

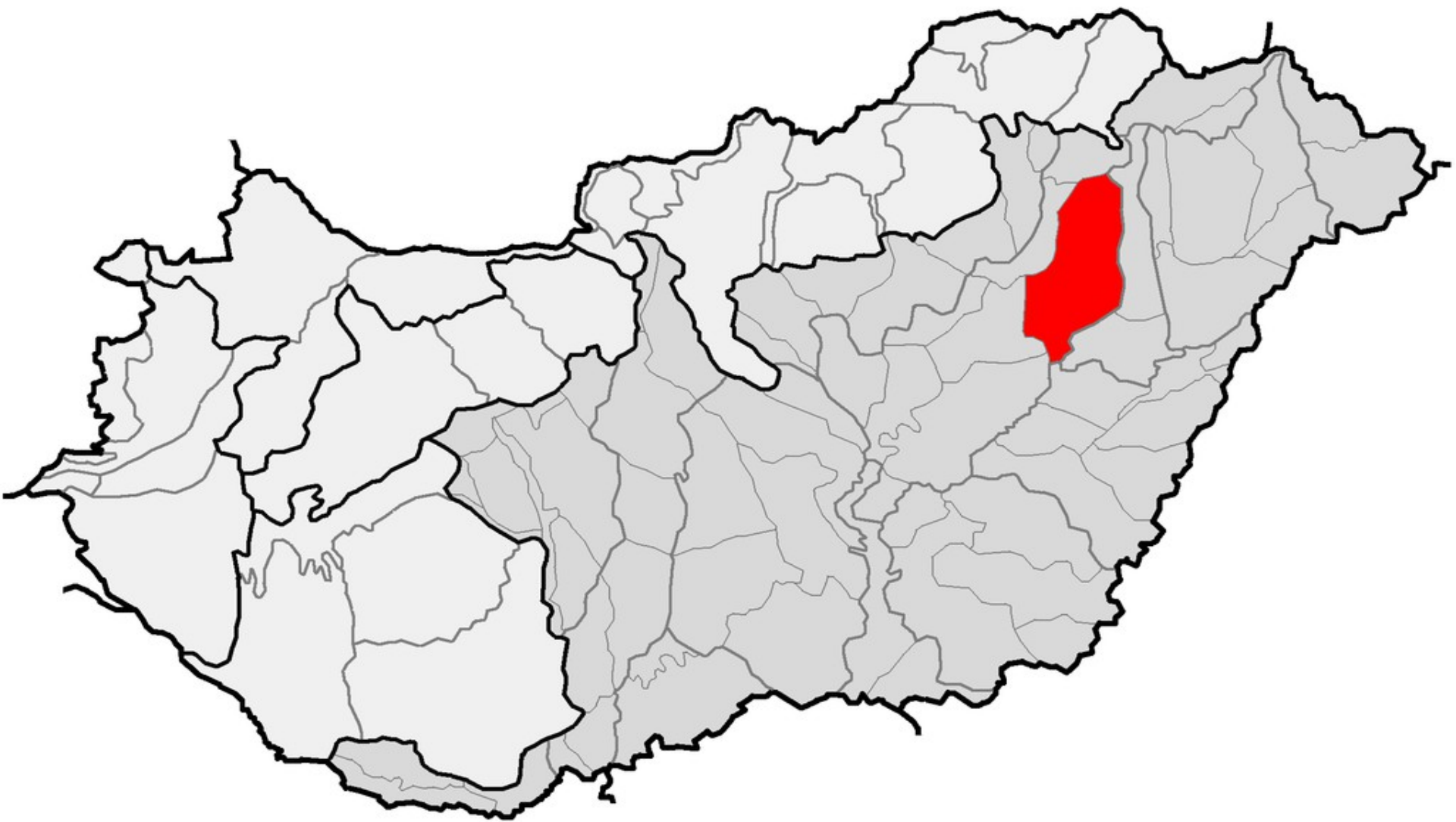
# Invading plants in the Hortobágyi NP – short overview of the species and treatments against them

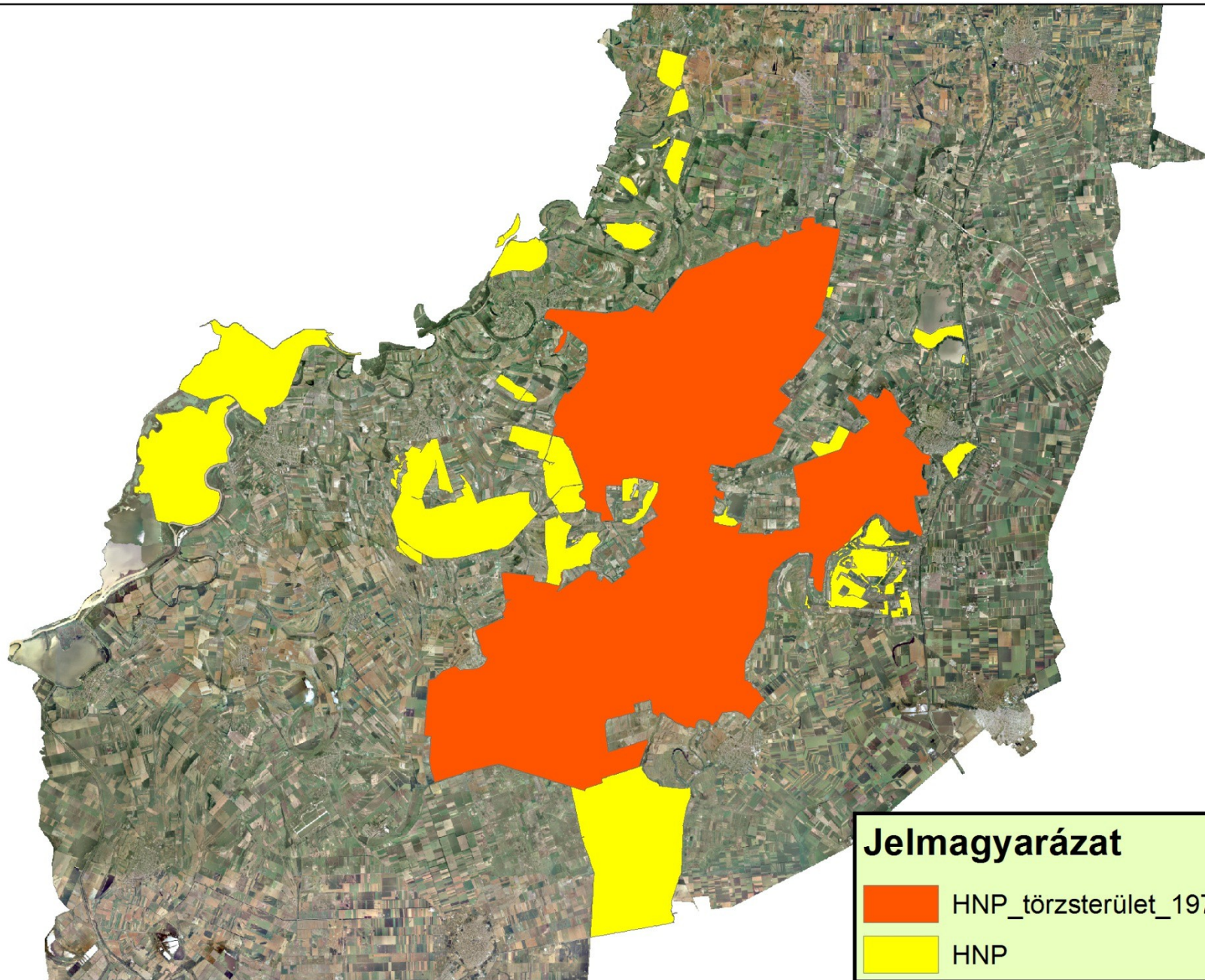
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*Managing invasive plant and animal species in the protected areas of  
Central and Eastern Europe*



*Workshop for experts., 02-06 May, 2016, Hortobágy, Hungary*







**Jelmagyarázat**

	HNP_törzsterület_1973
	HNP

## Notes

- 📖 Floodplain origin of Hortobágy
- 📖 Many chaneln and other water surfaces
- 📖 Primarily treeless habitats; open steppe areas
- 📖 Forced forestation activity in the 1950's, 1960's
- 📖 Widely distributed animal husbandry with grazing animal flocks
- 📖 Haymaking activity, incoming hay supply in dry seasons
- 📖 Mostly arboreal invasive plant species – causing landscape alteration



# Important habitats

Open salt steppe oak forests

*Galatello-Quercetum roboris*

N2k: 9110\* Euro-Siberian steppic woods with *Quercus* spp.



2 remained spots:

 Tilos-forest, Újszentmargita

 Ohat-forest

**Enemies:**

**Tree of heaven (*Ailanthus altissima*)**



**Problems:**

 Expansion by many seeds with the wind

 Spriting from roots



**Total contagious state by some years...**



## Treatments:

- 📁 Older specimens – drilling and injection
- 📁 time: from 2nd half of summer to winter
- 📁 chemical substance: glyphosate
- 📁 question: influence on living creatures??!! Carcinogenic? Hormon modulation?





**Younger individuals - spraying**

**Medium trees –  
Painting on 40-50  
cm section high  
around the trunk  
epidermis  
Blue – visual effect  
to recognize  
treated ones**





**Efficiency:**

 Depends on several things, e.g. timing, humidity – water and nutrient circulation in the plant, dose, amount of poison, place of poisoning on the plant, etc.  
General observation: most of the cases treatment must be iterated



Acacia aka Black locust (*Robinia pseudoacacia*)

☞ React well to poisoning

☞ Dried trees keep standing on there place (xylophag insects and their parasites)



**Riverine willow-poplar forests and riverine oak-elm-ash forests**  
***Leucojo aestivo-Salicetum albae et Fraxino pannonicae-Ulmetum***

**N2k:**

**91E0\* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior***

**91F0\* Riparian mixed forests of *Quercus robur*, *Ulmus laevis* and *minor*, *Fraxinus excelsior* or *angustifolia***

and ...

**...neighbouring meadows**



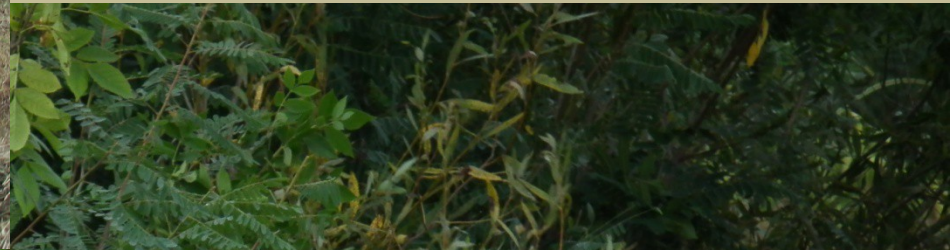


**Problems (among others):**

**„Bastard indigobush” (*Amorpha fruticosa*)**

**Red or green ash (*Fraxinus pennsylvanica*)**

**Ash-leaved maple (*Acer negundo*)**



**Cutting, grazing activities**  
**Notes: no year could be**  
**missed, in other hand**  
**your achievements**  
**become poorer condition**







**Amorpha – cut in the previous year – could be 1,5 m tall in next June...**



**In some case cutting and soil rotation, then sowing could be proper.**



**Wild olive (*Eleagnus angustifolia*)**

**Scattered on the puszta**

**Causing scenery damage on world heritage site**

**No reaction on glyphosate – as we found**

**Cut and then cut the young shoots persistantly for some years**

**Grazing and treading effort is positiv on places**



**Thank you for your attention!**