Plants and Gardens in the 16th Century

Introduction

The art historian who studies the history of gardens constantly comes across the basic research problem, which is the transiency of garden art. The most important materials in a garden are its plants. Their life span is so limited, however, and their form so changeable that it is difficult to treat preserved gardens as historically accurate. Particularly while studying very old gardens, created before the year 1700, the art historian must modify the framework of his research. I decided to base my research work on texts about gardens originating from these distant epochs. These texts were treatises and manuals on organizing gardens, descriptions given by travellers, literary views and philosophic allegories. All these documents unequivocally state how gardens were conceived at that time. The garden represented in the pages of the old treatises, unlike the actual garden itself, are not destroyed by the hand of time and give expressively the conception of its creators.

The limited framework of this article is a summary outline of certain aspects concerning plants in the Renaissance garden researched through the prism of theoretical works based on Szafranska (1988), which was accompanied by an anthology of texts by 35 Renaissance writers.

These ancient authors described the garden within the context of life and work in the whole of the rural dominion. The authors of the most comprehensive texts, i.e. treatises about « praedium rusticum », were educated in the humanities or medicine. The idea of the Renaissance garden arises from exactly these two types of relationships with the world. The Renaissance garden, on the one hand, belonged to the ancient tradition of « vita rustica ». On the other hand it was also a place to demonstrate new spheres of medical, botanical, agronomic and alchemic knowledge. The plant appeared simultaneously in the context of science, medicine, magic and symbolism. In the context of science, often because it was an exotic rarity from distant lands. In the context of medicine, according to medieval

tradition, botanists described plants emphasizing their application to medicine. During the era of the neo-Platonic conception of nature the medical properties of plants were readily linked with their magical properties, and the symbolisms of plants were also based on mythology and the Holy Bible. Thus a walk through the garden with an educated and attentive guest became a stroll along the avenues of knowledge, magic and poetry.

The plant names

The 16th century scholar of plants was faced with the huge task of arranging botanic knowledge that had accumulated over the centuries and had been based on extensive ancient natural-medical literature (Fig. 1). The basic problem became agreeing the nomenclature of plants. The Renaissance scholars quickly discovered that identical plants were given different names within the same language and the international exchange of botanical information was thus made impossible through misunderstandings in terminology. The only solution to this chaos was basing a system of plant notation on one universally known and accepted foundation. The only certain point of reference at the time was ancient natural history. The acceptance of a terminology, hence, depended on agreeing:

1. which names were given to which plants in Greece and in Rome;
2. what were the contemporary equivalents of these names.

Eminent experts of the time compiled such collections of names (e.g. C. Estienne) bearing in mind that this was a necessary stage before further research was undertaken. Their decisions were immediately taken up by herbalist writers (e.g. Andrea Cesalpino and the Polish herbalists: Szymon of Łowicz in 1532 and Marcin Siennik in 1568). Agreeing on actual names for meadows and forests in 16th century Europe, using ancient terminology was very difficult. Cesalpino complained that knowledge obtained by naturalists « is still dim, because the discoveries of the ancient scholars passed on in writing to be learnt by future generations were often distorted due to the divergency of languages or (...) the text itself was distorted as it was copied by different copyists (...). Moreover those plants that were termed by their name only (without any description) changed named as a result of the passing of time and as a consequence of this it is not known which plant the author was referring to » (Cesalpino, 1583, p. 13).

This statement clearly proves how botanical research has been influenced by the problems of language. But not all plants had been named in ancient times. The flora of central and northern Europe was virtually unknown to ancient Mediterranean naturalists and new geographical discoveries became an endless source of new information. Botany, it was written, « is a never-ending science, because the number of new plants discovered from day to

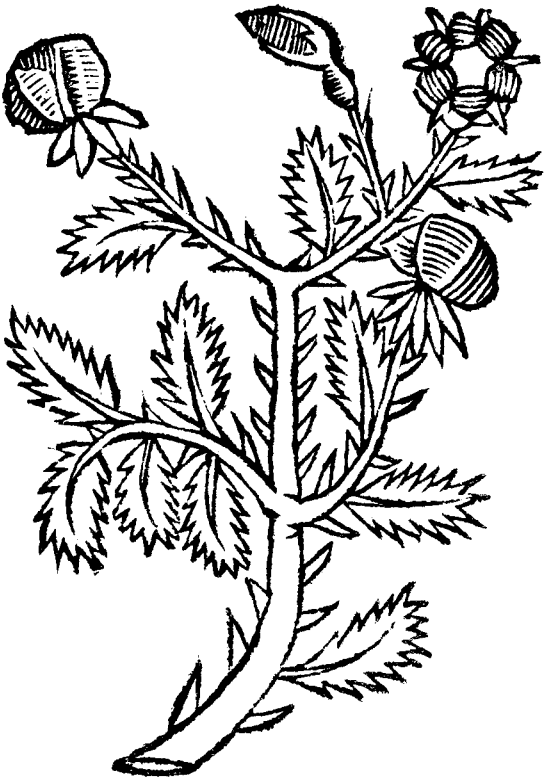

Fig. 1. Rose, from : P. de Crescentiis « Księgi o gospodarstwie » Kraków 1549.

day appears to increase into infinity » (Cesalpino, 1583, p. 12). The French naturalist, Olivier de Serres, wrote similarly to the Italian physician and philosopher : « man has not yet achieved full knowledge of plants, because new plants are discovered every day, not only from foreign lands, but likewise those which grow amongst us » (Serres, 1600, p. 498). The talented academicians of the 16th century added a new chapter to the ancient herbarium. This is how a Polish naturalist paid homage to the discoverers of new plants : « They were not satisfied with the knowledge of plants that grew in gardens and fields, but they went in search of new ones in the wilderness, in forests, in the mountains, on cliffs and even in places where wild goats seldom reached » (Marcin of Urzędów, 1595, Introduction).

The gardens

There were many elements, forms and concepts in the Renaissance garden. The most interesting form of organizing plants was the ornamental « parterre » (knot garden).

The « parterre » was a consequence of a development already taking place in the Middle Ages. During the renaissance, after having been adapted

to the new concept of space and shapes according to the new principle of visual perspective, it became the most important part of the garden. The « parterre » was divided into quarters along avenues bordered by plants (Bogdanowski, 1966, p. 78 ; Tatti, 1560, p. 73 v). Agostino Gallo encouraged the replacement of the old-fashioned stone borders with « beautiful borders of lavender, rosemary, box or other similar plants not exceeding one and a half feet in height and so painstakingly cut that not one branch, nor one leaf would fall out of alignment » (Gallo, 1558, p. 130). Likewise, taller stone enclosures were replaced by hedges. The reason for this was not merely the introduction of a greater number of plants to the garden, but also assuring shelter for birdlife. Birds living in garden hedges, wrote Gallo « continously chirp, naively and naturally, throughout the day and night, as if especially composing harmonic chords to their own, cheerful music » (Gallo, 1558, p. 130-131 ; Palissy, 1563, p. 59-60 ; Estienne, 1564, p. 45 r).

There were two types of « parterre » : one composed of flowerbeds and the other composed of ornamental quarters. The former was a traditional continuation, the latter, a Renaissance novelty which affected the repertoire of formal gardens for 500 years. This second type revealed the attributes of the plants ... rather than the qualities of individuals. Its appearance was created by arranging the plants ornamentally and planting them in the framework of a quarter. It was seemingly brought to the European gardens by the Arabs, although it had been known in England since the Middle Ages (knotes).

The humanists saw the « parterre » as an element of the ancient Roman garden (described by Plinius the Younger). Quarters of geometric and zoomorphic figures, very accurately described in « Hypnerotomachia Poliphili », even had Latin inscriptions (also made of plants), stylized on Roman lettering (Fig. 2). The preserved views of the Renaissance « parterre » tell us considerably more about the ornaments than about the owner's symbols – nevertheless the monograms, coats-of-arms and mottos provoked much interest as well. Thus, in Gaillon for example « the king's coats-of-arms along with ancient letterings were created with great craftsmanship using certain types of small plants » (Weiss, 1953, p. 11). B. Palissy likewise observed « various coats-of-arms, letters and mottos » in the « parterre » gardens (Palissy, 1563, p. 66). On the occasion of a reception for Polish ambassadors in the Tuileries Gardens the quarters were decorated with the French coats-of-arms. The monogram of Henry IV on the « parterre » at Sain Germain-en-Laye had a permanent character to it, not a temporary one (Fig. 3).

The patterned « parterre » took its motifs from collections of ornaments designated for interior design (panelling, ceilings, parquet floors). It was

Fig. 2. « Parterre » quarter, from Colonna (1499).

only in the second half of the 16th century that special designs were published for gardens. Jean Liebault had in mind the gardener as well as the amateur garden proprietor when preparing « parterre » designs for the new edition of his father-in-law's treatise (Estienne and Liebault, 1583, p. 241 etc.). This detailed lecture on ways of organizing ornamental « parterre », together with its concise illustrations, stands today (next to « Hypnerotomachia Poliphili ») as a priceless source of knowledge concerning the Renaissance « parterre ». (Figure 4) Liebault gave the honour of raising this technique to the highest level to « Mr Porcher, the prior of Crecy in Brie », who « was the most outstanding in this art form not only in France but in the whole of Europe » and who had passed on his knowledge to Liebault (Estienne and Liebault, 1583, p. 241).

When the new garden had become widely known after 1550 a very lively market for gardening books developed in Europe. Even botanists

Fig. 3. « Parterre » in Saint Germain-en-Laye, from Serres (1600).

happened to organize their plant collections in the form of ornamental « parterre », as did the famous biologist Jean Robin in Paris (Adams, 1979, p. 53).

The materials used in the patterned garden were specially selected plants which guaranteed creating precise and relatively perennial bands and expanses. Thus, lavender, hyssop, marjoram, rosemary, thyme, sage, wild thyme, camomile, violet, mint, basil, parsley, rue and raspberry were used (Mizauld, 1578, p. 127 ; Estienne and Liebault, 1583, p. 242). The plants were pruned using small scissors « similar to a tailor's scissors » (Estienne and Liebault, 1583, p. 265). Each section of the quarter should be filled with various types of plants « in order to differentiate the colours of the quarters » (Estienne and Liebault, 1583, p. 242). The author of « Hypnerotomachia Poliphili » left extraordinarily precise descriptions of how to arrange

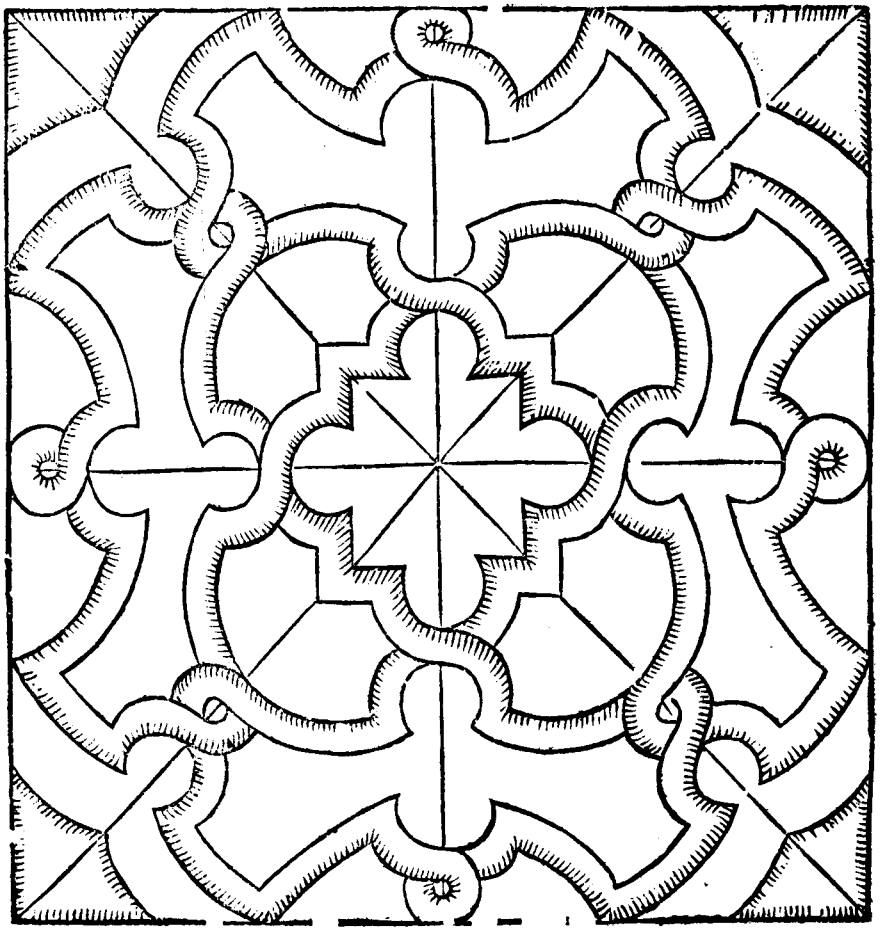

Fig. 4. « Parterre » quarter, from Estienne and Liebault (1583).

the plants within a « parterre ». Box, one might think the best plant to be used for creating ornaments, was often regarded as inadvisable in a garden, because it bore an « unpleasant smell » (Estienne and Liebault, 1583, p. 242). This unwillingness to use box began only to disappear towards the end of the 16th century. Olivier de Serres expressed his approval for this plant which would become permanently tied to the ornamental « parterre » in the 17th and 18th centuries. « Box » — wrote Serres — « retains its unchanging beauty despite bad weather, frost and snow » (...). It is perennial and easy to manage. That is why, despite its unpleasant smell, box is utilized for the most delicate elements of the « parterre » (Serres, 1600, p. 591). The plants on the borders should be taller and more frequently spaced than those inside the quarter « in order to expose the beauty of the « parterre » thus

allowing it to be more easily admired » (Estienne and Liebault, 1583, p. 242). The recommended regime was lavender or rosemary along the border, with hyssop filling the interior.

The more and more complex patterns of the Renaissance garden became unclearly delimited, because they were usually created by inconspicuous plants. That is why, probably towards the end of the 16th century, intensely coloured mineral substances began to be used in order to diversify the colour range of the quarters and to highlight the existing patterns. Possibly it was Olivier de Serres who first gave light to this practice : « earth in various colours is added to the quarter creating a background in between the plants. Such a quarter reminds us of a sophisticated painting which came from the hand of a great master. Coloured earth ought to be carefully selected (...) and bad earth avoided, so as not to damage the plants » (Serres, 1600, p. 592). At the beginning of the 17th century Gervase Markham put forward a selection of coloured materials which were typical of the Baroque garden : red colour obtained from brick-dust, yellow – from yellow clay or sand, white – from crushed chalk- dust or plaster, black -form coal-dust, blue -from chalk mixed with coal-dust (Markham, 1613, p. 156). Francis Bacon, who wrote on the subject of coloured earth also, had a negative attitude to the whole idea of the ornamental « parterre » comparing it with ... a birthday cake (Bacon, 1625).

Topiary and bushes

The « parterre » was intended to be mostly a decorative area. However, discreet, upright elements, emphasizing the composition of the « parterre », were introduced as well. These vertical accents – moderate and elegant unlike in the next period – were created in the Renaissance garden by small trees, potted plants, sculptures and fountains and above all by topiary trees and bushes (Visentini, 1985, p. 260 etc). « It is correct that in the middle as well as in the four corners of the quarter one can plant cypresses or rosemary or other (...) shrubs, neither too rich nor too tall, but with an upright stem » (Estienne and Liebault, 1583, p. 242). Estienne maintained that the pleasure of admiring the garden would not have been complete without the possibility of admiring the trees and shrubs « both foreign and local (...), most of which give delightful fruits, like pomegranates, capers, lemon and orange trees, palms, olive trees, bladder senna trees and others » (Estienne, 1564, p. 55 v ; Alamanni, 1546, v. 236-239).

During the period of the Renaissance « ars topiaria », – the art of trimming plants into unnatural shapes, – was superbly developed. Its ancient origins were widely known (Grapaldi, 1494, p. XXIX r). In the second half of the 15th century its first results were observed in residences of humanists eg. in the Medici palace garden in Florence and in villa Quaracchi. A

description of the latter garden can be found in « Zibaldone » by Giovanni Ruccellai, who wrote amongst other things : « through another gate there is an entrance on to a pretty, little meadow, surrounded by a low wall with a number of box-trees shaped in many ways into figures of giants, centaurs, stairs, vases » ; and « the following things can be seen from the lane : a great number of box-trees of various shapes – circles, cubes, ships, galleys, temples, columns and pillars, vases ... giants, men, maids, lions, monkeys, dragons, centaurs, camels, riders, donkeys, oxen, dogs, deer, a bar, a boar, dolphins, jousting knights, harpies, philosophers, a Pope, cardinals and so forth » (Dami, 1924, p. 33). Similar forms were mentioned by Francesco di Giorgio Martini : temples, mazes, porticos, animals (Giorgio Martini, 1466-1477:245). In « Hypnerotomachia Poliphili » descriptions (illustrated with wood engravings) of figural compositions made of box-trees can be found : a sea battle, « trionfo », a hunt. Gallo writes about « a beautiful garden decorated with a variety of vases arranged in order on the « parterres » and containing aromatic plants resembling sometimes fountains, sometimes towers or pyramids, spheres, people, birds and other animals » (Gallo, 1558, p. 135). Obelisks, dragons and stars were also found here (Riccio, 1587-1598, p. 10), as well as buildings, ships, columns (Serres, 1600, p. 555, 590). Such descriptions were supported by accounts from travellers. Gonzaga's secretary witnessed in Gaillon « box and rosemary bushes shaped in the form of ships, fountains and in many other beautiful ways » (Weiss, 1953, p. 10). It was obvious that these garden ornaments would not retain their form permanently and people complained that constant reshaping had to be carried out. In many French gardens, worte B. Palissy, « gardeners bent rosemary and many other types of plant shaping them into a crane, or a cock, or a goose (...) ; in some gardens I even saw soldiers on horseback or on foot (...) but all these things have a short life span and have to be frequently corrected » (Palissy, 1563, p. 66) (Fig. 5).

Box was the main material of « ars topiaria » (Heresbach, 1568, p. 422). Aromatic herbs, such as rosemary, laurel and cupress were also frequently used (Grapaldi, 1494, p. XVIII r). It was most probably figures of people and animals that made the greatest impact on the viewing public. They may have brought to mind mythological tales of people turning into plants, magical spells, black magic and other dangerous situations. Today we still cannot answer the question as to what meaning « ars topiaria » had to the creators of the Renaissance gardens. We should suppose that the meaning was other than mere decoration. It also embraced intellectual satisfaction arising from the observation of the conflict between the material used and its resulting form.

Exotic plants

Shrubs and even trees planted in wooden pots were likewise used to decorate the « parterre ». These were delicate plants, greatly affected by

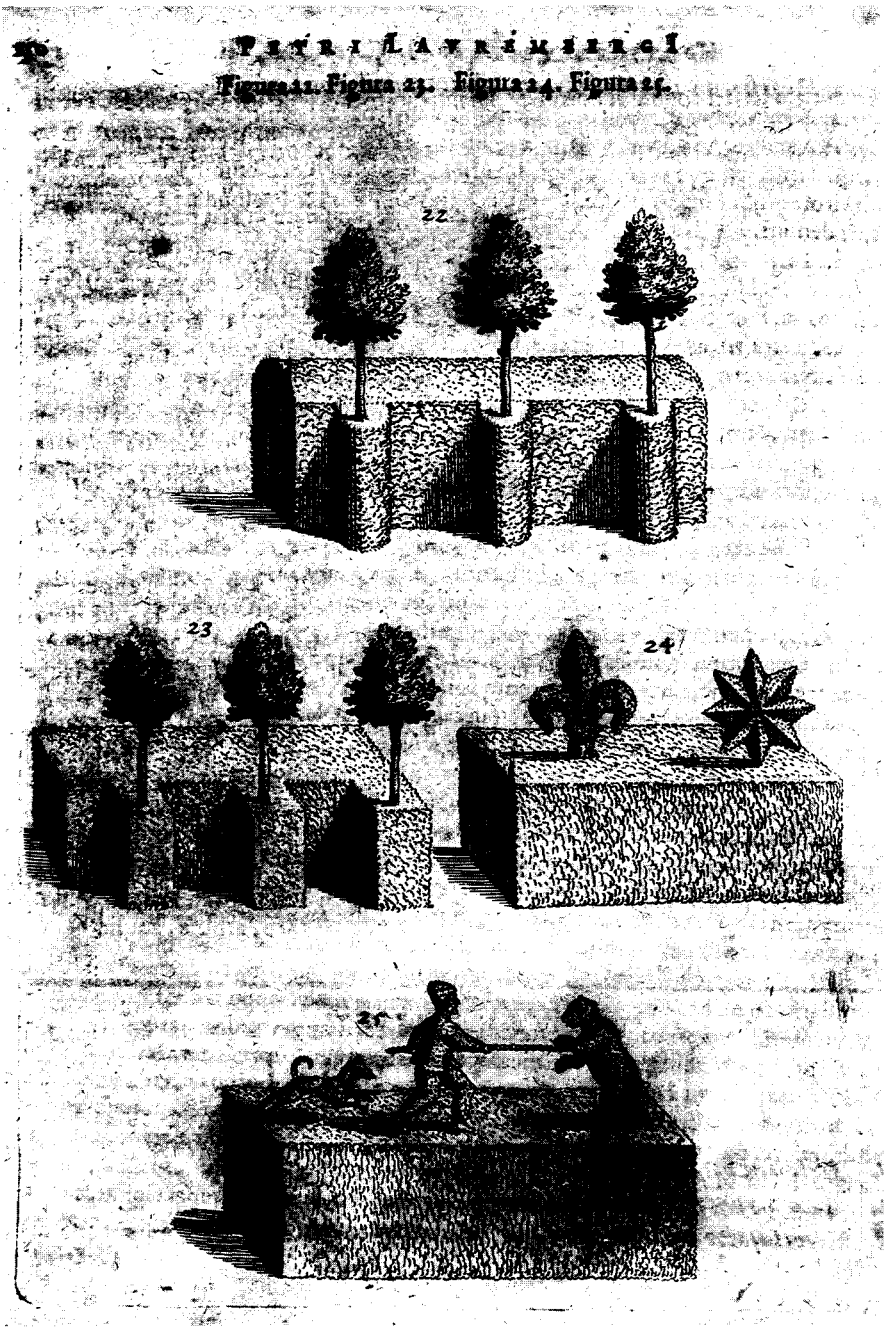

Fig. 5. Ars topiaria, from Laurembergius (1631).

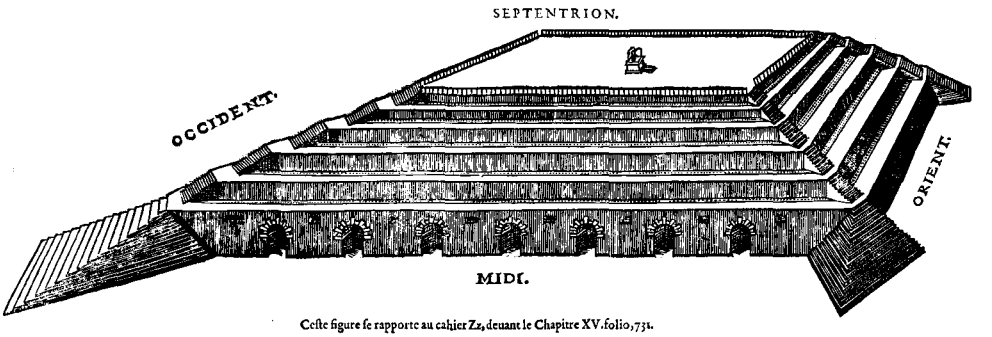

Fig. 6. Medical herb garden with « orangery », from Serres (1600).

the climate, and had to be removed from the garden in bad weather. The storage of exotic plants in the 16th century is a subject which still awaits detailed study. The method of sheltering frost-tender plants was twofold. Most frequently they were taken indoors for the winter and left in a seldom used part of the house. Polish housekeepers were told « to uncover fig trees, orange trees and other foreign plants on St Gregory's day and to remove them from the cellar » (Zawacki, 1616, p. 25). Oliver de Serres designed a multistorey, terraced garden of medical herbs. The interior of the brick construction (Fig. 6) was to be « empty in order to keep orange and other precious trees there throughout the winter » (Serres, 1600, p. 728). Bernard Palissy planned to excavate a series of hollows in a rocky slope at the bottom of the garden « to gather all the plants which would otherwise be damaged or freeze during the winter » (Palissy, 1563, p. 73). The other method used for the protection of delicate plants was to build independent, self-standing, most commonly wooden pavilions. Their development eventually led to the 17th century orangeries, figgeries and pineries. The Polish nobleman wanted to have in his garden « a small house to shelter his plants and trees and to store his liqueurs » (Ponętowski, 1588, p. 125). Michel de Montaigne saw a similar pavilion, also containing vegetables, in the summer residence of the Fugger family near Augsburg (Montaigne, 1580-1581, p. 471). The Polish poet and University of Padua student long remembered the laurels in Bembo's garden, over which on the threshold of winter a bamboo-cane roof was erected (Janicki, 1540, 1-10). At the beginning of the 17th century the Heidelberg gardeners stored citrus trees with great success. Salomon de Caus accounted that when building the garden thirty magnificent sixty-year old orange trees were transported from the lower garden to the upper terrace « with great effort, preserving the soil around the roots owing to specially constructed crates. (...). The orangery is made from wooden planks. (Fig. 7). It is mounted every year approximately

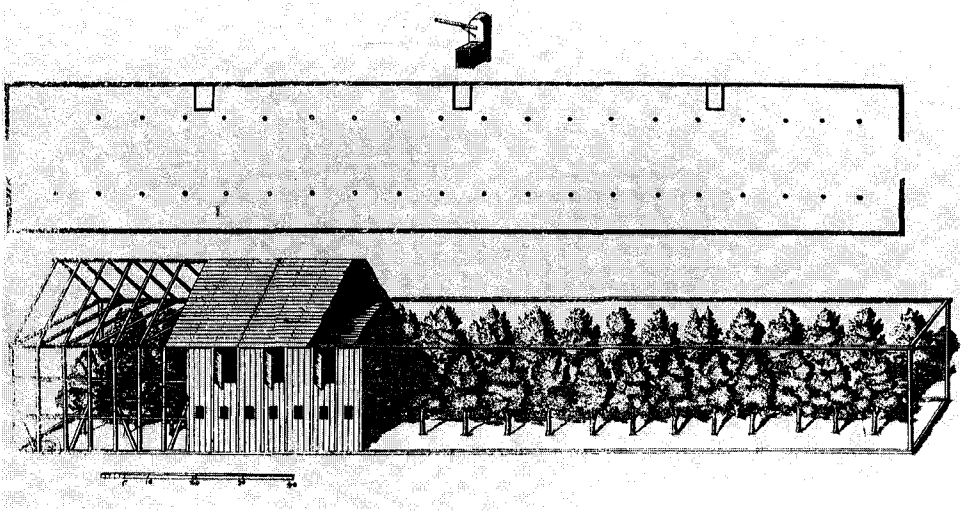

Fig. 7. Orangery in Heidelberg garden, from Caus (1620).

at the time of St Michael's day; orange trees are kept there throughout the winter, covered and heated by four stoves, so that during even the heaviest frosts one can wander through the orangery without feeling the cold. The planks (i.e. the walls) are removed at Easter time in order to leave the trees uncovered for the whole summer » (Caus, 1620). Salomon de Caus thought it too complicated to arrange the orangery in this fashion, thus he advised Prince Frederick V to build a stone pavilion in which large windows could be opened and the roof removed during the summer. This has become the classic orangery.

The functional garden

At the end, it is also worth noting, that in the Renaissance period the functional garden was as equally treasured as the ornamental garden. In medium-sized households ornamental plants were often replaced by fruit trees, vegetables and herbs (Gostomski, 1588, p. 91). Landowners were greatly interested in the intense development of gardening methods, the study of overseas plants (potato, tomato) and trials of their acclimatization and tolerance of new soils. They laid out their gardens for vegetable and fruit growing experiments. Francis Bacon expressively included gardening in Renaissance science, because of its exploratory and transformative aspects. In the 16th century no one was ashamed of showing a vegetable garden, orchard, hop field or mulberry plantation. On the contrary, these places were pride of the owner, because they housed « scientia, inventio and industria ». Thomas Bohier, the proprietor of Chenonceaux, was often sent

melons and pumkins for his garden in exchange for his favours. Jean le Breton, who learned Italian traditions whilst being the ambassador to Francis I, created an even larger vegetable garden by the Villandry castle. As much as forty years later the garden still overwhelmed its visitors, who especially admired the « exquisite lettuces » (Lokwood, 1983, p. 64).

Conclusion

16th century texts show the garden as a place where the plant holds the dominant position. In the Baroque period which followed, art and abstract geometry would have the dominant role in the garden. Yet, in the 16th century it was still different. The plant was important in the Renaissance garden as proof of man's knowledge and his diverse capabilities. The plant took part in the Renaissance admiration of the world. It was the plant which showed the strength of the human mind discovering and transforming the world. The plant, created in the Garden of Eden, also possessed hidden holy symbols. The plant helped physicians and the learned to reach the neo-Platonic world of eternal health and youth.

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