



Chapter 8

The Role of Chinese Plants in Hungarian Landscape Architecture

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Abstract: Most outdoor plants in Hungarian horticulture are exotas mainly from Middle and East Asia and North America. The flora of China is diversified and has many species because the last glacial period did not reach China. The richness of the Chinese flora was known for Europeans by the missionaries and medics first in 19th century. Later some bigger nurseries sent expeditions in China to collect new plants. Nowadays the Hungarian landscape architecture is impossible without Chinese plants.

Keywords: China, Landscape architecture, Glacial period, Discovery.



Introduction

Most outdoor plants (trees, shrubs, annuals and perennials) in Hungarian horticulture are exotas, which feel good in our climate. In outdoor planting it is very important that plants feel good in their new environment or at least that they can tolerate it, which will depend on their original environment, i.e. the circumstances under which they were chosen. That is why many plants from Middle and East Asia and North America have an important part to play in the structure of Hungarian and European ornamentals.

Speciality of the Chinese Flora

The flora of China is diversified and has many species. The reason for this is that the lay of the country's land varies. There are high mountains, ones over 4.000 meters, with alpine vegetation; highlands with forests; and lowlands lying near sea level. Especially in China, these different places are close to each other, so many kinds of plants occupy a relatively small area. This gives a good chance of hybridization and the birth of new species. Another reason is the richness of the flora - the last glacial period did not reach China, which is why many sorts of plants that died out in other parts of the globe one can find there; and such plants can successfully thrive again in long-ago known areas. A good example of this is the well known Ginkgo tree (*Ginkgo biloba*), whose past European presence has been proven by the existence of fossils.

Discovery of Chinese Flora

The richness of Chinese flora was known to Europeans via, originally, missionaries and medics. They sent the first seeds of many species from China to Europe, for example *Sophora japonica*, *Koelreuteria paniculata* and *Ailanthus altissima*. The most known person among them was a Frenchman, Armand David (1826 – 1901), after whom many plants were named as a way of respecting his



work (*Buddleja davidii*, *Davidia involucrata*, *Pinus armandii*). Later, some bigger nurseries sent expeditions to China to collect new plants. With this work they laid a foundation for their own future success and had an important role to play in spreading the Chinese plants around the world. (Johnson 1987)

As we look around our green areas we can see that, nowadays, Hungarian landscape architecture would be impossible without Chinese plants.

Most Important Taxa

The most important Chinese-originating ornamental plants in Hungarian landscape architecture:

Gymnospermous

Ginkgo biloba: It is planted very often here; it has a special character, and it is tall, so it is an attractive ornamental tree. The leaves have an extraordinary dichotomic venation, and in autumn turn a gold colour. This is why it is one of the most uncommon autumn sights in parks and public places. Until the glacial period, this plant was a member of European flora and in our current climate it can survive again. As one of the most ancient trees, it has outlived many things; its hardiness is excellent. It tolerates the air and other environmental factors within cities. Its importance may well grow because of the climate's warming. Its various uses might help new Hungarian plant types/candidates. The dioecious plant - as its seeds fall, it has an unpleasant smell in autumn. So we should plant female sorts only.

Metasequoia glyptostroboides: This tree is a real sight. Known first from fossils, it was later discovered in a Sechuan valley in the 20th century. Like the *Ginkgo biloba* this tree is also an ancient gymnosperm deciduous. It is a very elegant park tree with its gold-brown leaves in autumn. It is easy to mix up with *Taxodium distichum* because they are alike, but *Taxodium* does not like soils with lime.

Pinus wallichiana: One of the most beautiful conifer solitaires. 20-30 meters high, 5 needles grow from one point, ones that are long and soft, and they are bluish-silver. This species also has a very similar pair from North America, called *Pinus strobus*, though this conifer does not like soil with lime. *P. wallichiana* likes good quality soils and warm locations. In cities, one has to water it. It grows quickly and its wood produces a lot of gum.

Thuja orientalis: A popular and well known evergreen tree or shrub throughout



the country; to be found in parks, public places, cemeteries or private gardens. It has a lot of different shapes. It tolerates dryness and the cold winters in Hungary. It most likes warm locations and middle-light warm soils.

Juniperus chinensis: An 8-10 meters high, cone-shaped tree. It has needles and scale-leaves. On it grow a lot of bluish berries. This species tolerates the climate in towns, and there are many sorts. One of the most beautiful is 'Keteleeri'. Krüssmann, (1985)

Deciduous trees: The most important species of our deciduous ornamental trees comes from China. In the green places of all inhabited areas one can see *Ailanthus altissima*, as a weed-tree. Yet this species is able to grow in narrow dark courtyards, making such places pleasant, green areas. The *Albizia julibrissin* is an important tree for Mediterranean-charactered gardens. Because it not winter hardy one needs to plant it in dry, warm locations. *Sophora japonica* in spite of its name its origin is China It is one of the most important alley trees and solitary park-trees in Hungary. It puts up with city conditions but in dry air plant-lice like it. *Koelreuteria paniculata* is a noticeable tree, with yellow flowers blossoming in mid-summer. With a regular globe-shape, it is suitable for planting in line in narrow streets. *Morus alba* earlier was very important as a benefit -tree - nowadays it is an ordinary park tree of less importance. With spectacular blossom the *Magnolia liliflora* is a valuable tree for parts of the country where the soil is acidic. In old gardens we can find the old entities of *Salix babylonica* and *Malus spectabilis*. Other important ornamental trees are *Broussonetia papyrifera*, *Catalpa ovata*, *Malus floribunda*, *Pyrus betulifolia*, *Paulownia tomentosa*, *Populus simonii*, *Prunus cerasifera*, *Pyrus betulifolia*. *Prunus persica* and *Prunus armeniaca* are attractive trees when blossoming, but, firstly, they are important fruit trees in Hungary. (Griffiths 1997)

It is difficult to list only the taxa of shrubs, perennials and annuals planted in Hungarian gardens. The most important are the following:

Shrubs: Well known evergreens: *Berberis julianae*, *Berberis verruculosa*, *Lonicera pileata*, *Euonymus fortunei*, *Mahonia bealei*. From early spring, flower wonders are aplenty with Chinese origin: *Chaenomeles speciosa*, *Forsythia suspensa*, *Rhododendron* spp., *Chimonanthus praecox*, *Prunus triloba*. From shrubs blossoming in summer and autumn the well-known taxa also came from China: *Caryopteris incana*, *Buddleja davidii*, *Hibiscus syriacus*. Some other important shrubs from Hungarian gardens are: *Clematis montana*, *Cotoneaster horizontalis*, *Deutzia scabra*, *Exochorda racemosa*, *Hydrangea macrophylla*, *Kolkwitzia amabilis*, *Lonicera fragrantissima*, *Paeonia suffruticosa*, *Parthenocissus tricuspidata*, *Rosa rugosa*, *Spiraea cantoniensis*, *Syringa meyeri*, *Weigela florida*, *Wisteria sinensis*



and different species of winter-hardy bamboo which have been in Europe for a long time and have started to be known here, in our country, in recent years. (Graf 1992)

Some important taxa from the many perennials of Chinese origin: *Anemone hupehensis*, *Ceratostigma plumbaginoides*, *Chrysanthemum indicum*, *Dicentra spectabilis*, *Hemerocallis fulva*, the Hostas, *Lilium regale*, *Lilium tigrinum*, *Macleaya cordata*, *Miscanthus sinensis*, *Paeonia lactiflora*, *Platycodon grandiflorus*, *Sedum floriferum*, *Sedum spectabile*. (Kósa – Varga 1986) Annuals: *Callistephus chinensis*, *Dianthus chinensis*, *Impatiens balsamina*, *Ocimum basilicum*.

This list of plants shows us the difference and importance of Chinese plants in Hungarian landscape architecture. The importance of taxa always changes owing to changing climate and changes in ornamental design. Now, it is unimaginable how important plant discoverers such as Armand David and his colleagues were in the 19th century; yet, now, their work gives a good basis for scientific work in which improvers are creating new sorts. From not so well-known areas of China we can find new plants for world plant design!





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Ginkgo biloba can survive urban conditions very well.



Metasequoia glyptostroboides is an extraordinary park tree in Hungary



Sophora japonica is the most popular alley tree in Hungarian cities



Albizia julibrissin is an attractive and exotic living jewel for dry, warm parks



Pinus wallichiana with his long and weepy nails is one of the most beautiful conifers



We can use Biota orientalis in dry and sandy soiled gardens very well





Salix babylonica was the favourite weeping-willow in 19th century castle-gardens



Malus spectabilis produces many light-pink flowers in May



Peach is not only for a delicious fruit - the beautiful, early spring flowering is much liked



Magnolias are the most decorative flowering shrubs of Hungarian gardens



Paeonia suffruticosa has glorious flowers in springtime and colorful leaves in autumn



The different *Chrysanthemum* taxa are well known as perennials, pot-, and cutting plants





Hydrangea macrophylla likes acidic soil and a warm climate



Buddleja davidii flower all summer and in early autumn



Very important plants in shadow-gardens are the *Hosta taxa*



The wonderful flowers of *Hemerocallis fulva* last only one day



Dicentra spectabilis has uniquely shaped flowers



Miscanthus sinensis 'Gracillimus' is a ostentatious, solitaire perennial grass





Ailanthus altissima grows quickly in narrow, dark courtyards



Morus alba is an attractive, ornamental tree with special use



Koelreuteria paniculata is a striking yellow globe in the middle of summer



Parthenocissus tricuspidata 'Veitchii' can climb a 20m wall, too





Popular perennials of rock gardens
The *Platycodon grandiflorus*



An important energy plant:
Miscanthus floriculatus 'Giganteus'



