VEGETATION FOR RUSSIAN FORMAL GARDENS

The Golden Age of the Russian art of gardening and landscaping in the Baroque style fell into the first half of the eighteenth century. It coincided with the foundation of Saint-Petersburg - the new capital of Russia - on the banks of the Neva river. The gardens were intensively laid out at the same time as the city was being built. Peter the Great pursued two goals: to create an impressive appearance of the new capital, which should not be inferior to other European cities, and, at the same time, to drain and to strengthen the coastal territories in the Neva's delta for their further development. His optimism about it, despite difficult environmental and climatic conditions, was supported by Holland's centuries-old experience. The Russian Tsar had a soft corner in his heart for this country and gave it credit in the art of gardening for its achievements among all other European countries in the late 17th, early 18th centuries. It was from Holland that the first gardening specialists were invited and it was there that pupils were sent to improve their skills in the art of gardening.2

A certain role in the aspirations of the Russian Tsar was also played by his childhood and youth reminiscences of the gardens of the Moscow Kremlin and those in Moscow environs - Izmailovo and Kolomenskove. According to the census of 1702 there were 52 royal gardens in Moscow. Many of them were "upper" or hanging gardens, located on stone vaults.5 Those gardens were mostly of practical purpose, which was combined with some artistic techniques. Dmitry Likhachev defines the Moscow gardens of that period as the closest to the Dutch Baroque by their stylistics.1 They were divided "into several flower beds and patches with walking paths between them, which were paved not with turf but with planks ..."5 In those gardens they grew fruit trees and berry bushes, various vegetables and herbs, as well as very rare plants for the Moscow climate. The most popular flowers were the fragrant ones: Paeonia, Lilium, Rosa, Dianthus, Ruta graveolens, Viola, Narciussus etc.6

The first gardens appeared in Moscow after the Time of Troubles under the grandfather of Peter the Great in the 1610-20s. They were grown by Russian gardeners. In 1623 Nazar Ivanov selected, when laying out the Upper Garden, the best apple- and pear-trees from all Moscow gardens and planted in there three large "juicy apple-trees and a royal pear-tree" from his own garden. However, already in 1641 the most famous Pokrovsky Garden in Moscow was re-laid by the Tsar's physician-in-ordinary Vendelimus Sybelist, and it was managed by a German gardener, whose name is unknown. It was also the time of Adam Olearius written evidence about the appearance in Moscow of double and

Provence roses brought to Russia by merchant Pyotr Marselis from Gottorp gardens of the Duke of Holstein. 10

The father of Peter the Great, Tsar Alexei Mikhailovich, continued the development of gardening. In 1654 a Dutch ship brought to Moscow nineteen foreign trees bought in Holland by his order: "2 trees of Citrus aurantium, 2 trees of Citrus limon, 2 trees of Ficus carica, 4 trees of Persica, 2 trees of Armeniaca, 2 trees of Cerasus, 2 trees of Amygdalus, 2 trees of Prunus." In 1663 Alexai Mikhailovich ordered to lay out new more extensive gardens in Izmailovo, near Moscow. Only two years later the first bushes of Vitis vinifera, seeds of Citrullus, Melo and Gossipium were brought to Moscow from Astrakhan town. In autumn of the same year the Tsar sent for cuttings of Morus alba to Simbirsk (now Ulyanovsk) in order to breed silkworms in Moscow. 15

Since the second half of 17th century foreign specialists were invited to the royal gardens again. In 1666 a contract was signed with the Dutch gardening master Hendrik Casper Paups for his work in the Moscow Tsar's pleasure garden, and a year later the same kind of contract was signed with another foreign gardener, Grigory Hoot. The latter was replaced in 1668 by Falentin Daviz, who was in charge of the Grapes Garden and grew various "German herbs and flowers". 15

Each of the Izmailovo Gardens had its own distinctions in its layout and vegetation range.16 In 1670 the Round Kitchen Garden was arranged, it was called "apothecary". It had a radial ring layout. The external ring was planted with Rosa rugosa, Morus alba and a birch grove. In one of the middle rings - Berberis vulgaris, and on the rest of the territory vegetables and officinal herbs were grown: Tanacetum vulgare, Hypericum, Salvia, Chelidonium majus, Cichorium and many others.17 In the Grapes Garden, an area of 16 ha according to a description of 1687, were nine bushes of Vitis vinifera and eleven bushes of Juglans regia. The plan of the garden was a composition of squares, inserted one in another. The following plots were located from its borders to the centre: "for Fagopyrum", "for Friticum vulgare", "for Hardeum sativum", "for Papaver", "for Ribes alba", "for Malus domestica" and "for German flowers and herbs". On the other plots they grew Secale cereale, Avena sativa, Rubus idaeus and Fragaria. In the corners of the garden trees were located on concentric circles where they also grew royal Pyrus, white and red Cerarus avium and Prunus.18

The vegetation was taken a very good care of. Even soil was sometimes brought from far away. Thus, for example, in 1673 two hundred poods (1 pood = 36 lb) of "water melon" and "grapes" soil was brought to Izmailovo from the

town of Astrakhan.¹⁹ The Prosyanskiy Garden was not less interesting and reminded of the Grapes Garden by its layout, but without round plots in the corners. Along its external perimeter there were plantations of Linum, Pennisetum glaucum, Secale cereale, Avena sativa, Hordeum sativum, Fagopyrum, Canabis sativa and Pisum sativum. Malus, Pyrus and Prunus were located closer to the centre. In the very centre were a pavilion and parterres with flowers and sculptural animal figures, from the mounths of which water was pouring out.²⁰

In all Moscow gardens of 17th century the decorative effect was created by the combination of fruit trees, berry

vegetation, among which one can clearly identify tulips (Tulipa).

Books and engravings brought from abroad, which certainly included also information about the art of gardening, began to appear always more often. Traditional icons in the Russians' domestic life of late 17th century with depictions of gardens became widespread as well and the royal court was not an exception in this respect. In 1677 the boyar Artemon Sergeyevich Matveyev had among paintings and pictures "three large sheets with garden constructions and nine small ones". Thus, it was not only oral stories of Europeans and Russian ambassadors from abroad, but also

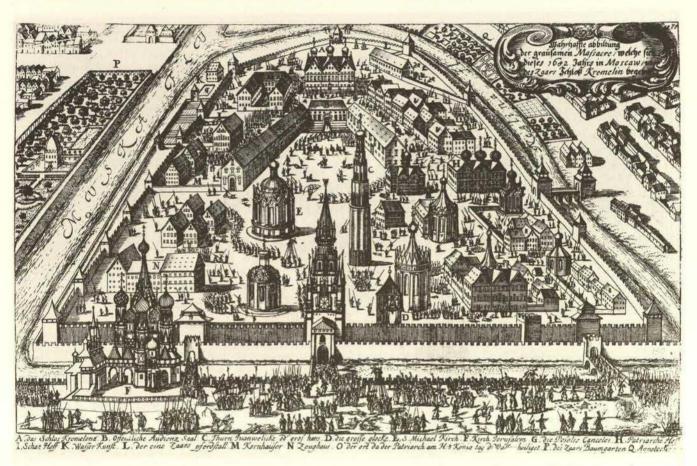


Fig. 1. View of the Kremlin, Moscow 1682, P – Royal garden ("P. des Zaars Baumgarten"), Q – Apothecary garden ("Q. Appoteckergarten") in the engraving: "Wahrhaffte abbiltung der grausamen Massacre, welche sich dieses 1682. Jahres in Moscaw in des Zaars Schloß Kremelin begeben"

bushes, cereals, officinal and flowering plants. In the central part, as a rule, arbours with galleries, decorated with designs and intended for rest, were put. The location of the gardens on the coasts of ponds intensified their artistic expressiveness.

The surviving plans of the pleasure gardens of Moscow of the 17th century do not give a full idea of the use of specific plants for this or that purpose, since these plans are rather relative. The rare exception is the Russian icon "Our Lady – Confined Vertograd", painted by Nikita Pavlovets ca. 1670, which has a depiction of a formal garden that apparently existed.³¹ It has a rectangular shape and is surrounded by a balustrade adorned with vases full of flowers and herbs. The garden has flower beds with sparsely planted

concrete pictures and plans of foreign gardens that could serve as examples for imitation during the planting of such early gardens in Moscow.

The new stage of gardens' and parks' development in Russia was connected with the name of Peter the Great and the large-scaled palace construction in the German settlement along the river Yauza. The planting of new gardens was entrusted to the physician of Peter the Great – Nicolaas Bidloo, who was noted according to his contemporaries' testimonies for his versatile knowledge not only in medicine, but also in other arts, including the ability of growing gardens and drawing plans. The Dutchman Brantgof was appointed as chief gardener of these complexes.

Apart from growing the royal gardens Bidloo participated in 1706 in the construction of a Moscow hospital with a

botanical garden,²⁶ and he also laid out a garden for his own house. There are some surviving pictures of his garden, which give an idea of its composition and of the vegetation used there.²⁷ Local and imported plants were in it, including: Tulipa, Lilium, Malva, Helianthus annuus and many others.

The few plans and pictures of late 17th and early 18th centuries give a general idea of the way of using vegetation in Russian gardens, which had a very simple layout, similar to early Dutch gardens with a division into separate bosquets. Their parterres were also simple. They consisted of flower beds with very sparsely planted vegetation. The veg-

and Oranienbaum were created, which constantly required a large number of planting material. Tens of thousands of plants were bought in Europe to be sent to Russia: from Sweden, Germany, and first of all from Holland. In one of the letters to the Russian ambassador B.I. Kurakin the Tsar wrote in 1712 from Vyborg town: "If in Holland, near Harlem, there are lime-trees grown from seeds (and not from wild ones) in sandy places ... work on this, in order to get some two thousand ... And having planted them with roots in sand on board of the ship, which is put as ballast, send them to Petersbourg in the same autumn ..." Even during the time of war with Sweden in 1716 and 1718 sea deliver-

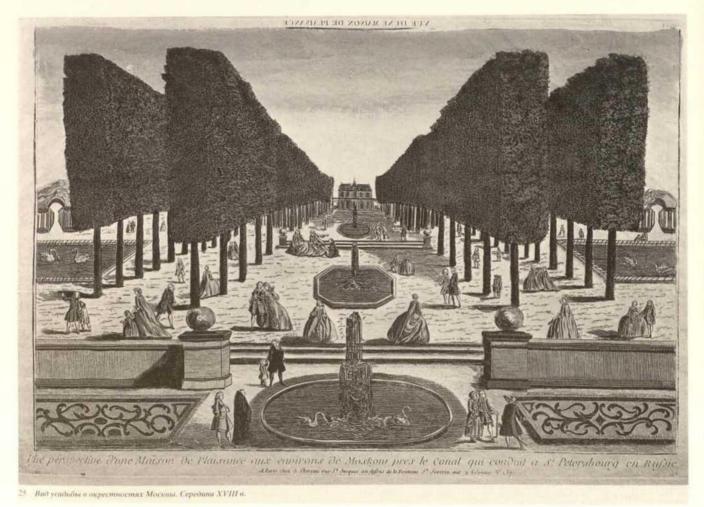


Fig. 2. View of a country estate in the environs of Moscow, mid 18th century, engraving, State Historic Museum, Moscow

etation range and decoration techniques of Moscow gardens were gradually formed. In mid 18th century the compositions of Moscow gardens became more complicated, but lost their individuality.

In St. Petersburg it was all different. The new capital was built as a sort of garden-city since the beginning. The planting of gardens both at city houses and at country houses was considered obligatory, therefore the plots of land along the banks of rivers and channels were distributed to well-to-do people, who had resources for such undertakings. The projects of Peter the Great demanded quick solutions: In 1710 the Gardening Office was founded which was in charge of purchasing and planting plants the royal gardens.

In those years the formal compositions of the Summer Gardens, Ekaterinhof, the complexes of Strelna, Peterhof ies to St. Petersburg of planting material, put together with the most precious goods, continued, escorted by the Dutch and English convoy. At the same time trees were coming from Yamburg, Koporiye, Moscow (from the old Izmailovo gardens), Velikiye Luki, Poltava and Novgorod. 1300 Siberian stone pines were prepared to be shipped to the royal garden, being put in special vessels and covered with soil, from the distant Solikamsk in Siberia. Already in 1706 the Tsar demanded to make special trailers on cannons' wheels in order to bring out from Narva to St. Petersburg large limetrees with the trunks' diameter of 30 to 40 cm.

An apothecary garden, in the tradition of Moscow apothecary garden, was laid out by Peter the Great's order on one of the islands of the Neva's delta in 1714. Later it was transformed into a botanical garden and played a significant role

in the cultivation of rare plants for St. Petersburg's gardens. The first vegetation catalogue of the apothecary garden was compiled in 1736 by Johann Georg Siegesbeck. It included 1275 names, of which he was most impressed by "flowering palms (Palma Maior et Minor), tall and beautiful coffee trees with their fruit, orange- and lemon-trees adorned with a multitude of fruit, some large Ficus with sweet fruit, a lot of Aloe and various other trees and bushes". 52

In 1721 Pieter de la Court van der Voort from Leiden presented to the Russian Tsar pine-apples (Ananas comosus). One of was sent by post and four other pine-apples by ship. De la Court also gave some drawings for the construction den", which included Tilia, Quercus, Carpinus, Acer, Aesculus hippocastanum, Picea, Juniperus, Persica, Pyrus, Malus domestica, Prunus, Juglans regia, Citrus medica and other "extraordinary" plants. ⁵⁶ The third nursery, the "Cossack Kitchen Garden" was made on the Neva's bank in Vyborgsky district. ⁵⁷ In the nurseries they grew for trellises trees like Alnus, Corylus avellana, Betula, Picea, bole Betula, as well as Picea abies and Juniperus communis with the shape of a ball or a pyramid. ⁵⁸

In the same years royal orders were issued on the preservations of valuable species of trees in the capital's environs, on the pain of a fine or even a death penalty, because

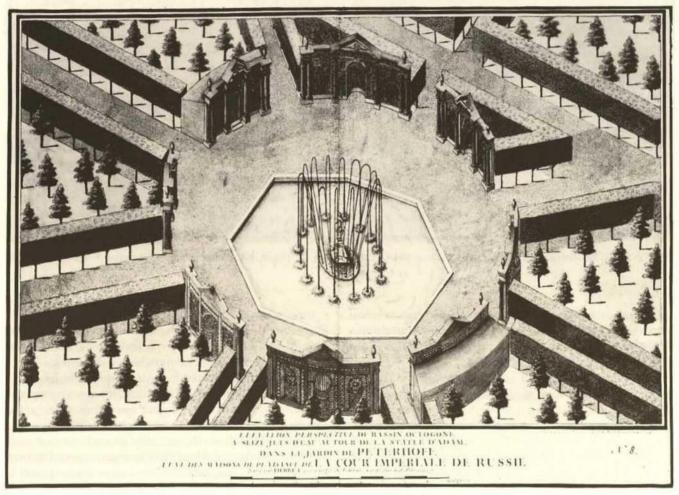


Fig. 3. Adam Fountain in the Lower Park of Peterbof, P. de Saint-Hilaire, 1775

of green-houses with underground heaters and instructions for the growing of this exotic fruit. Later the pine-apples were so successfully cultivated that in the second half of the 18th century the annual yield in the green-houses of the Italian Garden reached 150 to 160 pine-apples. Because of the intensive planting of gardens there was a constant shortage of imported plants. In 1717 Peter the Great, apparently after the examination of a nursery in Holland, sent a message to Menshikov from Amsterdam: "... I find it necessary to start a kitchen garden on the prepared ground near Kantsy, where fruit trees, and lime- and maple-tree, and others and flowers could be cultivated and sold to make it better for volunteers to make their own kitchen gardens". In the same year architect J-B.A. Leblond developed the project of one more nursery – "the Imperial Reserve Gar-

they were suitable for planting in the palaces' gardens. From forests they took, for replanting, plants like Corylus avellana, Sorbus aucuparia, Juniperus communis, Picea abies and other species. Peter the Great especially cared for large old trees. It is reported that such an old lime-tree (Tilia) grew in Strelna near the green houses with Italien fruit trees and herbs. An arbour was put in its crown where the Tsar often drank tea, enjoying the view over the sea. Next to the lime-tree there was a large elm-tree (Ulmus) brought by Peter from Courland and planted by himself, since there had been no such trees in this area. On the coast of the Gulf of Finland on the Round Island opposite the Strelna Palace the Tsar planted pine-trees grown from seeds, which he gathered in Thuringia during his travelling to Carlsbad (now Carlovy Vary). The attention of Peter the Great was

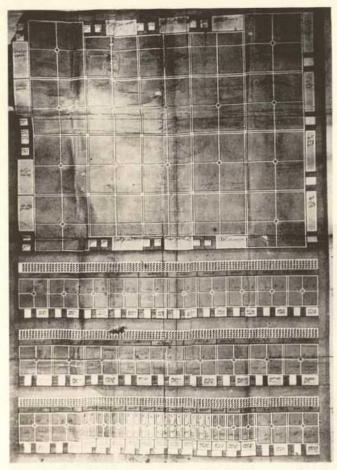


Fig. 4. Imperial Reserve Garden, project by J.-B. Alexandre Leblond, 1717

Fig. 5. Detail of the master-plan of Peterbof, P. de Saint-Hilaire,

also constantly focused on Quercus robur and Aesculus hippocastanum, which he was growing in all his country estates on the coast of the Gulf of Finland, watching how they developed.

For the faster creation of garden compositions they replanted large-sized trees with a large clod of earth. The realisation of such works required special skills and in 1709 a contract was concluded in Amsterdam with the gardening master Leonard Hernichfelt.41 There was a usual practice of re-planting trees not only from the neighbouring forests, but also from one garden to another, paying no attention to enormous expenses connected with such works. Thus, in 1745 a bole tree with a gallery in it, was brought from the Levenwald Garden to the Third Summer Garden and put in front of the Empress's bedroom. It proved to have been planted too low. In order to lift it up a special machine was made by the Dutch master Harman van Boles. 2 In 1748 seventy people were hired for the transportation of a large lime-tree from the former garden of Duke Menshikov, changing three times nine carts (the height of that lime was more than 8.5 m, the trunk was 1,32 m in circumference and the root system's diameter was about 8.5 m).45 Often after some state man fell into disgrace, his gardens were revaged. It happened to Menshikov's garden on Vasilievsky Island and to E.J. Biron's garden in Courland. All the plants from the ducal green houses: Citrus aurantium, Laurus nobilis, Punica granatum, Jasminum and Vitis vinifera were dug out and sent on Dutch ships to St. Petersburg and then to Peterhof."

The common and to some extent forced characteristic feature of St. Petersburg gardens of the first half of the 18th century was the use of local species of trees. Neither supplies from abroad, nor local nurseries could provide homogeneous planting material in such enormous number. For achieving the required volumetrical solutions of garden compositions all possibilities were used. Thus, when trellises were made in Peterhof along the newly-laid alleys, it was forbidden to cut down the naturally grown trees there such as Picea, Betula and Alnus (the Tsar gave special instructions about it), and imported trees were planted next to them, forming mixed trellises. Homogeneous plantations of Tilia, Acer, Corylus, Ribes, Berberis vulgaris, Rosa rugosa and other trees and bushes were also used for this purpose. The choice of species was often determined by soil and ground conditions.

The survival axonometric plans of Peterhof and Oranienbaum made in 1770s by de Saint-Hilaire certainly cannot give an objective picture of the state of garden compositions in the given historical period. For the decoration of parterres they used Vaccinium vitis-idaea, Juniperus communis and even Allium instead of Buxus sempervirens and Taxus baccato, which could not bear the cold St. Petersburg winter. For the creation of vertical accents they used tub Laurus nobilis and Citrus auranthium, and if they were not available - Picea abies, Juniperus communis or wooden trellis pyramids. For "rounded" or "sheltered" roads (berceau) they used Tilia with unsevered tops and Ulmus, and since the middle of the 18th century Caragana arborescens.

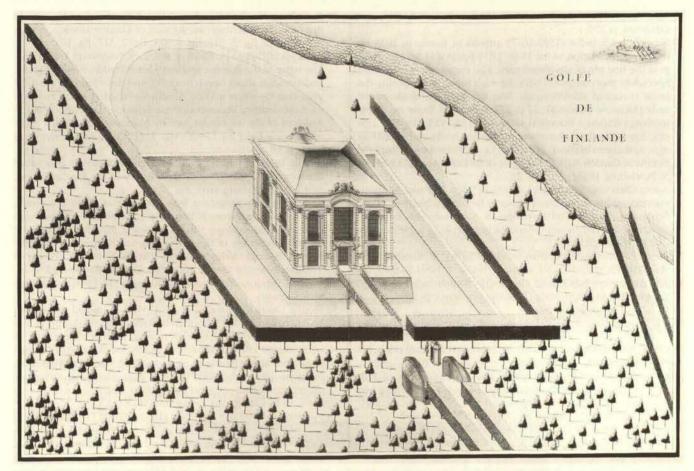


Fig. 6. Hermitage Pavilion in the Lower Park of Peterbof, P. de Saint-Hilaire, 1775

The internal part of bosquets in Moscow and St. Petersburg gardens were often used for growing fruit trees, berry bushes or for kitchen gardens.

Today, we must regretfully state the fact that the historical vegetation range of local species is not used fully during restoration works in formal gardens. Its possibilities are neither investigated nor analysed. Such techniques as the formation of the conifers – Picea and Juniperus communis, as well as Betula have been completely lost. The first positive experiments on the use of Vaccinium vitis-idaea instead of Buxus sempervirens, which were conducted in the park of the Forestry Academy and then continued in the Upper Park of Peterhof, were not completed.^{a7}

Nowadays, when the state's financing of restoration works in St. Petersburg's garden and park complexes practically stopped, it would be rightful to turn to the historical vegetation range and the techniques of the 18th century of plants' formation in Russian gardens. It would not only allow to retain the national colour of these complexes, but also to reduce considerably the costs of their restoration and maintenance.

FOOTNOTES

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- 1 A. Reiman, Nederlandse invloeden op de tuinkunst in Sint-Petersburg in het eerste kwart van de achttiende eeuw, Peter de Grote en Holland, Amsterdam 1996, pp. 124-131. See also: A. L. Reiman, Changes in the Species Composition of Vegetation in St. Petersburg and Its Vicinity: The Role of Peter the Great, Planning of Cultural Landscapes, Tallinn 1993, pp. 128-131.
- 2 A. Reiman, Sadovo-parkovoye iskusstvo (Art of Gardening and Parks), Peter the Great & Holland. Russian-Dutch Artistic & Scientific Contacts. Dedicated to the 300th anniversary of the Great Embassy: Cat. of the exib., Saint-Petersburg 1996, p. 21-22.
- 3 Russian scientists suppose that the appearance of hanging gardens in the Moscow Kremlin was connected with the name of the Italian architects Aristotele Fioravanti of Bologna, who worked there in 15th century. See: V.L. Glazychev, S.M. Zemtsov, Aristotele Fioravanti, Moscow 1985, pp. 130-131. In the treatise of his friend Filarete (Antonio di Piero Averlino), (1402/1404-1469) the Semiramis's Hanging Gardens were reconstructed. Filarete's Treatise on Architecture, New Haven and London, 1965. Yale University Press, vol. 2: The Facsimile, Folio 122 r.
- 4 D.S. Likhachev, Poeziya sadov: K semantike sadovo-parkovykh stiley. Sad kak text (Poetry of Gardens: About the Semantics of Garden and Park Styles, Garden as a text.), St. Petersburg 1991, p. 112.
- 5 Moscow Gardens in the 17th century in the book: I. E. Zabelin, Opyty izucheniya russkikh drevnostey i istorii. Issledovaniya, opisaniya i kriticheskiye statyi (Experiences of Investigation of Russian Antiquities and History, Descriptions and Critical Essays), part 2, Moscow 1873, p. 302.
- 6 Hereinafter modern Latin generic names are given for plants' names, since it was impossible to find the exact names of the plants used in Russia in 17th and 18th centuries.
- 7 Mikhail Fyodorovich Romanov (1596-1645), a Russian Tsar (1613-1645), the first of the Romanov dynasty.

8 I.E. Zabelin 1913 (see: footnote 9), Moskovskiye sady (Moscow Gardens), p. 276.

9 Vendelimus Sybelist (1597-1677) arrived in Russia in 1633 by the recommendation of the Duke of Holstein and occupied the post the first physician-in-ordinary. The engagement of foreign specialists was connected with the wish to use in gardening the latest European achievements. See: I.E. Zabelin, Moskovskiye sady (Moscow Gardens) ..., p. 277. Historical Essay on St. Petersburgs Imperial Botanical Garden (1713-1913), in: V.P. Lipsky, Imperatorsky S.-Peterburgsky Botanichesky sad za 200 let ego syshchestvovaniya (1713-1913), St. Petersburgs Imperial Botanical Garden during 200 Years of Its Existence (1713-1913), St. Petersburg 1913, part 1, p. 28.

10 Adam Olearius (Ölschlager), (1599-1671), a German scientistencyclopaedist, who visited Moscow twice as a member of the Schleswig-Holstein Embassy. See: A. Olearius, Offt begehrte Beschreibung der Neven Orientalischen Reise ..., Schleswig, Ja-

cob zur Glochen, 1647.

11 Alexei Mikhailovich Romanov (1629-1676), a Russian Tsar (1645-1676).

12 The trees were brought to Moscow by Dutch merchants, I.E. Zabelin, Moskovskiye sady (Moscow Gardens), p. 286.

13 I.E. Zabelin, op. lit., p. 289.

- 14 I.E. Zabelin, op. lit., p. 293; A. Reiman, Nederlandse invloeden ..., p. 125.
- 15 I.E. Zabelin 1913 (see: footnote 9), Moskovskiye sady (Moscow Gardens), p. 293.
- 16 S. N. Palentreyer Sady XVII veka v Izmailove (Gardens of 17th century in Izmailovo), Landshaftnoye iskusstvo. Nauchnye trudy Moskovskogo gosudarstvennogo universiteta lesa (Landscape Art. Scientific Works of Moscow State University of Forestry), Number 262, Moscow 1994, pp. 20-33. The gardens' plans were reproduced in: T. B. Dubyago, Russkiye regulyarnye sady i parki (Russian Formal Gardens and Parks), Leningrad 1963, pp. 23-26; A. E. Regel, Izyashchnoye sadovodstvo i khudozhestvennye sady (Fine Gardening and Artistic Gardens), St. Petersburg 1896.
- 17 I. E. Zabelin 1913 (see: footnote 9), Moskovskiye sady (Moscow Gardens) ..., pp. 294-295; S.N. Palentreyer, op. lit., p. 26. The plan of the Round Kitchen Garden apparently dates back to the plan of one of the towers of Sforzinda town. See: Filarete's Treatise ..., vol. 2, Book XVIII, folio 145 r, A.
- 18 S. N. Palentreyer 1994 (see: footnote 16), pp. 25-26. The plan of the Grapes Garden apparently dates back to the plan of a tower of Sforzinda town, made in the form of a maze. See: Filarete's Treatise ..., vol. 2, Book XIII, folio 99 r, A. The same location of fruit trees in concentric circles like in the Grapes Garden was later used in the Upper Park of Peterhof.

19 S.N. Palentreyer 1994 (see: footnote 16), p. 25.

20 S.N. Palentreyer 1994 (see: footnote 16), pp. 27-28.

- 21 The confined Vertograd garden is an image of the paradise, see: N.P. Kondakov, Russkaya ikona (Russian Icon), vol. 4, part 2, Prague 1933, p. 297. The widespread "Hortus Conclusus" must have served as a prototype of the picture as well as of one of the real upper gardens which existed in the Moscow Kremlin.
- 22 I.E. Zabelin 1913 (see: footnote 9), Moskovskiye sady (Moscow Gardens) ..., p. 308.
- 23 Istoriya i Drevnosti Moskvy (History and Antiquities of Moscow) in: I.E. Zabelin 1913 (see: footnote 9), pp. 191-193.
- 24 Khronika obshchestvennoy zhizni v Moskve s poloviny XVIII stoletiya (Chronicle of Public Life in Moscow Since Mid 18th Century, in: I.E. Zabelin 1913 (see: footnote 9), p. 418; Nicolaas Bidloo (1673/1674-1735) a son of Gotfrid Bidloo, a physician-in-ordinary of William III, King of Great Britain. In 1702 he was invited by Peter the Great to Russia for the post of physician-in-ordinary, see: V.M. Rikhter, Istoriya meditsiny v Rossii (History of Medicine in Russia), Moscow 1820, pp. 95-97, 100-101.

25 I.E. Zabelin, Chronicle ..., p. 418.

26 Op. lit. There is information that Peter the Great himself planted herbs in this garden more than once and collected plants. There is a survival picture of a sheet from his herbarium, see: V.M. Rikhter, op. lit., p. 23; V.I. Lipsky, op. lit., p. 67.

27 E. de Jong, Virgilian Paradise: A Dutch Garden near Moscow in the Early 18th Century, in: Journal of Garden History, vol. 4, pp. 306, 310, fig. 3; 312, fig. 4; 314, fig. 7; 317, fig. 10.

28 Archives of Duke F. A. Kurakin, vol. 2, St. Petersburg 1891, p. 61; The letter of the Russian resident Alexei Dashkov from Warsaw and Dresden about beech trees (Fagus) dates back to the 1713 year. See: Opsaniye arkhiva Alexandro-Nevskoy Lavry za vremya tsarstvovaniya imperatora Petra Velikogo (Description of the Archives of the Alexander Nevsky Monastery during the reign of Emperor Peter the Great), vol. 2, (1717-1719), St. Petersburg 1911, p. 69.

29 Op. lit. Book 3, St. Petersburg 1893, p. 49; Materialy dlya istorii Russkogo flota (Materials for the History of the Russian Navy),

part 2, St. Petersburg 1865, pp. 37, 80.

30 Two letters on gardening from the time of Peter the Great, Zhurnal sadovodstva, izdavaemyi rossiyskim obshchestvom lyubiteley sadovodstva (The Gardening magazine issued by the Russian Society of Horticulturists), vol. 8, June, 1859, p. 139.

31 Pis'ma i bumagi Imeratora Petra Velikogo (Letters and Papers of Emperor Peter the Great), vol. 4 (1706). St. Petersburg 1900, no. 1284: K Fyodoru Moiseyevichu Sklyaevu (To Fyodor Moiseye-

vich Sklyaev).

- 32 Joanne Georg Siegesbeck, (1686-1755) was invited to come to St. Petersburg in 1735 from Helmstadt to be in charge of the Admiralty's hospital, and apart from it, he was also offered to be in charge of the apothecary garden, see: V.I. Lipsky, Istorichesky ocherk (Historical Essay) ..., pp. 82-84. (Siegesbeck. Primitiae florae Petropolitanae sive Catalogus plantarum tam indigenarum quam exoticarum, quibus instructus fuit Hortus Medicus Petriburgensis per annum M.DCC.XXXVI (1736).
- 33 Pieter de la Court van der Voort (1664-1737), a Dutch merchant, collector and specialist in gardens, see: J. Drissen, Tsar Pyotr i ego gollandskiye druz'ya (Tsar Peter and his Dutsch Friends). St. Petersburg 1996, pp. 149, 152-153; P. Pekarsky, Nauka i literatura v Rossii pri Petre Velikom (Science and Literature in Russia under Peter the Great), vol. 1, St. Petersburg 1862, pp. 543-544.
- 34 RGIA Rossiysky Gosudarstvenny istorichesky arkhiv (Russian State Historical Archives), F. 467, Op. 2, Book 123, LL.186 ob. – 187.
- 35 Kantsy is a Russian name for Nyenskans town, which existed in the place of confluence of the Okhta and the Neva rivers; V.I. Lipsky, op. lit., pp. 69-70.

36 T.B. Dubyago, op. lit., pp. 58, 321-323.

37 Op. lit., p. 57. In the second half of 18th century the "Cossack Kitchen Garden" was used for growing early green vegetables for the imperial table, see: RGIA, F. 68, Op. 32, D.649, LL.1 – 1 ob.

38 T.B. Dubyago, op. lit., pp. 321, 323.

- 39 Picture of a lime-tree on the plan, see: RGIA, F. 485, Op. 3, D.572, L.6.
- 40 P.P. Svinyin, Dostopamyatnosti Sankt-Peterburga i ego okrestnostey (Notable Places of St. Petersburg and Its Environs), Book three (1818), St. Petersburg 1997, pp. 173, 185-186.
- 41 A. Reiman, Nederlandse invloeden ..., p. 126; Pis'ma i bumagi (Letters and Papers) ..., vol. 9, second edition, Moscow 1952, p. 755.
- 42 RGIA, F. 470, Op. 5, D-3. 266, L.75, D-3.257, L.203.

43 Op. lit., D-3.298, L.92 ob.

- 44 V. Vilite, Konfiskatsiya imushchestva Ernsta Ioganna Birona (Confiscation of Property of Ernst Johann Biron, Ernst Johann Biron [300th birthday anniversary (1690-1990)]: Exhibition Catalgoue in the Rundale Museum-Palace, 1992, p. 40.
- 45 Pierre Antoine de Saint-Hilaire a mathematical engineer, to-pographist, worked in Russia in 1764-1780. He has made to-gether with Ivan Sokolov and Gorikhvostov an exonometrical plan of the centre of St. Petersburg, as well as of Peterhof and Oranienbaum.

46 T.B. Dubyago, op. lit., p. 42.

47 M.E. Ignatieva, Brusnichnik v parkah (red bilberry in the parks) Leningradskaya panorama (Leningrad Review), 1982, no. 9, pp. 36-38. The experiments were made by the author of this article in 1980-1981 in the parks of the Forestry Academy and in Peterhof.