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DATING THE NEWLY DISCOVERED CEILING PAINTING IN THE HOUSE OF ESTLAND’S NOBILITY IN TALLINN. FROM ARCHIVAL RESEARCH TO DENDROCHRONOLOGY

INTRODUCTION

In the course of renovation work on the House of Estland’s Nobility in the autumn of 2022, a magnificent find came to light in the ceiling of a first storey room on the side of the Baroque building abutting on Kohtu Street – a figural plafond painting on a canvas attached to the ceiling. It was concealed behind a new coved ceiling that was built in the mid-19th century, although the painting had been hidden behind coats of paint and support beams considerably earlier. This find is sensational since it adds to the number of rare and fragile canvas plafonds, only a few of which survive in Estonia. The technique used and the style of depiction of the surviving canvas plafonds makes them exceptional. Most of them are in Tallinn’s Old Town – a total of five are known – and a few isolated examples

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are outside of Tallinn. Beams, and less often fully boarded ceilings, covered with ornamentation was the prevailingly widespread way in which ceilings were finished in the Baroque period. As a rule, the ornamentation was painted using relatively inexpensive tempera or distemper paints, which made it possible to quickly paint simple forms. On the other hand, finely modelled canvas plafonds made using the complicated and also more expensive medium of oil are mostly figural, depicting allegorical-mythological scenes based on antiquity or Christianity. According to Krista Kodres, a researcher of Tallinn’s early modern interiors, “ceiling paintings with complicated compositions and narratives covering the entire ceiling were the most impressive means of decoration in the dwellings of Tallinners. From the standpoint of an interior’s ‘ability to speak’, ceiling pictures gave a room a theme that literally covered it.”

All surviving canvas plafonds in Estonia are dated based on style and are believed to originate from the prime of the Baroque era from the end of the 17th century to the mid-18th century. That was a time when Estonia went through substantial political and economic fluctuations – famine, the Great Northern War, and plague. Nevertheless, not one of the surviving plafonds has a documentally verified dating. This means that it is not even known if they date from the period of Swedish rule or the period of Russian rule. Yet the canvas ceiling discovered in the House of the Nobility has been successfully connected with relative certainty to a precise time of completion with the help of archival sources and dendrochronological examinations. The story of the dating of the recently found canvas is at the centre of the following article. At the time of its writing, that canvas still awaits restoration.

A brief glance is also provided of the broader context in which the plafond is situated as an interior element, and of technical details regarding how canvas plafonds were historically made.

THE PLAFOND FIND IN THE HOUSE OF THE NOBILITY IN THE BROADER CONTEXT OF BAROQUE INTERIORS

The painting of canvas plafonds apparently was a widespread means of decorating ceilings in the Baroque period. Due to their technical fragility, only a few examples survive. Often, only a few isolated canvas fragments somewhere beneath listels or around nailheads that had been used to fasten the canvas are clues indicating locations where there might have been canvas plafonds. Five more or less intact plafonds are known to have survived in Tallinn’s Old Town, with another three outside of Tallinn. Nevertheless, there apparently were considerably more of them in interiors. Many are known to have perished in the destruction ensuing from World War II in Tallinn and in Baroque Narva. Not only ceilings, but also walls, door lintel, window lintel, and other interior elements were decorated with canvas. For instance, door and window lintels with ornamental décor are also displayed in addition to the ceiling plafond depicting the ancient goddess Flora in the merchant dwelling at Raekoja plats 12 in Tallinn. We have information on canvases used as wall decorations only in the form of surviving strips of canvas.

The size of the room itself gives the dimensions of canvas ceilings. As a rule, the painting covers the entire surface of the ceiling in full. The smallest of the surviving plafonds is the 12.5 m² plafond at Raekoja plats 12. The largest hitherto known plafond is the 40 m² plafond in the Kuressaare Town Hall, which admittedly does not authentically belong there and is thought to originate from Tallinn or Narva. This new find, however, breaks all hitherto existing records.
The ceiling painting in the House of the Nobility is nearly 60 m² in size, forming an almost square-shaped (7.6 × 7.8 m) composition. All the hitherto known canvas plafonds consist of relatively narrow canvas panels that are sewn together. The width of the loom determined the width of the canvas – at that time, it was possible to weave fabric in strips approximately 50 to 85 cm wide. A longer overlap is left on one side on the sewing edge, along which the unprocessed canvas was nailed to the ceiling. In this way, the edge of the following canvas panel covers the row of nails. The painting in the House of the Nobility appears to be exceptional among other works of its kind – in this case, standard 85 cm wide strips are not sewn together (Fig. 1). Instead, they are nailed as separate pieces through the edges of the canvas directly to the base boarding in such a way that the nails remain visible on the front side. It is not known whether the canvas panels were fastened to the ceiling by nails alone or by animal glue as well. In any case, the canvas nailed to the ceiling had to first be coated with animal adhesive and thereafter with chalk ground. The entire preparation and painting process took place at the ceiling. The finishing on the nailheads of the plafond in the House of the Nobility bears witness to this. Since the paint layer also covers the nails (Fig. 2), there are no grounds for doubting that the complicated and time-consuming painting process took place on site, with the artist looking straight up, so to speak. Considering the technical complexity of oil painting – in those days, pigments were mixed with binder in the course of the painting process – and the fine modelling of figural paintings, the technical virtuosity of Baroque artists is admirable. It required the experienced hand of a master and the ability to sensitively compose images (Fig. 3).

The outer edges of the canvas were almost always covered using profile listels, which were simultaneously covered with ornamental painting. In the case of the specimen at the House of the Nobility, a section of a wide wooden corbel was identified at the edge of one wall. That corbel appears to have traces of some sort of marbling.

Compositionally, the centre of plafonds is ordinarily in the central part of the canvas, where figures subjected to the central storyline

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7  We know from reports, for instance, that 50 to 60 cm strips have been found in Kuressaare, 85 cm strips at Pikk Street 53, and 50 cm strips at Lai Street 29.

of the picture are placed either in a separate framing or on an open surface. As is characteristic of the Baroque period, those figures frequently float among the clouds, which should suggest the illusion of “a view up from below” (sotto in su in Italian), so to speak, of the continuation of the ceiling into heaven / the heights. The central figural scene is surrounded by ornaments, flower garlands, sheaves of grain, and smaller framed scenes. The only exceptional non-figural painting is found at Pikk Street 60 (which is currently deposited at

9 Kodres, “Ruumimaalingud elamute kaunistajana 16.–18. sajandil”, 159.
the Estonian History Museum), where the entire ceiling is depicted as a sky with birds and floating clouds without central figures.

The plafond at the House of the Nobility is exceptional in terms of its painting technique. Background ornamentation painted using distemper is combined with framed figural painting fields painted using oil-based paints (Fig. 4A–B). In the initial situation prior to its revealing, it seems that there is a large, 3-metre quadrangular cartouche with a figural composition at the centre of the plafond. There are smaller circular painting fields with similar motifs in the corners of the ceiling.
It is too early to say at the current state of research just how widespread Baroque canvas plafonds were and how numerously they have survived in nearby regions. Only one analogous work is known from Latvian territory, located in Riga. Even that one originates from the Classicist period (either the end of the 18th century or the start of the 19th century).  

The canvas plafond in the House of the Nobility very likely originates from the time when the building was erected since the plafond is situated directly on the ceiling’s unfinished base boarding. The ceiling probably started sagging quite soon after its completion, which also caused the first damages to the painting. The unevenness that developed in the ceiling boarding caused rents in the canvas. Due to its sagging, it was decided to underpin the ceiling from below using five beams. At the same time, the plafond canvas was patched, and a new ornamental painting was painted in Rococo style between the beams. Dark, opulent rocaille ornamentation on a light background is well preserved beneath two later repair patches (Fig. 5). The first layer on the beams with profiled edges that goes together with the painting appears to be blackish marbling. The canvas plafond has later been patched on two occasions and painted over monochromatically using limewash or distemper. One of these layers is apparently contemporaneous with the early Classicist paintings on the walls, which probably date from the end of the 18th century. Painted plafonds had already gone out of fashion by then.  

The ceiling was lowered to a level below the 18th-century support beams in the course of major reconstructions of the building in the mid-19th century. The new ceiling was then covered with eclecticist paintings (Fig. 6), fragments of which survived behind partition walls that were added even later.

It is likely that there were other canvas plafond paintings in the House of the Nobility as well. The memoirs of Roman von Antropoff (1836–1926) are an interesting source here. His father was the secretary.
of the Estlandisches Oberlandgericht (Estland provincial high court and court of appeal). Their family lived on the first storey of the House of the Nobility in rooms facing the courtyard. Antropoff’s memoirs are particularly valuable because they tell about the time before the large-scale reconstruction that took place in the 1840s. One passage is of interest in the exceedingly confusing descriptions of the interiors of the House of the Nobility, and of how those interiors were used. Namely, “…In that room, the entire ceiling was covered with a painted canvas, which depicted a very corpulent Ceres with awesome, very naked breasts together with allegorical figures and ornamentation. As far as I know, that painting was from the Rococo period. I cannot judge what its value may have been, yet I do not believe that it was highly valued. I don’t know what became of that picture. Perhaps it was taken down, perhaps it was plastered over.” It turns out as well from those same memoirs that before the expansion of the House of the Nobility, the larger rooms on the ground floor in the building’s old part, including the room in question with the plafond painting, served as courtrooms for three Manngerichts (district courts) – those of the Harju, Viru, and Lääne districts (Fig. 7).12

Antropoff’s description is quite confusing, so it is impossible to precisely localise the rooms that he describes. One might think that he refers to the plafond painting that has now come to light, but by his time it already had to be hidden by several coats of monochrome paint.

A fragment of canvas was found in the course of restoration work in another room as well, once again on the building’s first storey. In this case there is admittedly no definite indication that it is necessarily a remnant of a painted ceiling, but this find as well could cautiously be connected to a possible former canvas plafond.

**WHAT DO ARCHIVAL DOCUMENTS SAY?**

Since the plafond painting that has come to light in the House of the Nobility is the first decorative layer – it is placed on unfinished ceiling boarding – it can be inferred that it dates from the time of the building’s construction or somewhere close to that time. Information on the time of the construction of the House of the Nobility has hitherto been somewhat contradictory. It has been thought to originate from the end of the era of Swedish rule or the beginning of the era

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of Russian rule. It is known that the earlier House of the Nobility, which was located on the site of the current Stenbock House, perished in the great fire that ravaged Toompea in 1684. The need for a new building started being spoken of immediately thereafter, initially apparently in its old location. The Ritterschaft (Knighthood) of Estland temporarily used the rooms of the Great Guild in the lower town.

A document discovered in the Estonian National Archives proved to be decisive in dating the old part of the House of the Nobility on Kohtu Street (Fig. 8). A contract of purchase and sale was concluded on 20 March 1694 between the Ritterschaft of Estland and Landrat (district administrator) Hans Jürgen von Üxküll, who was also the lord of Vigala Manor. According to the contract, the latter sold his newly completed two-storey stone house to the Ritterschaft. Üxküll was left with the obligation to finish work that remained incomplete on the second storey stoves and windows. The price of the contract was 6,000 riksdalers and additionally, the lot of the old House of the Nobility on the hillside of Toompea, which had burned down, became the property of the Üxkülls as compensation. The Ritterschaft accepted the obligation to pay the entire sum in three parts over the course of three years. The Üxkülls retained the right to use the first storey of the building until the purchase price had been paid in full.

That last stipulation of the contract continued to affect the use of the House of the Nobility far longer than expected. The Ritterschaft did not find the means or sufficient motivation to pay the purchase

13 Eesti arhitektuur. Tallinn, ed. by Villem Raam (Tallinn: Valgus, 1993), 78 – the building was completed in the first half of the 18th century at the latest. Baltic German historical literature mostly notes that it is not known when the “old House of the Nobility” was built. The purchase of the building from the Üxkülls is nevertheless mentioned – Die Estländische Ritterschaft. Ihre Ritterschaftshauptmänner und Landräte, gesichtlicher Teil von Wilhelm von Wrangell, Bildteil von Georg von Krusenstjern (Linburg/Lahn: C. A. Starke, 1967), 186–189.


15 National Archives of Estonia [Rahvusarhiiv, RA], EAA.854.2.1924, 2–3p; 6–7p.

16 RA, EAA.854.2.648, 150.

17 The original contract has not been found but at least three transcripts have survived from different times. The earliest of them is bound together with protocols of the Ritterschaft’s Diet (RA, EAA.854.2.648, 143–144), temporally the next transcript is from 1721 among documents associated with the House of the Nobility (RA, EAA.854.2.1924, 30ff), the latest transcript is from the start of the 1730s among letters received by the Ritterschaft (RA, EAA.3.1.227, 152ff).

18 The old House of the Nobility, which was built in 1655–1664, was located at registered immovable no. 25 (Rahukohtu St. 3). That House of the Nobility perished in the fire of 1684.
price and the accumulated interest over the course of forty years. It is known that in 1733, Hans Jürgen von Üxküll’s (died in 1713) grandson Berend Johann (1706–1761) still had the right to use the ground floor. That contentious issue was apparently resolved at about the same time, and the Üxkülls moved out once and for all.

Until that time, the Üxkülls and the Ritterschaft lived side by side in the house and it seems as if the upper storey used the services of the lower storey from time to time. Namely, Landrat von Üxküll’s wife was paid 10 dalers for “kitchen expenses” in 1711. It can be inferred from this that the Üxkülls provided catering services for the Ritterschaft’s events when necessary.

Hence, as is stated in the contract, the two-storey stone building was “new” in March of 1694 and there is no reason to doubt that it is the building at Kohtu St. 1 that has survived to this day. The history of the completion of the building can be clarified even further using archival material. There is an observation that arouses interest among the letters received by the Governor-General of Estland, which makes it possible to cast more light on the completion of the building. The letter dated 27 March 1691 is from Gerhart von Hunninghausen. Its content in retold form, yet preserving the author’s characteristic straightforward manner of speaking, is as follows: “I’m taking a walk in Toompea, and I happen to go to take a look at my lot there. And what do I see – Landrat Hans Jürgen von Üxküll has built the windows of his new house, which is already almost completely finished, right along the boundary of my lot. Those windows have to be bricked up so as not to hinder forthcoming construction activity on my lot.” Thus, the basic structure of the future House of the Nobility had to be complete by the spring of 1691.

Hunninghausen was very likely speaking of lot no. 46, according to the numeration of that time (Fig. 9). Lots 46 and 47 were situated side by side on the edge of Kirikuplats (Church Square) between present-day Kohtu and Toom-Rüütili streets. They had previously formed a single registered immovable. It is known that in 1600, Lord Protector Charles, who later became the king of Sweden, gave the former church lot ‘opposite the churchyard’ and the buildings on that lot as a gift to Heinrich Kursell for his faithful service. The owner of lot no. 48, which ran through that section of Toompea behind the previously mentioned two lots, Jürgen von Üxküll from Vigala (the father of the previously mentioned Hans Jürgen) purchased lot no. 47 from Christoffer Kursell in 1652. Christoffer Kursell gave lot no. 46 to his sister’s husband Cornet Henninghusen in 1673. It was later added to the Ritterschaft’s registered immovable in 1765.

20 RA, EAA.854.1.614, 17.
21 RA, EAA.1.2.514.
22 It seems that Hunninghusen was a man who acted impetuously, so to speak. On that very same day, he pestered the governor-general with another letter, in which he offered to sell his lot on the edge of Kirikuplats to the state. Part of the proceeds were meant to cover his tax arrears. Since the state had the right of first refusal for lots on Toompea, he also made the same offer to the governor-general in 1693. – RA, EAA.1.2.514; EAA.1.2.537.
23 RA, EAA.1.2.537.
24 RA, EAA.2.1.195.
25 RA, EAA.1.2.537.
Thus, the Ritterschaft settled in on the second storey of its newly purchased house in 1694. The Ritterschaft's account books and a few invoices received from various artisans allow us to keep track of subsequent construction work. The first recorded renovation work is from 1709. The dismantling and reassembly of a brown tiled stove cost six dalers and 50 ore. In the course of this work, additional new tiles had to be purchased. The stove builder Christian Danz was paid for this work. 26 Two years later, the ceiling of the Landt Stube (land room) was repaired (at a cost of 3 dalers). 27 Larger-scale repair work was undertaken in the summer of 1717. At that time, various kinds of building materials were purchased, including 500 new roof tiles, and glaziers and joiners were paid. 28

It can be assumed that the official functions of the House of the Nobility, especially the hosting of rulers who visited the city, required expenditures for decorating and modernising interiors. Much of the decoration work carried out on the interiors was quite likely connected to the visits of high-ranking rulers. It is known that the new ruler Peter I definitely visited the House of the Nobility during his visits to the city in 1711 and 1714. 29 The chronicle written by Landrat Wrangell describes those festivities. 30 Notably large expenditures were made from the Ritterschaft’s treasury to receive Duke Karl Friedrich of Holstein-Gottorf, who stopped in Tallinn in 1721 on his way to St. Petersburg. A total of 422 dalers was spent on that occasion for various food and drinks, decorations and gifts. 31 It is known from the time of the grandiose trip of Catherine II through the Baltic provinces in 1764 that for that occasion, the Ritterschaft had a life-sized portrait painted of the empress in the hall of the Landrats in the House of the Nobility. 32

According to surviving cash-books from the 1730s, the Ritterschaft’s primary expenditures were for writing materials. The renovation of the building’s chimneys was nevertheless undertaken in 1731 and the painter Fick was paid 7 dalers and 40 kopeks for an illumination fashioned on the building on the occasion of the name day of the son of His Imperial Highness. 33 Larger-scale work was done probably in 1734. At that time, 40 dalers were allotted to the head of the Ritterschaft ‘for renovating the House of the Nobility’. 34 It is possible that those expenditures in particular were related to bringing the first storey rooms into use by the Ritterschaft.

The next extensive renovation and reconstruction works that run through the sources took place in 1766–1767. 35 The building’s windows and floors were fixed up. Gotthard Holm was paid for painting work (more on this below). Johann Ernst Kannenberg was paid 60 roubles for tiled stove repairs. Johann Heinrich Dürschmidt submitted an invoice for the hefty sum of 88 roubles for roof repair work. 36 He might actually have been Johann Paul Dürschmidt, a mason and master builder of Tallinn’s Toomgild who is known in the history of Estonian architecture. There is information on his activities from numerous manors in Estland (Maidla Manor in Viru County in 1767, Roela Manor in Viru County).

Various additional ongoing work was apparently undertaken in the old House of the Nobility before the comprehensive reconstruction work in the mid-19th century, but more precise information has hitherto not been sifted out from the sources (Fig. 10). Construction work invoices from 1845–1850 are well preserved. Among other things, we find out that the painter Nieländer was paid a total of 327 banco roubles for finishing work in 1848–1849. Hence, the eclecticist paintings in the House of the Nobility were very likely painted by Johann Otto Nielmänder (died in 1855), who was a master and the Oldermann of the Painters’ Guild in the lower town. 37 For comparison of the costs of various types of work – the master joiner Sporleder

26 RA, EAA.854.2.1924, 25.
27 RA, EAA.854.1.614, 22.
30 Landrat Wrangell’s Chronik von Estland, hrsg. von Dr. K. J. A. Paucker (Dorpat: H. Schultz 50 roubles “for plans of the palace” in 1767. Among other things, an interesting fact is found in that same cash-book, that the Ritterschaft paid the master mason
31 RA, EAA.854.1.614, 91.
33 RA, EAA.854.2.3329. At that time, illuminations were understood as various adornments and colour and lighting designs meant for temporarily decorating buildings. A painter (apparently) named Johann Heinrich Fick died in 1736. His estate inventory survives and includes numerous pictures, frames, and also thematic books. TLA.230.1.Bt 15 VII, 613–615p.
34 RA, EAA.854.2.3329a, 3.
35 RA, EAA.854.1.641, 11.
36 RA, EAA.854.2.3340, 17, the Ritterschaft’s cash-book 1767. Among other things, an interesting fact is found in that same cash-book, that the Ritterschaft paid the master mason
37 Masters of the Painters’ Guild, TLA.190.1.133, 29a-29.
was paid 1,588 roubles over that same period. As an interesting fact, it also turns out that the architect Wintelhalter was paid 300 roubles for the building’s plans.  

Thus, there are many indirect references in the sources regarding the possible time of completion of the plafond painting. That time is probably situated in a relatively brief interval from the construction of the building around 1690 until its transfer into the possession of the Ritterschaft in the early spring of 1694. Although the Üxkülls as the builder of the house retained the right to use the ground floor for a long time to come, it is quite unlikely that they would have undertaken extensive work under uncertain conditions where as soon as the Ritterschaft pays the full sum, their right to use those rooms ends immediately. They thereafter apparently focused mainly on building new houses in the city at Kohtu St. 4 on Toompea and at Lai Street 15 in the lower town. All of this allows us to infer that

the plafond painting under consideration was completed in the first years of the 1690s and was commissioned by Landrat Hans Jürgen von Üxküll, lord of Vigala Manor. As such, it was initially a decorative element of a noble’s city palace and not of the corporative rooms for official functions of the Ritterschaft.  

The covering of the 17th-century ceiling painting for the first time with a Rococo painting and the installation of support beams could have taken place in the 1760s at the time of more extensive construction work that is reflected in the sources. In such a case, the dynamic Rococo ornamentation can be connected to a master painter named Gotthard Holm, whom the Ritterschaft paid at that time for painting work. Archival materials of Tallinn’s Painters’ Guild cast

38 RA, EAA.845.1.618, construction work invoice book from 1845 to 1850.

39 It can nevertheless not be completely ruled out that the plafond painting dates from the time of the coexistence of the Ritterschaft and the Üxkülls in the period from 1694 to 1734. In such a case, the ceiling canvas is still more likely from the start of that period since it is the first finishing layer.
some light on the person of Gotthard Holm. He was an apprentice under the master painter Johan Bollentin from 1741 to 1746. He presented his masterpiece in 1754. He became the guild’s clerk in 1762 and its Oldermann in 1770. Gotthard Holm died in 1778. It is quite possible that he had to register himself in the Toomgild as well in 1767 and pay guild fees to that guild in connection with his work in the House of the Nobility.

DENDROCHRONOLOGY COMES TO OUR ASSISTANCE

The dating of the House of the Nobility, and along with it also of the plafond painting, was successfully made more precise thanks to dendrochronological examinations undertaken in 2023. Dendrochronological investigations have been conducted in Estonia for decades and as their result, lengthy chronologies of tree-ring widths have been compiled for the principal tree species – spruce and pine – that have been used in Estonia as construction timber. Chronologies of ring widths of trees that have grown in the same climate resemble one another. With their assistance, wood samples of unknown age can be dated.

Dendrochronological samples were taken from the building’s attic using a dry wood borer, focusing on the building’s presumably oldest construction stage. A total of 19 increment cores were obtained from two ceiling constructions of the floor below (Fig. 12), and additionally two cross-section discs from each of another two ceiling constructions. The ceiling constructions in the attic were numbered I–V counted from the building’s northeastern end to southwest. Three samples were obtained from ceiling beams in the auxiliary building (Toom-Rüütl St. 2).

The tree ring widths of the samples were measured in the dendrochronology laboratory of the University of Tartu using the TSAP-Win program, the Lintab measuring device, and a Leica S4E stereo-microscope. The tree species of the samples were determined visually. In cases of doubt, however, the species was identified by the wood’s anatomical characteristics using a microscope. The series of tree-ring widths of the wood samples were synchronised among themselves in the TSAP-Win program. The program shifts two time series by one year step in relation to one another and calculates similarity coefficients of the series at each position. The position with the greatest similarity presumably corresponds to the actual position.

of the series on the time axis. Series of average tree-ring widths of the entablatures were dated by the spruce and pine chronologies respectively of Estonia and the rest of Europe.

The average of the series of tree-ring widths of the ceiling construction I proved to be very similar to the Estonian pine chronology named 3epestcr at the position where the last tree ring coincides with the year 1689 of the reference chronology (Fig. 13). The average of the tree-ring series from ceiling construction II also proved to be most similar to the Estonian pine chronology at the position where the last tree ring shows the year 1689 of the reference chronology (Fig. 14).

Dates of the four roof truss samples proved to be different. Sample no. 11 was taken from the roof truss situated above ceiling construction I. It is made of spruce (microscopic determination) and its dendrochronological date turned out to be 1750. On the other hand, two roof trusses placed loosely on the cross-vault (samples nos. 12 and 13) are made of pinewood and both are dated to 1691.

obtained 1756 as the date of cross-section disc no. 4 sawn from the end of the spruce-wood roof truss situated on ceiling construction IV. The date of cross-section disc no. 3 from the post of construction IV turned out to be 1666 but the wood surface from beneath the bark has apparently been lost here. Cross-section discs from two ceiling beams of construction V (nos. 1 and 2) provided the dates 1689 and 1686 respectively.

Several circumstances have to be taken into consideration in interpreting the dates obtained in dendrochronological examination. Dates are considered to be reliable if they provide mostly high similarity coefficients and their graphs are visually similar to reference chronologies. The length of the tree-ring series being compared is also important in assessing reliability. Lengths of series consisting of at least 70 to 80 tree rings are usually considered sufficient for reliable dating. The requirement of length of rows is met in the case of the samples from Kohtu St. 1, except for sample no. 21, which contains only 44 tree rings and was left undated.

Another key point in assessing dates is the existence or absence of a waney edge (WK – Waldkante) in samples. In the case of preserved WK, dendrochronological date notes the calendar year of growing of the tree’s last annual ring before it was cut down. After that, the
log could be used in construction. If the WK is missing, then it is not exactly known how many tree rings are missing from the wood surface, hence the year of construction also cannot be known. In such cases, the dendro-date is determined as a terminus post quem (after that year). In taking samples from Kohtu Street 1, the researchers tried in all cases to bore the waney edge. That is the part of the wood that includes the wood surface beneath the bark. Regardless of that, in some cases the dry, brittle wood crumbled and a few tree rings were lost. Samples from the same constructional element with the wood surface intact beneath the bark play a key role in identifying samples with missing surface tree rings: these samples provide the year in which the trees were felled and therewith also the probable year in which the constructions were built. Namely, in earlier centuries, raw wood was traditionally used in construction since it is easier to process raw wood using an axe and there was also no good reason for drying construction wood. Hence, assuming the use of raw wood, the constructions were built in the year next to the dendrochronological date (the year in which the last tree ring beneath the bark grew).

There are nevertheless exceptions to this norm. In the case of large buildings, wood could already be stocked up several years in advance. The dates of the wood samples from the House of the Nobility differ by only a year, or a few years in some cases, whereas it is not certain that samples with an earlier date were missing tree rings from the surface. For instance, several samples from ceiling construction I end with the tree ring from 1686, but the dendro-date of one sample (no. 8) is 1689 (Fig. 15). If the tree ring directly beneath the bark has been preserved in all these samples, then the explanation for the different dates can only be the use of trees that were felled in different years. The wood with the latest date indicates the year of construction. The probable building year of ceiling construction I at Kohtu St. 1 is in such a case 1690 or thereafter. The same building time also follows from the sample (no. 14) with a later date from construction II. The date 1666 of the crosscut sample (no. 3) taken from the post of construction IV also falls in the same time interval with the dates of the samples from construction I. In the case of the faceted cross-section of this pinewood, it can be suspected that the wood surface beneath the bark has been lost. Hence, that tree was felled several years after 1666. At the same time, the dates 1686 and 1689 of the cross-section discs sawn from ceiling construction V indicate the date of the last tree ring of the wood surface beneath the bark (Fig. 16). Hence the trees for these beams were felled in different years and at least the beam with the earlier date was included into the construction in dried form.

Figure 15, which shows the ending of rows of dated tree rings in addition to the length of rows, illustrates the contemporaneity of the pine trees used for the ceiling beams in ceiling constructions I and II. Since two wood samples (nos. 8 and 14) show the date of 1689, the constructions could have been built after that year, probably in 1690. Considering the fact that the date of one sample from ceiling construction V turned out to be 1689 too, we can infer that the entire row of ceiling constructions from I through V was built in the same stage of construction but using pine trees that had been felled in different years. The series of tree-ring widths of the samples synchronise with Estonian pine chronologies, hence pine
The two massive roof trusses made of pinewood (samples 12 and 13), which have been removed from their original place and are currently situated on a stone cross-vault, are from the time of the original construction. Their dendro-date 1691, which is two years later than the latest date of the ceiling constructions (1689), can be explained in two ways. According to the first version, the ceiling constructions of the entire building together with the roof trusses could have been built after 1691, presumably in 1692, using partly wood that had been stored up over the course of several years. According to the other version, roof trusses were added two years later to the constructions that had been completed in 1690 when the need for them emerged.

Two spruce-wood roof trusses on the ceiling constructions form a pair with dates that are near to one another (borer sample no. 11 and crosscut sample no. 4). Some surface tree rings have apparently crumbled off the first of them, but the other sample retains the wood surface beneath the bark. According to the closeness of their dates, it can be assumed that those roof trusses were placed on the ceiling constructions after 1756, probably in 1757, assuming raw wood usage.

In the bored samples from the two ceiling beams removed from the auxiliary building at Toom-Rüütli St. 2 on the same lot, the last tree ring before tree cutting was presumably formed in 1766. In such a case, the spruces could have been used as ceiling beams in the auxiliary building in 1767 at the earliest. This date matches the renovation work carried out in 1766–1767 as noted in archival documents. It turns out that in addition to fixing up the windows and floors of the main building, the auxiliary building was also built.

To recapitulate, it was proved by the dendrochronological investigation of the ceiling constructions of the House of the Nobility at Kohtu St. 1 in Tallinn that at least five successive constructions in the attic were built out of pinewood in 1690, assuming that mostly raw wood was used. Pine trees that were felled over the course of several years were used. Two years later in 1692, roof trusses made of pinewood were added to the constructions. Some of the roof trusses (this time made from spruce wood) were added after 1756, apparently in 1757. Black ceiling boarding (small cross-boards made of spruce wood) was inserted between the beams of construction I after 1823,
probably in 1824. The dendro-date of the two ceiling beams from the auxiliary building on the lot at Toom-Rüütli St. 2 indicates that the likely year of construction of that house was 1767. All the wood used in the constructions is evidently of Estonian origin.

CONCLUSION

This article has vividly demonstrated how archival research and dendrochronology can work together hand in hand. According to historical documents, the part of the building of the House of the Nobility that abuts on Kohtu Street was completed around 1690 – it was nearly finished in the spring of 1691. By applying dendrochronological dating, it was possible to ascertain that the trees, which the main wooden structural elements are made of, were felled after the growing season of 1689 and were used in construction probably in 1690. The family Üxküll of Vigala manor sold their newly completed town palace to the Ritterschaft of Estland in 1694 for unknown reasons. The plafond painting most probably originates from the period between those two dates, 1690 and 1694.

Thus, the Ritterschaft’s plafond ceiling is the only painting of its kind in Estonian architecture that is more or less definitely dated. It originates from an earlier period than most other plafond paintings in Tallinn, which are assessed using stylistic comparison as dating from after the Great Northern War (1721 until 1760). The nearly 60 m² plafond that has come to light in the House of the Nobility is certainly the largest in Estonia. The use of distemper and oil paint techniques together makes this painting remarkable. It is also the only known plafond with two painting layers from different times.

At the time of the writing of this article, the painting has not yet been exposed to view. Its thematic subject matter and the details of its technical realisation will be revealed to viewers only after its restoration. The question of the authorship of the plafond painting also initially remains unanswered, yet it is highly likely that the artist was a local master, perhaps a painter who belonged to the Toomgild. Perhaps future research will shed more light on this question. The painting with Rococo ornamentation that covers the original painting can cautiously be associated with the name of the guild painter Gotthard Holm, who was paid for work done in the House of the Nobility in the 1760s.

Let it be added that we are only at the start of the discovery and revelation of this magnificent find. The restoration and exposition of such a find is an exceedingly complicated sequence of technical, logistical, and conceptual decisions, which can last for years. Thanks to diverse examinations, we know by now that this is a very important find that justifies the undertaking of the complex and costly restoration process. In order to remove the plafond from the ceiling, the surviving fragments of the eclecticist painting on the 19th-century coved ceiling were ‘operated’ and the ceiling was dismantled. In order to take down the canvas with two layers of paint, it was also necessary to dismantle the beams added in the 18th century. Only then could the canvas itself be taken down in order to begin its restoration. All later valuable elements that have unavoidably been removed from their original locations – eclecticist paintings, beams from the Rococo period – are planned to be displayed as museum exhibits in the same building.

SUMMARY

In the course of renovating the Estonian Knighthood (Ritterschaft) House in the autumn of 2022, a magnificent find came to light in the ceiling of a first floor room – a figural plafond painting on a canvas attached to the ceiling. This find is sensational since it adds to the number of rare and fragile canvas plafonds, only a few of which survive in Estonia. This article demonstrates how archival research and dendrochronology can work together hand in hand. According to historical documents, this part of the Knighthood House was built around the year 1690, because it was described as nearly finished in the spring of 1691. By applying dendrochronological dating, it
was possible to ascertain that the trees that form the main wooden structures were felled after the growing season of 1689 and were used in construction, probably in 1690. The Üxküll family of Vigala manor sold their newly completed town palace to the Knighthood of Estonia in 1694 for unknown reasons. The plafond painting probably originates from the period between those two dates, 1690 and 1694.

Thus, the Knighthood House's plafond ceiling is the only firmly dated painting of this kind in Estonian architecture. It originates from an earlier period than most other plafond paintings in Tallinn, which are assessed using stylistic comparison as dating from the period after the Great Northern War, specifically from 1721 to 1760. The nearly 60 m² plafond is certainly the largest in Estonia. The use of distemper and oil paint techniques together makes this painting remarkable. It is also the only known plafond with more than one painting layer from different periods. At the time of writing, the painting has not yet been exposed to view. Its thematic subject matter and the details of its technical realisation will be revealed only after its restoration. The question of the authorship of the plafond painting also remains unanswered at this stage. The overpainting with Rococo ornamentation covering the original painting can be cautiously associated with the name of the guild painter, Gotthard Holm, who was paid for work done in the Knighthood House in the 1760s.

CV

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