

THE CANAL HOUSE GARDENS OF AMSTERDAM

Bert (N.C.M.) Maes

INTRODUCTION

The canals of Amsterdam were dug from the 13th through 17th centuries, and the streets lining them have a lot to offer where trees are concerned. The innumerable elms are conspicuous, a wealth of trees not to be expected in such a stony city. This wealth has been noted already by travellers visiting Amsterdam centuries ago. A varied stock of trees, albeit less conspicuous, is to be found in the backyards lying behind the Canal houses. Most of them cannot be seen from the street or the water, although sometimes one can get a mere glimpse from an alley or public building. It is exactly this polarity and interchange, the conspicuous street trees and the hidden gardens behind the houses, that is exciting. The great array of trees in the canal house yards has been shown from the recent inventory, a thorough and systematic undertaking, now finished for the Herengracht, Keizersgracht and Prinsengracht. This inventory has been published in three beautiful volumes by the 'Amsterdamse Grachtentuin' foundation. Each year there are 'open garden' days during which the public can visit several of these gardens.

The inhabitants are often attached to their trees. There are always stories to tell. In children's eyes trees are even larger than life and therefore they leave intense memories. And in some cases a tree can become a more or less public treasure – when it is written about, such as the white horse chestnut (*Aesculus*) behind Anne Frank's house on the Prinsengracht. Anne Frank, a Jewish girl, spent several years undercover in this 'safe house' during World War II. During this time she kept an impressive diary, found after the war and making her and the diary world famous. The tree behind the house, then some 150 years old, is described in three different seasons, empathically so. From her safe house, the 'Achterhuis' Anne could see the tree well, which by the way stands in the garden next door. In her diary she wrote, dated May 13, 1944: 'Our chestnut is in full bloom from tip to toe, it is full of leaves and looks a lot better than last year.' In canal house gardens we can find old and majestically spread trees, usually in the middle or toward the rear, often next to the garden walls that are just as old. They give a very special atmosphere, and a sense of time. The oldest tree in Amsterdam is a Black mulberry (*Morus nigra*), probably dating from the 18th century. It can be full of fruit and has given off great side-shoots that have rooted themselves and grown on. The widely crowned beeches (*Fagus*), sometimes

brown beeches, horsechestnuts (*Aesculus*), sycamores (*Acer pseudoplatanus*) and towering Italian poplars (*Populus nigra* 'Italica') are a most impressive sight.

In the Herengracht, Prinsengracht and Keizersgracht gardens some 70 monumental trees are found. They include a plane of 4.4 metres' circumference, a Brown beech (*Fagus*) of 3.65 meters' circumference, a White horse chestnut (*Aesculus*) of 4.5 metres, a swamp cypress (*Taxodium*) of 4.15 metres, a Dutch elm (*Ulmus* × *hollandica* 'Belgica') of 2.85 metres, a sycamore with variegated leaves (*Acer pseudoplatanus* 'Leopoldii'), a white mulberry (*Morus alba*) of 1.4 metres and an oriental plane (*Platanus acerifolia* 'Digitata') of 2.9 metres' circumference.

The inventory of these Amsterdam Canal house gardens shows that these trees do not grow in a haphazard way. Often a traceable layout can be seen, in some cases historically oriented, but in others in more modern styles. More and less famous garden designers such as Mien Ruijs with her original ideas and Arend Jan van der Horst, who often worked in a historical framework, have left their marks. Older trees refer back to the historical designs, a landscape garden or even a formal garden. We often find austere geometrical gardens, usually of recent date. Trained trees alongside the garden edges are sometimes elements of an older array and a historic layout.

175 SPECIES AND VARIETIES OF TREES

In the 680 gardens that have so far been studied by the 'Amsterdamse Grachtentuin' foundation, on the Herengracht, Prinsengracht and Keizersgracht, some 175 tree species can be found. That is a great number, although not really very high for this number of gardens. In the survey below we indicate which species occur at which canal, and in how many of the gardens. For completeness' sake we have encompassed the varieties of species under the same heading, as is the case with (ornamental) cherry (*Prunus*), holly (*Ilex*), sycamore (*Acer pseudoplatanus*), hawthorn (*Crataegus*) and mulberry (*Morus*) (Table 1).

Top of the bill are nine species that occur frequently: Ornamental cherry (*Prunus* sp.), yew, holly, sycamore, laburnum, fruit trees, lawson cypress (*Chamaecyparis lawsoniana*) and magnolia species. They occur in 100 or more gardens overall.

The ornamental cherry encompass a popular group of species, usually exotic, capable of flowering extravagantly. Therefore it is really the yew coming first, occurring in 207 gardens, with holly, found in 195 gardens, in second place.

Both species have been cultivated in gardens for a long time and are very able to propagate themselves spontaneously.

Table 1

Tree species in canal house gardens

Canals	Herengracht	Keizersgracht	Prinsengracht	Total number
No. of gardens	143	335	202	680
Species name				
Ornamental <i>Prunus</i>	42	107	67	216
Yew (<i>Taxus</i>)	44	124	39	207
Holly (<i>Ilex</i>)	52	127	16	195
Sycamore (<i>Acer pseudoplatanus</i>)	42	74	50	166
<i>Laburnum</i>	29	77	49	155
Fruit trees	36	62	47	145
<i>Chamaecyparis lawsoniana</i>	28	85	26	139
<i>Magnolia</i>	17	57	26	100
<i>Aesculus</i>	22	38	16	76
<i>Fagus</i>	17	40	5	62
<i>Betula</i>	12	31	18	61
<i>Tilia</i>	15	25	14	54
<i>Crataegus</i>	16	22	13	51
<i>Sorbus aucuparia</i>	7	19	20	46
Elm (<i>Ulmus</i>)	14	20	11	45
Hazel (<i>Corulus</i>)	7	20	15	42
Ornamental apple (<i>Malus</i>)	1	31	10	42
<i>Thuja occidentalis</i>	16	10	12	38
<i>Picea</i>	8	22	6	36
<i>Juniperus</i>	12	8	15	35
<i>Robinia</i>	6	5	19	30
<i>Salix</i>	5	24	1	30
Poplar (<i>Populus</i>)	4	15	10	29
<i>Rhus</i>	2	18	6	26
<i>Pinus</i>	7	14	4	25
Cedar (<i>Cedrus</i>)	3	16	5	24
<i>Carpinus</i>	6	16		22
<i>Ginkgo</i>	9	2	9	20

Canals	Herengracht	Keizersgracht	Prinsengracht	Total number
No. of gardens	143	335	202	680
Mulberry (<i>Morus</i>)	7	1	6	14
Larch (<i>Larix</i>)	4	4	5	13
Plane (<i>Platanus</i>)	2	8		10
<i>Juglans</i>	4	4	2	10
<i>Bignonia</i>	4	1	5	10
<i>Prunus cerasifera</i>	4		6	10
Ash (<i>Fraxinus</i>)	2	4	3	9
Oak (<i>Quercus</i>)	1	3	4	8
Elder (<i>Alnus</i>)		6	1	7
<i>Gleditsia</i>		1	5	6
<i>Metasequoia</i>		3	2	5
<i>Acer negundo</i>	3			3
<i>Abies</i>	1	1	1	3
<i>Populus canescens</i>		2		2
<i>Pterocarya</i>		2		2
<i>Prunus amygdalis</i>	2			2
<i>Liriodendron</i>	1		1	2
<i>Ailanthus</i>		1		1
<i>Acer campestre</i>			1	1
<i>Pseudotsuga</i>	1			1
<i>Castanea</i>			1	1
<i>Paulownia</i>	1			1
<i>Prunus serotina</i>			1	1
<i>Tsuga</i>			1	1

Their ornamental value is enhanced by their remaining green throughout winter. The sycamore (*Acer pseudoplatanus*) is present so often because of its power to propagate itself so well. After that comes laburnum, which may be considered a characteristic tree for the Amsterdam canal house gardens. In spring it produces great showers of yellow flowers. Fruit trees including apple, pear, peach, plum and cherry, occur in 145 of the gardens. These are the earliest garden trees, originally planted on account of their fruit being edible. In spring the Amsterdam gardens come to life when they start flowering. Lawson cypress (*Chamaecyparis lawsoniana*), really a *Chamaecyparis* species, and *Thuja occidentalis*, also called the tree of life, and juniper (*Juniperus*) belong to the conifer class. In most gardens they are present because of their decorative shapes and because they remain green in winter.

Evergreen trees and shrubs have always been chosen and are integral elements creating an atmosphere in town gardens. Last of the top category is the magnolia (*Magnolia*) or whiteflower tree which occurs in exactly 100 gardens. This really includes more than one species as well. The magnolia in its varieties produces some of the very best flowers found on trees. They produce many flowers in white and pale pink shades.

Frequent species occurring in 50 to 100 gardens are Horse chestnut, usually the white variety, beech, birch, lime and hawthorn. Especially beeches and horse chestnuts can grow out widely in gardens, and occupy most of their room. Other species often found are Ornamental apple, robinia or false acacia (*Robinia pseudoacacia*), Italian poplar, Sumac tree (*Rhus*) and Maidenhair tree, also called Japanese nut. The Italian poplar is conspicuous on account of its slender, high shape. Many species occur in less than 20 gardens, such as mulberry, walnut (*Juglans*), *Gleditsia triacanthos*, redwood (*Sequoia sempervirens*), *Pterocarya*, Almond (*Amygdalus*), *Bignonia*, tulip tree (*Tulipa*), *Ailanthus*, European chestnut (*Castanea sativa*) and *Paulownia*, besides a lot of smaller ornamental trees. The occurrence of mulberries may point to the silk industry. It is known that in the 18th century some companies active in this field were established along the river vecht in Utrecht province.

The more general tree species occurring in the canal house gardens are usually species that occurred there by nature, possibly helped by spontaneous propagation of planted specimens. Richly flowering species and evergreens were preferred. Lime and elm, which have stood alongside the canals for centuries appear regularly, but are certainly not the most common. It is of interest that species that are now common in the western Netherlands, such as ash (*Fraxinus*), sessile oak (*Quercus petraea*), slippery elm (*Ulmus rubra*) and black elder (*Sambucus nigra*) do not appear frequently. Oaks are not thought of as garden trees, contrary to beeches which are well represented, because of their feel. Beeches are more ornamental and appear in brown and mourning varieties. Oaks exist in mourning varieties as well, but these never became popular. People feel that an oak should not mourn.

Garden trees have their own particular history. They have their own descent, and introducing them has a lot to do with fashion, sensitivity and the taste of the planter and garden owner. They are subject to the sometimes strict aesthetics of nature. If necessary they will be pruned in whatever shape is wanted, such as globes, or mourning varieties can be used. Lime, horse chestnut and fruit trees are fit to train and to prune. Sycamores and robinias are fine for clipping in a globe shape. The best mourning species are beeches, but birches and weeping willow (*Salix babylonica*).

THE FUTURE OF THE TREES ALONGSIDE THE CANALS AND IN THE GARDENS

Many planted trees do not live to a great age. Gardens are apt to change quickly, depending on new fashion and new owners.

The occupants will plant on account of their taste, or because of special circumstances. The oldest trees now found in Amsterdam canal house gardens usually date from the 19th or the first half of the 20th century. A few yews or pruned tree may date from the 18th century. These trees represent a relic of the old stock and are therefore worthy of preservation.

Well-grown beeches and Horse chestnuts take up a lot of room and cast a large and deep shadow which may be seen as a drawback. On the other side the visual experience value and ecologic value of these enormous trees is most considerable. A list of monumental trees included in the gardens according to the division into grid squares was enumerated by Amsterdam's municipal board. The reigning criteria were: high age or great girth, combination of age and visual impact, significance as a memorial tree and the dendrological value.

The main point in preserving trees is the care for their position. The underground root system, although it cannot usually be seen, is of crucial importance for the vitality of a tree. Damage done to roots in case of soil excavations must be avoided if at all possible. In case of building activities it is necessary to screen the roots and to prevent the groundwater table from being lowered. These measures must be explicitly included in the specifications.

Another threat to trees can be posed by illegally erecting buildings or laying out of parking sites. The mayor and town clerks of Amsterdam are entitled to enforce the removal or stoppage of illegal structures and uses in order to comply with the greenery regulations that obtain. These regulations are a vital element of the municipal zoning plan.