

THE CONSERVATION OF THE BÜKKÁBRÁNY TREES IN IPOLYTARNÓC

ARTICLE OF THE PLASTDUR LTD, 2007.10. 14

The remains of the 8-million year old cypress trees have been found in Bükkábrány, in the lignite mine of Mátra Power Plant Closely-held Joint Stock Company. Six of them have been treated on the spot of the exploration with the wet dispersion polymer of PLASTDUR LTD. The material, which can create space nets even in a wet substance and has little viscosity, was injected with a special injector, made for this purpose, into the loose tree stems containing much water. This plastic will take the place of the cellulose, deteriorated to a greater extent, to strengthen the friable lignin. The treatment had to be done under adverse weather circumstances, even when the mine was operating, because the stems, having been taken out of the shelter of the wet sand, could have been pulverized due to drying. The deadline of the transportation was also shortened by the fact that the area was needed for mine cultivation. The operation proved to be successful. The gradually drying stems did not crack further, or collapse when they were detached from the lignite basement and they also endured being transported for 130 kms.

The prehistoric trees arrived in Ipolytarnóc on 3 September 2007. Five trees out of six were set up outside the building of The Nature Preservation Area for the Prehistoric Remains in Ipolytarnóc, whereas the sixth one can be seen inside the building. The opening of the reconstructed visiting centre took place on 12 October 2007, where the new building was opened by Gábor Fodor, minister for the Ministry of Nature and Water Protection, and the trees were introduced by József Duska, Director of Bükk National Park Directorate.

The stabilization of the trees continues here. The great amount of water, which can still be found in them and which has meant protection for them so far, has to be removed before winter sets in, because if it freezes, it can destroy the strengthened fibres. Air is blown into the basement of the trees, which will stream through the hollows of the trees, thus accelerating the drying process. In parallel with this, we have to continue the injection of polymer, because diffusion only works in wet substance and it takes the macromolecules to the surfaces of the fibres inside the stem, thus filling the place of the leaving water and stopping the further cracks. The plastic injected among the fibres of the trees is suitable for the stabilization of the trees' inner fibre material, its chemical structure will not change – it could only be damaged by ultra-violet radiation which was absorbed in the remaining material of the trees. The complex treatment seems to be lengthy, therefore – temporarily - a heatable tent has to be set up over the stems until the treatment finishes and due to the imminent risk of frost.

The first part of the finding-saving work finishes with the strengthening of the fibre structure and with drying, but further tasks are waiting for the experts. The next step is the preservation of the stems. After the complete drying, the exterior of the trees will be covered by a waterproof and mat lacquer layer to exclude the possibility of further wetness, since the fungi and bacteria, proliferating in a water filtering in later, could decompose the remaining tree cells. Even the protection against waterfall has to be solved: a poly-carbonate roof structure has to be built over the trees as a long-term protection against snow, hail, drizzle and rain and it should also harmonize with the landscape and with the style of the visiting centre.

PLASTDUR LTD appreciates the work of all the institutes, associations, companies and private people who have participated in the saving of a finding that is regarded as a world sensation. The company is also proud of the chance that it could take part in an unexampled team work, and also because it could utilize its technical knowledge in a complex venture that has attracted much attention. We are certain that the experience gained here can be incentive even in our everyday work. Our glues, being environmentally-friendly and harmless to health, can offer a guarantee not only for the 8-million year old trees, but also for processing the trees of today.