AHS Study Tour to Austria, 5–12 May 2019

Editor’s note: Between 1957 and 2016, members of the AHS undertook almost thirty horological study tours abroad or to regions in the UK. An historical overview of these tours was published in the March 2018 journal. What had inspired the compilation of that record of sixty years of AHS study tours was that Susan Knight, who had been the Society’s Study Tour Organiser for many years, had decided to step down. The article concluded: ‘Whether the study tours can be continued in years to come, only time will tell.’

Time did tell, and pretty much immediately. Our member David Brown came forward offering to organize a study tour, and of course Council was delighted to accept. The choice was made to visit Austria. Our Chairman was one of the twenty-four participants, and in his AGM address, published in this issue, he has expressed his gratitude to David and Jackie Brown for making the tour possible and to Tabea Rude for her cooperation.

The tour was organized with the professional support of group tour specialists Tailored Travel. On Sunday 5 May the group flew from Heathrow airport to Vienna, and the tour ended on 12 May with a return flight from Munich airport. The week was packed with visits to places of horological interest, as well as some attractions of a more general touristic nature, and these are reported below by the named participants. The report is illustrated with a small selection from a large number of photos that were made available.

Geymüller Schlössel
The first stop after arriving at Vienna airport and a traditional lunch was the Geymüller Schlössel. The small Summer palace, with its Gothic and oriental-style elements, was built by Johann Jakob Geymüller in 1808. Owned by a number of prominent local businessmen, it earned the nickname ‘Spendthrift Villa’. The last of these owners was the director of the Austrian Federal Press, Franz Sobek, who bought it in 1948. He was the first to collect, research, publish and show the technical range and craftsmanship of Austrian clocks in the late eighteenth and early nineteenth century. Up until then, this had been the undiscovered golden age of the Austrian clock, prior to that having often been belittled as a romantic toy of the Biedermeier period.

Specialised in historic furniture, our guide Johannes Karel gave a good introduction on the original interior and how it was used. Most fascinating was the impressive number of hidden compartments and features in many of the cupboards, cabinets and desks as well as their fine craftsmanship. Due to their good condition, Johannes was able to demonstrate some of their most interesting aspects. After the introduction, everyone was free to wander off to inspect and discuss the display of clocks. These could be viewed close-up, much to the happiness of the photographically-active group. The collection of around 170 timekeepers comprised largely of typical Viennese table, picture and frame clocks, Vienna regulators, and a few wooden clocks from the Karlstein area sprinkled among them.

Besides the impressive number of fine Vienna regulators with temperature compensation, long duration or equation of time functions, here are some personal highlights:

- An organ clock made between 1810–1820, containing seven melodies by Joseph Haydn in a fire gilt case (the organ movement was not on display that day).
- A very jolly picture clock with a rope- dancing ballerina automaton from the second half of the nineteenth century, which Johannes showed us in motion.
- A well-proportioned Vienna regulator in a fire-gilt bronze case by Anton Glückstein, with a half-circular thermometer on a knife-edge-
suspended grid-iron temperature-compensated pendulum and lunar day and moon face indication. It was equipped with a very unusual pendulum bob design (see photo).

A temple-shaped mantle clock by Vonderheid after 1830 with pearl columns, applied using the so-called Viennese 'Petit Point' technique, a type of canvas embroidery.

Tabea Rude

Vienna Uhrenmuseum
On Monday 6 May, the first full day, we spent the morning at the Uhrenmuseum, opened specially for us, where we were guided by conservator Tabea Rude, who keeps a selection of the clocks wound, and who could demonstrate several automata and musical clocks. The museum is housed in a remarkably old building, with some links to Roman times, but it opened as a museum in 1921 when an eccentric collector, Rudolf Kaftan, was forced to vacate the apartment where he kept his diverse clock collection, which the authorities agreed to acquire. Becoming the first director, Kaftan occupied a top-floor grace-and-favour apartment all the way through to the 1960s. With his pieces as the core of the museum, much has been added since, covering periods up to date, and extending into the world of the wristwatch. Several thousand clocks remain in store, while around 700 pieces are on show. We toured the three floors, taking in many genres of horology. Notable were the contributions from priest-mechanics, and also the range of vastly complicated calendrical and astronomical pieces, capable of displaying time, the dates in different calendars, and the dates of special observances. From the mid-eighteenth century, a highlight of the museum is the masterpiece of David Cajetano, an Augustinian priest, completed in 1769. This month-going calendrical marvel offers various calendar data, phases and eclipses of the moon—even the ability to determine time at a long list of places of different longitudes (including Babylon!)

Unsurprisingly, as well as displaying early iron Gothic clocks and clock types reflecting a broader European geography, the Museum features the clocks that epitomise Vienna (and Austria) as it developed its own signature styles of clocks—in particular the fine Laterndluhr, and its smaller sibling, the Dachluhr. We saw cartel clocks, mail-coach watches, fine enamelled watches, picture clocks (including a musical version, with a jolly tune to accompany the scene of Carl I awaiting his execution), cuckoo clocks from both the Schwarzwald in Germany and Waldviertel in Austria, and an eclectic selection of all sorts of clocks and watches on the top floor, including a very fine electromechanical clock by Karl Satori from c. 1912.

In all, being treated to a tour de force from Tabea, the group enjoyed a remarkable journey around a fine collection of horology, representative of some major themes in European horology from the sixteenth century onward, as well as featuring Austria’s (and Vienna’s) finest.

James Nye

University of Vienna Observatory
In the afternoon, the distinguished astrophysicist Professor Frank Kerschbaum of the University of Vienna gave us a superb tour of both the university observatory, and its museum, now housed in the former apartments of the director.

We began with a tour of the main dome, housing the stunning 1878 Grubb of Dublin, 27-inch (68cm) refracting telescope—at one time the largest in the world, and still ninth largest. This was driven by Grubb’s novel drive unit, with a pendulum as the controlling element, offering previously unattainable accuracy in
Vienna Kunsthistorisches Museum

Our first visit on Tuesday 7 May was to the Kunsthistorisches Museum, where we had the privilege of being guided by Dr Paulus Rainer, Curator of the Kunstkammer collection. Dr

tracking—particularly noticeable for the quartz rod of the master pendulum. From the outside of the main dome we enjoyed stunning views of the City, down across the trees of the picturesque park in which the observatory sits. Vienna’s second observatory (the first sat on the roof of the university in the City) dates from the 1870s, officially opened in 1883.

Descending to the museum we were treated to an engaging exposition of the transition from a world in which the skies and the heavens were regarded as the territory of the gods, to a world in which, post Kepler, Galileo et al, ‘physics’ could be used to relate elements and measurements of phenomena around us to comparable elements to be found in the ‘heavens’.

The museum makes a point of preserving a fine range of instruments used in former times in the observations and measurements which were the bread and butter of its daily life, such as spectrometers, and of course precision regulator clocks, of which an impressive array lined the walls, including examples by Riefler, Auch, Anders, Kittel and Urban (among many others).

The observatory also has a remarkable collection of incunabula and early printed books on astronomy. Especially placed on display for us were works including Peuerbach’s Novae Planetarum (1473), Regiomontanus’s Kalendarium (1476—used by Columbus to great effect on his third voyage), Copernicus’s De Revolutionibus Orbium Coelestium (1543), Hevelius’s Selenographia (1647) and the remarkably illustrated Harmonia Macrocsmica of Cellarius (1701), the most beautifully illustrated account of the northern constellations. This was a highly engaging and uplifting tour, delivered with great enthusiasm.

James Nye
Rainer’s remit is broader than horology, it includes goldsmiths’ arts, glyptics, clocks and automata. He was therefore able to put the stunning early clocks and automata into their historical, artistic and social context.

The Kunstkammer section of the museum is a ‘museum within a museum’, reopened in 2013. It arises from former imperial cabinets of arts and erudition: ‘Kunstkammer’. Most of the magnificent objects on display were produced for, and collected by, the Emperors of the Holy Roman Empire. It was seen as a princely virtue to collect objects made of precious materials. Later this included automata and clocks. The twenty-two galleries, with some 2,200 objects on display are arranged in chronological order.

The tour commenced with social and historical background. We covered the significance of precious materials from the twelfth century onwards. We looked at the differences in artistic development North and South of the Alps in the fifteenth century—Gothic versus Renaissance art. The first horological treasure we encountered was a small ivory horary quadrant attributed to Johan von Gmunden from the collection of Frederick III, dated to 1438. Two rooms further on came the first automaton, the ‘Cittern Player’, possibly made for Emperor Charles V in the mid-sixteenth century by Juanelo Torriano. It was damaged on a trip to Paris in the 1950s, but up until then she had been running; fortunately, there is footage of the Cittern Player working from the 1930s. Dr Rainer explained that the museum policy is to keep objects as original as possible—there may be information about techniques, concepts or dating embedded in components which future research might reveal. Where possible, images and movies are used to bring objects to life, to show the automata running. A room is dedicated to showing automata on film. Each gallery has tablets available which show the objects in motion. Some of the films can be seen on the museum website at: https://www.khm.at/en/.

From the Cittern Player we moved on to the first of the clocks in the collection: a Southern German table clock, dated c. 1545, with three dials including moon phase and days of the week. The going train was driven by springs, the bell mechanism by weights. After this point, apart from a brief interlude to look at the famous ‘Saliera’ (salt cellar) by Benvenuto Cellini, it was clocks and automata all the way to the seventeenth century ‘art cabinet with automatic machines’ (Kunstschrank mit Automatenwerken) of Archduke Leopold Wilhelm. Too many to detail, almost too much to take in in the time available, nevertheless immensely memorable. My notes default to superlatives. Very educational. Thoroughly enjoyable. Highly recommended.

Jon Colombo

Uhrenstube Aschau
After leaving Vienna we travelled south through the wooded hills and valleys of Burgenland, bordering Hungary, to the small village of Aschau, where we were given a warm welcome by Wolfgang Komzak and everyone was presented with a generous glass of Schnapps. The Aschau Uhrenstube (or clock room, though it actually comprises several buildings) contains sixty-seven tower clocks and thirteen roasting spits, which Wolfgang started to collect in 1963. He eventually opened his collection to the public in 2003. Before inspecting the clocks
there was lunch of local hams, cheese and wine in the central single-storey stone farmhouse with a thatched roof, built in 1820. Suitably refreshed we walked the short distance to the main exhibition room with forty-seven tower clocks of all sizes, all beautifully restored, on custom-made wooden stands and each clock clearly labelled. Like the other clocks in the collection most are of wrought-iron posted-frame construction with end-to-end trains, the earliest being Gothic clocks with a foliot, later ones having a verge or anchor escapement. Many of the clocks are from Austria, but examples from Hungary and southern Germany are also included, as well as a few wooden clocks. Up a short flight of stairs is a room with thirteen roasting spits, where we could see the connection with clockmaking, especially as one of them had a very large fusee and a gigantic spring barrel. A nearby restoration workshop included a forge and anvil, as well as clocks undergoing repair. One of them is the oldest in the collection, being Austrian and dating from about 1460. Behind the main farmhouse is a barn with larger clocks, mostly not on stands or working, including a large French clock with an internal countwheel. Wolfgang described the technical and constructional features that distinguish it from Germanic clocks. A study/office in the farmhouse was adorned with numerous domestic wall clocks, made of iron with painted iron dials, typical of Germanic rural clocks. Rather than being a living museum, it was more of a live-in museum and Wolfgang Komzak has gathered together what is probably the largest collection of wrought iron tower clocks to be found anywhere. But all good things have to end and we reluctantly left Aschau for Austria’s second largest city of Graz.

Wolfgang Komzak explains. Photo John Robey.

The Graz clock tower
On Wednesday 8 May we visited the Graz clock tower, which is a prominent landmark seen from all over the city. Accessed either by a funicular railway or steps, the city views at the top are outstanding and the tower’s use for fire watching over the years was very important to

John Robey
wheel crossings mostly of a pear-shape attached to the wheel rims. Its three-blade flys are inside the frame, compared to British practice of usually being outside. The external locking plates are at each end of the frame.

The bell tower next to the clock tower is octagonal and 34m high containing a large bell cast locally called Lisa from the name Elizabeth as are many bells in Austria. When the tower was built the bell was gradually raised up on a separate wooden structure built up at the same level as the walls until the bell was in its final position. It strikes 101 times at 7am, 12 noon and 7pm and is now swung electrically to ring it with a huge clapper, the previous broken clapper is stored in the tower.

Derek Frampton

Schloss Eggenberg
In the afternoon we visited this palace on the western outskirts of Graz. It was developed by Johann Seyfried von Eggenberg from 1666 onward. It was built in the Baroque style with extensive scenic gardens. Members toured the twenty-four state rooms, one of which was the splendid Planetary Room with its painted ceilings of the seven planets known at that time and the moon. The ceilings in this room also featured the four elements, the twelve signs of the zodiac, seven alchemistic chemicals and the seven coats of arms of the family.

Derek Frampton

Steyr and the Schmollgruber Iron Clock Museum
Steyr, which we visited on Thursday, is an industrial town at the confluence of the Enns and Steyr rivers. The surrounding area is rich in iron deposits and with its rivers for transport, has long been associated with iron working and manufacture. Despite the industry, Steyr has a delightful central area with a wealth of old buildings, including The Schmollgruber-Haus at Grünmarkt 2, an almost 500-year-old Renaissance property. This now houses the Iron Clock Museum and workshops for the repair of clocks and watches as well as the family jewellery business.

Our tour guide was also the owner, Friedrich Schmollgruber. Friedrich has been working independently in Steyr for sixty years, starting as a master watchmaker and goldsmith. Five
The Night Watchman Tour, Steyr

Dressed in traditional clothing and carrying a lantern and halberd, the Night Watchman took us on a memorable tour through the city centre in which composers such as Schubert and Mozart had stayed. We followed the path to the impressive parish church of St Aegidius and St Coloman built in 1443 is one of the largest turret clocks in Austria, remarkably still hand-wound. There is a date of 1791 to be found on the framework, but expert opinion would date the decorative curled iron finials much earlier—perhaps to 1650–1700. The remontoire, in place of the original escapement, probably dates to the late nineteenth century, though the late eighteenth century pendulum has been maintained, and hangs from beside the clock. Three early stone weights have also been retained. (Information on the clock kindly provided by Michael Neureiter.)

During the great fire of 1884, when many houses in the city burnt down, the tower was destroyed. It was rebuilt in Neo Gothic style during 1885–1889.

We then walked through the upper part of the town, descending to cross over the River Steyr to our next venue of the evening. Michaelerkeller lies beneath an amazing house which was built in the sixteenth century. Deep below the building lie two cellars, the first leading further down into the second. These were both used to store wine by the hospital. For medicinal purposes of course! The tour ended with a film in the cellar showing the history of Steyr. An amazing town.

John Pither

David Brown
Kremsmünster’s Mathematical Tower
On Friday morning, the coach brought the group to the Benedictine abbey of Kremsmünster, about 30km to the west of Steyr. The abbey was founded in 777. The present abbey building was completed in 1277 in the late Romanesque and early Gothic styles. After 1613 the church was remodelled in the Baroque style with the interior being changed between 1680 and 1720 with splendid decoration.

In 1748 the abbey decided to build an observatory, a wooden model of the planned building still exists, it was made by Fr. Anselm Desing (see photo). At the time of its construction was known as the ‘Mathematical Tower’. Its nine-storey structure was to house a universal museum. Architecturally the building is severe, more like a high-rise office block of the 1930s. The floors cover displays of minerals and fossils, plants and animals, human sciences and arts, physics, then astronomy. Finally there is a chapel on the seventh floor. From this room one can walk out onto a balcony that offers a view of the entire monastery complex and, on clear days, a view of the peaks around.

From the year 1763 up to the present day, meteorological observations have been recorded. On the first floor are three regulators. One of these is by Kessels, his son Heinrich (1833–1865) gave this to the Abbey, having kept the clock for his lifetime after his father died. Temperature and pressure instruments are here, on the ground below are rain recorders. A strip of grass is allowed to grow naturally; periodically this is cut, burnt and the ashes analysed. In the basement a seismograph records earthquake activity; on display was a trace of the Fukushima disaster where the trace went off the scale.

The displays on the floors are quite fascinating. timber is shown in sections, each tree having a book made of wood containing leaves, seeds and twigs. Wax models of mushrooms are realistic. In the astronomical section there are sundials, transit instruments and surveying instruments.

Above the chapel is the astronomical observatory, which has two domes. We were somewhat disappointed to be told we could not see inside, the excuse being given as ‘only the Director has the key.’

The gatehouse to the abbey courtyard has a dial on the outside and two clock dials on the inside symmetrically arranged on two small towers. A wind dial surmounts the tower. Two more dials are positioned on the twin towers of the church. No excuse for being late for a service!

Chris McKay

Golling Castle Museum
In the afternoon we visited Burg Golling, where on the second floor we were able to see what in the tour brochure was announced as ‘Austria’s second largest clock and watch exhibition’. The display here consists mainly of the collection assembled by the Princess Anna Marie zu Ysenburg & Budingen (1874–1942) who already as a child had a passion for collecting pocket watches, and later learnt the art of their repair and maintenance. Part of her extensive collection was sold, but her niece donated the remainder and there are at present 210 watches, a number of clocks and Tischuhren. Of wider horological interest are a small number of ivory sundials and other items related to timekeeping, this includes a contemporary workshop display. From their overall character, it seems that most of the
watches were locally acquired and built up as a comprehensive cross section of most types produced from the seventeenth to the early twentieth century. Being from local sources, very few of these are gold and nearly all are silver or gilt metal. Some are early, dating from the mid-seventeenth century and unexpectedly unusual. At the other end of the displayed ‘timeline’ is the last, an early wristwatch with leather strap containing a small fob watch. There are a number of interesting examples from the seventeenth century. These are mainly French, German or perhaps partly French and finished by German makers. To some degree or another, all have their accent on external decoration as one might expect. Later eighteenth-century watches are mostly continental in origin, English, French and Dutch predominating. Swiss watches of the most common and established types were represented by an extensive display from the nineteenth century. However, some from this period were undoubtedly produced in Austria, including a number of those odd and characteristically large watches which, surprisingly, were influenced by London-made Turkish market watches, by Isaac Rogers for example. Also present are a handful of genuine early eighteenth-century London watches by makers such as Windmills. Space allows only a small number of watches to be illustrated, but here are three of the best from the collection.
1) Small watch of unusual square form, the case of gilt brass with steel foliate applique. Signed Johann Sigmund Schloer, Regensburg, c. 1650, approx. 40 mm.

2) Another even smaller watch of unusual square form. Steel case with gold piqué to the borders and a cypher in gold piqué to the reverse. White enamel dial with gold lining and foliate decoration, with a crystal to the cover. Signed Johann FrauenPreis Dresden c. 1640, approx. 35mm. The use of steel in both these watches is unusual, the original appearance of the latter would have been jewel-like with case of polished and blued steel with gold decorative pin work.

3) Fine gold pair cased bell repeating watch by Dutens, London in a hardstone case of agate with four pierced gold panels, the inner case pierced and engraved. Gold champeve dial. London, c. 1735–40, approx. 50mm dia. Such watches were in demand for the German market during the mid-eighteenth century so its presence is not surprising. Dutens specialized in jewellery and hardstone, including watch cases. It is known that he supplied watches and clocks to Charles Clay. Two watches are known by Clay with rock crystal cases, one being in the collections of the V&A, see the article by Tessa Murdoch in AH March 2017.

Paul Tuck

The Salzburg Glockenspiel

After visiting Golling Castle Museum, the coach brought the group to Salzburg for the final part of the tour. On Saturday morning we enjoy a guided tour of the old city of Salzburg, which included viewing the Jeremias Sauters Glockenspiel in the tower. It was constructed in 1704 and now has thirty-five bells that ring out tunes over the city three times a day.

Salzburg had no king or baron; it was instead ruled by a Prince Archbishop. One such ruler, Johann Ernst Graf Thun (1687–1709), bought the thirty-five bells in 1695 from the bell caster Melchior de Haze in Antwerp. Salzburg master clockmaker Jeremias Sauter went on an information trip to the Netherlands to study carillon technique. After the tower had been raised to its full height in 1702, the final completion of the carillon dragged on for some years, since Sauter kept adding improvements. This meant that the carillon first resounded at the end of 1703. Archbishop Thun donated another 4,000 guilders in 1702 and with this money appointed the Salzburg Land Diet (then called Landschaft) to operate the carillon. Usually it was the duty of the apprentices and journeymen of the court clockmaker to crank the weights up three times a day, manually setting the carillon into motion.
There are two parts to the Glockenspiel, the driving train and the tune drum. The driving train comprises a great wheel with barrel, second wheel and fly. A large locking plate allows the tune to be played twice. The tune barrel is a massive drum 2.5 meter in diameter made of brass sections with 7,970 holes allowing two bell hammers per bell. In every aspect the Glockenspiel is highly finished with elaborate decoration.

The clock that released the Glockenspiel was a Freischwinger by Mannhardt. This was a near free pendulum where every minute a weighted arm rolled down an incline on the pendulum giving it impulse. It is a mechanical version of the Synchronome switch and may well have influenced Hope-Jones in its design.

Today the external dials are driven by electronic movements, the Mannhardt clock is static and the tune drum is driven discretely by a chain drive released electronically. The drive from the weight drive to the tune drum has been disconnected. However, this has been done in such a manner that no alteration can be seen.

Chris McKay
Schloss Hellbrunn

Our final visit was to Hellbrunn Palace for a tour of the palace and the trick fountains. The palace is south of Salzburg and was built in the Baroque style between 1613 and 1619 by Markus Sittikus von Hohenems, Prince-Archbishop of Salzburg, as a day residence.

In the grounds of the Palace are the trick fountains. These were conceived by the Archbishop as a series of practical jokes to be performed on guests. Unfortunately, the weather was against us during the afternoon as the visit to the trick fountains was undertaken in the pouring rain. One suspected that we would have been just as wet if we had stood in the middle of some of the fountains!

David Brown