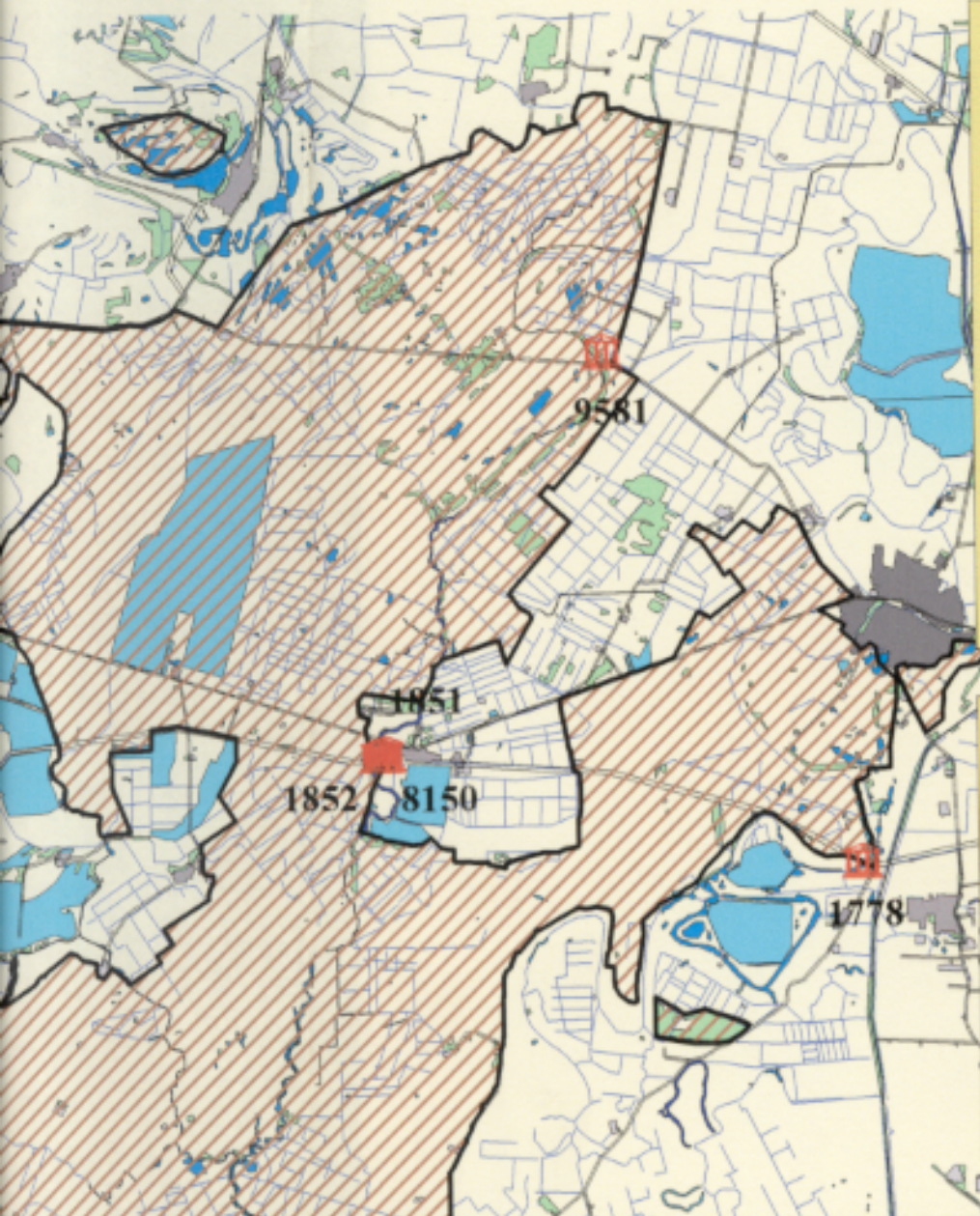
Novák László - Selmeczi László szerk.: Építészet az Alföldön. Nagykőrös, 1989.

Tóth János: Népi Építészetünk hagyományai. Budapest, 1961.

Zoltai Lajos: Mikor keletkeztek Debrecen határában a pusztai csárdák. Debreceni Szemle 1934.

# *l importance in the Hortobágy National Park*

1:200000




## Legend

- Historic Monument
- Hortobágy National Park
- Railway
- Main road
- Other road
- Marsh
- Artificial wetland (fishpond)
- River, bigger channel
- Smaller water flows, channels
- Forest
- Agricultural center
- Village
- City

## Notes

*Prepared at the Thematic Information Center for Hungarian Conservation using state owned data*
*Monuments' data:*
*Directorate of Monument Supervision, Debrecen*
*Topography:*
*Digital map of the Hungarian Army with 1:50 000 information content*

tik
természetvédelmi információs központ

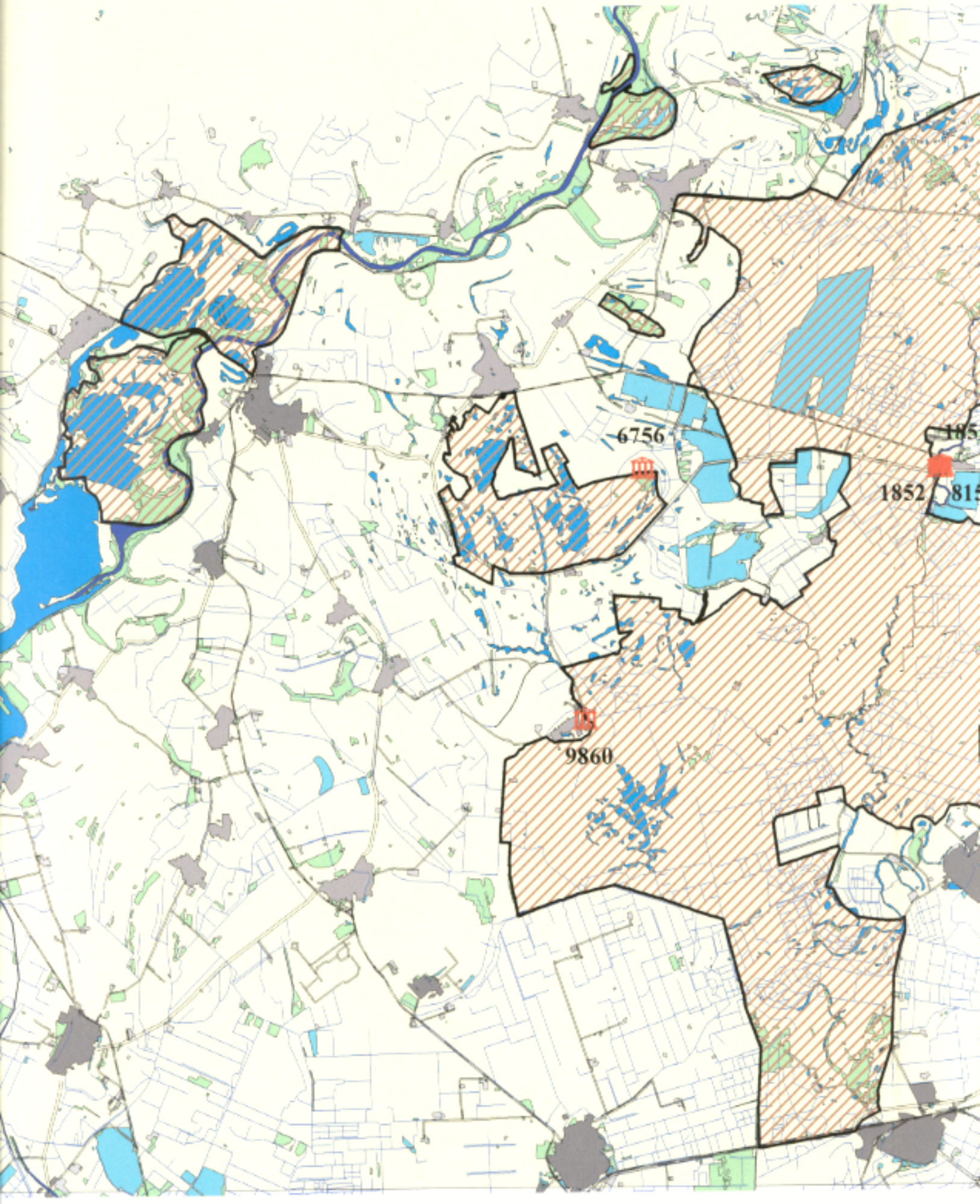
HORTOBÁGYI NEMZETI PARK

List of monuments, where
ID=code in the National Database for Historic Monuments
X= X coordinate given in the Hungarian National Coordinate system
Y= Y coordinate given in the Hungarian National Coordinate system

| Id | Name | Settlement | X | Y |
|---|---|---|---|---|
| 1852 | Hortobágy Nine Arch Bridge | Hortobágy | 807920 | 25078 |
| 1851 | Hortobágy Csárda | Hortobágy | 808087 | 25082 |
| 8150 | Shepherds' Museum | Hortobágy | 808063 | 25078 |
| 9581 | Kishortobágy Csárda | Balmazújváros | 814164 | 26179 |
| 1778 | Kadarcs Csárda | Nagyhegyes | 821261 | 24796 |
| 6756 | Meggyes Csárda | Tiszafüred | 794896 | 25080 |
| 9860 | Görbe Csárda | Nagyiván | 792238 | 23984 |

# MAP 3. *Historic monuments of national importance in th*

1:200000



Republic of Hungary - Ministry for Environment
National Authority for Nature Conservation

# Hortobágy National Park – The Hungarian Puszta

## Complementary information for the World Heritage nomination dossier

2nd edition

*by*
László Masits, Ibolya Módi and Gábor Szilágyi
*at the Hortobágy National Park Directorate, Debrecen, Hungary*

*June, 1999*

*Arts on the cultural and historic values of Hortobágy*
An illustrated guide

István Györffy /1884-1939/: university professor, ethnographer

According to one of István Györffy's eminent contemporaries: Hungarian people became scientists through him. He was the founder of historical ethnography in Hungary. His paper *The folklore and the national culture* can be regarded as his intellectual last will and testament. From this we quote his concept conceived in 1939., " Europe is not interested in what we have taken over from European culture, rather in what we have contributed to this cultural heritage!".

Herdsman's badge. 1796.

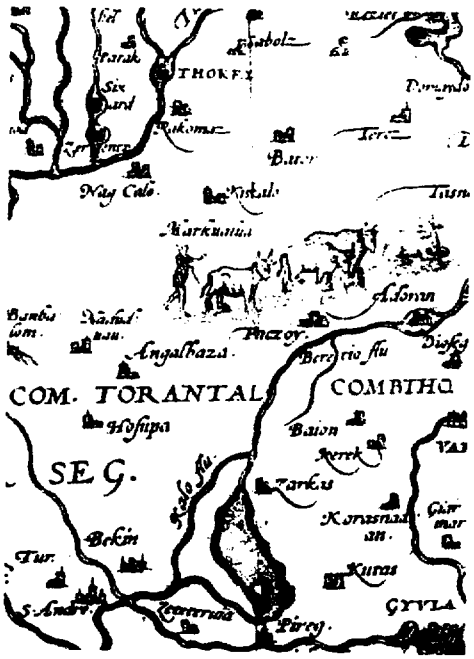
Two of the greatest treasures of the free royal city of Debrecen the stud-farm and the cattle herd stock, were watched over in the Hortobágy plain by herdsmen employed by the city. Both the horse and cattle herdsmen wore a so-called herdsman's badge moulded from copper, and marked with the letters **C**ivitas **D**ebrecen.

Lajos Csukás, Hortobágy horse-herdsman. 1943.

"The wealth of the city, the common struggle of the people living in the Puszta, the strength of the community and the feeling of loneliness, have deeply affected the life of each of the inhabitants of Hortobágy and have determined the personality of even the smallest herds-boy. The Hortobágy herdsman has served as a model for the entire Hungarian nation: there he could feel the glory of the great city above him, and he wanted to prove worthy of this".

Zsigmond Móricz /1935/

Among thematic drawings maps are especially remarkable as well. Their authors give early, but reliable contribution to the history of the Hortobágy.




János Zsámboki (Sambucus) /1531-1584/: scinetist, historian, critical editor of classic authors. His emblem collection was used by William Shakespeare as a source. In 1579 he planned and published from a copperplate his *Map of Hungary* in Vienna. The map indicates the relatively low population density of the Hortobágy, where cattle indicate animal keeping, the traditional land-use form of the region. On the drawn map of the great humanist villages of the Hortobágy and Bihar region can be seen with the figure of the herdsman.

Domokos Perlaszka /1801-1846/: *The Hortobágy plain and a herdsman.* 1846. His greasy hair rubs his shoulders, wearing only a single pair of trousers, his waist and stomach are bare. Sitting on an Arab horse in Hungarian attire. Also a publisher of copper and steel engravings. One of the most employed engravers, working at several periodicals.

The landscape of the Hortobágy is described by several travellers of different nations. One of the most detailed ones - giving an overall picture together with details of the landscape in an Englishman's eyes - is written by R. Towson (*Travels in Hungary with a short account of Vienna in the year 1793. London. 1797.*) from which appropriate parts are given in the box below (*old English letters are replaced with recent ones, bold parts ours*).

**FROM ERLAU (EGER) TO DEBRETZIN (DEBRECEN)**
CHAP. VIII.

**GREAT PUSZTA.**

I WILLINGLY left Erlau: but instead of going immediately to Tokay, now only distant a short days journey, which was my original plan, I was advised to alter my course, and visit that part of Hungary which lies on the other side of the Theis, as **this is the rudest part of the kingdom, where I could best see the uncontaminated Hungarians.** Accordingly, leaving the hills, I directed my course towards the great plain.

As I did not come into this part of Hungary to see elegant buildings, perfectioned arts, and high polished manners, but rough men and their rude contrivances, I was satisfied. Fured is a town, or large village, of five or six hundred houses; these consist only of the ground-floor; they are thatched with reeds, and placed without any order. The town is seated by the side of a fen, which at he overflowings of the Theis, which often happen, becomes an immense lake. **The inhabitants are graziers and farmers. I dined with one who was a nobleman, who had near two thousand sheep, and five or six hundred head of cattle.** Some of the sheep were of the common kind, or, as they are here called, of the German breed; but the greater part were of the Hungarian breed *(Ovis Strepsiceros)*, whose long erect spiral horns, and long hairy fleeces, give them a singular appearance. This place is famous for Hungarian saddles.

**The fens abound with water-fowl, and I dare say with many rare ones.** I went out with my gun, but was not successful. I had no time to spare, and the weather was rainy and boisterous. Herons are very common, and feed with the storks in the fens, but none of them have *yet* learnt from the stork, from *a principle of imitation*, to build their nests upon the peasants cottages.

All the country lying between these two towns (**Tiszafüred and Debrecen**) is a puszta. **There is not a single village in the whole journey, though the distance is fifty miles; only about half way there is a tolerably good inn: now and then at a great distance I saw a solitary spire: all is an immense and boundless waste.** It is part of the great plain I lately mentioned. **But though it is only sown here and there with corn, yet it is not lost; it feeds immense quantities of cattle.** Their hardy keepers stay out with them, covered with their rough sheep-skin clothing, weeks together. It is chiefly amongst these herdsmen that the custom of besmearing their shirts with hogs lard, and the fat of bacon, with a *view to cleanliness*, prevails. Thus anointed they can wear them a whole summer without washing, and it is said by this means they are kept free from those creatures "whose hourly food is human gore". Ought we not to consider this as a proof of the greater sensibility of the *Pulex irritans, Pediculus humanus & pubis*, than of man - or at least of these men?

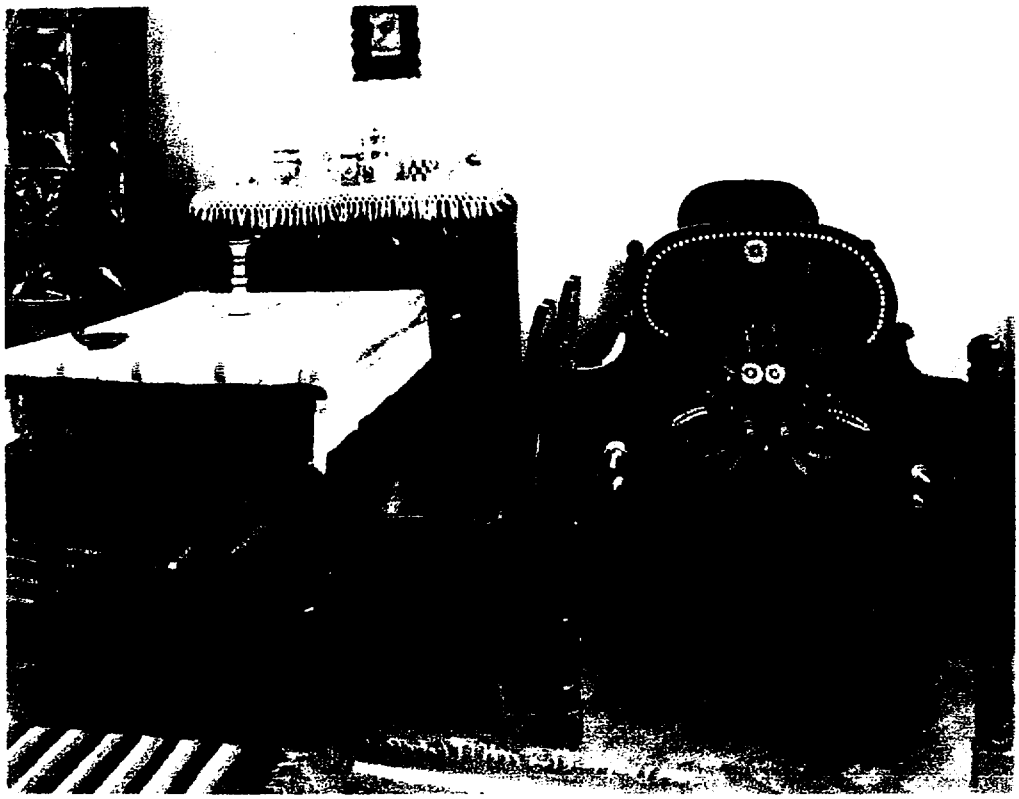
Some large birds of prey were very common on this waste; in one place I saw sixteen together. I suppose they were vultures: they are at times so bold as to dispute a carcase with the herdmans dogs. My driver assured me, that, a few days before, a herdsman had killed one with his stick, which had driven away his dogs that were feeding on a dead ox. In some places this waste is marshy: here water-fowl abound. I shot from my carriage a *Glareolus austriacus*. These birds were very common, and no ways shy.

**The immensity of this plain, its birds of prey, its herds of cattle, and their rough keepers, form a scene somewhat exotic.**


Mihály Ruttkai, engineer /1748/: *Map on the border cause between Debrecen and Újváros* (now Balmazújváros). In addition to the detailed Latin marginal notes and legend he illustrated also: the Calvinist church and street network of Újváros. A herdsman is also represented on the map with his dogs and donkey. The drawing is very detailed but authentic representation of the contemporary dress of herdsman.

*Shepherd boy from Angyalháza.* In the coloured illustration of Jenő Horváth, can be seen the favoured, long embroidered felt coat, characteristic of the beautiful ancient Hungarian apparel. This item of clothing made up of 11 sectioned matched together, meant everything to the herdsmen, carriage people, and those of the plain.

The conversation piece by László Pataky /1857-1912/ depicts the interior of the Hortobágy Inn at the end of the century. He was a pupil of Mihály Munkácsy. He chose items from the life of the people as subjects for his paintings.



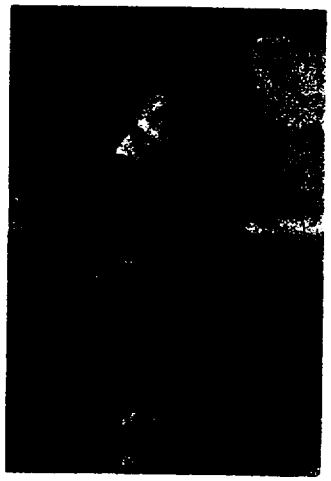
One of the guest rooms of the Hortobágy Inn, is decorated with flower designs, with pine wood furniture, commodity items and decorative vessels.

## The Puszta in the Hungarian literature (XVIII-XX centuries)

Hortobágy is rich in traditions of folk poetry, songs and decorative arts. Our popular ballad *Jóska Veres* of shady splendour is recorded in Nagyiván village by László Keszi-Kovács, ethnographer. This ballad includes the earliest language layer of the Hungarian epic poetry, from which our recent everyday language originates. Value of our folk song *Grazing over there* is increased by the fact that its was recorded by the great scientist of the Hungarian folk songs, Zoltán Kodály at Tiszacsege village.

Romantic literature preferred descriptions of mountainous landscapes, but pictures of the lowland and the Hortobágy appear quite early in our writers and poets. First descriptions were stimulated by the interest of discovering the Hungarian lowlanderes. This is especially true for the Hortobágy puszta, being a geographic landscape unit, desert in the middle of the Great Hungarian Plain, product of historical times, place of depopulated villages. It is also an ethnic unit: remained place of animal keeping, the primeval occupation of Hungarian people.

The landscape of unique natural beauty has been recorded by several belletristic works. It incorporates almost all the burning questions of the Hungarian history. Only our writers and poets ventured and were able to demonstrate the real weight of these problems. Excellent authors from the XVIII-XX centuries: Count József Gvadányi, Mihály Fazekas, Mihály Csokonai Vitéz, Baron Miklós Jósika, Lajos Kúthy, János Arany, Sándor Petőfi, Mór Jókai, Endre Ady, Zsigmond Móricz, Gyula Reviczky, Gábor Oláh, Pál Szabó, Péter Veres, Pál Gulyás, Gyula Illyés, Tamás Kiss. Their poems, novels and reports inspired by the Hortobágy are lasting values of the Hungarian cultural heritage.



C. v. Binzer: Mihály Fazekas

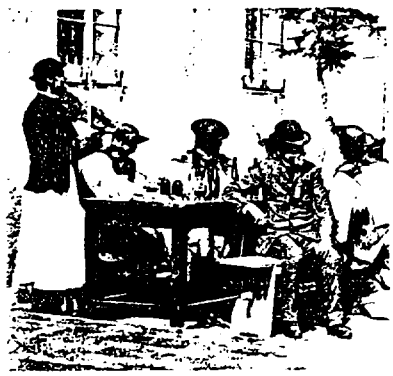
Mihály Fazekas (Debrecen, 1766. – Debrecen, 1828.): poet, botanist. One of the greatest writers of the age of enlightenment. Author of the sharpest work of social criticism of that age described in a humor-rich, anecdotic style. With a quarter of century before Sándor Petőfi he described the puszta as country of freedom. His poem *Hortobágy Song* derives from a popular folk song, at the same time determined criticism against feudalism.

Miklós Barabás: János Arany

János Arany (Nagyszalonta, 1817. - Budapest, 1882.): our greatest epic poet, master of the Hungarian ballad, outstandig writer of popular realism even in the international literature. At the beginning of the XIX. century grasslands of the lowland were continued as far as Nagyszalonta, to the homeland of the great poet. The famous hero, Miklós Toldi appears in his works on this puszta. János Arany was directly inspired by the Hortobágy, e.g. in his poem *The violin, lively legend.*

Soma Orlai Petrich: Sándor Petőfi in Debrecen. 1854.

Sándor Petőfi (Kiskőrös, 1823. – Fehéregyháza, 1849.): one of the geatest Hungarian poets, representing the revolutionary poetry and popular realism on the level of world literature. In his poem *The winter puszta* the allegory of the coming revolution is visualised. He had visited the puszta, the land of "ancient peacefulness" several times, and raised the mirage to a rank of the most peculiar poetic beauty of the lowland.



Mór Jókai with horse-herds at the Hortobágy Csárda. 1892.

Mór Jókai (Komárom, 1825. – Budapest, 1904.): one of our greatest novelists, a fantasy-rich describer of Hungarian history and folk-life. He became familiar with the Hortobágy after the revolution, when he was the guest of Debrecen town. His nicest novel *Yellow rose* was writen based on his experiences there, landscape description of which is the crowning work of the poetry on the puszta of world-wide success. Some critics say that this is his only psychologically authentic work.

Endre Ady in the editorial office of the Debrecen Morning News.

Endre Ady (Érmindszent, 1877. – Budapest, 1919.): one of our greatest poets, revolutionary reformer of the Hungarian lyric poetry. Initiator and leader of the fight for a new Hungarian literature. In his poem *The message of the mirage* his "...famous Hungarian" Hortobágy is a landcape run wild. In his symbol-system: "the Hungarian wasteland", anachronism, product of the old-fashioned citizens of Debrecen. Authors writing after him cannot be contented themselves only with the praising beauties of the puszta.

Zsigmond Móricz in the Hortobágy in spring, 1942.

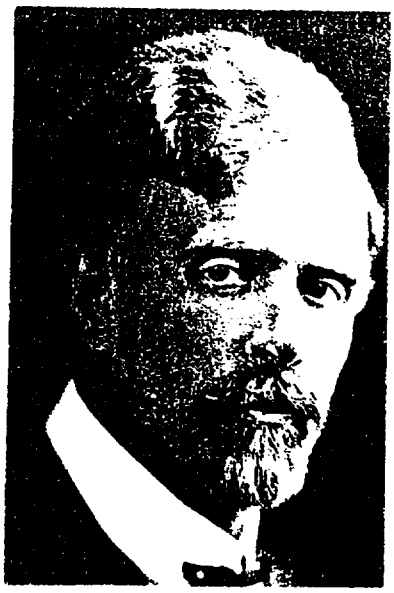
Zsigmond Móricz (Tiszacsécse, 1879. – Budapest, 1942.): our greatest novelist in critic realsim. He made a protest against barbarism, characteristic of his age, appearing even on the puszta. On the other hand in his novel *Spring breath of the Hortobágy* he shows the natural beauties, araising an increasing interest for the protection if them in the reader's heart.

Péter Veres. 1965.
Photo by László Várkonyi

Péter Veres (Balmazújváros, 1897. – Budapest, 1970): Excellent member of the movement of writers started from the region east fo River Tisza. He started his way to the Eastern European history from the grasslands of the Hortobágy, where he was a shepherd-boy. In his autobiography, "Account" he was the first, who described difficulties of the pastoral life from "inside".

Gyula Illyés, 1942.

Gyula Illyés (Rácegrespuszta, 1902. – Budapest, 1983): universal writer, making lasting values in each form of literature. He has done a lot in order to place the Hungarian peasantry into politics, literature and culture. In his poem, *Bridge market* - inspired by the film of G. Höllering *Hortobágy* – he opposed German racism to the eastern country of origin of the Hungarians.

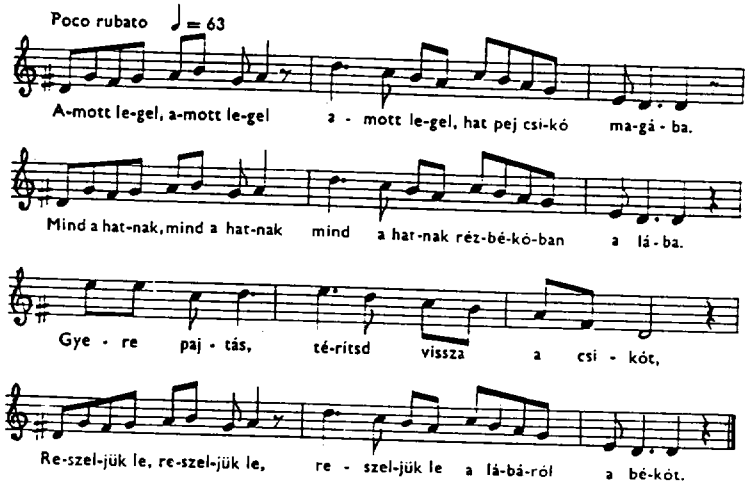


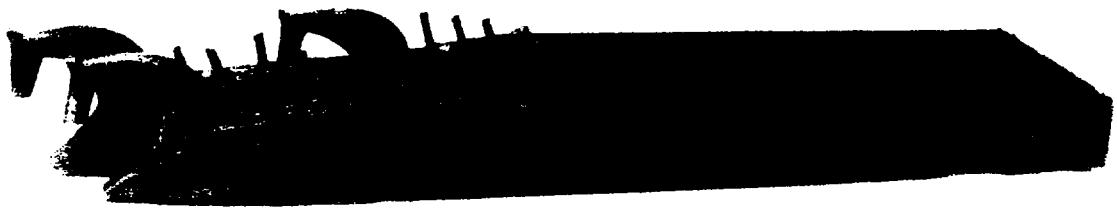
Zoltán Kodály /1882-1967/: composer of music, scientist and tutor. He has collected the song *Grazing over there* at Tiszacsege. 1930.

AMOTT LEGEL

Énekelte:
Tanka Gábor kb. 24 éves
Tiszacsege

Gyüjtötte:
Kodály Zoltán,
1930 körül



Zither with horse-heads from Debrecen.

# Hortobágy in the Hungarian fine arts of the XIX-XX centuries

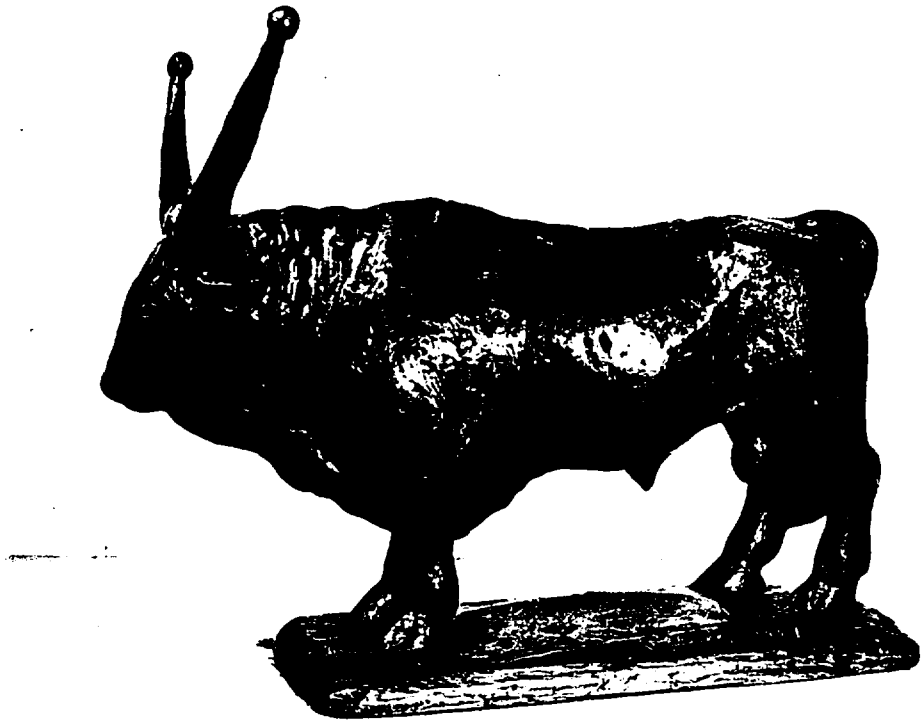
The Hortobágy is a great test of art-talent. This aesthetic question of principles has been discovered already by János Arany in 1851. His intuition: „Well, is this the puszta? That famous puszta / Eden of horse-herds, outlaws, poets? / Pictures of which has been hacked so many times / By the painter, poet, stage, dance and music?"

Following the Hungarian revolution in 1848/49 artists readily illustrated the land of ancient piece, characteristic of the Hungarian lowland. This interest deriving from the national feeling was followed by the romantic attention abroad. Petőfi raised the mirage to a rank of the most peculiar poetic beauty of the lowland. The most famous painters were working in his plenty of beaming: Miklós Barabás, August von Pettenkofen, Antal Ligeti, Károly Telepy, Károly Lotz, Sándor Wagner, Géza Mészöly, Tivadar Csontváry Kosztka, Sándor Bihari, József Róna, Béla Iványi Grünwald.

The unique intergrowth of nature and culture is a result of the close connection and neighbourhood of the Hortobágy with Debrecen town. Zsigmond Móricz was always interested in the Hortobágy, he liked the "absolute puszta". He attracted writers and other artists by him. Essence of the changing but still permanent puszta was authentically illustrated in the XX. century by the following artists: Tibor Boromisza, Ferenc Medgyessy, Zsigmond Kisfaludi Strobl, Miklós Káplár, László Holló, Vilmos Aba Novák, Jenő Haranghy, Kálmán Gáborjáni Szabó, Vladimír Szabó, Miklós Borsos, György Konencsni, Sándor Baranyó, Róbert Csíkszentmihályi, Viola Berki. Many of them are remarkable members of the Nagybánya and Szolnok colonies of artists. Some of them have reach European peaks. Their art-works can be seen in exhibitions and public squares in Hungary, but also abroad. Based on their masterpieces Hortobágy became to be the symbol of Hungary. In order to solve the most recent problems of modern, developing societies one can draw moral force from the protected natural and cultural heritage of this landscape of a great history.

Tivadar Csontváry Kosztka /1853-1919/: *Storm on the Great Hortobágy*, 1903.

A lonesome giant of our modern art. Reality and vision are alloyed in his painting of the Hortobágy, which is one of his significant works. The circumstances under which it was painted, came to light following publication in 1958 of the letter written by Haranghy György.



Ferenc Medgyessy /1881-1955/: *A bull of the Hortobágy*. 1934.

A sculptor reaching European peaks. The big-headed bull reminiscent of the "naive" beauties of our folk art, is one of his main works. The Hungarian mentality also received a form in his bronze sculpture. With his art he also captivated the sculpting greats of France. A. J. Mailiol and Ch. Despiau enthusiastically awarded Medgyessy with the Grand-Prix.

Zsigmond Kisfaludi Strobl /1884-1975/: *Herdsman of the Hortobágy*. Bronze. about 1955.

The sculpture can be characterised by the joint movement of horse and rider. He held nature to be his teacher. This is his small sculpture, the outstanding bronze of his life's work. His successes are proved by the acknowledgement of G. B. Shaw. On the photograph of his bust sent to the artist, he wrote: "better than the original".

Miklós Káplár /1886-1935/: *Szarvas Ernő, head shepherd.* 1928

From being a herdsman of the Hortobágy he became a pupil of József Rippl-Rónai. In his paintings he depicted very strongly the essence of the plain before its transformation. Analysing what was said by Zsigmond Móricz about the artistic work of his painter friend, ars poetica was expressed in connection with the painting decorating his study.


Vladimír Szabó /1905-1992: *At the Hortobágy bridge*. 1966.

One of a series consisting of seven copper etchings. Acquainted with the works of our classic authors inspired by the Hortobágy, he relates many of them with his copper etchings. Here also he favours the appearance of crowdedness. With his favour for relating tales, flooding from his wide intellectual horizon, he really captivates the viewer. He is the fable teller of Hungarian painting.

Kálmán Gáborjáni Szabó /1897-1955/: wood engraving. 1942.

Speaks of the musings of Móricz Zsigmond: "Spring breath of the Hortobágy". The artist illustrated the literary work with his wood engravings built up of the two most opposing elements, black and white. All three are assemblies of the distinctive characteristics of the countryside.

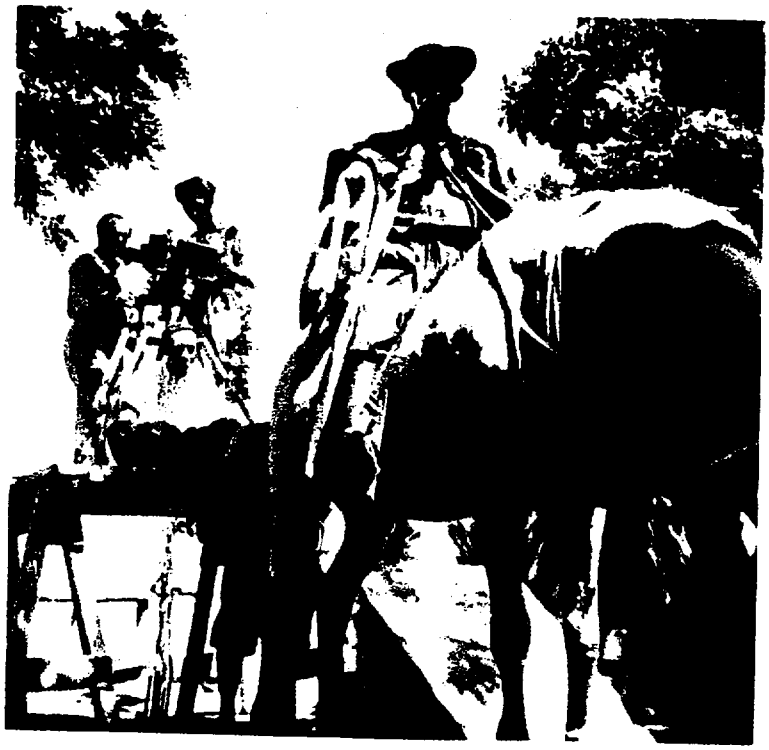
# HUNGARY

A realistic presentation of the plain, with a gigantic firmament, with a wild duck flying up out of the reeds, and a herd of cattle showing white in the distance. The artists were awarded the Grand Prix by the artistic judging committee at the 1937 World Exhibition in Paris. The new version of the original illustration, restored in 1963, was issued in 1998 by the the Hortobágy National Park Directorate, on the 25th anniversary of its establishment.

György Konecsni /1908-1970/ - Antal Fery /1908-1994/: *Hungary. Hortobágy.* A coloured illustration. 1936.

His medals and plaques bear witness to his high level of artistic performance. As does this bronze also, which on its front facing puts us in remembrance of the ancient flora world and the desolated villages of the endless plain. On its back facing: Executive Committee of the Hortobágy. 1963-1973.

Róbert Csíkszentmihályi /1940- /: *Hortobágy.* Bronze plaque. 1972.



Georg Höllering, Swiss director shot more than 15.000 metres of film in the Hortobágy puszta in 1934-35. Based on his request Zsigmond Móricz wrote his famous novel entitled *Sombre Horse*, which is the background story of the film *Hortobágy* (1936). The theme of the film – machines counquering the puszta – was enriched with legends, culture and love by the writer. The actors are herdsmen, they visualise the traditional way of life if the Hortobágy.

János Czinege, head horse-herd with the film shooting team

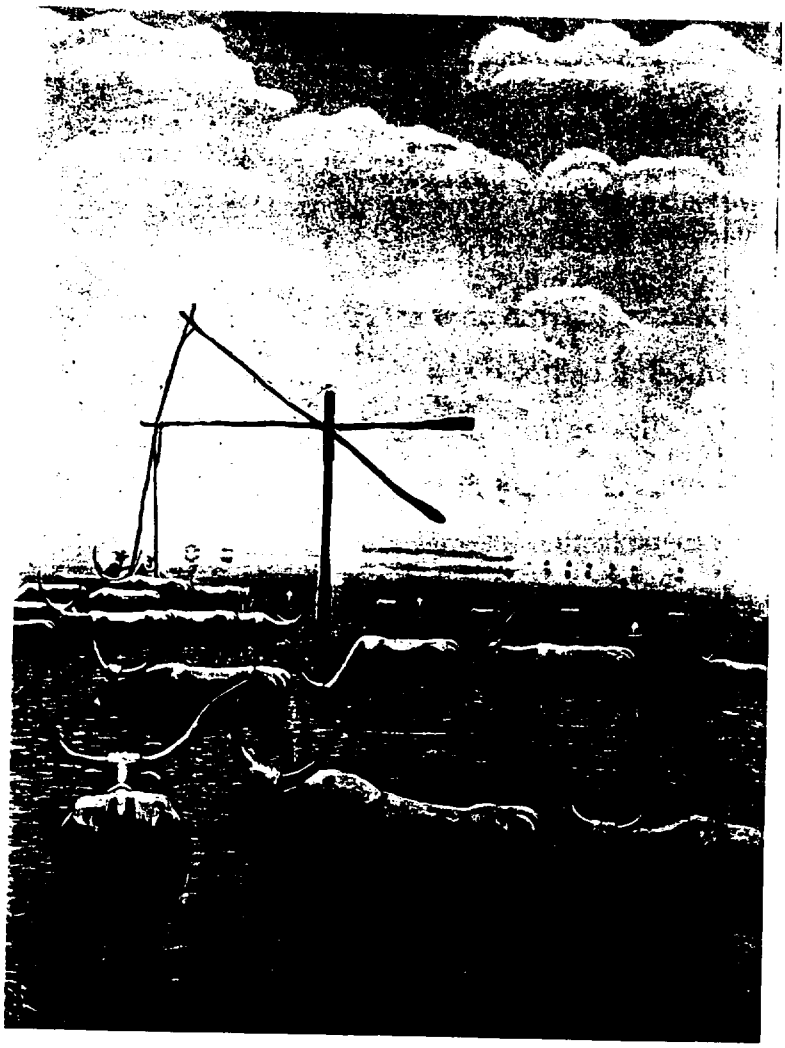
A new quality: an epic work of art for motion pictures was born in the Hungarian literature. The artistic work impression is enhanced by the background music based on folk-songs of historical importance, recorded in the puszta by László Lajtha, folklorist and composer. The work of the cameraman, László Schäffer got far ahead of the level of contemporary Hungarian films. The dramatic suggestion of the film - produced with amateur actors – has only been taken into consideration by cinematic arts years later, in the French and Italian neorealistic works. It is a descriptive piece of poetry, and what about its style? „The Hortobágy is laughing with the sky of the falling night. The Hortobágy is laughing at the frail human being with the pleasure of thousands, millions of years." It is one of the the best films of its age, giving an unforgettable experience even today. István Nemeskürty is the great authority on this film. In his opinion it is simply „time changed into pictures by magic", which can only be applied to a film of such a high level and quality.

Other films on the natural history of the Hortobágy:

- *In the forest of red-footed falcons*. 1953. Directed by István Homoki-Nagy.
- *Hortobágy National Park*. 1975. Directed by József Kiss.
- *Grasslands. Ancient and modern*. 1998. Part of the series „Living Europe". Produced by the Green Umbrella Ltd., UK.


György Konecsni/1908-1970/: *The art-work of fire and earth.*

Fazekas Lajos, potter, successful life restorer of the mysterious and rich art of black popular ceramics. The reviver of our placard art in his graphics of 1961., depicted with great expressiveness the perception of László Masits: The memorial to thousand of years of culture live in the folk pottery of Nádudvar.



Le soleil est au point culminant de sa carrière: La chaleur afflue en cascade d'or sur les bêtes assoiffées. Le taureau sombre, les vaches grises hongroises nous rappellent aussi nos valeurs menacées par le monde civilisé. Où le bord du pâturage touche déjà presque au ciel bleu, c'est là qu'on voit le phénomène lumineux naturel de valeur extraordinaire de la puszta: la mirage.

Miklós Káplár /1886-1935/: *Abreuvage au puits double.*
Peinture à l'huile, 1933.

Parmi les grands esprits créateurs déjà mentionnés de la littérature hongrosie on se souvient ici de Sándor Petőfi. C'est lui qui a inauguré dans notre littérature le mirage comme la beauté poétique la plus caractéristique de la Grande Plaine hongroise. Nous citons ses lignes écrites en 1847:

„...galopons vers l'est, c'est une perspective superbe qui suit: la puszta, le Hortobágy! Hortobágy, plaine glorieuse, tu es le front de Dieu!

Au loin, au bord de l'horizon, on voit la csárda (l'auberge) de Hortobágy, non pas à terre, mais dans le ciel... le mirage l'a soulevée là-haut. A côté de la csárda, c'est le troupeau de chevaux, de même en l'air, comme si une truope de grues fatiguées volait. Cher mirage! Il tient les objets dans ses bras comme la mère ses enfants.

Ce que la puszta est simple et combien elle est pourtant sublime! Mais peut-il être sublime ce qui n'est pas simple?"

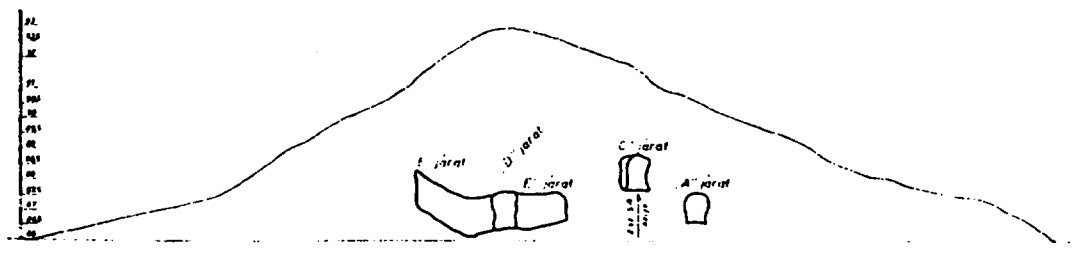
## *Archaeological information on the continuity of the Hortobágy landscape*

Archaeological findings in the already excavated kurgáns provide evidence on the existence of animal keeping human populations in the Hortobágy by the following facts:

- People buried in the kurgáns were covered by animal skins, being an important element of the funeral ceremony. This was recorded in the most recent excavations (Püspökladány: Kincses-domb, Sárrétudvari: Őrhalom) as well.
- In case of kurgáns excavated in Russia, but also south of Hortobágy (Dévaványa) tools and trinkets prepared from domestic animal bones were found.
- In all excavated kurgáns a great number of bones of domestic animals (sheep, cattle) were found, remains of the funeral feast and also of the food provided for the deceased person.

In case of other prehistoric cultures in Hungary there are not such a great amount of domesticated animal bones, compared with that of the kurgáns. It is scientifically accepted and proved that kurgáns occurring from Southern Russia to River Tisza in the east and to the Lower Danube in the south are burial sites of nomadic pastoral nations, originating from the steppes of Southern Russia. These kurgáns are from the Copper Age, but based on the recent scientific results (excavations at Sárrétudvari: Őr-halom) some of them has functioned as burial site even in the early Bronze age for the descendants of populations living in the Copper Age.

Kurgáns are the "pyramids" of European steppes, hence the structure of crypts and corridors are similar to that of the Egyptian pyramids (Fig. 1-2. From M. Ibolya Nepper /1977/: Okkersíros temetkezés Püspökladány-Kincsesdombon, Déri Múzeum Évkönyve, Debrecen)



PÜSPÖKLADÁNY - KINCSESDOMB

***Figure 1. Cross-section of the kurgán***

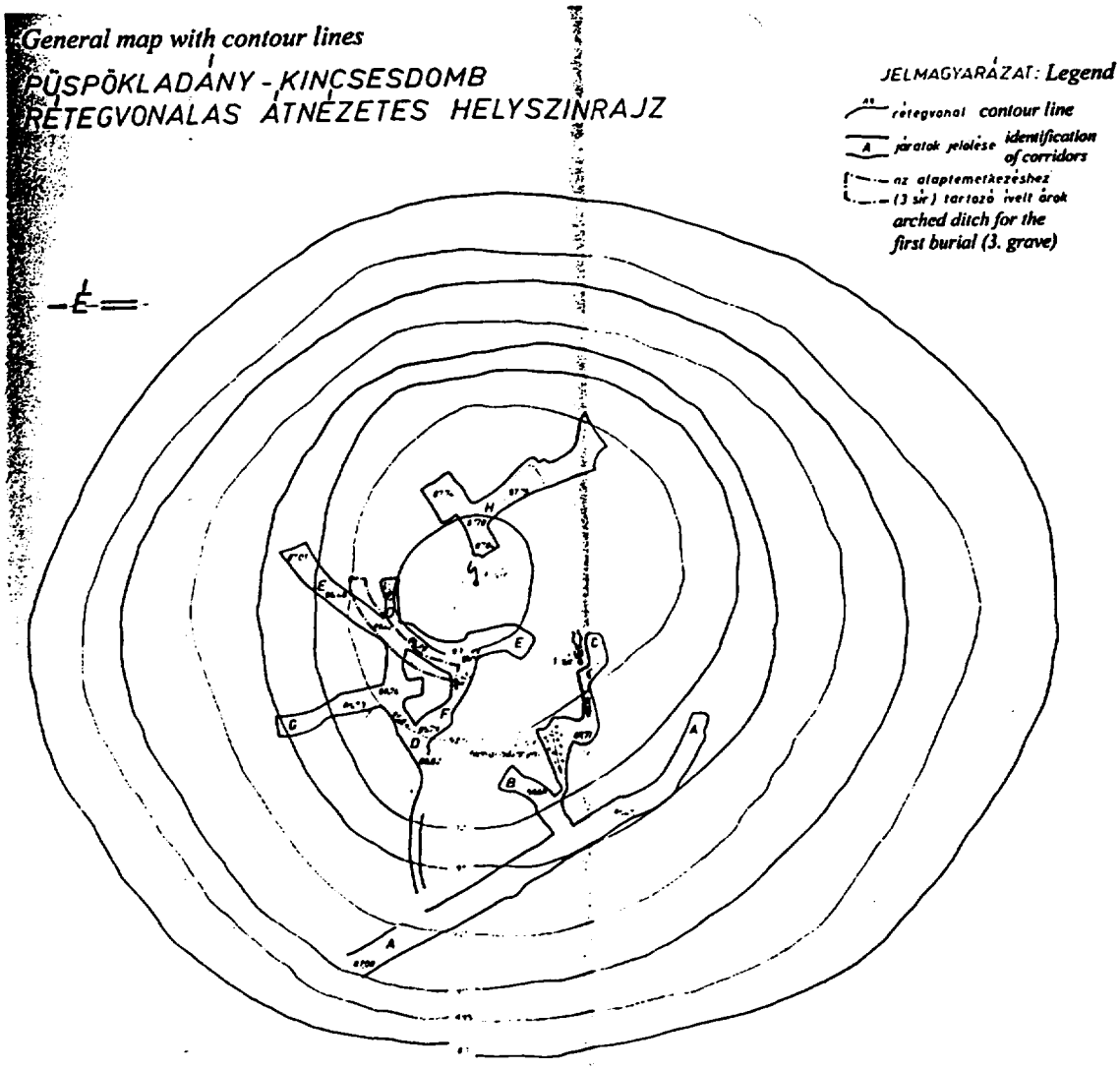



***Figure 2.***

Based on the regulations of the Law on the Protection of Natural Heritage (see. 4.1) it was necessary to set-up a National Kurgán Database. Kurgáns within the Hortobágy National Park are demonstrated by Map 1. (annexed) indicating 212 records from the National Kurgán Cadaster (numbers on the map refer to Table 2., in which the list of kurgáns is given, with geographical co-ordinates, indicating also their correctness).

*Tells* (settlement mounds), being wider and lower than kurgáns, are known from the Neolithic and the Bronze Age. There are no tells in the Hortobágy from the latter, probably because of climatic reasons. Following the Neolithic and the Copper Age Hortobágy is populated again at the end of the Bronze and Scythian Age. There are tells from the Neolithic in the Hortobágy, like the archaeological site of Nádudvar, Tök-halom (ID=72 on Map 2.), where a large, linear village was found near the tell. It is probable that there are more tells in the Hortobágy National Park, their identification and research needs further actions (see the last chapter).

The landscape of the Hortobágy has a remarkable archaeological-historical importance. Based on archaeological findings continuity of the still living characteristics in the economic specialities, especially in the land-use type has not changed since the immigration of the *sarmata* ethnic groups of Iranian origin from the II. century. The steppe they found reminded them of their left home, the steppes of the recent Southern Russia. This area provided an excellent opportunity for their traditional animal (big domestic ungulates) keeping and the complementary agricultural activities. Their cemeteries (e.g. Hortobágy Csárda, Poroshát) from this period incorporate a lot of graves proving the inhabitation of the area for several hundreds of years.

They still live in the Hortobágy when German tribes immigrating to the area in the IV-V centuries. It comes from the natural characteristics of the region that *avars* – known also as an animal keeping nation – lived in the Hortobágy from the beginning of the VII. century to the Hungarian conquest at the end of the IX. century. Their biggest cemetery, extremely rich in precious metals with several hundreds of graves has been excavated in 1959-60 in the central part of the recent national park (Árkus). Based on findings from the Bajnok Kurgán our Hungarian ancestors have appeared in the Hortobágy at the end of the IX. century. They settled in the region once for all at the X-XI centuries, hence the landscape was extremely suitable for the primarily animal keeping Hungarians. Monasteries of two clans are known from the region: Ohat, owned by the leader of the Ohat family (described as Cumanian by Anonymus) and Zám, owned by the Káta clan (both are still existing and used geographical names, toponyms of puszta areas in the national park). Early settlements of the XII-XIII. centuries has been destroyed by the Tartar invasion, but following this they were immediately repopulated.

Depopulation of smaller settlements at the turn of the XIV. and XV. was caused by the parallel development of towns around the Hortobágy. Their land was acquired by the squirarchy (Debreceni family, King Zsigmond, István Lazerevics and the famous Hunyadi family) and by the citizens of Debrecen town. The still surviving small settlements were destroyed by the Turkish invasion: Máta (the recent Hortobágy village) in 1563, while the already mentioned Ohat in 1660.

For the locations (107 sites) see the annexed map about the archaeological findings in and around the Hortobágy National Park (numbers on the map refer to Table. 3., in which the list of archaeological sites is given). The source database of the Déri Museum is not georeferenced, only site names are available, therefore there are no geographical co-ordinates for the sites.

Since then the endless grasslands of the Hortobágy were owned by the communities of the surrounding settlements (mainly Debrecen, but also Balmazújváros, Nádudvar, Hajdúszoboszló, Kisújszállás, Karcag, Nagyiván, Püspökladány, Hajdúböszörmény, Tiszacsege,

Egyek, Polgár, Tiszafüred) and were used in the same way as for thousand of years before: horses, cattle and sheep of the communities were kept on them. The first, detailed (1:28800) military map from the end of the XVIII. century indicates huge grasslands on the Hortobágy (for written evidence see above the description Townson from the same period in the first chapter) with csárda-s, as the only permanent buildings along the main trade route from Tiszafüred to Debrecen.

Based on these evidences the nominated area, the Hortobágy National Park – incorporating the largest continuous grassland of Europe (540 $km^2$ ha) - is a cultural landscape reflecting a specific sustainable land-use form – extensive animal keeping over thousands of years - where human populations inhabiting the area considered the characteristics and limits of their natural environment. Recently the unique landscape of the Hortobágy is managed by modern techniques of sustainable land-use by which natural values of it are also maintained. The continued existence of traditional forms of land-use supports biological diversity, described in detail in the nomination dossier.

The nominated area falls into the second category of cultural landscapes, being an organically evolved landscape resulting from an initial social, economic and administrative imperative and has developed its present form by association with and in response to its natural environment.

According to the sub-categories of organically evolved landscapes Hortobágy is a continuing one, retaining an active social role in contemporary society (see point 3.2) closely associated with the traditional way of life, and in which the evolutionary process is still in progress, but at the same time it exhibits significant material evidence of its evolution over time.

## *Managing the puszta by traditional land-use forms together with the contemporary society*

*Objective*

The main objective of grassland management in the Hortobágy National Park is to maintain the continuity of the landscape on the long term with traditional, extensive land-use forms. The contemporary society, living in the settlements around the national park plays an important role in this process.

*Tools*

The national park the legal owner of the majority of the state owned areas. In order to achieve the objective, - based on the nature conservation management plan - the Hortobágy National Park Directorate provides grazing and hay making possibilities within its area for the following types of legal or natural personalities:

- Companies
- Agricultural collective farms
- Private persons

These personalities rent areas – more than half of the total area of the national park (see Table 1. below for more details) – on a contractual basis from the directorate for grazing and hay making purposes. **They are exclusively from the settlements surrounding the national park** (in the park there is only one small settlement of fishermen), in this way the contemporary society

- plays an important role in the management, maintenance of the grasslands and the landscape,
- has income from the agricultural and the connected touristic activities, decreasing the high unemployment rate, characteristic of the region anyway.

*Table 1. Areas within the Hortobágy National Park used by different artificial and natural persons for animal keeping (1998)*

| ***Type of person*** | ***Number*** | ***Area (ha)*** |
|---|---|---|
| Company (including the Nature Conservation Public Limited Co. supervised by the Ministry for Environment) | 12 | 29.317 |
| Collective farm (including grazing societies of the surrounding settlements) | 16 | 12.070 |
| Private person | 21 | 1474 |
| ***Total:*** | | ***42.861*** |

The directorate offers these areas on a relatively low price, and if the contractor is ready to do other works connected to the area (maintenance of stables and other smaller buildings serving animal keeping) the costs of these activities can be included in the fee to be paid.

## *Legal background for the protection of kurgáns and archaeological sites*

### *4.1 Kurgáns (tumuli)*

*Kurgáns* are *ex lege* protected sites by the LIII. Law (1996) on the Protection of Natural Heritage:

23. § By right of the power of this Law all the *kurgáns* are protected as nationally important sites.
The Minister for Environment should publish the list of *kurgáns* within 3 years after this Law came into force.

In case of archaeological excavations of *kurgáns* regulations of the CXL. Law on the Protection of Cultural Heritage and on the Museums (1997) should be applied (see 4.3 below for more details).

### *4.2 Archaeological sites*

Legal background is provided by the CXL. Law on the Protection of Cultural Heritage and on the Museums (1997). The most important articles of this law are as follows.

26. § Archaeological findings hidden or found on the surface of the earth, in the earth or bed of waters is are owned by the state.

27. § Elements of the archaeological heritage – within the range of possibility - should be preserved in their original place and state together with their original circumstances. They can only be removed from their original circumstances in the course of a archaeological excavation.

28. § There should be a standard database for the discovered archaeological sites.
The database of discovered sites should be maintained and updated by the Regional Directorates of Museums (Regional Directorate).

29. § Archaeological sites of national importance and their surroundings should be designated as protected archaeological sites.

Designation is based on the proposal of the Regional Directorate and is based on an Act signed by the Minister of Cultural Heritage.

On protected archaeological sites it is not allowed to change the original, characteristic state of the area. Permission from the Regional Directorate is necessary for construction, change of land-use type, parcelling and any kind of change endangering the site.

The fact of protection should be indicated in the national land register for the appropriate pieces of land.

33. § For archaeological excavations it is necessary to have the permission of the Regional Directorate, which is based on the preliminary opinion of the Committee of Archaeological Excavations.

The Committee is a professional consultant body, chair, secretary and one member of which are delegated by the Minister for Cultural Heritage, two members by the Minister for Environment, and two members by the Chair of the Hungarian Academy of Sciences.

In the following cases the permission should be agreed by other authorities:

- on protected natural areas by the responsible National Park Directorate
- on protected historic sites by the National Board for Historic Monuments

## *Plan for the excavation and demonstration of archaeological sites in the Hortobágy National Park*

As it is indicated in the second chapter the Hortobágy National Park area and its surroundings areas rich in archaeological findings. Unfortunately the already excavated and preserved site, the mediaeval church of Papegyháza is not easily accessible, especially in bad weather conditions. In order to demonstrate the rich cultural heritage of the nominated area the Hortobágy National Park Directorate and the regional Déri Museum (serving also as the Regional Directorate) has agreed on a plan for co-operation on this field. The main objective of this plan are as follows

- Exact localisation (to a correctness of 10 meters) of all archaeological sites and kurgáns with the Geographical Positioning System (GPS) tool of the national park.
- Identification of tells within the Hortobágy National Park using satellite images, aerial photos and systematic field surveys.
- Identification of sarmata sites from the Roman age and their verification by excavations.
- Localisation of the Roman legionary camp, its excavation and demonstration for the public.
- Excavation and demonstration of the two monasteries (Ohat, Zám) and their churches. Both are easily accessible on existing asphalt roads.
- Excavation and demonstration of a kurgán within the Hortobágy National Park.

**Table 2.** *List of kurgáns in the Hortobágy National Park (see Map 1. for locations)*

| *Identification code* | *Settlement* | *Name* | *Reference* | *X* | *Y* | *Co-ordinate source* | *Co-ordinate correctness (m)* |
|---|---|---|---|---|---|---|---|
| 201 | Kunmadaras | Bogárzó-halom | | 793088 | 233647 | ZOUNUK88 | 800 |
| 202 | Kunmadaras | Ecse-halom | | 794237 | 232908 | ZOUNUK88 | 800 |
| 204 | Kunmadaras | Kis-Darvas-halom | | 796919 | 237010 | ZOUNUK88 | 800 |
| 205 | Kunmadaras | Kis-Füves-halom | | 791259 | 235405 | ZOUNUK88 | 800 |
| 207 | Kunmadaras | Köves-halom | | 790055 | 235433 | ZOUNUK88 | 800 |
| 208 | Kunmadaras | Luca-halom | | 791132 | 234091 | ZOUNUK88 | 800 |
| 210 | Kunmadaras | Nagy-Darvas-hal. | | 796692 | 238415 | 100E_HLM | 100 |
| 211 | Kunmadaras | Nagy-Fuves-halom | GYŐRFFY | 791223 | 232926 | 100E_HLM | 100 |
| 212 | Kunmadaras | Nagy-Koves-halom | | 789639 | 236709 | ZOUNUK88 | 800 |
| 216 | Nagyiván | Berec-halom | | 791823 | 241768 | ZOUNUK88 | 800 |
| 220 | Nagyiván | Kása-halom | | 793841 | 240587 | ZOUNUK88 | 800 |
| 222 | Nagyiván | Mérges-halom | | 795690 | 240623 | ZOUNUK88 | 800 |
| 223 | Nagyiván | Nagy-Bence | | 794372 | 242249 | ZOUNUK88 | 800 |
| 225 | Nagyiván | Sároséri-halom | | 795986 | 242357 | ZOUNUK88 | 800 |
| 229 | Tiszafüred | Filagoria-halom | | 792516 | 249361 | ZOUNUK88 | 800 |
| 232 | Tiszafüred | Kis-Földvar-h. | | 793386 | 250001 | ZOUNUK88 | 800 |
| 233 | Tiszafüred | Kondás-halom | | 792663 | 247082 | ZOUNUK88 | 800 |
| 235 | Tiszafüred | Lyukas-halom | | 795471 | 243750 | ZOUNUK88 | 800 |
| 236 | Tiszafüred | Meggyes-halom | | 794615 | 250160 | ZOUNUK88 | 800 |
| 238 | Tiszafüred | Nyiregyhazi-h. | | 793540 | 248231 | ZOUNUK88 | 800 |
| 309 | Karcag | Ecse-halom | GYŐRFFY | 795141 | 232773 | ECSEDY-IV | 1000 |
| 718 | Újszentmargita | | Ecsedy(1979) | 813962 | 268939 | ECSEDY-III | 1000 |
| 719 | Újszentmargita | Kettős-halom | ZOLTAI(1938) | 805491 | 264235 | ECSEDY-III | 1000 |
| 720 | Újszentmargita | Kettős-halom | Ecsedy(1979) | 805237 | 264055 | ECSEDY-III | 1000 |
| 722 | Újszentmargita | | Ecsedy(1979) | 809504 | 264188 | ECSEDY-III | 1000 |
| 723 | Újszentmargita | Margita-domb | Ecsedy(1979) | 807083 | 263778 | ECSEDY-III | 1000 |
| 724 | Újszentmargita | Király-halom | Ecsedy(1979) | 807900 | 265765 | ECSEDY-III | 1000 |
| 726 | Újszentmargita | Rosszfali-halom | Ecsedy(1979) | 808613 | 264471 | ECSEDY-III | 1000 |
| 730 | Újszentmargita | | Ecsedy(1979) | 807656 | 265921 | ECSEDY-III | 1000 |
| 731 | Újszentmargita | | Ecsedy(1979) | 808036 | 264720 | ECSEDY-III | 1000 |
| 732 | Újszentmargita | | Ecsedy(1979) | 808005 | 263190 | ECSEDY-III | 1000 |
| 733 | Újszentmargita | | Ecsedy(1979) | 806746 | 264921 | ECSEDY-III | 1000 |
| 734 | Újszentmargita | | Ecsedy(1979) | 805539 | 262869 | ECSEDY-III | 1000 |
| 739 | Újszentmargita | | Ecsedy(1979) | [illegible] | [illegible] | [illegible]DY-III | 1000 |

**Table 2.** *List of kurgáns in the Hortobágy National Park (see Map 1. for locations)*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 745 | Újszentmargita | Szandalik-halom | Ecsedy(1979) | 810837 | 264192 | ECSEDY-III | 1000 |
| 751 | Újszentmargita | | Ecsedy(1979) | 806065 | 265215 | ECSEDY-III | 1000 |
| 752 | Tiszacsege | Mályföldes-halom | ZOLTAI(1938) 152 | 799025 | 254631 | ECSEDY-III | 1000 |
| 754 | Tiszacsege | Kacskó-halom | ZOLTAI(1938) g | 798525 | 257212 | ECSEDY-III | 1000 |
| 755 | Tiszacsege | Varga-halom | ZOLTAI(1938) i | 799027 | 256666 | ECSEDY-III | 1000 |
| 756 | Tiszacsege | Bonca-halom | Ecsedy(1979) | 801259 | 262076 | ECSEDY-III | 1000 |
| 759 | Tiszacsege | Lyukas-halom | Ecsedy(1979) | 797155 | 262103 | ECSEDY-III | 1000 |
| 762 | Tiszacsege | | Ecsedy(1979) | 802476 | 263067 | ECSEDY-III | 1000 |
| 763 | Tiszacsege | Kása-halom | Ecsedy(1979) | 797599 | 255867 | ECSEDY-III | 1000 |
| 767 | Tiszacsege | | Ecsedy(1979) | 799064 | 261924 | ECSEDY-III | 1000 |
| 769 | Tiszacsege | Hármas kecskés-halom | Ecsedy(1979) | 800173 | 259949 | ECSEDY-III | 1000 |
| 770 | Tiszacsege | | Ecsedy(1979) | 800550 | 260000 | ECSEDY-III | 1000 |
| 773 | Tiszacsege | | Ecsedy(1979) | 797769 | 256034 | ECSEDY-III | 1000 |
| 774 | Tiszacsege | Kettős-halom | Ecsedy(1979) | 797690 | 256968 | ECSEDY-III | 1000 |
| 775 | Tiszacsege | | Ecsedy(1979) | 799919 | 255621 | ECSEDY-III | 1000 |
| 780 | Tiszacsege | | Ecsedy(1979) | 802491 | 259564 | ECSEDY-III | 1000 |
| 781 | Tiszacsege | | Ecsedy(1979) | 802785 | 259092 | ECSEDY-III | 1000 |
| 784 | Tiszacsege | | Ecsedy(1979) | 803326 | 259549 | ECSEDY-III | 1000 |
| 785 | Tiszacsege | | Ecsedy(1979) | 803916 | 259966 | ECSEDY-III | 1000 |
| 786 | Tiszacsege | | Ecsedy(1979) | 797945 | 257113 | ECSEDY-III | 1000 |
| 790 | Tiszacsege | Hármas kecskés-halom | ZOLTAI(1938) k | 798229 | 257516 | ECSEDY-III | 1000 |
| 890 | Balmazújváros | | Ecsedy(1979) | 815175 | 251376 | ECSEDY-III | 1000 |
| 894 | Balmazújváros | | Ecsedy(1979) | 812580 | 263918 | ECSEDY-III | 1000 |
| 895 | Balmazújváros | | Ecsedy(1979) | 813622 | 264442 | ECSEDY-III | 1000 |
| 896 | Balmazújváros | | Ecsedy(1979) | 813004 | 264205 | ECSEDY-III | 1000 |
| 907 | Balmazújváros | | Ecsedy(1979) | 819806 | 249747 | ECSEDY-III | 1000 |
| 908 | Balmazújváros | | Ecsedy(1979) | 820876 | 250159 | ECSEDY-III | 1000 |
| 911 | Hortobágy | Halas-laponyag | ZOLTAI(1938) 75 | 800394 | 240442 | ECSEDY-III | 1000 |
| 912 | Hortobágy | | Ecsedy(1979) | 811990 | 261908 | ECSEDY-III | 1000 |
| 913 | Hortobágy | | Ecsedy(1979) | 799349 | 251312 | ECSEDY-III | 1000 |
| 914 | Hortobágy | | ZOLTAI(1938) 116 | 805707 | 244082 | ECSEDY-III | 1000 |
| 915 | Hortobágy | Zámi templomdomb | ZOLTAI(1908), ZOLTAI(1938) 237 | 801636 | 244066 | ECSEDY-III | 1000 |
| 916 | Hortobágy | | Ecsedy(1979) | 801478 | 244298 | ECSEDY-III | 1000 |
| 917 | Hortobágy | | Ecsedy(1979) | 811909 | 254537 | ECSEDY-III | 1000 |
| 918 | Hortobágy | | Ecsedy(1979) | 813091 | 246671 | ECSEDY-III | 1000 |
| 919 | Hortobágy | | Ecsedy(1979) | 812923 | 247014 | ECSEDY-III | 1000 |
| 920 | Hortobágy | | Ecsedy(1979) | 802903 | 241750 | ECSEDY-III | 1000 |

**Table 2.** *List of kurgáns in the Hortobágy National Park (see Map 1. for locations)*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 921 | Hortobágy | | Ecsedy(1979) | 803984 | 244634 | ECSEDY-III | 1000 |
| 922 | Hortobágy | | Ecsedy(1979) | 805189 | 243447 | ECSEDY-III | 1000 |
| 923 | Hortobágy | | Ecsedy(1979) | 814976 | 261112 | ECSEDY-III | 1000 |
| 924 | Hortobágy | | Ecsedy(1979) | 800640 | 240399 | ECSEDY-III | 1000 |
| 925 | Hortobágy | | Ecsedy(1979) | 800286 | 239365 | ECSEDY-III | 1000 |
| 926 | Hortobágy | | Ecsedy(1979) | 812016 | 262237 | ECSEDY-III | 1000 |
| 929 | Hortobágy | Kandra-halom | ZOLTAI(1938) 101 | 813849 | 252387 | ECSEDY-III | 1000 |
| 930 | Hortobágy | | Ecsedy(1979) | 813849 | 252387 | ECSEDY-III | 1000 |
| 931 | Hortobágy | | ZOLTAI(1938) 4 | 813849 | 252387 | ECSEDY-III | 1000 |
| 932 | Hortobágy | | Ecsedy(1979) | 813225 | 262075 | ECSEDY-III | 1000 |
| 933 | Hortobágy | | Ecsedy(1979) | 814185 | 260191 | ECSEDY-III | 1000 |
| 934 | Hortobágy | | Ecsedy(1979) | 813420 | 259489 | ECSEDY-III | 1000 |
| 935 | Hortobágy | Papegyházi-halom | ZOLTAI(1910), ZOLTAI(1938) 177 | 807912 | 257913 | ECSEDY-III | 1000 |
| 936 | Hortobágy | | Ecsedy(1979) | 809277 | 257773 | ECSEDY-III | 1000 |
| 937 | Hortobágy | | Ecsedy(1979) | 807613 | 258302 | ECSEDY-III | 1000 |
| 939 | Hortobágy | Méhes-halom | ZOLTAI(1911) 16, ZOLTAI(1938) 150 | 799076 | 245214 | ECSEDY-III | 1000 |
| 940 | Hortobágy | | Ecsedy(1979) | 799550 | 241058 | ECSEDY-III | 1000 |
| 941 | Hortobágy | Faluvég-halom | ZOLTAI(1938) 50 | 800777 | 244736 | ECSEDY-III | 1000 |
| 944 | Hortobágy | Bajnok-halom | ZOLTAI(1909) 22-23, ZOLTAI(1938) 11 | 800738 | 248988 | ECSEDY-III | 1000 |
| 947 | Hortobágy | | Ecsedy(1979) | 802663 | 240589 | ECSEDY-III | 1000 |
| 953 | Hortobágy | | Ecsedy(1979) | 804340 | 240877 | ECSEDY-III | 1000 |
| 954 | Hortobágy | Kettős-halom | ZOLTAI(1938) 110 | 800390 | 249544 | ECSEDY-III | 1000 |
| 955 | Hortobágy | Kettős-halom | ZOLTAI(1938) 110 | 800550 | 249875 | ECSEDY-III | 1000 |
| 956 | Hortobágy | Külső hármas-halom | ZOLTAI(1938) 78 | 800482 | 250332 | 100E_HLM | 100 |
| 957 | Hortobágy | Sárosér-halom | ZOLTAI(1938) 105 | 796492 | 242418 | ECSEDY-III | 1000 |
| 965 | Hortobágy | Sáros-halom | Ecsedy(1979) | 797163 | 241220 | ECSEDY-III | 1000 |
| 966 | Hortobágy | | Ecsedy(1979) | 797943 | 242047 | ECSEDY-III | 1000 |
| 967 | Hortobágy | | Ecsedy(1979) | 796915 | 243276 | ECSEDY-III | 1000 |
| 968 | Hortobágy | Kis Kenderátó-halom | ZOLTAI(1938) 105 | 797805 | 243855 | ECSEDY-III | 1000 |
| 969 | Hortobágy | | Ecsedy(1979) | 800290 | 243986 | ECSEDY-III | 1000 |
| 972 | Hortobágy | | Ecsedy(1979) | 799681 | 251192 | ECSEDY-III | 1000 |
| 974 | Hortobágy | Százköblös-halom | ZOLTAI(1938) 192 | 814750 | 251960 | ECSEDY-III | 1000 |
| 975 | Hortobágy | Kun György-halom | ZOLTAI(1938) 133 | 804136 | 251686 | ECSEDY-III | 1000 |
| 980 | Hortobágy | Borsós-halom | ZOLTAI(1938) 22 | 811641 | 247791 | ECSEDY-III | 1000 |
| 981 | Hortobágy | | Ecsedy(1979) | 806059 | 244774 | ECSEDY-III | 1000 |

**Table 2.** *List of kurgáns in the Hortobágy National Park (see Map 1. for locations)*



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 983 | Hortobágy | | Ecsedy(1979) | 818467 | 253904 | ECSEDY-III | 1000 |
| 984 | Hortobágy | Kövecses-l. | ZOLTAI(1938) | 818690 | 252445 | ECSEDY-III | 1000 |
| 985 | Hortobágy | | Ecsedy(1979) | 805061 | 250556 | ECSEDY-III | 1000 |
| 986 | Hortobágy | | Ecsedy(1979) | 802762 | 241593 | ECSEDY-III | 1000 |
| 988 | Hortobágy | | Ecsedy(1979) | 804438 | 249428 | ECSEDY-III | 1000 |
| 989 | Hortobágy | Kincses-laponyag | ZOLTAI(1938) 116 | 805508 | 244172 | ECSEDY-III | 1000 |
| 990 | Hortobágy | | Ecsedy(1979) | 811682 | 262875 | ECSEDY-III | 1000 |
| 991 | Hortobágy | | Ecsedy(1979) | 803784 | 253562 | ECSEDY-III | 1000 |
| 992 | Hortobágy | | Ecsedy(1979) | 810554 | 257583 | ECSEDY-III | 1000 |
| 997 | Hortobágy | | Ecsedy(1979) | 806575 | 249189 | ECSEDY-III | 1000 |
| 998 | Hortobágy | | Ecsedy(1979) | 806064 | 245381 | ECSEDY-III | 1000 |
| 999 | Hortobágy | | Ecsedy(1979) | 803815 | 244821 | ECSEDY-III | 1000 |
| 1002 | Hortobágy | | Ecsedy(1979) | 810614 | 262976 | ECSEDY-III | 1000 |
| 1003 | Hortobágy | | Ecsedy(1979) | 796344 | 241729 | ECSEDY-III | 1000 |
| 1004 | Hortobágy | | ZOLTAI(1938) 22 | 811610 | 248013 | ECSEDY-III | 1000 |
| 1005 | Hortobágy | | Ecsedy(1979) | 811852 | 247994 | ECSEDY-III | 1000 |
| 1006 | Hortobágy | | Ecsedy(1979) | 805109 | 240745 | ECSEDY-III | 1000 |
| 1007 | Hortobágy | Pente laponyagja | ZOLTAI(1938) 226 | 804365 | 240106 | ECSEDY-III | 1000 |
| 1008 | Hortobágy | | ZOLTAI(1938) 180 | 804752 | 240374 | ECSEDY-III | 1000 |
| 1009 | Hortobágy | Árkus-laponyagja | Ecsedy(1979) | 802774 | 242812 | ECSEDY-III | 1000 |
| 1010 | Hortobágy | Polturás-laponyag | ZOLTAI(1938) 7 | 803832 | 242826 | ECSEDY-III | 1000 |
| 1011 | Hortobágy | Köves halom | ZOLTAI(1938) 185 | 801745 | 240274 | ECSEDY-III | 1000 |
| 1062 | Nagyhegyes | | Ecsedy(1979) | 816629 | 248771 | ECSEDY-III | 1000 |
| 1063 | Nagyhegyes | Kis Szálka-halom | ZOLTAI(1938) 203 | 817038 | 249173 | ECSEDY-III | 1000 |
| 1064 | Nagyhegyes | Kis Szálka-halom | | 816774 | 249265 | ECSEDY-III | 1000 |
| 1073 | Nagyhegyes | Borosfok | Ecsedy(1979) | 819126 | 249401 | ECSEDY-III | 1000 |
| 1078 | Nagyhegyes | | Ecsedy(1979) | 816356 | 251061 | ECSEDY-III | 1000 |
| 1079 | Nagyhegyes | | Ecsedy(1979) | 817783 | 250127 | ECSEDY-III | 1000 |
| 1081 | Nagyhegyes | | Ecsedy(1979) | 817203 | 248759 | ECSEDY-III | 1000 |
| 1084 | Nagyhegyes | | Ecsedy(1979) | 820747 | 249339 | ECSEDY-III | 1000 |
| 1088 | Nagyhegyes | | Ecsedy(1979) | 814659 | 245762 | ECSEDY-III | 1000 |
| 1096 | Nagyhegyes | Szálka-halom | ZOLTAI(1938) 202 | 815667 | 250895 | ECSEDY-III | 1000 |
| 1191 | Nádudvar | Sebesár-halom | ZOLTAI(1938) | 807558 | 235590 | ECSEDY-III | 1000 |
| 1192 | Nádudvar | | Ecsedy(1979) | 801437 | 229905 | ECSEDY-III | 1000 |
| 1193 | Nádudvar | | Ecsedy(1979) | 803146 | 228965 | ECSEDY-III | 1000 |
| 1194 | Nádudvar | Kék-laponyag | Ecsedy(1979) | 804061 | 229216 | ECSEDY-III | 1000 |
| 1195 | Nádudvar | | Ecsedy(1979) | 805012 | 229126 | ECSEDY-III | 1000 |
| 1196 | Nádudvar | | Ecsedy(1979) | 803878 | 228779 | ECSEDY-III | 1000 |

**Table 2.** *List of kurgáns in the Hortobágy National Park (see Map 1. for locations)*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1197 | Nádudvar | | Ecsedy(1979) | 805321 | 229594 | ECSEDY-III | 1000 |
| 1198 | Nádudvar | | Ecsedy(1979) | 804722 | 228633 | ECSEDY-III | 1000 |
| 1201 | Nádudvar | Nagyág-halom | ZOLTAI(1938) | 806797 | 237215 | ECSEDY-III | 1000 |
| 1204 | Nádudvar | Belső-halom | Ecsedy(1979) | 797736 | 240039 | ECSEDY-III | 1000 |
| 1206 | Nádudvar | Boda-halom | Ecsedy(1979) | 801489 | 229420 | ECSEDY-III | 1000 |
| 1208 | Nádudvar | Lapos-halom | Ecsedy(1979) | 805764 | 230704 | ECSEDY-III | 1000 |
| 1210 | Nádudvar | Tökhalom | Ecsedy(1979) | 802676 | 232436 | ECSEDY-III | 1000 |
| 1212 | Nádudvar | Német-halom | GYŐRFFY | 799393 | 228727 | ECSEDY-III | 1000 |
| 1214 | Nádudvar | Halász-halom | Ecsedy(1979) | 804286 | 239113 | ECSEDY-III | 1000 |
| 1215 | Nádudvar | Endre-halom | ZOLTAI(1938) | 805110 | 235774 | ECSEDY-III | 1000 |
| 1217 | Nádudvar | | Ecsedy(1979) | 804137 | 229850 | ECSEDY-III | 1000 |
| 1218 | Nádudvar | | Ecsedy(1979) | 803091 | 229402 | ECSEDY-III | 1000 |
| 1220 | Nádudvar | | Ecsedy(1979) | 805640 | 236871 | ECSEDY-III | 1000 |
| 1222 | Nádudvar | Eperjes-halom | Ecsedy(1979) | 803624 | 237477 | ECSEDY-III | 1000 |
| 1223 | Nádudvar | Szabolcs-halom | Ecsedy(1979) | 800843 | 238813 | ECSEDY-III | 1000 |
| 1224 | Nádudvar | Zöld-halom | GYŐRFFY | 798886 | 232465 | ECSEDY-III | 1000 |
| 1225 | Nádudvar | | GYŐRFFY | 799204 | 228467 | ECSEDY-III | 1000 |
| 1232 | Nádudvar | Nagy Darvas-halom | ZOLTAI(1938) 1 | 796692 | 238415 | 100E_HLM | 100 |
| 1235 | Nádudvar | | Ecsedy(1979) | 799388 | 237926 | ECSEDY-III | 1000 |
| 1236 | Nádudvar | Nagyborzas-halom | ZOLTAI(1838) 23 | 798951 | 239871 | ECSEDY-III | 1000 |
| 1240 | Nádudvar | Teke szarva halma | ZOLTAI(1938) 226 | 805533 | 240750 | ECSEDY-III | 1000 |
| 1241 | Nádudvar | | ZOLTAI(1938) 180 | 804911 | 239914 | ECSEDY-III | 1000 |
| 1243 | Nádudvar | Égett-halom | Ecsedy(1979) | 799469 | 236420 | ECSEDY-III | 1000 |
| 1246 | Nádudvar | | Ecsedy(1979) | 800878 | 238480 | ECSEDY-III | 1000 |
| 1247 | Nádudvar | | Ecsedy(1979) | 802790 | 239843 | ECSEDY-III | 1000 |
| 1248 | Nádudvar | | Ecsedy(1979) | 803149 | 239132 | ECSEDY-III | 1000 |
| 1249 | Nádudvar | | Ecsedy(1979) | 802994 | 239541 | ECSEDY-III | 1000 |
| 1250 | Nádudvar | | Ecsedy(1979) | 804255 | 239565 | ECSEDY-III | 1000 |
| 1251 | Nádudvar | | Ecsedy(1979) | 803677 | 237923 | ECSEDY-III | 1000 |
| 1252 | Nádudvar | | Ecsedy(1979) | 805398 | 236997 | ECSEDY-III | 1000 |
| 1253 | Nádudvar | | Ecsedy(1979) | 806174 | 237830 | ECSEDY-III | 1000 |
| 1254 | Nádudvar | Köves-halom | ZOLTAI(1938) 201 | 802482 | 240153 | ECSEDY-III | 1000 |
| 1255 | Nádudvar | | Ecsedy(1979) | 806542 | 238123 | ECSEDY-III | 1000 |
| 1256 | Nádudvar | | Ecsedy(1979) | 806315 | 237959 | ECSEDY-III | 1000 |
| 1257 | Nádudvar | | Ecsedy(1979) | 805749 | 238184 | ECSEDY-III | 1000 |
| 1258 | Nádudvar | | Ecsedy(1979) | 800497 | 232419 | ECSEDY-III | 1000 |
| 1259 | Nádudvar | | Ecsedy(1979) | 801314 | 233035 | ECSEDY-III | 1000 |
| 1260 | Nádudvar | | Ecsedy(19[illegible] | 801119 | 233354 | ECSEDY-III | 1000 |

**Table 3.** *List of archaeological findings in and around the Hortobágy National Park (see Map 2. for locations)*

| *Identification code* | *Site name* | *Age* |
|---|---|---|
| 1 | Derzs | Árpád Age |
| 2 | Folyás | Árpád Age |
| 3 | Nádudvar, Vajó-zug | Árpád Age |
| 4 | Nádudvar, Bojárhollós | Árpád Age |
| 5 | Csécsi-mocsár | Árpád Age |
| 6 | Angyalháza | Árpád Age |
| 7 | Gyökérkút | Árpád Age |
| 8 | Szálka-halom | Árpád Age |
| 9 | Ohat, Telekháza, monastery and village site | Árpád Age |
| 10 | Szabolcs village site | Árpád Age |
| 11 | Máta, Szeghatár-halom, Papegyháza | Árpád Age |
| 12 | Görbehát (Kőudvar) | Árpád Age |
| 13 | Zám, Köves-halom | Árpád Age |
| 14 | Máta, Bivaly-halom | Árpád Age |
| 15 | Tiszacsege, Nagykecskés-puszta | Avars Age |
| 16 | Balmazújváros, Daru, Kadarcs-part | Avars Age |
| 17 | Tiszafüred | Avars Age |
| 18 | Tiszacsege, Nagymajor, Sóskás | Avars Age |
| 19 | Nádudvar, Nyár-zug | Avars Age |
| 20 | Csécsi-halastó | Avars Age |
| 21 | Hortobágy, Köves-halom | Bronze Age |
| 22 | Nádudvar, Bojárhollós | Bronze Age |
| 23 | Tiszacsege, Nagymajor, Sóskás | Bronze Age |
| 24 | Hortobágy, Bivaly-halom | Bronze Age |
| 25 | Egyek, Szög-határ | Bronze Age |
| 26 | Angyalháza, Mély-fenék | Bronze Age |
| 27 | Püspökladány, Meggyes-tanya | Bronze Age |
| 28 | Nádudvar, Halom-zug | Bronze Age |
| 29 | Balmazújváros, Fiáth-birtok | Bronze Age |
| 30 | Egyek, Majorsági-föld | Bronze Age |
| 31 | Külső-Ohat | Bronze Age |
| 32 | Tiszacsege, Róka-hát (Kenderföld) | Bronze Age |
| 33 | Folyás | Bronze Age |
| 34 | Egyek, Szőlőskert | Bronze Age |
| 35 | Tiszadorogma, Védgát | Copper Age |
| 36 | Szásztelek | Copper Age |
| 37 | Szálka-halom | Copper Age |
| 38 | Ohat, Duna-halom | Copper Age |
| 39 | Bivaly-halom | Copper Age |
| 40 | Külső-Ohat | Copper Age |
| 41 | Hortobágy, Poroshát | Gepids Age |
| 42 | Hortobágy, Nagyvókonya | Gepids Age |
| 43 | Hajdúszoboszló, Angyalháza, Várostanya | Gepids Age |
| 44 | Nádudvar, Csépelóré | Gepids Age |
| 45 | Tiszacsege, Rákóczi str. 24. | Hung. Conquest Age |
| 46 | Hortobágy, Bajnok-halom | Hung. Conquest Age |
| 47 | Elep, Mike-lapos | Hung. Conquest Age |
| 48 | Nádudvar, Mihály-halom | Hung. Conquest Age |
| 49 | Csécsi-halastó | Hung. Conquest Age |
| 50 | Nádudvar, Török-laponyag | Hung. Conquest Age |
| 51 | Hortobágy, Pipások | La Tene Age |
| 52 | Hortobágy Csárda | La Tene Age |
| 53 | Tiszacsege | La Tene Age |

**Table 3.** *List of archaeological findings in and around the Hortobágy National Park (see Map 2. for locations)*

| | | |
|---|---|---|
| 54 | Nádudvar, Török-laponyag | La Tene Age |
| 55 | Ohat, Völgyes-laponyag | La Tene Age |
| 56 | Balmazújváros, Kárhozott-halom | La Tene Age |
| 57 | Külső-Ohat | Migrations Age |
| 58 | Nádudvar, Vasútállomás | Migrations Age |
| 59 | Szásztelek | Migrations Age |
| 60 | Borsósi-víztározó | Migrations Age |
| 61 | Tiszafüred | Migrations Age |
| 62 | Hortobágy, Faluvég-halom | Neolithic |
| 63 | Csécsi-mocsár | Neolithic |
| 64 | Kishortobágyi Csárda | Neolithic |
| 65 | Kandrahalom | Neolithic |
| 66 | Nádudvar, Büte-zug | Neolithic |
| 67 | Méhes-halom | Neolithic |
| 68 | Papegyháza | Neolithic |
| 69 | Tiszacsege, Homokbánya | Neolithic |
| 70 | Nádudvar, Vasútállomás | Neolithic |
| 71 | Nádudvar, Csukás | Neolithic |
| 72 | Nádudvar, Tök-halom | Neolithic |
| 73 | Ohat, Kissziget | Prehistoric |
| 74 | Hortobágy Csárda | Prehistoric |
| 75 | Pipások | Prehistoric |
| 76 | Nádudvar, Büte-halom | Prehistoric |
| 77 | Gyökérkút | Prehistoric |
| 78 | Nádudvar, Farkaslóré | Prehistoric |
| 79 | Egyek-Félhalom | Prehistoric |
| 80 | Halász-laponyag | Prehistoric |
| 81 | Négygémű kút melletti laponyag | Prehistoric |
| 82 | Mátai út és a Hortobágy-folyó között | Prehistoric |
| 83 | Szásztelek | Prehistoric |
| 84 | Lovász-zug | Sarmata Age |
| 85 | Ohat-Pusztakócs | Sarmata Age |
| 86 | Derzsi-telek | Sarmata Age |
| 87 | Nádudvar, Tök-halom | Sarmata Age |
| 88 | Elep, Fertő-lapos | Sarmata Age |
| 89 | Kishortobágyi Csárda | Sarmata Age |
| 90 | Hortobágy, Bivaly-halom | Sarmata Age |
| 91 | Egyek, Ohat, Duna-halom | Sarmata Age |
| 92 | Hortobágy, in front of the Nyírő-hodály | Sarmata Age |
| 93 | Balmazújváros, Rácok-szigete | Sarmata Age |
| 94 | Elep, III-zsilip | Sarmata Age |
| 95 | Tiszacsege, Homokbánya | Sarmata Age |
| 96 | Tiszacsege, Jámbor-tanya | Sarmata Age |
| 97 | Hortobágy, Poros-hát | Sarmata Age |
| 98 | Ohat, Csípő-halom | Sarmata Age |
| 99 | Tiszacsege, Szőlős-kert | Sarmata Age |
| 100 | Hortobágy Híd | Sarmata Age |
| 101 | Hortobágyi Csárda | Sarmata Age |
| 102 | Nádudvar, Vajó-zug | Sarmata Age |
| 103 | Tiszacsege, Nagykecskés-puszta | Sarmata Age |
| 104 | Debrecen, Nagyborsós-lapos | Sarmata Age |
| 105 | Csécsi-halastó | Scythian Age |
| 106 | Tiszacsege | Scythian Age |

# Hortobágy (Hungary)

# No 474rev

**Identification**

| | |
|---|---|
| *Nomination* | Hortobágy National Park |
| *Location* | Hajdú-Bihar, Jász-Nagyun-Szolnok, Heves, and Borsod-Abaúj-Zemplén Counties |
| *State Party* | Republic of Hungary |
| *Date* | 25 June 1998 |

**Justification by State Party**

Hortobágy is an outstanding example of a harmonious interaction between people and nature, based upon sustainable land-use practices, thereby maintaining a diversity of species and biotopes. The *Puszta* represents the highest scenic quality, with pleasing or dramatic patterns and combinations of landscape features, together with important aesthetic and intangible qualities. The area is completely unspoiled by large-scale, visually intrusive or polluting industrial and urban development, with associated infrastructure. It has a distinctive and common character, including topographic and visual unity. At the same time, the integrity of the landscape is maintained with monuments, buildings, and other structures of great historical and architectural interest. There is consensus among professionals and public opinion as to the world importance of the site, reflected, for example, through associations with internationally renowned writings and paintings about the landscape and its inhabitants. This landscape is undoubtedly a resource of world importance in terms of both rarity and representativeness.

Hortobágy National Park, which extends over a vast territory, represents the continuous existence of traditional land-use forms over several thousand years, maintaining the highest level of biodiversity.

---

The Hortobágy National Park bears unique witness to the cultural traditions of 18th and 19th century animal keepers.

The Park is surrounded by settlements on three sides, and the man-made environment to be seen today is characterized by a rich historical diversity. It encompasses relics of various nations and cultures who have left traces behind during their migrations. There are monuments ranging from *kurgans* (burial mounds) from as early as the 2nd millennium BC through the devastated settlements of medieval Hungary to the numerous 18th and 19th century buildings that are still in use today and are of exceptional architectural value.

Although the man-made environment of today is diversified and stratified, the feature that makes this region unusual in Hungary and unique in Europe results mainly from herding, which was of great importance in the 18th and 19th centuries. The process of depopulation began in the 14th century and the region had become deserted by the end of the 17th century following the series of wars with the Ottoman Empire. **Criteria iii and iv**

The Hortobágy National Park is an exceptional surviving example of the sustainable land-use by grazing of natural grasslands.

Animal husbandry on extensive grasslands was the basic activity and way of life of the nomadic people who inhabited this region in the 5th and 4th millennia BC, and also of the Hungarian conquerors at the end of the 1st millennium AD. This way of life was maintained throughout the Middle Ages (a late 16th century map shows this region as being used for grazing cattle) and the later period of prosperity set a final imprint on the man-made environment of the region. Herding is a form of land-use which does not alter the natural landscape but instead makes use of the natural resources without causing any damage to them. It requires only extensive pastures and few, if any, solid structures. It is therefore not by accident that the nominated area contains very few buildings. These include wells for the use of stock, thatched wooden shelters for use in winter, bridges over rivers, and *csárdas* (provincial inns) scattered along the roads at intervals of half or one *jordana*. These are not only the invaluable records of the former pastoral life but also living proof of the harmonious co-existence of man and nature. **Criterion v**

**Category of property**

In terms of the categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *site*. It is also a *cultural landscape* as defined in paragraph 39 of the *Operational Guidelines for the Implementation of the World Heritage Convention*.

**History and Description**

*History*

Numerous peoples migrated from the east into the Carpathian Basin in prehistory. The nomadic group who arrived around 2000 BC at the end of the Bronze Age were the first to leave their imprint on the natural landscape in the form of many burial mounds (*kurgans*). The region lay outside the Roman Empire, and at this time it was settled by the Sarmatians, an equestrian group of oriental origin. The Avars came to the region in the mid 6th century AD, and they were followed by Slavic settlers.

The Hungarians arrived in what is now Hungary at the end of the 9th century under their leader, Arpád. Since the area was ideal for animal husbandry they occupied the lands around the Tisza river in the 10th and 11th centuries, and by the early 13th century there was a dense network of settlements, whose economic base was pastoralism, in the Hortobágy, the main axis of which was the trading route from Buda through

Tiszafüred and Debrecen into Transylvania. A Cuman group from southern Russia settled peacefully around Nagykunság in the south-west of the Hortobágy in the early 13th century.

However, the whole region was devastated by the Mongol horde that swept through this part of Europe in 1241-42 and many settlements were never rebuilt after the sudden withdrawal of the Mongols following the death of their Great Khan. Numerous villages were depopulated and abandoned during the Black Death in the mid 14th century, whilst the growth of Debrecen attracted the inhabitants of other villages to the new urban centre.

The region fell into the hands of the Ottoman Turks when Debrecen was captured in 1543. Yet more villages were abandoned in the course of the wars that swept the region between 1593 and 1608 and as a result of the Crimean Tartar incursion in 1594, and the Fifteen Years War which saw the Turks driven out of Hungary in 1711.

The 150 years of Turkish rule consolidated the pastoral economy that was to dominate the Hortobágy henceforth. Great herds of cattle and sheep were kept on the open pastures from early spring to late autumn, being driven to winter shelters near water sources for the winter. This system broke down, however, in the early 19th century as a result of the poor economic state of Europe at the end of the Napoleonic wars and changes in dietary habits. At the same time, water regulation systems were set up, notably control over flooding of the Tisza river: this resulted in the draining of former wetlands, which were converted to arable farming. Reduction of the water available for the natural pastures decreased their fertility, which was the cause of serious overgrazing in the early part of the 20th century.

Efforts were made to diversify the land use of the Hortobágy, the most successful of which was the creation of artificial fishponds between 1914 and 1918 and again in the 1950s, as a result of which they now cover 65km$^2$. An attempt to introduce rice cultivation in the 1950s was not successful, nor were forestation projects on alkaline grasslands resulting from the water regulation schemes.

*Description*

The Hortobágy National Park is part of the Tisza plain of eastern Hungary. It is surrounded by settlements to the south, east, and west. The two main settlements are Tiszafüred on the Tisza river and the city of Debrecen. The two are linked by the main historic communication ridge route.

The oldest man-made elements of the landscape are the Early Bronze Age burial mounds (*kurgans*). Their dimensions are variable – 5-10m high and 20-50m in diameter – and they are generally conical or hemispherical. They are always to be found on dry land, but located near a source of water. They were often used for secondary burials by later peoples, and in some cases Christian churches were built on them by the Hungarians. Also to found in the Park are the low mounds (*tells*) that mark the sites of ancient settlements, now disappeared.

Settlement in the Middle Ages followed the Debrecen-Tiszafüred route. The main group was in the area defined by the existing settlement of Hortobágy, Naghegyes, Náduvdar, and Nagyiván. Documentary records have shown that many of these had churches. With the progressive depopulation of the region from the 14th century onwards, the settlements disappeared. The only man-made features in the wide plains of the Puszta were light temporary structures made of reeds and branches, used to provide winter shelter for animals and men.

The sole surviving structures from this time, which were public buildings constructed built in stone, are the bridges and the *csárdas*. The Nine Arch Bridge at Hortobágy is the longest stone bridge in Hungary. A wooden bridge known to have been in existence as early as the 14th century was replaced in 1827-33 by the existing structure in classical style. The Zádor bridge in the southern part of the National Park was built in 1809 with nine arches, but the two side piers were swept away by a flood on the Zádor river in 1830 and never replaced.

The *csárdas* were provincial inns built in the 18th and 19th centuries to provide food and lodging for travellers. The typical *csárda* consists of two buildings facing one another, both singled-storeyed and thatched or, occasionally, roofed with shingles or tiles. A tavern was normally set up on the side of the road with a railed-off counter in a room that had access to the wine cellar. A few also had one or two guest rooms. On the opposite side of the road from the *csárda* was provision for horses and carriages. The best known of the *csárdas* are those at Balmazújváros (18th century), Hortobágy (first built in 1699 and reconstructed on several occasions), Nagyhegyes (early 19th century), Nagyiván (mid 18th century), and Tiszafüred (*c* 1770).

**Management and Protection**

*Legal status*

The Hortobágy National Park was established in 1972 by Presidential Decree of the National Authority for Nature Conservation No 1850. The original 52,000ha was extended by a further 11,422ha in 1993 and it reached its present extent in 1996.

It is regulated by Articles 31-41 of the 1996 Law No LIII on Nature Conservation. These impose severe limitations on any activities that may have adverse impact on the character and qualities of protected areas, including land clearance, building or other form of construction or earth moving, and unauthorized vehicle use.

*Management*

Of the total area of the Park (74,820ha), 68,196ha are in State ownership (principally the National Park Directorate, with other areas owned by the water management authorities, the Hungarian army, and other State institutions). Of the rest, 5069ha are owned by collective farms, 1263ha by private individuals, 254ha by municipalities, and 38ha by non-governmental organizations.

Article 36 of the 1996 Law on Nature Conservation requires there to be a management plan for each protected natural area, to be revised every ten years. That currently in force for the Hortobágy National Park, prepared in 1997, covers the following items:

- Purchase of remaining areas owned by collective farms;
- Supporting the establishment of stock-rearing companies in the surrounding settlements, so as to avoid fragmented land management;

- Obtaining rights for nature conservation in areas specified for extension of the Park;
- Enforcement of regulations dealing with the use of chemicals, hunting, etc in the buffer zone;
- Systematization and better dissemination of research data;
- Continuation and extension of new species surveys;
- Designation of natural values discovered by research as protected;
- Development of an overall research strategy.

Article 30 of the 1996 Law on Nature Conservation requires protected natural areas to be protected, "in case of necessity," by buffer zones. The buffer zone for the Hortobágy National Park has been defined; it covers an area of 199,380ha.

The National Park Directorate has a staff of 42, of whom twenty are administrators/professionals, thirteen are rangers, six technical staff, and three drivers. The Directorate is under the overall control of the Ministry of Environment and Regional Policy. It is the authority of first instance in relation to non-State-owned properties within the Park.

The *kurgans*, *csárdas*, and other historic properties within the Park are protected as historic monuments under the provisions of the 1997 Law No LIV on Ancient Monuments. The regional offices of the National Office of Ancient Monuments in Debrecen, Eger, and Szolnok are responsible for monitoring their state of conservation and taking necessary action.

**Conservation and Authenticity**

*Conservation history*

Conservation of the natural values of the nominated area has bee continuous since the Hortobágy National Park was established in 1972. A series of laws enacted since 1995 have increased statutory controls over the designated area, providing protection for the preservation of man-made environments and assigning responsibilities for protection to community councils, local municipalities, and county administrations.

The entire nominated property is a Biosphere Reserve under the UNESCO Man and the Biosphere (MAB) programme. More than 23,000ha are protected under the RAMSAR Convention as wetlands of international importance.

*Authenticity*

The historic trajectory of the *Puszta* has been such that its cultural growth and decline are recorded indelibly in its landscape. The landscape of today is a palimpsest of its long history which has not been overlaid by more recent technological or social developments. Its authenticity as a cultural landscape is therefore absolute.

**Evaluation**

*Action by ICOMOS*

An expert nominated by ICOMOS after discussion with IUCN visited the property at the end of April 1999.

*Qualities*

The landscape of the Hungarian *Puszta* as exemplified by the Hortobágy National Park bears exceptional testimony to its evolution over time. The natural resource of vast expanses of grass and other animal foods attracted settlers there from earliest times to practise a nomadic or semi-nomadic pastoral way of life. Abundant traces of their presence from prehistory to the recent past survive intact or as vestiges, and the subsequent economic decline of the region has ensured that they have not been obliterated by more recent development.

*Comparative analysis*

The *Puszta* is a flat floodplain that is periodically inundated, lying on an alluvial fan that has been eroding continuous since the end of the last Ice Age. Morphologically it is partly flood plain and partly loess ridges, and the characteristics of both can be clearly seen in the Hortobágy National Park. In Europe this type of landscape is only to be found in the Carpathian Basin. The only other similar landscapes that are comparable in size are to be found to the east of the Urals.

*ICOMOS comments and recommendations*

This property was first nominated for inscription on the World Heritage List in 1988, under the natural criteria. On the recommendation of IUCN it was not accepted for inscription, but its natural qualities as a Biosphere Reserve and Ramsar site were acknowledged. Since that time the Committee has developed its categorization of cultural landscapes, and the present resubmission is made under the cultural criteria, implicitly as a cultural landscape.

The nomination dossier contains considerable information about the natural qualities of the nominated area, with almost equal space in the "Description of Property" section devoted to natural habitats, biotopes, and the avifauna as to the cultural heritage. The important links between the natural characteristics of the region and its cultural development are not clearly stated, although diligent search through several sections reveals the essential facts.

In the description of the cultural heritage, details are supplied of the most important *csárdas* and the two historic bridges. However, there is only a general account of the prehistoric burial mounds (*kurgans*) and a passing reference to settlement mounds. Similarly, there is no information about specific abandoned medieval village sites.

The mission report commented favourably on the degree of protection afforded to the cultural elements located in the property, but proposed that the State Party should be requested to provide a comprehensive list of the cultural heritage of the Hortobágy National Park, with details of any programmes of inventarization, research, and excavation currently in operation. If no such programmes exist, the State Party is strongly urged to formulate and implement them without delay.

The report also drew attention to the lack of information in the nomination dossier concerning the interaction and coordination between state agencies responsible for the protection of the natural and cultural heritage respectively. Details relating to this point should be supplied by the State Party. However, neither this request, nor that in the preceding paragraph, is considered by ICOMOS to warrant

delay in the inscription of this outstanding cultural landscape.

The information on the natural values of the Hortobágy National Park in the nomination dossier was very comprehensive. On the basis of the mission report, ICOMOS feels that IUCN might be requested to reconsider its 1988 recommendation, with the possibility of inscription under natural criterion iii.

**Brief description**

The Hortobágy is a vast area of plains and wetlands that have been used by humans for grazing their domestic animals for more than two millennia.

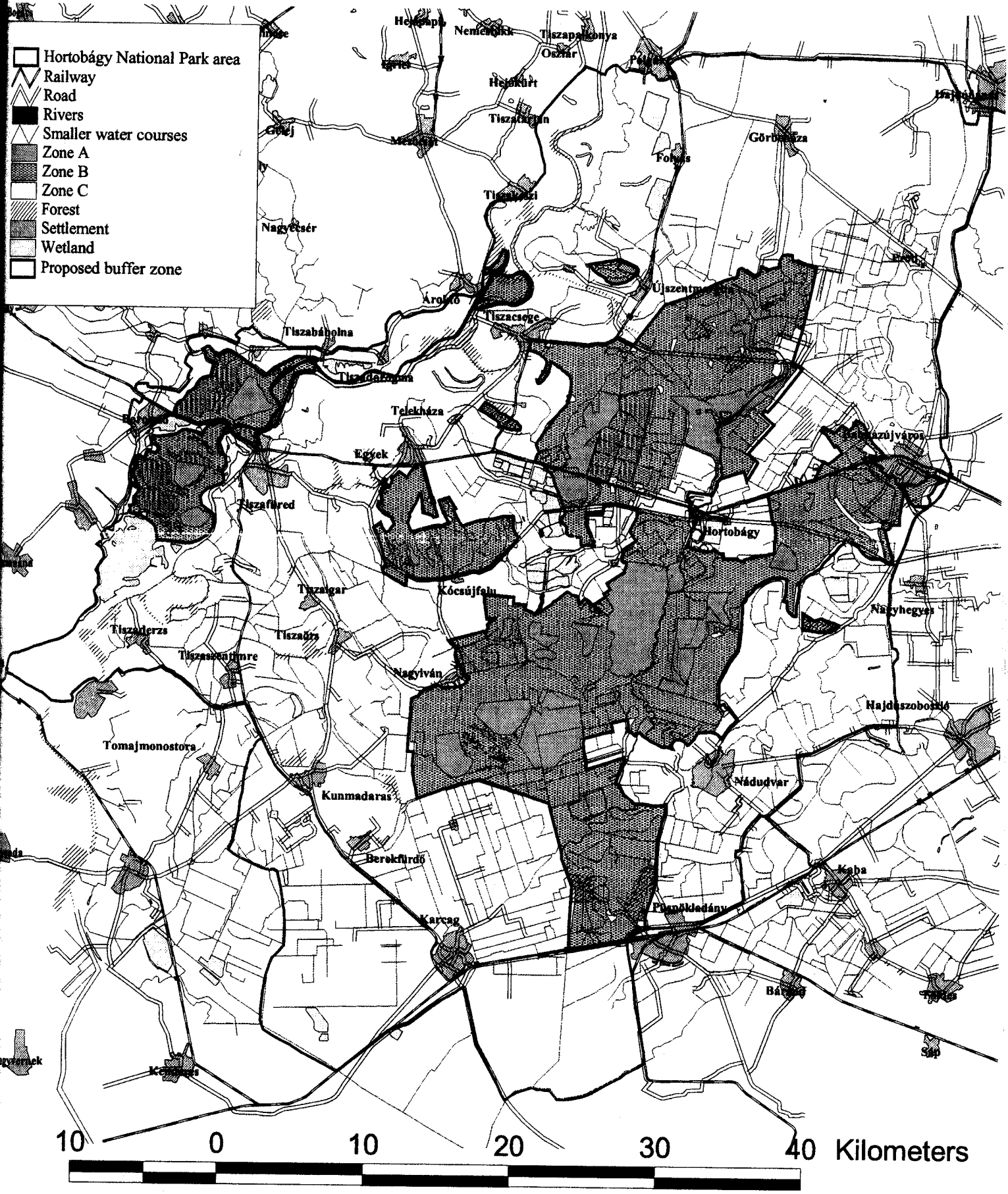
**Recommendation**

That this property be inscribed on the World Heritage List on the basis of ***cultural criteria iv and v*:**

> ***Criterion iv*** The Hungarian *Puszta* is an outstanding example of a cultural landscape shaped by a pastoral human society.
>
> ***Criterion v*** The landscape of the Hortobágy National Park preserves intact and visible the evidence of its traditional use over more than two millennia and represents the harmonious interaction between human beings and nature.

ICOMOS, September 1999

# Map 2
# Zoning of the Hortobágy National Park
# 1:250000




**Parc national de l'Hortobágy / Hortobágy National Park :**
**Plan indiquant la zone proposée et la zone tampon / Map showing nominated property and buffer zone**

# Hortobágy (Hongrie)

# No 474rev

**Identification**

| | |
|---|---|
| *Bien proposé* | Parc national de l'Hortobágy |
| *Lieu* | Comitats de Hajdú-Bihar, Jász-Nagyun-Szolnok, Heves et Borsod-Abaúj-Zemplén |
| *Etat partie* | République de Hongrie |
| *Date* | 25 juin 1998 |

**Justification émanant de l'Etat partie**

L'Hortobágy est un exemple remarquable de l'interaction harmonieuse entre l'homme et la nature, basée sur une utilisation durable des sols qui préserve la diversité des espèces et les biotopes. La *Puszta* offre des panoramas extraordinaires, une succession de paysages variés, originaux et saisissants de beauté. La zone est épargnée de toute urbanisation ou industries polluantes, intempestives ou inesthétiques, et des infrastructures qui les accompagnent. Elle se caractérise par une unité visuelle et topographique originale. Son intégrité est soulignée par des monuments, des bâtiments et autres structures d'un grand intérêt architectural et historique. Ce paysage et ses habitants, de l'avis des experts et du public, est une source d'inspiration d'œuvres picturales et littéraires et sans nul doute une ressource d'importance mondiale en termes de rareté et de représentativité.

Le Parc national de l'Hortobágy, qui s'étend sur un vaste territoire, représente la continuité, sur plusieurs milliers d'années, dans l'utilisation traditionnelle des sols, et conserve le plus haut degré de biodiversité.

---

Le Parc national de l'Hortobágy porte un témoignage unique sur les traditions culturelles des bergers des XVIII$^{e}$ et XIX$^{e}$ siècles.

Le parc est entouré de villages sur trois côtés, et l'environnement façonné par l'homme est enrichi par la diversité historique. Les différentes nations et cultures qui se sont succédées ont laissé des traces de leurs migrations. Parmi les monuments il y a les *kurgans* (tumulus) constructions funéraires qui remontent à 2000 ans av. J.-C., les villages dévastés de la Hongrie médiévale et les nombreux bâtiments des XVIII$^{e}$ et XIX$^{e}$ siècles, encore utilisés de nos jours et d'une valeur architecturale exceptionnelle.

L'actuel environnement aménagé par l'homme est diversifié mais ce qui fait l'originalité de cette région de la Hongrie, ce qui fait qu'elle est inhabituelle et unique en Europe, c'est principalement l'élevage des troupeaux. Cette activité était d'une importance majeure aux XVIIIe et XIX$^{e}$ siècles. Le processus de désertification, amorcé au XIV$^{e}$ siècle, s'est terminé au XVII$^{e}$ siècle après la série de guerres contre l'Empire ottoman. **Critères iii et iv**

Le parc national de l'Hortobágy est un exemple exceptionnel de survivance de l'utilisation durable d'une terre de pâturages.

L'activité principale du peuple nomade qui occupait cette région aux V$^{e}$ et IV$^{e}$ millénaires av. J.-C. était déjà l'élevage extensif sur de vastes pâturages. C'était aussi celle des conquérants hongrois à la fin du 1$^{er}$ millénaire de notre ère, puis pendant tout le Moyen Age - une carte datant de la fin du XVI$^{e}$ siècle montre que cette région était déjà vouée à l'élevage. Cette dernière époque de prospérité marqua définitivement cette région façonnée par l'homme. L'élevage n'altère pas le paysage naturel mais utilise les ressources naturelles sans leur causer de dommages. Le paysage est composé de vastes pâturages et de peu ou pas, de bâtiments. La zone proposée pour inscription ne comporte presque pas de constructions : des puits pour abreuver le bétail, des abris au toit de chaume pour passer l'hiver, des ponts pour traverser les rivières et des *csárdas* (auberges provinciales) qui jalonnent la route à intervalles d'une ou une demie *jordana*. Tout cela représente la mémoire inestimable de la vie pastorale d'autrefois. C'est aussi la preuve vivante de la coexistence harmonieuse de l'homme et de la nature. **Critère v**

**Catégorie de bien**

En termes de catégories de biens culturels, telles qu'elles sont définies à l'article premier de la Convention du Patrimoine mondial de 1972, le bien proposé est un *site*. C'est aussi un *paysage culturel* tel que défini au paragraphe 39 des *Orientations devant guider la mise en œuvre de la Convention de patrimoine mondial.*

**Histoire et description**

*Histoire*

De nombreux peuples ont migré de l'est vers le Bassin des Carpates pendant la préhistoire. Le groupe nomade qui est arrivé autour de 2000 av. J.-C. à la fin de l'Age du bronze fut le premier à laisser son empreinte sur le paysage naturel, sous la forme de nombreux tumuli (*kurgans*). La région est en marge de l'Empire romain et, à l'époque, occupée par les Sarmates, un peuple cavalier venu d'Asie. Les Avars sont arrivés au milieu du VI$^{e}$ siècle, suivis par des colons slaves.

Les Hongrois s'installèrent dans ce que l'on appelle aujourd'hui la Hongrie à la fin du IX$^{e}$ siècle, menés par leur chef, Arpád. Comme la région se prêtait à merveille à l'élevage, ils occupèrent les terres autour de la Tisza

aux X$^{e}$ et XI$^{e}$ siècles. Au début du XIII$^{e}$ siècle, un réseau dense d'établissements, dont l'économie reposait sur l'activité pastorale, s'était développé dans l'Hortobágy. L'axe commercial principal reliant Buda à la Transylvanie passait par Tiszafüred et Debrecen. Une tribu Cuman venue du sud de la Russie s'installa pacifiquement près de Nagykunság au sud-ouest de l'Hortobágy au début du XIIIe siècle.

La région fut cependant dévastée par la horde mongole qui déferla sur cette partie de l'Europe en 1241-1242 et de nombreux villages ne furent jamais relevés après le départ soudain des Mongols à la mort de leur Grand khân. Pendant la grande peste, au milieu du XIV$^{e}$ siècle, de nombreux villages se vidèrent de leur population et furent abandonnés. Simultanément, Debrecen se développa et attira les habitants des autres villages.

La région tomba entre les mains des Ottomans lorsque Debrecen fut prise en 1543. D'autres villages furent abandonnés durant les guerres qui dévastèrent la région entre 1593 et 1608, après l'incursion des Tatars de Crimée en 1594 et la guerre de quinze ans qui refoula les Turcs hors de Hongrie en 1711.

Les 150 ans de gouvernement turc ont renforcé l'économie pastorale qui devait dès lors dominer l'Hortobágy. De grands troupeaux de moutons et de bœufs étaient gardés sur les prairies ouvertes du début du printemps jusqu'à l'automne, puis conduits vers les abris d'hiver à proximité des sources d'eau. Au début du XIX$^{e}$ siècle, ce système prit fin, ruiné par la dévastation économique causée par les guerres napoléoniennes et les changements d'habitude alimentaire. Simultanément, des systèmes de régulation des eaux ont été mis en place. La domestication des eaux du fleuve Tisza élimina les crues et les inondations et draina les marécages qui furent transformés en terres arables, tandis que les prairies naturelles, privées d'eau, perdirent leur fertilité. Les maigres ressources ne suffisaient plus à nourrir les troupeaux et la région connut une grave surexploitation au début du XX$^{e}$ siècle.

On s'efforça de diversifier les activités dans l'Hortobágy, dont la plus réussie fut la création des étangs à poissons entre 1914 et 1918 et à nouveau dans les années 1950. Les étangs et les lacs couvrent actuellement une superficie de 65km$^{2}$. L'introduction de la culture du riz dans les années 1950 fut un échec, de même que les projets de reboisement dans les anciens marais asséchés au sol alcalin.

*Description*

Le Parc national de l'Hortobágy s'inscrit dans la plaine de la Tisza dans l'est de la Hongrie. Il est entouré de développements urbains au sud, à l'est et à l'ouest. Les deux principaux foyers urbains sont Tiszafüred sur la Tisza et la ville de Debrecen. Ces deux villes sont reliées par la grande route de crêtes historique.

Les plus anciens éléments dus à l'homme sont les tombes de l'Age du bronze ancien (*kurgans*). Leurs dimensions sont variables – 5 à 10m de haut et 20 à 50m de diamètre – ils sont en général coniques ou hémisphériques. On les trouve toujours sur des sols secs mais à proximité d'une source. Ils ont souvent été réutilisés comme tombeau et dans certains cas, les Hongrois ont construit des églises chrétiennes à leur emplacement. On trouve aussi dans le Parc des tells correspondant à d'anciens villages maintenant disparus.

Au Moyen Age, les villages bordaient la route de Debrecen à Tiszafüred. Le groupe principal se trouvait dans le voisinage des villages actuels de l'Hortobágy - Naghegyes, Náduvdar et Nagyiván. Des documents d'archives prouvent que nombre de ces villages possédaient une église. Avec le dépeuplement progressif à partir du XIV$^{e}$ siècle, les villages ont disparu. Dans les grandes plaines de la Puszta, les seules marques d'établissement des hommes se limitaient à des structures légères et temporaires, faites de roseaux et de branchages, pour abriter les hommes et les animaux durant l'hiver.

Les seules structures qui soient parvenues jusqu'à nous sont les constructions publiques en pierre : les ponts et les *csárdas*. Le pont à neuf arches à Hortobágy est le plus long pont de pierre de Hongrie. Des documents attestent la présence d'un pont en bois à cet endroit dès le XIV$^{e}$ siècle, remplacé en 1827-1833 par l'ouvrage existant de style classique. Le pont Zádor dans la partie sud du parc national a été construit en 1809 avec neuf arches, mais les deux piles ont été emportés par une crue du Zádor en 1830 et ne furent jamais remplacés.

Les *csárdas* étaient des auberges provinciales construites aux XVIII$^{e}$ et XIX$^{e}$ siècles pour permettre d'héberger et de nourrir les voyageurs. Les *csárdas* typiques comportent deux bâtiments l'un en face de l'autre, tous deux d'un seul niveau et couverts d'un toit de chaume ou parfois de bardeaux ou de tuiles. Une taverne s'ouvrait en principe sur la route, avec un comptoir et un accès à la cave à vin. Quelques-unes disposaient d'une ou deux chambres à louer. De l'autre côté de la route, en face de la *csárda* se trouvait les écuries et le hangar à voitures. Les meilleures *csárdas* connues sont celles de Balmazújváros (XVIII$^{e}$ siècle), Hortobágy (construite en 1699 et reconstruite plusieurs fois), Nagyhegyes (début du XIX$^{e}$ siècle), Nagyiván (milieu du XVIII$^{e}$ siècle), et Tiszafüred (vers 1770).

**Gestion et protection**

*Statut juridique*

Le parc national de l'Hortobágy fut créé en 1972 par le Décret présidentiel national pour la conservation de la nature N° 1850. Les 52000ha d'origine furent complétés par 11422ha en 1993. La superficie actuelle est inchangée depuis 1996.

Le parc est régi par les articles 31-41 de la loi No LIII de 1996 sur la conservation de la nature. Ils répriment toute activité qui risquerait d'avoir un impact négatif sur le caractère et la qualité des zones protégées, y compris le défrichage, toute forme de construction ou de terrassement, et l'utilisation non autorisée de véhicules.

*Gestion*

Sur la superficie totale du parc (74820ha), 68196ha appartiennent à l'Etat - principalement à la Direction des Parcs nationaux, mais aussi à l'entreprise publique de gestion des eaux, à l'armée hongroise et à d'autres institutions d'Etat. Pour le reste, 5069ha appartiennent aux fermes collectives, 1263ha à des propriétaires individuels, 254ha à des municipalités et 38ha à des organisations non gouvernementales.

L'article 36 de la loi de 1996 sur la conservation de la nature, exige un plan de gestion pour chaque zone de protection de la nature, révisé tous les dix ans. Le plan actuellement en vigueur pour le parc national de l'Hortobágy, préparé en 1997, couvre les points suivants :

- Achat des parcelles encore détenues par les fermes collectives ;
- Soutien à la création de sociétés d'élevage dans les villages environnants afin d'éviter un morcellement de la gestion des terres ;
- Obtention des droits pour la conservation de la nature dans des zones destinées à être rattachées au Parc.
- Application des règlements relatifs à la chasse, à l'utilisation de produits chimiques, etc. , dans la zone tampon ;
- Systématisation et meilleure diffusion des informations et des résultats de recherches ;
- Poursuite et extension des recherches portant sur les nouvelles espèces ;
- Désignation des valeurs naturelles découvertes par la recherche sur la protection ;
- Développement d'une stratégie de recherche globale.

L'article 30 de la loi de 1996 sur la conservation de la nature requiert la protection des espaces naturels "en cas de nécessité" par des zones tampon. La zone tampon du Parc national de l'Hortobágy est définie ; elle couvre une superficie 199380ha.

Le personnel de la Direction des Parcs nationaux est composé de 42 personnes : 20 administrateurs et spécialistes, 13 gardiens, 6 membres du service technique et 3 chauffeurs. La Direction est placée sous l'autorité du ministère de l'Environnement et de la Politique Régionale. C'est l'autorité de première instance pour les parcelles qui n'appartiennent pas à l'Etat au sein du Parc.

Les *kurgans*, *csárdas* et autres biens historiques du parc sont protégés en tant que monuments historiques dans le cadre de la loi No LIV de 1997 sur les Monuments anciens. Les bureaux régionaux de l'Office national des monuments anciens à Debrecen, Eger et Szolnok sont responsables du suivi de l'état de conservation et doivent prendre les mesures nécessaires.

**Conservation et authenticité**

*Historique de la conservation*

La conservation des valeurs naturelles de la zone proposée pour inscription est un processus continu entrepris depuis la création du Parc national de l'Hortobágy en 1972. Une série de lois votées depuis 1995 ont renforcé les contrôles obligatoires sur la zone désignée, encouragé la préservation des environnements créés par la main de l'homme et attribué des responsabilités relatives à la protection aux conseils locaux, conseils municipaux et administrations des comitats.

Le bien proposé pour inscription est une réserve de la biosphère dans le cadre du programme "L'homme et la biosphère" (MAB) de l'UNESCO. Plus de 23000ha sont protégés dans le cadre de la Convention de Ramsar relative aux zones humides d'importance internationale.

*Authenticité*

La trajectoire historique de la *Puszta* est telle que sa croissance et son déclin culturels sont inscrits à tout jamais dans son paysage. Le paysage actuel est comme un palimpseste qui n'aurait pas été recouvert par les plus récents développement technologiques ou sociaux. Son authenticité en tant que paysage culturel est donc absolue.

**Evaluation**

*Action de l'ICOMOS*

Un expert proposé par l'ICOMOS après délibération avec l'UICN a visité le bien à la fin du mois d'avril 1999.

*Caractéristiques*

Le paysage de la *Puszta* hongroise, illustré par le Parc national de l'Hortobágy, porte un témoignage exceptionnel sur son évolution dans le temps. La ressource naturelle des vastes étendues d'herbages et autres plantes fourragères ont attiré depuis les premiers temps les nomades ou semi-nomades menant une vie pastorale. Des traces abondantes de leur présence depuis la préhistoire jusqu'à un passé récent survivent intactes ou sous forme de vestiges. Le déclin économique de la région a contribué à figer le paysage tel qu'il était et empêche son altération par de plus récents développements.

*Analyse comparative*

La *Puszta* est une plaine marécageuse périodiquement inondée, un vaste cône alluvial que les eaux érodent continuellement depuis la fin de la période glaciaire. Morphologiquement, le parc national de l'Hortobágy se caractérise par une alternance de dépressions inondables et de formations de lœss. En Europe ce type de paysage

est caractéristique du Bassin des Carpates et ne se retrouve ailleurs, sur des étendues comparables, qu'à l'Est de l'Oural.

*Observations et recommandations de l'ICOMOS*

Ce bien a été proposé une première fois pour inscription sur la Liste du Patrimoine mondial en 1988, comme patrimoine naturel. Sur recommandation de l'UICN, la proposition n'a pas été inscrite, mais les qualités naturelles de l'Hortobágy en tant que réserve de la biosphère et site Ramsar ont été reconnues. Depuis lors, le Comité a précisé sa définition des catégories de paysages culturels, et l'actuelle demande est présentée, au titre du critère culturel, implicitement en tant que paysage culturel.

Le dossier de proposition d'inscription contient une grande quantité de données sur les caractéristiques naturelles de la zone proposée, avec une place presque aussi importante accordée à la "Description du Bien" consacrée aux habitats naturels, aux biotopes et à la faune des oiseaux qu'au patrimoine culturel. Les liens importants entre les caractéristiques naturelles de la région et son développement culturel ne sont pas clairement formulés, bien qu'une lecture attentive de certaines parties révèle les faits essentiels.

Dans la description du patrimoine culturel, les *csárdas* les plus importantes et les deux ponts historiques sont abondamment décrits tandis que les tumuli (*kurgans*) ainsi que les vestiges d'anciens villages ne le sont que succinctement. Aucune information n'est donnée sur les sites des villages médiévaux abandonnés.

Le rapport de mission émet un avis favorable sur le niveau de protection assuré aux éléments culturels appartenant au bien mais suggère qu'il soit demandé à l'Etat partie de fournir une liste complète du patrimoine culturel du Parc national de l'Hortobágy, assortie de la description de tout programme d'inventaire, de recherche et de fouilles en cours. Si aucun programme de ce type n'existe actuellement, il est fortement recommandé à l'Etat partie de les concevoir et de les mettre en place sans délai.

Le rapport signale également le manque d'information concernant l'interaction et la coordination entre les agences chargées respectivement de la protection du patrimoine culturel et du patrimoine naturel. Il est demandé à l'Etat partie de fournir des renseignements à ce sujet. Ni cette demande ni celle visée au paragraphe précédent ne justifient cependant pour l'ICOMOS la nécessité de retarder l'inscription de ce paysage culturel exceptionnel sur la liste du Patrimoine mondial.

Les informations fournies dans le dossier d'inscription du bien proposé sur les valeurs naturelles du Parc national de l'Hortobágy sont très complètes. Sur la base du rapport de mission, l'ICOMOS estime qu'il pourrait être demandé à l'UICN de reconsidérer ses recommandations de 1988, avec pour conséquence la possibilité d'inscrire le bien au titre du critère iii relatif aux biens naturels.

**Brève description**

L'Hortobágy est une vaste étendue de plaines et de marécages qui a été utilisée par l'homme comme pâturages pour les animaux domestiques pendant plus de deux mille ans.

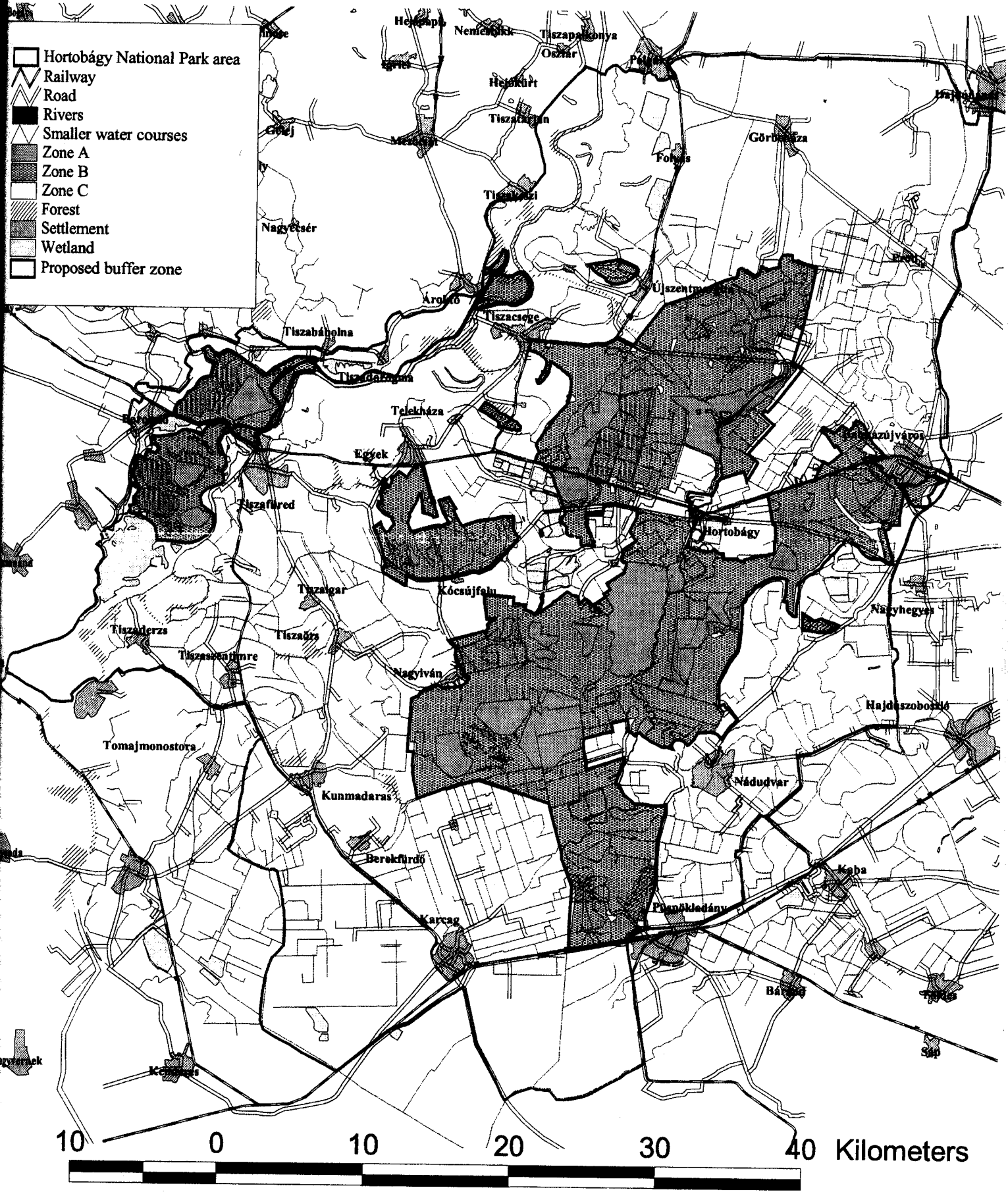
**Recommandation**

Que ce bien soit inscrit sur la liste du patrimoine mondial sur la base des ***critères culturels iv et v*** :

> ***Critère iv*** La *Puszta* hongroise est un exemple exceptionnel de paysage culturel constitué par une société pastorale.
>
> ***Critère v*** Le paysage du Parc national de l'Hortobágy conserve intactes et visibles les traces de son utilisation traditionnelle sur une durée de plus de deux mille ans et illustre l'interaction harmonieuse entre l'homme et la nature.

ICOMOS, septembre 1999

# Map 2
# Zoning of the Hortobágy National Park
# 1:250000




**Parc national de l'Hortobágy / Hortobágy National Park :**
**Plan indiquant la zone proposée et la zone tampon / Map showing nominated property and buffer zone**