HUGRASSLANDSLIFE (LIFE NAT/HU/001028) project

Fifth Report

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The aim of this survey to follow the vegetation change after the nature protection management during the 2019 year.

1. Gyermely-Máriahalom. There was not nature protection management on my first three examined sampling plots. The natural scrub species begun to sprout fast in the new three sampling plots. Mowing and grazing immediately needed.
2. Budaörsi kopárok. The number of black pine seedlings has increase. The invasive *Ailanthus altissima* has appeared again, but has broken to the waist. The amount of herbaceous invasive species has not changed significantly. The increasing of dominance of native and archeophytic woody species has continued so the bush clearing, mowing and grazing is necessary as soon as possible again, if grassland conservation is the goal.
3. Tétényi fennsík. This year, one stalk of *Celtis occidentalis* appeared in the designated sampling areas. The native and arcehophytic shrubs were sprouting vigorously. To continue the management is indispensable.
4. Debegió-hegy. Many invasive species spread quickly on the bare surface of black locust clearing area. Native species of open sand grasslands are also spreading to there. Invasive therophytes will be driven out by lawn competition, but great care must be taken to eradicate perennials, especially woody ones. The major problem is caused by *Celtis occidentalis* and *Solidago* species, but invasion of *Prunus serotina* is also expected. Grazing and mowing the area, and sowing it with local seed mixture would accelerate the succession.
5. Fóti Somlyó. The grasslands were in good condition during 2019. The amount of Celtis *occidentalis* seedlings has increased and than most of them died during the summer. The sprouts of native and archeophytic snugs of shrubs have grown higher and higher. Repeated mowing and grazing are necessary.
6. Tápiósági Földvár. The black locust was successfully eradicated, but some of the canes left in the ground were sprouted again. The amount of *Celtis occidentalis* has increased. A lot of young *Populus alba* shoots appear from the roots of the white poplar trees had been cut. The largest problem that the gravitating water washes a lot of nutrients and pesticides from the higher arable onto the lower slopes. The use of fertilizers and other chemicals in this area should be restricted (prohibited). Regular mowing and grazing of the area should be a priority.
7. Szentmártonkáta. The quality of the pannonic open sand steppes are very good, the frequency of *Asclepias syriaca* is very low. The herbaceous and woody alien plants have continued their invasion on the competition poor surfaces of the previously black locust dominated places, where the large number of *Celtis occidentalis* seedlings and sprouts of *Robinia pseudoaccacia* are increasing. Mowing and grazing is necessary here.
8. Küdői-hegy: Many of the eroded soil surfaces were colonized by native flora, but on the higher, drier side of the hillside the *Celtis occidentalis*-, on the lower, wetter side the *Solidago gigantea* multiplied on it. The growth of native and archeophytic woody species is very fast: they produce taller, dense, strong shrubs, so the need to be removed as soon as possible by repeated mowing and permanent grazing.
9. Domony-völgy: The sprouting has accelerated on the cleared, previously Crataegus monogyna dominated scrub. The amount of the invasives has decreased in the standing *Robinia pseudoacacia* plantation, but the sprouts of black locust has increased on the surrounding eradication area. Mowing and grazing would be necessary.

In summary, repeated mowing and grazing is necessary on every places. Without these treatments the situation will be worse than it was before the scrub clearings because the invasion of the *Celtis occidentalis*.

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