

# REUFIS Field trip programme

19 October 2017

Hosted by the “Valkó” Forest Management Unit of the “Pilisi Parkerdő” State Forest Enterprise



The “Valkó” Forest Management Unit manages 9235 ha of forest area and 67% of this area is protected, 15% is strictly protected and 40% is part of the Natura2000 network.

The climatic conditions of the management area are balanced. The elevation varies between 150-300 meters and the annual precipitation is around 550 mm.

Composition of tree species: 25% black locust (*Robinia pseudoacacia*), 26 % oaks (*Quercus* sp.), 17 % Turkey oak (*Quercus cerris*), 14 % Pine (*Pinus* sp.), 13% other hard broadleaved species and 5 % other soft broadleaved species.

All the Hungarian big game species are present here: red deer, fallow deer, roe deer, European mouflon and wild boar.

Except for the roe deer, the wildlife

management values of these species are significant. The bag of 2016 included 1191 hunted animals (319 red deer, 89 fallow deer, 118 roe deer, 33 mouflon and 632 wild boar). The total amount of marketed game meat was 41.269 kg.

## **1. stop - Management of black locust (*Robinia pseudoacacia*) stands**

The annual timber harvest of the forest management unit amounts to 27 000 m<sup>3</sup>. Black locust represent 13 600 m<sup>3</sup> of this amount (40% logs, 8% poles and 52% fuel wood).

The forest management unit has 2315 ha (~25%) black locust stands. Due to the regulations related to the protected areas, clearcuts are maximised in 3 ha. After the harvest, the area is cleared (the small branches are burned or collected, depending on the quality and the quantity) and root ripping supports the vegetative regeneration. Finally electric fences are installed to prevent game damage in the regeneration area. Once a year (during the winter) the stump sprouts are removed to help the development of the root-shoots. The most difficult task is to protect the young stands from the game. In the first years the chewing of the apical buds and later the stripping damage cause serious problems.

In the Gödöllő 82/E sub compartment locust is a first generation stand, but next to it, in the Gödöllő 83/A sub compartment the stand is already regenerated once with root-shoots. The difference in the stand structure is clearly visible. In the second-generation stand some associate tree species are

already established, like the black cherry (*Prunus serotina*) or the western hackberry (*Celtis occidentalis*). Birds facilitate the spreading and the establishment of these species. It's not a management goal to remove all of these associate tree species, because they produce good quality fuel wood. On the other hand, it's necessary to control them in the early years and keep them in the second layer, since they are fast growing species and they can outgrow and obstruct the development of the locust.

After the clearcuts it's necessary to create a favourable stand structure. The associate tree species are often cut back twice a year to make sure there's enough space for the locust root-shoots.

All three of the above mentioned tree species are introduced, and considered as invasive on some sites. Therefore any information on their distribution, reproduction and control is essential. Our management unit provides also some sites for researchers. In the *Gödöllő 84/C* sub compartment a PhD student (Ms Viktória Nemes) is testing some chemical protection methods to control the black cherry.

## **2. stop - Gödöllő Arboretum**

This forestry arboretum was established in 1902 following the decision of the Minister of Agriculture. The original purpose of the arboretum was to experiment with non-native species (particularly conifers) and explore their potential to be managed as stands in Hungary. After 1960 with the leadership of the Hungarian Forest Research Institute large-scale plantation programmes were developed and implemented. The result of this programme is the current stand composition with 154 experimental forest types. The unique feature of the Gödöllő Arboretum is the complex collection of forest stands with their associate herbaceous and shrub layers. The arboretum also functions as a gene reserve. We can find well-documented stands of Scotch pine (*Pinus sylvestris*), European larch (*Larix decidua*), Black locust (*Robinia pseudoacacia*), pedunculate oak (*Quercus robur*) and many others. The research activities are still on-going. Since October 2012 the "Valkó" Forest Management Unit carried out all the maintenance and cleaning activities and since 2016 the complete property management belongs to the unit.



The Gödöllő Arboretum serves the forestry researchers and functions as a complex gene reserve on 350 ha. Approximately 40 ha are used for recreational functions. As of today the collection includes 147 conifers and Gymnosperms, 875 broadleaves and shrubs species, sub-species and varieties.