WOOD-PASTURES OF HUNGARY,
A DISAPPEARING SILVOPASTORAL SYSTEM

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Introduction
Agriculture and forestry have changed a lot during the past 150-200 years in Hungary and in the Carpathian Basin. With these changes, many details sink into oblivion, like the wood-pasture heritage. The old wood-pastures are forest-grass habitat complexes, a kind of silvopastoral systems created by anthropogenic influences. They can be easily recognised from the more or less open grasses and the open standing veteran trees (Fig. 1).

Material and methods
In spite of the fact that this kind of land use has been in practice until the 1950s or 1980s, there is relatively little available information about it. The most important sources come from the fields of forest use and forestry. Other sources are the archive texts about wood-pastures from the turn of the 19th and 20th centuries. Nowadays, Haraszthy et al. (1997) and Márkus (1993) have written about the conservational relations of this land use type. Recent data can be obtained from the database of the Vegetation Heritage of Hungary by Bölöni et al. (2008, Fig. 2) and Varga (2008). Best sources of international cases are Rackham (1996), Schnabel and Ferreira (2004), Holl and Smith (2002), etc. Some parts of this land use type can be only reconstructed based on descriptions, historical references and stories of old inhabitants.

Results and conclusions
Not only simple grazing had been usual before the 20th century in the Hungarian forests, but wood-pastures as a kind of land use had been present, too. Around the turn of the 19th and 20th centuries there was a fierce debate among forester scientists about this land use type in the Carpathian Basin. There were several opinions and viewpoints about forming, using and developing these land uses. Since forest-grassland habitats have been created by human land use, the presence of human activities are indispensable for the subsistence of these mosaics, like the clearing of pastures. Production has been intensified since the 1950s in Hungary. Livestock nutrition has shifted towards the increased use of grain based hard feed, therefore the importance of pastures started to decrease. Abandoned wood-pastures started to reforest. Today, the characteristic pasture shrub species grow over open grasses among the dispersedly placed old trees and seedlings of the evolving forests (Fig. 3).

Nowadays, there are still numerous wood-pastures in Hungary. The total area of wood-pastures is at least 5,500 hectares according to the most particular data of the Vegetation Heritage of Hungary ( Bölöni et al. 2008). Most of the remained areas are in a late phase of natural succession due to self-reforestation.

These semi-natural habitats create connection between closed forests and open grasses. Accordingly, the diversity of wood-pastures is higher, due to the positive margin effect (Haraszthy et al. 1997). Many living beings can be found in them, either because they prefer these habitats or because they are crowded out from their original habitats by the intensive managing methods. The veteran trees provide habitats for fungi, lichens, mosses, arthropods, smaller mammals and birds.

In addition, wood-pastures are very important landscape elements and memories of the former landscape and farming history. Thanks to these values, wood-pastures currently play a role in landscape protection and conservation management, therefore there are some ‘active’ wood-pastures in Hungary, usually under the conservation management of some of the national parks or private farmers (Fig. 4). There are other countries where the research, rehabilitation and conservation of similar land use types are more developed, like the United Kingdom, Germany, Switzerland, Spain, Portugal, etc.

References