

## Short communication

# Role of representative woody plants in the spatial composition of dendrological gardens

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### Abstract

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A more thorough exploration and deeper knowledge of the overseas colonies brought along the discovery and import to the European continent of several new plant species. Planting exotic species in the Hungarian parks became a wave of fashion in the last third of the 19th century. Landscape architecture also calls these landscape gardens of special plant collections dendrological gardens. Apart from the value of the individual specimens, these woody plants also had a great role in the spatial composition of the entire garden. These plants of diverse appearance endowed a part or the whole of the garden with a unique character, as the outcome of preliminary planning. Below I highlight different planning methods developed on the basis of using different representative, mostly exotic woody plants. Traces of these methods can still be discerned today even in badly neglected gardens. Knowledge of the criteria of planning and the typical use of plants can provide indispensable clues to the reconstruction of gardens.

### Keywords

dendrological garden, garden design, historical garden

### Introduction

In dendrological gardens the use of extraneous and indigenous plants and their spatial layout produce a peculiar atmosphere of the garden sight. As is known, the garden designers of 19th century and early 20th century Hungarian mansions and country houses had a special penchant for ever newer species of trees to create esthetic and tasteful compositions.

Raymund Rapaics uses the phrase dendrological garden to designate a distinct period of landscape gardens (RAPAICS, 1940). It is important to know that dendrological gardens are mainly defined by the esthetic qualities of woody plants. These qualities derive

from the complex arrangement of solitary and clustered plants. The plant composition of diverse groups and solitary items determine the spatial layout and overall impression of the garden. Thanks to the increasing amount of diverse foreign woody plants over the 19th century and the outcome of plant breeding efforts landscape architects and the garden owners themselves achieved more and more spectacular sights.

In the effort to explore all Hungarian dendrological gardens and define their number, at first I screened the available databases of existing parks, historical gardens (*Central European historic garden database*). This appears to be the most complete collection, including all smaller and greater Hungarian gardens. It lists 1,550

Hungarian gardens and parks in most different states of repair today. The major filtering was carried out with the help of the internet and some comprehensive publications. Lots of picture postcards, aerial photos, satellite pictures, photos and historical accounts available on the Internet helped my work. The published sources (e.g. MÉSZÖLY et al., 1984; RAPAICS, 1940; SOMKUTHY and TÓTH, 2000; GALAVICS, 1999) offered sufficient information on the historical background of the gardens.

Below I have examined and analyzed the landscape architectural use of woody plants typical of the dendrological phase of landscape gardens in the still extant Hungarian gardens.

## Material and methods

For any discussion of the theme it is indispensable to clarify the concept of “dendrological garden”. For me as a landscape architect, a dendrological garden is a garden architectural work in which a special spatial composition can clearly be discerned and in which there are valuable old and/or extraordinary tree species. Another characteristic feature is that they were created in the plant collection phase of late landscape gardens. This feature basically differentiates a dendrological garden from an arboretum, thus when a garden is created from a collection of new plants, it is an arboretum and not a dendrological garden. Dendrological gardens constitute a subset of arboreta created by the designing principles, esthetic and space compositional rules of concrete garden historical periods. Accents or contrasts with plants, as well as the reinforcement of certain parts of the gardens, e.g. the background or the borders, acquired immense significance in these gardens.

It was not always unambiguous or successful to pick out the dendrological gardens with the above method (see Introduction). In several cases it was unavoidable to personally explore the venue, for earlier photos and descriptions failed to give information of the real situation. Only a visit to the actual place could decide whether it still existed as a dendrological garden or only the historical sources registered a once flourishing garden in the place.

I have examined the features of plant composition (collecting the old characteristic tree species, examining the planting method of woody plants) in the screened list. The field experiences of the so-far visited gardens – some one third of the narrow list – are presented here with a few venues picked out that deserve special attention on account of the conscious, designed layout of trees and spatial compositions.

## Results and discussion

Several gardens in Hungary still preserve the memory of former dendrological gardens. Many of them per-

ished or were badly damaged during the tempestuous years after World War II. Out of the mentioned 1,550, I estimate at between 80 and 100 the number of dendrological gardens in which the one-time originally planted tree species can still be found. They are, however, mostly in distressing condition. Only few are well maintained, tended and flourishing. These include Vácrátót, the former park of the Vigyázó family’s country house (today Hungary’s largest botanic garden), as well as Cégénydányád, Szarvas, Alcsútdoboz, Erdőtelek, Kámon, Szabadkígyós, Lengyel, Martonvásár, Zirc. A larger group includes less well maintained gardens that still have valuable vegetation determining their character, e.g. Iharosberény, Baktalórántháza, Sopronhorpács, Szombathely-Bogát, Somogyvár, Szeleste, Vép, Zsenyey, Tóalmás. In some cases the „new” function put a stamp on the park and caused lasting damage. One is the park of the Nagyréce country house, today the garden of a school and local library. Though the original plant stock provides information of the former park, the spatial structure of the park has wholly vanished. The installation of the utilities of the district primary school and kindergarten completely transformed and deformed the garden for good.

The periods of dendrological gardens are often determined on the basis of the most characteristic, “fashionable” plants (e.g. plane (*Platanus × acerifolia* (Aiton) Willd.), conifers, Turkish hazelnut (*Corylus colurna* (L.)) (RAPAICS, 1940; KÓSA, 2000; SCHMIDT, 2003). It is still conspicuous that in some Hungarian counties conifers were very popular, the most frequent and characteristic of them being giant sequoia (*Sequoiadendron giganteum* (Lindl.)) found in nearly all dendrological gardens of Somogy, Vas and Zala counties, most of them aged about 150–180 years (Fig. 1). These spectacular trees are usually planted close to the mansion or country house. In these counties, first of all Zala and Vas, the more humid mountainous climate and the acid reaction of the soil are favourable conditions for planting and developing evergreens. Other conifers with a decisive role in the spatial composition of gardens are *Pseudotsuga menziesii* (Mirb.) Franco, *Cedrus atlantica* (Endl.) Manetti ex Carrière, *Pinus strobus* (L.), *Pinus nigra* (J. F. Arnold), *Pinus sylvestris* (L.), *Larix decidua* (Mill.) and members of the *Abies* genus. One of the finest and largest Douglas fir is in Segesd, in the northern, rear part of the park. At Bárdudvarnok the surviving vegetation includes two old and fine Atlas Cedar specimens close to the mansion, in the front and back gardens. Quite a lot of eastern white pine can be found in the gardens, mainly planted in groups, first of all in the shrubbery or wooded areas. Old specimens can be found at Csurgó, Szarvas, Zirc and Cégénydányád, among other places. Coniferous plants, first of all members of the *Pinus* family, mainly larches, thujas and false cypress (*Chamaecyparis*) plants were favoured in smaller or larger groups, sometimes in circles

fairly removed from the country house. In this way the evergreens had a role to attract attention and orientate the glance. Larches – whether alone or in groups – are not so frequent as background or remote spectacle, but their intriguing veil-like habit turns them into a relieving counterpoint or subtle decoration against compact masses of trees. They are planted in groups of three in the parks of the Bezerédi-Széchenyi mansion at Rum and the Inkey country house at Iharos. Larches were usually not applied close to buildings.



Fig. 1. Aged giant sequoia in the park of Bárdudvarnok (Photo Author).

Planting deciduous trees in clusters was also typical. One of the most popular ornamental plants of the

age was plane used 1) as lines of trees to designate axes and routes (e.g. at Acsád), 2) in clusters of trees, 3) as borders (e.g. to demarcate the pleasure ground) in the park of the country house at Tóalmás (Fig. 2) and to mark out the immediate surroundings of the house, 4) as a solitary tree, at accentuated points like the ramification or convergence of roads (Sárvár country house park, Arboretum of Alcsútdoboz). Sometimes it was used to organize large grass plots (Vácrátót, Margaret Island). As for deciduous trees, I have found considerable amounts of *Ginkgo biloba* (L.), *Liriodendron tulipifera* (L.), *Catalpa bignonioides* (Walter), *Quercus rubra* (L.) and various kinds of maple (*Acer*). *Ginkgo* is just as characteristic among deciduous trees as is giant sequoia among conifers. There are specimens aged 120–200 years at Acsád, Keszthely, Gernyeszeg (today: Gornești, Romania), Dég, Szabadkígyós, Somogyvár and Somogyárd next to the mansions (Fig. 3). It was used as a compositional element of clearings or lawns at Szarvas and Sellye and probably it was also applied at Sárvár and Somogyzsitfa. Owing to the cramped vegetation or changed functions at the mentioned places only guesses can be made about the one-time space-organizing role of these plants. Tree species with large leaves such as tulip-tree and Southern Catalpa were usually planted along access roads or to mark out large lawns outside the country house by placing individual specimens at salient points. Large tulip-trees can be found at Iharosberény, Körmend and Ivánc. Finally, mention must also be made of two tree species and a shrub species. One is the genus of beech trees with *Fagus sylvatica* L. cv. *Atropunicea* or purple beech, and *Fagus sylvatica* L. cv. *Pendula* or weeping beech, the other is the cypress oak (*Quercus robur* L. f. *fastigiata*). The basic species are indigenous in Hungary, but the mentioned kinds enjoyed greater popularity in dendrological gardens. The cypress oak of fine columnal habit is found from Sárvár to Gernyeszeg (e.g. Keszthely, Surd, Tura, Szarvas) at many places, either to articulate clearings or grassy surfaces, or as a distant sights,



Fig. 2. Plane trees as borders in the park of the country house at Tóalmás (Photo Author).



Fig. 3. Placement of a Ginkgo next to the mansion of Gernyeszeg (Gornești) (Photo Author).

sometimes as a single feature. The members of the *Fagus* genus were almost always close to the mansions, dominating free open spaces of varying size.

Among shrubs I would only mention the Magnolia species found in many Hungarian gardens (e.g. Csurgó, Segesd, Bályok (today: Balc, Romania)). They were customarily planted in representative gardens connected directly to the country houses. A favoured location was along the roads leading to the house or like solitary markers on either side of the road, constituting a symbolic gate.

The above discussion was reduced to the compositional role of the most characteristic and typical plants in dendrological gardens. It can be concluded that the one-time landscape architectural principles can still be detected even amidst the worst conditions of neglect. The plant stock of the gardens is senescent and defective; the state of the few gardens handled with professional competence provides no excuse for leaning back contentedly – quite to the contrary! Failure to access several gardens prevented me from assessing and analyzing their plant compositions. This situation requires the sounding of the alarm: the aging plant stocks and consequently the gardens themselves are doomed to perishing unless further assessment, treatment, rejuvenation and maintenance begin urgently.

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## **Kompozičná úloha drevín so zvláštnym habitom v dendrologických záhradách**

### **Súhrn**

Dôkladnejší výskum a spoznanie zámorských kolónií umožnili objavenie a dovoz mnohých nových rastlinných druhov na európsky kontinent. V Maďarsku sa objavili prvé jedince zvláštnych a unikátnych druhov rastlín v niektorých väčších parkoch už na začiatku 19. storočia. Móda vysadzovania exotov sa najviac rozšírila až v poslednej tretine 19. storočia. Pre tieto parky, vybudované v neskorom prírodno-krajinárskom (anglickom) slohu, zároveň zbierkového charakteru, používa krajinná architektúra označenie dendrologické záhrady. Tieto parky sú charakteristické nielen výskytom unikátnych drevín, ale aj ich harmonickým zapojením do priestorovej kompozície parku. Dreviny sa tak stávajú súčasťou celku, plnia kompozičnú úlohu, čo zvyšuje ich hodnotu. Rastliny s neobvyklým vzhľadom, dovtedy v našom podnebí nezvyčajné, vysadené ako výsledok vedomého plánovania, dávajú tak jedinečný charakter ucelenej časti parku alebo dokonca celému parku. Niektoré rastliny sa z dôvodu ich obľúbenosti stali v tomto období dokonca charakteristickými hlavnými rastlinami viacerých dendrologických záhrad. Používanie určitých rastlín v kompozícii týchto záhrad bolo často typické pre určitú oblasť a obdobie. Tieto rastliny sú v záhradnom obraze často dodnes badateľné, stali sa odtlačkami daného obdobia.

V mojom výskume chcem poukázať na postupy navrhovania záhrad, v ktorých zohralo prvoradú úlohu použitie exotických drevín so zvláštnym habitom, a ktorých vplyv môžeme dodnes rozoznať v parkovej kompozícii (aj v prípade zanedbaného parku). To je dôležité preto, lebo znalosť pôvodných plánovacích hľadísk a charakteristického spôsobu používania rastlín môže byť určujúcim východiskom pre prípadnú záhradnú rekonštrukciu. Púhou obnovou terénu a parkových prvkov, bez obnovy pôvodných rastlín, nie je možné reprodukovať náladu, estetický ani priestorový zážitok bývalého parku.

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