



THE HISTORY OF THE FIRST PRUSSIAN MAJOR FOREST TREE NURSERY MÜHLENBECK (ŚMIERDNICA/PUSZCZA BUKOWA) AND THE ARBORETUM IN GLIEN (GLINNA)

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It may not be widely known among neither foresters nor dendrologists that after having passed his exams in forestry at the University of Berlin with distinction in 1816, the oldest son of the Prussian head forester **Georg Ludwig Hartig** (1764–1837), Friedrich Hartig, obtained his first employment as a head forester in Mühlenbeck in der Buchheide near Stettin (Pomerania), which is Śmierdnica/Puszcza Bukowa near Szczecin, Poland today. In this Prussian forest district the first Prussian major forest tree nursery was established in Glien (Glinna) in 1823. The famous landscape gardener **Peter Joseph Lenné** (1789–1866) had been among the founders of this facility, of which head forester Hartig now assumed control. He developed it with big dedication into an exemplary forest plant raising site at that time. It was the first time in Prussia that the widely increasing demand for pinewood trees after the turn of the 18th to the 19th century was accommodated, that could no longer be covered by the mostly undersized planting camps in the forest districts.

Friedrich Theodor Carl (von) Hartig (fig. 1) descended from a well known Hessian family of foresters that provided excellent foresters in five generations of German forestry. He was born in Hungen/Wetterau on April 12, 1788. His father, the later chief of the Prussian state forestry administration, had still been baronial forester of Solms-Braunfels at the time his son was born. Modeling himself on his father, Friedrich first had studied with him at his private forestry school

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in Dillenburg before he joined the Königlich Württembergische Leibjägercorps as an ensign in 1808. Being a member of the Rheinbundkontingente Friedrich Hartig took part in the campaign against Russia under marshal Ney in 1812 that involved heavy losses. He received high military awards for outstanding bravery and even was conferred personal titles of nobility by the King of Württemberg. He then joined the army of Silesia under marshal Blücher, where he was again highly decorated as an officer in the fight against Napoleon. After the wars of liberation Friedrich Hartig was able to complete his studies of forestry in Berlin and obtained his first employment as a head forester in Mühlenbeck/Pommern.

In Mühlenbeck he started teaching forestry students in 1820, emulating his father. His brother Theodor (1805–1880), the later professor of forestry at the Collegium Carolinum in Braunschweig, was one of his first students. The latter afterwards called his apprenticeship in Mühlenbeck especially formative and productive for him. Friedrich Hartig paid special attention to the projects of reforestation in his field of responsibility. He designed a cultivator, a harrow and a hoe for the local soil conditions (HARTIG 1840). Under his administration forest stands developed, “which we now enjoy in every instance – the fund, too!” (Woś 1997). During his time as a forester there was also developed the plan to create a forest garden, among other things to test the possibility to cultivate “exotic kinds“ of wood.

The forest tree nursery in Glien had nine acres of land (2.25 ha) when it was established in 1823 (BENDIX 2008). It was enlarged by two acres (0.5 ha) in 1830 and grew to a total of 21 acres (5.36 ha) until 1867. It was shaped like a regular square with a central path and ten raising quarters (fig. 2). Hartig transferred the supervision as well as the care work to a lumberjack with “a large family able to work“. For his work this man, who was very interested in plant raising, received 48 Reichstaler a year as well as three pennies from the proceeds of every plant. In 1829 a house was built at the nursery for this “nursery keeper“, where the attic was used as a storage for the seeds. At that time this forest tree nursery had a very good reputation among foresters over the borders of Prussia. Numerous excursions were realized to visit the raising site. Hartig managed the forest tree nursery in Glien until October 1, 1832. He later reported on the installation and the economic development in a detailed disquisition. According to his forestal merits he was awarded the 4th class medal of the Red Eagle (Rote Adlerorden IV. Klasse) by the Prussian king Friedrich Wilhelm III. on January 18, 1830. There-with thanks were given to him last but not least for his dedication to this forest plant nursery. Promoted to an inspector of forestry he was assigned the survey of the forest in Schwedt/Oder from October 1832 to March 1843. Afterwards he assumed control of the royal Prussian forestry district Tornau in the Dübener Heide, administrative district of Merseburg by “the highest order of the Cabinet“ and keeping the rank of an inspector of forestry. In the spring of 1850 he suffered a serious riding accident performing the official forestal duties in his forestry district. He underwent surgery in Leipzig, but died on May 4, 1850 due to his severe injuries and an additional pneumonia. Hartig was buried on May

7, 1850. His grave has been preserved until today on the municipal cemetery in Bad Dübén (BENDIX 2001).

Under his successor, head forester **Friese** (1832–1854), the production of the tree nursery in Glien fell back so far that a closing sale of the existing plant populations and the reforestation of the area were considered after 1845. These measures, however, remained undone and it was possible to improve the raising conditions by intensive tillage operations and fertilizing in the following years. This is in particular due to the great dedication of the forest supervisor **Wilhelm Raatz** (1822–1902) for this forestal show case, who was appointed especially for the forest tree nursery in 1855. This also aroused interest of forest inspector **Bernhard Danckelmann** (1831–1901), who was responsible for the survey district of Potsdam-Neustadt(-Eberswalde). In 1866 he took the competent young forest supervisor as a newly appointed interim principal to the institute of higher forestal education in Neustadt-Eberswalde and conferred on him the administration of the well-known forest garden in Chorin. Raatz was head gardener there till 1893 (MILNIK 2006).

Head forester **Carl Ludwig Gené** (1820–1893), who had been a forest student of chief forest inspector **Wilhelm Pfeil** (1783–1859) at the institute of higher forestal education in Neustadt-Eberswalde, was executive head forester in Mühlenbeck from 1863 to 1893. Under his management the raising profile of the tree nursery has been significantly expanded. In addition to the traditional production of forest plants fruit trees, alley trees and decorative trees as well as ornamental shrubs, roses and hedge forming plants were now raised. Even a new residential and a farm building were erected between 1874 and 1876. A printed sales list from 1889 mentions 33 species of trees under the heading of “Alley and Forest Trees“, among others Boxelder *Acer negundo* L., and Lombardy Poplar *Populus nigra* ‘Italica’, Horse-chestnut *Aesculus x carnea* Hayne, Swingle *Ailantus altissima* (Mill.) – tree of heaven (e.g. 2.0 m high for 40 pennies per piece), Silver Birch *Betula pendula* ‘fastigiata’, Flowering Ash *Fraxinus ornus* L., English Oak *Quercus robur* ‘fastigiata’ Koster – (e.g. more than 3 m high for 3 Mark per piece), Pagoda Tree *Styphnolobium japonicum* (L.) Schott., Zelkova *Zelkova serrata* (Thunb. ex Murray) Makino, King Boris’ Fir *Abies borisii-regis* Matf. and Spanish Fir *Abies pinsapo* Boiss. – were sold as “decorative trees“. Among the “ornamental shrubs“ Judas-tree *Ceris siliquastrum* L. (50p./p.), Slender deutzia *Deutzia gracilis* Siebold et. Zucc. (also 50p./p.), European bladdernut *Staphylea pinnata* L. and Yellowroot *Xanthorrhiza simplicissima* Marshall (each for 30p./p.) could be found (GENÉ 1889). The assortment of this forest tree nursery clearly shows that Gené has been extraordinarily interested in dendrology. For this reason the rare species of trees and shrubs mentioned above were raised and the area of the tree nursery was systematically expanded into an arboretum from 1870. In 1889 head gardener **Strelow** managed the tree nursery. The plant sale was handled by the royal auxiliary forest treasury (Königliche Forsthilfskasse) in Dobberpfuhl near Neumark in Pommern.

When a guided tour for the Pommeranian Forest Club took place on June 29, 1878, Gené wasn't able to produce a catalogue of his only eight year old arboretum, but he labelled especially well grown specimen of Silver Maple *Acer sacharinum* L., Cross vine *Bignonia capreolata* L., Kentucky Coffee Tree *Cymnocladus* Lam., Honey Locust *Gleditschia* L., Black Walnut *Juglans nigra* L., White Walnut *Juglans cinerea* L., Tulip Tree *Liriodendron* L., Magnolia *Magnolia* L., Northern Red Oak *Quercus rubra* L., Scarlet Oak *Quercus coccinea* Münchh., Shingle Oak *Quercus imbricaria* Michx., Turkey Oak *Quercus cerris* L., American Elm *Ulmus americana* L., Atlantic White Cypress *Chamaecyparis thyoides* (L.) Britton, Strens et. Poggenb., Eastern Red-cedar *Juniperus virginiana* L., Whitebark Pine *Pinus albicaulis* Engelm., Swiss Stone Pine *Pinus cembra* L., Lodgepole Pine *Pinus contorta* Douglas ex Loudon, Black Pine *Pinus nigra* J.F. Arnold, Loblolly Pine *Pinus taeda* L., Red Spruce *Picea rubens* Sarg., White Spruce *Picea glauca* (Moench) Voss, Balsam Fir *Abies balsamea* (L.) Mill., Nordmann Fir *Abies nordmanniana* (Steven) Spach, Siberian Fir *Abies sibirica* Ledeb., Deciduous Cypress *Taxodium distichum* (L.) Rich., Sierra Redwood *Sequoiadendron giganteum* (Lindl.) J. Buchholz, Maidenhair Tree *Ginkgo biloba* L., Black Cherry *Prunus serotina* Ehrh. and Sweetshrub *Calycanthus* L. in his excursion guide (GENÉ 1878). Most of the oldest and most valuable specimen in the area of the arboretum in Glinna of today which is 3.61 hectares now date from 1870 to 1890 (fig. 4).

A first "official" information about the arboretum dates from 1911, when the well-known forest scientist from Eberswalde Prof. Dr. **Adam Schwappach** (1851–1932) mentioned among others the already no longer existing Black Walnut (*Juglans nigra* L.) which had a diameter at breast height of 92 cm and a height of 23 m, as well as the at that time 90 years old Shagbark Hickory (*Carya ovata* [Mill.] K. Koch) which had a diameter at breast height of 54 cm and a height of 23 m "in the forest garden of Glien" and was planted by head forester Hartig, in one of his disquisitions on expatriate forest species (SCHWAPPACH 1911). This *Carya* which can be found in quarter 2 today, now has reached a diameter at breast height of 83 cm and a height of 32 m. In 1983 a compilation initiated by the German Dendrological Association (Deutsche Dendrologische Gesellschaft) is said to have included 56 different species of shrubs and trees altogether. In a detailed inventory in 1970/71 commissioned by the Polish administration of state forests – to whose area of responsibility the forest garden in Glien belongs since 1954 – only 23 of the tree species listed in the compilation could be confirmed though. Most of the missing specimen presumably have not survived the harsh winters of 1939/40 and 1941/42. It is also known that scores of old trees fell victim to storms or droughts in the years between 1950 and 1970. The replacement plantings continuously made by Polish foresters since 1970 originated almost entirely from seed stock of the arboretum in Rogów and brought the population of the arboretum to a total of 916 trees and shrubs from 135 genera with 360 species. Already in the entrance area the visitor is welcomed by a particularly fine specimen of an Atlas Cedar (*Cedrus atlantica* [Endl.] Manetti ex Carrière). Figure 3 gives a good impression of the very well-tended precious plant population of today. Besides the already mentioned *Carya* the specimen of a 42 m high *Abies*

grandis (Douglas ex D. Don) Lindl. – Giant Fir and a 28 m high *Abies cephalonica* Loudon – Greek Fir are particularly impressive (TUMIŁOWICZ 1996).

On the initiative of Prof. Dr. **Bolesław Szymkiewicz** of the University of Agriculture (SGGW) Warsaw and the deputy director of the regional management of state forests in Szczecin, Dr.-Ing. **Jerzy Jackowski**, the scientific attendance of the forest garden has been entrusted in the care of the arboretum of the University of Agriculture Warsaw in Rogów. However, being the owner of the area the head forestry district of Gryfino (Greifenhagen) is responsible for management and garden design (DATA 2001). In 1997, an information and training center of the forest promotion complex, a nature trail and a parking lot for visitors have been built at the arboretum. Every tree and shrub specimen is signposted, numbered and mapped. Above that an information booklet includes a separate chart of the most precious trees measured in 1993.

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S u m m a r y

The article deals with the installation and development of the Prussian Forest Tree Nursery Mühlenbeck in the Buchheide Stettin (Pomerania) – now Śmierdnica/Puszcza Bukowa with Szczecin, in the Republic Poland and the resulting Arboretum Glien (Glinna) from 1880.

Key words: history of forestry, forest tree nursery, arboretum, tree species

HISTORIA PIERWSZEJ PRUSKIEJ SZKÓŁKI DRZEW LEŚNYCH W ŚMIERDNICY I ARBORETUM W GLINNEJ

S t r e s z c z e n i e

Publikacja omawia historię utworzenia i rozwoju pierwszej, pruskiej, szkółki leśnej w Śmierdnicy w Puszczy Bukowej (Mühlenbeck, Buchheide) w okolicach Szczecina w 1880 roku i powstałej na tej bazie Arboretum w Glinnej (Glien).

Słowa kluczowe: historia leśnictwa, szkółka leśna, arboretum, gatunki drzew



Fig. 1. Friedrich Theodor Carl (von) Hartig (1788–1850) wearing the uniform of a Prussian (titular) forest inspector, around 1832 (after BENDIX 2001)

Ryc. 1. Friedrich Theodor Carl (von) Hartig (1788/50) w mundurze pruskiego nadleśniczego, około 1832 roku (BENDIX 2001)

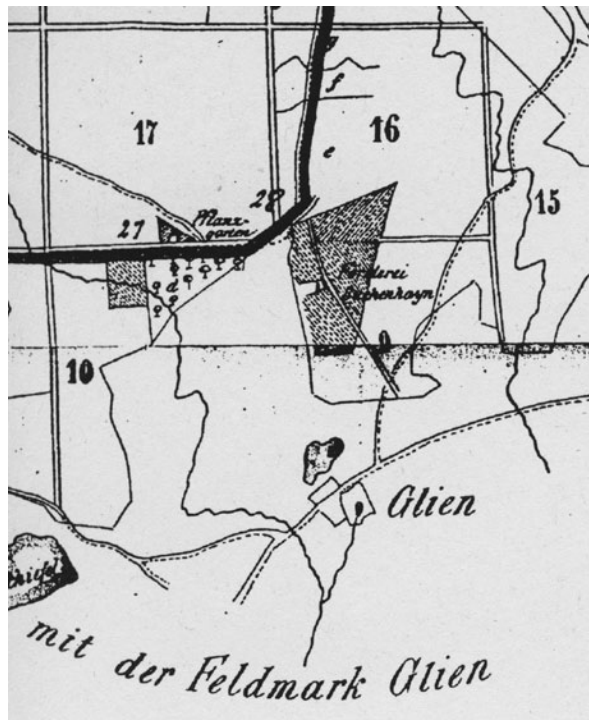


Fig. 2. Floor plan of the forest tree nursery in Glien in 1878 (after GENÉ 1878)

Ryc. 2. Mapa terenowa szkółki w Glinnej w 1878 roku (GENÉ 1878)



Fig. 3. Arboretum in Glinna in May 2010 (photo B. Bendix)

Ryc. 3. Arboretum w Glinnej w maju 2010 roku (fot. B. Bendix)



Fig. 4. Memorial badge awarded on the 125th anniversary of the opening of the Arboretum Glinna (photo B. Bendix 2010)

Ryc. 4. Odznaka pamiątkowa wydana z okazji 125. rocznicy otwarcia Arboretum w Glinnej (fot. B. Bendix)