

The Oldest Oaks of Saint-Petersburg, Russia

Gennady A. Firsov¹, Alexej P. Vekshin²

¹Curator of the Arboretum, Komarov Botanical Institute,
Government of St. Petersburg, Russia

²Committee of Landscape Improvement and Road Economy,
Government of St. Petersburg, Russia

Saint-Petersburg is the oldest centre of introduction of arboreal plants in Russia. Planting of trees, both local and exotic, began soon after the foundation of the city (1703). In 1738 at the Karel Isthmus, not far from Saint-Petersburg, the Lindulovskaya larch grove was established, from seeds of *Larix sibirica* of Arkhangelsk origin. Today, 268 years later, these trees have reached the height of 50 m with a trunk diameter of 1 m at breast height. They are among the tallest of all trees, native and introduced, in north-west Russia; but they are not the largest in diameter, nor the oldest ones.

No doubt certain trees of common oak (*Quercus robur* L.) may be considered among the oldest living trees in and around Saint-Petersburg. This species grows wild in this area and is also commonly cultivated. The northern border of its natural distribution lies somewhat north of Saint-Petersburg. Oak has been widely cultivated since the times of Peter the Great, and its natural stands were kept and protected as far as possible.

Quercus robur was mentioned by G. Sobolevsky in his "Flora Petropolitana" (1799; 1801-1802) with remarks that it grew wild and was also cultivated at the gardens. A. Inostrantsev (1882) in his book about pre-historic man of the Stone Ages at the coast of Ladoga Lake, reported that on digging the Ladoga Canal, trunks of dead old oaks, up to 250 years old and up to 1.6 m in diameter were often found. They were black, but with well-preserved trunks and root systems. Of course, they were native, not planted, but it was a disputable question, how they happened to appear at this area. All historical data and literature confirm the fact that oaks occurred in this territory long before Saint-Petersburg was established. The original primary woody vegetation was represented by *Betula pubescens*, *Betula pendula*, *Alnus glutinosa*, *Alnus incana*, *Sorbus aucuparia* and *Populus tremula*, with the conifers *Pinus sylvestris* and *Picea abies*, and a mixture of broadleaved species: *Quercus robur*, *Tilia cordata* and *Ulmus laevis*. At this time, broadleaved trees, including oaks, were of rather small significance in forming those pristine woods.

We began to develop our interest in old oak trees more than 10 years ago, when we visited Dubki Park near the town of Sestroretsk (in the northern environs of Saint-Petersburg). The park was established in 1719, and we were much impressed by the massive oaks there (**Figure 1**). We began to analyze historic data, visited several parks and gardens, and measured the oldest and largest trees.

There are two main centers of introduction of arboreal plants in Saint-Petersburg. These are the botanic gardens of the Komarov Botanical Institute of the Russian Academy of Sciences (BIN) and of the Forest-Technical Academy (FTA). Botanic Garden BIN was established in 1714 by the order of Peter the Great as Aptekarsky Ogorod (Pharmaceutical garden) to grow medicinal herbs, but since its early years trees of different kinds were also cultivated there. Near the main building of the Komarov Institute there are two good oaks which may be considered to be the oldest



Figure 1. One of the largest *Q. robur* at Dubki Park, Sestroretsk; 36km from Saint-Petersburg, May 1, 2005.

among several thousand trees of Park-Dendrarium BIN. According to some data, they are about 250 years old. Both trees are healthy, they stand in open sunny places, not suppressed by other trees, and have magnificent crowns, as wide as tall. The first tree is 23.0 m tall, 350 cm in circumference at breast height, with the crown 23.8 x 21.6 m. The second tree is 24.0 m tall, 345 cm in circumference with the crown 18.5 x 17.7 m (all measurements made in autumn 2005). These trees grow in the centre of huge industrial city on Aptekarski Island at the mouth of the Neva River, only 3 m above sea level, in an area subject to flooding.

The park FTA was established later, in the 19th century. The first plantings of trees here were made in 1827-1828. At that time two oak trees were planted here (not in one year but with an interval of several years). They grow in a beautiful glade, left and right of the entrance to the main building FTA, just behind a flower parterre (**Figure 2**). At present, the right-hand tree (when facing the building) has reached 24.5 m tall, 326 cm in circumference, with the crown 26.4 x 23.5 m. The tree is in a good condition and has a well-developed main trunk with symmetrical branches protruding in different directions. The fully cylindrical trunk forks at 4 m. The left-hand tree is 25.5 m tall, 425 cm in circumference, with the crown 25.0 x 22.2 m. This tree is also with a well-developed crown, without frost damage, and without hollows and signs of dry twigs. At the height of 2.1 m it is divided in two massive trunks. One of them has another division somewhat higher, and in general the crown consists of three main stems, without a leader. These two oak trees grow at the northern area of the city, less subject to environmental pollution, and at a higher elevation compared to the other oaks described here. It is interesting that there are data of Egbert Wolf (1929), who measured these oaks in 1924. He pointed out that



Figure 2. The Forest-Technical Academy park, with two *Q. robur* at the entrance.

the right hand oak was 23.5 m tall, and the left one was nearly the same height. The trunk diameter of the right tree was 90 cm, and of the left one 64 cm, measured at 90 cm. The diameter of the crown was 17-18 m. Therefore, in the last 80 years, the height of these trees has remained nearly unchanged while the size of the crown has enlarged by nearly one and half times. Most considerable has been the enlargement of the diameter of the trunk.

There are old oaks in other parks of Saint-Petersburg and its environs as well. Prince A.M. Beloselsky owned Krestovsky Island since 1803. Soon after this, the park was established around his castle (Markov, 1965). Up to the present day, several oaks, larches, limes, silver maples and Siberian pine have survived here. The oldest existing trees here are therefore about 200 years old. As for oaks, one of the largest here is a tree standing on the right bank of the Malaya Nevka River near Petrovsky Bridge, just above the river. It is 19.0 m tall, 374 cm in circumference, with a crown of 18.0 x 16.0 m. The second tree, not far from the first, is smaller, but of the same age: 14.0 m tall, 315 cm in circumference and with the crown 16.5 x 14.0 m.

A special geobotanical and historical research was carried out of Peter the Great's Estate "Blizhnije Dubki" which existed at the northern sea-shore of the Gulf of Finland in 1723-1737. The project was undertaken by a group of experts under the leadership of Dr. Valentina Ukraitseva and Mr. Andrej Reiman (2001). In 1995 they measured the circumference of a dying oak tree as 440 cm. Using the method of radio-carbon analysis, its age was estimated to be 570 years, \pm 54 years. This means that during the first years of Saint-Petersburg's existence, and when the Russian Tsar's estate was being planned, this was already a large and beautiful tree about 300 years old or even older, and was carefully protected.

Ten years later, in summer 2005, we tried to find that very oak. Two of our excursions



Figure 3. The author's wife, Barbara, gives scale to the oldest *Q. robur* in the Gulf of Finland, nearly 5m in circumference.



Figure 4. The author beneath the ancient *Q. robur*, Gulf of Finland.

were unsuccessful. But finally we were rewarded with the discovery of another oak tree, even larger and apparently older (**Figures 3,4**). This is a wild oak, growing in the forest, not in the park or garden, and not near buildings, but there is a small possibility that it might have been planted by Swedes who were early inhabitants of this area. We express our gratitude to the local amateur oak enthusiast Mrs. Irina Medalinskaya, who helped to find this tree in the wild forest along the Gulf shore on 1 October 2005. This impressive tree is 22.5 m tall and nearly 5 m in circumference (496 cm), with a massive crown of 22 x 25 m. (**Figure 5**). Standing in a

small glade, it looks like a giant among dwarfs, compared with other, smaller trees of the surrounding forest. Apparently, this is the oldest tree, the absolute champion among all trees growing wild or cultivated in the area of Saint-Petersburg and far around. Luckily, this tree is in good condition, and many young seedlings may be found under its canopy. Several of them we took and planted at the nursery of the Komarov Botanical Institute.



Figure 5. Measuring the Gulf of Finland *Q. robur*; 496 cm circumference.

But how old might this tree be? The width of its trunk is surpassed by two oaks growing at Elagin Island near the Palace. I.P. Elagin was a courtier of Katherine the Great, and he became the owner of the Island, now named after him, at the end of 1770s. Both oaks grow in an open position near the mouth of the Neva River. One of them has the broadest trunk of all trees in the Saint-Petersburg area. It is 670 cm

in circumference, 26.5 m tall, with compact crown 15.5 x 16.5 m. (**Figure 6**). At 5 m the tree is divided into two massive trunks. The lower part of the tree is partly rotten and destroyed, with a large hollow repaired by iron sheets. On the north side, nearly half the bark is absent up to a height of 6 m. The second tree is of the same height (estimated as 26.5 m tall). Its trunk is less massive – 520 cm in circumference, but surpasses all other trees in Saint-Petersburg, taking the honorable second place after its neighbor. The crown is 25.7 x 19.6 m, with the trunk forked at 3 m. This tree is in better condition. The bark is undamaged, except near soil level where



Figure 6. The largest *Q. robur* at Elagin Island, and in Saint-Petersburg, near Elagin Palace.

there are several small fillings protected by cement.

According to some literature (Markov, 1965; Kovjazin et al., 2002) these trees could have been planted in Elagin's time, as, when the park was established, drainage modifications were made and many trees were planted. If this is the case, their age cannot exceed 240-250 years old. In fact, these two oaks are much older. The main expert of Central Park of Culture and Rest (which is now situated now at Elagin Island) Mr. Andrej R. Mets was very kind to report to us that there is an oral legend, that the first and oldest oak was self-sown (an acorn was dropped by a duck) in 1557. According to the legend, the acorn of the second oak was planted by Swedish fishermen A. Petersson, who lived on this island, in autumn 1661, and germinated in spring 1662. This was before Saint-Petersburg was established.

The old oak at Kamenny Island was planted, according to legend, personally by Peter the Great. The tree died in 1988. In 2003 at that very place, a young oak seedling was planted, in memory of the 300th anniversary of Saint-Petersburg.

There are other old trees in parks and gardens of Saint-Petersburg, which we were lucky to identify and observe, but this is a subject for other articles. All of them are in need of protection and careful monitoring, in order to prolong their lives as much as possible. We believe that oak trees described in this article will be of interest for The International Oak Society, and that they deserve to be included in a European database of old trees. This is a very important task to estimate the real age of the oldest and largest oaks.

References

- Inostrantsev A.A. SPb 1882. Doistorichesky chelovek kamennogo veka poberezhja Ladozhskogo ozera. 244 p.
- Kovjazin V.F., Minkevich I.I., Shabnov V.M. 2002. Drevesnie porodi zelenih nasazhdenij Sankt-Peterburga i Pushkina, monitoring ih sostojanija i sposobi ego uluchshenija. SPb.: SPbGPU. 88 p.
- Markov V.I. 1965. Kirovskie ostrova. L.: Lenizdat. 159 p.
- Sobolewsky G. 1799. Flora petropolitana. Petropoli. 352 p.
- Sobolewsky G.F. SPb. 1801-1802. Sankt-Peterburgskaya flora, ili opisanije nahodjaschihsja v Sankt-Peterburgskoi gubernii prirodnih rastenij s prilozheniem nekotoryh inostrannih, kak na otkritom vozduhe, zdeshnem stranopolozhenii udobno proizrastajut. Parts 1-2.
- Ukrainitseva V.V., Reiman I.L., Arslanov Kh.A., Kutlin N.V., Levina I.L. 2001. Geobotanicheskoe izuchenie usadbi Petra I "Blizhnije Dubki" (1723-1737) // Izvestija AN. Ser. geograficheskaya. N 2. P. 96-102.
- Wolf E.L. 1929. Park and arboretum Leningradskogo lesnogo instituta // Izvestija Leningradskogo lesnogo instituta. Vip. 37. L., pp. 235-268.