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HISTORY AND RESTORATION OF THE ST PETERSBURG SUMMER GARDEN: RETURNING TO THE ROOTS

In 2014 the oldest garden in St Petersburg, Russia, the Summer Garden, celebrated three hundred and ten years since its foundation. The history of the Summer Garden began in 1704 by order of Tsar Peter the Great, who commissioned numerous talented foreign and Russian architects and gardeners to design a garden complex around his new palace. The garden reached its peak in the mid-eighteenth century, but in 1777 was largely destroyed by a flood, following which it was transformed into one of the most cherished of St Petersburg's public spaces. A recent restoration of the Summer Garden (completed in 2012) was controversial, but it demonstrated the ability and skill of the Russian School of Historic Gardens Restoration. This paper discusses the history of the Summer Garden with particular emphasis paid to the dynamics of the garden's vegetation over three centuries, together with the principles and results of its latest restoration.

The Summer Garden is not only the oldest monument of garden art within the 'Venice of the North' but also reflects the essence of the new Russian capital, St Petersburg, and its creator, Tsar Peter the Great (1672–1725). The tsar aspired to emulate all aspects of European civilization, and the decision to create a new capital was an attempt to open 'the window to Europe' and to include Russia as one of its most powerful and rich empires. He started unique large-scale experiments to modify the natural landscape and to apply new principles of European urban planning design, architecture and garden art on Russian soil. Very low and boggy, and subject to many floods, the natural landscapes of the River Neva delta (forty-two islands and sixty-nine rivers, tributaries and other waterways) were transformed into a magnificent European capital, variously called 'New Amsterdam', 'Venice of the North' and 'New Rome'.¹

Many European gardeners and architects designed the imperial parks and gardens of St Petersburg, and Russians were taught by German, Dutch, French and English experts in specially organized gardeners' schools. Right from the beginning, a range of Western styles of garden art was grafted onto Russian 'soil' on a huge scale.

HISTORY OF THE CONSTRUCTION OF THE SUMMER GARDEN

St Petersburg is located on the delta of the Neva, which was originally covered by numerous wetlands, coniferous forests (spruce and pine) and willow shrubberies along the river and its tributaries. There were only a few fishermen's villages and Swedish farmsteads on its banks. The site of the Summer Garden was open and swampy and already stripped

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of vegetation.² At the beginning of the eighteenth century the Summer Garden was a complex consisting of four different gardens. Two were within the boundaries of the garden existing today and a third occupied the site of the present Mikhailovsky Garden. The fourth part of the garden complex was the 'Big Meadow' (Mars Field today), also called *Gulbische*, meaning a place for folk festivals and celebrations. Planning began in 1704 under the tsar's close supervision, and construction of the Summer Palace started in 1710 under Swiss-Italian architect Domenico Trezzini (1670–1734). The overall plan and boundaries of the garden were defined around 1714–16 and remain essentially intact today (Figure 1).

The Summer Garden has a typical early eighteenth-century formal structure with a geometric system of alleys, parterres and *bosquets*, but an unusual feature is the asymmetrical location of the palace (Figure 2). Probably the tsar himself suggested the initial plan as he was especially interested in garden art and ordered books from abroad to study gardens and fountains. He also consulted a number of talented foreign and Russian architects and gardeners, including Ivan Matveev (16??–1714), the first designer of the Summer Garden who worked to the direct orders of Tsar Peter; Trezzini (see above), who was invited by the tsar in 1703 and eventually became the principal architect of St Petersburg; Andreas Schluter (1660–1714), a German architect appointed by the tsar in 1713 to finish the Summer Palace; Jan Roosen, a Dutch gardener who worked in the garden from 1712 to 1726; Michail Zemtsov (1688–1743), the first 'truly' Russian architect, who worked in St Petersburg from 1709; and Jean Baptiste Alexander Le Blond (1679–1719), a French architect and author of the first master plan (1717) of St Petersburg. The Summer Garden is unique not only for St Petersburg but also throughout Russia, as it was the first garden to adopt the new European principles of garden art.

The Summer Garden is located on an island surrounded by the waters of three natural rivers (Neva, Fontanka and Moika) and the artificially made Lebyazhy (Swan) channel. This abundance of water and the compartmented character of the garden with its intimate green rooms created spaces on a human scale, while a collection of European marble sculptures glorified the tsar as a successful politician and patron of the arts, who



Figure 1. The Summer Garden, 2014. The Summer Palace can be seen to the east by the Neva River; to the south is Fontanka (Fountain) River. Courtesy: <https://maps.yandex.ru>

was leading his state to prosperity and peace (Figure 3).³ The garden was used for official receptions and celebrations, particularly in the tsar's reign.

The development of the Summer Garden can be divided into several periods, three of which were during the tsar's reign (1704–10, 1711–16 and 1716–27). In the first

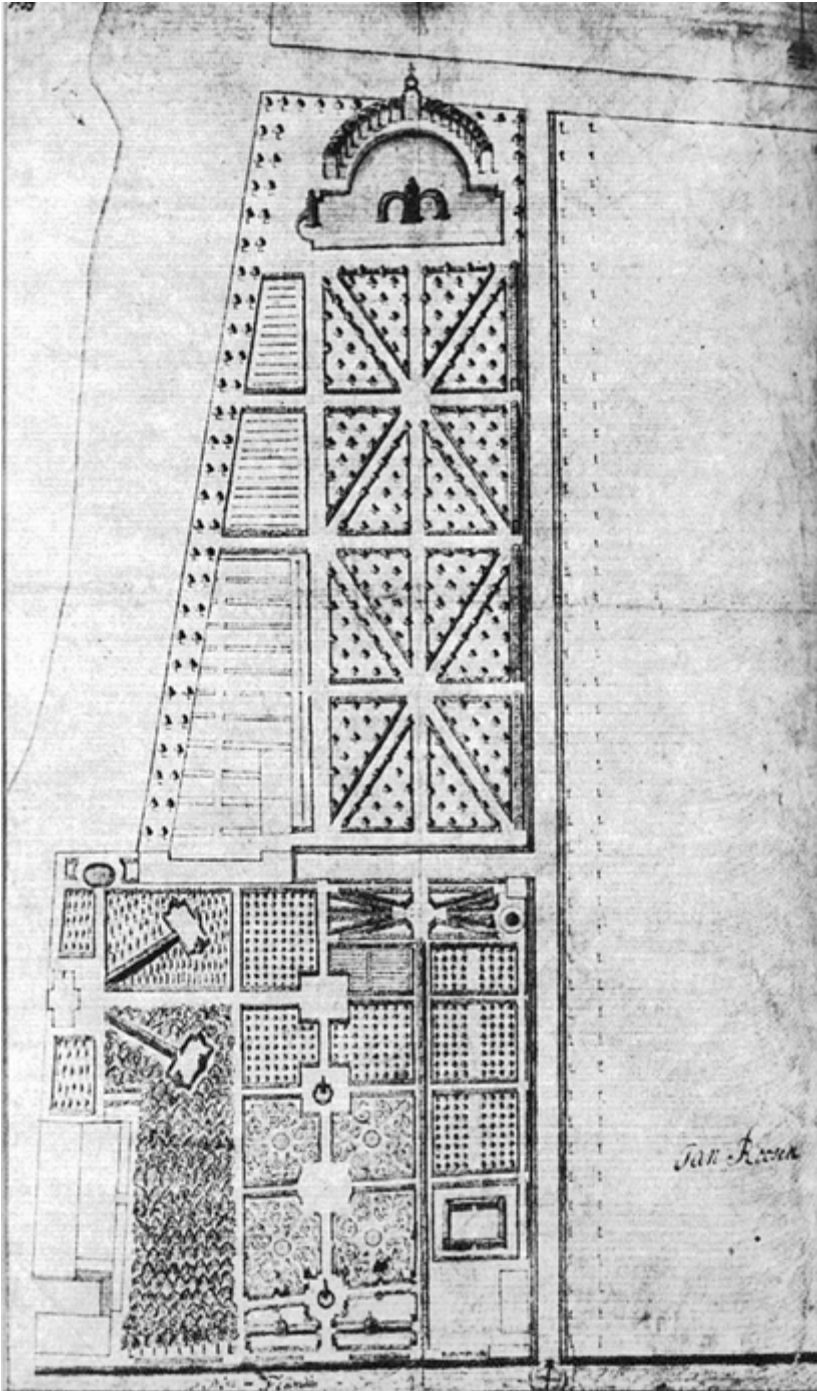


Figure 2. Fragment of the Summer Garden plan, by Jan Roosen (1714–16).
Courtesy: Library of the Russian Academy of Sciences (BRAN), No. 225



Figure 3. *Allegory of Architecture* (1722), school of P. Baratta. Photo: M. Cherdantsev, 2014

and second periods the influence of Dutch culture, and especially the baroque garden, is clearly observable, for example in the relatively small size of the palace and its position, the intimate scale of green rooms, the presence of water ploys, and flower parterres.⁴ Roosen made a significant contribution to the development of the Summer Garden in this period (Figure 2). The part adjacent to the Neva was a pleasure garden where all the decorative elements were concentrated. A canal perpendicular to the river marked off a more utilitarian area with vegetable beds and the Carp Pond, an ‘echo’ of the gardens in the days of Old Moscow in Ismailovo.⁵

During these first two periods the garden was also decorated with marble sculpture from Venice and Rome, and its first marble fountains. In the third period Russian architect Zemtsov incorporated the ideas of architects Le Blond, Nicola Michetti (1675–1759) and Georg Johann Mattarnovi (?–1719), finishing the grotto with a water organ, and designing the Fable-Grove-Labyrinth with fountains and sculpture inspired by Aesop’s Fables. He also completed four central *bosquets* at Cross Point Promenade, Menagerie Pond, Poultry Yard and French Parterre.

The period 1727–62 was characterized by the contribution of Italian baroque architect Bartolomeo Francesco Rastrelli (1700–71), who designed the cascade ‘amphitheatre’ with numerous fountains. At that time the Summer Garden had its maximum number of fountains (around fifty) together with sculpture, an elegant embroidery parterre next to the amphitheatre, the Red Garden (for growing spices, vegetables and decorative exotic plants) and greenhouses, as well as *bosquets* surrounded by trimmed hedges, *berceaux* and numerous trellises.

The next period in the Summer Garden’s history (1762–1800) was overshadowed by the catastrophic flood of 1777, which completely destroyed the fountain system and grotto, and many of the marble sculptures and trees were damaged or disappeared. By that time garden fashion had changed as well – trees were no longer trimmed, giving



Figure 4. Pavilion in the Summer Garden, Tumling (1830–40s).
Courtesy: State Russian Museum

them a more natural appearance as was seen in European romantic gardens, and the fountains, grotto and other classical formal garden ‘tricks’ were not restored.

At the beginning of the nineteenth century, the Summer Garden was transformed into the city’s garden for the privileged public with coffee and tea houses (one replacing the damaged grotto) (Figure 4) and a monument to the Russian author of fables Ivan Andreevich Krylov (1769–1844). However, after the Russian Revolution of 1917 it was opened to all citizens. During the Great Patriotic War (1941–45) the garden suffered serious damage from bombing and artillery shelling, but during the nine hundred days of the Siege of Leningrad not one tree was cut for firewood!

THE SUMMER GARDEN PLANTING

From the beginning of St Petersburg’s foundation, broad-leaved trees such as lime (*Tilia cordata* and *Tilia platyphyllos*), maple (*Acer platanoides*), oak (*Quercus robur*), ash (*Fraxinus excelsior*) and elm (*Ulmus laevis* and *U. glabra*) were the preferred species for all parks and gardens. The city is within the natural distribution of most of these species, although some are very close to their northern limit. Before its construction these species were never abundant in the area and could only be found in specific habitats such as floodplains, south-facing slopes, gullies and fertile calcareous soils, where they occurred in small numbers. The preference for these tree species is often explained by the fashion for the European formal garden of the eighteenth century where these plants were widely used. However, it probably also reflected Tsar Peter’s ‘nostalgia’ for his childhood which he spent in Moscow surrounded by broadleaved forests.

Tilia was always the dominant species in all formal parks where it was used in hedges, alleys, *berceaux* and *bosquets* because of its decorative qualities, hardiness and excellent response to clipping. Species of *Acer*, *Fraxinus*, *Quercus* (Peter’s favourite deciduous tree) and *Ulmus* were common in formal groves. *Picea* was also used in smaller amounts and

gave a northern flavour to formal gardens, and the *bosquet* at Cross Point Promenade was almost entirely based on this species.

Two of the first introduced species to arrive en masse in St Petersburg were the common box (*Buxus sempervirens*) and yew (*Taxus baccata*) for use in formal parterres.⁶ This material was mainly purchased from Holland, Germany and Sweden, which had large plant nurseries. However, many plants (some of them quite mature) were supplied from different Russian regions (Moscow, Novgorod, Poltava and others). Because of the unfavourable St Petersburg climate, yew and common box often froze, which required the regular reordering of new material. However, from the beginning Russian gardeners tried to find suitable substitutes for this exotic topiary material. Local juniper (*Juniperus communis*) was used as a replacement for yew, and another local species, cowberry (*Vaccinium vitis-idaea*), resembled common box and started to be used in the parterres of the tsar's gardens, for example, at Peterhof and Tsarskoye Selo.⁷

Because of its low-lying location (only three metres above sea level) the soil in the Summer Garden was boggy, especially in its southern part, so early on extensive drainage works were completed with the creation of the Swan and Transverse Channels, the Carp Pond and a small harbour next to the palace. Excavated soil and specially transported fertile meadow turf were used to raise the ground level, and this was added to several times during the Summer Garden's lifetime as the area was repeatedly exposed to heavy flooding and soil erosion. The backfill in various parts of the garden varies from a half to two metres and includes natural podzolic and bog-podzolic soils.⁸

The Russian garden tradition of being not only decorative but also practical had been retained here as well, as some *bosquets* contained fruit trees, such as apple and cherry, Russian favourites. The Summer Garden also had exotic tree nurseries where new arrivals would be acclimatized. For example, Siberian pine trees (*Pinus sibirica*) were specially sent from Solekamsk to the tsar's residence; apricot, peach and walnut trees came from Hamburg (in 1745); and hornbeam (*Carpinus betulus*) arrived from Kiev. Exotic herbs, blossoming bulbs, perennials and annuals were constantly planted in the garden, together with Tsar Peter's favourite fragrant herbs.⁹ When he died this tradition was continued by the St Petersburg gardener Henrich Ekleben who experimented in the garden with new Siberian species such as *Caragana arborescens* (for hedges), *Crataegus* and *Lonicera*.¹⁰

After the 1777 flood the pruning of large trees was stopped and only the hedges which surrounded the *bosquets* and emphasized the garden's original geometry continued to be cut. These green hedges were also especially important as a background for the marble sculptures. However, bit by bit the overgrown broad-leaved deciduous trees cast shade, which caused the hedges to disappear and gave the garden a romantic atmosphere, reminiscent of a landscape garden, from the second half of the nineteenth century (Figure 5). This romantic Summer Garden was described in poetry, novels and memoirs of famous writers, musicians and artists of the nineteenth and twentieth centuries, including the most famous Russian poet Alexander Pushkin (1799–1837):

Serving with perfect attestation,
His father lived deeply in debt,
Put every year three balls in action,
And brought his assets to the end.
The fate was humane to Evgeny,
At first, Madam was his kind 'nanny',
Then one Monsieur took him to breed.
The child was spry, but very sweet.
Monsieur l'Abbe, the Frenchman poor –



Figure 5. The Summer Garden before restoration. Photo: Maria Ignatieva, 2005

Not to exhaust the little child –
 Made his tuition droll and mild,
 Didn't bore him with a moral cruel,
 He softly groaned at child's jests –
 The Summer Garden was their place.¹¹

In a letter to his wife, Natalia Pushkina on 11 June 1834, Pushkin also wrote: 'Summer garden my countryside vegetable garden. I wake up in the morning and go there in a bathrobe and slippers. After lunch, I sleep, read and write there. I feel at home there.'¹²

More recently, in 1959, the Russia poetess Anna Akhmatova (1889–1966) wrote her famous 'The Summer Garden':

I crave for the roses and garden my best,
 That's clad in the best in the word airy fence.
 Where statues remember me youthful and blessed,
 And I – them all covered by Neva's cold waves.
 In silence, so fragrant, amidst limes of kings,
 I hear: the ship's masts are squeaking in swings.
 And sails the white swain through the ages again,
 Enjoying the charm of his brother-of-twain.
 And deadly sleep hundreds of thousands steps
 Of friends and of foes, of foes and friends.
 And the train of shadows has no the end
 From vase's granite to the palace of grand.
 There whisper each other my white nightly skies
 Of somebody's love, very secret and high.
 And all shines with jasper and pearl in the night ...
 But nobody knows a source of the light.¹³

EARLY SUMMER GARDEN RESTORATIONS

Over the course of three centuries the Summer Garden has experienced several reconstructions. After the catastrophic floods of 1777 and 1824 dead trees were removed and plantings renewed, pathways renovated and damaged sculpture restored. However, at the beginning of the twentieth century the condition of the garden declined and the formal Peter the Great residence no longer appeared as a 'worthy capital garden'.¹⁴ The Russian Revolution of 1917 cultivated an understanding of historic parks and gardens as a cultural heritage of the working class and consequently the Summer Garden had not been completely transformed into a public garden with sport fields and recreational facilities. The garden was then placed under the jurisdiction of the Petrograd Office of Cultural Education and the question of its scientific restoration and preservation again became acute after the flood of 1924.¹⁵

At the end of the 1930s the architect Tatyana Dubyago, the 'mother of Russian landscape architecture' and founder of Russian landscape architecture education, was invited to lead the reconstruction process in the Summer Garden.¹⁶ For the first time in Russia an historic garden was considered an artwork that required careful attention. Dubyago suggested a garden restoration concept that aimed to identify the garden designer's intent and at the same time to examine the later historical layering.¹⁷ In the late 1940s, after the war, she suggested a new plan that highlighted the geometrical character of the design by planting trimmed hedges to create a green background for the marble sculpture. It was not the intent, however, to destroy the existing informal character of the garden with its overgrown trees. She also suggested reconstruction of the fountain system and repair of the four central *bosquets* significantly damaged during the war. However, due to economic difficulties this plan was not implemented.

The next restoration project in the Summer Garden was suggested in 1971 by Natalia Tumanova (Dubyago's former student) and architect A. Gessen. They planned a partial reconstruction of 'garden ventures' in the *bosquets*, and restoration of the fountains and the small harbour next to the Summer Palace, but this was not implemented. The 1970s opened an important chapter in St Petersburg's restoration of historic parks and gardens when Ivan Sautov, Head of the Leningrad State Inspection for the Monuments Protection, initiated the creation of a special sector of archaeological excavations (including parks and gardens) at the 'Restorator' (Restorer) Institute. Archaeologist Victor Korentsvit conducted significant excavations in the Summer Garden in the 1970s and 1980s, and his discoveries were used as a foundation for the latest restoration. He found fragments and foundations of fountains and evidence of disappeared buildings such as greenhouses.¹⁸

Since the late twentieth century the Summer Garden has experienced a high recreational load and air pollution from heavy traffic on the surrounding roads, and pollutants have also badly affected the eighteenth-century marble sculpture and old trees.

THE RUSSIAN RESTORATION SCHOOL

During the last seventy years St Petersburg (Leningrad) has created its own strong scientific restoration and reconstruction school that has become a leading institution of this type in the (former) Soviet Union. This Leningrad experience has been used as the foundation for many government documents and laws involved in the protection and restoration of this type of historic heritage within the entire Soviet Union and later within the Russian Federation. Its development was stimulated by the widespread destruction of the war, after which it was necessary to resurrect many of the park's complexes entirely from ruins. Such large-scale restoration and reconstruction of heritage landscapes in St Petersburg was subsidized by the government during Soviet times, and palaces and parks

in suburbs such as Peterhof, Pavlovsk, Tsarskoy Selo and Gatchina and were restored practically from scratch.¹⁹ Special scientific research facilities, practical institutes (e.g. Restorator), numerous planning firms and colleges have all provided training in heritage landscape skills.

After the collapse of the Soviet Union in 1991 many of the government organizations were restructured because of new requirements in the market economy.²⁰ Maximum preservation of authenticity is one of the essential principles of the St Petersburg approach to the protection and restoration of historic parks and gardens and is based on detailed archaeological investigation.²¹ Two main principles are used: reconstruction (*vosstanovlenie*) and full restoration (*vossozhdanie*). Reconstruction is used when the site has retained some original features, for example of layout, planting or built structures (planning structure, vegetation, architecture etc.) and the intention is to restore individual details. Full restoration is understood as the recreation of a composition that had previously been lost (e.g. as a result of destruction during the war) without changes in its planning and spatial character.²²

Following current practice, preliminary investigation includes fieldworks (geodesic survey, engineering geology, soils, water system, topography, road system, condition of vegetation and architecture), archaeological excavations, and archival research. Outputs from these include: the planning and design aims and objectives of restoration, a detailed historical overview, a historical map of the period on which the park should be reconstructed, a dendrological plan of the current situation with existing vegetation, a plan showing planning structure, buildings and green areas, a perspective plan of the surrounding areas and park's borders, a plan of the roads and the hydrological system as well as photographs of existing conditions. Only then is the design stage implemented with, most importantly, the designer being involved in the construction and maintenance phases as well as the design concept.

THE 2009–12 RESTORATION CONCEPT

Following the new tradition of a market economy, in 2002 the State Construction Committee of the Russian Federation announced a competition for the Summer Garden restoration project, which was won by the Leningrad Proekt Restavratsiya (Restoration) State Unified Enterprise. Work on the project, which took six years to complete, was conducted jointly with Rest-Art-Proekt, led by architect N. P. Ivanov, a former pupil of Natalia Ilyinskaya, with input from a special committee consisting of specialists from the Russian Museum, State Inspection for Monument Protection and the project's designers.²³ The vision for the Summer Garden was to be part of a larger green infrastructure – the green heart of St Petersburg, together with Mikhailovsky Garden, the Mars Field and the Garden on the Square of Arts, part of the UNESCO Heritage Site.

This concept relied on the previous restoration concept of Dubyago and Tumanova as well as the detailed historic research and development of the landscape composition of the garden. It was based on the results of new archaeological excavations, new archival findings on sculpture, the various garden buildings and experimental plantings, geobotanical and floristic investigations. Analysis of these findings led to the conclusion that the most important period of the garden was the last quarter of the eighteenth century. A little-known plan, 'The General Plan of the Summer Palace of Elizabeth Petrovna and Adjusted Territories' of the 1780s, was essential to the acceptance of the garden restoration concept of the Summer Garden.

Prior to the beginning of the restoration work, detailed entomological and phytopathological investigations were carried out by specialists from the St Petersburg

State Forest Technical University.²⁴ About eighty per cent of all trees were found to be weakened or ill, many post-war plantings were random, and the shade created by the canopy of some species of old trees had led to the formation of loose, twisted and elongated stems. In recent years many elm trees had died from Dutch elm disease, so the recommendations of plant pathologists was to remove most of them.²⁵ For the first time in the history of garden restoration in Russia the Summer Garden concept and project evolved through a series of public debates to resolve fundamental disagreements on proposals for the dramatic change of the familiar and already established Summer Garden image (Figure 5).²⁶

Key characteristics of the restoration project were twofold (Figure 6). Firstly, to preserve the existing general planning structure – this is almost identical to the original of 1704. Because historical contours were damaged or lost, this could only be repaired through a correction of alley geometry and open space. At the same time, the garden plan conveys the combination of several garden ‘styles’. Secondly, to re-establish the lost historical ‘*genius loci*’ of the space, emphasizing the Dutch influence and that of Peter the Great and French formal baroque, there was a decision to restore the four main *bosquets* with their historic contents (‘architectural ploys’). As these *bosquets* contained mature trees, some were to be removed, although a key aim was the protection of existing trees where possible and three hundred trees were retained by treatments such as pruning, root fertilizing and hollowing treatment. As a part of restoration, special investigation of old trees was performed by an impulse tomograph ‘Arbotom’ which helps to estimate the condition of the inner trunk.

The four main *bosquets* were meant to restore the brilliancy of the formal tsar’s residence and included the Menagerie Pond (*Menazheriniy Prud*) – an oval body of water and the central island with the pavilion (Figure 7). Eight aviaries are located around the pond. Fence posts and roofs of the aviaries are decorated by majolica vases with plants. These vases were replicated according to historical documents and fragments discovered in the Summer Garden. The *bosquet* at Cross Point Promenade (*Krestovoe Gulbische*) consists of two alleys crossed in the form of a St Andrew’s Flag centred on the Nereid fountain. Original plant material of spruces was planted here as well (Figures 8a and 8b). The *bosquet* Yard of the Birds (*Ptichi Dvor*) included an open space with a fountain and two buildings: the Pavilion ‘Pigeon house’ and ‘Sable Cells’. These were intended for summer display of animals as in the eighteenth century, but it was decided to use *blende*, specially painted wooden animals very popular in Russian gardens of the eighteenth century, instead of live animals. The fourth *bosquet* had been decorated with a French embroidery parterre during the time of Peter the Great, but had been destroyed and in the mid-nineteenth century a sculpture of the author Krylov was placed there instead. The monument was left in its original place and typical eighteenth-century garden benches were added.

Restoring the spirit of Peter the Great’s time was also accomplished by the restoration of a ‘grand parterre’ based on the perspective plan of Pierre-Antoine de Saint-Hilaire (1765–73) and archaeological data. The main materials used for reconstruction were lawns and crushed red brick. Saint-Hilaire drawings were also used in the restoration of many garden details and buildings within the Summer Garden. Along the School Alley the historical *berceaux* from linden trees was restored, which stressed the importance of the main alley as the central axis of the whole garden. One of the most important parts of the restoration project was the reconstruction of eight of the most significant fountains including Tsaritsin, the Pyramid, the Crown and Gerbovy (Coat of Arms).

Another unique feature was the introduction of an interpretive display, a well-known practice in Western European historic parks. Thus, the excavated foundation of the joke

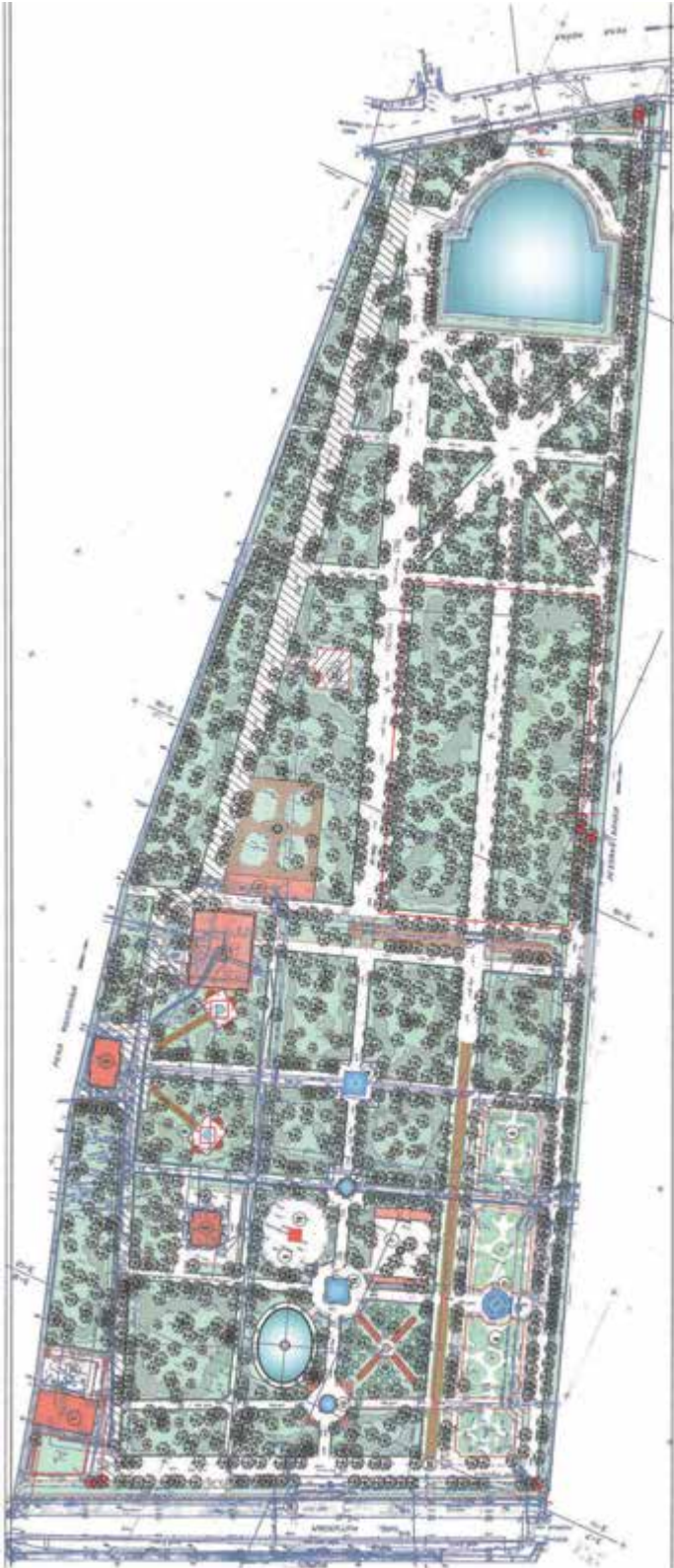


Figure 6. Master plan of the Summer Garden restoration by architects N. Ivanov and N. Mirzoeva, St Petersburg Institute 'Lenproektrestavratsiya'. OOO 'Rest-Art-Proekt'. Courtesy: S. Renny



Figure 7. Reconstructed Menagerie Pond. Photo: Olga Cherdantseva, 2014

fountain ‘Lacosta’ was covered by a glass floor and equipped with interpretation boards so that visitors could see how the fountains system operated in the eighteenth century (Figure 9). Another innovative feature was the interpretation of Gavanets (a small harbour) which was discovered during the last archaeological excavation and was displayed to the public using modern methods of conservation. The Red Garden *bosquet* (*Krasny Sad*) was restored as well. This eighteenth-century orangery garden consisted of four simple parterres with a single-jet fountain in the centre and flowerbeds containing historic herbs, vegetables and exotic flowers. Another significant feature of the latest restoration project was the replacement of original marble sculpture with artificial marble reproductions.²⁷

CONDITION OF THE GARDEN PLANTING BEFORE RESTORATION

Tree inventories were compared from 1940, 1962, 1973, 1986, 2000, 2007 and 2012. During the Second World War the Summer Garden lost quite a few trees and after the war many were damaged and died so that by 1986 there were only 2158 trees left, and by the year 2000 there were only 1881, with many ageing trees also being affected by recreational pressure and air pollution. Analysis of tree age also showed that young trees dominated before 1973 because of mass planting after the war, but since 1986 older trees had taken over since many young trees did not survive. By the time of restoration in 2012 trees more than one hundred years old were prevalent in the garden (Figure 10). As for tree composition, tree inventories confirmed constant domination of linden trees within the garden, followed by maple, which had been used in *bosquets* and *berceaux* together with linden. Other broadleaved trees were present in small quantities. During the last restoration of 2009–11 a total of one hundred and four young trees were planted in the Summer Garden: 41.35% spruces, 24.04% linden, 14.42% elm tree and hawthorn, and 5.77% oaks.

Our investigations of flora (higher vascular plants) at the end of the 1990s showed the presence of one hundred and sixty-three species (ninety-five species of herbaceous

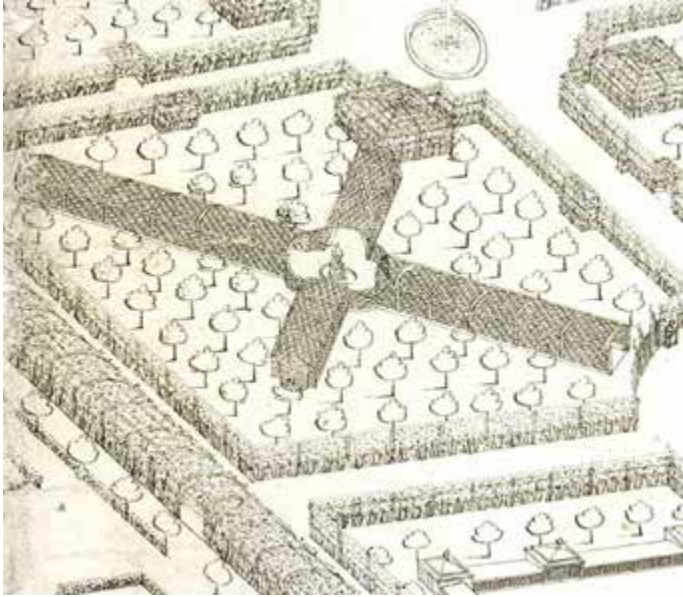


Figure 8. (ABOVE) Cross Point Promenade on the axonometric plan of St Petersburg, by Pierre-Antoine de Saint-Hilaire (1763–73); and (BELOW) bosquet with the fountain and spruces as reconstructed in 2012. Photo: Olga Cherdantseva, 2014

plants and thirty-four species of trees and shrubs), eight species of lichens and fourteen species of bryophytes.²⁸ The co-existence of planted broadleaved trees on the added fertile soil over time (almost three hundred years) had changed the soil's appearance to that of a brown forest type. This has also resulted in the development of typical nemoral forest vegetation and in the *bosquets* the ground cover is dominated by nemoral ephemeral plants such as *Gagea minima*, *G. lutea* and *Ficaria verna*, and in the summer by ground elder (*Aegopodium podagraria*). These plants probably arrived in the garden



Figure 9. Excavation of Lacosta fountain. Photo: Olga Cherdantseva, 2014

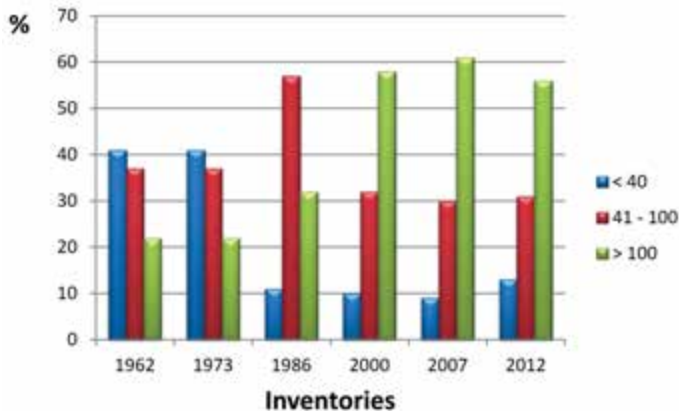


Figure 10. Age composition of the trees in the Summer Garden. Courtesy: Ekaterina Lukmazova

as seeds within the root balls of trees and found ideal conditions under the canopy of the broadleaf trees.²⁹

In the second half of the twentieth century the understory vegetation of the Summer Garden had systematically gone through a ‘repairing’ process when the ephemeral and ground elder cover was deliberately destroyed and reseeded by lawn mixtures. After only one year the traditional light-loving lawn grasses disappeared in the shady conditions and repair works added further stress to the old trees and contributed to their degradation, so there was clearly the necessity of improving the situation with existing vegetation.

RESTORATION OF THE ORIGINAL SPATIAL DESIGN AND PLANTING

The most important part of the restoration work was changing the spatial organization of the garden from the open layout of regular groves of large trees to the image of a formal

baroque garden of the eighteenth century. All *bosquets* were therefore surrounded by wooden trellises and eight kilometres of linden tree hedges (thirteen thousand specimens), thus creating a new visitor experience – a sense of insular, closed spaces of the formal baroque garden (Figures 11a and 11b). This involved the removal of ninety-four sick and dying trees and significant pruning of many others. Because of crown thinning of these



Figure 11. Spatial organization of the Summer Garden before (ABOVE) and after (BELOW) the restoration. Photos: (ABOVE) Maria Ignatieva, 2010; and (BELOW) Olga Cherdantseva, 2014

trees, light and temperature were improved and humidity decreased, all of which was beneficial for the growth of the trees and shrubs. The development of wood-destroying fungi was also weakened.³⁰

CHOICE OF PLANT MATERIAL

Plant material received special attention and had been based on prior experimental research and analysis of historical and modern practices. Before the start of the restoration process in the Summer Garden, experimental plantings (mostly from the German nursery Lorberg) were made to find the best material for restoration purposes. Historic plant material was used where possible, as for the parterre, where cowberry, *Vaccinium vitis-idaea*, was planted.³¹ Although use of the Dutch cowberry cultivar 'Corall' in the Netherlands for low borders had been known about since the 1990s, large amounts were not available in Soviet nurseries. However, for the latest restoration, despite the lack of documentary evidence for its use in the Summer Garden, the St Petersburg Committee of Historic Monument Protection recommended that it achieve a more eighteenth-century historical accuracy. It was the first use of this plant material in St Petersburg's historic garden complexes and required eleven thousand specimens of cowberry, which were especially requested from several Scandinavian nurseries. The dendrological part of the restoration project included the installation of tubs with citrus, bay leaves and box trees, and vases with historical plants in different part of the garden. Traditional Russian flowering plants were especially grown in the local north-west plant nurseries following the old Summer Garden tradition.

The new enclosed garden concept has allowed a realization of an innovative movement in modern historic gardens: biodiversity hotspots.³² Prior to the restoration many of the rare herbaceous plants of the Summer Garden suffered from recreational footfall and the constant repair of the lawns under tree canopies. Now within the completely enclosed *bosquets*, which are surrounded by linden trellis and prohibited to the public, there are excellent conditions for biodiversity protection and its reinforcement. In these *bosquets* there are about four-and-a-half thousand specimens of native and exotic species of shrubs planted to attract wildlife, including *Berberis vulgaris*, *Sambucus racemosa*, *Viburnum opulus*, *Frangula alnus* and *Lonicera tatarica*. Nesting boxes were attached to tree trunks and now many birds, such as nightingales, have returned to the Summer Garden.

THE SUMMER GARDEN AFTER RESTORATION

Thanks to high-quality treatment and care for the trees of the garden during the period of its reconstruction and after the reopening of the Summer Gardens, natural fall of trees has been rare, with the exception of elm trees (seventeen specimens) which were already affected by Dutch elm disease. During the last two years, two linden trees and an ash tree with root rot have fallen, but the fall of shrubs in the *bosquets* and linden trees in the trellises did not exceed one per cent and that of cowberry planted on the parterre at five per cent.

The garden now has many twenty-first-century features – video watch, Wi-Fi zones, modern museum facilities and innovative interpretation of some authentic garden elements.³³

CONCLUSIONS

According to the St Petersburg Committee for State Control, Utilisation and Protection of Historical and Cultural Monuments all restoration works in the Summer Garden had been carried out in full compliance with the recommendation of the International

Council on Monuments and Sites (ICOMOS) Venice Charter (1964), which determines the restoration methodology on cultural heritage objects. Consultants from different European countries were involved in various stages of the conceptual and practical realization of this project. Through an initiative of the Summer Garden Administration, a book for public comments was opened immediately after the reopening of the garden in June 2012. During 2012 it attracted two hundred and fifty-one comments from eleven countries, which, together with opinions made in the press, made it clear that the older generation preferred the previous image of a romantic, nostalgic garden. For the younger generation, however, especially those who visited the garden for the first time, it was interesting and entertaining. Landscape architecture specialists, both national and international, were appreciative of the restoration project, although some cultural and historic preservationists (for example, the St Petersburg branch of the Russian Society for the Preservation of Historical and Cultural Monuments) were critical of the project's main concept.

The Summer Garden restoration project was one of the finalists of the European Garden Award 2013 (out of one hundred and fifty parks and gardens from ten European countries). Nominations were based on innovative implementation and management, urban development aspects, sustainability and good visitor services or voluntary work, as well as the high quality of restoration or modern design of a park or garden. The implementation of this restoration project left many future issues to be addressed, such as how old trees would perform after significant pruning and major construction work; and whether there should be a small entrance fee to generate income towards management and maintenance.

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² N. Kareeva, 'Garden composition development', in N. Lovetskaya and A. Reiman (eds), *Summer Garden. Renaissance* (St Petersburg: OOO Severoslavyanskoe Buro Reklami, 2012), pp. 15–24. According to historical documents, it was the location of the Swedish estate 'Usadiss Hoff', which belonged to the family of Swedish Major Erik Bernt von

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³ A. Reiman, 'Introduction', in Lovetskaya and Reiman, *Summer Garden. Renaissance*, p. 12.

⁴ A. Reiman and N. Lovetskaya, 'The history of the project restoration: from the project of T. Dubyago to the 2009–2011 project', in Lovetskaya and Reiman, *Summer Garden. Renaissance*, pp. 35–8. Tsar Peter spent four-and-a-half months in Holland during his

European trip in 1697–98.

⁵ Maria Ignatieva, 'The mystery of ancient Russian gardens', *Lustgärden* (1997), pp. 69–78.

⁶ M. Ignatieva, G. Konechnaya and G. Stewart, 'St Petersburg in plants and habitats of European cities,' in J. Kelcey and N. Muller (eds), *Plants and Habitats of European Cities* (New York: Springer, 2011), pp. 407–52. [in English]

⁷ Maria Ignatieva, 'Cowberry (*Vaccinium vitis-idaea* L.) in parks', *Leningrad Panorama Journal*, 9 (1982), pp. 36–8; *ibid.*, 'Experience of cowberry cultivation like a decorative plant', *Forestry, Forest Culture and Soil Science: Interinstitute Collection of Scientific Works. St Petersburg Forest Technical Academy* (1983), pp. 138–43.

⁸ Podzolic soil is usually formed in coniferous or boreal forests and characterized by low pH and phosphate deficiency; I. Melnichuk, M. Jassin and O. Cherdantseva, 'Soil cover of the Summer Garden and its pollution by lead', in I. Melnichuk (ed.), *Scientific Essays Dedicated to the Memory of T. DUBYAGO and 70 years of the T. DUBYAGO Thesis 'The Summer Garden and its Restoration'* (St Petersburg: St Petersburg State Forest Technical University, 2011), pp. 28–40. Some soils have retained their profile; V. Dolotov and V. Ponomareva, 'Characteristics of Summer Garden soils', *Soil Sciences*, 9 (1982), pp. 134–8.

⁹ A. Reiman, 'Plants for the Summer Garden', in Lovetskaya and Reiman, *Summer Garden. Renaissance*, pp. 59–64.

¹⁰ *Ibid.*

¹¹ Alexander Pushkin, *Evgeny Onegin* (1833), III. This and the two following quotations are translated by Yevgeny Bonver, July 2002.

¹² Alexander Pushkin, *Collected works* (Sobranie sochineni) in 10 vols: Vol. X, D. Blagoi, S. Bondi, V. Vinogradov and Yu Osman (eds), *Letters 1931–1934* (Moscow: Gosudarstvennoe isdatelstvo khudozhestvennoy literaturi, 1962).

¹³ See http://www.poetryloverspage.com/yevgeny/akhmatova/summer_garden.html/.

¹⁴ Vladimir Kurbatov, *Parks and Gardens of the World* (Petrograd: Isdatelstvo Tovarishstva Volf, 1916).

¹⁵ The public authority for the Protection of Monuments of History and Culture in St Petersburg was first formed in 1917–20. From 1938 it was under the umbrella of the Office of Arts, and in 1944 was reorganized into the State Inspection for the Monuments Protection (Gosudarstvennaya inspeksiya po ochrane pamyatnikov – GIOP) within the Office for Architecture. During the Second World War the Summer Garden was under the jurisdiction of the Control of Cultural and Educational Enterprises of Leningrad City Council. In 1996 GIOP was transformed into an independent Committee for the Control, Utilization and

Protection of Cultural and Historic Monuments of St Petersburg Administration (KGIOP), which today is responsible for looking after three hundred and twelve historic parks, of which one hundred and ten are within the St Petersburg World Heritage Site.

¹⁶ Inna Bogovaya, Irina Melnichuk and Victor Smertin, '65 Years of the Faculty of Landscape Architecture Foundation in St Petersburg Forest Technical Academy', in I. Melnichuk (ed.), *Materials of the International Conference 'Scientific Readings in the Memory of T. B. DUBYAGO, Dedicated to the 65th of the Landscape Architecture Faculty* (St Petersburg: Polytechnical University Press, 2010), pp. 5–8.

¹⁷ During the discussion of this plan there were two opposite approaches. One group saw the garden strictly as a museum and argued for the necessity of carrying out the exact restoration strictly based on archival documents. Another group believed that each park (including historic parks) must be a place for urban recreation. They suggested conducting restoration works that would take into consideration the modern requirements of an urban megalopolis.

¹⁸ Victor Korentsvit, 'Narrative of an archeologist about the Summer Garden. The Bird Pond', *History of St Petersburg*, 6/22 (2004), pp. 3–6.

¹⁹ D. Granin, I. Gurevich, G. Khodasevich, G. Belanina and V. Belanina, *Risen from Ashes: Petrodvorets, Pushkin, Pavlovsk* (Leningrad: Aurora, 1992).

²⁰ Official webpage of the KGIOP: http://www.gov.spb.ru/gov/admin/otrasl/c_govcontrol/proekt/.

²¹ Natalia Ilyinskaya, *Reconstruction of Historic Landscape Architecture Objects* (St Petersburg: Stroisdat, 1993), p. 7.

²² *Ibid.*

²³ In 2004, the site of the Summer Garden became part of the State Russian Museum.

²⁴ Ekaterina Lukmazova, 'The condition of the arboreal–shrub vegetation of the Summer Garden in St Petersburg after reconstruction', in *Restoration, Reconstruction and Development of Cultural, Industrial and Natural Landscapes. International Conference Proceedings* (St Petersburg: State Polytechnic University Publishing House, 2014), pp. 54–5.

²⁵ *Ibid.*

²⁶ There were discussions in the Union of St Petersburg Architects, the Scientific Committee of the Russian Museum, the Federal Agency on Culture and Mass Communications in Moscow, and the Council of Preservation of the Cultural Heritage within the St Petersburg Administration. There were also articles in local newspapers and protests from public organizations.

²⁷ The original Summer Garden marble sculptures are now kept at Mikhailovsky Castle.

²⁸ N. Malisheva, I. Tikhomirova, A. Tobias,

M. Ignatieva and I. Shavrina, 'Complex botanic investigation of the Summer Garden in St Petersburg', *Biology*, Vestnik of St. Petersburg University, ser. 3, iss. 3, pp. 52–8.

²⁹ Tamara Gorishina and Maria Ignatieva, *Botanic Excursions around the City* (St Petersburg: Chimisdat, 2000), pp. 92–3; Maria Ignatieva, 'History of the creation and the modern condition of St Petersburg Summer Garden green plantations', *Lustgården*, 74 (1994), pp. 61–3. [in English]

³⁰ Many specialists and citizens were concerned that a large number of trees would be lost during such a large-scale restoration, but in 2009–10 only one hundred and twenty-six trees were removed, even though it was planned to fell one hundred and forty-seven specimens. Crown thinning was done by the method of industrial alpinism when specially trained people climbed the trees and manually performed the required pruning.

³¹ In the 1980–90s historical documents were found that had used cowberry as a substitute for box in Russian parterres. The

Swedish author Gösta Adelswärd suggested that cowberry was used for the same purpose in Swedish historical gardens because of the harsh climate; Gösta Adelswärd, 'What did André Mollet use? Heather or cowberry' [Vad menade André Mollet? Ljung eller lingon?], *Lustgården*, 74 (1994), pp. 47–60. In the 1990s experimental plantings of *Vaccinium vitis-idaea* were made in Peterhof Upper Garden that replicated the eighteenth-century way of planting cowberry using plants from the surrounding forests.

³² Maria Ignatieva, *Historic Gardens – Where Nature Meets Culture – Can there be Urban Biodiversity Hotspots?* (available at: <http://www.thenatureofcities.com/2013/01/27/historic-gardens-where-nature-meets-culture-can-be-urban-biodiversity-hotspots/>) [in English]

³³ This restoration cost two point three billion roubles (seventy-four million US dollars), the sculptures and green areas being the most expensive.