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THE WATER SYSTEM OF THE 18TH-CENTURY GARDEN IN BOGORODITSK IMPERIAL PROPERTY (TULA REGION)

Abstract

This paper presents the Bogoroditsk (Tula Region in Russia) Park's history of origin in the 18th century, its subsequent functioning and degrading. Special attention is paid to the contribution of A. T. Bolotov serving as the supervisor of Bogoroditsk Volost in the 1770s–1790s. In conclusion, the contemporary state of Bogoroditsk Park and its water-supply facilities that is worrying the experts is described.

Dieser Beitrag stellt die Entstehungsgeschichte des Parks Bogorodizk (Oblast Tula in Russland) im 18. Jahrhundert sowie seine spätere Funktion und schließlich seinen Niedergang vor. Besondere Aufmerksamkeit gilt dem Beitrag von A. T. Bolotow als Verwalter des Wolost Bogorodizk in den 1770er bis 1790er Jahren. Abschließend wird der gegenwärtige Zustand des Parks Bogorodizk mit seinen Wasserversorgungsanlagen, der die Experten mit Sorge erfüllt, beschrieben.

The museum complex, château and park at Bogoroditsk are in Tula Region, 200 km to the south of Moscow (see Bogoroditsk Palace-Museum). The history of the town settlement in Bogoroditsk dates back to the 17th century when a wooden fort that almost completely fell to pieces by the 18th century was built by the side of the Upyorta River. In 1763, by the edict of the empress Catherine II in Russia the rebuilding of many ancient country towns according to regular design began. In Bogoroditsk, like in many other cases, it appeared to be easier to lay the foundation of a new town nearby, and so in 1773 the construction of the town according to a regular design began on the right side of the river across from the fort. Simultaneously, in the same year of 1773, Catherine gave the order to buy the land on which the fort was standing to have the right of imperial ownership over it so that after her death it could be given to the private ownership of her illegitimate son by Count G. G. Orlov, Aleksey Bobrinsky. The locals still call this part of the town the ›Count's part‹. By her order, the construction of the country estate began and proceeded simultaneously with

the construction of the town. In the summer of 1776, the river was dammed to form a big pond between the château and the town that became one of the main aquatic ornaments of the ensemble. The château and most of the adjoining buildings were designed by the architect I. E. Starov (see Петров 1961). It was one of his early works, and without doubt, a very successful one, but there is no evidence that Starov ever visited Bogoroditsk. It is likely that he only designed the buildings, and the architect Y. A. Ananin supervised their implementation. Andrey Timofeyevich Bolotov was asked to manage the construction supervision and to set up the household of the estate.

Bolotov is a striking and interesting person in the Russian history of the 18th century (see Маслов 1838; Шеблыгина 2003). He died aged 96 and wrote the most extensive memoirs of 18th-century Russia that start with his birth in 1738 and end in 1805. Unfortunately, not all parts of the manuscript could be preserved, and the most complete publication from the 19th century ends in 1797 (see Болотов 1871–1873). Bolotov had a very wide range of interests and talents. In particular, he took an interest in agriculture and was an active member of the Russian Free Economic Society (see Бердышев 1988). His publications in the *Treatises* of the Society earned him the acknowledgement as an agricultural expert, which is the reason why he was asked to manage the Imperial Volost of Bogoroditsk. For Bolotov, who left the military service already in 1762 before the coup d'état thanks to which Catherine II came to power, this employment helped to move up the career ladder and meant considerable remuneration which was important since he had already started a rather large family. An additional point is that he was really interested in agricultural experiments and was happy about the opportunity to carry them out on the vast imperial land with the almost unlimited help from his free workforce. Bolotov served in this position for 20 years and retired from his service nearly instantly after the death of Catherine II and the transfer of the land to the private ownership of Count Bobrinsky. Most of the transformations and construction initiatives that made Bogoroditsk a work of architectural and garden art was authored by Bolotov (see Макаров 1924; Любченко 1984; Вергунов/Горохов 1996).

Bolotov assumed office at the end of 1776, after the foundation for both the château and the Kazan church was laid, the gate bell tower was built, the Great Pond and the Rectangular Pond nearby the church were created and a small formal park was laid out near the château. Relying on Bolotov's memoirs, he is the author of the radial design of Bogoroditsk: the radially located streets named for the members of the imperial family converged in one point of the main Catherine Hall of the château (see Болотов 1871–1873, 3, 777f.). This urban construction has survived to date. He also initiated and created the great landscape park that became the ornament of the Bogoroditsk château and has survived to this day.

The key source of information about the history of the creation of Bogoroditsk château and park is also linked to Bolotov's name. Firstly, it is his memoirs which include an in-depth description of all works performed in Bogoroditsk from 1777 till 1796. Secondly, over the course of 10 years, from 1779 till 1790, Bolotov edited in Moscow in the printing works of the well-known Russian publisher N. I. Novikov the journal *Экономический*

магазин (*The Magazine of Economics*) dedicated to housekeeping and economic issues (see *Экономический магазин 1780–1789*). The journal was issued twice a week, and a considerable part of its content was provided by Bolotov himself. In particular, he shared in his magazine articles his agricultural and garden art experience that he had gained during the development of Bogoroditsk. Finally, another source is an album of watercolour and ink illustrations that Bolotov composed together with his son Pavel. From his memoirs we know that they made two albums: one for themselves, and another one as a gift for the empress during her visit in Tula in 1787. The destiny of the presented album is unknown, but the second album is deposited in the State Historical Museum in Moscow and is being prepared for a publication.¹

Bolotov became keen on horticulture already in the 1750s during his years in uniform which he spent in Koenigsberg during the Seven Years' War. He had a garden in his own estate of Dvoryaninovo, and after moving to Bogoroditsk he instantly set up a garden around the house of the onsite caretaker. In 1783, the governor of Tula M. N. Krechetnikov suggested to him to design a big landscape garden around the château. Bolotov was happy about this proposal since it converged with his own intentions. For many years, he had been an admirer of the landscape design in gardening, and shortly before the talk with the governor, he bought all volumes of C. C. L. Hirschfeld's *Theorie der Gartenkunst (Theory of Garden Art)* that he relied upon when designing the park (see Hirschfeld 1779–1785). Despite the general work mentioned above assessing Bolotov's contribution to the development of the Russian garden art, many private aspects of his activity in this area have never been considered. Bolotov was an 18th-century inventor by inclination, and the garden created by him implemented many ideas and fancy ways to solve some problems.

One of the major problems of that kind was the near absence of water. The château and the area behind it were located on the high riverside above the Great Pond, hence the water from the pond could not be used to irrigate the garden nor to set up any aquatic ornaments in it that Bolotov highly appreciated. By and by, starting from 1786, when he began translating the chapters from Hirschfeld's book and printing them in his journal, he also included nine small articles, excerpts from Hirschfeld's dedicated to water, its role in gardening and the different forms of its use, such as in ponds, creeks, waterfalls, fountains etc. (see *Экономический магазин 1785*, 27, 311–318, 321–325, 363–365, 375–378, 385–393; 28, 3–8, 17–24, 33–37, 49–59). One of the first articles begins with some thoughts about water being the soul of a landscape and that all human beings experience elation when they see water or hear its murmur (see *Экономический магазин 1785*, 27, 311).

In reliance upon horticultural literature as well as his own experience and examinations, Bolotov was able to create an innovative water system in Bogoroditsk that provided ample water for the freshly made garden and allowed to set up several aquatic ornaments in it. A

1 I would like to thank the research associate of the State Historical Museum in Moscow, E. A. Lukyanov, for his help to select illustrations.

detailed practical description of the works on how to install the water system was also provided by Bolotov in *Экономический магазин* (*The Magazine of Economics*) starting from 1781. The first article on that topic explores the question of how to look for water, meaning which natural indications can give a hint on the locations where groundwater is close to the soil surface (see *Экономический магазин* 1781, 5, 33–41). He suggests paying attention to the moisture of the soil, some specific plant species and so forth. Such distinctive marks can be put to the purpose of well-sinking but for water disposal, Bolotov proposes to use open sources, in other words springs. In several articles from the years of 1784–85, Bolotov provides an in-depth description of his experiment of water disposal from one part of the landscape to another as exemplified by two main water conduits in Bogoroditsk (see *Экономический магазин* 1781 20, 65–79, 81–112). Primarily, he suggests looking for springs that are located higher than the part of the garden that needs irrigation as it is always easier to guide the water down, on the down grade. He divides the springs and wells into effluent ones and those that are springing up. In both cases, it is suggested to guide the water down some chutes that form a small moat with sloping walls, approximately 25 cm deep and 30 cm wide (in his journal and the memoirs, Bolotov always uses ancient linear measures), whereby the flowing water needs to fill only one third of such a moat. For the wall's reinforcement, Bolotov suggests using oak planks, bridge stones and blue clay that he also discovered in the environs of Bogoroditsk and found to be better than the red, easily washable clay. He turfed the moat edges and, in some places, hedged them, also for reinforcement reasons. Bolotov made a merit of the fact that most of his inventions in the garden did not require the purchase of any special materials nor expenses from the exchequer. That is why he gave up on tailor-made pipes and preferred to dig an open chute although he wrote a separate article on the pipes in the journal (see *Экономический магазин* 1781, 5, 102–107). Instead, all constructions devised by him needed constant care and maintenance in working order, especially after winters.

The process of channelling the chutes itself was described by Bolotov at large in a magazine article (see *Экономический магазин* 1781, 20, 81–96). First, a person with a leveling device goes ahead and drives in pegs along the course of the future chute. This person is followed by two people who even out the ›level way‹ up to 2 metres wide so that it is possible to pass along the whole chute. The chute must run with a steady small incline, so where necessary, this incline was created artificially. Another two people dug the moat and strengthened its walls. The water was let in directly in short parts so that all possible obstacles could be detected: a too loose soil, a too steep or too gentle slope and so on. Bolotov suggested to circumvent natural obstructions cropping up along the way to avoid building an aqueduct. Apart from that, he wrote that the incline of the water flow needs to be small, 5–6 cm per 2 m of the chute to avoid firstly an overflowing of the ponds, secondly water sparge because of a strong current downward and a washing out of the soil, and thirdly for aesthetic reasons. Bolotov assumed that overall, humans preferred to see a smooth water flow with ›quiet steps‹ and hear soft murmuring rather than observe a constant waterfall plummeting down or being subjected to a noisy fall of water (see *Экономический магазин*

1781, 20, 100). It is possible to have it in some separate spots in the park, but they must be few and should be in a secluded place. For setting up waterfalls and cascades, he recommended to use broad flag stones, and the water impact point should be laid out with roundish stones of unequal size so that it is possible to regulate the volume and quality of the sound with their help.

Bolotov found the first source of water for the future Bogoroditsk park a good distance off the château, approximately two kilometres away (see Болотов 1871–1873, 3, 1139–1142). In addition to the above, he had to lift the water in the detected source almost by three metres. The method of the water rise used by Bolotov in Bogoroditsk was also described by him in *Экономический магазин* (*The Magazine of Economics*) but it is only applicable to springing wells (see *Экономический магазин* 1785, 24, 97–109, 113–127, 129–141). The well is covered by sand, and when the water starts to emerge from under the sand in a fountain it is surrounded by a compact timber blocking (small house). This procedure is repeated several times until the water rises to the necessary level, this means in the case of Bolotov by approximately 1.5 metres. The actual length of this water conduit was a lot more than 2 km because it circumvented two gullies. The work took three weeks and was accomplished by the workforce of 20 state-owned peasant serfs. After a while, Bolotov made a second water conduit that began considerably nearer, slightly over half a kilometre from the château (see Болотов 1871–1873, 3, 1180f.). There, he found several sources all at once that he combined into one and then separated again in the part of the garden that was closer to the château. Thanks to these two main water conduits, Bolotov could set up a whole network of ponds in the direct vicinity of the château that were connected by channels, with small bridges, islets, a morning and an evening bench for watching the dawn, the sunset and the reflection of the sun in the water (Plates XVII, XVIII). Several garden pavilions were constructed on the shores of the ponds and on the islands. One of those pavilions that was standing in the way of a short water conduit imitated a half-ruined gate that accommodated a bath-house within (Plate XIX). In the ponds, Bolotov raised carps, and the sufficient amount of irrigation water made it possible to plant mature trees which allowed to set up a real park very quickly.

The high bank of the Upyorta River on which the château was located consisted of very compact sand with various shades. In it, Bolotov laid out passes and galleries and sent down a cascade from the top down the slope that ended exactly near the entrance of a cave so that a guest leaving it could hear water (Plate XX). Finally, Bolotov also installed a water decoy: a mountain in the form of a snail surrounded by a moat. When guests climbed the mountain, a special person sitting in the bushes opened the sluice, and the mountain turned into an island.

There were no fountains in the main château park because they were not in line with the idea of an actual landscape park imitating real nature. But Bolotov also had his own small garden nearby the house of the onsite caretaker. This is where he designed a small fountain for himself in the form of a goose from the beak of which water was springing. Bolotov described in detail its functioning, both in his memoirs and in the journal (see

Болотов 1871–1873, 3, 1169; Экономический магазин 1781, 5, 188–204, 257–272, 311–320). It was a poured-in-place fountain, a barrel was located on the roof of the shed from which the water ran in a pipe into the fountain and returned then back into the barrel with the help of a pump. The most expensive detail of the fountain was a copper tap that Bolotov had to specifically order in Tula.

Saving money was a sort of Bolotov's fixed idea. So much so that he agreed to implement the governor's idea of building an island in the Great Pond with the help of a channel separating a small cape from the main shore. These major works were performed by the locals from Bogoroditsk, and Bolotov was very unhappy about the high costs that needed to be accepted to fulfil the civil servant's whim (see Болотов 1871–1873, 4, 52f.).

The park of the Bogoroditsk estate made much of an impression on the contemporaries and was apparently indeed a rather interesting piece of garden art combining the heritage of the European garden theory with the personal taste of its creator that was characterised by a baroque pursuance of embellishment and inventions. Without requiring major financial investments, it nevertheless needed constant care and maintenance that could only be performed thanks to the nearly unlimited amount of unpaid workforce, namely from the serfs. The water conduits were washed out, they needed to be constantly strengthened, rain and meltwater had to be removed, and the ponds had to be drained during winter. Such a park quickly fell into decline without the vigilant eye of its enthusiastic housekeeper, which happened in the end after Bolotov's resignation in 1797.

The new landlord of the château and the park, Count A. G. Bobrinsky and his caretakers, neglected the maintenance of the water conduits in working order. This led to shallowing ponds and drying trees. But in the middle of the 19th century, thanks to the efforts of the first Count Bobrinsky's grandson, Aleksey Pavlovich, who had served as Minister of Transportation, the garden was revived and even expanded, and the château received two additional wings. There is very little information about that period that could be preserved but it is evident that Bolotov's water conduits were not restored and the major part of his water endeavours was lost. It was at that time that L. N. Tolstoy visited the place, and the Bogoroditsk park served as a prototype for Vronsky's estate Vozdvizhenskoe in the novel *Anna Karenina* (see Осипов 1983).

In 1917, the château was nationalised which was followed by its gradual decline although in 1918 there was still a working museum in some of the château's halls. In the 1920s, the château accommodated troops after which in 1925 it was admitted that it was in a critical condition so that the museum was shut down completely and the park was gradually destroyed. In 1929, both wings and the bell tower were blown up and the health resort 'The Red Miner' opened in the château since Bogoroditsk was surrounded by coal mines. The church was used from 1930 as a warehouse and the park served as a typical Soviet Park of Culture and Rest: it had a swing, amusement rides and a beach on the shore of the Great Pond.

In December 1941, the château was destroyed almost completely and had been for a long time a ruin. In the 1960s, the local authorities took the decision to permanently dis-

pose of the château's ruins that had become dangerous. But a group of locals addressed the Ministry of Culture via leading newspapers and suggested to restore and reconstruct the palace and garden complex. From this point on, the restoration of the complex began and was mainly performed by the said same residents. The restoration of the château was finished in 1973, and in the same year the bell tower was constructed from scratch. Later, a museum opened in the château (see Веселова 2004). Since the beginning of the 1980s, a restoration of the park that in 1975 received Bolotov's name was planned. The park had been partially cleared during the restoration of the château, but the water system had not been restored. The state description of the park and the plan for its restorative works was made already in the 1980s by the association *Specproektrestavraciya* that several times recurred to that idea but due to financial reasons the works have never been started.

The water system of Bogoroditsk suffered even more when in April 1986 the Chernobyl disaster happened. The radioactive cloud passed over Bogoroditsk. One theory is that the USSR government took the deliberate decision to trigger an artificial rainfall so that the radio-contamination would not reach Moscow. These circumstances, namely the high level of radiation in the mush at the bottom of the Great Pond is being referred to as one of the reasons for which the pond was drained and left without water for more than 10 years. Another theory suggests that this was made because the dam was clogged, and the pond began to turn into a swamp. It is possible that both explanations are true. In the beginning of the 2000s, the pond was filled with water again, but experts claim that it needs immediate deepening and cleaning and the park requires a restoration of the drainage system and water-supply facilities. At the present time, it is very difficult to discern the park layout created by Bolotov, the paths in the park are in bad condition or had been partly and barbarously paved with flagstones, and the park itself is overgrown by understory. Despite all pledges and plans, the city officials and regional authorities have not made any serious efforts yet to save this 18th-century historical park.

The origin and history of destruction of the water system in Bogoroditsk park presents a case study of an unfavourable confluence of social and anthropogenic factors. Originating in a fundamentally different social and economic situation in relation to contemporary conditions, this system presented an original and effective but not sustainable solution requiring constant and labour-intensive maintenance. The flip of the political and economic backdrop (the abolition of serfage) determined the first phase in the degrading of water conducts in Bogoroditsk. Historical cataclysms of the 20th century aggravated by an environmental disaster (the accident at a nuclear power plant) and an emotionless attitude of those responsible for Bogoroditsk museum and park (the Ministry of Culture of Russia and the city executives in Bogoroditsk) resulted in a situation where one of the 18th-century ›gems‹ of Russian province is on the verge of being lost (completely) and turning into a fundamentally different place, possibly retaining its leisure function but losing the significance of a historical artefact. The legacy study of Bolotov as the creator of Bogoroditsk park and its water system is essential for the recreation of the historic basis of the park and turning it into a full-fledged museum object.

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Plates XVII–XX State Historical Museum Moscow

Aus dem Russischen von Alexandra Oks.



XVII A. T. Bolotov, P. A. Bolotov, View of the islets on the Lower pond in Bogoroditsk park. Page from the album, Bogoroditsk. View of the estate of the counts Bobrinsky'. 1786 Paper, water colour, ink, pen.



XVIII P. A. Bolotov, View of the rotunda, round pavilion, bell tower and palace from the ›Evening bench‹ in Bogoroditsk park. Page from the album Bogoroditsk. View of the estate of the counts Bobrinsky, 1786–1787.



XIX A. T. Bolotov, P. A. Bolotov, View of the ruins of the dwellings of Ehi in the Ehienean valley in Bogoroditsk park. Page from the album Bogoroditsk. View of the estate of the counts Bobrinsky, 1786. Paper, water colour, ink, pen.



XX P. A. Bolotov, A. T. Bolotov, View of the waterfall and round pavilion in Bogoroditsk park. Page from the album Bogoroditsk. Views of the estate of the counts Bobrinsky, 1786. Paper, water colour, ink, pen.