Plants depend on their roots, of course, but it can also be said that people depend, in the figurative sense, on their roots. This year, 2013, is the 150th anniversary of the birth of renowned botanist Alfred Rehder, and it provides a welcome opportunity to remember his family roots, youth, and education: in a word, his origin in Germany.

Childhood and Youth in Waldenburg

Alfred Rehder was born on September 4, 1863, in Waldenburg, Saxony (Kobuski 1950, Reed 1951, Rehder 1972). This small town on the banks of the Mulde river was the capital and seat of power of the principality Schoenburg-Waldenburg, a miniature state with limited sovereignty but a high level of culture. His father, Paul Julius Rehder (1833–1917), was employed there beginning in 1859 as Prince Otto Friedrich's (1819–1893) director of parks and gardens. As a high court official, he lived in a wing of the castle and it was here that his eldest son Georg Alfred was born. (Note: While Rehder himself used only the first name Alfred, the parish register at St. Bartholomäus church in Waldenburg shows Georg Alfred as the name on his baptismal certificate.)

Julius Rehder was responsible for maintaining and developing the famous old park Greenfield, as well as the castle's park and pleasure garden. On behalf of the Prince he developed grand plans to transform the picturesque surroundings of town and river into a magnificent park comparable to the famous parks in Woerlitz and Muskau. These plans were never realized for reasons of cost.

Julius Rehder was one of the notables of the town. Besides his work for the prince, he was an authority on all things horticultural. A very sociable man, he had a large circle of friends. He was temporarily chairman of the club "Harmony," an association of the citizens for the cultivation of social life, in competition to the court society. My grandfather, Richard Rüdiger (1864–1934), and his family were close friends of Rehder, and in 1892 Rehder designed the Rüdiger's garden.

Alfred Rehder's mother, Thekla (1839–1897), was the daughter of the physician and author Dr. Julius Schmidt (1796–1872) (Ruckdeschel 1872) in Hohenleuben, a small rural commune in the principality Reuss-Schleiz. A bit of mystery surrounds Julius Schmidt's origins, but there is strong evidence that he was an illegiti-
mate son of Heinrich, Duke of Anhalt-Köthen (1778–1847) (Fischer 1940). Alfred Rehder’s ancestors thus include the ducal family of Anhalt, one of the oldest families in the German nobility. Interestingly, the founder of the world-renowned parks and gardens of Wörlitz was also a member of this family.

In 1825, Schmidt was a co-founder and president of the Voigtländischen Alterthumsforschenden Gesellschaft, a historical society that still exists today. The scientific interests of Rehder’s maternal grandfather went far beyond his profession. He was a proficient botanist; in his “Topographie der Pflege Reichenfels” (Schmidt 1827) he described more than 300 native plant species.

He also dealt with the influence of climate on horticulture. Schmidt suggested, first, that for each plant in the botanical literature the annual mean temperatures should be specified, in which “it thrives well, moderately, or not at all.” Second, if the annual mean temperature would be explored for each area, these data “would save a lot of unnecessary tests to introduce new plant species” (Schmidt 1827). Exactly 100 years later, Alfred Rehder published his systematic investigation of plant hardiness zones and maps of these zones (Rehder 1927)—an ingenious further development of the ideas of his maternal grandfather and godfather.

After attending elementary school in Waldenburg, Alfred Rehder lived for two years in Berga/
Elster with his uncle, the Reverend August Schillbach, who prepared him to attend high school. Here Rehder gained his thorough knowledge of Latin and Greek, which he would later use in shaping a variety of new plant names. Throughout his life he dealt with the question of historically and linguistically correct notation, including in his papers entitled “Botanikerlatein” (Botanist’s Latin) (Rehder 1885) and “Origin of the name Camellia” (Rehder 1938). During this time his character development was molded by the modest but intellectual atmosphere of a Protestant parsonage. Alfred Rehder had a broad general education, and he was interested in matters far removed from horticultural and arboricultural fields. Kobuski (1950) reported that it was a joy to hear him tell of his younger days in Germany and the cultural life in which he participated.

Starting at Easter in 1876, he attended high school (Gymnasium zu Zwickau) in Zwickau. Here he met the teacher who would determine his future, Otto Wünsche (1839–1903), who was the most famous botanist in Saxony at the time. His plant identification book Exkursionsflora für das Königreich Sachsen (Flora of the Kingdom of Saxony) (Wünsche 1869) was, with its clear key and excellent analytical method, the model for all subsequent school floras. He gave lessons in botany and natural history, and “many a disciple was won by him for botany” (Schorler 1905), including Rehder.

In 1881, Alfred Rehder left the school without a high school diploma (Erler 1882) and went back to Waldenburg. He began a three-year apprenticeship as a gardener with his father. Being a gardener was not only his father’s profession, it was the family tradition. His grandfather Jacob Heinrich Rehder (1790–1852) (Thietje 2003) had, as long-standing court gardener for Prince Pueckler, an essential part in the creation of Muskau Parks, and his great-grandfather, Friedrich August Schmidt, was court gardener of Count Carl von Brühl (1772–1837) in Pförten/Brody in Lower Lusatia.

By the age of 23 Alfred Rehder had written a flora for his home region in Saxony.

Exkursionsflora
für das
Königreich Sachsen
und die
angrenzenden Gegend.

Bearbeitet
von
Dr. Otto Wünsche,
Oberlehrer am Gymnasium zu Zwickau.

Die höheren Pflanzen.
Sechste, umgearbeitete Auflage.

Leipzig,
Druck und Verlag von B. G. Teubner.
1891.

By the age of 23 Alfred Rehder had written a flora for his home region in Saxony.
Rehder's Years of Travel

In March 1884, the apprenticeship was finished. Fourteen years of traveling then began for the young gardener, and during this period Rehder made himself familiar with all aspects of gardening work. First, he went to Berlin at the Botanical Garden of the Friedrich-Wilhelm-University and used the opportunity to gain new knowledge about taxonomy and field research. As first proof of his growing taxonomic skills, he gave a lecture at the 1886 meeting of the Association of Natural History in Zwickau. The 23-year-old spoke about beardmosses, and showed convincingly that the esteemed explorer Henry M. Stanley had made errors in the determination of this plant species (Anonymous 1886).

After an interlude in 1886 working with a flower grower in Frankfurt, he went to Muskau and worked for a year with Gustav Schrefeld (1831–1891), a disciple and successor of his grandfather (Jacob Heinrich Rehder was no longer alive.) In Muskau, Alfred Rehder lived with his grandmother Auguste. It is very likely that here he got to know his future wife, Anneliese (1875–1967), the daughter of Gustav Schrefeld. During this period he was especially interested in the well-known garden and tree nursery, Arboretum Muscaviense.

In 1888 he worked—now as head gardener—for a year at the Grand Ducal Botanical Garden of Hesse-Darmstadt. During the next six years he worked at the Botanical Garden of the University of Göttingen. Rehder was fully responsible for the entire garden and, with enthusiasm and vigor, immediately began a profound reorganization of the venerable institution. This earned him acclaim and also extended his research work, as he made contact with leading botanists and wrote more than 20 publications.

In 1890, Prince Otto of Stolberg-Wernigerode offered the University of Göttingen an area for a garden for the study of alpine plants on the Brocken, the tallest of the Harz Mountains. This Brockengarten was designed and created by Rehder. His later pioneering work on the hardiness of woody plants and developing hardiness zone maps was founded in his work at this garden.
Brockengarten

Alfred Rehder was instrumental in the creation of the Brockengarten, a botanical garden designed for the study of alpine plants. After years of neglect in the 1970s and 1980s, the garden was reestablished in the 1990s. Today, alpine plants from many regions can be seen in the garden, with a weather station and telecommunications tower arising at the mountain’s peak. Seen here, sky blue *Gentiana ternifolia* from China and *Calceolaria uniflora* from the Patagonia region in South America.

However, the collaboration with his supervisor, Albert Peter (1853–1937), director of the Göttingen garden, soon proved to be very difficult. The professor saw in the only 10-years-younger colleague merely a practical working gardener, without academic training, and prohibited any independent decision-making. The situation was untenable, all attempts at mediation failed, and Rehder soon announced his resignation. As before, he used this time to change, to open up to a new field of work, and in 1895 he became editor of the leading German horticultural journal, *Möller’s Deutsche Gärtner Zeitung*.

Rehder threw himself into journalism. In the three years from 1896 through 1898 he published a total of 120 articles on a wide range of horticultural and dendrological topics. His extraordinary ability to represent scientific results in a clear and persuasive form of writing emerged from this journalistic work.

Rehder spent several years editing and writing for *Möller’s Deutsche Gärtner Zeitung*, the leading German horticultural journal of the day.
A New Beginning in America

In the 1880s, grape phylloxera (an aphid-like insect that can damage or kill grapevine roots) spread in Germany and threatened to destroy the wine producing industry. American grape (Vitis) species were found to be resistant to phylloxera, so knowledge of these plants was indispensable for the survival of European wine production. In 1898 Rehder received from the German government a mandate to examine the Vitis species on the East Coast, while at the same time reporting about American horticulture for his journal. As a destination, he chose the Arnold Arboretum in Boston, which was part of Harvard University and, despite being in existence for only 26 years, was regarded as the center of American dendrology.

His initial reception in Boston was far from friendly, as the over-cautious port authorities had him summarily detained. Through the mediation of the founder and director of the Arnold Arboretum, Charles S. Sargent (1841–1927), he was set free. Rehder’s launch into the United States was also difficult for him in economic terms, and for a while he improved his meager income by weeding in the Arboretum. Sargent quickly recognized the exceptional botanical skills of the young German and offered him a permanent position.

The next article in this issue describes the further development of the “unübertrefflichen [unsurpassable]” (Höfker 1927; Günther 1979) Alfred Rehder. His enormous talent and tireless energy enabled him to combine his family tradition with the resources of the Arnold Arboretum to become the most important dendrologist of the twentieth century.

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References

Dr. Arnd Rüdiger Grimmer grew up in Waldenburg. He studied chemistry and worked for many years at the Academy of Sciences of the GDR and the Humboldt University–Berlin. Concurrent with his retirement he studies the regional history of the Principality of Schoenburg-Waldenburg and recently coordinated a 150th anniversary celebration of Alfred Rehder in Waldenburg.