



## **HANS CARL VON CARLOWITZ SYLVICULTURA OECONOMICA**

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The Royal Polish and Electoral Saxon Oberberghauptmann (chief officer of the mining administration) Hans Carl von Carlowitz (1645–1714) published the first purely forestal German reference book *Sylvicultura oeconomica*, also known as *Anweisung zur wilden Baumzucht*. Thereby he is given pride of place among the fore-runners of forestry (fig. 1).

### **GERMANY HONORS THE ELECTORAL SAXON OBERBERGHAUPTMANN VON CARLOWITZ (1645–1714) IN 2013**

The year 2013 provides an occasion for German foresters to honor the author through commemorative ceremonies, newspaper articles and book publications on the subject that is a “300 years of *Sylvicultura oeconomica*“. Concurrently another fact of world-historic significance is appreciated: As a numerous modern publications depict, now more than ever a set phrase of “Nachhaltiger Entwicklung” (*Sustainable development*) is being used, which when looking back in time, arose from the forest sustainability, inter alia, as one amongst other old forest regulations (e.g. Saxony 1560) and have become evident in the works of Hans Carl von Carlowitz. Thus his personality is honored now, who, as a non-forester, worked commendably

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for the conservation and improvement of the Electoral Saxon forests. Who was that baroque author?<sup>1</sup>

## BIOGRAPHY OF THE AUTHOR OF THE FIRST GERMAN FOREST BOOK

Hans Carl von Carlowitz was born as the second of seventeen children of the later Landjägermeister (professional huntsman of the state) of the county Erzgebirge Georg Carl von Carlowitz (1616–1680) at Rabenstein Castle near Chemnitz (fig. 2) on 14 December 1645. His parents provided a solid education for the boy. They sent him to school at Werdau and, in 1659, to the secondary school at Halle an der Saale, which was famous at that time. Five years later the secondary school pupil took up the studies at the university of Jena. The time he spent on studying in Jena comprised a maximum of two semesters during which he also attended lectures given by Erhard Weigel (1625–1699), a professor of mathematics who taught there since 1653 and had been very well known beyond the university.

Here in Jena, the twenty years old von Carlowitz may have decided to embark on a grand tour which had been mandatory for young noblemen, to extend his levels of knowledge and to learn about other cultures. Encouraged in his decision he launched and visited such important cities and residences as Nuremberg, Heidelberg, Stuttgart, Durlach, Frankfurt am Main, Mainz und Cologne. The exact itinerary is now open to speculation, as his travel reports have been lost. Later, in 1665, von Carlowitz directed himself towards the universities of Leiden and Utrecht which were open to enlightenment, to continue his studies.

Von Carlowitz probably have spent only one semester at both universities respectively and travelled afterwards through the Spanish Netherlands (Flanders), where at that time, the plague was raging. Then in 1666 he betook himself to London, and the only understandable reason of his action was the fact that at that time a big epidemic was rampant, but in London it was already subsiding. Instead of experiencing the above, he witnessed the full extent of the Great Fire of London, that broke out on Sunday 2 September 1666, at first-hand. Because it had been supposed that foreigners could also had started the fire deliberately, von Carlowitz was arrested and held in a custody for a short period of time.

He left London in spring 1667 and betook himself to Danmark via Hamburg and ultimately to Sweden. His way back led him via Lübeck and by sea from Hamburg to the Netherlands again.

Later, driven by his thirst for knowledge, he travelled to France, to the gorgeous metropolis of the Sun King Louis XIV, the Paris. During the years 1638–1715 he had

1 This biographical portrayal written by Bernd Bendix is an abbreviated version of the Carlowitz-Biography of the same author taken from: GROBER, Ulrich et al., 2013. *Die Erfindung der Nachhaltigkeit. Leben, Werk und Wirkung des Hans Carl von Carlowitz*. Ed. Sächs. Hans-Carl-von-Carlowitz-Gesellschaft e.V. zur Förderung der Nachhaltigkeit – Chemnitz, oekomVerlag GmbH, München, p. 175–220 (there are also extensive source and literature references).

been staying there from time to time. He took advantage of those periods to learn the French language and seized the opportunity to study at the library of the famous university of Paris, the Sorbonne. He explored also the French provinces, in order to leave for the Italy at the turn of the year 1667/68. In 1669, he betook himself via Naples and Sicily to Malta, where he met the governing Grand Master of the Order of St. John. From Malta von Carlowitz finally returned to Saxony via Venice and Tyrol. It can be assumed that von Carlowitz used the impressions, findings and experiences gained during his journey throughout Europe as well as his records from writings and books obtained from visited libraries. All that wouldn't have been available to him in Electoral Saxony, when conceiving a manuscript of his, the *Sylvicultura oeconomica*, if he had not taken this journey.

The Elector of Saxony Johann Georg II. (1613–1680) approved that von Carlowitz assisted his father in a territorial adjustment on the border with Bohemia and consequently appointed him to Kammerjunker (Groom of the Bedchamber) on 19 August 1672. Subsequently he became the assistant of the Amtshauptmann (senior civil servant) for the departments of Wolkenstein, Lauterstein, Lichtenwalde und Neusorge. In this position young von Carlowitz had to deal directly with forestry, which gave him already the expertise in this field for his further career.

In 1679 Hans Carl von Carlowitz made an appointment with Vice-Berghauptmann (vice-inspector of mines). Abraham von Schönberg (1640–1711) was his boss then, the one who had taken up an appointed as mine administrator in 1676 and who had been a man of strong vision with extraordinary organizational skills and an expertise in many fields. When von Schönberg had died on 4 November 1711, von Carlowitz took up the appointment as the mine administrator on 23 September 1712. Thereby, in that moment he became the highest mining officer of Saxony. What a career! As a director of the Saxon Upper Mining Authority now, he was responsible, among other things, for the Saxon mines' wood supply and smelting works. His official residence was the building at 11 Kirchgasse near the cathedral in Freiberg which was erected around 1500 and today it is still there. In 1679 the Electoral Saxon Upper Mining Authority had moved here and the highest saxon mining authority has been residing here in continuous succession ever since (fig. 3). Probably here, in his office, von Carlowitz discerned the *Sylvicultura oeconomica* and was working on the script (fig. 4).

The Arnsdorf manor near Hainichen, acquired by his father, was chosen by von Carlowitz as his private residence (fig. 5). On 19 September 1675 he married Ursula Margaretha von Bose (1656–1727). She was the daughter of Christoph Dietrich von Bose sen. (1628–1708) who was the hereditary and liege lord and judge of Unterfrankleben, Mölbis and Nickern. He worshiped/hold the four Electors as Royal Polish and Electoral Saxon privy councillor, war councillor and commissary general of war in (his) 50 years of service at the Saxon court. By marrying Ursula von Gustedt (1636–1694) von Bose acquired the village of Mölbis, situated in the south of Leipzig. At the time of his daughter's marriage von Bose was privy councillor and councillor of mines.

Five children were born from that marriage, of which only three daughters outlived their parents. One son and one daughter were stillborn. The oldest daughter

Ursula, probably born in 1678, had never married and died on 2 July 1746 in Freiberg. Daughter Charlotta Maria (1679–1734) married lieutenant-colonel Georg Wolf von Tümpling (1672–1732) in 1702 and in 1715 daughter Johanna Magdalena († 1729 in Freiberg) married Ludwig Gustav von Carlowitz (1678–1730), lieutenant-colonel and Junker of Biehla and Liebenau near Kamenz, who was a distant cousin..

Hans Carl von Carlowitz took over Arnsdorf manor for 26,500 thaler after his brothers had relinquished rights in his favour and enfeoffed him when dividing the father's property after his death in 1680. Thereby he became a hereditary lord and judge of Arnsdorf. On 1 June 1689 residence and outbuildings at the manor were destroyed by a tempest. Over the course of that the family documents and his travel diary got lost. This twist of fate induced von Carlowitz to buy a prestigious town house at the Obermarkt in Freiberg, that was built in "Görlitzer Renaissance" style. From here he could easily reach his official residence, the Upper Mining Authority at 11 Kirchgasse (fig. 6).

Hans Carl von Carlowitz also held shares in the inheritance law for the glassworks Steindöbra in the Saxon Vogtland. As the heritage of his father-in-law Christoph Dietrich von Bose, who died in Mölbis in 1708, Hans Carl von Carlowitz also inherited the so called *Bosesche Haus* in Dresden located in a prime location near the electoral palace. The building dated back to mid-sixteenth century had been completely destroyed by a hail of bombs in 1945 and was constructed anew on the historical site in 2007. Based on old photographs, at least the entrance portal (Schössergasse 16) has been restored true to original. However, Carlowitz did not have this building in his possession for a long time. He sold it for 8,600 thaler to the Elector who passed it to the "Geheime Kriegskollegium" as a headquarters.

The great honour of being promoted to mine administrator was granted to already disease-ravaged Hans Carl von Carlowitz. For some time past he was plagued by bad/poor spleen condition accompanied by temporary ileus. Subsequently he suffered precordial anxiety, was enduring headaches, vertigo and, at last, fever associated with inflammations. During the depicted protracted course of disease, Carlowitz could probably have finished his scientifically profound and comprehensive work *Sylvicultura oeconomica* only with great willpower. On 3 March 1714 Hans Carl von Carlowitz had died in his house at the Obermarkt in Freiberg and ten days later was transferred to the family crypt of the von Carlowitz at St. Peter's Church. Unfortunately his tomb is lost because the family vault was dissolved in 1891.

The official memorial service took place at St. Peter's on 15 April 1714. The funeral valediction in front of numerous guests was given by the local ministerial preacher Hieronymus Joachim Wäger who recited within the detailed life career of the decedent. This funeral valediction was also printed, as it was customary at that time (fig. 7). In accordance with tradition in those days some attendants gave recitations of orotund hymns of praise to the deceased, eight of which appeared in print in Chemnitz and Freiberg, too.

## A REFERENCE BOOK WRITTEN OUT OF CONCERN FOR THE FOREST AND AS A CONTRIBUTION TO THE PREVENTION OF AN IMMINENT WOOD SHORTAGE IN ELECTORAL SAXONY

When Hans Carl von Carlowitz finally concluded his manuscript *Sylvicultura oeconomica* on 12 October 1712, he would not have guessed that his work will be appreciated after almost 300 years as a fascinating contemporary document of the 18th century. This certainly does not surprise at all as it was and still is of fundamental importance being the first and for a long time the most important book bringing forth solely forestal content. Book must have been out of print within a short time after its publication because it became famous at least among the Electoral Saxon service gentry who were literate forestry workers. It was de facto a set book for the mining sector as well as for the forestal administration of Electoral Saxony.

The 300 years old reference book covers in 30 chapters with 800 sections fundamental problems of land use, forest foundation, forest tending and an economic use of the natural wood resource, that are equally relevant today. Objective of the work and concerns about were to transfer knowledge of the professional forestry that has to provide wood for population and industry on a constant basis.

## THE SYLVICULTURA OECONOMICA – GUIDEBOOK AND IMPETUS FOR THE ADVANCEMENTS IN THE GERMAN FORESTRY

Since the year 2000 three reprints and a scientific edition of the *Sylvicultura oeconomica* have already been published, the latter only as a verbatim conversion and annotation of the baroque German type of the original, though.<sup>2</sup> Now the two authors (Harald Thomasius and Bernd Bendix) have transliterated the original text, which causes huge difficulties for today's readers due to the German type and the circumlocutory baroque language of the 18th century (fig. 8: book title). In his preface to this transliteration Harald Thomasius elucidates to the reader the motives for the redaction of this publication:

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- 2 – H.C. Carlowitz, *Sylvicultura oeconomica* [...], Reprint of the first edition of 1713 published by Johann Friedrich Braun Leipzig, revised by Klaus Irmer u. Angela Kießling with an introduction by Ulrich Grober. Ed. TU Bergakademie Freiberg 2000. H.C. Carlowitz, *Sylvicultura oeconomica* [...], Reprint of the first edition of 1713 published by Johann Friedrich Braun Leipzig, with an introduction by Jürgen Huss u. Friederike von Gadow. Ed. Verlag Kessel Remagen-Oberwinter 2012.
- H.C. Carlowitz, *Sylvicultura oeconomica* [...], Reprint of the second edition of 1732 published by Johann Friedrich Brauns sel. Erben Leipzig, with an introduction and published by Bernd Bendix in the Reprint series *Forstliche Klassiker* volume 1 published by Kessel Remagen-Oberwinter 2009.
- Hamberger, Joachim [Hrsg.]: H.C. Carlowitz, *Sylvicultura oeconomica* oder haußwirthliche Nachricht und Naturmäßige Anweisung zur Wilden Baum-Zucht. oekom Verlag, Gesellschaft für ökologische Kommunikation mbH München 2013.

The historical meaning of Carlowitz' work has been pointed out by him already in the course of his almost thirty years of teaching at forestal educational institutions not only by word of mouth but also by showing the original first edition of the 1713. This was always received by his students with interest and respect, but it is hardly likely that an immediate study of sources has been initiated thereby. That did rather less result from the content of the work, but from the size and the poor readability of the German type print in baroque German language. For himself Harald Thomasius had made a transliteration as early as the 1980s. However, it was impossible to think of a reproduction in those days before the coming of computers and modern printers.

### **THE SYLVICULTURA OECONOMICA 2013 TRANSLITERATION AS MODERN AS IF IT WAS PUBLISHED TODAY**

There are several reasons for the recent transliteration of the reprint into modern German, all revised by Harald Thomasius:

- Gothic (German type), which had been common in most of the German states since the Early Modern Age and had been taught in schools as late as 1941. Today, this beautiful script often causes difficulties in reading fluency and in writing even more, especially for younger persons.

- Forestry has evolved – like other crafts – developed in pre- and early history to a profound craft with a specific terminology. Thereby, von Carlowitz in his work published in 1713, had used mainly, early derivative and modern, terms that had been forming that time. Many of them have become – with the passing of more than 300 years- out of the common, others have been added ever since.

- Likewise the terminology, the sentence construction has changed over the course of more than 300 years. This affects, above all, the great number of mediate references to the subject and restrains from citing von Carlowitz. Moreover, it causes difficulties that even put into confusion. In addition to the mentioned above, references which often are repetitive that have been removed from the transliterated text for the sake of good reading.

- Author of the book, von Carlowitz, member of the Electoral Saxon service gentry and a high mining official in the Electorate of Saxony, lived and worked in the baroque period. This has left an imprint on his work which has been written in courtly baroque German. It is marked by:

- exaggerated extolments and courtesies towards authorities as well as subservience to persons of high rank,
- preference for loanwords and foreign language quotes (especially Latin ones), that were only available to the intelligentsia in those days,
- long, nested, flatulent and verbous sentences with many paraphrases and idealizations,
- numeral enumerations in abundance, as well as statements that differ in synonymity concepts and the principles underlying logic of arrangements. It is not always clear, whether Carlowitz wanted to express similarities or differences by

enumerations, e.g. using adjectives like: stable, permanent, perpetual, consistent, continuous, sustainable, incessant, steady, relentless.

The transliteration of Carlowitz' work that has been published by Kessel Remagen-Oberwinter ([www.forstverlag.de](http://www.forstverlag.de)) thus dovetails with the three already published reprint editions and the first scientific editorial revision by HAMBERGER at Verlag München, that was presented at the Leipziger Buchmesse in March 2013 on the occasion of the book's tercentenary (cf. footnote 2). Bernd Bendix undertook the editorial revision of the script. He completed the transliteration with some forestry-specific and numerous bibliography amendments to the authors; Hans von Carlowitz to whom referred today is the most unknown as well as the annexed biography of his. The personal, local and botanical register have been compiled by Bernd Bendix as well. All this grants the fast orientation and an access to the entire text book.

## HANS CARL VON CARLOWITZ *SYLVICULTURA OECONOMICA*

### Summary

This article presents a book published recently, in 2013, by Kessel – Remagen-Oberwinter, Germany (ISBN: 978-3-941300-70-5). The two authors (Harald Thomasius and Bernd Bendix) have transliterated the 300 years old forestal reference book *Sylvicultura oeconomica* by the Electoral Saxon Oberberghauptmann Hans Carl von Carlowitz (1645-1714) to a contemporary German. The Phrase of “Nachhaltiger Entwicklung” (*Sustainable development*), when looking back in time, arose from forest sustainability, inter alia, as one amongst other old forest regulations and have become evident in the works of Hans Carl von Carlowitz.

## HANS CARL VON CARLOWITZ *SYLVICULTURA OECONOMICA*

### Streszczenie

W publikacji przedstawiono książkę wydaną w 2013 roku w Niemczech przez Kessel – Verlag, Remagen – Oberwinter (ISBN: 978-3-941300-70-5). Obaj autorzy (Harald Thomasius i Bernd Bendix) dokonali nie tylko transliteracji tej liczącej 300 lat publikacji, ale i uwspółcześnili język. Patrząc wstecz, pojęcie „zrównoważonego rozwoju” powstało na bazie trwałości lasu jako jednej ze starych zasad leśnictwa, co jest widoczne w pracy Hansa Carla von Carlowitza.





Fig. 1. Hans Carl von Carlowitz (1645–1714), copperplate by Martin Bernigeroth (1670–1733) around 1712 (285 x 185 mm), SLUB Dresden, Abt. Kupferstichkabinett, Sign. 30 024, (photo: Hans Loos)

Ryc. 1. Hans Carl von Carlowitz (1645–1714), miedzioryt autorstwa Martina Bernigerotha (1670–1733) około 1712 roku (285 x 185 mm), SLUB Drezno, Wydział Grafiki i Rysunku, Sygnatura 30 024 (zdjęcie: Hans Loos)



Fig. 2. Castle Rabenstein/Chemnitz, picture postcard (1986), Verlag Bild & Heimat Reichenbach (Vogtl.), photo: Wagner, (Bernd Bendix private archive)

Ryc. 2. Zamek Rabenstein/Chemnitz, widokówka (1986), Wydawnictwo Bild & Heimat Reichenbach (Vogtland), zdjęcie: Wagner, (prywatne archiwum Bernda Bendixa)



Fig. 3. Building of the Saxon mining authority in Freiberg/Saxony, Kirchgasse 11 (photo: Bernd Bendix 2012)

Ryc. 3. Budynek Urzędu Górniczego we Freibergu/Saksonia, Kirchgasse 11 (zdjęcie: Bernd Bendix 2012)



Fig. 4. Title page of the *Sylvicultura Oeconomica* 1713 (photo: private archive of Bernd Bendix)

Ryc. 4. Strona tytułowa *Sylvicultura Oeconomica* 1713 (zdjęcie: prywatne archiwum Bernd Bendixa)



Fig. 5. Arnsdorf manor near Hainichen. Historical photograph before 1945 (photo: private property of Uwe Jagusch, Arnsdorf)

Ryc. 5. Dwór Arnsdorf w pobliżu Hainichen. Zjęcie historyczne sprzed 1945 (zdjęcie: własność prywatna Uwe Jagusch, Arnsdorf)



Fig. 6. The Obermarkt in Freiberg / Saxony with the „Carlowitz“-House (second building on the right), photo: Bernd Bendix 2012

Ryc. 6. Rynek Główny we Freibergu/Saksonia z domem-„Carlowitz” (drugi budynek na prawo), zdjęcie: Bernd Bendix 2012





Fig. 7. Front page of the printed funeral sermon of Hans Carl von Carlowitz (WÄGER 1714), copy: Torsten Pflittner, Blaustein

Ryc. 7. Strona tytułowa wydrukowanego kazania pogrzebowego Hansa Carla von Carlowitza (WÄGER 1714), kopia: Torsten Pflittner, Blaustein

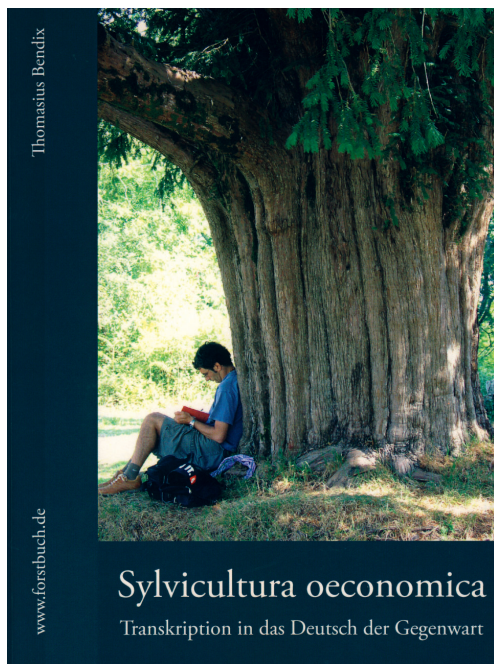


Fig. 8. Cover of the book (2013)

Ryc. 8. Okładka książki (2013)